MEMORANDUM TO FILE

DATE: July 3, 2006

COUNCIL FILE NO.: 94-0684

PLACE IN FILES

JUL 0 3 2006

DEPUTY

RE: EXPIRED COUNCIL FILE

This memorandum notes the expiration of the accompanying Council file/contents; the file is deemed terminated (received and filed) and the subject matter contained herein is closed. No other action is forthcoming.

Pursuant to Council action of September 13, 2005, all Council files pending before the City Council, which have not been placed on a Council or Committee agenda for consideration for a period of two years or more, are deemed received and filed (CF 05-0553). City Clerk, Council File Index Section: 213.978.1044

Brian Walters
Legislative Assistant

cc: Index Section

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(11)

94-0684 Communications from the Department of Water and Power relative to the status of deregulation in the electric utility industry, including Federal Energy Regulatory Commission and California Public Utility Commission actions and jurisdictional considerations.

DISPOSITION (Continued Indefinitely.) Ref. when deemed appropriate for Cl. Input.

COMMENTS FROM PUBLIC ON ITEMS OF PUBLIC INTEREST WITHIN COMMITTEE'S SUBJECT MATTER JURISDICTION

Asked to return whenever not returning might cause a "flap." None of the status reports have been Noted & Filed previously; therefore, Bill just held until further action.

CNO613.AGD

POOL-BASED WHOLESALE ELECTRICITY MARKET

It is argued that making wholesale markets more competitive is a vital step in any industry reform and that a competitive wholesale pool would reduce costs to customers by increasing competition in the market.

San Diego Gas & Electric Company submitted an alternate to the CPUC's Direct Access proposal. Below is a summary of the five figures in SDG&E's CPUC filings on competitive wholesale electric markets.

SUMMARY

- Electricity is a commodity in which efficient transport and trading of the physical product is in real time. Dispatch of generation and transmission is centralized.

- Access by market participants to the grid and the physical spot market is the essence of the pool-based wholesale proposal.

- The wires are a natural monopoly that should be made available to all market participants on a non-discriminatory basis.

- Equally important is that the institutional arrangements — the dispatch, pooling and economy trading processes — be available to all on comparable terms.

8/29/94

FIGURE 1: Structure of the Industry

- GENCOS (competitive generators) - generators who compete to sell electricity in the wholesale spot and contract markets
- DISCOS (regulated distribution & retailing utilities) - muni's and IOU's that operate local distribution systems. They buy wholesale and sell retail.
- GRIDCO (regulated monopoly transmission system) - ideally, a regional transmission grid owned and operated by a regulated company unaffiliated with any gencos or discos. Could be a RTG.
- POOLCO (central dispatch & spot wholesale market operator) - independent entity
    - dispatches the system based on energy buy/sell offers from individual gencos and discos
    - purchase short-run ancillary services (e.g., reactive power, spinning reserves) needed to maintain system performance
    - determines market clearing prices for each hour
    - settles spot transactions with the pool

FIGURE 2: Possible Ownership Arrangements

- Ownership arrangements among Gencos and Discos can take several different forms, as long as some critical separation of control and accountability are maintained:
    - Independence of Poolco
    - Arms-length dealings between Discos and Gencos
    - Neutrality of Gridco maintained

FIGURE 3: Dispatch and Pool Pricing: No Grid Congestion

- Beginning with the relatively simple case in which there are no transmission constraints, the dispatch and spot pricing process includes the following principals elements:
  - Genco Offers to Sell Energy
  - Disco Demand Projections of Bids
  - Intersystem Trading
  - A Dispatch/Market Clearing and Pool Pricing Procedure Established
  - Poolco Purchase of Ancillary System Services
  - Settlement of Pool Transactions at Pool Prices

FIGURE 4: Dispatch and Pool Pricing: With Grid Congestion

- Transmission constraints that can create grid congestion do not fundamentally change Poolco's dispatch and pool pricing process, but do require much greater attention to locational factors in offers, dispatch and pricing.

- The effect of grid congestion on pool prices at different locations can be illustrated with the following example shown in Figure 4:
  - Generator G2 at X has increased its available capacity to 20 MW and generator G4 at Y has decreased its capacity to 6 MW.
  - With more generation at X and less at Y than before, it would be desirable to transmit more energy (14 MWh/hr) from X to Y, except that transmission from X to Y is limited to 10 MW.
  - High-cost generator G5 at Y, with energy cost of $28/MWh, must be run to meet demand at Y, while G3 at X must be turned off and G2 at X, with energy cost of only $22/MWh, must run at less than its available capacity.

- With the X-Y transmission constraint binding, the pool price (defined as the incremental cost of meeting additional demand) is now $22/MWh at X and $28/MWh at Y.
- Poolco, as a net buyer of low-cost energy at X and a net seller of high-cost energy at Y, earns congestion revenue of $60/hour (the price differential between X and Y of $6/MWh multiplied by the X-Y flow of 10 MW.
- This congestion revenue is rebated to those who hold the 10 MW of rights to compensation for X-Y congestion. Because of this, Poolco bears little or no financial risk because of congestion and has no incentive to maintain or relieve grid constraints.

- Then incentive to invest to relieve grid constraints is with those who want to take advantage of the X-Y price differential but do not have compensation rights.

FIGURE 5: Bilateral Contracts in a Pool-Based Wholesale Market

- Because the pool provides and prices system services and incremental physical energy on an efficient, nondiscriminatory basis without even knowing about bilateral contracts, market participants can enter into any kind of bilateral contracts they choose and can then meet their obligations flexibly and economically.

- The contracts must take form of "contracts for differences" (CFD) that specify payments between the parties based on pool prices. The central features of a CFD are:
  - Defined quantities and prices
  - Independent or contract-specified operations
  - Periodic payments based on pool price outcomes
  - Buying and selling uncontracted quantities at the pool prices
- Once the pool price outcome is known, the parties to a CFD determine who owes how much money to whom under the contracts. These payments, which are made totally outside and perhaps without the knowledge of the pool, offset the effects of pool prices to the extent agreed by the contracting parties.
- For example, as shown in Figure 5, a simple contract may specify that a Genco at X will guarantee a Disco at Y that the Disco will get 1 MWh each hour at Y for a net price of $25/MWh. Then, in an hour in which the pool price is $26/MWh at both X and Y (as in Figure 3, where there us no congestion from X to Y), the Genco simply pays the Disco the difference between the pool price of $26/MWh and the contract energy price of $25/MWh, or $1/MWh, on the 1 MWh contract quantity. The net effect of the pool and contract transactions is that the disco pays and the Genco receives the contract price of $25/Mwh for the contracted amount.

FIGURE 1

STRUCTURE OF THE MARKET

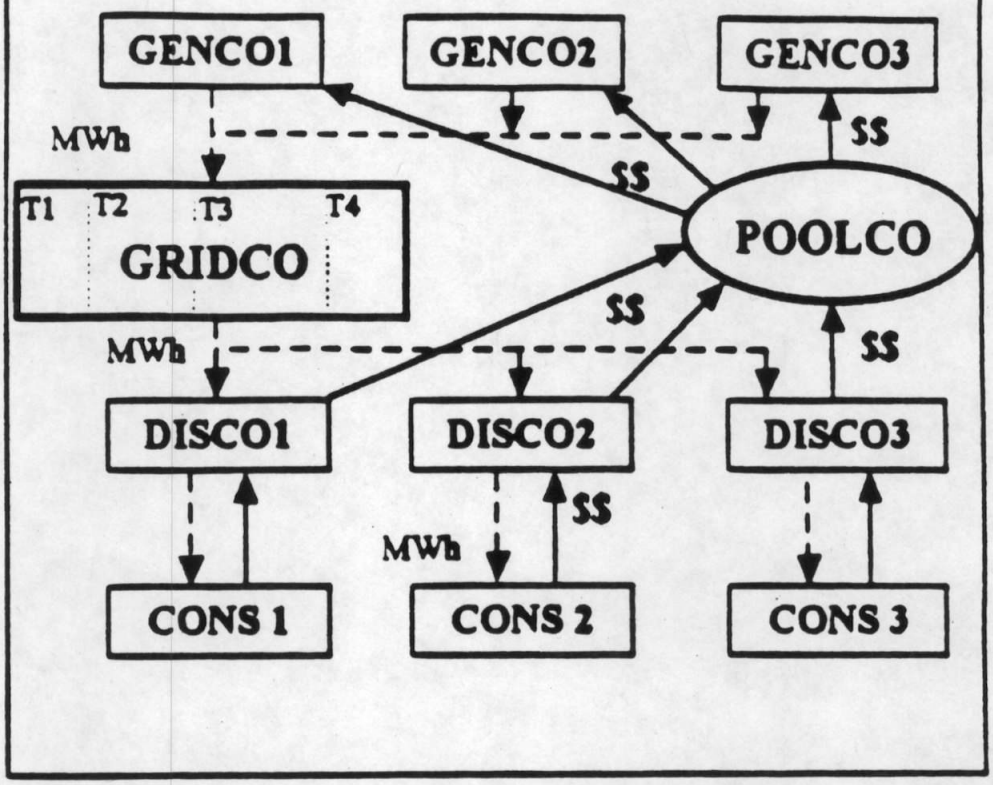


FIGURE 2

POSSIBLE OWNERSHIP ARRANGEMENTS

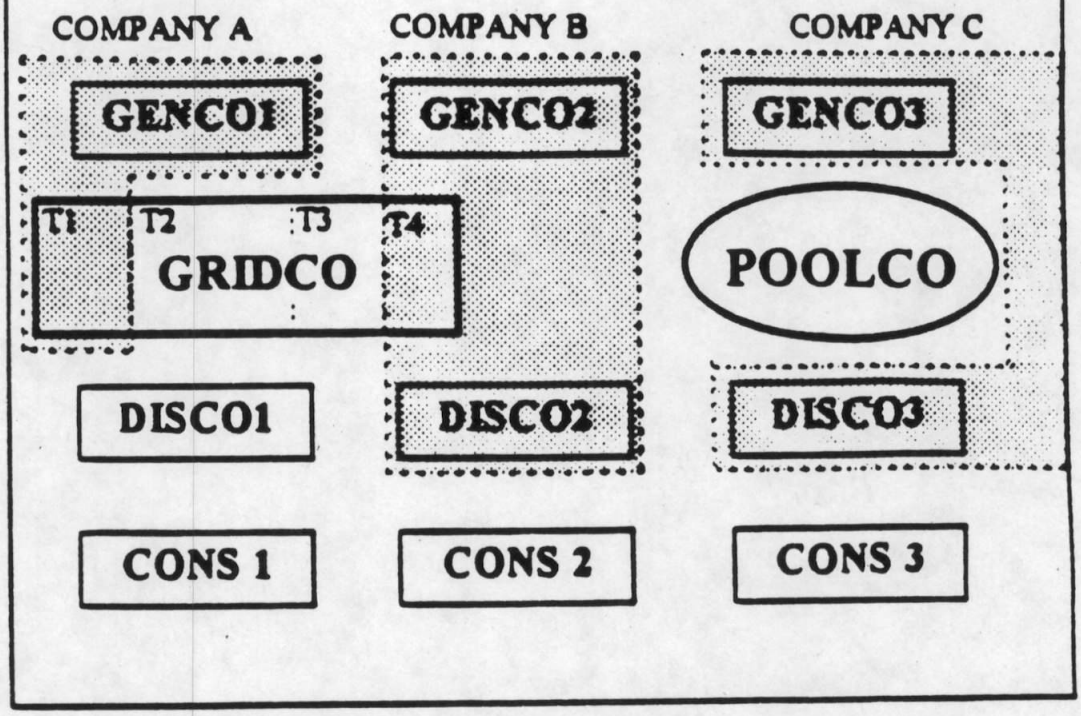
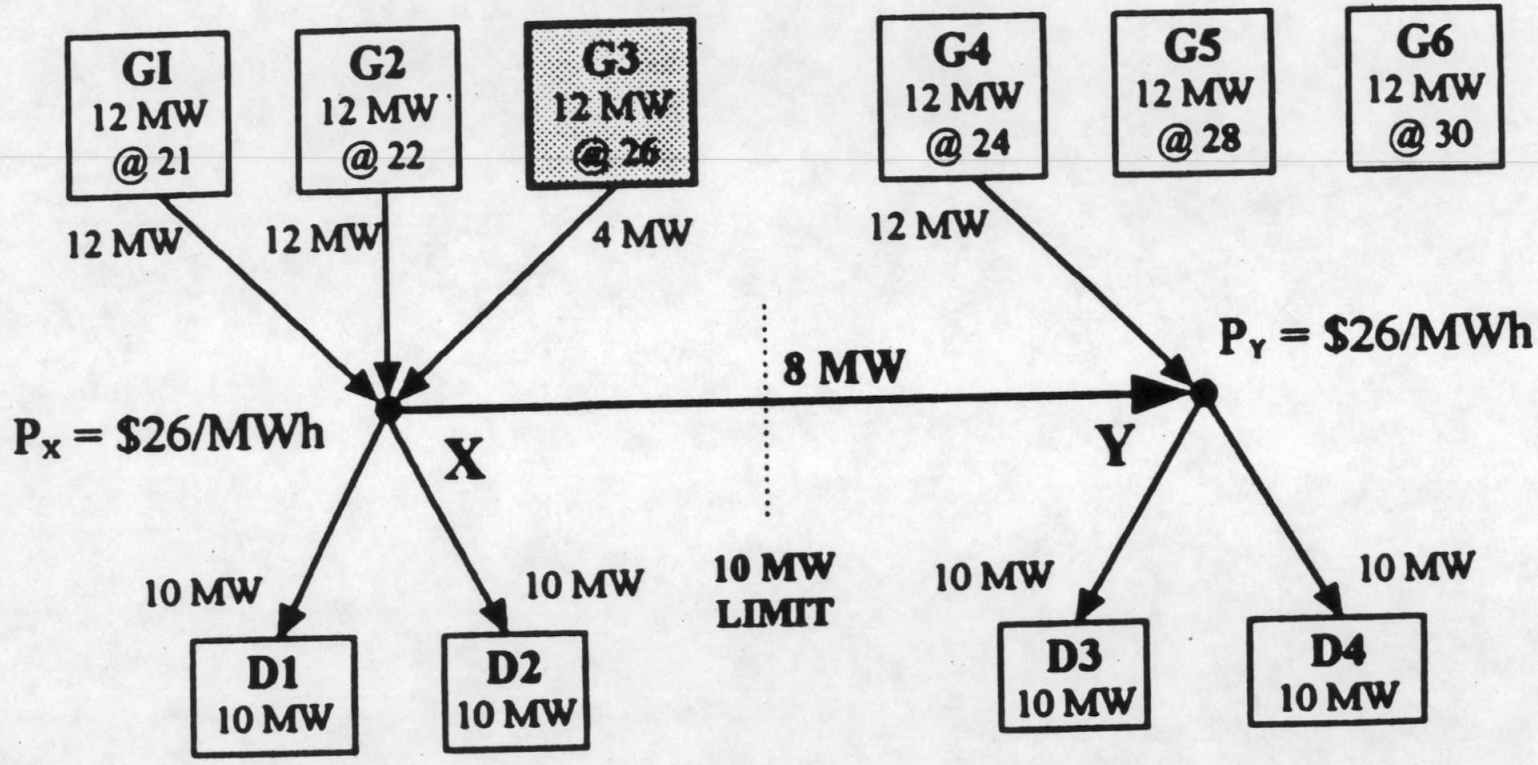


FIGURE 3

POOL PRICING: NO CONGESTION

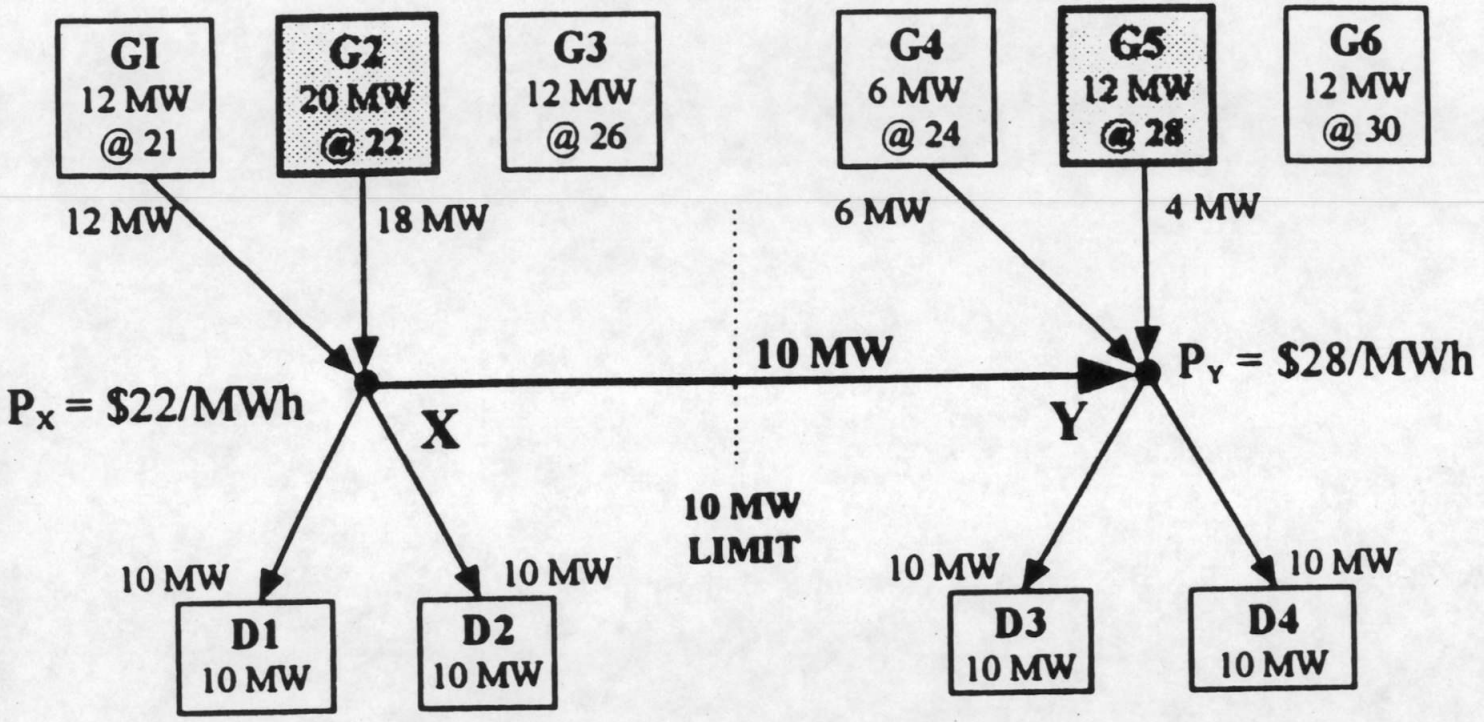


Pool Congestion Revenue = $26/MWh*40 MW - $26/MWh*40 MW

= $0/hour

FIGURE 4

POOL PRICING: WITH CONGESTION



Pool Congestion Revenue = $22/MWh*20 MW + $28/MWh*20 MW
- $22/MWh*30 MW- $28/MWh*10 MW

= $28/MWh*10 MW- $22/MWh*10 MW

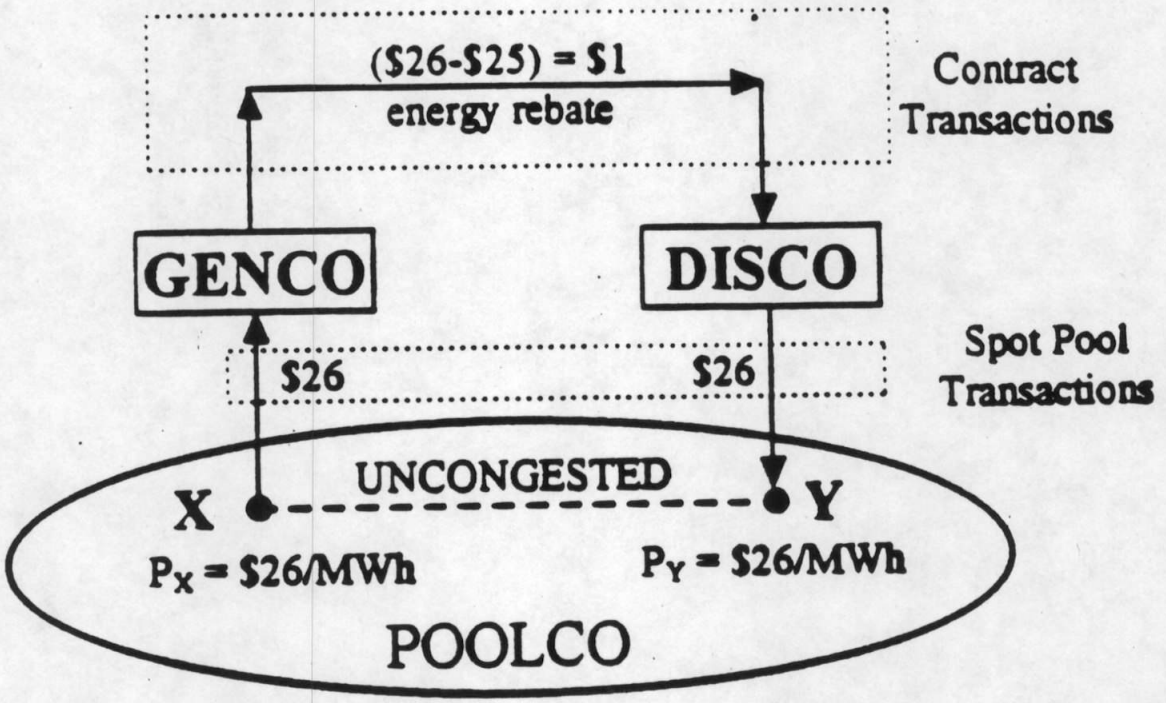
= ($28/MWh - $22/MWh)*10 MW

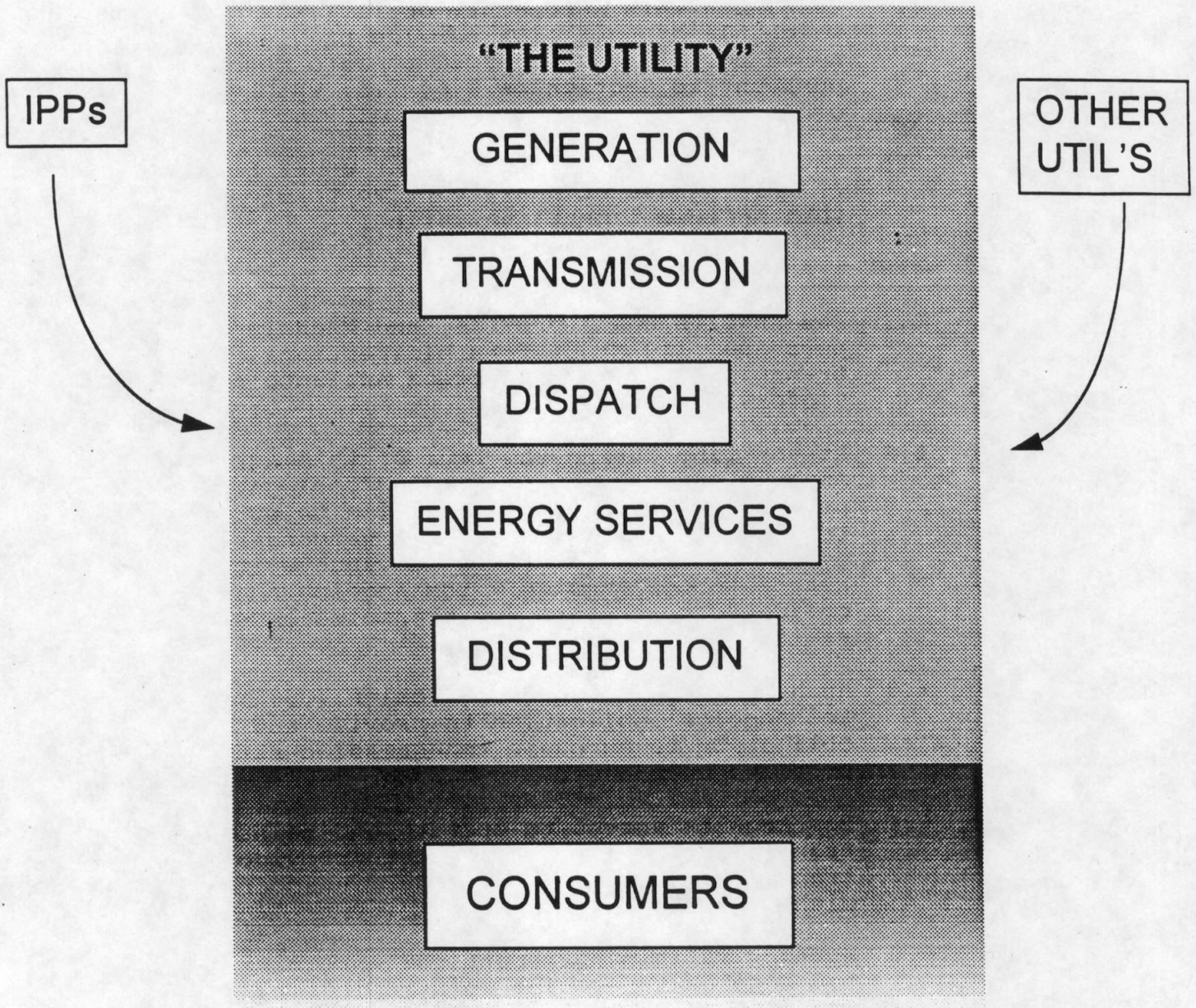
= ($6/MWh)*(10 MW) = $60/hour

FIGURE 5

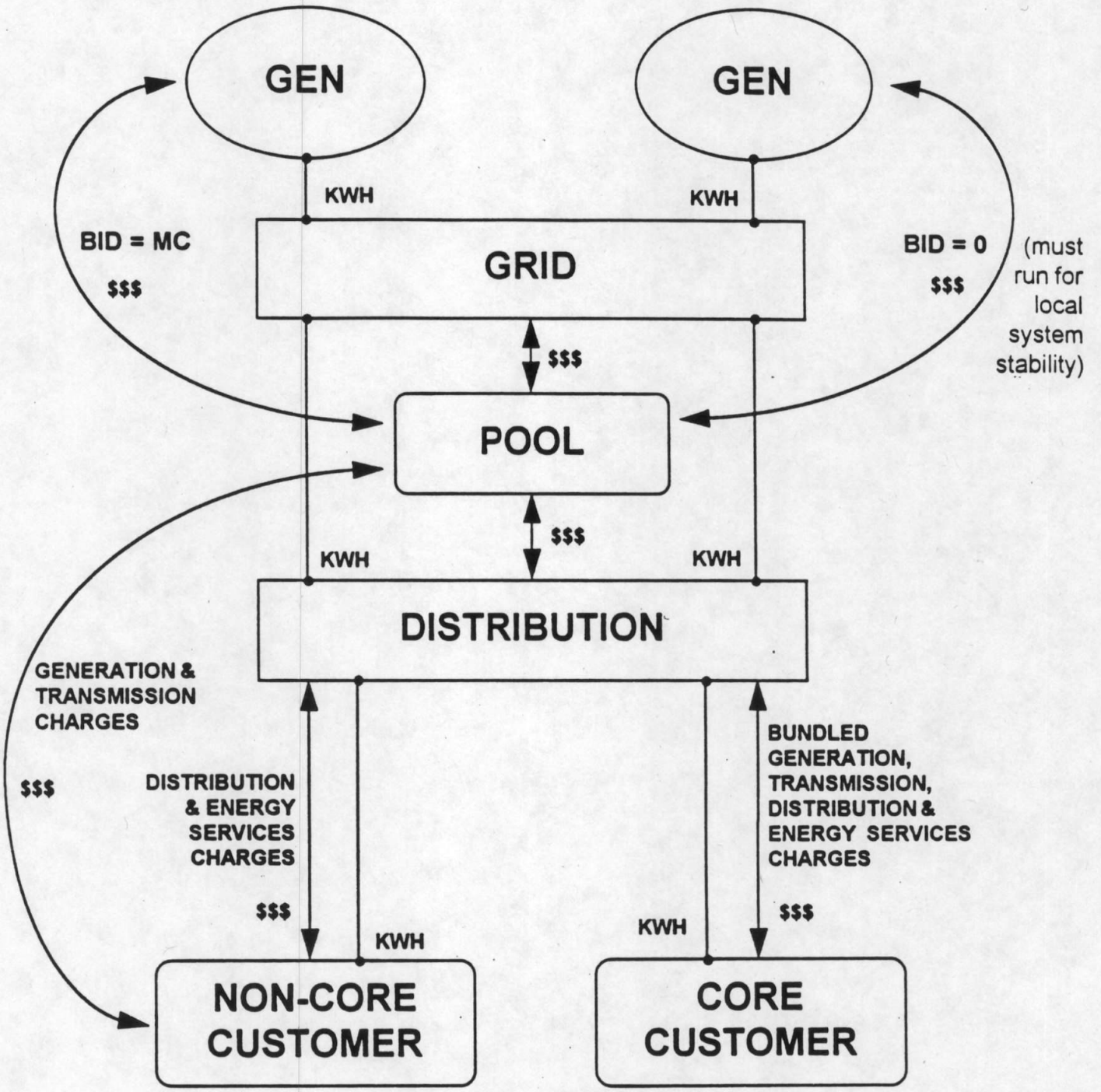
CONTRACTS FOR DIFFERENCES: NO CONGESTION

TERMS OF CFD:
Disco contracts with Genco at X to buy 1 MWh every hour at Y at a net price of $25/MWh.




"THE UTILITY"
IPPs
OTHER UTIL'S
GENERATION
TRANSMISSION
DISPATCH
ENERGY SERVICES
DISTRIBUTION
CONSUMERS

BASIC ELEMENTS OF A CENTRALIZED POOL



New Order Received 6/13/95

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FERC NOPR
and
CPUC
Regulatory Proposals

Business Planning and Development
Los Angeles Department of Water and Power
June, 1995

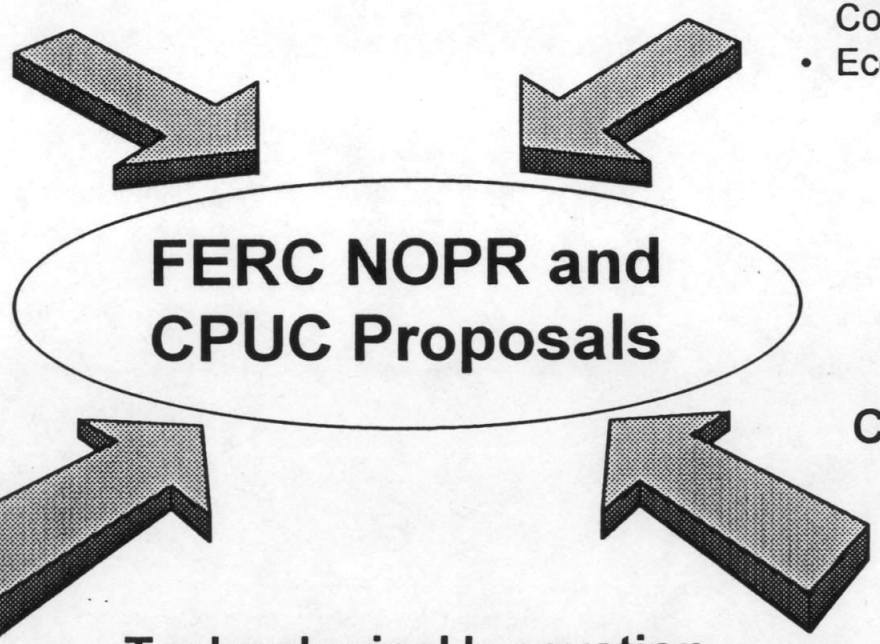
Forces of Change

Regulatory Reform

- Deregulation of other industries (Telecom, Airlines, Rail, Gas, etc.)
- Electric privatization in other countries

Macroeconomic Pressure

- Regional and Global Competitiveness
- Economic growth stagnation



Entrepreneurship

- IPPs
- Cogeneration Developers

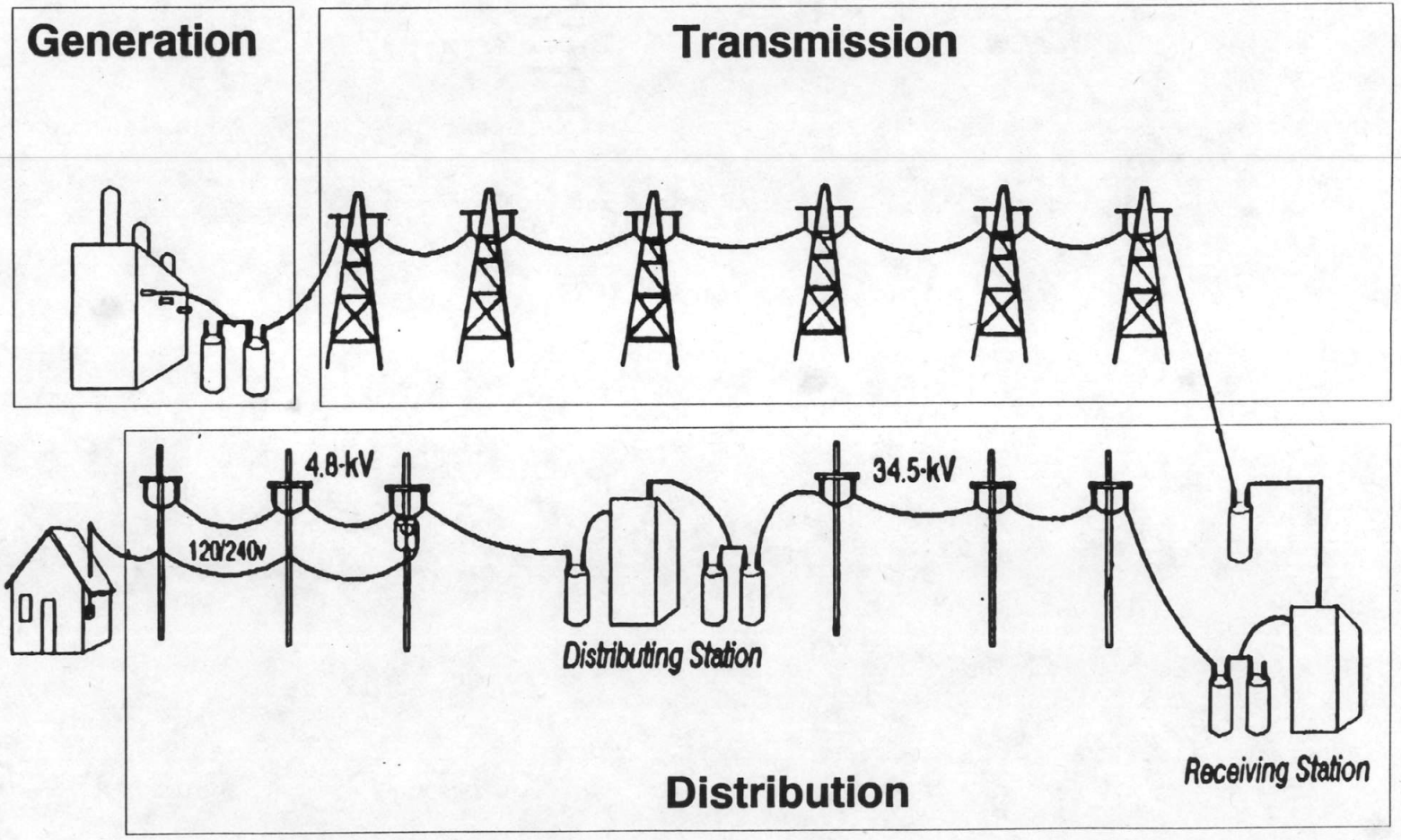
Technological Innovation

- Combined Cycle Generating Units (low price gas)

Consumer Movement

- Customer choice
- Faith in gov't diminishes
- Large energy users tired of paying cross-subsidies

The Utility


Generation
Transmission
4.8-kV
120/240v
34.5-kV
Distributing Station
Receiving Station
Distribution

FERC NOPR

	Proposed Regulation	Implications for City
Generation	• (NOPR does not directly address generation. Intent of NOPR is to promote competition in wholesale generation segment via non-discriminatory transmission services.)	• Competitive generation sector.
Transmission	• Standard rates, terms and conditions • Comparability - charge yourself same as external customers • Non-discriminatory access • Real-time Information Network (RIN) • Existing contracts maintained • Existing transmission owners expand facilities upon request and compensation • Stranded asset recovery	• FERC jurisdiction over transmission access and pricing • Tax exempt financing at risk • Unbundling prices to wholesale customers • Restructure organization and facilities to separate transmission activities • Develop RIN • Recovery of stranded costs
Distribution	• (NOPR does not directly address distribution)	• Where is division between transmission and distribution?

CPUC Wholesale Power Pool Proposal

	Proposed Regulation	Implications for City
Generation	• IOU generation place in pool by 1/97 • Independent System Operator (ISO) operates pool - Dispatches generation - Establishes market clearing price - ISO owns nothing • IOU's purchase/sell all generation from pool/ISO • Possible divestiture of SCE and PG&E generation • Maintain existing contracts • Non competitors: Qualifying Facilities, Hydro, and Nuclear	• Participation to buy/sell in Pool is optional - details to be worked out
Transmission	• "Cooperative Federalism" • Power Pool: - subject to FERC - operates transmission system - transmission rates set by FERC tariff - owns nothing	• DWP loss of control of transmission system
Distribution	• Virtual Direct Access • Install time of use meters • Contracts for differences • After 2 years, consider retail access • Competitive transition costs - Stranded assets - Stranded liabilities (contracts) - Stranded benefits (social programs)	• Expenses to transition to real-time metering • Retail access may result in loss of customers

CPUC Direct Access Proposal

	Proposed Regulation	Implications for City
Generation	• IOUs must divest themselves of all generation assets. • Market for generation services as determined by principal-to-principal negotiations will determine dispatch of generation assets.	• LADWP not required to divest itself of its generation resources • Retail Access at outset - bypasses phased wholesale
Transmission	• Establishes Independent System Operator (OPCO) to provide non-discriminatory access to the electric grid (includes transmission and distribution) • IOUs retain ownership of transmission system	• Could result in loss of local control over City's transmission system.
Distribution	• IOU customers can purchase energy and spinning reserves directly from utility and non-utility generators or marketers. • Distribution assets remain with utilities. • Utilities continue to provide distribution level services. • Collects competition transition charges for stranded assets, liabilities and balancing accounts.	• If the City implements this proposal, there is a potential for the City to loose a significant portion of its industrial and large to medium size commercial customers base to local non-utility generators and low cost electric utilities based in the Pacific Northwest and Southwest.

FERC and CPUC
RULEMAKING SCHEDULES

FERC NOPR Rulemaking Schedule

	Issue Date	Due Date
NOPR	April 7, 1995	
Public Comments		August 7, 1995
Reply Comments		October 10, 1995
FERC Final Rule	Approx. April 1, 1996	
Implementation (Comparability Tariff Due)		Approx. June 1, 1996

CPUC Electric Utility Industry Restructuring Rulemaking Schedule

	Issue Date	Due Date
Proposed Policy Decision and Alternative	May 24, 1995	
Public Comments		July 24, 1995
Reply Comments		August 23, 1995
Policy Decision and Outline of Implementation Steps	No sooner than 90 days after issuance of Proposed Policy Decision	

	Effective Date
Policy Decision Effective	No sooner than 100 days after issuance of Policy Decision

OFFICE OF
CITY ATTORNEY
JAMES K. HAHN
CITY ATTORNEY

EDWARD C. FARRELL
CHIEF ASSISTANT CITY ATTORNEY
FOR WATER AND POWER

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LEGAL DIVISION
P.O. BOX 111 — SUITE 340
LOS ANGELES, CALIFORNIA 90051

TELEPHONE (213) 367-4500
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December 2, 1994

The Honorable Chairperson
Councilmember Ruth Galanter
Commerce, Energy and Natural
Resources Committee
Los Angeles City Council
Rm. 395, City Hall

File No. 94-0684

Attention: City Clerk

Re: Report on California Public Utilities Commission's Proposal to Reform the Electric Industry's Regulatory Structure And Its Impact Upon the Department of Water and Power's Tax-Exempt Bond Status

Dear Chairperson Galanter:

On July 25, 1994, the Commerce, Energy and Natural Resources Committee requested a report from this Office in connection with the California Public Utilities Commission (CPUC) proposal to reform the California electric industry's regulatory structure by requiring "direct access" for consumers to competing power generation sources and increased competition among producers. You inquired as to the effect of the proposal on the tax-exempt status of Department of Water and Power (DWP) revenue bonds.

Returned herewith is a report from the DWP Bond Counsel regarding your inquiry. It discusses the CPUC proposal and the Federal Energy Regulatory Commission (FERC) authority to mandate electric energy transmission for private or investor-owned utilities over DWP lines.

The report sets out the risk faced by DWP that extensive power wheeling could cause DWP bonds to become "private activity" bonds and thereby taxable.

Also enclosed is a draft of Memorandum from the American Public Power Association to be submitted to Treasury in response to its review and rewriting of the private activity bond regulations in this area.

Very truly yours,

David J. Oliphant

DAVID J. OLIPHANT
Assistant City Attorney

DJO:erb
(213) 367-4538

Enclosure

MEMORANDUM

TO: Los Angeles Department of Water and Power

FROM: Larry Sobel

DATE: November 1, 1994

RE: Federal Tax Implications of Direct Access, Mandated Wheeling and Electric Industry Restructuring

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I. Background

This memorandum summarizes the federal tax law implications relating to tax exempt bond financings ("Bonds") of (1) the California Public Utility Commission's ("CPUC") proposed restructuring of California's electric services industry and (2) the 1992 amendments to the Energy Policy Act ("EPA") which grant FERC the authority to compel transmission service under certain circumstances.

Under the CPUC's proposal, the CPUC would: (1) deregulate the electricity generating sector; (2) permit consumers to purchase electricity directly from independent power producers rather than from their local utility; (3) require California utilities to provide transmission and distribution services unbundled from the provision of the electricity ("direct access"); and (4) require utilities to reduce their rates through the imposition of performance - based ratemaking.

Under the EPA, FERC is authorized to order any "transmitting utility" to provide transmission services (including service over facilities that may have been financed

with Bonds) to any investor-owned utility or other private entity that generates electric energy for sale or resale.

In the case of both the direct access proposals and the impact of EPA mandated wheeling, the fundamental tax issue raised is whether facilities financed with proceeds of Bonds will be "used" by one or more private entities ("Private Users"). Excessive use of a Bond financed facility by Private Users (i.e., "private business use") may cause interest on the Bonds to be declared taxable by the IRS.

As indicated, the private business use question at the wholesale level primarily relates to providing transmission service (either voluntarily or pursuant to FERC mandate) to private parties over Bond financed transmission lines. The same "use" question also exists with respect to the voluntary creation of regional transmission groups ("RTGs") which are being encouraged by FERC as an alternative means of providing cooperative and open transmission access.

At the retail level, the private business use questions raised so far relate primarily to the pricing of electricity sales by a municipal utility which are designed to retain existing retail customers, to attract new retail customers to relocate into the municipal utility's service territory, and eventually possibly to provide service to customers located in another utility's service territory. The "use" issues relate to pricing, contract length, and the imposition of demand and energy charges.

II. Federal Tax Law

A. General

For purposes of the Internal Revenue Code of 1986 (the "Code"), Bonds issued to finance municipally owned electric facilities (whether generation or distribution) are "State or local" bonds. The Code classifies State or local bonds as either (i) governmental bonds or (ii) "private activity bonds." While interest paid on State or local bonds is generally excluded from gross income for federal income tax purposes, interest paid on private activity bonds will be so excluded only if the bonds are "qualified private activity bonds.[1/] To qualify as governmental bonds, the Bonds must fail to satisfy (i) the private loan financing test of Section 141(c) of the Code, and (ii) either of the private business tests of Section 141(b) of the Code. By virtue of Section 141(b)(4) of the Code, the Bonds will satisfy the private business tests and will be private activity bonds (and the interest paid on the Bonds will be taxable) if the total amount of tax-exempt financing of a Bond financed facility used by Private Users exceeds the lesser of 10% or $15 million.

B. The Treasury Department Regulations

In 1972, the Department of the Treasury promulgated final regulations clarifying the application of the prior version of the private business tests to power-generating facilities (the

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[1/] Generally, it will not be possible for Bonds financing municipal utility property to be qualified private activity bonds, although some possibilities exist.

"Output Regulations").[2] As discussed below, such rules have been made applicable to electric transmission facilities as well. Specifically, the Output Regulations provide that the use by one or more nongovernmental persons of a major portion[3] of the Subparagraph (5) Output[4] of an electric generating facility would satisfy the private business tests if such use had the effect or transferring to the nongovernmental person(s) (i.e. Private Users) the benefits of ownership of such facility and the burden of paying debt service with respect to the bonds that financed such facility. Such benefits and burdens are transferred to a nongovernmental person where (i) either one nongovernmental person agrees pursuant to a contract to take (or to take or pay for) 25 percent of the Subparagraph (5) Output of such facility or two or more nongovernmental persons[5] agree, pursuant to contracts to take (or to take or pay for) more than

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[2] Treasury Regulations §1.103-7(b)(5). Theses regulations are frequently referred to as the "Subparagraph (5) Output" regulations.

[3] In 1972, "major portion" meant 25 percent. The current law analog is the lesser of 10 percent or $15 million.

[4] Under the Output Regulations, "Subparagraph (5) Output" generally is determined by multiplying the number of units produced or to be produced by the facility in one year by the number of years during which the bonds are outstanding. See Treasury Regulations §1.103-7(b)(5)(ii)(b). The number of units produced or to be produced by the facility in one year is based on the facility's nameplate capacity (or, if no nameplate capacity, by the maximum capacity), without any reduction for reserves or other unutilized capacity. Id.

[5] Under the 1992 Regulations, a private party's purchase only counts if it agrees to pay annually a guaranteed minimum payment exceeding 3 percent of the average annual debt service with respect to the obligations in question (the "3 percent de minimis rule").

25 percent of the Subparagraph (5) Output of the facility; and (ii) payments made or to be made with respect to such contract by such nongovernmental person exceed 25 percent of the total debt service with respect to the obligations.

C. The 1986 Tax Reform Act

While generally retaining the Output Regulations to define when use of an output facility by a nonexempt person must be treated as "nongovernmental use" for purposes of the private business tests of Section 141(b) of the Code, the 1986 Tax Reform Act made two changes with respect to "output facilities." First, Section 1301(i) of the Act eliminated the 3 percent de minimis rule. Second, Section 1301(a) of the Act reduced the private use limit to 10% and added the $15 million limit to the Code. The 1986 Conference Report describes the $15 million limit as providing that "an issue 5 percent or more of the proceeds of which are to be used with respect to any output facility . . . shall be treated as meeting [the private business test] if the nonqualified amount with respect to such issue exceeds . . . $15,000,000.[6/] The 1986 Conference Report makes clear that this

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[6/] H.R. CONF. REP. NO. 841, 99th Cong. 2d Sess. II-689 (1986), reprinted in 1986 U.S.C.C.A.N. 4075, 4777. Technically, the 1986 Tax Reform Act provided that nonqualified use (including use of portions of the facility financed with previous tax-exempt obligations in excess of the lessor of (i) 10 percent of the proceeds of the bonds, and (ii) 15 million would cause the bonds to be private activity bonds. This memorandum will refer to the post-1986 Act limit as the "$15 million limit."

special output facility rule applies equally to generation and transmission facilities.[7]

1. Qualified Exchanges

The 1986 Conference Report also clarified that certain power pooling and exchange arrangements of output capacity do not count toward the 10% or $15 million limits. Specifically, Private Users will not be treated as using a Bond-financed output project where a swapping arrangement constitutes a "qualified exchange." A qualified exchange is defined as (i) an exchange agreement that provides for the swapping of power between governmentally owned and operated utilities and IOUs; (ii) an arrangement that provides for "true-up" of the exchanges at least annually; (iii) the power is swapped pursuant to an arrangement that does not involve output contracts; and (iv) the purpose of the arrangement is to enable the utilities to satisfy differing peak load demands or to accommodate temporary outages.

For example, if a municipal utility sells power to an investor-owned utility ("IOU") in the Pacific Northwest during the night (to help satisfy the IOU's peak load demand) and receives power from the IOU during the day (to help satisfy its peak load demand), then this use of the generating (or

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[7] Specifically, the 1986 Conference Report includes the following sentence: "In the case of bonds 5 percent or more of the proceeds of which are to be used to finance output (e.g. power but not water) projects such as electric and gas generation, transmission, and related facilities, the maximum amount of bond-financing that may be used by non-governmental persons on a basis other than as a member of the general public and by governmental units is $15 million/" H.R. CONF REP. NO. 841, 99th Cong. 2d Sess. II-689 (1986), reprinted in 1986 U.S.C.C.A.N. 4075, 4777 (emphasis added).

transmission) facilities could be a qualified exchange that does not count toward the 10% or $15 million limit. On the other hand, an exchange agreement used to satisfy different geographic demands probably is more likely to be considered a "lay-off" contract which would result in private business use of the generating or transmission facilities which are the subject of the exchange.

2. Spot Sales

Finally, the 1986 Conference Report provided an exception for certain "short-term" uses. Specifically, "spot sales" of excess power capacity for temporary periods, other than by virtue of output contracts with specific purchasers, do not count toward the 10% or $15 million limit. For this purpose, the Report defines a "spot sale" as a sale pursuant to a single agreement that is limited to no more than 30 days duration.

Neither the Conference Report nor any other pronouncement by Congress, the Treasury Department, or the Internal Revenue Service (the "IRS") recognizes any exception for short-term contracts other than the one for spot sales. Accordingly, currently spot sales under contracts of longer than 30 days will give rise to private business use chargeable against the 10% or $15 million limit.

D. Current Developments

Currently, the Treasury Department is in the process of reviewing and rewriting all of the private activity bond regulations, including particularly the Output Regulations. Treasury has requested comments from the "industry" for input

into this rewriting. Attached is the current draft of the detailed comments to be submitted by the American Public Power Association.[8/] These comments make recommendations on a number of issues including the effect of the EPA and retail wheeling issues. Much of the analysis in this memorandum could be changed depending on the results of this regulatory project.

III. Tax Issues at the Wholesale Level - Mandated Transmission Service

As mentioned earlier, the EPA authorizes FERC to order any "transmitting utility" to provide transmission service to any IOU that generates electricity for sale. If the transmission facilities over which the service must be provided have been financed with Bonds, the Private User which receives the service may be treated as using the facilities, potentially causing the Bonds to be taxable.[9/]

Recently, a public transmission utility attempted to obtain comfort from the IRS that transmission services provided to an IOU as required by the EPA did not constitute private business use. While the IRS appeared to be sympathetic to the conflict between the EPA mandate and the IRS rules limiting private business use, the IRS refused to rule based on procedural

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[8/]Also attached are comments submitted by the American Bar Association Output Facilities Task Force. The author of this memorandum is a member of the ABA Task Force, and with others at Orrick, has assisted APPA in revising its comments.

[9/] In the case of mandated wheeling, it is unlikely that the terms of the agreement will constitute a spot sale or qualified exchange.

grounds. However, it was also clear that the IRS was concerned that a favorable ruling on the private business use question would open a door that would allow municipal utilities to circumvent virtually all private use restrictions under the mandate of the EPA. We understand that one or more similar rulings are soon to be submitted to the IRS which may force the IRS to focus on the substance of the question.

The same basic questions and concerns exist with respect to RTGs. For example, if an RTG arrangement constitutes the equivalent of a long-term, lay-off contract to one or more IOUs, such IOUs may be treated as Private Users of the municipal transmission facilities. One the other hand if such arrangements can be structured as spot-sales or qualified exchanges, the private use conclusion may be avoided.[10/]

IV. Tax Issues at the Retail Level - Direct Access

The basic questions that have been raised to date concern the type of power sales contracts that a municipal utility can enter into without creating private use of its generation (or transmission) facilities by the retail customer. Although, municipal utilities appear not yet concerned about IOUs selling power to existing customers located in the municipal utility's service territory, competitive and political pressure will undoubtedly force municipal utilities to provide electric service at competitive prices. Thus, there is already concern

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[10/]Power Pooling arrangements will also need to be analyzed as to whether or not they can be structured to satisfy the rules on Spot Sales or Qualified Exchanges.

regarding the types of pricing arrangements and contracts that can be offered to retain existing customers and to attract new customers into the municipal utility's service territory.

In analyzing the private use question with respect to retail sales of electricity, the traditional analysis has been to compare individually negotiated rates and terms (possibly creating private business use) with "tariff" rates generally applicable to all similarly situated customers which are based on "cost of service" pricing concepts.[11/] The latter type, at least where the customer does not have any minimum "take" obligation, has been treated as a sale to the general public without any private business use concerns. Each contract will need to be analyzed as the particular terms are negotiated with the general rules discussed herein kept in mind. Most sales obligating a customer to "take" for less than 30 days should be eligible for the spot sale exception from private business use. "Requirements" contracts should avoid private business use taint, at least where there is a realistic prospect of the customer's requirements disappearing[12/] or where the customer can cancel every thirty days.

Similarly, pricing policies which offer discounts to large customers, or to customers which meet certain objective

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[11/] The basic question could be rephrased as to whether a "special" deal with an individual customer constitutes a "take, or take or pay contract" under the Output Regulations, in which case it would be subject to the Subparagraph 5 calculations.

[12/] E.g., the customers may move away or go out of business without any penalty or further obligation under its contract.

standards[13/], ought not to be treated as creating private use, again, where there is no minimum take (or it can be terminated within the 30 day spot sale limit). This should be true at least where the discount can be viewed as part of a rate category, i.e., some objective basis for determining which customers are entitled to a discount and the amount of the discount.

In transactions with larger customers, utilities often impose a minimum demand charge. Such arrangements also should be able to avoid private use. This results from the application of the Subparagraph 5 calculation which takes into account only energy sales. Thus, so long as the demand charge does not contain a "hidden" energy charge and is not structured like a "loan" (e.g., designed to recover the cost, with interest, of a particular facility) no private use should result.

It would seem that private use of generating facilities may be avoided by using "system sales" of power. This would allow a municipal utility to allocate its "private use" sales to facilities that have been financed with taxable debt or equity. This analysis assumes that the municipal utility has such facilities, of course. If all of the utility facilities have been financed with Bonds, the allocations theory would not be available. In addition, for the system sale allocation to withstand scrutiny, the sale should not have any operating or other nexus to a particular generating station or transmission path.

13/ Such standards could include, e.g., the number of employees at the facility.

V. Summary

As indicated, all of the foregoing is based upon existing law, particularly the existing Treasury Regulations. In addition, the analysis on many of these issues is still evolving and is likely to be dealt with, in whole or in part, by the Treasury Department as it rewrites its regulations, or by the IRS as it is forced to rule on some of these questions.

AMERICAN PUBLIC POWER ASSOCIATION

MEMORANDUM

RECOMMENDATIONS ON PRIVATE ACTIVITY BOND REGULATION PROJECT

I. Introduction.

A. Significant changes in the electric power industry.

We represent over 1750 of the approximately 2000 total State or local governmentally-owned power systems ("public power systems") in the United States, which provide about 14% of total electricity. A small number of about 260 private investor-owned utilities ("IOUs") dominate the electric power industry and provide about 75% of total electricity.

The electric power industry is undergoing a significant shift away from a regulated IOU monopoly structure towards an open competitive structure, especially for power generation and wholesale power sales. In the most significant legislation affecting the power industry in over 50 years, the Energy Policy Act of 1992, Pub. L. No. 102-486, 106 Stat. 2776 (1992) (the "1992 Energy Act") generally de-regulated independent power producers, known in this act as "exempt wholesale generators" ("EWGs" or "independent power producers") to encourage a competitive bulk power sale market.

Moreover, in arguably the single most important change affecting public power systems, the 1992 Energy Act granted FERC the authority to mandate open access to transmission facilities for wholesale transmission of electric power from power generators to retail distributors. The mandated wholesale "wheeling" provisions apply fully to otherwise unregulated public power systems. These provisions are pushing the electric power industry forcefully towards treating transmission facilities as integrated networks that consist of many interconnected parts built by many different entities and that are available to all on an equal basis, without discrimination in favor of transmission owners.

B. Purposes of memorandum.

This memorandum makes recommendations on private business use issues affecting public power systems for consideration in your proposed regulation project to update the private activity bond rules under section 141 of the Internal Revenue Code of 1986, as amended (the "Code") and to implement the changes made

by the Tax Reform Act of 1986.[1]. In general, we recommend that, to the fullest extent consistent with Federal tax policy, you provide rules that will enable public power systems to operate in a manner that recognizes the national energy policy to promote open transmission access without impairing the tax-exempt status of their bonds.

In particular, Section II of this Memorandum makes recommendations to address special considerations on transmission. We stress that, in the transmission area, it is especially important to give public power systems the flexibility to comply with FERC open transmission access policies and to participate in the development of voluntary transmission network arrangements without triggering impermissible private business use.

Section III of this Memorandum makes additional, mostly non-transmission specific, recommendations on other private business use issues affecting public power systems. We point out that all the members of the Large Public Power Council ("LPPC") are also members of APPA and we generally support their separate recommendations to you on related private activity bond tax issues.

Section IV of this Memorandum provides additional general background on the electric power industry. In addition, enclosed for further background is a recent article by David W. Penn, Director of Policy Analysis at APPA, entitled "Change: The Old and New World of Competition: Transmission Access, the National Energy Policy Act of 1992, and FERC Implementation."

II. Transmission and private use.

A. Background on transmission and open, equal transmission access.

1. General background and historic restricted transmission access.

"Transmission" generally refers to the intermediate step in the electric power delivery process in which power, produced by power generators, is transferred through an energized network of

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[1] Pub. L. No. 99-514, 100 Stat. 2085 (the "1986 Act"). The relevant legislative history will be referred to as follows: (i) H.Rep. No. 99-426, 99th Cong., 1st Sess. (the "1986 Act House Report"); (ii) Sen. Rep. No. 99-313, 99th Cong., 2d Sess. (the "1986 Act Senate Report"); and (iii) H.R. Rep. No. 99-814, 99th Cong., 2d Sess. (the "1986 Act Conference Report"). The Joint Committee on Taxation's General Explanation of the 1986 Act-will be referred to as the "1986 Act Bluebook."

high voltage transmission lines to ultimate retail distribution loads that draw power from the network. The transmission system in the United States is interconnected and largely in place. ~~In part, short of analyzing transmission fully on a "network" basis, contract path principles remain necessary to address the physical characteristic of electric power transmission in which power flows through the transmission network through the path of least resistance.~~

TO BE CLARIFIED

Historically, power generators used their transmission facilities to protect generation assets and limited access to their transmission facilities for competitive reasons. Transmission owners generally confined transmission access to discrete point-to-point transactions and corresponding tax analysis focused on "contract path" principles. Most small public power systems and independent power producers do not own transmission facilities and thus historically were "transmission dependent" on transmission owners. This impeded competition.

At the same time, transmission has natural monopoly characteristics because there can only be a single transmission network (even if owned by multiple utilities). It would be virtually impossible to construct a second transmission network that would operate independently of and in competition with the existing network. One transmission system avoids duplication, minimizes environmental impacts, and increases efficiency. So long as transmission technology relies on the physical principles of an electric current network, transmission necessarily must be a jointly-planned and owned system.[2]

While the 1992 Energy Act deregulates power generation, it does the opposite to transmission by mandating open transmission access. An unregulated transmission market is <u>not</u> expected to develop.

2. <u>1992 Energy Act requires open, equal transmission access</u>.

A principal purpose of the 1992 Energy Act was to increase competition in the bulk power sale market through open transmission access and thereby to reduce retail electricity costs. Specifically, section 721 of the 1992 Energy Act grants FERC the power to mandate wholesale wheeling, as follows:

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[2] One potential technological change in transmission is so-called "Flexible Alternating Current Transmission System" or "FACTS." This technology employs electrical rather than mechanical circuit closures and potentially could increase capacity significantly on existing transmission facilities.

> "Any electric utility, Federal power marketing agency, or any other person generating electric energy for sale for resale, may apply to the Commission [FERC] for an order under this subsection requiring a transmitting utility to provide transmission services (including any enlargement of transmission capacity necessary to provide such services) to the applicant."

The 1992 Energy Act's transmission pricing provisions reflect the open, equal transmission access policy. Specifically, section 722 of the 1992 Energy Act addresses required pricing for mandated wholesale wheeling, as follows:

> "An order under section 211 shall require the transmitting utility subject to the order to provide wholesale transmission services at rates, charges, terms, and conditions which permit the recovery by such utility of all the costs incurred in connection with the transmission services and necessary associated services, including, but not limited to, an appropriate share, if any, of legitimate, verifiable and economic costs, including taking into account any benefits to the transmission system of providing the transmission service, and the costs of any enlargement of transmission facilities. Such rates, charges, terms, and conditions shall promote the economically efficient transmission and generation of electricity and shall be just and reasonable, and not unduly discriminatory or preferential. Rates, charges, terms, and conditions for transmission services provided pursuant to an order under section 211 shall insure that, to the extent practicable, costs incurred in providing the wholesale transmission services and properly allocable to such services, are recovered from the applicant for such order and not from a transmitting utility's existing wholesale, retail, and transmission customers."

3. <u>FERC aggressively implements open transmission access policy</u>.

FERC has implemented the open transmission access provisions of the 1992 Energy Act aggressively. In one of the first and most significant final mandatory wholesale wheeling orders under section 211 of the 1992 Energy Act, in <u>Florida Municipal Power Agency v. Florida Power and Light Company</u>,[3], FERC ordered an IOU to wheel power for a public power system on an ongoing <u>equal</u> basis with the IOU over the IOU's entire regional transmission network. Thus, this case fully implemented the policy of open,

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[3] 67 F.E.R.C. Paragraph 61,167, 1994 FERC Lexis 907 (May 11, 1994).

equal transmission access. In the Florida Power case, FERC approved a transmission cost-sharing approach that, in simplified terms, allocated transmission costs based on the relative "load shares" of native retail power load that each party on the transmission network served. This transmission cost-sharing approach is discussed further in section IV of this Memorandum.

In addition, in many other contexts, FERC is fully implementing the policy of open, equal transmission access. For example, FERC is requiring open, equal transmission access as a condition to each of the following: (i) approval of IOU mergers; (ii) permission to IOUs to sell surplus power off the system at market rates; and (iii) permission for power marketing.

4. FERC supports voluntary regional transmission groups.

FERC is formally encouraging the voluntary creation of "regional transmission groups" ("RTGs) as an alternative voluntary means of providing cooperative, open, equal transmission access. During congressional consideration of the 1992 Energy Act, a consensus proposal for RTGs was developed.[4] On November 10, 1992, FERC issued a request for public comments on its authority to approve jurisdictional RTG agreements containing the essential elements in the consensus proposal.[5]

On July 30, 1993, FERC issued a policy statement supporting RTGs and outlining the basic components for FERC approval. These components included the following:

(1) Board membership covering an area of sufficient size and contiguity to enable members to provide appropriate transmission services;

(2) Coordination with relevant state regulatory, siting, and other authorities;

(3) Obligation of member transmitting utilities to provide transmission services, including the obligation to enlarge facilities;

(4) Requirement to develop a coordinated transmission plan on a regional basis and to share transmission planning information;

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[4] See Cynthia Bogorad and Robert Nordhaus, RTGs: The Emergence of an Industry Consensus, Public Power magazine (APPA), January-February, 1993, at pages 32-38.

[5] See Request for Public Comments on Regional Transmission Group Proposal (Docket No. RM 93-3).

(5) Fair and nondiscriminatory governing and decisionmaking procedures, including voting procedures;

(6) Voluntary dispute resolution procedures; and

(7) An exit provision for RTG members, specifying the obligations of the departing member.

Several RTG applications are pending with FERC or otherwise being developed. These involve both IOUs and public power systems. Several NERC reliability regions are working to reform themselves in a manner that will accommodate RTG requirements. A common goal exists in that FERC wants to reduce the administrative burdens of specific adjudications of transmission planning, pricing, and other disputes, and power systems want to reduce their regulatory burdens through participation in RTGs. Ultimately, however, FERC retains the final arbiter role for disputes involving the use of the transmission monopoly to assure open, equal transmission access.

B. Recommend that transmission use be disregarded because it represents use on the same basis as a member of the general public.

1. Recommend treating transmission as used on the same basis as members of the general public.

Setting aside for purposes of this recommendation the difficult questions regarding what kinds of transmission contracts properly should give rise to use at all under section 141, we recommend that, in all events, transmission use should be disregarded for purposes of the private business use restrictions because it represents use on the same basis as members of the general public under section 141(b)(6)(A) of the Code.

The entire current regulatory regime for electric power under the 1992 Energy Act and related current inplementation and economic developments associated with that regime strongly support treating transmission as used on the same basis as the general public. Set forth below are highlights of some of these previously-discussed supporting factors. First, FERC's power to mandate open, equal transmission access under section 721 of the 1992 Energy Act demonstrates a real legal mechanism to gain general public access to transmission. Second, the transmission pricing provisions under section 722 of the 1992 Energy Act, particularly the requirement that transmission charges not be unduly discriminatory or preferential, demonstrate that access to transmission will be available to the general public on the same cost basis as it is to the transmission owners. Third, FERC's implementation of the 1992 Energy Act, exemplified by the Florida Power case, evidences a strong commitment to carry out its general public access mandate. Fourth, current economic trends

in the industry against the backdrop of FERC's legal control over the transmission monopoly, exemplified by the RTG movement, suggest that the electric power industry in practice is moving towards an approach of fair, equal public access to transmission.

In the 1986 Act, Congress both supported the general public use exception to private business use and effectively strengthened it by codifying it in section 141(b)(6)(A). Previously, this general public use exception had appeared only in Treas. Reg.§ 1.103-7(a)(3). New section 141(b)(6)(A) provides that, for purposes of determining impermissible trade or business use, use as a member of the general public is not taken into account. Moreover, the legislative history clearly indicates that use as an industrial customer can qualify as general public use.[6]

Although a good argument can be made that transmission facilities conceptually are not output facilities in that they don't produce products, nonetheless we recognize that the legislative history to the 1986 Act suggested some intent to treat them as output facilities.[7] Assuming such treatment, the legislative history to the 1986 Act suggests that Congress

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[6] See 1986 Act Conference Report at II-687 ("Use on the same basis as the general public (including use as an industrial customer) is not taken into account.").

[7] See 1986 Act Conference Report at II-689 ("output (e.g., power but not water) projects such as electric and gas generation, transmission, and related facilities").

intended for this general public use principle to apply fully to output facilities.[8]

Although the legislative history goes on to provide two examples involving power pooling and exchange agreements and very short-term 30-day spot sale agreements,[9] we believe that these examples most reasonably should be treated as illustrative examples of the general public use principle in narrow identified circumstances raised by lobbyists at the time--rather than as any limitation on the full application of this principle in the power contract area (or any negative limitation on other permissible power contracts under existing and continued law that do not give rise to use in the first instance).

Generally available transmission contract terms may evidence the general public use of transmission.[10] We recommend that the

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[8] In the 1986 Act Conference Report, the conference committee states in relevant part that the "conference agreement provides a special limit on bond-financing for output facilities used by persons other than governmental units or members of the general public [emphasis added]," and that the $15 million limitation on output facilities applies to use by nongovernmental persons on a basis other than as a member of the general public [emphasis added]. 1986 Act Conference Report at II-689.

Similarly, in the 1986 Act House Report, the House Ways and Means Committee states as follows:

> "Similarly, bonds for a governmentally owned and operated electric utility that serves a substantial portion of the members of the general public on the same basis are essential function bonds. The fact that some customers of the utility may purchase more electric power than others or that rates charged to customers who purchase electric power in bulk may reflect volume discounts does not necessarily indicate that the output of the facility is not made available to members of the public on the same basis, as long as such transactions in substance do not approximate an output contract or a take-or-pay contract or otherwise constitute use of the bond proceeds of the issue by such customer.

[9] See 1986 Act Conference Report at II-690.

[10] These contract principles should also apply to power generation and distribution contracts for purposes of considering whether they properly should not give rise to private use based on general public use.

rates or terms of a transmission contract evidence general public use if they are based on either of the following:

(i) regulated tariff or publicly-posted rates and terms of general application; or

(ii) contractual rates and terms of general application[11] that are reasonably available[12] to a relatively broad class of similarly-situated transmission customers and that are adopted pursuant to generally recognized or prudent ratemaking principles.

In this regard, contracts that differ in terms based on service factors, such as discounts for larger volume contracts, should not invalidate the generally-available character of the transmission.

In addition, your administrative authority to provide safe harbors under the general public use principle appears to be broader than the authority to provide management contract safe harbors like those in Revenue Procedure 93-14 and thus could support contracts having terms longer than five years.[13] As an overall limiter on this general public use principle, you could consider a maximum contract term not to exceed some specified period of at least 5 years and preferably 10 years.

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[11] For authority supporting preferred treatment for various kinds of power contracts charging rates of general application, see, e.g., § 1.103-7(e), Example (13); PLR 9102046, as supplemented by PLR 9123038; PLR 8240049.

[12] The legislative history indicates that "reasonable availability" for use can qualify as use on the same basis as members of the general public. In the 1986 Act House Report, the House Ways and Means Committee stated in relevant part that "bond proceeds and bond-financed facilities that are available [emphasis added] for use by members of the public on the same basis are not treated as being used in a nongovernmental activity." 1986 Act House Report at II-521. In addition, the committee stated that use "on the same basis by all members of the general public may be determined by reference to reasonable availability for use, rather than actual use, in certain cases.

[13] In the 1986 Act House Report, the conference committee cites the existing management contract safe harbors as an instance in which "limited use of facilities by nongovernmental persons on a basis unlike that of the general public is disregarded in certain cases." 1986 Act House Report at II-521, Footnote 36.

In summary, we recommend that transmission properly should be analyzed and treated as the national, interconnected transportation system for the movement of electric power that is available for general public use by all participants in the power industry on the same basis. The closest analogy is to roads which the tax law consistently has treated as eligible for the general public use exception to private business use.[14]

C. Recommend alternatively that FERC-mandated or comparable FERC-sanctioned wholesale wheeling transmission lines be disregarded for policy reasons.

Absent full adoption of our first recommendation to treat transmission use as general public use, we recommend alternatively that FERC-mandated wholesale wheeling be disregarded for private business use purposes for policy reasons. Similarly, we recommend that voluntary wholesale wheeling, such as that done by FERC-approved RTGs, also be disregarded for private business purposes in circumstances in which FERC-mandated wheeling could be reasonably expected to be available. This approach would advance the previously-discussed significant national energy policies encouraged in the 1992 Energy Act. We stress that FERC can mandate such wheeling only when it finds it to be in the "public interest" under section 211(a) of the Federal Power Act, as amended by section 721 of the 1992 Energy Act.

As an anti-abuse limitation, you could consider limiting the benefit of this wholesale wheeling exemption to those transmission facilities that are "not designed differently, sized larger, built sooner, or constructed in a more costly fashion" than necessary for the applicable public power system to service its native load.[15]

We believe that the potential for abuse is low in the transmission area in part because the national transmission network essentially is in place and includes over 600,000 circuit miles. We expect that new capital investments in transmission will consist primarily of incremental additions to accommodate new power sources and load growth. In either case, additions are expected to be jointly planned to reinforce the transmission network and reliably improve power transfer capability.

If you nonetheless were concerned particularly about inappropriate tax-exempt financing of new transmission facilities (which we believe to be unfounded), you could consider limiting

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[14] See, e.g., § 1.103-7(c) and § 1.103-7(e), Example (10).

[15] See PLR 9227020.

the benefit of this recommended policy rule to existing transmission facilities.

D. Other recommendations on discrete transmission use and measurement.

1. Introduction.

In general, if you consider favorably either of our previous recommendations to disregard transmission use on general public use or policy grounds, the recommendations in this section will have less application. If you reject these previous recommendations or in any event if a case involves an isolated discrete transmission line that doesn't really support the transmission network, it will be necessary to measure and allocate transmission use. Although transmission facilities are different from output facilities in that they don't produce products, we have assumed that you will give effect to the indications in the legislative history to the 1986 Act that treat transmission facilities as output facilities. Due to the special nature of transmission facilities, however, we believe it is important to provide some specific guidance on transmission use because none currently exists. We have several recommendations in this area.

2. Generally retain the Treas. Reg. § 1.103-7(b)(5) subparagraph (5) output rules and nameplate capacity principles.

As discussed further in the next section, we recommend that you generally retain the "subparagraph (5) output" rules under Treas. Reg. § 1.103-7(b)(5), as modified to delete the 3% minimum guaranteed debt service rule directed by Congress,[16] and apply them to discrete transmission use. Except with respect to the 3% rule, the legislative history suggests that Congress effectively endorsed a continuation of this present law methodology.[17]

3. Measuring transmission capacity and use.

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[16] See 1986 Act Conference Report at II-689, Footnote 14 ("Specifically, Treasury is directed to delete the special exception under which users of 3% or less of the output of a facility are disregarded in calculating whether the issue satisfies the trade or business test and security interest test.").

[17] See 1986 Act Conference Report at II-687 ("The conference agreement generally retains the present-law rules under which use by persons other than governmental units is determined for purposes of the trade or business test.")

a. Maximum transmission capacity.

No good analogy to generation "nameplate" capacity exists for transmission. Several factors affect the measurement of transmission capacity, including temperature of the transmission lines, constrained tie-lines in a regional transmission system or interconnections with other systems, and power displacement from electric current flowing in opposite directions. Various aspects of transmission can be measured.

The "thermal capacity" of a transmission line is based on the maximum amount of electric current that can flow through a line at different ambient temperatures. As the ambient temperature increases, the maximum amount of electric current that can flow reliably through the lines decreases, and vice-versa. The voltage rating of the line multiplied by the maximum current capability of the line equals the thermal capacity of the line. For purposes of determining use of a transmission line to effect a wholesale power transaction, the line's thermal capacity has little meaning for integrated transmission network operations because wheeling transactions almost never occur on a single line. For a truly discrete transmission line, thermal capacity may be one measure of maximum capacity.

Another measure, "transfer capability", is a transmission network concept that defines the amount of power that can be reliably transmitted from one area of the network to another. Transfer capabilities are evaluated using network power flow models that estimate the amount of power that can flow from any one area defined within the network to any other area defined within the network. The evaluation of transfer capability takes into consideration the thermal capacity of all lines in the network, the current generator and bus loadings on the network, and the probability of any key power system element being out of service under those conditions.[18] Transfer capability is a more conservative measure than thermal capacity in that it recognizes constraints in the transmission network.

b. Load share ratios.

Arguably, the most promising and reasonable approach to transmission measurement is the FERC-approved approach that focuses on the aggregate megawatts of generated power needed to serve the aggregate load served by the entire transmission system. For example, if a region required 1,000 megawatts of

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[18] Transfer capabilities are defined with respect to first contingency, second contingency, etc. The ability of the system to effect a power transfer properly to assure reliable operation in the case of one or more of the contingencies not functioning during the transfer.

power to be generated to serve its aggregate load in ultimate retail customers, and a public power system in the region needed 100 megawatts of generated power to serve its share of the load, the public power system reasonably should be allocated 10% of the cost and use of the regional transmission system that serves that aggregate load.

This approach recognizes that a regional transmission system is designed to meet the needs of all loads in the region and that these needs are defined primarily by the size of the load to be served (as contrasted with the specific capacity characteristics of an individual transmission line or the specific contract demands for power of a member of the regional transmission system in a particular year). For decades, the FERC has applied this principle in its administration of transmission cost allocation in wholesale rates.[19]

The final FERC order under the 1992 Energy Act in the Florida Power case mandated network transmission services and adopted this transmission allocation approach based on the relative "load shares" of the parties using the network transmission system. The load shares are based on a ratio of the average of the 12 monthly peak loads (in megawatts) of the public power system to the average of the 12 monthly total system peak loads (in megawatts). Because FERC's definition of system load includes all retail customers as well as wholesale customers that have an obligation to serve load, the public power system's 12 month peaks must also be included in the total system peak loads. Furthermore, FERC directed the IOU to factor in the public power system's ownership of transmission facilities to give the public power system credit for the contribution of network facilities that it owns.

The load share principle potentially could be applied as a measure of the maximum capacity of a transmission line. Under this application, the maximum capacity of any transmission line that is part of a transmission network could be viewed as equal to the aggregate megawatt load served by the network. This approach assumes that under some scenario, with the failure of other transmission lines in the network, any transmission line in the network potentially could be called upon to serve the total load of the entire network.

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[19] Between 1972 and 1988, FERC issued 48 Opinions on transmission cost allocation, most of which dealt with the issues of how to allocate cost responsibility for the integrated transmission network. Specifically see American Electric Power Service Corporation, Opinion 311, 44 FERC ¶ 61,206, August 2, 1988.

c. Recommended transmission use allocation methods.

We recommend that you specifically endorse the following methods for allocating transmission capacity and use:

(i) the "load share" ratio allocation principles for transmission approved by FERC in the Florida Power case, as discussed previously;

(ii) another transmission use allocation method generally approved by FERC, including, without limitation, a methodology agreed upon by a FERC-approved RTG; and

(iii) another reasonable transmission use allocation contractually agreed upon by the parties using the transmission system, based on all the facts and circumstances.

Transmission use allocations between public power systems and IOUs have an inherent economic check because the economic interests of the parties are adverse. We stress that, due to the industry flux in transmission arrangements, it will be important for the regulations to provide sufficient flexibility to cover evolving transmission arrangements.

d. Special considerations on transmission network use allocations.

For joint transmission network arrangements, the allocation of transmission use on a network basis using native load share ratios or other agreed-upon use allocations would require substantial re-thinking of traditional concepts on tracing use of tax-exempt bond proceeds to make the concept workable. The following example highlight the issue:

Example. Suppose a public power system had a 1% native load share of a transmission network otherwise comprised of IOUs. Suppose further that the public power system issued $100 in tax-exempt bonds to finance its 1% share of the transmission facilities on the transmission network. The only workable way to allocate use of the $100 of tax-exempt bond proceeds to the transmission network would be a methodology that permits the public power system to be treated as the sole user of the $100 in tax-exempt bond-financed transmission facilities representing its capital contribution to the network. If, alternatively, the $100 of tax-exempt bond proceeds were required to be traced in the traditional manner to the individual transmission facility, but the use of that $100 transmission facility were required to be allocated on a network basis to result in 1% use by the

the public power system and 99% by the IOUs, this result would be an unmitigated disaster for public power systems.

To reiterate, we strongly emphasize that it would be untenable to combine traditional tracing of tax-exempt bond proceeds with network-based transmission use allocation principles in the alternative manner described in the above example. This potential combination of allocation principles could impair the tax-exempt status of a very substantial amount of tax-exempt bonds. This potential has deterred some public power systems from joining RTGs encouraged by national energy policy.

You could look to some very limited regulatory analogies for support for flexible network-based allocation methods for analyzing use. For example, the "fund accounting" principle in the reimbursement regulations[20] reduces required tracing of individual projects. Similarly, the arbitrage joint bond yield authority[21] permits the IRS Commissioner to aggregate the yields on certain bond issues.

The difficulties presented by these issues further support the merits of our previous recommendations to disregard private transmission use on either general public use or policy grounds. If, however, you were to reject those recommendations, we encourage you to provide flexible, workable transmission network use allocation methods.

In cases that do not involve joint use of an entire transmission network, by FERC order or contractual arrangement, to serve the native load of the network and in cases involving off-network sales, the "contract path" principle should continue to apply fully. Thus, in a case involving a discrete point-to-point transmission contract, the contract path principle should apply. In contract path determinations and power swapping arrangements, the focus should be on "net" power outflows or inflows.

e. Closest transmission analogue to a take-or-pay contract is a firm transmission contract.

For purposes of applying the subparagraph (5) output rules, the closest transmission analogy to a take-or-pay contract would appear to be a "firm" transmission contract. Under a firm transmission contract, an entity reserves transmission capacity on a firm basis in that it has very high priority access to that capacity and very few priorities that can interrupt that access.

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20 See § 1.150-2(e)(2)(ii).

21 See § 1.148-4(a).

A firm transmission contract, however, is more in the nature of a reservation of capacity or demand, and to that extent is less indicative of use than a take-or-pay contract.

Significantly, in this regard, the original 1971 proposed version of the current subparagraph (5) output rules, which original proposal was set forth in proposed § 1.103-7(b)(3)(iv)(a) and (b) published on June 5, 1971, included demand charges as an independent type of contract that could give rise to a transfer of benefits and burdens of ownership and private business use. The final version of the subparagraph (5) output rules deleted the demand charge basis and thus it is arguable that a firm transmission contract to reserve transmission capacity should not give rise to private business use.

III. Other recommendations on private activity bond regulations.

A. Introduction.

In this section, we make additional, mostly non-transmission specific, recommendations on other private business use issues affecting public power systems. We point out that all the members of the Large Public Power Council ("LPPC") are also members of APPA and we generally support their separate recommendations to you on related private activity bond tax issues. We nonetheless believe our related specific recommendations may be helpful to give you perspective on this area.

B. Generally retain the subparagraph (5) output rules and nameplate capacity principles.

1. In general.

We recommend that you generally retain the "subparagraph (5) output" rules under Treas. Reg. § 1.103-7(b)(5), as modified to delete the 3% minimum guaranteed debt service rule directed by Congress. Except with respect to the 3% rule, Congress effectively endorsed a continuation of this present law methodology.[22] In general, we urge you not to extend the boundaries of private business use for output facilities (or any other facilities for that matter) beyond their existing boundaries grounded in benefits and burdens of ownership

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[22] See 1986 Act Conference Report at II-687 ("The conference agreement generally retains the present-law rules under which use by persons other than governmental units is determined for purposes of the trade or business test.")

principles.[23] In light of the reduced 10% private business use threshold, we believe that it is increasingly particularly important to provide brighter lines and further guidance, including some positive safe harbors, on the private business use boundaries for output facility use.

In PLR 9247012, the IRS endorsed the subparagraph (5) output rules and stated in part as follows:

> "We believe that the underlying purpose of the special rules applicable to output facilities is to provide state and local governments with the practical flexibility to finance output facilities for their own needs. Congress implicitly recognized that, because of such concerns as the cost effectiveness of economies of scale and the need to plan for utility needs far in advance, output facilities financed with tax-exempt bonds will commonly be used by both public and private users."

We recommend that you retain the concept of nameplate capacity in measuring power generation because this is a reasonable, objective, and known standard. In addition, we believe it is important to recognize the special, public-interest reasons to maintain reserves of power generation capacity to protect against electricity outages. We recommend that any prescribed measurement methodology take into account these needed reserves. If you are considering applying alternative present value principles to private business use generally or to output facilities in particular, we would recommend that you continue to recognize nameplate capacity and necessary reserve requirements for power generation.

2. Further clarify take-or-pay contract boundary.

We recommend that you provide further guidance to clarify the boundary on types of output facility contracts that do and, perhaps more importantly, do not, transfer the benefits and burdens of ownership so as result in impermissible private business use under the subparagraph (5) output rules. Section 1.103-7(b)(5)(i)(a)(1) of the existing regulations counts the following contracts and we recommend that you limit covered contracts to these specified contracts or economically comparable contracts:

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[23] See, e.g., 1986 Act Conference Report at II-692 ("Similarly, an output or management contract with respect to a bond-financed facility generally is not treated as a loan of bond proceeds unless the agreement in substance shifts significant benefits and burdens of ownership to the purchaser or manager of the facility.").

(i) a "take-or-pay" contract, which should be interpreted to mean a guaranteed[24] contract to pay for power whether or not it is provided; and

(ii) a "take" contract, which should be interpreted to mean a guaranteed[25] contract to take and pay for power if it is provided.

Solely to increase the certainty in this area and not as a substantive boundary, we recommend that you consider providing some positive safe harbors to make certain that some types of power contracts do not result in private business use. For example, we believe that the following contracts should not cause private business use under existing law and we recommend that you provide safe harbors to confirm this:

(i) any IOU contract to purchase power for a term not to exceed at least 5 years and preferably 10 years, provided that it is subject to a "back out" provision which allows the purchaser to cancel on reasonably short notice without cause (e.g., 3 years) so long as the back out provision has substance (e.g., the purchaser has reasonable potential alternative power sources);

(ii) any IOU "requirements" contract, provided that the amount of power required is not effectively fixed;[26] and

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[24] We recommend that you expressly clarify the need under existing law for a strong guaranteed-type contract to cause use. In part, this recommendation is intended clarify a very slight ambiguity regarding Congress's instructions to delete the 3% guaranteed debt service payment rule. We believe that this deletion was intended to eliminate the special disregard of the described 3% contracts, but was not in any way intended to change the basic principle that a "guaranteed" type of take-or-pay or take contract is necessary for private business use of output facilities. Thus, for example, IOU contract to purchase power that is not guaranteed at all in that it has low-priority, interruptible, or "as-available" terms should never give rise to use under existing law or the new regulations.

[25] Id.

[26] See, e.g., PLR 9125007; PLR 8240049.

(iii) any IOU power-exchange and power-swapping contracts of the type endorsed in the proposed safe harbor in the legislative history to the 1986 Act.[27]

For retail distribution contracts, in the increasingly competitive environment, to enable public power systems to survive in competition against IOUs and independent power producers, they will need the flexibility to enter into longer-term contracts to attract and retain industrial customers. If retail wheeling develops, the need for this flexibility will be even greater. We recommend that you permit longer-term contracts to the fullest extent possible without causing impermissible private business use. We recommend that you consider the general public use exception as a potential basis for longer-term industrial contracts if the contracts are reasonably available to a reasonably broad class of industrial customers. In this regard, PLR 8240049 (subsequently endorsed and expanded in PLR 9125007) contains the following good supportive statement about the general public use exception for requirements contracts:

> "In the present case, M is not guaranteed any specific quantity of power and energy from the Authority's facilities, that is, M purchases power and energy on the same basis as other customers of the Authority. If the Authority's resources are insufficient to meet the total needs of its customers, the Authority will allocate such resources in such manner as it deems most in the public interest; M has no right to control the allocation. Accordingly, M has none of the benefits and burdens of ownership of the Authority's facilities."

3. De minimis exceptions.

In addition, although Congress pretty clearly expressed an intent to delete the 3% minimum guaranteed debt service rule

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[27] See 1986 Act Conference Report at II-690. We reiterate that the safe harbors against private business use in the legislative history to the 1986 Act most reasonably should be treated as illustrative examples in narrow identified circumstances raised by lobbyists at the time rather than any overall negative implication regarding other permissible power contracts under existing law or any limitation on your ability to provide additional safe harbors.

under § 1.103-7(b)(5)(a)(2),[28] we recommend alternatively that you provide a general de minimis exception to private business use to simplify the whole private business use area. We recommend that a 1-2% general de minimis exception to private business use would provide useful simplification without undue threat to the fisc.[29]

4. Change existing subparagraph (5) output "contract term" to issue term.

The existing subparagraph (5) output rules generally contemplate output contracts that have terms corresponding to the entire term of the related tax-exempt bond issue. We believe that some technical modification to the measurement of output use is necessary to provide proper treatment of covered contracts that are shorter than the entire term of the bond issue. We recommend basically that you change the denominator in the mathematical measurement of output contract use from "contract term" to the term of the tax-exempt bond issue.

C. Permit the reasonably-allocable governmental portion of mixed use output facilities to be financed with tax-exempt bonds.

We recommend that you provide clear guidance that permits the governmentally-used portion of a mixed use output facility to be financed with tax-exempt bonds without volume limitation. In this regard, for purposes of the $15 million limitation on output facilities under section 141(b)(4), we recommend that you follow the positive example in the 1986 Act Conference Report that clearly would permit the governmental portion of an output

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[28] See 1986 Act Conference Report at II-689, Footnote 14 ("Specifically, Treasury is directed to delete the special exception under which users of 3% or less of the output of a facility are disregarded in calculating whether the issue satisfies the trade or business test and security interest test.").

[29] Cf Notice 87-69, 1987-2 C.B. 378, at § (b) (disregards certain incidental uses up to 2.5%).

facility to be financed with tax-exempt bonds without volume limitation, regardless of ownership.[30]

We stress that mixed use allocation principles are particularly justifiable for electric power facilities because electric power use is fungible and commonly provided with facilities having both public power systems and IOUs as recipients of the fungible electric power.[31]

In addition, the legislative history to the 1986 Tax Act contains a number of positive indications of support for reasonable mixed use allocation rules for private business use purposes in various related contexts.[32] These mixed use allocation principles are very defensible on the basic ground that, so long as the use is reasonably allocated between the qualifying and nonqualifying use, there simply is no good tax policy reason or threat to the fisc that would justify denying the proportionately reduced amount of tax-exempt bond financing for good governmental purposes of public power systems.

More generally, we recommend that you extent the mixed use allocation principles, most recently evidenced in § 1.150-2(c)(3) of the final arbitrage regulations, for all private activity bond purposes. In all events, however, we believe that those principles make sense for mixed use power facilities that provide fungible electric power.

D. Provide clear definition of project for purposes of the $15 million private use limitation on output facilities under section 141(b)(4).

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[30] See 1986 Act Conference Report at II-690, Examples (1) and (2). By the same token, we recommend that you disregard the inexplicable reversal of those positive examples in the 1986 Act Bluebook effected by changing them from examples of use to examples requiring joint ownership. See 1986 Act Bluebook at 1163. See also § 1.103-7(e), Example (15).

[31] See PLR 9247012 (permitting a mixed use allocation in a power contract case); PLR 9125050 (permitting a mixed use revenue allocation in a case involving "fungible" research revenues).

[32] See 1986 Act House Report at II-528 (mixed use airports), II-529 (mixed use docks and wharves), II-530 (mixed use mass commuting facilities, II-538 (mixed use 501(c)(3) organization facilities). See also 1986 Act Bluebook at 1158.

We recognize that legislative repeal of the very restrictive, indeed punitive, $15 million private use limitation on output facilities under section 141(b)(4) is the only meaningful way to eliminate the restrictive effect of this provision on power facilities. We urge you to support that legislative repeal.

Absent such legislative repeal, however, we believe that it is important to provide specific guidance on the definition of "project" under this provision to assure power financings greater certainty of compliance with this low private business use threshold. In particular, we recommend that you define the term "project" in a manner that permits clear separations of facilities from being treated as part of the same project.

In particular, we recommend that you define project generally as any functionally integrated and related capital project, subject to specified exceptions. We recommend that you consider the following factors as potential bases for separating projects:

(i) significant separations in time of financing or time facilities are placed in service, such as a one-year separation;

(ii) functionally separate or independent generation, transmission (e.g., separate transmission lines between separate substations), and/or distribution facilities;

(iii) separate ownership or separate beneficial use;

(iv) separate wholesale retail customer bases served by the facilities; and

(v) other clearly discrete governmental purposes, such as environmental Clean Air Act improvements or incremental transmission line additions.

In general, we recommend that you extend the mixed use allocation principles that were begun in § 1.150-2(c)(3) of the final arbitrage regulations to apply for all private activity bond purposes.

IV. Additional background on the electric power industry.

A. In general.

This section provides additional general background on the electric power industry and specifically describes public power systems. Four types of utility entities currently own the existing, integrated electric power industry: IOUs, public power systems, cooperatives, and the Federal government. In all four utility groups, individual business structures are regionally diverse, yet, due to the highly integrated nature of electrical systems, they largely operate according to common guidelines and principles.

The qualities of electricity as an energy source give it many advantages over other energy sources. Electricity can: be converted to heat with 100 percent efficiency; refrigerate or pump three times the amount of heat energy as electrical energy used to drive the pump; provide controlled mechanical work with great efficiency and precision; and illuminate our surroundings. Furthermore, electricity has very significant environmental benefits over direct fuel burning energy sources.

From 1970 to 1990, in the United States, aggregate energy use increased approximately 20% and electrical energy use increased approximately 70%. This trend is expected to continue as more processes take advantage of the efficiencies and environmental benefits of electrotechnologies.[33] As the United States economy continues to grow, electric use will follow closely.

From a regulatory perspective, this industry is in the midst of a very significant restructuring from vertically integrated, regulated monopolies to functionally separate operating companies. Some companies remain subject to regulation and others are relegated to competitive markets. This transition has accelerated dramatically since enactment of the 1992 Energy Act.

B. Relative sizes of electric utilities.

There are approximately 2,000 public power systems, that serve the electrical requirements of approximately 14 percent of the United States population, commerce and industry. Over 35 million people receive electric service from a public power system. In contrast, about 260 IOUs serve about 76 percent of

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[33] See Electricity for Increasing Energy Efficiency, Electric Power Research Institute Journal, April/May 1992. See also Electrotechnology Reference Guide, EPRI Project No. TR-101021 (Rev 2) Final Report (RP2613-10).

all kilowatt sales to ultimate customers. IOUs are expected to continue to consolidate. Rural electric cooperatives serve nearly 8 percent and Federal Power Agencies serve the remaining 2 percent. The median sized public power system serves 1,700 customers.[34]

C. Regulatory background and historic regulated monopoly structure.

Utilities have historically operated as "vertically integrated" industries in that they own generation, transmission, and distribution facilities needed to assure delivery of their generated power. The natural monopoly characteristics of the industry necessitated either public ownership or regulation of IOUs. Prior to large scale interconnection of utility transmission networks in the 1950s, small public power systems ran vertically integrated utilities consisting of only generating and distribution plant. Currently, however, most small public power systems are geographically surrounded by, and "transmission-dependent" on, larger IOUs, public power systems, and cooperatives to transmit electricity for distribution to their ultimate customers.

In 1935, the Federal Power Act (16 U.S.C. § 824j) (the "1935 Federal Power Act"), extended federal authority, now vested in the Federal Energy Regulatory Commission ("FERC"), to regulate IOUs on matters including power generation sales for resale and transmission rates and terms. Also in 1935, the Public Utility Holding Company Act (15 U.S.C. § 79 et seq.) ("PUHCA") granted jurisdiction to the SEC to regulate IOU holding companies. In 1978, the Public Utility Regulatory Policies Act (16 U.S.C. 2601 et seq.) ("PURPA") required IOUs to either grant transmission access to, or to purchase power at avoided costs from, certain qualified cogenerators and small power producers.[35] The PURPA provisions not only marked the emergence of independent power producers, it also spurred the creation other corporate entities created to build generating plants for the sole purpose of selling electricity for resale to the existing, vertically integrated utilities.

As previously discussed, the landmark 1992 Energy Act has had a very significant impact on promoting a competitive power

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[34] For recent statistical data, see generally Public Power magazine, January-February 1994 (American Public Power Association) at pages 72-73.

[35] Under PURPA, the definition of avoided costs was left to State regulatory commissions. Most commissions have used a form of long-run marginal cost to set avoided cost rates.

generation and bulk sale market and mandating open transmission access.

D. Generation, transmission, and distribution functions.

This section discusses the three main functional components of an electric power system: generation, transmission, and distribution. It is important to understand that the purpose of an integrated electrical system is to serve the electrical requirements, or load, of all customers on the system. An electrical system must instantaneously produce and deliver the electrical requirements of all connected customers, or the system will cease to function.[36]

1. Generation function.

a. In general.

Generation means the production of electricity. Generating capacity, or the ability to produce adequate electrical power output to meet the load requirements, is measured in kilowatts or megawatts of electric power. (1 kilowatt= 1 thousand watts; 1 megawatt= 1 million watts; 1 gigawatt= 1 billion watts). For reliability reasons, there must be generating capacity in excess of the system load.

Generation costs represent approximately two-thirds of the total cost of delivered electricity. Power generation costs consist of a fixed capital cost component and a variable operating cost component, principally variable fuel costs. There are several types of fuels used to generate electric power, including coal, gas, hydro, nuclear, wind, wood, and oil. All interconnected utilities use a mix of generating units to serve load. The choice of which generating units to use typically is based on a ranking of the incremental operating costs of all available units.

There are two main types of electrical generating units: baseload and peaking. "Baseload" generating units produce power continuously to serve the portion of electrical load that always

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[36] When the system does not have adequate resources to serve load, a phenomenon known as voltage collapse occurs. Systems are designed to increase generator output, or in emergencies, shed loads to avoid voltage collapse on the network.

exists on the system.[37] "Peaking" units produce power that is needed only at certain peak times of the day or year. Baseload generating units are generally the most fuel efficient and can achieve low operating costs under continuous operation. Peaking units must have the ability to rapidly change power output to match the changes in load requirements. Peaking units are typically less efficient and have higher operating costs than baseload units, but they also have lower capital costs.

A unique and important characteristic of the power generation function is the need to maintain generating capacity in excess of forecast peak loads, or reserve capacity, ranging from 15% to 25%. These reserves protect against emergency shortages of electricity and blackouts. Reserve requirements are determined by system planning studies that consider the impact of generating unit outages on the ability of the system to continue to serve load. Because all utilities will have greater access to generating units on the electric power system, it is possible that increased transmission access as a result of the 1992 Energy Act could lead eventually to reduced generating capacity reserve requirements.

The 1992 Energy Act significantly opened up a market for competition in generation. The clear intent of Congress was to foster conditions needed to create a competitive electric power market that would place greater reliance on competitive forces to discipline prices and bring out the greatest overall economic efficiencies that utilities can achieve. In the last several years, independent power producers and affiliated power producers, now dubbed "EWGs," have installed the majority of new power generating capacity. Although a fully competitive market structure has yet to form, these entities are jockeying to gain greater shares of the emerging market.

b. Nameplate capacity.

"Nameplate capacity" is an objective measure, certified by both manufacturer and purchaser, of the capacity that a generating unit can reliably produce at the time of purchase. Although nameplate capacity commonly is equated with maximum capacity, it can be more or less than actual maximum capacity depending on many factors such as the type of unit, weather, specifications, age, and housing. Moreover, manufacturers

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[37] There never ceases to be some demand for electricity. Typically, the average load on an electrical system is about sixty percent of the peak load. As a rough approximation, one can assume that baseload units will serve the average load on the system.

generally use conservative assumptions to certify nameplate capacity. Large base load units may lose capacity as they age. Peak load gas units may have a little higher capacity than nameplate capacity at the outset. Some units may be operated aggressively in excess of nameplate capacity, but are likely to suffer a future derating due to excess wear and tear.

We believe that nameplate capacity continues to be the most reasonable measurement standard for generation capacity and use because it is an objective, uniform, and accepted industry standard. While other periodic performance measures are made of generating units, these measures are primarily used as system planning indicators.[38] Owners can have a reasonable expectation that a new generating unit will, on average, produce the power equivalent to the machine's nameplate capacity.

2. Transmission function.

a. In general.

Transmission is the intermediate function in which power, produced by generators, energizes a network of high voltage transmission lines that are connected to loads that draw power from the energized network. The interconnected transmission system in the United States is a network constructed to serve the needs of all customers within the three North American interconnections.[39] When power is generated, it enters the transmission network and flows, through the path of least impedance, to the nearest loads, regardless of whether those loads are served by the utility that owns the generating unit. While utilities are required at every instant to generate the equivalent amount of power consumed by their loads, plus a share of the energy lost in the transmission system, there can be no certainty that power generated by a specific utility has flowed only to its own loads. The transmission network is used by all utilities in the region as a carrier of all electricity produced to all loads in the region.

The term "electrical network" means a system of transmission or distribution lines so crossed-connected and operated as to

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[38] After the 1965 New York blackout, the North American Electric Reliability Council began collecting annual data about generation unit performance.

[39] Refer to the North American Electric Reliability Council definitions of the Eastern Interconnection, Electric Reliability Council of Texas, and the Western Systems Coordinating Council.

permit multiple generating sources to supply power to any principal point on it.[40]

The term "wheeling" means the transmission of electricity from one utility to another. Although a wheeling transaction involve a receipt point and a delivery point, the transmission lines that interconnect the receipt and delivery points are in most cases part of an interconnected network. In a wheeling transaction, two or more interconnected utilities agree that one utility will receive a specific amount of power from a generating unit or tie line connected to its transmission facilities, and that the other utility will use this power to serve load at a delivery point connected to its transmission facilities. According to a predetermined schedule, power will flow from the generator into the network and be drawn from the network to serve load.

The public power community includes both owners and non-owners of transmission facilities. Based on 1992 financial data on gross plant ownership of transmission facilities, IOUs owned $57 billion (72%), public power systems owned $9.3 billion (12%), the Federal Government owned $7.3 billion, and rural cooperatives owned $5.8 billion share (7%) in the $79.4 billion transmission system in the United States.[41] Relatively, public power systems have a somewhat lower market share of owned high voltage transmission facilities than generation and retail distribution facilitie, as compared to IOUs. Non-owners are dependent on contracts with surrounding utilities from whom they have secured long-term interconnections to serve their distribution customers loads.

3. Retail distribution function.

a. In general.

The final function of a power system is retail distribution. A utility distribution system consists of substations, overhead and underground distribution lines, circuit protection, and

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[40] See Inter-Agency Committee on Water Resources, Glossary of Important Power and Rate Terms, Abbreviations, and Units of Measurement (Federal Power Commission, 1965).

[41] According to data compiled by APPA in 1988 from the Public Power--Utility Information Survey and the EEI Statistical Yearbook, public power systems owned approximately 7% of the circuit miles of higher voltage transmission lines in the range of 132-800 kilovolts and approximately 10% of the lower voltage transmission lines in the range of 22-131 kilovolts.

transformers. Substations contain switches and transformers that lower the voltage from high voltage transmission levels (69 kilovolts to 765 kilovolts) to voltages suitable for distribution to customers load centers (2.4 kilovolts to 35 kilovolts). The high voltage distribution lines leaving a substation are called "feeders." Feeders conduct electrical power into smaller transformers that reduce the primary distribution voltage to the levels required by customers (120/240 volts, 480 volts).

Once power is drawn from the transmission network into a substation, it will be used by a customer load and will not re-emerge on the transmission network. Notably, although some distribution facilities have network characteristics, most distributions facilities consist of discrete radial lines. Network distribution facilities have limited transfer capability that covers small regions and are easily distinguishable from the high voltage transmission network.

b. Retail wheeling.

Recently, there has been considerable debate over proposals in California and elsewhere to mandate "retail wheeling." Retail wheeling means the transfer of power from the generators of one utility to the retail customer of another utility. The utility that provides the generation is compensated for its production and transmission costs, while the utility, whose customer is being served, is only compensated for use of the distribution system that serves the customer. We believe that widespread retail wheeling will occur only after the benefits of competition have been proven in wholesale power markets.

Final Version

ABA Private Activity Tests Task Force
Output Facilities

The ABA Private Activity Task Force recommendations as to the application of the private activity bond tests to output facilities are set forth below. In general, it is the sense of the Task Force that "output" bonds are a relatively unique and somewhat limited area. In addition, in light of the fact that Congress reviewed the basic rules relating to output facilities in 1986 and made only limited changes, our general recommendation is that the existing approach be retained, modified only as necessary to reflect those specific changes.

I. The term "output" should be defined in a clear and objective manner.
   A. Inclusions should be specific (e.g., electrical and gas generation and transmission, water production, storage and distribution); subsequent to the promulgation of final regulations, additional types of facilities may then be added to the "list" by published ruling or by notice.
   B. Consistent with the existing regulations and the 1986 Act, only electric and gas generation, transmission and water collection and distribution should be included on the initial list of "output" facilities.

II. Guidance must be provided as to what constitutes a "facility (or any other facility which is part of the same project)" under Code section 141(b)(4). This definition needs to be clear and completely objective, above all else.
   A. Circumstances indicating "separateness" should include any of the following: ownership, the proximity of the sites for each facility, whether the facilities serve the same purpose or the same customer base, whether the facilities are interdependent or when the facilities are designed or placed into service.

III. The existing "output" regulations at section 1.103-7(b)(5), examined by Congress in the 1986 Act and changed in only minor ways, should be retained with minor clarifications as to the concept of "use" and its measurement.
   A. Each type of output facility should have an objective basis for determining "output" that is the equivalent of "nameplate" for electric generation; for instance, for electrical transmission the standard should be thermal capacity.
      1. Guidance should also be provided as to when reliance on such objective measures is inappropriate (e.g., the "no rulings" policy indicated in section 4.01(6) of Revenue Procedure

89-3), in light of the fact that section 1.103-7(b)(5)(ii)(b) specifically provides that capacity is not to be reduced for "reserves or other unutilized capacity" and Congress did not alter that standard in their 1986 Act revisions to the output rules. As is currently the case, outages for scheduled maintenance should not reduce the total "output."

B. "Use" should not include the provision of services in a manner available to any similarly situated consumers of the service, e.g., pursuant to a published tariff schedule. Normally, any form of arm's-length contract between an industrial customer and a bona-fide municipal utility should not be private use.

C. The ability to disregard non-exempt users making guaranteed minimum annual payments not exceeding 3 percent should be deleted in accordance with section 1301(i) of the Tax Reform Act of 1986.

1. Existing law should be clarified as to whether use by two or more non-exempt persons requires guaranteed annual payments or whether Congress intended to eliminate both the 3 percent threshold and the requirement for guaranteed annual payments. It is hard to see that someone making no guaranteed minimum annual payments is bearing any of the burden of the debt service on the bonds.

2. As to the 3 percent threshold, the Conference Report to the 1986 Act indicates Congress intended that the deletion of the 3 percent requirement was to "reflect the reduced limits on such [private] use." See H. Rep. 841, 99th Cong, 2d Sess at p. II-689, fn 12. Thus, maybe the 3 percent requirement should be changed to 10/25ths of 3 percent.

D. As is the case under section 1.103-7(b)(5)(i), "use" should include only arrangements (i.e., "to take or to take-or-pay for" contracts) that effectively transfer the benefits of ownership of the facility and the burdens of paying the debt service on the obligations that finance that facility.

1. Thus, a requirements contract or other contract under which a consumer of the service is not required to take or to take or pay for a fixed amount of output or where payment is made according to tariff should continue to not result in private business use. See, e.g., LTR 8240049; LTR 9125007; LTR 9102046 as modified by LTR 9123937.

2. The regulations should confirm the meaning of the phrase "to take or to take or pay for"; that is, contacts "to take" require payment so long as the resource is capable of providing the service while contracts "to take or pay" require payments in all

instances, whether or not the resource is capable of producing output.

E. The safe-harbors as to deminimis use, described in the "Bluebook" prepared with respect to the 1986 Act should be incorporated into the regulations. In addition, take and pay contracts for output should not be treated as "use" unless they are either (i) anticipated at the time of, and incorporated into the structure of, the financing or (ii) entered into on a non-arm's-length basis and with an intention to pass through the burdens and benefits of the financing or (iii) for a term in excess of, for instance, 5 years by analogy to the management contract guidelines of Revenue Procedure 93-19. The current regulations clearly did not contemplate post-issuance contracts because the "contract term" always begins when the first output is taken under the contract. This makes sense where the contract is part of the financing plan but would make no sense as applied to a contract entered into 10 years after a facility is placed in service.

F. Use that actually is, or would reasonably be expected to be, mandated by a superior governmental entity (e.g., "wholesale" wheeling ordered by FERC) should not constitute use of the facility unless it is part of a plan to evade the limitations of section 141 at the time original bonds are issued.

G. Exchange or Pooling Arrangements between municipal utilities and private utilities should be counted only to the extent that the municipal utility expects to be (or is actually) a net exporter of the service on, e.g., an annual basis. Emergency consumption should not be counted.

H. If the "nonqualified amount" should take into account time-value concepts, consistent with the approach taken in Notice 87-69, guidance should be provided as to the appropriate discount rate in the event multiple issues finance the same project and the allocation of investment proceeds.

I. Issuers should be free to allocate sales of system power among any of their available generating resources.

J. In electrical transmission, guidance should be provided as to the degree to which the tax analysis can continue to rely on "contract path."

K. "Loop-flow" and other uncontrolled energy flows that occur more or less instantaneously from any number of points of interconnection should be disregarded regardless of whether the issuer receives payments for such occurrences.

L. Where capacity in a transmission line is reserved, actual interuptible use by others of that reserved capacity should not be construed as use by the actual users. Otherwise, rules must be promulgated to prevent double counting of the same transmission capability.

IV. Allocations

A. Non-proceeds should be allocable on a consistent basis to any portion of a facility, at the discretion of the Issuer, and the issuer should be able to allocate private use to the portion of the facility financed with non-proceeds first.

FILE NO.	SUBJECT

(9)

94-0684 Status report presented by the Department of Water and Power, Chief Legislative Analyst and the City Attorney relative to the California Public Utilities Commission's (CPUC) proposal to reform the California electric industry's regulatory structure.

DISPOSITION Cont to next meeting

COMMENTS FROM PUBLIC ON ITEMS OF PUBLIC INTEREST WITHIN COMMITTEE'S SUBJECT MATTER JURISDICTION

DEPARTMENTS SUBMITTING WRITTEN REPORTS OR MATERIALS DURING THE COMMITTEE MEETING MUST PROVIDE COPIES TO EACH COMMITTEE MEMBER AND TWO ADDITIONAL COPIES TO THE CITY CLERK - ONE COPY FOR THE COUNCIL FILE AND THE SECOND COPY TO BE MADE AVAILABLE FOR PUBLIC INSPECTION DURING THE MEETING

CN0214.AGD

Department of Water and Power the City of Los Angeles

RICHARD J. RIORDAN
Mayor

Commission
DENNIS A. TITO, *President*
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JAMES F. WICKSER, *Assistant General Manager—Water*
PHYLLIS E. CURRIE, *Chief Financial Officer*

October 13, 1994

Commerce, Energy and Natural
Resources Committee
c/o Office of the City Clerk
Room 395, City Hall
Los Angeles, California 90012

Dear Committee Members:

This is in response to your letter of July 25, 1994 formalizing the Commerce, Energy and Natural Resources Committee's (Committee) request of June 28, 1994 for a report (Report) on potential impacts on the City relative to the California Public Utilities Commission's (CPUC) proposal to reform the electric industry's regulatory structure in California. At that meeting, the Committee was informed by the Los Angeles Department of Water and Power (Department) that it would take several months to provide the information requested. In response, the Committee directed the Department to provide status reports, on the Department's efforts, directly to the Committee.

At the August 30, 1994 Committee meeting, the Department presented a status report on the Department's efforts to provide the requested information. Mr. Donald M. Pappe, Business Planning Unit Manager, informed the Committee that the Department is focusing its efforts in three critical areas: (1) cost of service analysis; (2) assessment of future market clearing prices; and (3) a competitive rate analysis. This information will be used to determine the effects of possible rate reductions and resulting impacts to net income. Also, based on the results of these studies, cost reduction strategies and possible debt restructuring strategies to meet the challenges of future industry competition while maintaining a strong financial rating will be developed.

The market clearing price for electricity is an important issue for the City as that price will influence what measures the Department must take to market its generation and the prices it must charge its customers to remain competitive in the future. Bids received by utilities in the Pacific Northwest in June of this year indicate power produced from combined-cycle gas turbine plants used by industrial customers would be priced in the 3-1/2-cent-per-kilowatt-hour range. The Department estimates that the market clearing price in Southern California would be increased to the

111 North Hope Street, Los Angeles, California ☐ *Mailing address:* Box 111, Los Angeles 90051-0100
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4- to 4-1/2-cent-per-kilowatt-hour range because of the added transportation cost from the Northwest to the Los Angeles basin. And, there is little likelihood that any combined-cycle gas turbine-generator would be operated anywhere near 100-percent capacity and without catalytic devices that decrease the operating efficiencies of these units (these devices are not required in the Northwest because of less-stringent air quality emission requirements). The total price of electricity to each customer, of course, will reflect the transmission and distribution costs -- two variable costs that are location and capacity specific.

The Department reported to the Committee that the target date for completing the analyses of DWP's cost of service and market clearing price and validation is October 1, 1994. Since the analyses have been expanded to include residential, the target date is now November 30, 1994. The competitive rate analysis and associated financial analysis will be completed by the end of the year. The studies on these subjects are being integrated with the work associated with the Barrington-Wellesley Group Audit.

In addition to the update on the Report, a presentation was made to the Committee on the wholesale power pool concept currently being proposed by the Southern California Edison Company (SCE), the San Diego Gas and Electric Company (SDG&E), and others. Enclosed is an outline of the SDG&E pool proposal which was provided to the Committee.

The Department also presented graphs (enclosed) depicting how its rates, on average, compare to SCE's and other utilities within the Western Systems Coordinating Council. While the Department's average rates are lower than California's three largest investor-owned utilities, the Department's average rates are high when compared to other utilities on a regional basis. This is significant from the perspective that under deregulation, the Department may have to compete on a region-wide basis.

Finally, the Committee was informed that the investor-owned utilities, such as SCE, are tailoring their rates to match their commercial and industrial customers' load profiles using some 20 to 30 rate schedules for various customer classes compared with the Department which currently uses 3 to 4 rate schedules. As we move more and more toward a new era of competition, strategies involving the unbundling of services and devising rate schedules tailored more to specific customer needs will become imperative.

The information to be included in the Report has extremely sensitive strategic and competitive implications for the City, especially in a fully competitive environment. The Department is, therefore, requesting that as sections of the Report are completed, the information be presented to the Committee in closed session. This would provide the Committee Members with the opportunity to provide input or ask questions without compromising possibly sensitive competitive information.

The Department will continue to keep the Committee informed on its progress involving the aforementioned analyses and will present the results of the studies to the Committee by the target dates mentioned. If you require further assistance on this matter, please contact Mr. Pappe at (213) 367-0298.

Sincerely,

WILLIAM R. McCARLEY
General Manager

Enclosures

c: w/o Enclosures
Mr. Konrad Carter, Legislative Assistant
Ms. Cecilia Weldon
Mr. Donald M. Pappe

POOL-BASED WHOLESALE ELECTRICITY MARKET

It is argued that making wholesale markets more competitive is a vital step in any industry reform and that a competitive wholesale pool would reduce costs to customers by increasing competition in the market.

San Diego Gas & Electric Company submitted an alternate to the CPUC's Direct Access proposal. Below is a summary of the five figures in SDG&E's CPUC filings on competitive wholesale electric markets.

SUMMARY

- Electricity is a commodity in which efficient transport and trading of the physical product is in real time. Dispatch of generation and transmission is centralized.
- Access by market participants to the grid and the physical spot market is the essence of the pool-based wholesale proposal.
- The wires are a natural monopoly that should be made available to all market participants on a non-discriminatory basis.
- Equally important is that the institutional arrangements — the dispatch, pooling and economy trading processes — be available to all on comparable terms.

FIGURE 1: Structure of the Industry

- GENCOS (competitive generators) - generators who compete to sell electricity in the wholesale spot and contract markets
- DISCOS (regulated distribution & retailing utilities) - muni's and IOU's that operate local distribution systems. They buy wholesale and sell retail.
- GRIDCO (regulated monopoly transmission system) - ideally, a regional transmission grid owned and operated by a regulated company unaffiliated with any gencos or discos. Could be a RTG.
- POOLCO (central dispatch & spot wholesale market operator) - independent entity
    - dispatches the system based on energy buy/sell offers from individual gencos and discos
    - purchase short-run ancillary services (e.g., reactive power, spinning reserves) needed to maintain system performance
    - determines market clearing prices for each hour
    - settles spot transactions with the pool

FIGURE 2: Possible Ownership Arrangements

- Ownership arrangements among Gencos and Discos can take several different forms, as long as some critical separation of control and accountability are maintained:
    - Independence of Poolco
    - Arms-length dealings between Discos and Gencos
    - Neutrality of Gridco maintained

FIGURE 3: Dispatch and Pool Pricing: No Grid Congestion

- Beginning with the relatively simple case in which there are no transmission constraints, the dispatch and spot pricing process includes the following principals elements:
  - Genco Offers to Sell Energy
  - Disco Demand Projections of Bids
  - Intersystem Trading
  - A Dispatch/Market Clearing and Pool Pricing Procedure Established
  - Poolco Purchase of Ancillary System Services
  - Settlement of Pool Transactions at Pool Prices

FIGURE 4: Dispatch and Pool Pricing: With Grid Congestion

- Transmission constraints that can create grid congestion do not fundamentally change Poolco's dispatch and pool pricing process, but do require much greater attention to locational factors in offers, dispatch and pricing.

- The effect of grid congestion on pool prices at different locations can be illustrated with the following example shown in Figure 4:
  - Generator G2 at X has increased its available capacity to 20 MW and generator G4 at Y has decreased its capacity to 6 MW.
  - With more generation at X and less at Y than before, it would be desirable to transmit more energy (14 MWh/hr) from X to Y, except that transmission from X to Y is limited to 10 MW.
  - High-cost generator G5 at Y, with energy cost of $28/MWh, must be run to meet demand at Y, while G3 at X must be turned off and G2 at X, with energy cost of only $22/MWh, must run at less than its available capacity.

- With the X-Y transmission constraint binding, the pool price (defined as the incremental cost of meeting additional demand) is now $22/MWh at X and $28/MWh at Y.
- Poolco, as a net buyer of low-cost energy at X and a net seller of high-cost energy at Y, earns congestion revenue of $60/hour (the price differential between X and Y of $6/MWh multiplied by the X-Y flow of 10 MW.
- This congestion revenue is rebated to those who hold the 10 MW of rights to compensation for X-Y congestion. Because of this, Poolco bears little or no financial risk because of congestion and has no incentive to maintain or relieve grid constraints.

- Then incentive to invest to relieve grid constraints is with those who want to take advantage of the X-Y price differential but do not have compensation rights.

FIGURE 5: Bilateral Contracts in a Pool-Based Wholesale Market

- Because the pool provides and prices system services and incremental physical energy on an efficient, nondiscriminatory basis without even knowing about bilateral contracts, market participants can enter into any kind of bilateral contracts they choose and can then meet their obligations flexibly and economically.

- The contracts must take form of "contracts for differences" (CFD) that specify payments between the parties based on pool prices. The central features of a CFD are:
  - Defined quantities and prices
  - Independent or contract-specified operations
  - Periodic payments based on pool price outcomes
  - Buying and selling uncontracted quantities at the pool prices
- Once the pool price outcome is known, the parties to a CFD determine who owes how much money to whom under the contracts. These payments, which are made totally outside and perhaps without the knowledge of the pool, offset the effects of pool prices to the extent agreed by the contracting parties.
- For example, as shown in Figure 5, a simple contract may specify that a Genco at X will guarantee a Disco at Y that the Disco will get 1 MWh each hour at Y for a net price of $25/MWh. Then, in an hour in which the pool price is $26/MWh at both X and Y (as in Figure 3, where there us no congestion from X to Y), the Genco simply pays the Disco the difference between the pool price of $26/MWh and the contract energy price of $25/MWh, or $1/MWh, on the 1 MWh contract quantity. The net effect of the pool and contract transactions is that the disco pays and the Genco receives the contract price of $25/Mwh for the contracted amount.

FIGURE 1

STRUCTURE OF THE MARKET

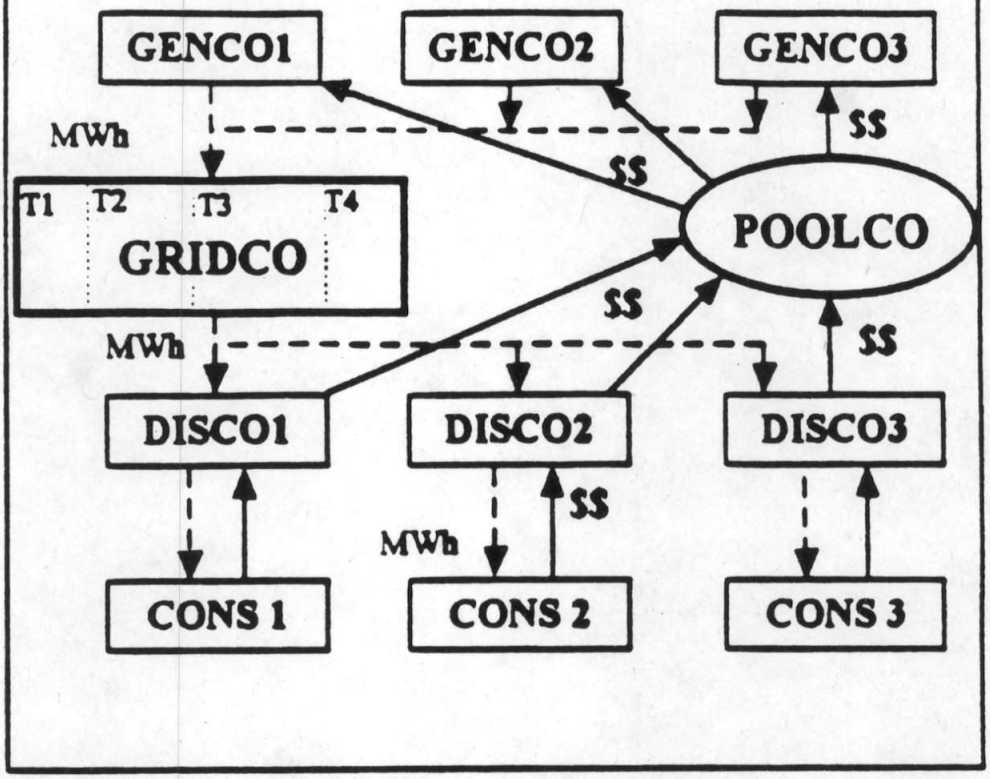


FIGURE 2

POSSIBLE OWNERSHIP ARRANGEMENTS

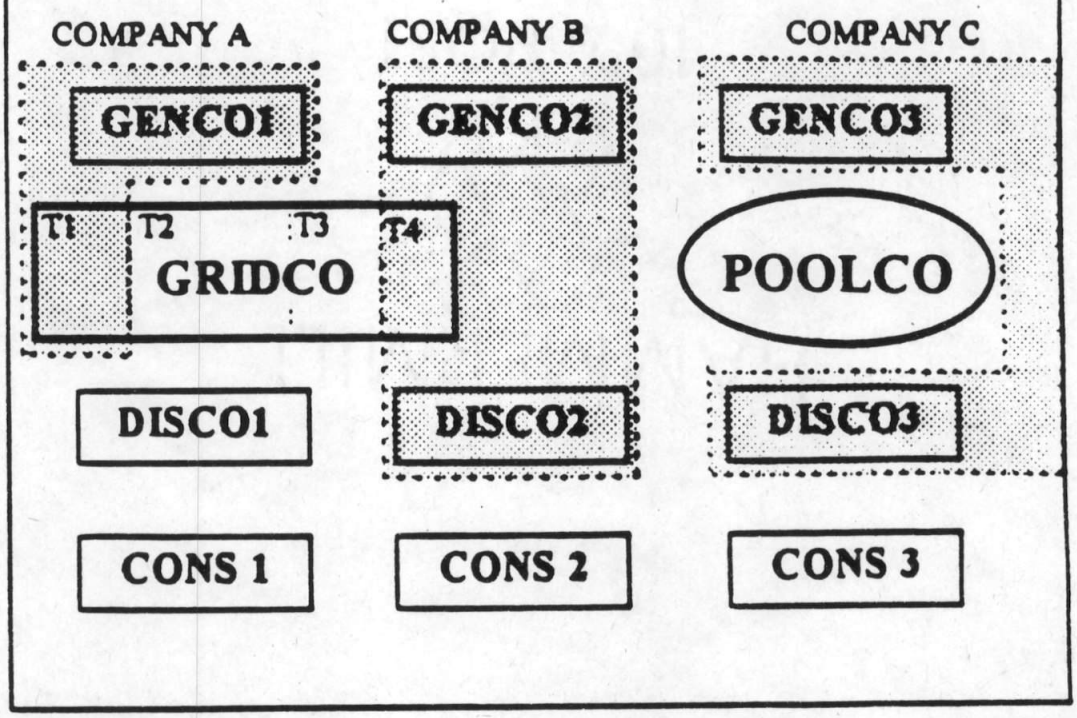
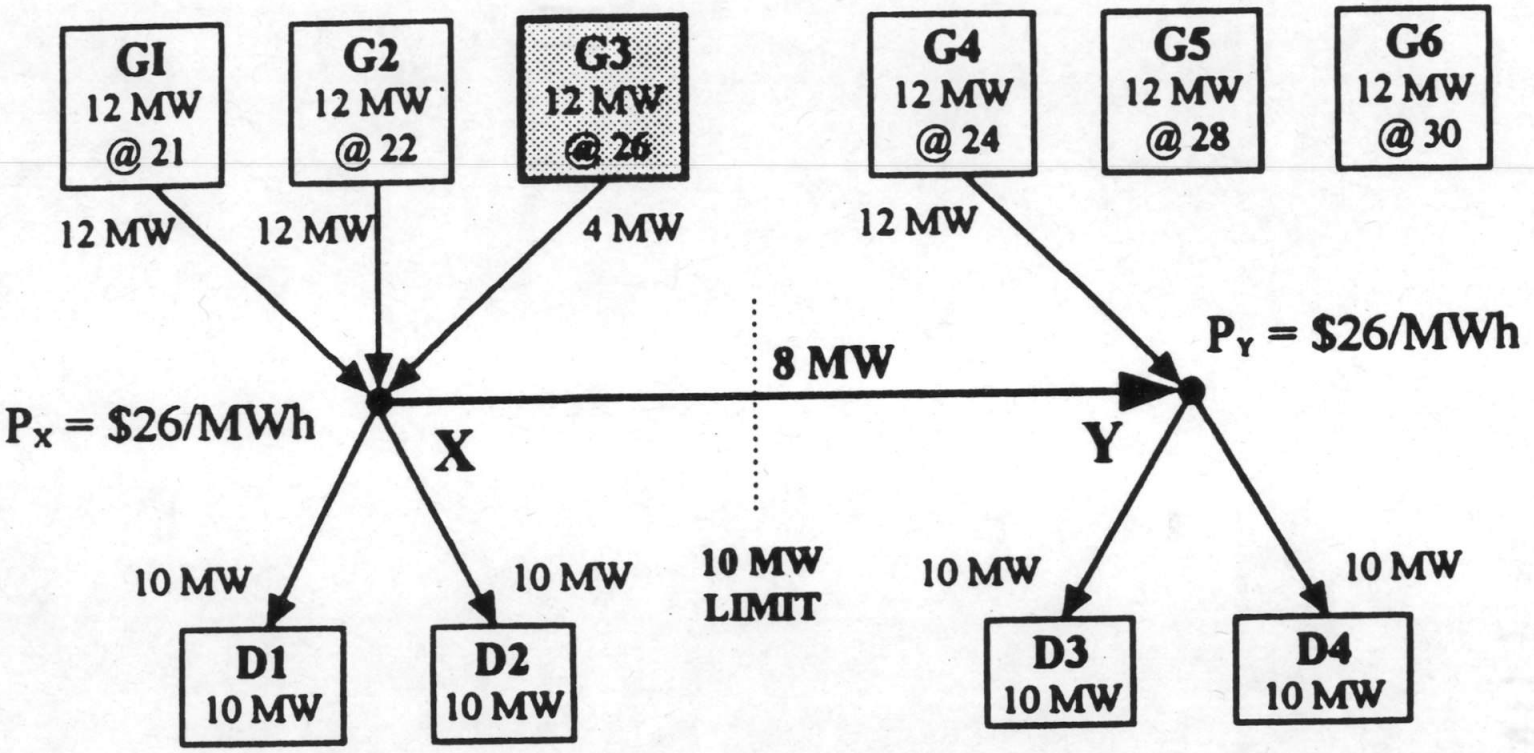


FIGURE 3

POOL PRICING: NO CONGESTION

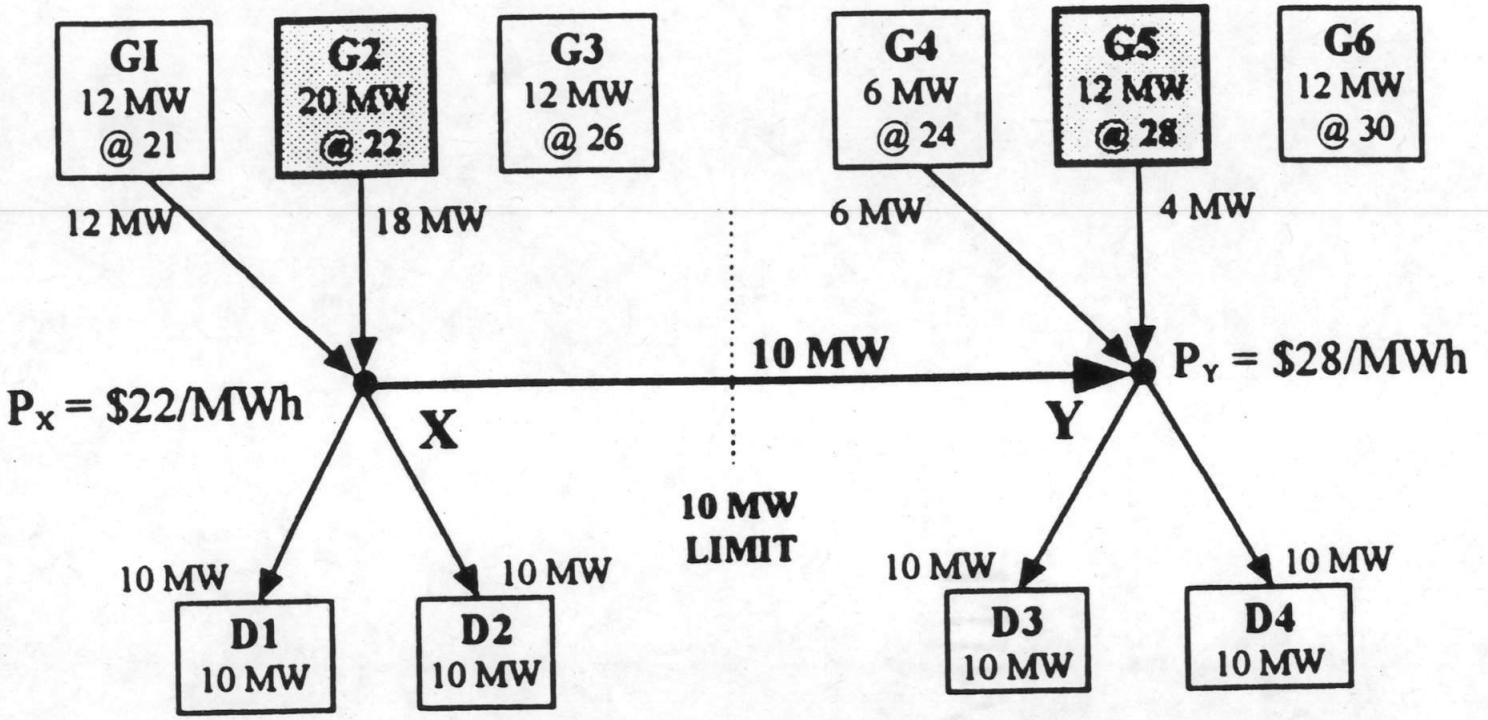


Pool Congestion Revenue = $26/MWh*40 MW - $26/MWh*40 MW

= $0/hour

FIGURE 4

POOL PRICING: WITH CONGESTION



Pool Congestion Revenue = $22/MWh*20 MW + $28/MWh*20 MW
- $22/MWh*30 MW- $28/MWh*10 MW

= $28/MWh*10 MW- $22/MWh*10 MW

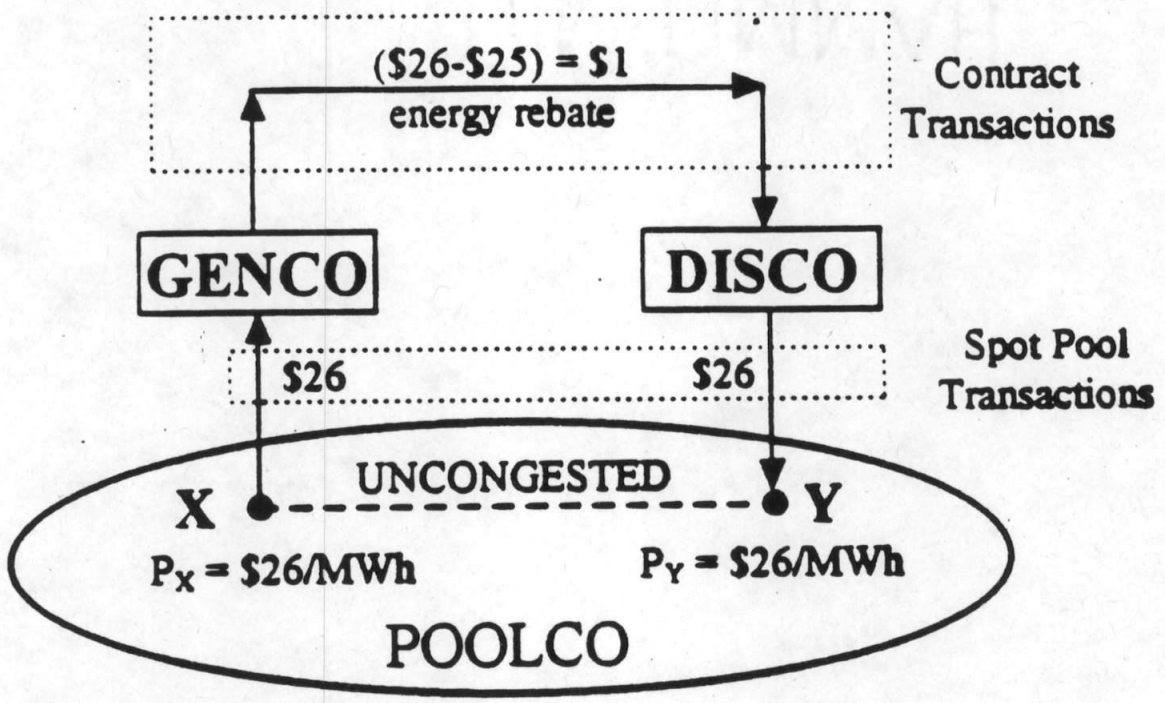
= ($28/MWh - $22/MWh)*10 MW

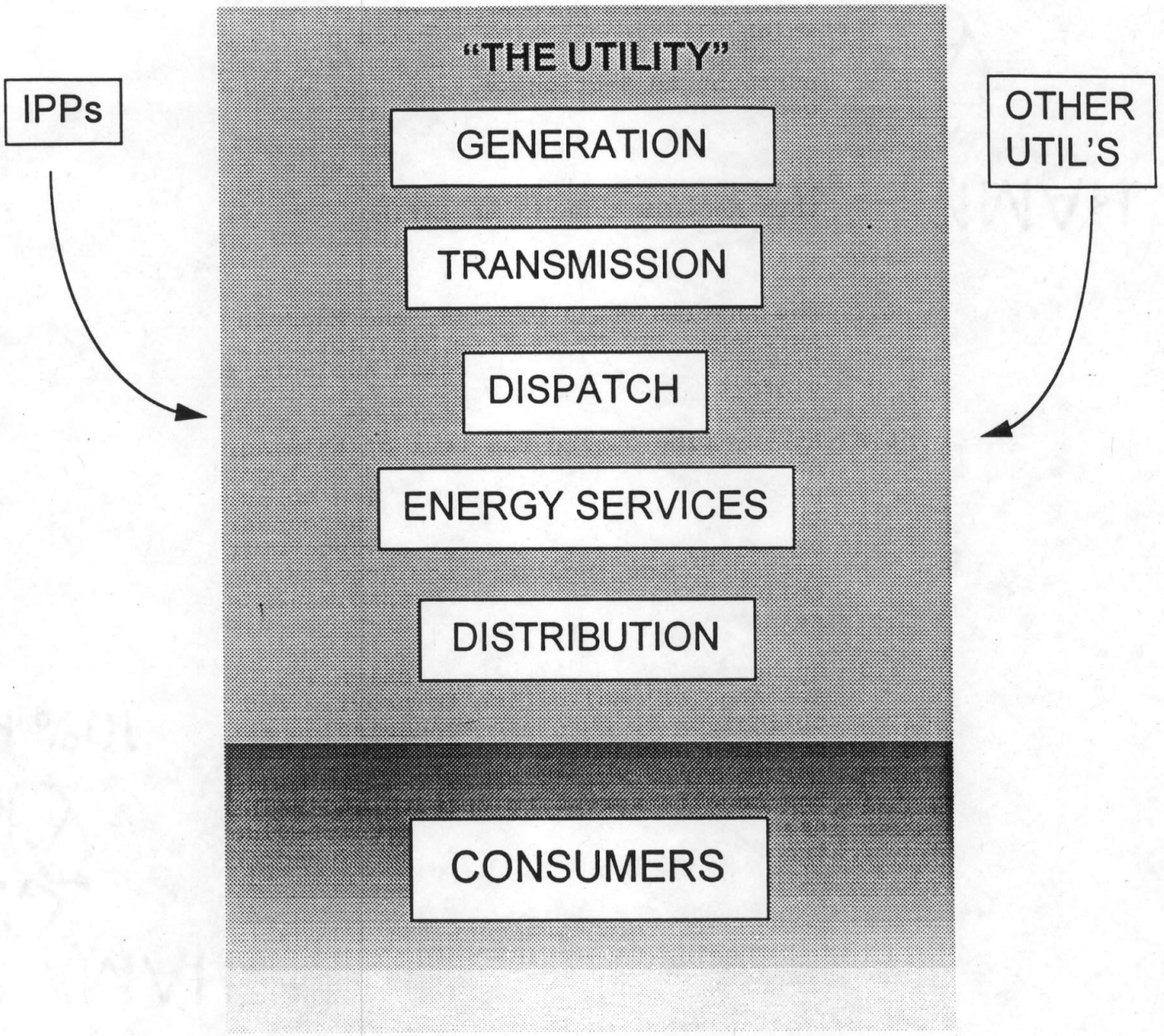
= ($6/MWh)*(10 MW) = $60/hour

FIGURE 5

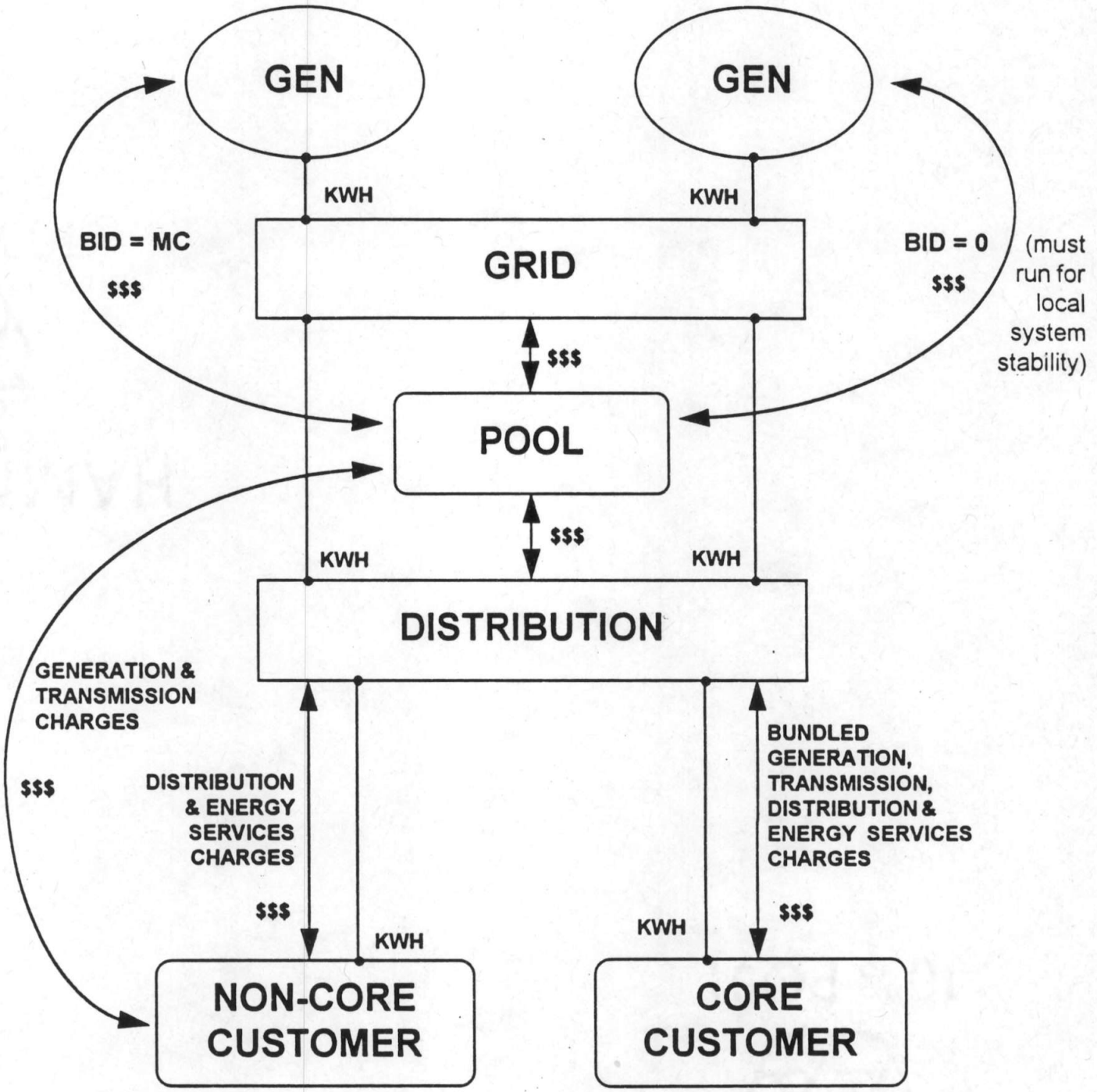
CONTRACTS FOR DIFFERENCES: NO CONGESTION

TERMS OF CFD:
Disco contracts with Genco at X to buy 1 MWh every hour at Y at a net price of $25/MWh.



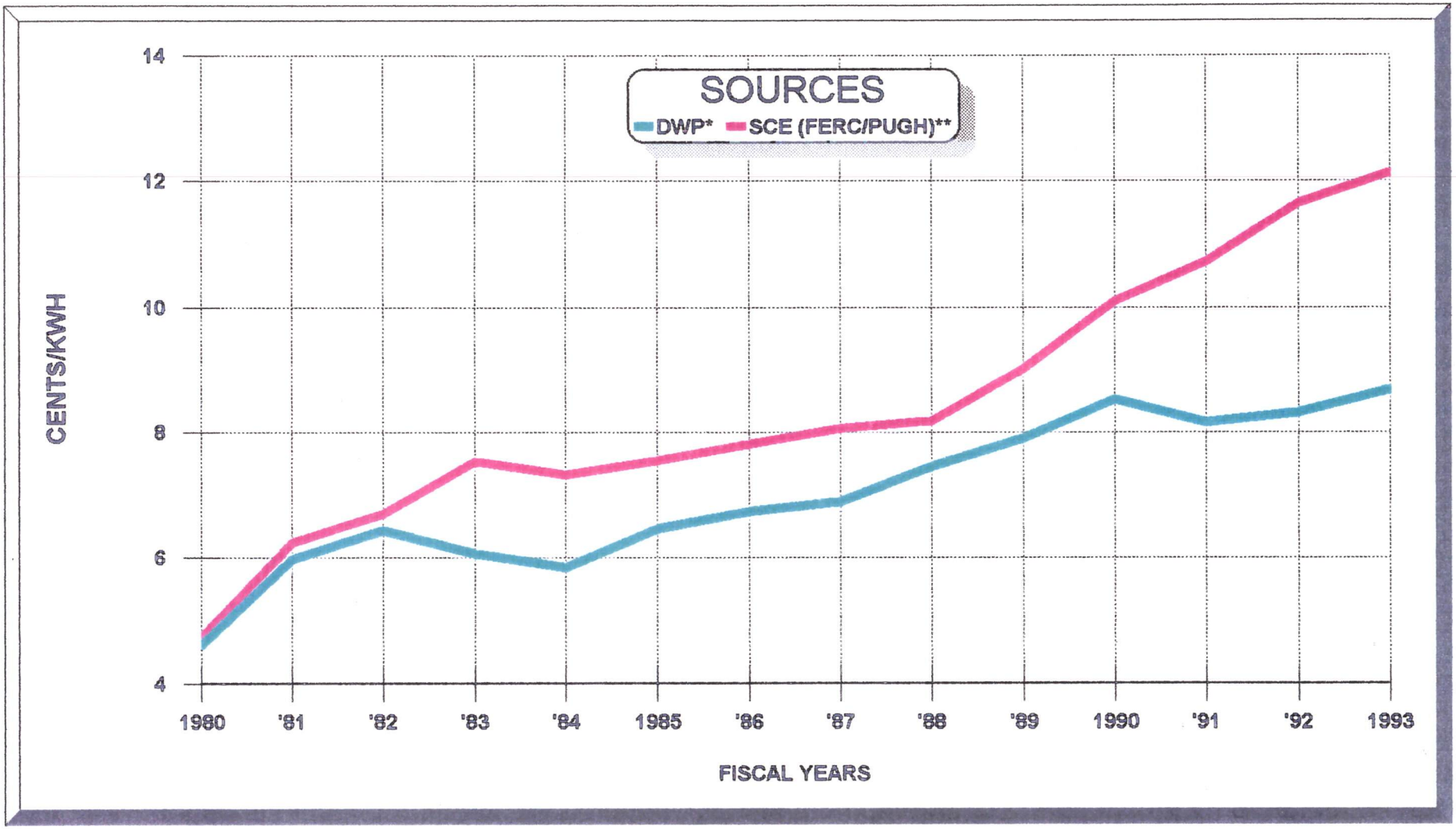

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CONSUMERS

BASIC ELEMENTS OF A CENTRALIZED POOL



AVERAGE RETAIL RATE CENTS/KWH

FOR RESIDENTIAL CUSTOMERS

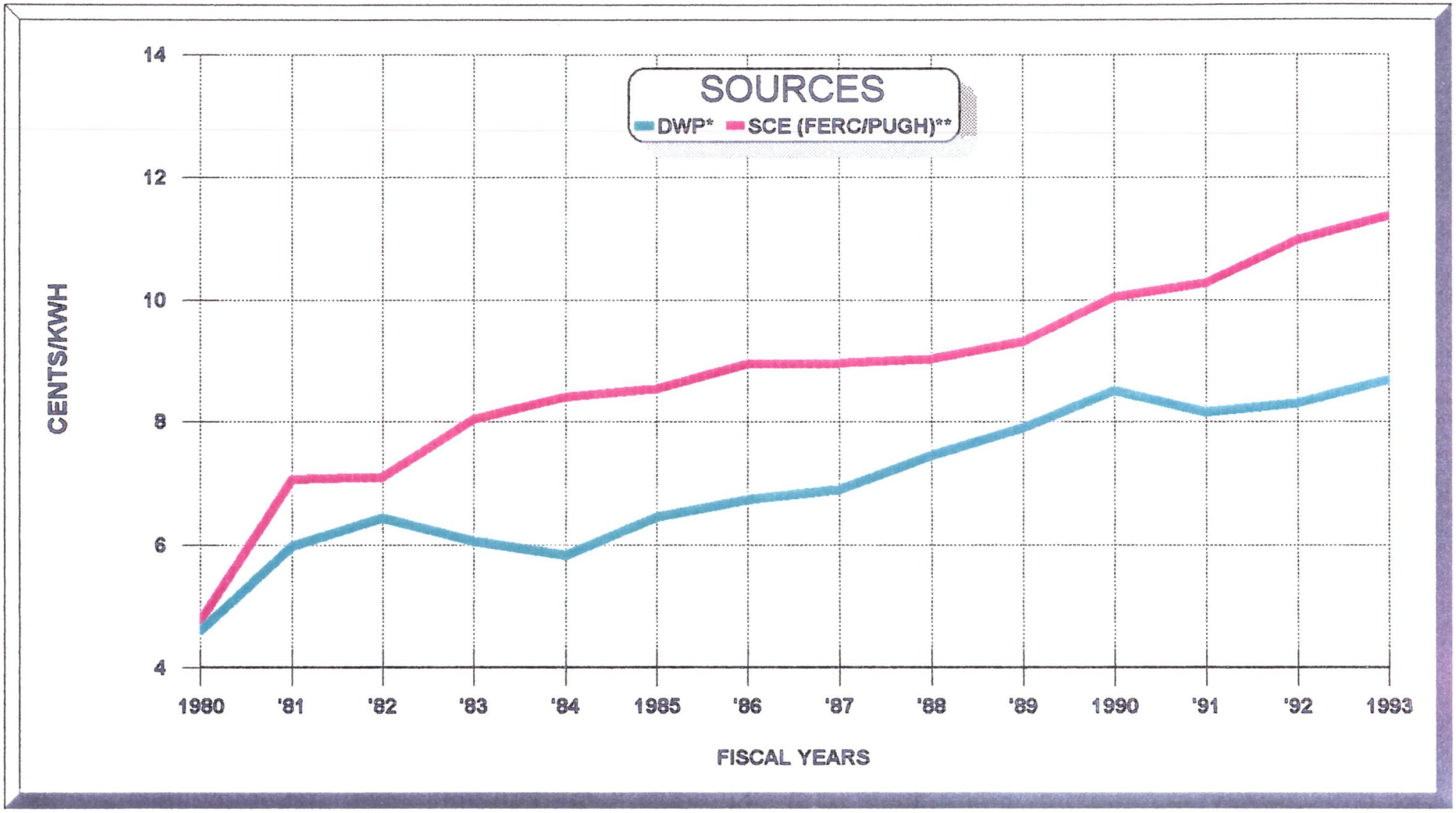


NOTES:
* RATES BASED ON STATISTICAL REPORT FOR FISCAL YEARS 1983-1992
**RATES ESTIMATES BASED ON FERC DATA COMPILED BY G.R.PUGH UTILITY DATABASE 12-1992.

5-10-1994

AVERAGE RETAIL RATE CENTS/KWH

FOR COMMERCIAL CUSTOMERS



NOTES:

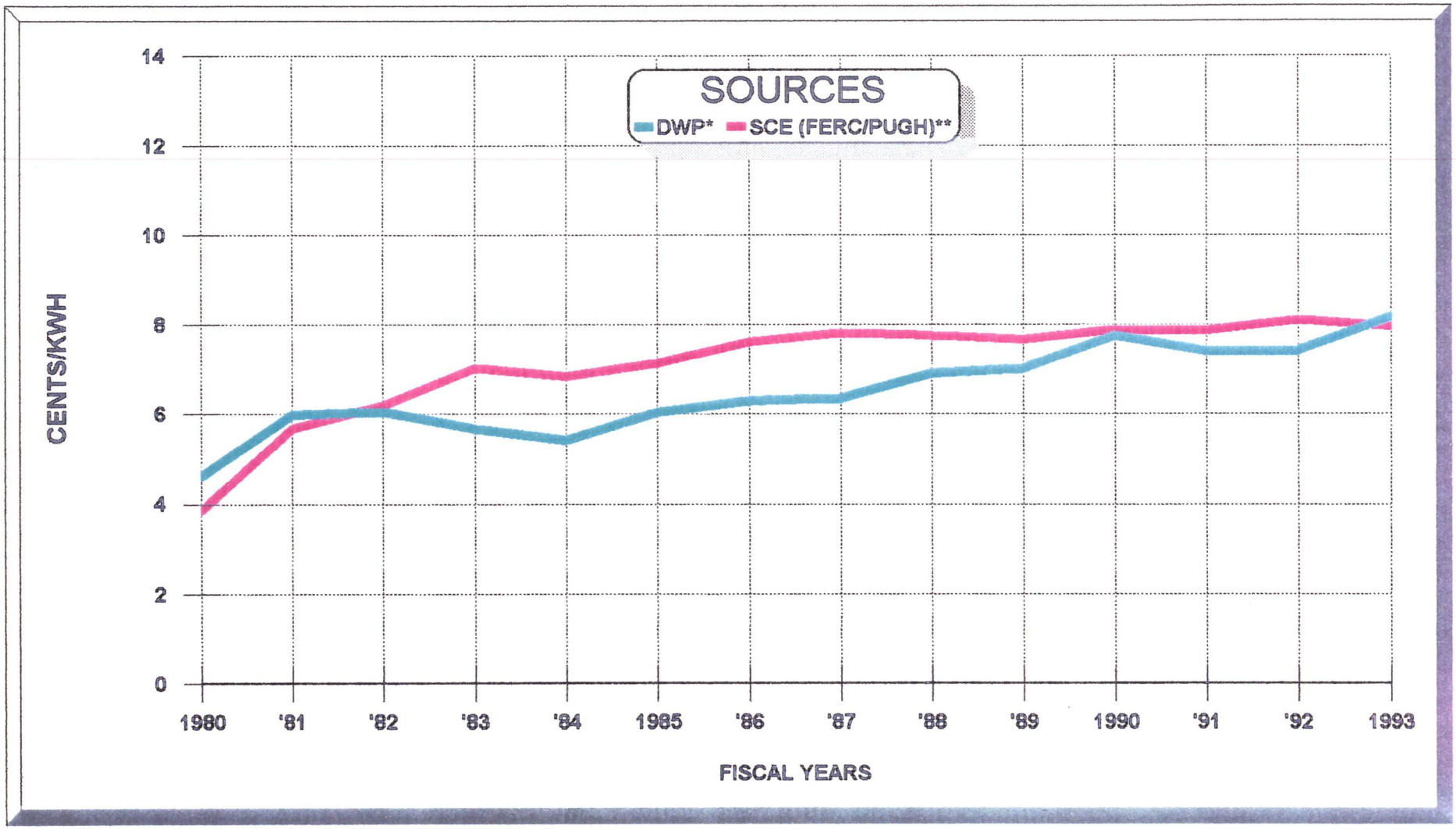
5-10-1994

* RATES BASED ON STATISTICAL REPORT FOR THE FISCAL YEARS 1983-1992

**RATES ESTIMATES BASED ON FERC DATA COMPILED BY G.R.PUGH UTILITY DATABASE 12-1992.

AVERAGE RETAIL RATE CENTS/KWH

FOR INDUSTRIAL CUSTOMERS

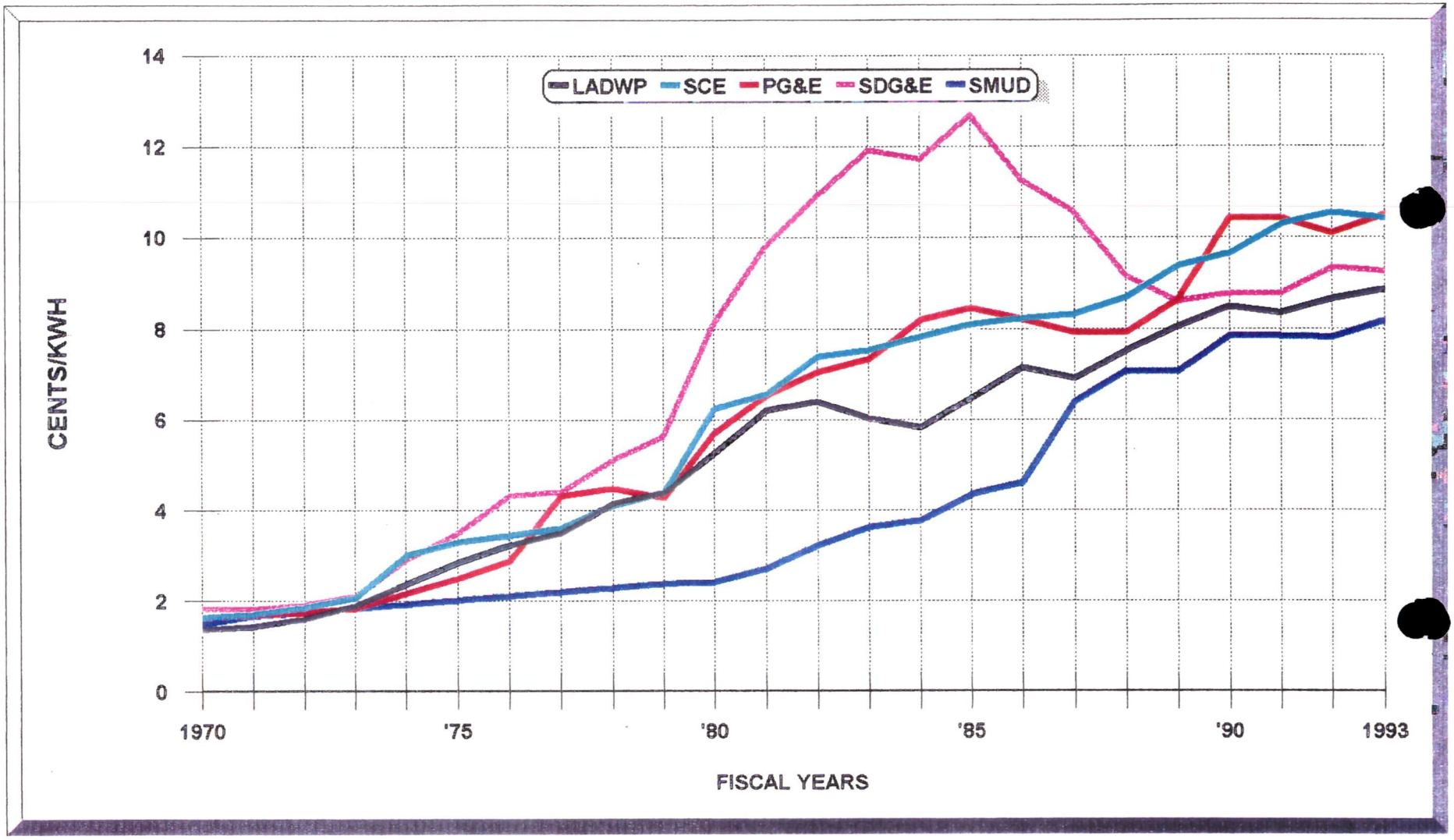


SOURCES:
* RATES BASED ON STATISTICAL REPORT FOR FISCAL YEARS 1983-1992
**RATES ESTIMATES BASED ON FERC DATA COMPILED BY G.R.PUGH UTILITY DATABASE 12-1992.

5-10-1994

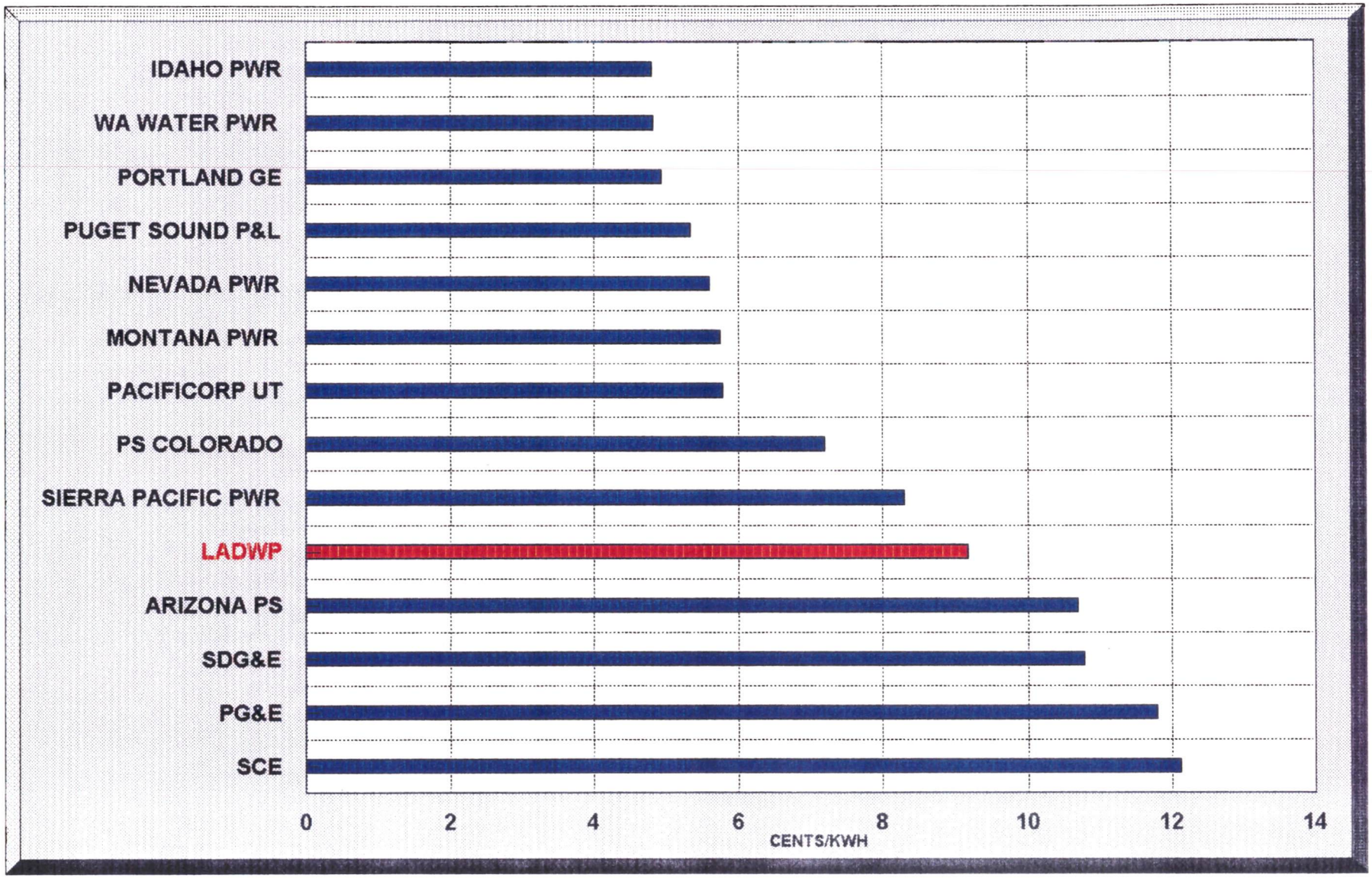
AVERAGE RETAIL RATE CENTS/KWH

SELECTED CALIFORNIA UTILITIES



CONSERVATION PLANNING
CORPORATE/STRATEGIC PLANNING

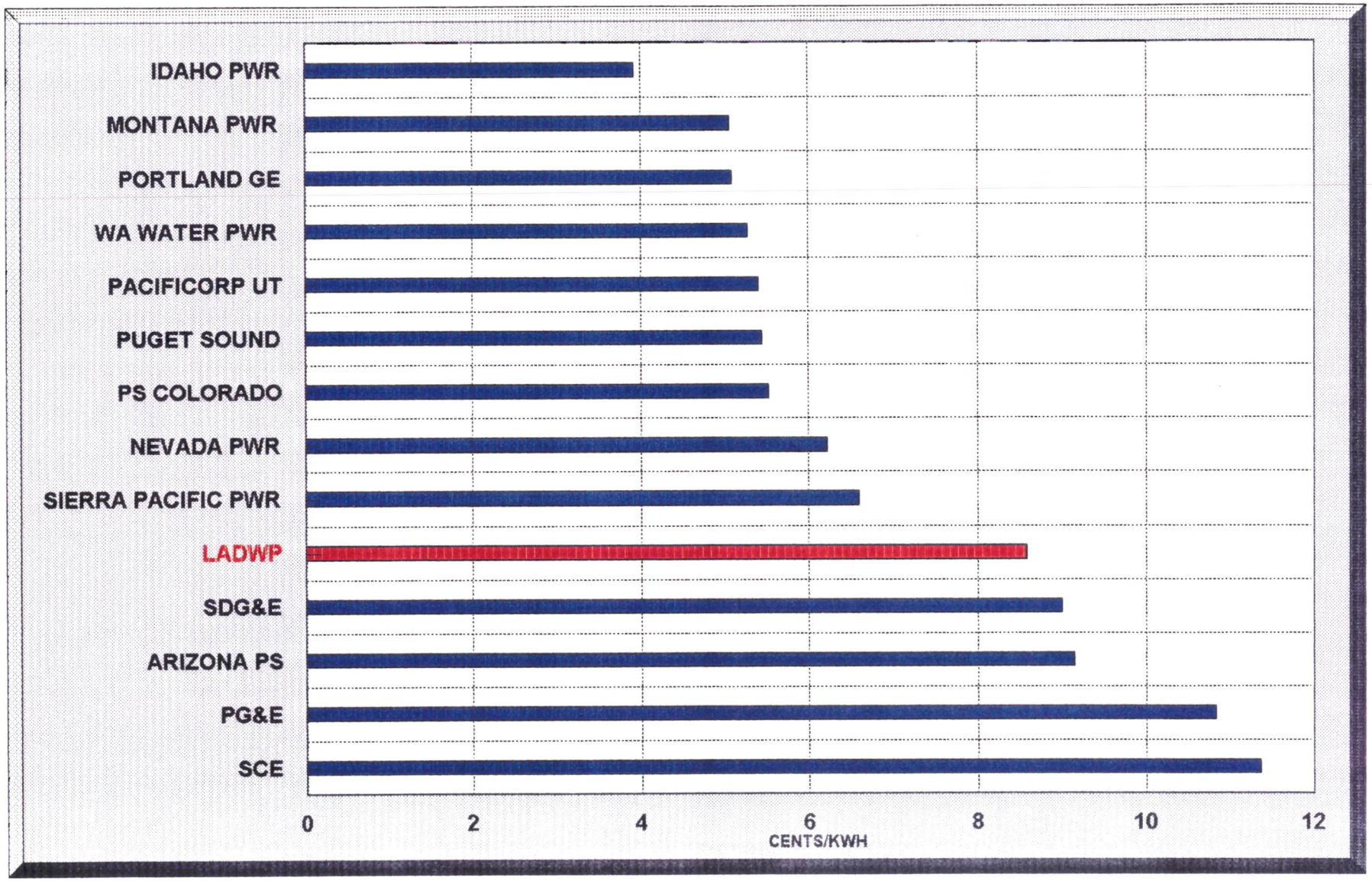
RATE PROFILE OF AVERAGE ELECTRICITY PRICES CENTS/KWH FOR RESIDENTIAL CUSTOMERS



SOURCE: G.R. PUGH UTILITY DATABASE 12-1992

5-10-1994

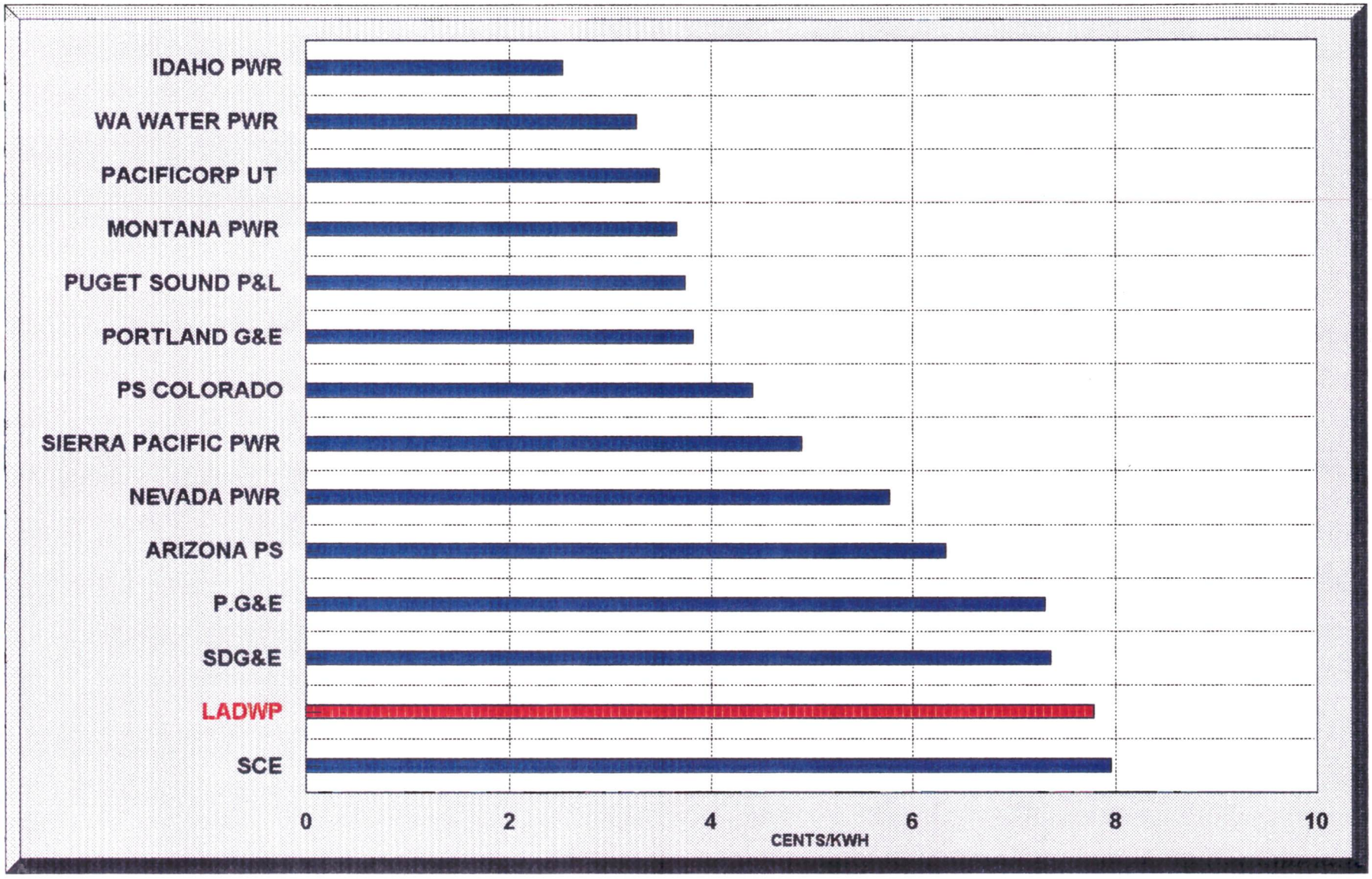
RATE PROFILE OF AVERAGE ELECTRICITY PRICES CENTS/KWH FOR COMMERCIAL CUSTOMERS



SOURCE: G.R. PUGH UTILITY DATABASE 12-1992

5-10-1994

RATE PROFILE OF AVERAGE ELECTRICITY PRICES CENTS/KWH FOR INDUSTRIAL CUSTOMERS



SOURCE: G.R. PUGH UTILITY DATABASE 12-1992

5-10-1994

SUPPLEMENTAL PAGE

SPECIAL MEETING

COMMERCE, ENERGY AND NATURAL RESOURCES COMMITTEE

TUESDAY - AUGUST 30, 1994

9:00 A.M. - ROOM 238 - CITY HALL

MEMBERS: **COUNCILMEMBER RUTH GALANTER, Chair**
COUNCILMEMBER RUDY SVORINICH, JR.
COUNCILMEMBER JOHN FERRARO

Raymond D. Crisp - Legislative Assistant - (213) 485-5775

FILE NO. **SUBJECT**

(10)

94-0684 Status report presented by the Department of Water and Power, Chief Legislative Analyst and the City Attorney relative to the California Public Utilities Commissions's (CPUC) proposal to reform the California electric industry's regulatory structure.

DISPOSITION Cont to ?

NOTE TIME CHANGE

COMMERCE, ENERGY AND NATURAL RESOURCES COMMITTEE

TUESDAY - JUNE 28, 1994

9:30 AM - ROOM 238 - CITY HALL

MEMBERS: **COUNCILMEMBER RUTH GALANTER, Chair**
COUNCILMEMBER RUDY SVORINICH, JR.
COUNCILMEMBER JOHN FERRARO

Konrad Carter - Legislative Assistant - 213.237-1615

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DEPARTMENTS SUBMITTING WRITTEN REPORTS OR MATERIALS DURING THE COMMITTEE MEETING MUST PROVIDE COPIES TO EACH COMMITTEE MEMBER AND TWO ADDITIONAL COPIES TO THE CITY CLERK - ONE COPY FOR THE COUNCIL FILE AND THE SECOND COPY TO BE MADE AVAILABLE FOR PUBLIC INSPECTION DURING THE MEETING.

FILE NO. **SUBJECT**

(1)

94-0684 Status report presented by the Department of Water and Power, Chief Legislative Analyst and the City Attorney relative to the California Public Utilities Commission's (CPUC) proposal to reform the California electric industry's regulatory structure.

DISPOSITION CLA to Return in 60 days - 9-13-94

COMMENTS FROM PUBLIC ON ITEMS OF PUBLIC INTEREST WITHIN COMMITTEE'S SUBJECT MATTER JURISDICTION

cn0512.agd

ELIAS MARTINEZ
City Clerk

J. Michael Carey
Executive Officer

When making inquiries relative to this matter refer to File No.

CITY OF LOS ANGELES
CALIFORNIA

RICHARD J. RIORDAN
MAYOR

Office of
CITY CLERK
Council and Public Services
Room 395, City Hall
Los Angeles, CA 90012
Council File Information - (213) 485-5703
General Information - (213) 485-5705

Pat Healy
Chief Legislative Assistant

94-0684
(file not transmitted)

July 25, 1994

Ronald F. Deaton, Chief Legislative Analyst
Room 255, City Hall

REQUEST FOR REPORT: CALIFORNIA PUBLIC UTILITIES COMMISSION'S PROPOSAL TO REFORM THE ELECTRIC INDUSTRY'S REGULATORY STRUCTURE

On June 28, 1994, the Commerce, Energy and Natural Resources Committee considered a status report presented by the Department of Water and Power, Chief Legislative Analyst and the City Attorney relative to the California Public Utilities Commission's (CPUC) proposal to reform the California electric industry's regulatory structure.

No action was taken by the Committee, however, the Committee Chairperson requested a report from your Office relative to identifying and analyzing and state or federal statutes that must be changed if the CPUC's proposal is adopted.

Please direct your report to the Committee in care of the City Clerk's Office, Room 395, City Hall.

Sincerely,

Konrad Carter

Konrad Carter, Legislative Assistant
Commerce, Energy and Natural Resources Committee, 237-1615

cc: Councilmember Ruth Galanter
Attn: Betty Fisher

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Executive Officer

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RICHARD J. RIORDAN
MAYOR

Office of
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Council and Public Services
Room 395, City Hall
Los Angeles, CA 90012
Council File Information - (213) 485-5703
General Information - (213) 485-5705

Pat Healy
Chief Legislative Assistant

94-0684
(file not transmitted)

July 25, 1994

James K. Hahn, City Attorney
Room 1800, City Hall East

REQUEST FOR REPORT: CALIFORNIA PUBLIC UTILITIES COMMISSION'S PROPOSAL TO REFORM THE ELECTRIC INDUSTRY'S REGULATORY STRUCTURE AND ITS IMPACT UPON THE DEPARTMENT OF WATER AND POWER'S TAX-EXEMPT BOND STATUS

On June 28, 1994, the Commerce, Energy and Natural Resources Committee considered a status report presented by the Department of Water and Power, Chief Legislative Analyst and the City Attorney relative to the California Public Utilities Commission's (CPUC) proposal to reform the California electric industry's regulatory structure.

No action was taken by the Committee, however, the Committee Chairperson requested a report from your Office relative to an evaluation of "direct access" and increased competition in the electric services industry on the Department of Water and Power's tax-exempt bond status.

Please direct your report to the Committee in care of the City Clerk's Office, Room 395, City Hall.

Sincerely,

Konrad Carter

Konrad Carter, Legislative Assistant
Commerce, Energy and Natural Resources Committee, 237-1615

cc: Councilmember Ruth Galanter
Attn: Betty Fisher

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City Clerk

J. Michael Carey
Executive Officer

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CITY OF LOS ANGELES
CALIFORNIA

RICHARD J. RIORDAN
MAYOR

Office of
CITY CLERK
Council and Public Services
Room 395, City Hall
Los Angeles, CA 90012
Council File Information - (213) 485-5703
General Information - (213) 485-5705

Pat Healy
Chief Legislative Assistant

94-0684
(file not transmitted)

July 25, 1994

Kenneth S. Miyoshi
Acting General Manager and Chief Engineer
Department of Water and Power

REQUEST FOR REPORT: CALIFORNIA PUBLIC UTILITIES COMMISSION'S PROPOSAL TO REFORM THE ELECTRIC INDUSTRY'S REGULATORY STRUCTURE

On June 28, 1994, the Commerce, Energy and Natural Resources Committee considered a status report presented by the Department of Water and Power, Chief Legislative Analyst and the City Attorney relative to the California Public Utilities Commission's (CPUC) proposal to reform the California electric industry's regulatory structure.

No action was taken by the Committee, however, the Committee Chairperson requested a report from your Department that summarizes the following analyses:

1. Analyze the cost of providing service to different types of customers. If appropriate, make comparisons across a range of industrial and commercial customers.

2. Identify the rates the City would have to charge (by customer class) to be competitive within and outside of California. Identify the affects this new rate structure would have on the City. For example, note the impact on the Department's net income and anticipated transfer, ratepayer assistance programs, and environmental programs and initiatives.

3. Analyze competitor commercial and industrial rates.

Please direct your report to the Committee in care of the City Clerk's Office, Room 395, City Hall.

Sincerely,

Konrad Carter

Konrad Carter, Legislative Assistant
Commerce, Energy and Natural Resources Committee, 237-1615

cc: Councilmember Ruth Galanter
Attn: Betty Fisher

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DUPLICATE IN FILE

CITY COUNCIL OF THE CITY OF LOS ANGELES

OFFICE OF THE PRESIDENT

JOHN FERRARO
COUNCILMAN 4TH DISTRICT

M-30, CITY HALL
LOS ANGELES, CA 90012
(213) 485-3337

June 7, 1994

Daniel Wm. Fessler, President
Public Utilities Commission
State of California
505 Van Ness Avenue
San Francisco, CA 94102-3298

Dear President Fessler:

The Los Angeles City Council applauds the efforts of the California Public Utilities Commission to "harness the forces of competitive generation", and provide the State's diverse ratepayers with lower electricity rates. As the ratemaking body for the nation's largest publicly owned power utility (and the third largest electric service provider in California), we share many of the Commission's concerns about the overall economic well-being of the State.

Low-cost power is an essential component of California's recovering economy, and the Commission's "direct access" proposal is merely another step along a continuum of Federal and State actions designed to unleash the forces of the marketplace. However, we are concerned that this step is too large, that it is being taken too quickly, and that it may be proceeding without the full participation of all the affected parties in California.

Although the Los Angeles Department of Water and Power is not under your jurisdiction, the Commission's "direct access" proposal has broad sweeping implications for the City of Los Angeles and its residents. While the Commission acknowledges the need to address problems related to stranded capital investment, environmental goals, and general social programs, we are nonetheless concerned about these issues.

Specifically, we are concerned about the fate of residential ratepayers and other classes of customers, who may not benefit from advantages of "direct access." The Los Angeles City Council stands by its obligation to serve all of the City's customers - not merely the largest - and to maintain the City's long-standing commitment to promote environmentally conscious generation policies, and continue providing disadvantaged ratepayer service programs.

Submitted in Comte
6-28-94

We urge you to proceed cautiously as you conduct hearings and weigh the conflicting counter-proposals in an open and inclusive fashion. Furthermore, we are concerned that it may be premature for the Commission to embark upon a California-only retail wheeling program before gaining a commitment from other State Commissions that they will reciprocate. Also, the benefits of wholesale wheeling, as allowed under the federal Energy Policy Act of 1992, have not been allowed to fully develop.

Attached is a summary of the City's concerns about retail wheeling, which we hope to discuss with you and the other Commission Members at the June hearings in Los Angeles. Again, the City Council endorses the "spirit" of competition, and welcomes the opportunity to work with the Commission as it pursues the important task of securing lower rates for all of California's electric consumers.

The City of Los Angeles is hereby requesting permission to participate in these proceedings as an interested party. Accordingly, I am directing City staff to contact Administrative Law Judge Malcolm and request permission to address the full Commission at the June 15, 1994 hearing in Los Angeles.

Very truly yours,

JOHN FERRARO
President
Los Angeles City Council

CC: Administrative Law Judge Malcolm

Perspective on the Technical Problems Associated with Providing Direct Access (Retail Wheeling)

From a technical perspective there are not insurmountable problems standing in the way of open transmission access, retail wheeling, unbundling of services, or any other manifestation of "deregulation" in the electric utility industry. Further, modifications to the structure of the industry to accommodate Direct Access will not create any new technical problems which have not already been identified in the discussions on wholesale wheeling.

However, it must be recognized that the interconnected electric system is not technically perfect in its present form and that existing proposals to restructure the industry will demand a substantially higher level of technical perfection than exists today. Therefore, the viability of "deregulation" is not dependent on whether or not technical problems can be overcome. Given sufficient time and money, the technical problems will eventually be solved. The actual question is whether or not the economic benefits derived from any "deregulation" proposal outweigh the costs of restructuring, and maintaining the electric industry in a new configuration. Further, there is the issue of whether the solutions precede or at least coincide with the timetable proposed for introducing Direct Access to the California consumer.

Among the technical problems to be addressed are: parallel path flow, system stability, frequency regulation, voltage and VAR control, and general reliability. The foregoing list is not all-inclusive and intentionally excludes the more esoteric problems. All of the above problems exist today and all electric utilities now incur specific costs to control their effects.

However, as previously mentioned, the control system is not perfect. The realities of generation, transmission, and consumption of electricity impose costs on interconnected utilities which cannot be specifically allocated to any one particular utility. Under the present utility structure, it is generally recognized that the overall costs of achieving perfect control and accountability far exceed the potential benefits. Therefore, individual utilities suffer or benefit on a somewhat random basis. The belief is that everything will "even-out" over time.

In a highly competitive environment, suppliers of electricity may not be particularly motivated to follow that principle. All costs will have to be precisely allocated and this means that all technical problems will have to be solved to perfection. Some type of regulatory oversight may be needed to ensure that equity issues are properly resolved.

Summary of CPUC Hearings

June 14 and 15, 1994

Introduction

- Good morning, I'm here to present a summary of the major themes that emerged at the all day June 14 and 15 California Public Utilities Commission (CPUC) hearings which were held at the Los Angeles Convention Center.
- The purpose of the hearings was to provide the CPUC with general reactions to its April 20 proposal to deregulate the electric utility industry in California.
- In attendance were the CEOs of SCE, SDG&E, PG&E as well as the CEO of SoCal Gas.
- Also in attendance were consumer representatives, labor, environmentalists, independent power producers (IPPs), industry experts, government agencies, which included the Department of Energy (DOE), and financial groups.
- Basically, all the major players were in attendance and well represented.

Quick Background

- The primary purpose of the CPUC proposal's was to substantially reduce California's electricity rates.
- The CPUC proposed two primary mechanisms to accomplish this:
  1) Performance Based Rates; and
  2) Direct Access (i.e. retail wheeling), which would ultimately result in all consumers having a choice of electricity supplier by 2002.
- The primary focus at the hearings was on reducing rates and whether or not to implement direct access.

Who Wanted Direct Access & Who Didn't

- Direct Access was supported by large industrial users and the agricultural interests.

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- Direct Access was seriously questioned by the investor owned utilities (IOUs), most of the "industry experts", the DOE, labor, environmentalists, and the municipals.

- IPPs and the Consumer representatives were split on direct access.

Proposed Alternatives to Direct Access

- Wholesale competition was pitched by many as the way to achieve what the CPUC wants - which is lower rates while achieving environmental and social objectives through the marketplace. They also wanted to let the lessons from wholesale competition emerge before the industry was thrust headlong into retail competition.

- Performance Based Rates (PBR) were seen as another solution. Almost everyone agreed with using PBR in one way or another - it was the level of the productivity benchmarks that was debated.

- SCE proposed a specific centralized power pool called Poolco.
  - In Poolco, all utilities in the western US give up control of their transmission (however they would retain ownership and maintenance).
  - Power would be bid into and bought out of this central pool.
  - The required centralized dispatch would be done by a private party named Poolco.
  - England is currently using a pool type system w/mixed results
  - SCE's proposal is not clear in regards to municipal participation in Poolco.

- There were proposals that the utilities be required to divest their generation assets. Utilities should not be allowed to be both a buyer and seller of electricity.
  - Shares of stock would be issued to create a "Genco". The Genco would have to sink or swim by itself in a pool type system.

- Some suggested that utilities be allowed a monopoly only for the residential and possibly some smaller commercial customers.

Arguments in Regard to Direct Access

Transition Costs

- Transition costs is another term for stranded investment costs. Many of the participants used one or both of the terms in their testimonies.
- Transition costs are investments that utilities have entered into under a monopoly situation. These investments were expected to be recovered from its "captive" customers over the long term. However, with customer choice looming on the horizon, how these investments will be recovered has become a major issue.
- Transition costs include capital as well as some environmental and social costs.
- Transition costs are seen as a major impediment to direct access. The CPUC has proposed a "competition transition charge" to mitigate stranded investment risk.
- However, some feel that the IOU shareholders and ratepayers both should share in the stranded investments.

Jurisdictional Issues

- Brought up by almost all the major players.
- Discussed potential lawsuits - would leave the CPUC in a quagmire.
- DOE had most notable testimony - CPUC paid a lot of attention.
  - ⇒ DOE wanted CPUC to maintain concern over environment, social programs, reliability, and equity.
  - ⇒ CPUC was at the line or over it in regards to its jurisdictional boundaries and that Michigan was taken to court over their retail wheeling experiment.
  - ⇒ DOE pledged its cooperation and desired to work closely with the CPUC.

Environmental Issues

- The environmentalists' opinion can be summed up by Ralph Cavanaugh's of the Natural Resources Defense Council statement "Light a fire under the utilities, but make sure it burns cleanly."

Reciprocity

- Reciprocity is another issue, reciprocity across state lines and across IOU / municipal lines (Fitch Investor Services).
- The Department was asked by Commissioners Fessler and Conlon:
  If the CPUC were to allow retail competition could DWP compete outside its service territory?
  Will DWP reciprocate and allow the IOUs to compete inside DWP's territory?

Misc Issues

Commodity versus Social Provider Argument

- Should electricity be treated as a commodity or a provider of social good.
- There are strong feelings on both sides of this issue.

Consumer Representatives Presents a Survey

- A rare coalition of consumer groups sponsored a study of the IOU's performance versus IOU's in other states.
- After normalizing for differences, study determined that California ratepayers paid in excess of $6.4 billion in 1992 .
- A rallying cry of "reduce California's electric rates 25% within 5 years" became common.

Fear of municipalization

- It appears that the IOUs view municipalization as a threat to them with ongoing deregulation.
- We should anticipate some level of anti-municipal legislation.

Quantification

- Commissioner Knight asks Thomas Page, CEO of San Diego, "What are some social programs that you sponsor and how much do they cost

you?" Answer: DSM and low income = 0.5 cents/kWh and 1.5 cents/kWh for other social costs out of a total of 10 cents/kWh bill."

DWP Actions

- There may be opportunities for DWP in the future and these are currently being analyzed. (e.g. the financial implications of operating under a centralized dispatch operation is being modeled).

- There is concern that the municipals may be left out of the process therefore the City needs to continue its involvement with the CPUC in regards to their proposal.

Conclusion

- Fessler "The CPUC is not the change leader, it is merely a change accomodater."
- A common metaphor was "the genie (competition) is out of the bottle" and you can't get it back in.

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE
STATE OF CALIFORNIA

Order Instituting Rulemaking on the Commission's Proposed Policies Governing Restructuring California's Electric Services Industry and Reforming Regulation	)	R.94-04-031
Order Instituting Investigation on the Commission's Proposed Policies Governing Restructuring California's Electric Services Industry and Reforming Regulation	)	I.94-04-032

WRITTEN COMMENTS
SUBMITTED BY
THE CITY OF LOS ANGELES
June 15, 1994

The City of Los Angeles and the Department of Water and Power (DWP) (collectively "the City") welcome the opportunity to provide comments to the Commission regarding the proposal for restructuring California's electric service industry. As the Nation's largest municipal utility and the third-largest electric service supplier in California, we believe that the implications of this proposal have far-reaching indirect impacts to all California electricity consumers and utilities -- not just investor-owned utilities.

We commend the Commission's efforts to improve the business climate in California by lowering electricity rates. However, we ask that the Commission exercise caution in this investigation since the State's electric utilities represent approximately 2½% of its economy. Accordingly, a recent study on business migration conducted by a host of California utilities,

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showed that energy prices were one of the least critical elements of the California business climate.

The customers of electric utilities have historically relied upon the industry to provide unconditional service. These customers should be made fully aware of the risks involved with this proposal.

The Commission's efforts to harness the forces of competition to provide lower electricity rates are commendable, and we share many of your concerns regarding the sluggish recovery of California's economy. However, we are concerned that the implementation of this proposal is too quick. The City would like to take this opportunity to share our concerns.

Coordination of Effort

We understand that the Commission's primary concern is the regulation of investor-owned utilities, however, the impacts of this proposal will affect all electricity consumers. The City is concerned that the Commission has not adequately considered the impact of its proposal on Los Angeles' 1.3-million electricity customers. The City and the Commission, as utility regulators, should coordinate their respective policies to assure that all of California's ratepayers, which includes municipal ratepayers, may benefit from California's new electricity market.

Social and Environmental

The City has concerns about the impacts of the Commission's proposal on social and environmental programs. However, we will discuss this issue in detail at the July 1, 1994 hearing.

Residential

The Commission has not offered adequate information on how the residential customer will be protected against dispatch discrimination. The utility industry has been under obligation to serve every customer, large and small alike. A customer who has declared bankruptcy or has a poor credit history cannot be denied service. Under the current proposal, there are no safeguards to stop a supplier from picking and choosing their consumers based on an expected profit margin for each customer type.

By allowing the industrial consumers to have direct access first, the residential consumers are likely to experience a rate increase. Consumers will sign contracts with suppliers on a first come, first served basis. The large industrials will have preferential access to less expensive power. The residentials, who will be last to choose, could be left with the more expensive power. Even independent power may increase in price. Without firm energy contracts, the cost of capital for building new resources will rise.

Technical Details

There are no insurmountable technical problems standing in the way of direct access. However, the electric system is not perfect today and many problems do exist. The means for correcting and dealing with these problems are being resolved through utility collaboration. The number and magnitude of these problems will increase with added power transactions and exchanges. Expanding the number of "independent" sources will only exacerbate the situation.

Most obvious of the technical problems are parallel path flow, load following, system stability and reliability, frequency regulation, and voltage and VAR control. Utilities have incurred costs to mitigate existing problems and to provide future reliability. In a market-driven environment, a methodology has to be developed to allocate system costs, while a technically feasible solution to existing system problems has to be found to assure stable electricity service and delivery. The future integrity of the electric system is not adequately addressed in the Commission's proposal.

Wholesale Wheeling / RTGs

Wholesale competition was recently brought forth formally through EPAct 92. This type of competition must be given a chance to work. The benefits and pitfalls of wholesale competition have not yet surfaced. Much can be learned from this endeavor -- any form of retail competition would be greatly improved if the lessons learned from wholesale competition could be applied.

FERC has mandated wholesale wheeling per EPAct 92 and Regional Transmission Groups (RTGs) have been developed to resolve

wholesale transmission issues "in-house" through cooperative efforts. The Commission's proposal jeopardizes the cooperative gains made between the utilities and the exempt wholesale generators by forcing them to become more isolated by direct competition. Additionally, the proposal may negatively affect the full implementation of wholesale competition and the potential success of the RTGs.

It is quite possible that wholesale competition is the answer to California's high electricity prices. However, insufficient study has been performed to measure the incremental benefits of retail wheeling relative to wholesale competition.

Wholesale competition could provide California with the desired levels of competitive rates and environmental / social stewardship. The City recommends the deferral of direct access until the transmission access issue is resolved at the wholesale level and its benefits realized.

Bond Ratings

Negative ratings by agencies such as Standard & Poor's or Moody's affect the real or perceived risk of investing. The greater the perceived risk, the higher the cost of borrowing. The financial community is closely monitoring the prospects of open competition in the electric utility industry. The mere announcement of the Commission's proposal has resulted in California's IOUs being placed on credit watch.

These negative reactions are due in part to the Commission's rapid implementation schedule. A lengthened implementation strategy would vastly reduce the potential for negative ratings, thereby significantly reducing the utilities' cost of capital. This will ultimately result in lower electricity bills -- the Commission's goal.

Higher costs of borrowing would make financing new power projects and improving old facilities very difficult and perhaps uneconomical. The DWP Power System typically borrows approximately $200 million annually, not including any major project financing. Any downgrading of DWP's ratings will have an adverse impact on the cost of that capital for DWP and would increase its rates.

Conclusion / Recommendations

The City of Los Angeles presents the following recommendations:

- The major benefits of EPAct92 have not been realized. Wholesale energy markets should be to permitted to further develop prior to deciding the merits of direct access.

- The Commission's implementation schedule of "direct access" should be extended until more details of the "how to" have been specified.

- The Commission should host working groups to solicit input from all affected parties and address specific issues on an individual basis. These working groups should result in the preparation of specific recommendations and they should provide the details for implementation. Industry experts should be included in this process.

Respectfully Submitted,

/s/ ELDON A. COTTON

ELDON A. COTTON
Assistant General Manager - Power
LOS ANGELES DEPARTMENT OF
WATER AND POWER

DRAFT

Financial Impact Analysis On The City Of Los Angeles Resulting From The Possible Loss Of The Top 300 Customers

Purpose

This report outline is prepared at the request of the Los Angeles City Council Committee on Commerce, Energy and Natural Resources. The scope of this study is to determine the financial impacts on the City of Los Angeles from the CPUC's Proposal to Restructure California's Electric Utility Industry. Five scenarios will be used to determine the effects on DWP's annual revenue and the resulting financial consequences. The results of this study will provide a basis for subsequent strategic and contingency planning.

Methodology

The first of the five scenarios is the "status quo". With no change in the current regulatory structure, this scenario would serve as the baseline by which the remaining scenarios would be compared. The remaining four scenarios are based on certain customers leaving the DWP's service, thus resulting in a loss of revenue.

To determine which customers will leave the system, an analysis will be done on the top three-hundred customers, to determine how they will leave the system, and their attractiveness to competitive suppliers. Additionally, an analysis will be done where DWP's price is marginal cost. The resulting loss of revenue will then be determined.

Loss of Customers

To estimate loss of customers and revenue, the top 300 customers are used as a starting point (these represent approximately 32.7% of the power system's revenues). This group is a mixture of both commercial and industrial customers.

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Customers will be ranked on their probability of leaving the system based on five factors, each worth three points.
Then customers are categorized into three groups.

- 10-15 points result in a "very attractive rating"
- 5-9 points result in a "somewhat attractive rating"
- less than 5 points results in a "not attractive" rating.

The rating factors include:

Load Shape
Size of Customer
Co-generation capability
Geography/Proximity
Current Rate

Customers are then sorted by a two tier sorting system. The first sort is by attractiveness, the second sort by the annual revenue of the customer. This ranking provides the basis for the customers used in the scenarios.

Parameters

All scenarios are considered on the following:

- Study period will be from 1994 to 2002 (transition period).
- The DWP's 1993 Loads and Resources Plan is fixed, including both weather and economic trends.
- No loss of residential customers
- Loss of revenues will be from the commercial and industrial sectors.
- Variable costs (fuel) to fixed cost ratio is approximately 1 to 3.
- All independent power producers (IPPs) will use natural gas fuel.

- Power supply sources from IPPs will be from single or combined cycle units.
- Present level of system reliability will be maintained.
- Transmission and distribution services will be provided at embedded costs plus a rate of return.
- Capacity and energy for direct access customers will be provided by the supplier not the native utility.
- IPPs are responsible for their own power interruption contingency plans.
- No sales to other outside DWP's service area, due to charter and tax restrictions.
- There is no approved mechanism for transition costs.
- All take or pay power supply contract obligations will be met.
- Obligation-to-serve will not apply to direct access customers

Results

The results of this analysis will provide a detailed comparison between the five scenarios. Quantitative results should include:

Revenues / Losses
System Costs
Net Income Analysis
Financial Ratio Sensitivities
Cash Flow Implications

Impacts

After the quantitative results are obtained, analysis will be performed on the potential impacts. Areas that are of main concern are as follows:

Rates by class
City Transfer
System Reliability
Sensitivity of revenue losses vs. ability to cut costs
Cost of capital (Bond Ratings)
Taxes
Environmental and Social Programs
Overall operating costs

Areas of further analysis

From this report the City and the DWP can formulate plans and strategies to deal with the eventual implementation of direct access. This will also serve as a marketing tool in determining what the DWP will have to do to retain customers, i.e. what services are offered, what price etc.

The Scenarios

All scenarios are constrained by the assumptions listed in the parameters section on page 2.

Scenario 1

This is the base line scenario. Current situation will endure and business will be as usual. There is no loss of market share, however any forecast of loss of load is included. The Southern California economy remains stagnant over the next five years.

Scenario 2

In this scenario, the top ten ranked customers leave the system. This will represent a decrease in market share. Since this is probably some of the largest customers, this scenario will have a major impact. An additional comparison run will be done with our generation price lowered to marginal cost to keep these ten largest customers.

Scenario 3

In this scenario, the top fifty ranked customers leave the system. This will represent an even further decrease in market share. Again as in scenario 2, an additional analysis will be done with the DWP generating price at marginal cost.

Scenario 4

In this scenario, the top one-hundred ranked customers leave the system. This will represent the ever decreasing market share. The secondary analysis at marginal cost will also be performed.

Scenario 5

In this scenario, the top three-hundred ranked customers leave the system. We will probably never get to this scenario in reality. The "death spiral" will probably have already occurred, i.e. the remaining customers will be required to bear the burden of stranded investments and all customers leave the system.

KLM/jac

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking on the Commission's Proposed Policies Governing Restructuring California's Electric Services Industry and Reforming Regulation.	R.94-04-031
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ADMINISTRATIVE LAW JUDGE'S RULING

This ruling provides parties with an agenda and other information for the full panel hearing on July 1. It also provides guidance to the parties on other procedural matters.

Agenda for July 1 Full Panel Hearing

The agenda for the full panel hearing, titled "Balancing Public Policy Objectives," is attached to this ruling. Pursuant to the Assigned Commissioners' ruling of May 11, 1994, the topics of the hearing include low income ratepayer assistance programs, economic development programs, low emission vehicle programs, fuel diversity, demand side management, energy conservation and renewable resources. Panelists should limit their opening remarks to three minutes. Remaining time will be reserved for questions from Commissioners.

Comments for related topics should be filed no later than June 24. Parties who wish to file reply comments should do so no later than July 21.

The Commission will hold the hearing in the County Board of Supervisors' Chambers in the County Administration Center, Room 1450, 700 H Street, Sacramento.

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Deferral of July 21 Full Panel Hearings

The Assigned Commissioners' Ruling dated May 11 announced the Commission's intent to hold a full panel hearing in this proceeding on July 21. Since the issuance of the May 11 ruling, several parties have expressed concern that the expedited schedule in this proceeding does not permit parties enough time to craft high quality comments. In the interest of promoting a good record in this proceeding, the Commission will defer the July 21 hearing to a later date. The Commission still intends to hold a full panel hearing on August 4.

Public Participation Hearings

The Commission intends to hold a series of public participation hearings in this proceeding. The purpose of the hearings will be to solicit the views of members of the public who are not parties to this proceeding. The hearings will be held in several locations around the state. The exact times and places of the hearings will be published in a subsequent ruling. The Commission will also notify local agencies, associations and media of the hearings.

Electronic Access to Proceeding Files

The ruling dated June 10, 1994 relaxed the requirements of Rule 4.5 by permitting parties other than DRA and respondent utilities to serve only a subset of the service list in this proceeding. In order to provide additional access to proceeding documents to the public and parties, the Commission will provide electronic copies of filed materials, including parties' comments on the Internet. This access is through a software program called "Gopher" at gopher.cpuc.ca.gov. Questions about the program should be directed to Kale Williams at (415) 703-3251 or by electronic mail at klw@cpuc.ca.gov. Questions about the gopher server should be directed to gopher-admin@cpuc.ca.gov.

Pursuant to Ordering Paragraph 3 in R.94-04-031, parties were directed to submit a 3.5 inch disk in WordPerfect or ASCII

format to the Division of Strategic Planning. Parties with the capability may provide the electronic copy of their comments by electronic mail through the Internet in lieu of submitting the disk.

Parties who have electronic access to Internet are requested to inform other parties of their electronic mail address so that comments may be served electronically.

Service List

An updated service list is attached to this ruling. With the exceptions provided in the ruling dated June 10, 1994, parties shall serve all parties on the service list pursuant to Rule 4.5. Names that have been added since the June 1, 1994 assigned commissioners' ruling are identified with a star or are listed at the end of the ruling under "new additions as of May 31, 1994."

The Commission has received informal complaints that parties are requesting that other parties serve them duplicate copies of comments. Parties are under no obligation to serve anyone who is not included on the official service list in this proceeding, or to serve duplicate copies on other parties.

Requests for Information by Parties

Many parties to this proceeding have called inquiring about the content of anticipated rulings. Providing such information to some parties before it is provided to all parties is inequitable. Moreover, such inquiries are time-consuming for Commission staff. As a matter of fairness to all parties, the parties should refrain from such inquiries and Commission staff will not respond to them.

Additionally, parties should not request the administrative law judge to copy Commission documents for them or to facsimile Commission documents to them. The Commission's Central Files office will copy and mail Commission documents for a fee of $.20 per page. Commission rulings and orders issued in this

proceeding are mailed to all parties on the date of filing at no charge.

IT IS RULED that:

The Commission will hold a hearing on topics described herein on July 1, 1994 beginning at 9:00 a.m. in the County Board of Supervisors' Chambers, County Administration Center, Room 1450, 700 H Street, Sacramento.

Dated June 21, 1994, at San Francisco, California.

/s/ KIM MALCOLM
Kim Malcolm
Administrative Law Judge

CALIFORNIA PUBLIC UTILITIES COMMISSION

HEARING ON ELECTRIC RESTRUCTURING

SACRAMENTO COUNTY ADMINISTRATION CENTER
SUPERVISORS CHAMBERS

Balancing Public Policy Objectives in the Competitive Environment

July 1, 1994

At this full panel hearing, the Commission will hear parties' views on how public policy objectives which have historically been promoted by this Commission and the Legislature can be achieved in the increasingly competitive electric marketplace under a reformed regulatory regime as proposed in Rulemaking (R.) 94-04-031. The state's investor-owned utilities have traditionally provided the principal means for implementing programs designed to achieve certain public policy objectives. Their customers have provided all necessary funding. Rulemaking 94-04-031 affirms the Commissions continued dedication to these programs which assist low income customers and promote economic development while providing environmentally sensitive energy services. California's environmental sensitivity objectives have lead to the promotion of fuel diversity, and procurement of energy efficiency and renewable resources.

Given the time limitations, it is our desire to have panel members be prepared to discuss both general topics as well as the more specific questions identified for each panel.

General questions: We ask that each participant be prepared to address the following propositions and concerns:

1. To what extent is it viable and appropriate, in a competitive market, for the state's investor-owned utilities to provide the principal means for *implementing* programs designed to achieve public policy objectives? To what extent is it viable and appropriate, in a competitive market, for the state's investor-owned utility consumers to provide the principal means for *funding* programs designed to achieve these public policy objectives? Describe any preferred program

administration and funding mechanisms that would provide the same attributes regardless of generation service provider.

2. To what extent does the proposal threaten or enhance the state's ability to achieve these public policy objectives?

3. To the extent the increasing competitiveness of the marketplace jeopardizes the current means of achieving these objectives, what alternative mechanisms should the Commission establish, and/or propose the Legislature or other state and local governments adopt, to ensure these objectives are achieved in the future?

Questions for Each Panel to Address: The following questions are representative of those the Commission wishes parties to discuss of during the hearing. They are not meant to limit discussion, nor is each party expected to answer all of the questions assigned to the panel.

Panel 1: Environmental Policies in a Restructured Electric Industry

It is acknowledged that the electric marketplace is becoming increasingly competitive, perhaps most notably in the Energy Policy Act of 1992. Some parties written comments, and participants at the June 13 and 14 full panel hearing, cited the existence of market barriers to deployment of demand side efficiency improvements. Others call for perfecting *wholesale* market access rather than, or as a precursor to, implementing *direct* access.

1. What principles should guide modification of the Commission's regulatory mechanisms governing integrated resource procurement to provide the most cost effective deployment of demand side and supply side resources?

a. Is the market able to provide cost effective demand side and supply side efficiency absent regulatory intervention?

b. What market barriers, if any, currently frustrate cost effective demand side efficiency improvements and will they persist as the market evolves?

c. If market barriers exist, what steps should the Commission take, if any, to eliminate the barriers?

d. What barriers, if any, exist to perfecting direct access? How should the Commission, given its authority, work to overcome these barriers?

2. Section 701 of the Public Utilities Code requires the Commission to provide for environmentally sensitive electric procurement. What do you anticipate will be the impact of direct access by customers and performance based ratemaking for utilities on resource procurement decisions?

a. Are current laws and regulations adequate to incorporate environmental considerations into electric service decisions in an industry characterized by consumer choice through direct access?

b. To what extent do existing environmental mandates require a single vertically integrated monopoly market structure?

c. How should California internalize environmental externalities in the proposed reformed regulatory regime and restructured industry?

d. How can the demand for energy be best met, through either demand side or supply side resources, in a provider-neutral manner?

e. How might the role and programs of other environmental regulators change to ensure environmentally quality in a more competitive electric services industry?

3. What are the steps the Commission should take to ensure the increasingly competitive marketplace achieves the state's objective of developing a diverse resource base?

a. Can direct access lead to significant "supply" side energy efficiency gains? How might these gains, if any, compare to gains resulting under the status quo?

b. How can customer acceptance of energy efficiency be achieved in a competitive marketplace?

c. Can renewable resources be competitive with other resources on a strict price basis? If not, would the air quality and diversity benefits of renewable resources justify a preference for renewables? How would that preference be expressed in the marketplace? Is a surcharge to cover any price differential between renewable and other resources necessary, prudent, and/or justified?

d. Should energy efficiency programs continue to be treated as alternatives to supply side deployment or as programs which primarily provide customer value?

Panel 3: Targeted Ratepayer Assistance Programs

Regulated utilities currently assist low-income consumers by administering programs, funded by other ratepayers, to reduce both rates and energy consumption in order to lessen the hardship to low-income households.

1. Should the Commission expect these services will be provided without government intervention if the Commission pursues the proposed direct access program?

a. Are there other agencies or organizations better suited to providing such intervention?

b. If these services should continue to be provided by utilities, how should the programs be administered and the associated costs recovered in a manner which does not advantage or disadvantage any player in the competitive market?

c. What percentage of each of the utilities' total revenue requirement currently goes towards these programs? How many households currently benefit from these programs?

Panel 4: Economic Development Programs

California's investor owned utilities have played a variety of roles in addressing the state's economy and empowering previously under represented segments of our population. Legislative mandates have created economic enterprise zones to encourage revitalization and renewal of the California economy in particularly troubled geographic areas. The Commission has contributed to state efforts to retain business by authorizing specialized industrial and commercial rates and services. Legislative mandates and the Commission's General Order 156 have established programs to encourage utility procurement from women, minority, and disabled veteran-owned businesses.

1. With the level of customer choice and rate flexibility envisioned in the proposal issued for comment, will special tariffed rates continue to be required? Will customer choice through direct access to energy service improve statewide business retention efforts and the ability to attract new businesses?

2. What will be the effect of the utility proposed performance based regulation proposals on the Commission's economic development and business retention programs?

3. How should opportunities for women, minority, and disabled veteran-owned business be preserved or improved upon in the restructured industry and reformed regulatory climate proposed?

Panel 5: Technological Innovation and Research, Development and Demonstration Programs

In an era in which utilities were secure in their own service territories they have been generous in promoting cooperative approaches to research, development and demonstration programs. If one assumes a competitive market in generation and a direct access option for ultimate customers, what are the likely impacts upon utility attitudes toward the advancement of products and services to which they will not have a proprietary claim?

1. What effect will the competitive market have on technological innovation, research, and development in the electric industry?

2. What role, if any, would the electric utility perform in fostering RD&D in a more competitive market?

3. Should the Commission expect competition to increase technological innovation among providers?

CALIFORNIA PUBLIC UTILITIES COMMISSION

HEARING ON ELECTRIC RESTRUCTURING

SACRAMENTO COUNTY ADMINISTRATION CENTER
SUPERVISORS CHAMBERS

Balancing Public Policy Objectives in the Competitive Environment

July 1, 1994

9:00-9:45 **Opening Remarks by Commissioners and Legislators**

Panel 1: Environmental Policies in a Restructured Electric Industry

9:45-10:45 **Subject Experts**
(invited experts will be announced at the hearing)

10:45-11:45 and 11:45-12:45 **Fuel Diversity/Renewable Resources and Supply Efficiency**

First Hour: ELCON, Southern California Edison, Pacific Power and Light, South Coast Air Quality Management District, California Biomass Energy Alliance, Independent Energy Producers

Second Hour: Sacramento Municipal Utility District, International Brotherhood of Electrical Workers, Environmental Defense Fund, Pacific Gas and Electric, California Large Energy Consumers Association, Center for Energy Efficiency and Renewable Technologies

12:45-1:30 **Lunch**

1:30-3:00 **Demand Side Efficiencies**

San Diego Gas and Electric, Industrial Users Group, National Association of Energy Service Companies, CPUC Division of Ratepayer Advocates, Natural Resources Defense Council, Southern California Edison, California Department of General Services, Toward Utility Rate Normalization

Panel 2: Public Participation

3:00-3:30 (sign up sheet available day of hearing)

Panel 3: Targeted Ratepayer Assistance Programs

3:30-4:00 **Low Income Ratepayer Assistance Programs**

Southern California Gas, Latino Issues Forum, Independent Energy Producers, Pacific Gas and Electric, Cal-Neva, California Large Energy Consumers Association

4:00-4:30 **Direct Weatherization Programs**

Pacific Gas and Electric, National Association of Energy Service Companies, Sierra Pacific, Utility Consumers Action Network, Cal-Neva, Proven Alternatives

Panel 4: Economic Development Programs

4:30-5:00 **Enterprise Zone Tariffs and Business Retention Programs**

Southern California Edison, San Francisco Black Chamber of Commerce, San Diego Gas and Electric, California Trade and Commerce Agency, California Manufacturers Association

5:00-5:30 **Women, Minority, and Disabled Veterans Business Enterprise Programs**

Pacific Gas and Electric, Greenlining Coalition, Hesse Gas

Panel 5: Technological Innovation and Research, Development and Demonstration Programs

5:30-6:00 San Diego Gas and Electric, California Energy Commission, Los Angeles Department of Water and Power, Union of Concerned Scientists, Western States Petroleum Association, EPRI

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE
STATE OF CALIFORNIA

DRAFT

Order Instituting Rulemaking on the Commission's Proposed Policies Governing Restructuring California's Electric Services Industry and Reforming Regulation	)	R.94-04-031
Order Instituting Investigation on the Commission's Proposed Policies Governing Restructuring California's Electric Services Industry and Reforming Regulation	)	I.94-04-032

WRITTEN COMMENTS
SUBMITTED BY
THE CITY OF LOS ANGELES
Councilperson Ruth Galanter
July 1, 1994

Introduction

I am Councilperson Ruth Galanter of the City of Los Angeles. As the Chairperson for the City's Commerce, Energy and Natural Resources Committee, I am here to speak before you as both an electric utility ratemaker and legislative policymaker. I thank the Commission for the opportunity to present the City of Los Angeles' concerns regarding the social and environmental issues related to this investigation.

Like yourselves, the Los Angeles City Council has begun to wrestle

Submitted in Comm
6-28-94

with the forces of competitive change in the electric industry. We have recently completed an audit of the Los Angeles Department of Water and Power (DWP), that identifies a number of actions designed to make the Department more efficient and productive over time. Furthermore, I suspect that in time, the City of Los Angeles will begin to examine the overall competitiveness of its rate structure relative to other energy producers within and outside of California.

Like other interested parties, the City of Los Angeles will continue to participate in the Commission and State Legislature's hearing process on this important issue. In doing so, we hope to learn more about the specifics of your proposal, and the potential costs and benefits of direct access.

As a long-time advocate of environmental stewardship, I have a deep interest in the Commission's proposal with respect to the continuation of the Commission's and Legislature's support for environmental and social policies associated with the electric utility industry. I commend your efforts to make California more competitive in an increasingly global market. However, we need to understand that as we reach out beyond our borders to compete in a global market that we assume global responsibilities for the environment as well.

My comments today are directed towards our mutual and difficult task of achieving an equitable balance between the needs of a more global customer-focused cost-efficient electric utility industry and the need to sustain the social and environmental programs that adds to the overall economic health of our State and region.

Social Programs

As the State's economy slowed over the past four years, a perception developed among some Californians that California's comprehensive set of social programs and environmental regulations were among the primary reasons for making the State of California appear less attractive to existing and new businesses. This perception has spilled over to include the social programs funded by the consumers of the electric utility industry. It is important that the Commission not perpetuate this fiction in its decisions.

As a Councilperson and consumer, I am concerned that the

Commission and the State's elected representatives charged with administering to the needs of a complex and dynamic society may inadvertently cause the social programs that reflect the underlying values of our communities to be lost to purely economic, possibly inaccurate, considerations.

The social programs associated with the electric utility industry, such as low income and lifeline rates, developed by the Commission, State Legislature and cities, such as Los Angeles, is a manifestation of the fact that our society sees the use of electricity, not as a luxury but a necessity of modern civilization. These programs help to create a healthier environment, physically and mentally, for the State's workforce, an integral element in the economic health of any state.

I would like to point out that it is not only the low income or residential customers that benefit from social programs. Los Angeles based-businesses are beneficiaries of social programs such as our disaster relief program which provided rate relief for businesses affected by the April 1992 civil disturbances and the January 1994 earthquake.

The consideration of fuel diversity, demand-side management programs and externalities in the planning of resource acquisitions, the subsidization of renewable technologies, etc., are outstanding examples of the Commission's and the Legislature's long-term commitment to promote, through the electric utility industry, the overall interests of California's 29 million residents. I urge the Commission, in its investigation of how to best restructure the electric utility industry to improve California's competitiveness, not to abandon the gains of the past and to carefully consider the overall contribution the current social programs have made towards improving, rather than degrading, the business climate in California.

Another issue that concerns me, coming from a region that has been beset with disasters of all types, is the support utilities provide each other in response to such disasters. Currently, the electric utilities in the State have obligated themselves to support each other in times of crisis. Recent examples of this cooperation between utilities are the DWP's providing the Pacific Gas and Electric Company with expensive electrical equipment to support the PG&E's electric system following the Loma-Prieta earthquake in 1989 and the assistance provided by Southern California Edison to the Los Angeles in

restoring the City's electric system following the Northridge earthquake in 1994. Can any utility or nonutility generator, in a fully competitive marketplace, reasonably expect another utility or a nonutility generator to provide assistance during an emergency? I would like to think so but the competition issue complicates the answer to that question.

Environmental Policies

The City of Los Angeles has earned world-wide respect for its leadership role on a wide range of environmental issues. While costs are an important consideration to businesses and the general public alike, we believe that maintaining a healthy natural and human environment for businesses to function in is as important to improving business competitiveness in California as cost. Businesses cannot afford to have employees whose physical and mental health are impacted by poor environmental conditions. While unskilled and educationally deprived workers may not have a choice where they work, it is doubtful whether highly skilled and talented employees, desired by businesses everywhere, would choose to work in a state where their families would suffer the ill effects of a lower quality of life.

For the electric utility industry in California, the major environmental concern has been the air emissions associated with stationary fossil-fueled thermal powerplants. Although the primary source of air pollution in urban areas, such as Los Angeles and Orange Counties, is automobiles, the fossil-fueled thermal powerplants have been the primary target of the State's air quality management districts. As a result, the utilities in California have been required by state and federal agencies to integrate extensive and expensive pollution control equipment into their powerplants.

Over the years, as a result of direction set by the California Public Utilities Commission and the California Energy Commission, the reduction of air emissions has been a primary consideration in the California utilities selection of electricity resources. California's investor-owned and municipally owned utilities invested capital into low emission resources, retrofitted existing plants with low emission equipment, repowered existing powerplants with new technologies and increased out-of-state energy purchases in order to reduce emissions within the state. The utilities have, collaboratively, funded research and development of pollution reduction technology and cleaner resources. In addition, the City of Los Angeles

voluntarily committed its utility to reduce its CO2 emission by 20% by the year 2000.

These investments made by the electric utility industry to improve the state's environment has benefited the state through the creation of high quality jobs in research and development, fabrication, marketing of electricity-related technology and the improved our health and well-being. If low price becomes the only driver for utilities, can they be expected to work collaboratively on research and development projects that add cost but no near-term tangible benefit to them?

There is a business and equity side of our environmental concerns. In response to the challenge to national security and our economy brought on by the oil embargo of the 1970s, we made, in our opinion, a prudent decision, like many other utilities, to reduce our exposure by diversifying our generation mix. Aside from helping to reduce unwanted stationary source air emissions, the City is no longer dependent upon limited supplies of foreign and domestic oil for generation. This was a voluntary decision that reflected the City's valuation of resource reliability, fuel price, and air quality. Under the Commission's proposal some of these investments made in support of the nation's security could now be classified as "uneconomic" generation. It is unfair to penalize utilities for such well-intentioned prudent long-term planning, by forcing them to compete with new sources of generation who carry no such burden. This may be the <u>real</u> issue of reciprocity.

In a similar vein, our voluntary and required investments in the environment are significant and on-going. Most importantly, these costs, as are the cost of fuel diversification, are already internalized in our rates. Clearly, this places us and other similar utilities, at a significant disadvantage if we open California's borders to marginal generators from other states, other regions, or even other countries not burdened with such costs or responsibilities. I was encouraged by President Fessler's June 15, 1994 comments that California does something about the environment, while our neighboring states merely talk about doing something. Yes, Californian's have a proud history of environmental responsibility. That is why we must work together to encourage other states' and even federal decisionmakers to make similar commitments, if they wish to pursue electric customers in California.

As I understand it, the Commission's proposed solution to this problem

raises questions about fees, definitions of stranded investment, and time frames for related transition periods. We hope that any functional definition of stranded investment recognize each utilities' actual investment. Furthermore, we also hope that any scheme to recover stranded investment also include consideration of environmental and fuel diversity investments.

I recognize that you have undertaken a formidable task that is fraught with uncertainty, and even ambiguity. The answers to many of the issues buried within your proposal will require a considerable commitment of resources and time. Consider that Los Angeles has already spent over a billion dollars since about 1982 for environmental program alone. With so much at stake, we hope that the Commission continue to allot as much time as is needed to completely understand and address these issues, as well as the many technical issues submitted to you in Los Angeles. As you take the needed time to consider fully all the issues, wholesale competition as envisioned by EPACT92, will have more time to develop. This may provide many of the benefits we all seek, without many of the risks associated with direct access.

We are both being driven to face the forces of change, and impending market forces. Fortunately, I have the luxury of watching and learning from you as you continue to provide leadership in this incredibly important policy area.

Closing Remarks

In closing, I would like to applaud the open and participatory fashion that you have conducted these hearings to date, and once again urge the Commission to protect the environmental and social investments that ratepayers have made in California through all of our utilities.

We urge the Commission to protect the environmental and social investments that we have all made in California. through our utilities. The environmental and social programs have real costs, but they also pay real dividends. Additionally, I would ask that care be taken not to disadvantage the California utilities who made these investments on our behalf in the name of competition. The City Council and Department of Water and Power looks toward working with the Commission and the Legislature in resolving the many pitfalls that line the path to restructure the electric utility industry in California.

ELIAS MARTINEZ
City Clerk

J. Michael Carey
Executive Officer

When making inquiries relative to this matter refer to File No.

94-0684

CITY OF LOS ANGELES
CALIFORNIA

RICHARD J. RIORDAN
MAYOR

Office of
CITY CLERK
Council and Public Services
Room 395, City Hall
Los Angeles, CA 90012
Council File Information - (213) 485-5703
General Information - (213) 485-5705

Pat Healy
Chief Legislative Assistant

June 2, 1994

City Clerk, Pat Healy
City Attorney
City Administrative Officer
Chief Legislative Analyst

Water & Power Commission
Attn: Judith Kasner
Department of Water & Power

RE: RESPONSE TO MOTION (GALANTER - FERRARO) RELATIVE TO THE CALIFORNIA PUBLIC UTILITIES COMMISSION'S PROPOSAL TO REFORM THE CALIFORNIA ELECTRIC INDUSTRY'S REGULATORY STRUCTURE

At the meeting of the Council held May 31, 1994, the following action was taken:

Attached report adopted	X
Attached motion adopted ( )	
Attached resolution adopted	
Ordinance adopted	
Motion adopted to approve attached report	
Motion adopted to approve attached communication	
To the Mayor for concurrence	
To the Mayor FORTHWITH	
Mayor concurred	
Findings adopted	
Negative Declaration adopted	
Categorically exempt	
Generally exempt	
Tract map approved for filing with the County Recorder	
Parcel map approved for filing with the County Recorder	
Attach a copy of follow-up Department Report to file	

Elias Martinez

City Clerk
jv

steno\940684

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File No. 94-0684

TO THE COUNCIL OF THE
CITY OF LOS ANGELES

Your COMMERCE, ENERGY AND NATURAL RESOURCES COMMITTEE

reports as follows:

	Yes	No
Public Comments	XX	

COMMERCE, ENERGY AND NATURAL RESOURCES COMMITTEE REPORT in response to Motion (Galanter-Ferraro) relative to the California Public Utilities Commission's proposal to reform the California electric industry's regulatory structure.

Recommendations for Council action, as recommended by the City Legislative Analyst:

1. INSTRUCT the Department of Water and Power (DWP) and the Chief Legislative Analyst (CLA) to SUBMIT to the California Public Utilities Commission (CPUC) a formal set of comments reflecting broad policy goals while encouraging the CPUC to continue pursuing competitive electric rates for all of the State's consumers. The policy goals are identified as follows:

   a. Any electric services restructuring proposal must promote and protect rate structure equity for residential customers.

   b. Any electric services restructuring proposal must promote and protect existing social and environmental programs and requirements.

   c. In pursuing these and other goals, the CPUC should also examine the potential costs and benefits of "direct access" as it applies to retail customers (retail wheeling).

2. INSTRUCT the Department of Water and Power, with the assistance of the City Clerk, Chief Legislative Analyst, and the City Attorney, to take the following actions relative to the CPUC's electric services restructuring proposal:

   a. Submit the Council's concerns to the CPUC for their consideration by June 6, 1994.

   b. Prepare testimony for the City to deliver to the CPUC at their scheduled June 14th hearing in Los Angeles.

   c. Prepare a financial analysis and obtain legal opinions on the various ways the City can compete in a deregulated environment.

d. Identify and examine legislation that supports the policy goals outlined above, and submit pertinent positions to the Council for approval.

3. INSTRUCT the Department of Water and Power, with the assistance of the Chief Legislative Analyst, to report back to the Commerce, Energy and Natural Resources Committee every 30 days on the status of the CPUC's proceedings, as well as any related hearings or actions by the State Legislature.

Summary

On May 24, 1994 (continued from May 10, 1994), the Commerce, Energy and Natural Resources Committee considered a Motion (Galanter-Ferraro) instructing the Department of Water and Power and the Chief Legislative Analyst to prepare a City position and a set of comments on the California Public Utilities Commission's (CPUC) proposal to reform the California electric industry's regulatory structure. At the meeting on May 24, 1994, the Chief Legislative Analyst submitted recommendations to the Committee relative to the CPUC's proposal.

Traditionally served by investor-owned utilities (IOUs), the CPUC proposal would allow all customers served by the state's IOUs to opt for "direct access" to power suppliers within and outside of California. The CPUC hopes the proposal will harness the "forces of competition" to reduce consumer power rates statewide, and ultimately make California more attractive to businesses.

Although not directly affected by this proposal, the Department od Water and Power would be indirectly influenced by the CPUC's proposal.

Some of the potential impacts are as follows:

1. As a result of the CPUC's proposal, the Department of Water and Power's customers will undoubtedly want to have similar opportunities for "direct access" to electricity supplies. If such opportunities are not provided, the City could lose a number of its top revenue producing customers (top 100 customers produce about 25 percent of the Power System's revenues).

2. Absent any other changes, allowing the City's customers to have direct access to outside power suppliers could result in the following:

   a. The loss of the Department's top industrial customers, which would result in a reduction of Department and City revenue (DWP transfer).

   b. Increased rates for those customers who do not have immediate access to non-DWP power producers (small

businesses and residential customers).

3. Pressure to eliminate cross-subsidies between customer classes, as well as eliminate or significantly reduce spending on environmental and social programs will increase.

On May 23, 1994, the State Assembly's Natural Resources Committee and the Utilities and Commerce Committee held a joint hearing to discuss the California Public Utilities Commission's April 20th proposal. Many of the members voiced concern about the Commission's proposed timeline for implementing changes to the State's electric services industry, and the impact of the proposed changes on residential ratepayers.

Furthermore, the members made it very clear to the public and the CPUC Commissioners in attendance that the State Legislature would continue to play a very significant role in the State's electric services industry, as well as the emerging policy discussions related to the Commission's proposal.

The Commerce, Energy and Natural Resources Committee recommended that the Chief Legislative Analyst's May 24, 1994 recommendations (contained on the Council file) be approved and the matter be scheduled for Council consideration.

Respectfully submitted,

COMMERCE, ENERGY AND NATURAL RESOURCES COMMITTEE

KC
5/25/94

#940684

Rept.
ADOPTED

MAY 3 1 1994

LOS ANGELES CITY COUNCIL

AGENDA NO. 30-36	YES: 13	NO: 0	ABS: 2	05/31/94	TIME: 10 39 41
ALARCON.....YES	ALATORRE.....YES	BERNSON.....YES		BRAUDE.....YES	
CHICK.....YES	GALANTER.....YES	GOLDBERG.....YES		HERNANDEZ....YES	
RIDLEY-THOMASYES	SVORINICH....YES	WALTERS.....YES		YAROSLAVSKY..YES	
FERRARO.....YES	HOLDEN.....ABS	WACHS.....ABS			

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COMMERCE, ENERGY AND NATURAL RESOURCES COMMITTEE
Report ~~/Communication~~ for Signature

Council File Number 94-0684

Committee Meeting Date 5-24-94

Council Date 5-31-94

COMMITTEE MEMBER	YES	NO	ABSENT
COUNCILMEMBER GALANTER, Chair	✓		
COUNCILMEMBER SVORINICH	✓		
COUNCILMEMBER FERRARO	✓		

Remarks CPUC proposal

Konrad Carter, Legislative Assistant ♦♦♦♦♦ Telephone 237-1615

COMMERCE, ENERGY AND NATURAL RESOURCES COMMITTEE
SUGGESTED NOTIFICATION OF COUNCIL ACTION

Council File No. 94-0684

- [ ] Petitioner/Communicant _____
- [ ] Council Member(s) _____
- [ ] Office of the Mayor
- [ ] Board of Airport Commissioners
- [ ] * Certify stamp and return Commission copy (on file)
- [ ] Department of Airports
- [ ] Board of Harbor Commissioners
- [ ] Harbor Department
- [x] Board of Water and Power Commissioners
- [x] Department of Water and Power
- [x] City Attorney
- [x] City Administrative Officer
- [x] Chief Legislative Analyst
- [ ] Controller
- [x] City Clerk: Attn: Pat Healy
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

COMMERCE, ENERGY AND NATURAL RESOURCES COMMITTEE

TUESDAY - MAY 24, 1994

9:00 A.M. - ROOM 238 - CITY HALL

MEMBERS: **COUNCILMEMBER RUTH GALANTER, Chair**
~~COUNCILMEMBER RUDY SVORINICH, JR.~~
COUNCILMEMBER JOHN FERRARO

Konrad Carter - Legislative Assistant - 213.237-1615

Council Committee meetings are now audiocast live via "Council Phone". In Los Angeles, call (213) 621-CITY, or check your local telephone listing for the "Council Phone" number applicable to your area.

DEPARTMENTS SUBMITTING WRITTEN REPORTS OR MATERIALS DURING THE COMMITTEE MEETING MUST PROVIDE COPIES TO EACH COMMITTEE MEMBER AND TWO ADDITIONAL COPIES TO THE CITY CLERK - ONE COPY FOR THE COUNCIL FILE AND THE SECOND COPY TO BE MADE AVAILABLE FOR PUBLIC INSPECTION DURING THE MEETING.

FILE NO. **SUBJECT**

(1)

91-2120 S1 Communication from the Mayor transmitting Ordinance and City Administrative Officer report relative to property condemnation in San Bernardino County for the Department of Water and Power's Mead-Adelanto Transmission Line Project-Segment V. (Public Hearing scheduled in Council 6-17-94)

DISPOSITION _____

(2)

94-0684 CONTINUED FROM 5-10-94 FOR REPORT
Consideration of Motion (Galanter-Ferraro) that the Department of Water and Power and the Chief Legislative Analyst prepare a City position and a set of comments on the California Public Utilities Commission's (CPUC) proposal to reform the California electric industry's regulatory structure.

DISPOSITION Approve CLA Recs

COMMENTS FROM PUBLIC ON ITEMS OF PUBLIC INTEREST WITHIN COMMITTEE'S SUBJECT MATTER JURISDICTION

Tuesday?

FILE NO. **SUBJECT**

The Committee reserves the right to recess to CLOSED SESSION as permitted by Government Code Section 54956.9(b) to confer with its legal counsel relative to the following items:

CLOSED SESSION ITEM
(3)

94-0439 Transmittal from the Mayor, City Administrative Officer report and Board of Water and Power Commissioners' Resolution relative to Casmalia Resources Site Steering Committee limited purpose participation agreement (proposed second amendment and restatement).

DISPOSITION_____

CLOSED SESSION ITEM
(4)

94-0873 Motion (Galanter-Chick) that issues concerning the other City departments/agencies regarding Casmalia Resources Ltd. Site Steering Committee be heard concurrently with Department of Water and Power discussion on Casmalia. City Attorney to report.

DISPOSITION_____

cn0524.agd

REPORT OF THE CHIEF LEGISLATIVE ANALYST

May 24, 1994

TO: Ruth Galanter
Chairwoman of the Commerce, Energy, and
Natural Resources Committee

FROM: Ronald F. Deaton RFD by SMG
Chief Legislative Analyst

SUMMARY

At the May 10th Committee hearing, the Committee directed staff to present a report on the California Public Utilities Commission's (CPUC) proposal to restructure California's electric services industry. This report is in response to the request.

Traditionally served by investor-owned utilities (IOUs), the CPUC proposal would allow all customers served by the state's IOUs to opt for "direct access" to power suppliers within and outside of California. The Commission hopes the proposal will "harness the forces of competition" to reduce consumer power rates statewide, and ultimately make California more attractive to businesses.

Although not directly affected by this proposal, the Department of Water and Power would be indirectly influenced by the CPUC's proposal.

Some of the potential impacts are as follows:

1. As a result of the Commission's proposal, the Department of Water and Power's customers will undoubtedly want to have similar opportunities for "direct access" to electricity supplies. If such opportunities are <u>not</u> provided, the City could lose a number of its top revenue producing customers (top 100 customers produce about 25 percent of the Power System's revenues).

2. Absent any other changes, allowing the City's customers to have direct access to outside power suppliers could result in the following:

   A. The loss of the Department's top industrial customers, which would result in a reduction of Department and City revenue (DWP transfer).

Submitted in Comte 5-24-94

B. Increased rates for those customers who do not have immediate access to non-DWP power producers (small businesses and residential customers).

3. Pressure to eliminate cross-subsidies between customer classes, as well as eliminate or significantly reduce spending on environmental and social programs will increase.

Yesterday the State Assembly's Natural Resources Committee and the Utilities and Commerce Committee held a joint hearing to discuss the California Public Utilities Commission's April 20th proposal. Many of the members voiced concern about the Commission's proposed timeline for implementing changes to the State's electric services industry, and the impact of the proposed changes on residential ratepayers.

Furthermore, the members made it very clear to the public - and the CPUC Commissioners in attendance - that the State Legislature would continue to play a very significant role in the State's electric services industry, as well as the emerging policy discussions related to the Commission's proposal.

RECOMMENDATION

The deadline for submitting comments to the Commission has been extended to June 8th, and the public comment and discussion process has been extended throughout the summer. The City Council may wish to encourage the Commission to continue pursuing competitive electric rates for all of the State's consumers, but in doing so, the CLA and the DWP recommend that the Committee submit a formal set of comments to the California Public Utilities Commission that reflects the following broad policy goals:

1. Any electric services restructuring proposal must promote and protect rate structure equity for residential customers.

2. Any electric services restructuring proposal must promote and protect existing social and environmental programs and requirements.

3. In pursuing these and other goals, the Commission should also examine the potential costs and benefits of "direct access" as it applies to retail customers (retail wheeling).

The CLA and the DWP also recommend that the Committee direct Department of Water and Power, the City Clerk, Chief Legislative Analyst, and the City Attorney to take the following actions relative to the CPUC's electric services restructuring proposal:

1. Submit the City Council's concerns to the California Public Utilities Commission for their consideration by June 6, 1994.

2. Prepare testimony for the City to deliver to the Public Utilities Commission at their June 14th hearing in Los Angeles.

3. Prepare a financial analysis and obtain legal opinions on the various ways the City can compete in a deregulated environment.

4. Identify and examine legislation that supports the policy goals outlined above, and submit pertinent positions to the City Council for approval.

5. Report back to the Committee every 30 days on the status of the California Public Utilities Commission's proceedings, as well as any related hearings or actions by the State Legislature.

Marcus A. Allen
Analyst

Attachments: Motion
DWP Report
CPUC Proposed Rule

FINDINGS

At the conclusion of the May 10th Commerce, Energy, and Natural Resources Committee meeting, the Committee members directed the Chief Legislative Analyst, Department of Water and of Power, and the City Attorney to prepare a report on the California Public Utilities Commission's (CPUC) proposal regarding the "Restructuring of California's Electric Services Industry." Staff was asked to prepare a set of public comments, and a legislative and regulatory strategy relative to the CPUC proposal.

California Public Utilities Commission (CPUC) Proposal

On April 20th, the CPUC proposed a massive restructuring of the state's electric services industry. In theory, the CPUC proposal is designed to offer all Californians lower cost electricity by deregulating and increasing competition between electricity generators, and by re-regulating the present structure and incentives used to set rates for the State's investor owned utilities.

The Commission has proposed a two-tiered approach for achieving this goal. The first component allows all customers of investor-owned utilities to have "direct access" to the electricity generator or supplier of their choice. Once transmitted, the local utility would still be responsible for delivering the electricity. As proposed, large industrial customers would be given this choice first (1996), smaller industrial customers second (1998), commercial and small businesses third (1999), and residential customers last (2002).

The second component of the Commission's proposal allows the state's investor-owned utilities to revise their method for establishing rates. Currently, revenue requirements and rates are tied to capital and operating expenses, and the CPUC has an elaborate structure in place for reviewing these expenses and costs. Proponents of the CPUC proposal have argued that under the current approach, utilities have been able to recover costs by raising rates, even if utility operations have been inefficient and uneconomical, and that the existing rate review structure is excessive and costly.

The proposed method for rate setting, known as performance-based ratemaking, provides the state's investor-owned utilities with a performance related target. To the extent that a utility reduces costs below the established target, it could divide any savings between ratepayers and shareholders. To the extent that it does not, it would also divide those costs between ratepayers and shareholders. The CPUC believes this approach gives utilities greater incentives to operate efficiently, while reducing the administrative and reporting burden associated with the existing ratemaking approach.

CPUC's Proposed Implementation Schedule

The Commission had initially planned to accept public comments until May 20th, hold public hearings in June, and then adopt a final policy in on restructuring the state's electric industry by August. However, the CPUC has extended the initial public comment period until June 8th, as well as their hearing schedule. Although the new schedule will proceed throughout the summer, it is still not a lot of time for all of the interested parties to effectively examine the scope of the proposed changes, and prepare substantive alternatives (See Exhibit A).

The CPUC comment and review process is very tedious, and requires a substantial amount of legal and technical expertise. In the past, the City Attorney has represented the City in proceedings before the CPUC. However, given the scope and complexity of the proposed CPUC changes, and the potential impact on the City, the City Council may wish to hire legal and technical consultants to assist the City Attorney, in the event the City intervenes in this process.

General Concerns about the CPUC's Proposal

Although the Department of Water and Power has been tracking the Commission's 14-month study of regulatory reform, like everyone else in the electric industry, the scope and timing of the Commission's proposal was unanticipated. Nonetheless, the Department of Water and Power has identified an initial set of concerns about the "direct access" component of the Commission's proposal.

1. The implementation schedule is too short, and does not explicitly involve the State Legislature. Because the CPUC's proposal will directly affect all of the State's residents, it is only appropriate that the State Legislature play a significant role in framing the CPUC's policy.

2. Opening California's borders to out-of-state power producers, without reciprocal agreements between those states, places California power producers at risk. For test purposes, should "direct access" be limited to "Intra-State" competition?

3. Wholesale wheeling has not had a chance to fully develop under the National Energy Policy Act of 1992 (NEPA). Differently, neither the beneficial nor adverse effects of the wholesale competition are known yet. Absent the identification and evaluation of these impacts, it may be premature to launch a California-only retail wheeling program.

4. Technical problems related to voltage control, transmission access, and system reliability may offset potential savings resulting from "direct access".

5. As proposed, residential ratepayers will be the last consumers to reap the benefits of "direct access". One of the most difficult aspects of the overall Commission proposal, direct access for residential customers will impact the greatest number of consumers across the State. If direct access for residential customers is infeasible, these consumers may have to bear the brunt of stranded system investments and costs, as other customers purchase their power elsewhere.

While not insurmountable, the City must remain cognizant of these issues because they will influence the City's provision of electric services. See Exhibit B for a more detailed discussion of the Department of Water and Power's concerns regarding "retail wheeling".

Impact of the CPUC Proposal on the City

Although the Department is not under the jurisdiction of the CPUC, the Commission's proposal could influence the Department indirectly. With this in mind, the Department has prepared a detailed report that outlines their concerns about the CPUC proposal.

The issues identified in the Department's report can be categorized as (1) impacts on the City's ratepayers at large; and, (2) impacts on the City and the Department. See the Department's report titled "Potential Effects of the CPUC's Proposal on the City's Ratepayers" for a complete discussion of these issues (attached).

The CPUC's April 20th proposal could indirectly **affect the City's ratepayers** in a number of ways, some of which are as follows:

- **Economic Benefits** - The Commission hopes its proposal will help revitalize the State's recovering economy by allowing inter-state competition to drive down the price of electric power rates. Because electricity is such an essential factor of production for most businesses, all sectors of California's economy would benefit from the low-cost electric rates.

- **Business Retention and Development** - If a statewide "direct access" market develops, it is almost a certainty that the City's electric consumers will demand similar opportunities of choice. Municipalities already compete fiercely with one another to attract and retain businesses. This competition will only be heightened as some cities respond well to the changing electric services market, and others do not. Therefore, in addition to addressing the immediate issue at hand (the CPUC's April 20th proposal), the City must also begin to address the related issue of "competitive electric services, and how they influence economic development."

- **Rate Structure** - Under the City's current rate structure, commercial and industrial customers subsidize residential customers. If the City elects to compete with other energy suppliers for customers inside or outside of the City, it may be necessary to reduce or eliminate some of these longstanding cross-subsidies.

- **Social Programs** - Like the CPUC, the City Council must also begin to make some explicit choices between potentially conflicting approaches and priorities for electric service delivery. For example, the City has aggressively championed environmental policies related to the use and development of electric vehicles. The City has also pursued special ratepayer programs for the aged and economically disadvantaged. As the City begins to grapple with the Commission's proposal, and the broader issue of competition, these programs may be in jeopardy.

The Commission's "direct access" proposal could **affect the Department of Water and Power's and the City's financial well-being** in a number of ways. However, the most direct impacts are as follows:

- **Potential Erosion of the DWP's Customer Base** - Under the Commission's plan, the DWP could lose a substantial amount of its existing customers due to competition. Competition could take a number of forms and may include neighboring utilities, out-of-state generators, and energy brokers and marketers. Because these competitors will probably target the Department's largest, they could have a significant impact on the DWP's revenues. For example, the top 100 customers represent $489 million (25 percent) of the Department's annual revenues.

- **Potential Erosion of the City's Revenue Base** - If the Department's sales of electricity decline significantly, so would their gross income. Because the City's revenue transfer from the DWP Power System is directly tied to gross income, the transfer to the City would also decline proportionately. Furthermore, if the CPUC's "direct access" proposal is adopted, and the City also allows its customers direct access to outside power suppliers, the City will have to re-examine the way it collects utility users' taxes on electricity. Otherwise, the City's utility users' tax revenue would be subject to unanticipated decreases.

Role of the State Legislature

Although the Commission has direct jurisdiction over California's investor-owned utilities (IOUs), the State Legislature also exercises a significant amount of control over the State's IOUs through a number of California statutes. For a partial listing of the changes required to the State's Public Utilities Code, see the attached correspondence from the Assembly Natural Resources Committee (Exhibit C).

Any significant changes to the State's electric services will require the repeal or amendment of these laws. While many of these laws directly affect investor-owned utilities, they will also indirectly affect municipalities. Furthermore, given the scope and magnitude of the proposed changes, and the impact they will have on all of California's residents, it is important that the State Legislature play an active role in the electric services restructuring process.

CONCLUSION

DWP Structural Analyses and Changes

The immediate issue confronting the City is how best to respond to the Commission's proposal. However, the broader issue confronting the City is how best to respond to competitive market forces in the electric industry. The City must begin to acknowledge and examine some of the following issues relative to the provision of electric services:

1. Is the city willing to sacrifice aspects of service reliability, in pursuit of low-cost service provision?

2. Should the City compete for customers outside of its current service territory? If so, should the Department compete as a fully integrated utility (generation, transmission, and distribution)?

3. How does the existing rate structure help or hinder the City as it continues to navigate through an increasingly competitive electric services market?

4. How does the Department of Water and Power's existing management and operating structure help or hinder the City's provision of electric services in an increasingly competitive electric services market?

5. How does the City's existing governmental structure help or hinder the Department of Water and Power's provision of electric services in an increasingly competitive electric market?

Granted, these are structural, managerial, and governance questions that transcend a discussion of the California Public Utilities Commission's April 20th proposal. However, as the City continues to grapple with changes in the U.S. and California electric services industry, these questions will continue to arise.

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COMMERCE, ENERGY and NAT. RES.

APR 26 1994

MOTION

During the 1980s, a number of services traditionally dominated by monopolies were deregulated, reregulated, and generally pushed toward more competitive market structures. With the introduction of different market structures, many of the companies within these industries (i.e. gas, communications, and airlines) have been forced to adapt and evolve into highly competitive businesses.

The electric industry has not been sheltered from these competitive changes. In 1992, the U.S. Congress set the state for deregulation of the Nation's electric utility industry with the enactment of the National Energy Policy Act (NEPA). The NEPA eliminated many of the barriers that prevented out of state nonutility power generators from competing with traditional in state electric utilities for local market share.

In response to Congress' attempt to open up the Nation's electricity market, state regulators have typically seized opportunities to move their electric industries toward competitive market structures. Consistent with these trends, the California Public Utilities Commission (CPUC) recently announced its plan to increase competition within the California electric industry.

If adopted, the CPUC's proposal would make sweeping changes in the way the state's investor owned utilities (IOUs) are regulated. Under the CPUC proposal, all classes of customers would eventually have the ability to choose their power producers, while local utilities would still be responsible for transmitting and distributing that power (for a fee). The CPUC proposal would also allow IOUs to adopt performance based ratemaking structures.

The CPUC has asked all interested parties to submit comments to the Commission by May 20th. The comment period will be followed by another public hearing in Los Angeles on June 14th.

Although the California Public Utilities Commission (CPUC) regulates all of the investor owned utilities in the State, they do not have any jurisdiction over the City's Department of Water and Power. However, it appears that the CPUC's proposal may adversely affect the Department of Water and Power's ability to serve its existing customers.

For example, if there is open competition across utility service areas, uncompetitive utilities will be forced to become the low cost provider for all customer classes, or experience a loss of market share. Furthermore, heightened rate competition may force utilities to eliminate existing subsidies between customer classes, reduce spending on special ratepayer assistance programs, as well as environmental and conservation programs.

I THEREFORE MOVE that City Council Direct the Department of Water and Power to submit a report to the City Council by May 3rd that outlines the affects of the CPUC's Proposal (to reform the California electric industry's regulatory structure) on the City's ratepayers.

I FURTHER MOVE that the City Council Direct the Department of Water and Power and the Chief Legislative Analyst to prepare a City position - and set of comments on - the CPUC's Proposal (to reform the California electric industry's regulatory structure).

PRESENTED BY: Ruth Galanter

Councilwoman Ruth Galanter
6th Council District

SECONDED BY: John Ferraro

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EXHIBIT A

BEFORE THE PUBLIC U[illegible] COMMISSION
OF THE
STATE OF CALIFORNIA

630-0065

Order Instituting Rulemaking on the Commission's Proposed Policies Governing Restructuring California's Electric Services Industry and Reforming Regulation	)	R.94-04-031
Order Instituting Investigation on the Commission's Proposed Policies Governing Restructuring California's Electric Services Industry and Reforming Regulation	)	I.94-04-032

ASSIGNED COMMISSIONER'S RULING

Notice of Assignment of Commissioners and Administrative Law Judge: Parties will take note that the rulemaking and investigation are assigned to President Fessler with a co-assigned Commissioner status in Commissioner Knight. Administrative Law Judge Kim Malcolm has been assigned to both matters.

Scope of ruling: This ruling sets forth some guidelines for the Commission's review of electric industry restructuring and grants extensions of time for opening and reply comments ordered in R.94-04-031.

Requests for Extensions of Time: On April 27, 1994, PG&E filed a

motion seeking an extension of time for comments. PG&E seeks an additional 60 days for opening comments and an additional 15 days for reply comments.

This ruling grants the parties an extension for opening comments to June 8. Reply comments will be due June 21. Because of the limited time between receipt of the comments and the June 14 full panel hearing in Los Angeles, copies to the Commissioner offices and the Commission's staff shall be hand delivered or sent by way of overnight mail.[1] The subject of these comments is discussed below.

Comments and Full Panel Hearings: Because of the importance and breadth of the issues raised in this rulemaking, the Commission intends to hold a series of full panel hearings. To afford the maximum time advantage in preparing for and participating in these full panel hearings, I hereby announce general topics for the first two hearings and tentative dates for a total of four possible full panel hearings. The Commission will seek rounds of comments on specific areas of inquiry which will correspond to the topics of each full panel hearing. The parties may craft their written and oral comments as they deem appropriate within the general framework of these broad issues.

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[1]Staff to be included in such service are: ALJ Malcolm, Virginia Coe, Director of Strategic Planning, and Paul Clanon, Assistant Director of the Commission Advisory and Compliance Division.

R.94-04-031/I.94-04-032 DWF

Proposed Schedule of Comments, Full Panel Hearings, and Reply Comments

I.

June 8	First Round Comments
June 14	Full Panel Hearing: "Competitive Premise, Regulator's Role and Marketplace Implications"
June 21	First Round Reply Comments

II.

June 24	Second Round Comments
July 1	Full Panel Hearing: "Balancing Public Policy Objectives"
July 8	Second Round Reply Comments

III.

July 5:	Commission announces decision on need for Third Full Panel Hearing and assigns topic. Timetable for initial and reply comments to be announced.
July 21:	Tentative date for Third Full Panel Hearing if ordered.

IV.

July 25:	Commission announces decision on need for Fourth Full Panel Hearing and assigns topic. Timetable for initial and rely comments to be specified.
August 4:	Tentative date for Fourth Full Panel Hearing if ordered.

competitive premises, the regulator's role, and the marketplace implications of the proposed policies, as set forth in this ruling, is extended from May 20, 1994 to June 8, 1994. Reply comments on these subjects will be due June 21, 1994. Copies to the Commissioner offices and the Commission's staff shall be hand delivered or sent by way of overnight mail.

2. Comments on balancing public policy objectives in the competitive environment, as discussed in this ruling, are due June 24, 1994. Reply comments are due July 8, 1994. Copies to the Commissioner offices and the Commission's staff shall be hand delivered or sent by way of overnight mail.

3. The official service list for this proceeding, created pursuant to Ordering Paragraph 4 of R.94-04-031, is attached to this ruling.

Dated May 11, 1994, at San Francisco, California.

Daniel Wm. Fessler
President of the Commission

of electric services, the Commission's duty to protect consumers should broaden to maintain the integrity of the marketplace in the competitive sectors of the industry while continuing to exercise adequate oversight in those sectors where competition is absent or insufficient. We also wish to test the assertion in the proposal that its adoption would: "benefit both large and small electric consumers, providers of electric services, including the utilities we oversee, California businesses, and the state's economy."

A more detailed agenda for the June 14 full panel hearing will be distributed to the parties on or before June 3, 1994.

July 1, 1994, Full Panel Hearing: The Commission will hear parties views on the proposal's assertion of continued dedication to what may be termed equity/social and environmental policies and their viability in a competitive environment. Among the equity/social goals embodied in current Commission practice are low income ratepayer assistance programs, economic development programs, and the development of low and zero emission vehicles. California's environmental objectives have included the promotion of fuel diversity, demand side management, energy conservation and renewable resources. Comments on balancing such public policy objectives in the competitive environment are due June 24. Reply comments are due July 8.

IT IS RULED that,

1. The date for filing opening comments on subjects relating to the

The schedule set out in this rulemaking is ambitious so the schedule of comments, full panel hearings, and reply comments is likewise demanding. It is my intention to stage the Commission's inquiry to first encourage discourse on the broad, foundational policies asserted in the rulemaking. After such opportunity, parties will then be encouraged, in subsequent written comments and full panel hearings, to provide specific, comprehensive recommendations on industry structure and regulation given the thoughts aired at the first full panel hearings.

June 14, 1994 Full Panel Hearing: As reviewed in the rulemaking (p. 5), a clear consensus emerged during our informal policy deliberations that the Commission must fundamentally reform California's regulatory policy governing investor-owned utilities. In the rulemaking, the Commission proposes policies to correct what it perceives to be a mismatch between regulation and the marketplace. For the first full panel hearing the Commission wishes to read and discuss parties' broad-based reactions and thoughts on what parties deem to be the key issues raised in the rulemaking to determine the wisdom and practicality of going forward with the policies proposed in the rulemaking. We will address the foundational premise embodied in the rulemaking that the generation supply market is, or could be, sufficiently competitive and mature to support a modified utility role that will enhance service to consumers through choice. We also will address the proposed policy that, as market forces play an increasing role in the delivery

EXHIBIT B

Perspective on the Technical Problems Associated with Providing Direct Access (Retail Wheeling)

From a technical perspective there are no insurmountable problems standing in the way of open transmission access, retail wheeling, unbundling of services, or any other manifestation of "deregulation" in the electric utility industry. Further, modifications to the structure of the industry to accommodate Direct Access will not create any new technical problems which have not already been identified in the discussions on wholesale wheeling.

However, it must be recognized that the interconnected electric system is not technically perfect in its present form and that existing proposals to restructure the industry will demand a substantially higher level of technical perfection than exists today. Therefore, the viability of "deregulation" is not dependent on whether or not technical problems can be overcome. Given sufficient time and money, the technical problems will eventually be solved. The actual question is whether or not the economic benefits derived from any "deregulation" proposal outweigh the costs of restructuring, and maintaining the electric industry in a new configuration. Further, there is the issue of whether the solutions to the technical problems will be timely, that is, will the solutions precede or at least coincide with the timetable proposed for introducing Direct Access to the California consumer?

Among the technical problems to be addressed are: parallel path flow, system stability, frequency regulation, voltage and VAR control, and general reliability. The foregoing list is not all-inclusive and intentionally excludes the more esoteric problems. All of the above problems exist today and all electric utilities now incur specific costs to control their effects. However, as previously mentioned, the control system is not perfect. The realities of generation, transmission, and consumption of electricity impose costs on interconnected utilities which cannot be specifically allocated to any one particular utility. Under the present utility structure, it is generally recognized that the overall costs of achieving perfect control and accountability far exceed the potential benefits. Therefore, individual utilities suffer or benefit on a somewhat random basis. The belief is that everything will "even-out" over time.

In a highly competitive environment, suppliers of electricity may not be particularly motivated to follow that principle. All costs will have to be very precisely allocated and this means that all technical problems will have to be solved to perfection. Some type of regulatory oversight may be needed to ensure that equity issues are properly resolved.

For example, consider the simple case of parallel path flow. Except for direct current transmission lines, there are no "valves" in electric transmission and distribution systems. Electric current travels through the interconnected system according to the laws of physics. The practical effect of this phenomenon is that transmission lines which are owned and operated by a given utility are "inadvertently" used by many other interconnected utilities on a routine basis. Although the owning utility is responsible for the entire cost of its transmission lines, it may be regularly deprived of the full use of such lines because of the generation and consumption patterns of its neighbors.

The Pacific Alternating Current Intertie (PACI) consists of several 500 kV transmission lines which extend from northern Oregon to southern California. North of the California-Oregon border (COB), these lines are jointly owned by the Bonneville Power Administration, Pacificorp, and Portland General Electric. South of COB, the lines are owned by Pacific Gas & Electric, Southern California Edison, and San Diego Gas and Electric. Although the maximum rating of this transmission system is 3200 MW, it is often subject to parallel path flows in the 600-800 MW range. Obviously the owners of the PACI suffer economic harm and want to be compensated by those who "caused" their loss. The problem, however, is that the parallel path flow is caused by simultaneous operation of virtually all generating units in the WSCC.

Throughout the years, many attempts have been made to mitigate parallel path flow and to compensate those who are harmed by such flow. To date, a comprehensive solution still needs to be found. Research needs to be done to conducted to estimate the costs associated with control parallel path flow or to accurately identify and allocate costs caused by such flow. Expanding the number of "independent" sources will only exacerbate the situation.

With the passage of the Energy Policy Act of 1992 (EPAct), FERC gained the authority to order transmission-owning utilities to involuntarily provide wholesale transmission service for others. Parallel path flow has become a major unresolved issue in acertaining which entities benefit and which entities suffer harm. Retail transmission service will add another level of complexity to an already complex situation.

EXHIBIT C

MEMBERS
Doris Allen
Tom Bates
Debra Bowen
Terry Friedman
Mike Gotch
Bill Hoge
David Knowles
Burt Margolin
Bill Morrow
Bernie Richter
Hilda Solis
Curtis R. Tucker, Jr.

California Legislature
Assembly Natural Resources Committee

BYRON D. SHER
CHAIRMAN

CHIEF CONSULTANT
Kip Lipper

CONSULTANTS
Jeffrey P. Shellito
Paul D. Thayer

COMMITTEE SECRETARY
Ann E. Boone

STATE CAPITOL
P.O. BOX 942849
SACRAMENTO, CA 94249-0001
TELEPHONE (916) 445-9367

May 3, 1994

Daniel Wm. Fessler, President
Public Utilities Commission
State of California
505 Van Ness Avenue
San Francisco, CA 94102-3298

Dear President Fessler:

On April 20, the commission unveiled sweeping new proposals for restructuring California's electric service industry. Those proposals appear to envision repeal or amendment of numerous California statutes, including but not limited to:

Public Utilities Code sec. 451 et seq. (Just and reasonable rates; only rates found justified by the Commission are to become effective)

Public Utilities Code sec. 726 et seq. (Nondiscriminatory, just and reasonable rates; cost recovery; cost allocation among customer groups)

Public Utilities Code sec. 701.1 (Energy efficiency; resource diversity; incorporation of environmental costs in resource planning)

Public Utilities Code sec. 701.3 (Renewable energy procurement by utilities)

Public Utilities Code sec. 701.4 (Valuation of resource diversity)

Public Utilities Code sec. 1001 et seq. (Certificates of public convenience and necessity for utility plant additions)

Public Utilities Code sec. 2801 et seq. (Sections limiting service on a wholesale basis by "private energy producers"; changes here will also raise significant complications under federal law)

Public Utilities Code sec. 740 et seq. (Provisions governing utility-financed research & development, electric vehicles, economic development)

Public Utilities Code sec. 746, 747, 747.7 (Incentives for demand-side management; pricing policies to promote energy efficiency)

Printed on Recycled Paper

Public Resources Code sec. 25305 et seq. (Long-term resource planning)

Public Resources Code sec. 25500 et seq. (Determination of need and siting for new resources)

Under the circumstances, we consider it something of an understatement when the proposed order states that "we recognize that the Legislature can assist in the timely implementation of our proposal" (p. 7). President Fessler, we trust that you recognize that the Legislature must be much more than the PUC's "assistant" with "your proposal."

The potential magnitude of the impact of your proposal for restructuring California's electric service industry necessitates broad public input. Therefore, we are concerned that your schedule gives the public only thirty days to comment, and anticipates an initial Commission decision within less than four month's time. That schedule is grossly inadequate from the legislative perspective. Given the significant role that the legislature must play in this process, we urge you to adopt a more reasonable schedule and look forward to your response that outlines such a schedule.

Sincerely,

Byron D. Sher, Chair
Assembly Natural Resouces Committee

Gwen Moore, Chair
Assembly Utilities and Commerce

BDS:kf

cc: Speaker Willie L. Brown, Jr.

COMMERCE, ENERGY AND NATURAL RESOURCES COMMITTEE

MONDAY - MAY 16, 1994

9:00 A.M. - ROOM 250B - CITY HALL

MEMBERS: COUNCILMEMBER RUTH GALANTER, Chair
COUNCILMEMBER RUDY SVORINICH, JR.
COUNCILMEMBER JOHN FERRARO

Konrad Carter - Legislative Assistant - 237-1615

THE PREVIOUSLY SCHEDULED SPECIAL MEETING

FOR THIS DATE

HAS BEEN CANCELLED

cn0516c.agd

SPECIAL MEETING

Note Room Change - This Meeting Only

COMMERCE, ENERGY AND NATURAL RESOURCES COMMITTEE

MONDAY - MAY 16, 1994

9:00 A.M. - ROOM 250B - CITY HALL

MEMBERS: COUNCILMEMBER RUTH GALANTER, Chair
COUNCILMEMBER RUDY SVORINICH, JR.
COUNCILMEMBER JOHN FERRARO

Konrad Carter - Legislative Assistant - 213.237-1615

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DEPARTMENTS SUBMITTING WRITTEN REPORTS OR MATERIALS DURING THE COMMITTEE MEETING MUST PROVIDE COPIES TO EACH COMMITTEE MEMBER AND TWO ADDITIONAL COPIES TO THE CITY CLERK - ONE COPY FOR THE COUNCIL FILE AND THE SECOND COPY TO BE MADE AVAILABLE FOR PUBLIC INSPECTION DURING THE MEETING.

FILE NO.	SUBJECT
	(1)
94-0684	CONTINUED FROM 5-10-94 FOR REPORT Consideration of Motion (Galanter-Ferraro) that the Department of Water and Power and the Chief Legislative Analyst prepare a City position and a set of comments on the California Public Utilities Commission's (CPUC) proposal to reform the California electric industry's regulatory structure. DISPOSITION_____

cn0516SP.agd

CANCELLED

Special Meeting
Commerce, Energy and Natural Resources Committee
Monday - May 16, 1994

COMMERCE, ENERGY AND NATURAL RESOURCES COMMITTEE

TUESDAY - MAY 10, 1994

9:00 A.M. - ROOM 238 - CITY HALL

MEMBERS: **COUNCILMEMBER RUTH GALANTER, Chair**
COUNCILMEMBER RUDY SVORINICH, JR.
COUNCILMEMBER JOHN FERRARO

all present

Ray Crisp
~~Konrad Carter~~ - Legislative Assistant - 213.237-1615

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FILE NO. **SUBJECT**

(1)

94-0684 Consideration of Motion (Galanter-Ferraro) that the Department of Water and Power and the Chief Legislative Analyst prepare a City position and a set of comments on the California Public Utilities Commission's (CPUC) proposal to reform the California electric industry's regulatory structure.

DISPOSITION Cont to Special meeting for 5-16-94 9:00 a.m.

with assistance of CLA - CLA will bring recommendation for response to CPUC

COMMENTS FROM PUBLIC ON ITEMS OF PUBLIC INTEREST WITHIN COMMITTEE'S SUBJECT MATTER JURISDICTION

cn0510.agd

OUTLINE OF COMMENTS

by Eldon A. Cotton

I. History of Electric Utility Deregulation *(Appendix H)*

II. California Public Utilities Commission Proposal *(pages 1-4)*

- Direct Access *(pages 1-2)*
- Performance Based Rate Making *(pages 2-3)*

III. Potential Impacts on DWP Customers *(pages 8-9)*

IV. Potential Impacts on DWP / City Revenues *(pages 9-10)*

V. What Every Utility Needs to do!
What DWP Needs to do! *(pages 16-17)*

VI. Suggested City Position on CPUC Proposal *(pages 5-8)*

APPENDICES FOR REFERENCE

A. How the Financial Community Sees the Future
B. Rate Comparisons (DWP vs. others)
C. Customer Segmentation / Revenue by Segment
D. Financial Impacts of Cogeneration (Project Losses to DWP/City)
E. Annual Revenue to City of Los Angeles
F. Profiles of Electricity Prices within WSCC (Western U. S.)
G. "Strategic Issues Paper", by Ralph Cavanagh, NRDC
H. History of Deregulation of the Electric Utility Industry

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE
STATE OF CALIFORNIA

Order Instituting Rulemaking on the Commission's Proposed Policies Governing Restructuring California's Electric Services Industry and Reforming Regulation	)	R.94-04-031
Order Instituting Investigation on the Commission's Proposed Policies Governing Restructuring California's Electric Services Industry and Reforming Regulation	)	I.94-04-032

WRITTEN COMMENTS
SUBMITTED BY
THE CITY OF LOS ANGELES

Councilwoman Ruth Galanter
July 1, 1994

Introduction

Thank you for the opportunity to present the City of Los Angeles' concerns regarding the social and environmental issues related to this investigation. As the Chairperson of the Los Angeles City Council's Commerce, Energy and Natural Resources Committee, I am here to speak before you as both an electric utility ratemaker and legislator. My comments today are directed toward our mutual and difficult task of achieving an equitable balance between the needs of a more customer-focused utility industry and the need to maintain the social and environmental programs that have added to the economic health of our State and region.

Prior to serving as a City Councilmember, I was active in the development of public policy related to air quality management, coastal land use, the restoration of the Santa Monica Bay, and the protection of natural habitats like the Ballona Wetlands and the Santa Monica Mountains. I am also a Board member of the Local Government Commission, an organization of California city and county officials dedicated to environmentally responsible government.

As a member of the City Council, I have concentrated on carbon dioxide (CO2) reduction, water conservation, and resource-efficient planning. As a life-long advocate of environmental stewardship, I have a deep interest in the Commission's proposal with respect to California's support for environmental and social policies.

I am here today because I have grave concerns about the social and environmental implications of your proposals. As ratemakers, we share the difficult task of balancing the needs of our customers and our respective utilities. However, as an elected official, my responsibilities transcend simple economic considerations. I must also consider the needs of my constituents who see electricity as a necessity of modern life, not merely a commodity.

Public Policy Concerns

Good environmental policy is also good economic policy. The "California Dream" has always been built upon an active and healthy lifestyle that is clearly tied to a clean environment. As you proceed, do not forget the environmental amenities that originally attracted so many people to our wonderful state and made possible our agricultural industry.

Currently, utilities fund much of the technological advances that will lead to a clean environment and a better market for electricity. The Los Angeles Department of Water and Power (DWP), for instance, is engaged in pilot projects with electric cars. In a price-only competitive situation, we would be unable to do this. Rather than make long-term investments that would benefit all of society, utilities would be driven to make short-term investments decisions predicated on limited returns.

Key policies and concerns that have guided energy decisionmakers over the last 20 year have been consistent in their direction, and have prompted billions of dollars in long-term investment decisions within the electric industry. For example, energy policies at the federal level have reflected broad concerns such as national energy security, environmental protection, energy conservation and alternative resource development.

In response to national concerns about energy security that stemmed from the "oil crisis" of the 1970s, the City has contracted to purchase well over $2 billion worth of electricity generated from domestic fuels like the Intermountain Generating Station in Utah. In response to federal environmental requirements, we have also invested well over $1 billion in various pollution control technologies.

In California, energy policies have not only reflected federal concerns, but also the unique environmental and energy interests of our diverse population. California policymakers have promoted conservation, demand side management, the development of renewable resources, and integrated resource planning. These policies reflect California's commitment to mitigating the environmental impacts associated with the production of electricity. The City of Los Angeles has made decisions and significant investments based on these state policies.

Consistent with state and federal policies, Southern California municipalities and regional governments like the South Coast Air Quality Management District (SCAQMD) have worked together to address our unique environmental problems. For example, the City of Los Angeles has developed a carbon dioxide (CO2) reduction program aimed at reducing greenhouse gases. Additionally, in response to the SCAQMD's air attainment goals, the City has invested over $400 million to retrofit and repower its inbasin power plants.

For well over 20 years, federal, state and local energy policies have moved in a concerted fashion. In an effort to secure the promise of long-term economic and environmental benefits for all Californians, utilities have made investment decisions based on clear federal, state, regional, and local policies. The most recent example of this is embodied within the National Energy Policy Act of 1992 (EPACT92).

As adopted, EPACT92 gives state and local ratemakers the opportunity to pursue lower electric rates for all customers through wholesale competition. We believe the EPACT92 will accomplish this goal, and we support wholesale competition. This is evidenced by the City's recent decision to participate in the Western Regional Transmission Association (WRTA). Any restructuring proposal adopted by the Commission must ensure the equitable distribution of benefits to all customers classes, not merely the largest. I fear that retail competition, as you envision it, does not do this.

The costs of these policies are now imbedded in our existing rate structure. As President Fessler noted at the June 15th hearing in Los Angeles, while others have talked about making environmental and energy policy investments, California has acted. Are the savings that you envision from "direct access" going to come at the expense of these investments?

Your proposal flies in the face of 20 years of national, state, and local energy policies. Moreover, your proposal places billions of dollars of investments, related to these policies, at risk. Once again, these long-term policies and investments are being placed at risk in the pursuit of short-term benefits for a select class of large customers. The City of Los Angeles urges you not walk away from the energy and environmental policy path that we as a society have chosen to follow.

Social Concerns

Electricity is not merely a commodity, it is a basic necessity of modern life. The social programs and benefits provided through the electric industry, such as low-income ratepayer and lifeline rates, reflect a commitment to this belief. Programs like these have provided a "safety net" for those Californian's most in need. Ironically, these are the customers least likely to be represented in these proceedings. As both a ratemaker and elected official, I cannot lose sight of this fact, and neither should you.

I would like to point out that social programs are not only provided to low-income or residential customers, but also commercial and industrial customers as well. For instance, Los Angeles based businesses were beneficiaries of the City's disaster relief programs which provided rate relief for commercial and industrial customers affected by the April 1992 civil disturbances and the January 1994 earthquake.

Environmental Concerns

I understand the Commission's proposal relies on the "market" to set the value of environmental investments, and consensus to dictate each utility's environmental commitment. The environment, however, cannot be disaggregated, packaged, and sold like widgets to individuals. Because environmental costs and benefits accrue to society as a whole, it is government's responsibility to ensure that every individual pays their share of these costs.

While costs are an important consideration to businesses and the general public alike, maintaining a healthy natural and human environment for commerce is just as important to improving California's competitiveness as lowering energy costs. Businesses cannot afford to have employees whose physical and mental health are adversely impacted by poor environmental conditions.

While employment opportunities for the unskilled and undereducated are limited, opportunities for highly skilled and educated workers are not. All other factors being equal, these desirable employees will not choose to work in a state where their families will suffer the ill effects of a lower quality of life.

Disaster Preparedness Concerns

Coming from a region that has been beset with disasters of all types, I am very concerned about the apparent disincentives your proposals creates for utilities to work together during emergencies. In the past, California utilities have supported one another in times of crisis. Recent examples of this include the DWP providing assistance to the Pacific Gas and Electric Company following the Loma Prieta earthquake in 1989, and the Southern California Edison Company providing assistance to Los Angeles following the Northridge earthquake in 1994.

In a fully competitive world, can any utility or nonutility generator reasonably expect a competitor to provide assistance during an emergency? I would like to think so, but in the environment of pure price competition, it is very unlikely.

Closing Remarks

In closing, I would like to leave you with the following thoughts:

First, what you have proposed is a significant departure from years of federal, state, and local environmental and energy policies that have served us well.

Secondly, billions of dollars of long-term investments have been made by California's utilities in response to these policies and, like the policies themselves, should not be lightly tossed aside.

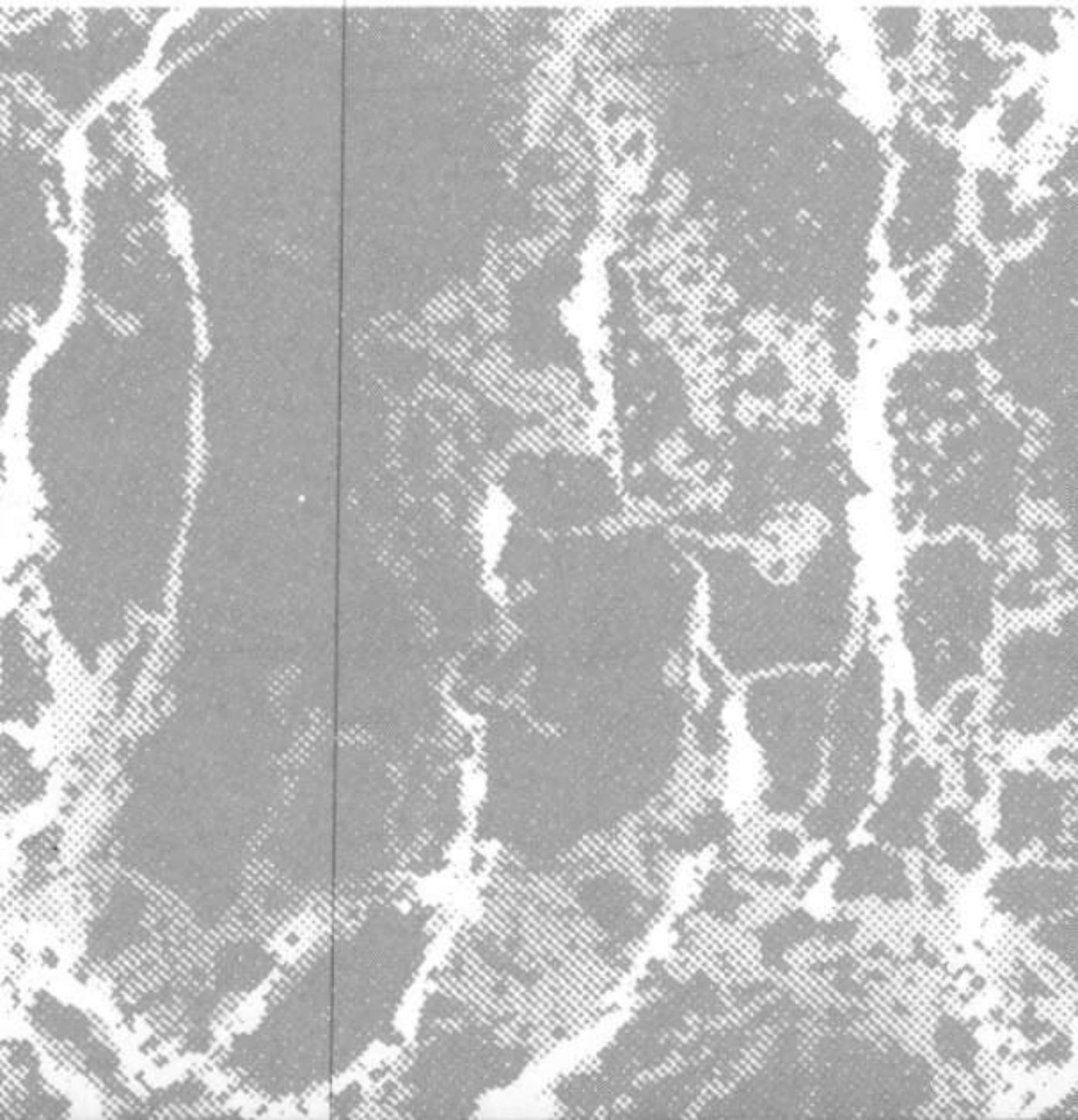
Lastly, our constituents, yours and mine, will surely hold us accountable in California's newly restructured electric industry does not provide all customer classes with the same level of benefits that the current system does.

On behalf of the City of Los Angeles, I appreciate the opportunity to participate in your process. It is important that such a major portion of the state be fully represented. Moreover, I pledge my personal support to assist you in these deliberations as the continue to unfold.

Respectfully submitted,

Original signed

Ruth Galanter
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Los Angeles City Council

Discussion Of
Regulatory Reform Proposals
Presented at the CPUC Hearings on
June 14 - June 15, 1994
and Implications for the
Department of Water & Power

June 23, 1994

Barrington-Wellesley Group

Discussion Topics

- Summary of CPUC's Initial Hearings
- BWG's Conclusions Regarding the CPUC Retail Access Initiatives
- Overview of Key UK Retail Access "Lessons Learned"
- Preliminary Implications for DWP
- Next steps / CPUC Actions

Summary of CPUC Hearings
(6/14/94 - 6/15/94)

- Over 50 presenters representing IOUs, Public Power, Consumers, Labor, Environmental, IPPs, Power Marketers, Academia, Wall Street, Federal Dept. of Energy, and others.
- Commissioners appear solidly behind retail access proposal
- Remarkable consensus on virtues of wholesale competition and need for regulatory reform
- No real surprises on positions of major parties regarding retail access respective to their "pet" issues
  - » Major IOU concern is "stranded" investment. Low cost IOUs want to accelerate timetable / high cost IOUs want to delay
  - » Public Power concerned about social subsidies, loss of industrials
  - » Wall street concerned over share price impacts of competition
  - » Environmentalist want DSM subsidies for continued energy efficiency programs
  - » IPPs / Other NUGs want to accelerate schedule
  - » DOE (representing all federal agencies) questions state / fed jurisdictional issues

Investor-Owned Utilities

- All supportive of two-tier track furthering wholesale competitive market enhancements and introducing performance-based regulation
- All California IOUs except Sierra Pacific recommend additional transition timetable - Need reciprocity with other states
- Generally concerned about stranded investment - emphasis should be on transition to the future rather than punishment
- SCEd proposal for "Poolco" which separates transmission ownership from dispatch and grid operations may provide a partial solution to generation divestiture issue
- Out-of-state IOUs (PacifiCorp) pushing to accelerate retail access
- Not overly concerned about social programs -- belief that these would be an energy surcharge across the board
- Only economically viable DSM should continue unless considered social program and treated as above

Consumer Representatives

- Most believe that California rates (and bills) are too high - over $6 billion of uneconomic plant
- Current rates and economics to not appear to sufficiently motivate residential or commercial energy efficiencies
- Current rates encourage substitution and bypass
- Timetable for retail access is too aggressive / not clear that retail access will bring any more benefits than introduction of competitive wholesale markets
- Performance-based incentives need to be aggressive
- All stakeholders should share in transition costs

Labor and Environmental Interests

- Direct access does not sufficiently correct current problems
- General support for wholesale competitive markets
- Fear of short-term opportunities outweighing need for long-term investments
- "Sure" returns on DSM investments vs. potential benefits of direct access and retail competition
- Will cause a major disruption to labor - no one can demonstrate that marginal cost to consumer will be any advantage over wholesale competition
- Big issue is to continue separation of profits from kwhr sales
- Barriers to entry will keep others from effectively providing energy efficiency services

Non-Utility Service Providers

- Recommend unbundling cost elements - emphasis on customers and products & services provided to various customers
- Wholesale power markets are already "competitive" - recommend adding value such as through supporting a spot market / electronic bulletin board
- Can't absorb 100% of stranded investment - need to develop mechanism for reducing
- Disagreement over whether utility marketing affiliates should be allowed to compete - if so they subject to "497 type" rules (conduct, separate books, transparency, strong remedies)
- Efficiencies will happen through increased competition - proven!
- Recommend that the CPUC not wait for the perfect system - set objectives and make adjustments along the way
- Don't need a central pool to move ahead

National Power (UK)

- Restructuring will be beneficial - there are no major technical / engineering roadblocks to moving ahead
  - » Real prices to customers in UK have fallen 16% (8% at retail level)
  - » Closed over 9000 mw of uneconomic plant
- Stranded investment will have to be dealt with - but customers are already paying - consider UK's "fossil fuel levey (nuclear subsidy) as a possible model
- Although NP's market share has declined from 45% to under 35% profits have increased from $650 million to $950 million in three years
  - » Primarily a result of massive cost-cutting
- Establishing a pool first is not required - customer access is what brought benefits
  - » Pool + performance regulation not as good as pool + competition
- Don't try to achieve perfection on first try - Insure that rules include adequate mechanism for agreeing to changes - have enough right and get off and running

Public Power

- APPA and CMUA adamantly in favor of competition
  - » Direct access at wholesale and transmission level
  - » Jury is still out on retail access
- Should assure we get benefits of wholesale competition first
- All appear to have concern over customer subsidies, access to industrial customers, and continuation of environmental and other social programs
- Must deal squarely with transition cost up front - should not be left as a follow-up detail
- Some municipal agencies (Sonoma, LA Cty Sanitation) support direct access because of investments in waste energy plants

Industry "Experts" - An Eclectic Group

- No real consensus - opinions ranged from speed up to slow down to stop
- Rate design change and regulatory revisions will allow efficiencies to be developed
- Most fears are based on the "old" model of industry and regulation - little analysis of what is likely to occur
- Currently problems with transmission pricing - variety of bases; we don't know what really works
- Cost of externalities may be questioned - may be zeroed - already paying market price
- Should protect consumers - no one should pay more than their proportionate share of stranded investment cost

BWG's Preliminary Conclusions

- Regulatory reform in California is coming
- Implementation of wholesale competition will accelerate
  - » Formation of RTGs
  - » Evolution of WAPA
- Retail access is a "when" not an "if" issue
  - » CPUC proposed timetable of 8 years
  - » SDG&E indicates 10 years may be feasible
  - » PG&E proposes 14 years to allow for full depreciation of D.C.
- Pace of change will probably be influenced by gubernatorial election - but, just like Tiananmen Square, will not cancel the underlying movements for regulatory reform and competition
- A highly competitive power market will emerge in California and the western US over the next 5 years.

Some UK "Lessons Learned"

- Change occurred rapidly
- People with profit at risk have taken the greatest steps to creatively identify markets, target customers, focus on strategic strengths, and to cut costs
- Price cap regulation has provided some incentive to cut costs and improve productivity in the non-competitive, regulated areas of the utility business - not nearly as much as competition has however
- Everybody who could, would prefer to hold on to monopoly status
  - » RECs don't want to see expediting reduction of captive market
  - » Big Gens perceived by many as demonstrating their ability to discourage new generator entry

Some UK "Lessons Learned"(Cont'd)

- Monopolies tend to act like monopolies
  - » Gens have been successful in gaming in the bidding and making plant available to control SMP (and keep above SMC)
  - » RECs have tried to become mini-vertical utilities by taking advantage of captive market to buy expensive capacity and earn above market returns by passing costs on to franchise customers
- Natural monopolies also behave as expected
  - » Inefficient
  - » Bureaucratic
  - » Non-responsive to customers
- It is very important to get performance incentives correct
  - » Clearly defined objectives
  - » Requires close monitoring and timely corrective action

UK Observations - Critical Success Factors In a Competitive Power Market

- Managers and staff are highly focused on a few important items (typically related to investor returns) clearly communicated throughout the company
- Only road to survival in competitive arena is to become the low cost producer - Significant staff and other cost reductions are inevitable
- Quality is focused on performance and cost improvement
- Profit-center / decentralized orientation wherever possible. Requires comprehensive understanding of the business, internal costs of providing services and products, development / usage of internal contracts for services, and transfer pricing mechanisms (Fundamental Unbundling)
- Important to modify compensation systems consistent with business practices -- emphasis on use of "gainsharing" to eliminate need for overtime or full employment

UK Observations - Critical Success Factors In a Competitive Power Market (Cont'd)

- Substantial retraining of management and workforce is required to adopt to new environment. Extensive recruiting of new skills is also required.
  - » Contracting
  - » Bidding Strategy
  - » Financial / Commodity Trading
  - » Marketing
- Customer segmentation information is essential
- Unbundling into major segments of power industry (generation, supply, transmission, distribution) has facilitated management of competitive businesses. Requires demarcation of assets and information structures
- Careful public relations are essential to gaining customer acceptance of changes that will be viewed with skepticism

Preliminary Implications for LA and the DWP

- One can stall competitive market, but will not be able to avoid it
- The City needs to develop clear business objectives for DWP
- Benchmarking comparisons made in the BWG audit are very conservative - experience in the UK shows that substantial staff reductions will occur in a competitive power markets beyond that we identified in comparisons with a regulated industry.
  - » Greatest opportunities lie in production and engineering / construction
  - » Performance based regulation (i.e.. price caps) will result in efficiency improvements in all sectors, albeit at a slower pace

Preliminary Implications for LA and the DWP (Cont'd)

- It is quite possible that current subsidies between customer classes can be off-set by across the board efficiency improvements. Under any circumstances, the City should begin the process of phasing out subsidies between customer classes
- Primary focus should be on "unbundling" the DWP into its various businesses and developing a better understanding of products and services provided, costs, and customer segments
- Following this a "corporatization" process should take place
  - » Profit-center orientation (including mechanism for revenues, transfer pricing, contracting for services, controllable costs)
  - » Appropriate performance measures
  - » Clear accountabilities for performance
  - » Incentive compensation

Potential Effects of the CPUC's Proposal on the City's Ratepayers

Order Instituting Rulemaking on the Commission's Proposed Policies Governing Restructuring California's Electric Services Industry and Reforming Regulation — R.94-04-031 and I.94-04-032

May 27, 1994
Conservation and Planning Division
Los Angeles Department of Water and Power

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May 27, 1994
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Los Angeles Department of Water and Power

POTENTIAL EFFECTS OF THE CALIFORNIA PUBLIC UTILIES COMMISION'S (CPUC) PROPOSAL ON THE CITY'S RATEPAYERS

Prepared By
Los Angeles Department of Water and Power (DWP)

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EXECUTIVE SUMMARY

CPUC's Proposal to Reform California's Electric Utility Industry and its Potential Impacts to the City of Los Angeles and DWP

Introduction

The electric utility industry has been undergoing significant restructuring primarily through legislative and regulatory reform measures for many years. In 1978 the Public Utility Regulatory Policy Act was passed to encourage non-utility generation and in 1992, the National Energy Policy Act deregulated the wholesale energy market to promote competition in the generation sector.

On April 20, 1994, the California Public Utilities Commission (CPUC) released a proposal that would restructure California's privately owned electric utility industry through a variety of initiatives, the most striking of which is "direct access". This principal of "direct access" gives customers the right to choose their electrical energy supplier.

Although the CPUC does not have jurisdiction over municipal utilities like DWP, their proposal places pressure on all California utilities to aggressively compete to retain and attract customers. Jurisdictional boundaries cannot impede competitive pressures for very long.

This report outlines the CPUC's proposal, its potential impacts upon the City's stakeholders, recommends a position on the proposal, and suggests actions that should be taken now. Appendices are provided to support information in greater detail.

Highlights of the CPUC's Proposal

Date:	Direct Access for:	Relationship to DWP Customer Base: Customers Impacted	Annual Revenues (millions)	Contribution to City Revenues[2] (millions)
1/1/96	Large Industrial Customers (>50 kV)	NA[1]	NA[1]	NA[1]
1/1/98	Small Industrial Customers	15,000	$219	$36
1/1/99	All Commercial Customers	190,000	$1,082	$178
1/1/02	All Residential Customers	1,160,000	$589	$82
		Totals	$1,891	$296

1 DWP does not have Customers in the Large Industrial category -- 50 kV and above (however there may be pressure from customer groups to lower this to 30 kV).

2 Represents annual transfer to City and utility user taxes.

Other Highlights of the CPUC Proposal

- The traditional cost of service regulation will be replaced by Performance Based Rates. The CPUC will set an earnings ceiling and floor and allow the utilities to capture or lose additional earnings within this bandwidth based upon the utility's performance.
- Environmental programs will be funded on a voluntary basis, whereas social programs will be funded directly via surcharges applied to all consumers or from the State's General Fund.
- Utilities will be obligated to serve native customers not choosing to go to another supplier.
- Utilities will be allowed to apply surcharges to cover stranded investments on the "uneconomic portion" of their generation.
- The CPUC is requesting comments on their proposal by May 20, 1994.

Potential Impacts Upon the City's Stakeholders

- DWP - loss of revenues if non-competitive
- Residential - rates will rise via removal of existing subsidization
- Industrial and Large Commercial - rates will fall
- City Hall - reduction in transfer from DWP via lower revenues and utility user taxes
- Environmental / Social Programs - decreased funds available for such programs

Threats to City

- DWP's industrial rates are higher than SCE's
- DWP is less flexible than competitors under City Charter and Civil Service rules
- Large financial obligations incurred under a monopolistic structure are at risk in a deregulated structure
- The cost of borrowing could significantly increase due to negative ratings by financial community
- Tax-exempt status could be in jeopardy if DWP sells outside of the City of Los Angeles
- The increasing costs of strict air compliance regulations in the Los Angeles Basin reduces DWP's regional competitiveness.

Recommended Position on the CPUC Proposal

The City endorses the "spirit" of competition in the electric utility industry. The goals of the CPUC's proposal are ambitious, however, there is concern with various aspects of the proposal which may adversely impact the City of Los Angeles and its ratepayers. How the CPUC intends to mitigate these impacts is of critical interest to the City.

The main concerns are to maintain the operational integrity of the electric network, avoid reversing the positive gains made by environmental and social programs, and to avoid any type of plan that would unjustly benefit any one customer group at the expense of another.

The CPUC's proposal will be debated within the regulatory / political forums. The City should actively participate in this process to influence and shape the ultimate outcome of the CPUC's plan in order to safeguard the City's interests.

Recommended Actions for DWP

In anticipation of market-based competition, electric utilities throughout the nation are taking significant steps to improve their ability to compete on price and service. With the support of the City, DWP also needs to prepare for aggressive competition whether it originates from the CPUC's current proposal or from market forces.

A "no-regrets" plan should be developed and implemented based on the following action items:

- Continued cost-cutting and aggressive marketing of services and surplus assets.
- Developing and implementing financial strategies to improve competitiveness.
- Revising Charter and Civil Service Rules to enhance DWP's ability to compete.
- Streamlining and restructuring the DWP's current organization with the long term objective of operating in a competitive environment.
- Improving the DWP's public image since it significantly impacts competitiveness.

MAIN REPORT

Potential Effects of the CPUC's Proposal on the City's Ratepayers

On April 20, 1994, the California Public Utilities Commission (CPUC) issued a proposal that would fundamentally and significantly restructure California's electric service industry. This proposal replaces the monopolistic structure of past decades with a competitive market. The policies are based on the principle of "Direct Access" -- that is, consumers will have the opportunity to choose their electrical supplier. While the CPUC does not have jurisdiction over municipal utilities like DWP, the proposal places pressure on all California utilities to be competitive and retain customers.

The main goal of the CPUC's proposal is to improve California's overall competitive position. While DWP endorses the "spirit" of competition in the electric utility industry, we are concerned with various aspects of the proposal which may adversely impact some of our customers and the City of Los Angeles. We are also concerned with how these impacts will be mitigated.

Based on the potential far-reaching consequences of the CPUC's ambitious proposal, it is strongly suggested that the City be an active participant in this process to shape and guide the ultimate outcome.

I. Highlights of the CPUC's Proposal

Proposed Implementation Schedule for Direct Access:

Beginning in:	
1/1/96	Large Industrial Consumers (50-kV and above)
1/1/98	Small Industrial Consumers
1/1/99	All Commercial Consumers
and by:	
1/1/2002	All remaining consumers

Major Provisions

Direct Access

The CPUC's proposal contains the following provisions governing Direct Access (Retail Wheeling):

- The utility retains its traditional "obligation to serve" only for those consumers who elect not to choose Direct Access.
- Consumers who elect to participate in Direct Access have the freedom to procure generation services directly from nonutility providers.
- Phase 1 in 1996 -- Direct Access for Large Industrial Customers, will apply to consumers at 50-kV and above. (This may be lowered to 30-kV during the scheduled hearings.)
- Direct access consumers must give utilities 12 months notice before returning to status of tariffed utility service customer (may be waived by the utility). Direct access customers may return earlier however they will not be guaranteed the tariffed rate.
- Investor-owned utilities (IOUs) may freely negotiate prices with Direct Access consumers.
- Regional Transmission Groups are the primary means of supporting Direct Access.

Performance-Based Rates

Performance-Based Rates (PBR) will provide the IOUs with performance-based regulation with an earnings floor and ceiling that will provide a "soft-landing" for the utilities during the deregulatory transition period. PBR also gives the IOUs an opportunity to increase their earnings if they operate more productively.

Key features of PBR contained in the policy are:

- Replaces "cost-of-service" regulation with performance-based regulation.
- Decouples rates and costs.
- Decouples rate base and earnings.
- Establishes new accounting rules.
  - A separate accounting system will be established for generation.
  - All generation plant investment will be decoupled from rate base.

Stranded Investments

A stranded investment occurs when an investment has been made on behalf of a customer who chooses to leave the system before the utility has fully recovered the cost of the investment.

The CPUC's proposal on stranded investments allows IOUs to recover the "uneconomic portion" of their generating assets via a "competition transition charge" assessed as part of a Direct Access consumer's demand charge. It appears Direct Access consumers will be responsible for compensating the native utility for their contribution to any stranded investments.

Other Provisions

- Environmental Programs -- Type and funding would be determined by the "market". Customers could choose to purchase "green electric service", if they wish.
- Social Programs -- Funded by end user surcharges that are spread across all consumer classes.
- Energy Efficiency -- Achieved through the implementation of real-time pricing in coordination with a spot energy market.

- Transmission and Distribution (T/D) Systems -- Operation and control remain under the utilities' jurisdiction. Nonutility distribution systems would not be allowed. (It is likely that the CPUC will retain regulatory control over T/D to insure against monopoly abuse.)
- SO4 Contracts -- Eliminated through a process of negotiations (This would free up a substantial amount of independent power to compete in the new competitive market , but would also significantly reduce generation available under direct utility control) .

CPUC's Request for Comments

The CPUC is requesting parties to comment by June 8, 1994. Specifically on the following items:

- "The proposed schedule governing the direct access eligibility of the consumer classes."
- "Whether the competitive market they hope to foster necessarily depends on ordering the utilities to divest themselves of generating assets."
- "Whether a competitive market for generation depends, at a minimum, on the CPUC ordering the utilities to create separate accounts for its generating and transmission assets."
- "Whether prohibiting the utility from offering generation services with in its own service territory represents a preferable alternative to divestiture or separate accounts."
- "Whether the CPUC should first establish a spot market (like the United Kingdom Pool) or other market instruments to foster a competitive market or should the CPUC foster an environment in which the market develops and operates these mechanisms and tools?"
- "Whether the successful implementation of the CPUC's direct access proposal depends on a mechanism similar to the Pool to

address the vital link between the move to increase reliance on bilateral or multi-lateral contracts and the need for system reliability?"

The CPUC also asks respondents to propose alternative frameworks based on "let the market decide" (to replace the Biennial Resource Plan Update).

II. Applicability to the City of Los Angeles

Under existing statutes, the CPUC has no jurisdiction over the policies, practices or operations of municipal utilities. However, DWP traditionally tends to reflect the operational policies of the State's IOUs. The CPUC's proposed order is **directly** applicable only to the State's IOUs. Although if adopted, the proposal would have significant **indirect** impacts to municipal utilities. California's electric IOU's serve over 90% of the State's geography. If municipals are not competitive, it is extremely unlikely that they will be able to retain their customers -- regardless of local policies. Municipal power consumers, particularly the larger commercial and industrial energy intensive users, will demand similar opportunities for choice.

III. Suggested LA City position on CPUC Proposal

The City desires the lowest rates and best possible service for our customers. We endorse the "spirit" of competition in the electric utility industry. The goals of the CPUC's proposal are ambitious, however, we are concerned with various aspects of the proposal which may adversely impact some of our customers and the City of Los Angeles. We are also concerned with how these impacts will be mitigated.

Our main concerns are to maintain the operational integrity of the electric network, avoid reversing the positive gains made by our environmental and social programs, and to avoid any type of plan that would benefit any one customer group at the expense of another.

Based on the potential far-reaching consequences of this ambitious proposal, the DWP/City should participate in guiding the ultimate outcome of the CPUC's plan, to provide the greatest aggregate benefit to all stakeholders. For example, the CPUC proposal now advocates that industrial customers should have direct access first. This may put DWP at a disadvantage. However, what if residential consumers were allowed to have direct access first (as it is occurring in New Zealand)? This may put DWP at an advantage over our neighboring utilities. On the other hand, DWP would remain at a disadvantage with regard to many utilities outside of California.

DWP recommends that the following positions be considered:

CPUC should extend its implementation schedule.

The proposed schedule for phasing in "Direct Access" does not allow sufficient planning time to investigate the impacts of such sweeping regulatory reform and to analyze the critical impacts to all stakeholders. The integrity of the electrical supply system in California as well as utilities interconnected to the California grid are at risk under the CPUC proposal and the time to analyze the depth and breadth of the proposed reform is not adequate as proposed.

Environmental Policy

Overtime, the City's environmental policy has served Los Angeles well. However, if CPUC adopts a "market based" environmental strategy, the City should review it overall policies and the methods for achieving its goals so City policies do not place its electric utility at a business disadvantage.

The City's policy has supported legislation and programs that:

- Provide incentives to promote energy efficiency; to remove impediments to the use of energy-efficient devices and to

encourage use of cost-effective end-use technologies for commercial, industrial and residential applications.

- Encourage the use of resource planning processes that consider the total costs of providing electric energy and provide incentives for electric utilities to use least-cost planning/integrated resource planning principles in their resource planning efforts while protecting the utility's ratepayer's electric service reliability.

- It has been DWP's practice to resolve operational issues with environmental implications through a collaborative process with the appropriate stakeholders.

Wholesale Competition

Wholesale competition through EPACT 92 must have a chance to work. The benefits of wholesale competition have not been fully realized; i.e. the effect of wholesale competition under EPACT 92 has not been fully validated. To move to open and direct access at this early juncture without analyzing the effects of wholesale competition is premature.

Under EPACT 92, competition among energy providers will intensify. Conventional, High Tech, Renewables and Demand Side Energy Services have been given access to the utility market through the grid. The utilities are presently held accountable for meeting the electrical energy needs of their customers by their various governing authorities. Competition among the aforementioned energy provider groups has already and continues to promote better and more efficient production of electrical energy in California and surrounding States.

Competition at the retail level may hinder the necessary R&D to advance the development of new and more efficient technologies. The marketplace will no doubt focus on the short-term aspects of "price"

rather than the long-term needs of ensuring a technically advanced electrical supply.

Public Trust Policy

An appropriate policy to promote greater competition at the retail level must ensure not only mitigation of financial risk but also the attainment of long-term social and environmental goals. The CPUC's proposal attempts to mitigate utilities' near term financial risk through transition fees. Maintenance of social programs would be handled through billing surcharges. Maintenance and improvement of environmental quality through energy efficiency programs, demand side management and the investment in renewable resources are explicitly remanded to existing and future competitive energy markets.

Until it can be demonstrated that the competitive market will efficiently and effectively result in the procurement of socially and environmentally desirable resources, that responsibility should remain under local control.

IV. Potential Impact on City's Electric Utility Consumers under CPUC Proposal.

If a statewide open competitive market develops, it is almost a certainty that the City's electric power consumers will demand similar opportunities of choice. The following impacts could then reasonably be expected:

Residential Consumers

- During the first three years, residential rates will increase as cross-subsidies from commercial and industrial sectors are eliminated or reduced.
- By the year 2002, will be able to choose energy provider.

- May be burdened with the cost of stranded investment. (It is still unclear, under the CPUC's plan, how the "competition transition costs" may mitigate this).

Commercial and Industrial Consumers

- Will view stopping cross-subsidies as a positive event.
- Will expect the price of power to reflect full cost of service.
- Will have the opportunity to shop for lower priced power.
- Will view this as an opportunity to be more profitable by reducing operating costs.
- If properly implemented, will perceive that this could attract new business and increase employment in LA.
- Will desire ability to negotiate for power supply directly like other commodities.

V. Potential Impacts on City/DWP from CPUC's Proposal

Loss of Existing Large Customers and Revenues

Under the CPUC's plan, DWP could lose a substantial portion of its existing customers due to competition. Competitors may include neighboring utilities, exempt wholesale generators, marketers or brokers. They will likely target DWP's largest consumers. For example, the top 100 of DWP's 1.2 million customers represents $489 million or 25% of DWP's annual electric revenues. If a competitor were to successfully take these top 100 customers by providing lower priced power and better service, either real or perceived, the City could stand to lose $61 million annually in related transfer and taxes. Refer to Appendices D and F.

To compete on price, DWP must do so with each particular customer . On an individual customer basis, there can be large discrepancies between SCE's and DWP's rates. The graph in Appendix B

demonstrates the differences between a large commercial/industrial customer's rates over the course of a year.

- DWP's industrial/commercial rate can be from 1% to 26% **above** SCE's for a large customer at the 5 kV class.

- DWP's industrial/commercial rate can be from 8% to 39% **above** SCE's for a large customer at the 34.5 kV class.

The customers in the above classes account for 27% of DWP's revenues.

By comparison, average **system** rates **and even average sector rates** are not an appropriate indicator of competitiveness. For example:

- DWP's average **residential** rates are 26% **below** that of SCE's
- DWP's average **commercial** rates are 27% **below** that of SCE's
- DWP's average **industrial** rates are 7% **below** that of SCE's

Graphs in Appendix C comparing DWP's rates with SCE's indicate that DWP's sector average rates are below SCE's while individual high revenue customers are above SCE's.

A more drastic picture emerges when DWP's rates are contrasted with the average customer segment rates of some of the other utilities in the western region. Many of those utilities have the ability to access our service areas. Many of the utilities in the charts have "cheap" seasonal power available for sale into higher priced markets, like DWP's, if the CPUC's proposal of "direct access" becomes a reality.

For example, DWP is substantially **less competitive** than those utilities in the Northwest, many of which have transmission access to our service area. For a comparison of DWP's rates with other California utilities and regional utilities refer to Appendix G.

Uneconomic Bypass

The potential exists for a customer to leave the system because DWP's regulated price is higher than a competitor's, but DWP's marginal price is lower than the competitor's. The net result is the consumer will leave, for a price somewhere between DWP's marginal and system average cost.

Stranded Investments --- Who pays?

For a municipal utility, stranded investments can only be recovered from the customers that remain on its system. Stranded investments will cause the rates of those remaining customers to increase thereby creating an incentive for other customers to leave the system. The "details" of the CPUC's proposal in this area, which will be scrutinized closely by DWP, are of utmost concern.

Environmental / Social Programs at risk

The CPUC proposes that the funding for social programs be obtained by placing a surcharge on all the end users' bills.

The CPUC envisions that environmental programs would only be funded through voluntary participation by consumers through the purchase of "green electric service".

With the emphasis on spot market pricing and short-term marginal costs, the CPUC's proposal provides disincentive for investment in environmentally responsible programs. Furthermore, absent regulatory mandate, a price driven competitive market could be expected to be governed by high volume sales of the lowest price commodity available. Such a practice is inconsistent with energy efficiency programs, demand side management and renewable resource procurement.

Financial Implications

Risk of Losing Tax Exempt Status:

The U. S. Tax Reform Act of 1986 limits the amount of sales that can be made to private entities from resources financed through tax exempt debt. Under the CPUC proposal, DWP could potentially serve other customers besides its "native" customers -- that is, private entities. However, if the cumulative amount of the sales to these private parties exceeded the statutory limits, DWP could lose its tax exempt status.

Lower Ratings by Rating Agencies (Higher borrowing costs)

Negative ratings by agencies such as Moody's, Fitch, Standard & Poors, Lehman Brothers, Duff & Phelps Inc., affect the real or perceived risk of investing to investors. The greater the perceived risk, the higher the cost of borrowing.

The DWP Power System on average, borrows approximately $200 million annually not including any major projects financing. Any downgrading of DWP's ratings will have an adverse increase in interest cost to DWP.

The financial community is closely monitoring the prospects of open competition in the electric utility industry. The mere announcement of the CPUC's proposed regulatory reform plan for the investor owned utilities has resulted in the State's IOUs being placed on credit watch.

Moody's will evaluate municipal utilities according to their overall "at risk" profile, namely:

Profile #1: Heavy Industrial Customer Base
Profile #2: Subsidy of City's General Fund
Profile #3: High-Cost, Excess Baseload

Moody's rates a utility's ability to compete based on three basic criteria:

Price -- The utility's price of electricity; historical and current rates, its standing compared to it neighboring utilities and to others having access to the utility over the grid.

Cost -- Market based pricing will become more important as competition heats up. A utility's costs will largely determine the flexibility it has in establishing prices for electricity.

Flexibility to compete -- In a deregulated electric marketplace, analysis of a utility's margin--or flexibility to compete while maintaining a financially sound position--is critical to credit quality.

For additional rating information, see Appendix A.

Moody's concludes:

"Credit position will be determined substantially by a municipal utility's adaptation to the changing electric marketplace. The margin between a utility's price and cost structure will be important in the short- and long-term, particularly as it relates to protection of debt service coverage. Moody's will place increased emphasis on the flexibility the utility has to compete and adapt to the changing market while maintaining financial integrity".

DWP's Large Long- and Short-term Financial Obligations:

Power System Long-term Bonds	$2,600,000,000
Power System Short-term Bonds	$148,000,000
JPA Obligations	$5,300,000,000
Long-term Power Contracts	$624,000,000

Increased cost exposure from air quality compliance

DWP's ability to maintain a resource portfolio based on existing and emerging social and environmental needs would be severely jeopardized since such resources would become economically unjustifiable based on anticipated market conditions.

Transfer uncertainty

If DWP were to lose substantial market share to competitors and offsetting sales could not be made in a timely way or the price of power sold discounted in order to make the offsetting sale, DWP's Gross Income will be reduced. Transfers to the City are tied directly to DWP's Gross Income and the transfer would be proportionally affected.

Lost Revenues

To demonstrate the impact of loss revenues, the historical impacts of co-generation on the City of Los Angeles has resulted since 1984 in lost gross revenues of approximately $1-billion. The associated loss in gross City taxes revenues was $170 million. Refer to Appendix E. (The net effect of lost revenue is less than "gross", as operating expenses were also lower and electric utility taxes were partially offset by "gas" utility taxes).

Competitive Implications -- Unlevel playing field is created

Under the CPUC proposal, DWP will be competing on an unlevel playing field. DWP is facing competitors, such as independent power producers and IOUs, who have greater flexibility to negotiate terms of sale and price of electricity and who are presently not required to fund social and environmental programs.

Inflexibility created by charter and civil service rules make it difficult for DWP to effectively compete.

In the past, the City Charter has served DWP well. However, in a deregulated and highly competitive electricity market, several of the guidelines of the City Charter would require change. The CPUC which regulates SCE, SDG&E, and PG&E is positioning its utilities to compete in a new arena, so too must the City of Los Angeles provide the necessary regulatory changes to allow DWP to remain competitive.

The City Charter contains a major constraint as it presently limits DWP's ability to sell "retail" outside the City. For example, DWP is currently allowed to sell only "surplus" power. This worked well under a monopoly situation, however, in an environment where DWP can now lose customers to a competitor, it must have the ability to negotiate and commit to longer term power supply arrangements with others to offset any lost market share.

DWP's rate ordinance provides little rate flexibility. SCE can now undercut our rates under the CPUC's proposed Performance Based Ratemaking which means that SCE's industrial rates would soon be open to negotiation --- a substantial advantage.

DWP also needs more flexibility to cut costs. The inflexibility created by Charter and Civil Service rules inhibit DWP's ability to effectively reduce costs and be more competitive. The two primary restrictions in terms of cost cutting are in the areas of Civil Service/Personnel Rules and Purchasing/Contracts.

For example, the application of Charter-based Civil Service rules provides a narrow interpretation of job classifications (duties) which prevents the efficient restructuring of job duties with resultant lower staffing levels for some tasks.

Currently, the City Council must approve contracts of terms longer than three years. The entire City approval process is very slow. In the

near future DWP may be operating in an environment where a timely response to customers' "bids" for future power supply will be required. Under the current Charter-mandated system DWP will be at a major disadvantage with competitors who are able to bid and execute contracts quickly.

DWP is not structured to compete under the proposed CPUC model -- this must be changed if DWP is to compete in a new competitive arena.

VI. What does DWP need to do to compete?

In anticipation of market-based competition, electric utilities throughout the nation are taking significant steps to improve their ability to compete on price and service. The actions below are "no-regrets" strategies that DWP should implement now. Many of these actions are being implemented by utilities throughout California and the entire U. S.

1. Continue aggressive cost containment.
2. Streamline organization --- Reduce staff levels.
3. Restructure organization with the following attributes:
   - Business Units
   - Institute activity based cost accounting system
   - Asset management based
   - Customer Focus --- Retail and wholesale
   - Establish Marketing / Pricing and Sales Departments
   - Comprehensive benchmarking programs
   - Outsourcing
   - Unbundle services and rates
4. Reduce and/or restructure rates

5. Restructure short-term rates

   Based on continuing and extensive competitor and market research, estimate expected future market electricity prices for each customer class.

   Develop integrated strategies to reduce long-term rates below those expected market driven rates at the time of deregulation.

   Separate the Power System into generation, transmission and distribution components and evaluate the impact of deregulation on each.

   Develop financial strategies to enhance the competitive position of each of these components, such as accelerated depreciation and/or early debt retirement.

   Consider using short-term strategic rate increases to accelerate debt repayment. This could result in significant long-term rate reductions that could improve DWP's overall competitive position.

6. Develop strategies to reduce debt.
7. Prepare charter amendments aimed at making DWP competitive within industry.
8. Enter into long-term contracts with large customers.
9. Conduct competitor rate analysis.
10. Develop strategies to protect tax exempt status.
11. Develop strategies to employ JPA to compete with non-regulated IOU subsidiaries.
12. Train DWP management and employees in newly required competitive business skills.
    Audit current skill and abilities.
    Establish desired skills level profile for employee groups.

Develop and deliver effective and appropriate training.
Reinforce "competitive message" in employee communications.

VII. Responses to CPUC Proposal by California's IOU's

Our neighboring IOU utilities have responded to the CPUC's announced proposal. The following quotes are from press releases by San Diego Gas and Electric and Southern California Edison.

April 20, 1994

Edison responds to CPUC Report about Future of Electric Utility Business

"John E. Bryson, chairman and chief executive officer of Southern California Edison, today described the California Public Utilities Commission's "Proposal to Consider a Restructuring of California's Electric Services Industry" as a thoughtful proposal for the future of the electric utility business in California. Edison agrees with the Commission's goal of bringing the benefits of competition to all customers"

SDG&E Encouraged by Today's CPUC Proposal

"San Diego Gas & Electric said today's California Public Utility Commission (CPUC) proposal to encourage future competition in the electricity industry affirms the company's business direction."

APPENDICES

A. How the Financial Community Sees the Future

B. Large Commercial/Industrial Customer Rate Comparison

C. Rate Comparisons

1. DWP/SCE Comparison - Historic (By Customer Segment)
2. Rate Projections - Average Price (DWP, SCE, PG&E, SDG&E AND SMUD)
3. Historical Rates - Average Price (DWP, SCE, PG&E, SDG&E AND SMUD)

D. Customer Segmentation / Revenue by Segment

E. Financial Impacts of Cogeneration

1. Annual Revenue Losses to DWP from Cogeneration
2. Annual Revenue Losses to City from Cogeneration

F. Annual Revenue to City of Los Angeles

G. Profiles of Electricity Prices within WSCC

1. Residential
2. Commercial
3. Industrial

H. "Strategic Issues Paper", by Ralph Cavanagh, Natural Resources Defense Council

I. Summary Background - History of Deregulation of the Electric Utility Industry

APPENDIX A

How the Financial Community Sees the Future

1. Morgan Stanley
2. Fitch Investor Service
3. Standard & Poors and Moody's
4. Washington International Energy Group

MORGAN STANLEY MEMORANDUM

SELECTED HIGHLIGHTS

U.S. Investment Research -- Electric Utilities

10/25/93

Eight Characteristics of Superior Management Needed in Evolving Electric Utility Industry

1. Proven track record
2. Activity based accounting
3. Clear focused strategy
4. Ability to clearly communicate benefits of strategy
5. Superior political skills to manage regulation
6. Strong cost management skills
7. Operating skills
8. Acceptance and encouragement of change

Selected Excerpts

- Companies that face the greatest risk in the competitive marketplace are SCEcorp, Commonwealth Edison, and FPL Group.
- Electric Utility Industry is not likely to follow path of Cable TV - that is, charge whatever price the market will bear. It will likely evolve into regulated competition.
- The most significant problem facing the Electric Utility Industry is a crisis in management.
- Purchased power will not offer as much benefit as most believe.
- The most important area for improvement in management processes is in the area of activity-based accounting. Utilities do not have clear ideas on the genesis of their current costs or where costs may be headed.

BPU - EJF
04/29/94

FITCH'S INVESTOR SERVICE

What Successful Utilities Need in a Competitive Environment

- ✓ Proactive Management
- ✓ Competitive Rates
- ✓ Incentive-Based Regulation
- ✓ Efficient Plan
- ✓ Diverse Service Area
- ✓ Strong Cash Flow

BPU - EJF
04/29/94

FITCH'S INVESTOR SERVICE

Global Power Ratings Checklists

✓ MANAGEMENT - 20%

- Experience/Depth
- Ability to Manage Risk
- Strategic Planning
- Customer Relationships
- Economic Development Efforts
- Diversification Strategy
- Relationship with Regulators/Board
- Financial Targets

✓ RATES - 20%

- Rate Design
- Ability to Discount
- Price Caps
- Predatory Competitors
- Average System Rates
- Rates - Retail Supplier
- Rates - Wholesales Supplier
- Rate Increases

✓ FINANCIAL/LEGAL - 20%

Financial

- Coverage
- Cash Flow
- Capital Improvement Program
- Decommissioning Plan
- Asset Quality
- Capitalization
- Profitability
- Dividend Payout
- Transfer Policy

Legal

- Security Provisions
- Litigation
- Writedown of Assets

✓ PLANT - 15%

- Total Capacity (MW)
- Fuel Mix
- Fuel Agreements
- Reserve Margin
- Regional Reserve Margin
- Purchased Power

Generating Plant Statistics

- Average Production Costs
- Marginal Production Costs
- Unit Characteristics
- Average Plant Age
- Environmental Factors

Transmission

- Regional Interconnections
- Ability to Buy/Sell
- Wheeling Rates
- Siting of New Lines
- Regulatory Issues

Distribution

- Variable Cost
- Fixed Cost

✓ REGULATION - 15%

- Regulatory Agency
- Quality of Regulation
- Commission Policies

✓ DEMOGRAPHICS - 10%

- Customer Growth Trends
- Diversity of Large Customers
- Exposure to Energy Intensive Customers
- Diversity of Employment
- Employment Growth
- Unemployment
- Per Capita Income Comparison
- Revenue Breakdown by Customer Class

BPU - EJF
04/29/94

STANDARD & POOR'S AND MOODY'S

Factors of Moody's review of municipal electric revenue debt:

- Rate comparison with neighboring utilities
- Rate comparison, in particular, for industrial customers.
- State regulatory provisions regarding retail wheeling.
- Future long-term threats to competitive position: impact of issues such as decommissioning costs and Clean Air compliance.
- Expiration dates and the renewal process for wholesale contracts, franchise and territory agreements.

Credit considerations for S&P include:

- Retail rates
- Operating efficiency
- Diversity of resources
- Customer focus
- Financial and political flexibility
- Transfer policies and uncertainty

S&P will place increasing weight on:

- Responsiveness of management to react to change
- Rates, especially where there are vulnerable customers
- Efficiencies, as measured by existing and possibly new operating and financial ratios.
- Cash flow stability

BPU - EJF
04/29/94

THE TEN THINGS EVERY UTILITY NEEDS TO DO

Source: Washington International Energy Group
appeared in the Energy Daily, 1/12/94

1. Review the long-term economic viability of each generation unit. Shutter, retire, sell or decide to operate them forever. Squeeze everything you can out of your assets.
2. Write off debt now while there is still time, particularly nuclear debt.
3. Get a grasp of real costs by establishing profit centers with real-time accountability.
4. Build a capability to find out which of your customers and sectors are really profitable and which are not.
5. Establish a corporate intelligence function. Shift consulting dollars away from useless quantitative exercises and give it to companies that can give you instant market input.
6. Revolutionize and upgrade your marketing and rate operations. They are your most valuable assets.
7. Confront state regulators head on with the news that the world is changing and that they must give you more freedom to make decisions. Tell them you won't let them micro-manage you any more. IRP, DSM, EE (energy efficiency) and all the other cost-intensive efforts will have to be cut way back or abandoned unless they make money. Information is your most vital asset, state and federal regulators need to allow you to keep more of it proprietary.
8. Put an end to the "management of the month" approach. Make it very simple: It's about survival.
9. If you think you've right-sized, think again. Make heavy-duty cuts but do it once and get it over with. It isn't fair to employees to keep the sword hanging over their heads.
10. Start taking risk. You'll find it exhilarating. You'll make plenty of mistakes, but eventually you'll get the hang of it and start to make the right decisions.

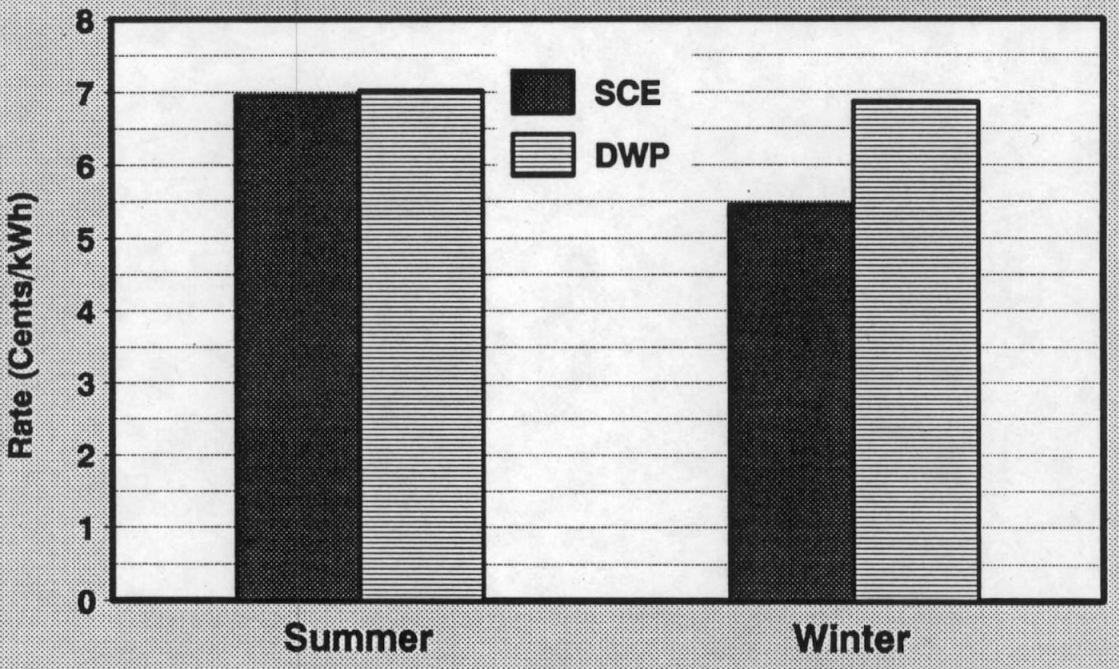
BPU - EJF
04/29/94

APPENDIX B

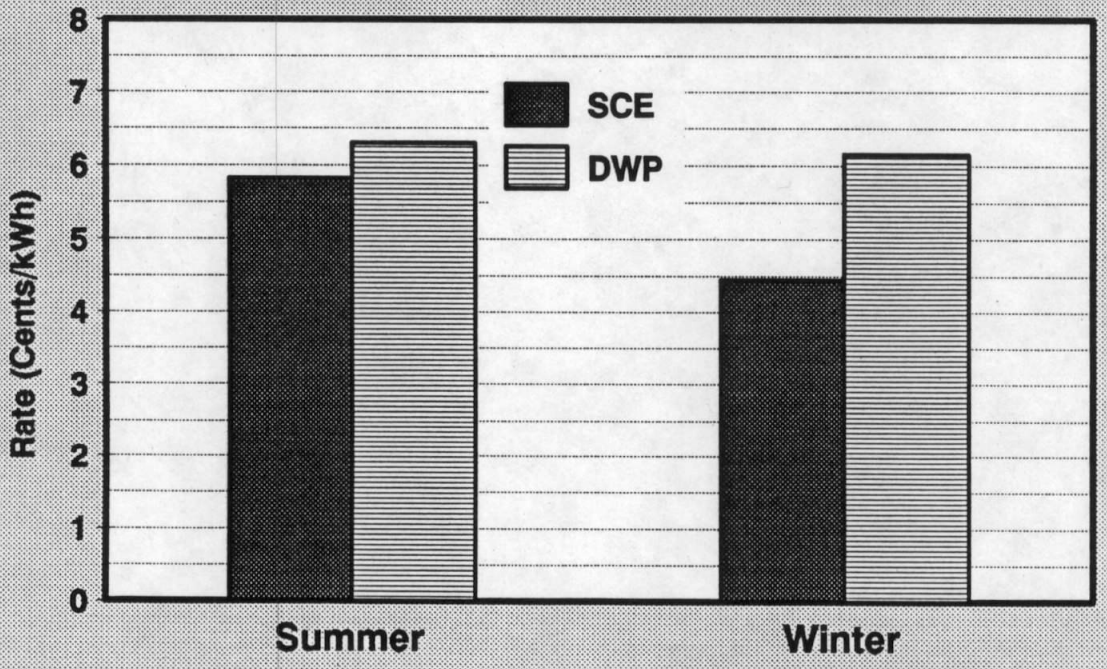
Large Commercial/Industrial Customer Rate Comparison

Large Commercial/Industrial Customer Rate Comparison
Southern California Edison and Department of Water and Power

Primary Distribution Customer (5kV)



Subtransmission Customer (34.5kV)



Comparison Based On: 500 kW Constant Load, Operating 24 hours per day, 30 days per month (21 weekdays and 9 weekend days), all Interruptible Load

Sources: Los Angeles Electric Rates, January 31, 1993, Ordinance No. 168436
Southern California Edison, Tariff Schedules, March 18, 994, File No. 94-1E

LADWP has 1056 services above 500 kW that represent 27 % of the Power System Revenues.

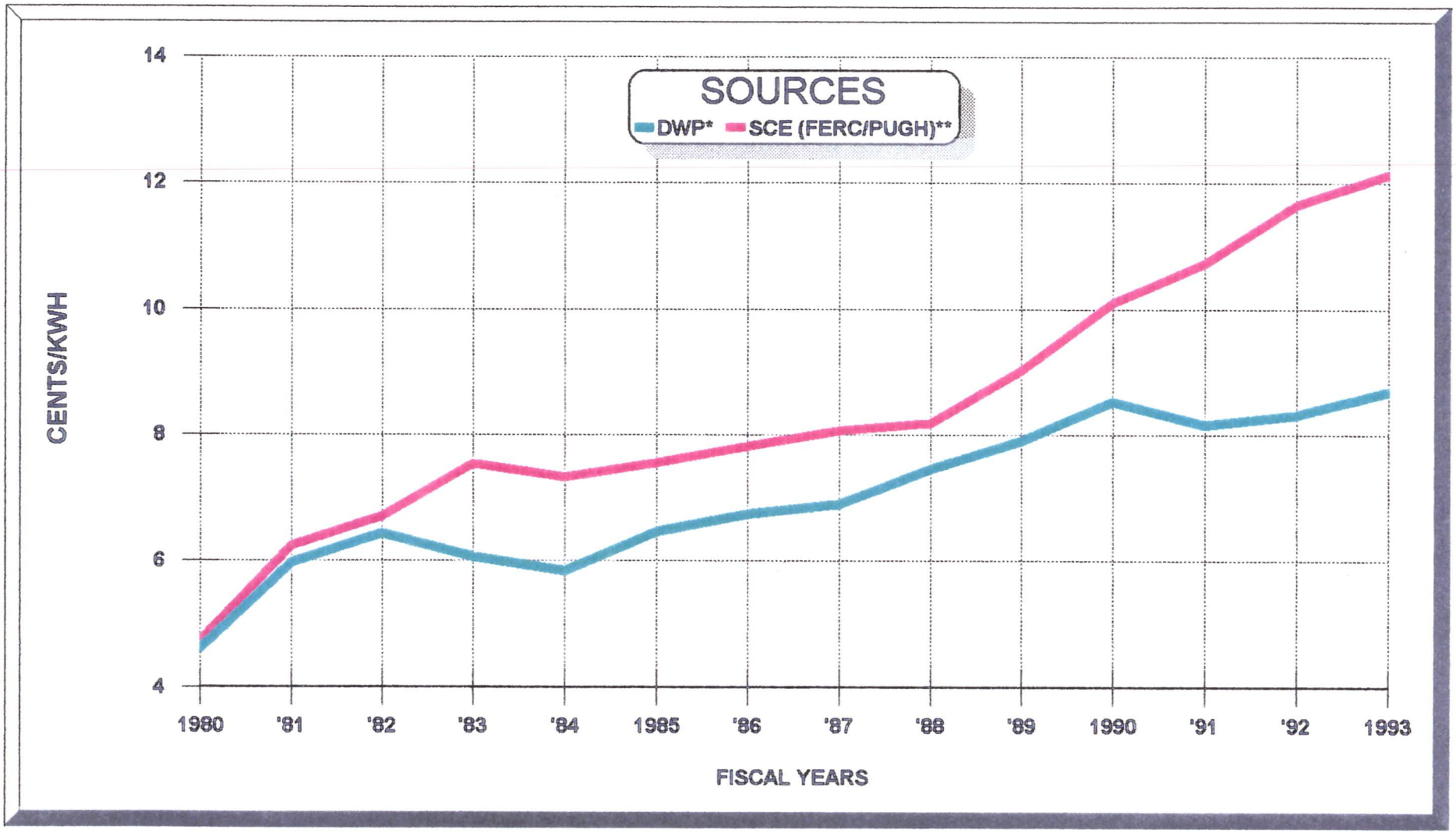
APPENDIX C

Rate Comparisons

1. DWP/SCE Comparison - Historic (By Customer Segment)
2. Rate Projections - Average Price (DWP, SCE, PG&E, SDG&E AND SMUD)
3. Historical Rates - Average Price (DWP, SCE, PG&E, SDG&E AND SMUD)

AVERAGE RETAIL RATE CENTS/KWH

FOR RESIDENTIAL CUSTOMERS

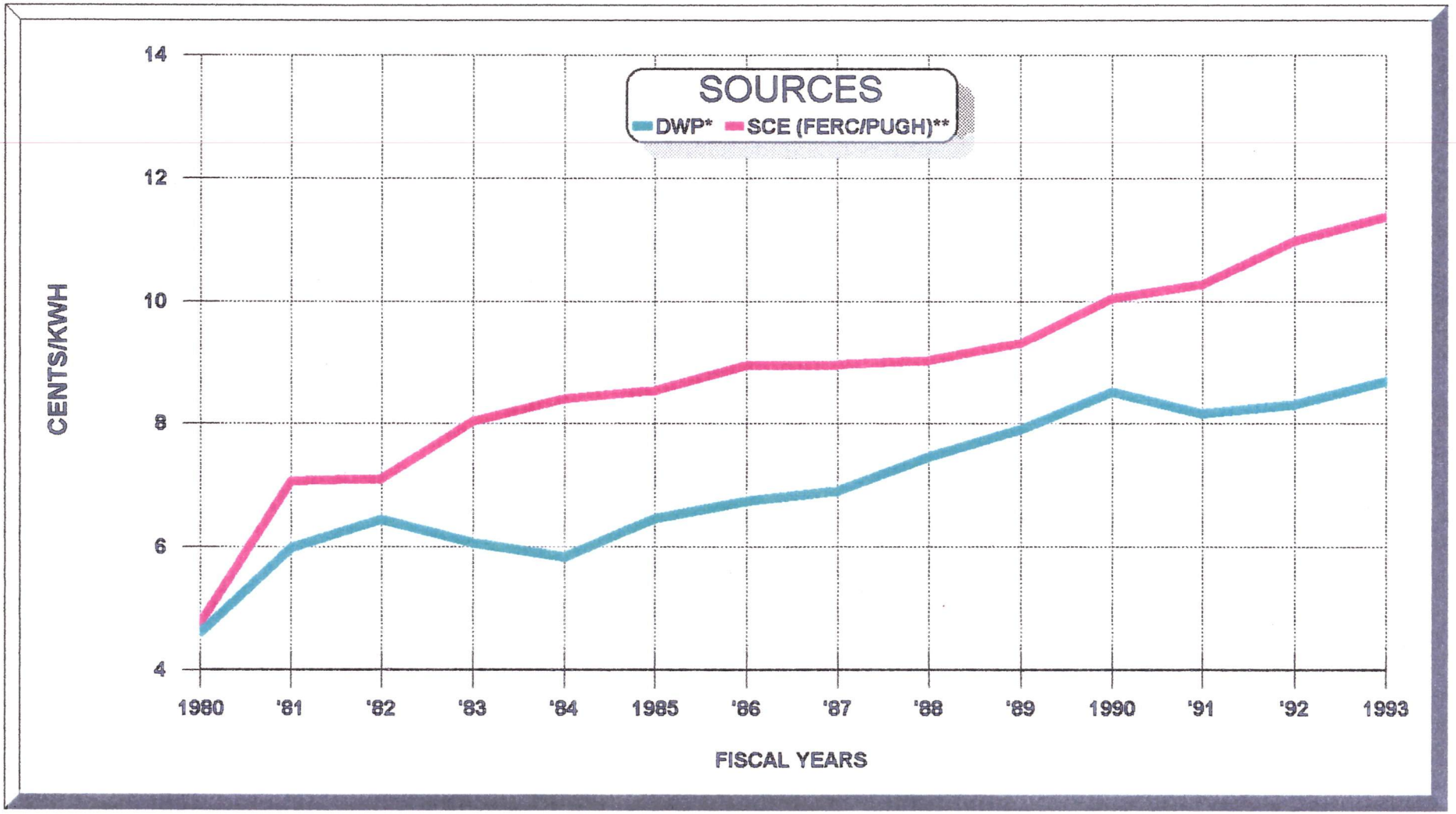


NOTES:
* RATES BASED ON STATISTICAL REPORT FOR FISCAL YEARS 1983-1992
**RATES ESTIMATES BASED ON FERC DATA COMPILED BY G.R.PUGH UTILITY DATABASE 12-1992.

5-10-1994

AVERAGE RETAIL RATE CENTS/KWH

FOR COMMERCIAL CUSTOMERS



NOTES:

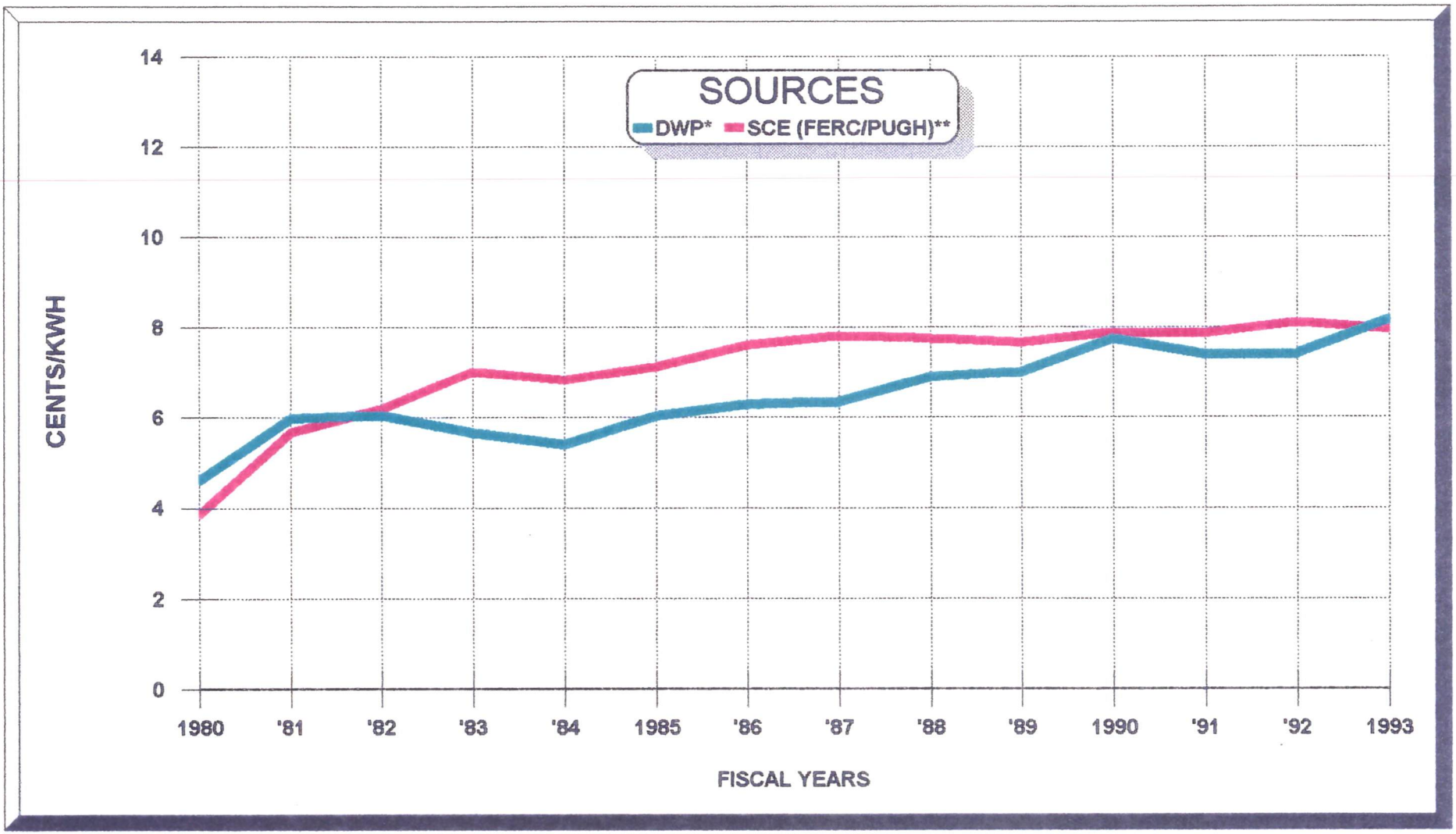
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* RATES BASED ON STATISTICAL REPORT FOR THE FISCAL YEARS 1983-1992

**RATES ESTIMATES BASED ON FERC DATA COMPILED BY G.R.PUGH UTILITY DATABASE 12-1992.

AVERAGE RETAIL RATE CENTS/KWH

FOR INDUSTRIAL CUSTOMERS

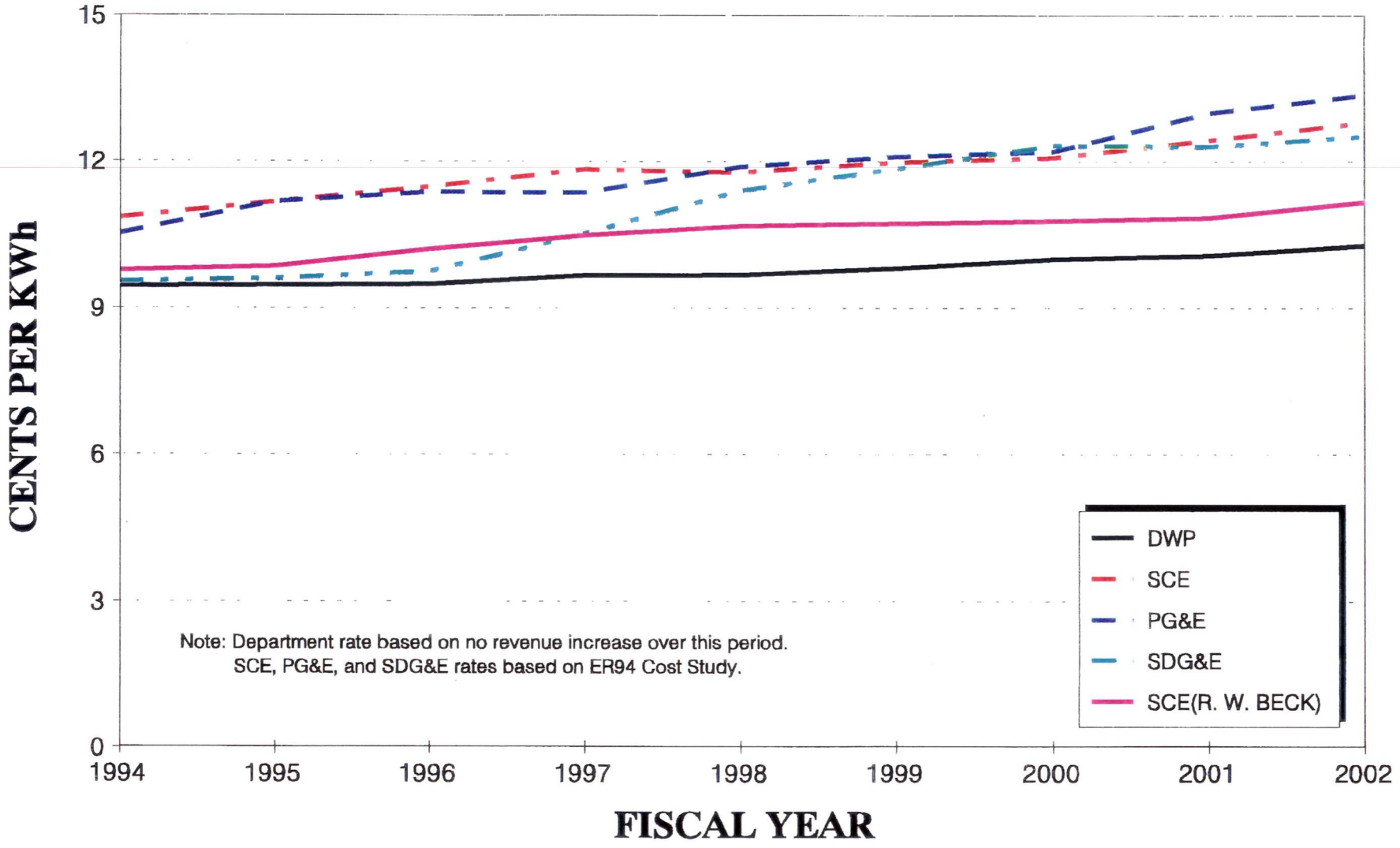


SOURCES:
* RATES BASED ON STATISTICAL REPORT FOR FISCAL YEARS 1983-1992
**RATES ESTIMATES BASED ON FERC DATA COMPILED BY G.R.PUGH UTILITY DATABASE 12-1992.

5-10-1994

AVERAGE PRICE OF ELECTRICITY COMPARISON

DWP VS. SCE, PG&E, AND SDG&E

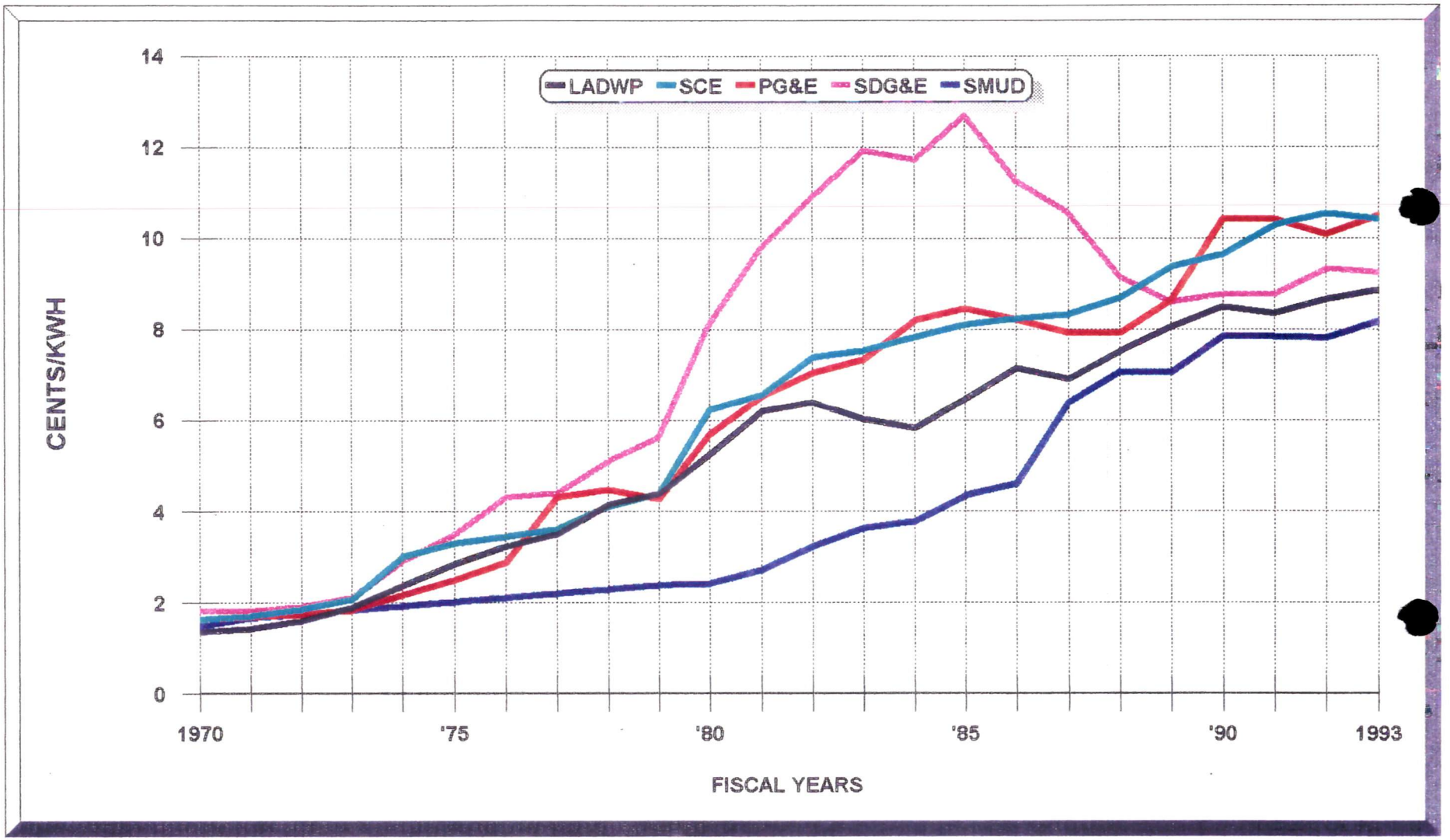


Assumptions: Natural gas price based on suggested forecast
by CEC for ER94.
Preliminary 1994 Load Forecast.

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AVERAGE RETAIL RATE CENTS/KWH

SELECTED CALIFORNIA UTILITIES

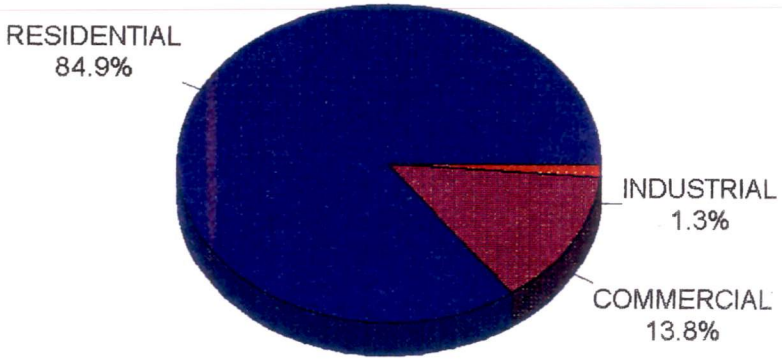


CONSERVATION PLANNING
CORPORATE/STRATEGIC PLANNING

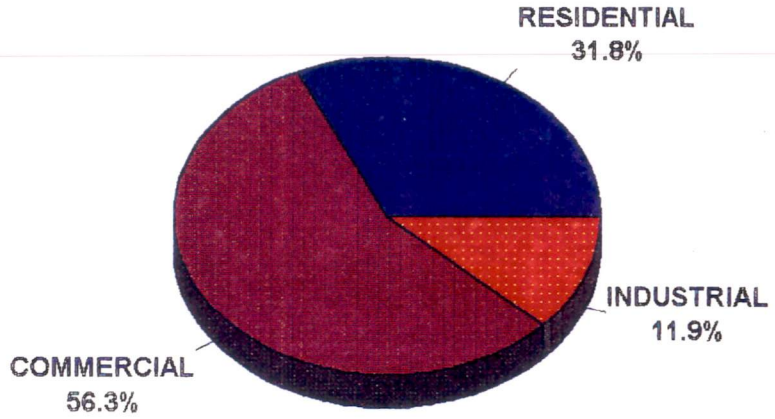
APPENDIX D

Customer Segmentation / Revenue by Segment

LOS ANGELES DEPARTMENT OF WATER AND POWER
AVERAGE NUMBER OF CUSTOMERS AND REVENUE
12 MONTHS ENDING MONTH OF NOVEMBER 1993



NUMBER OF CUSTOMERS
1,314,492



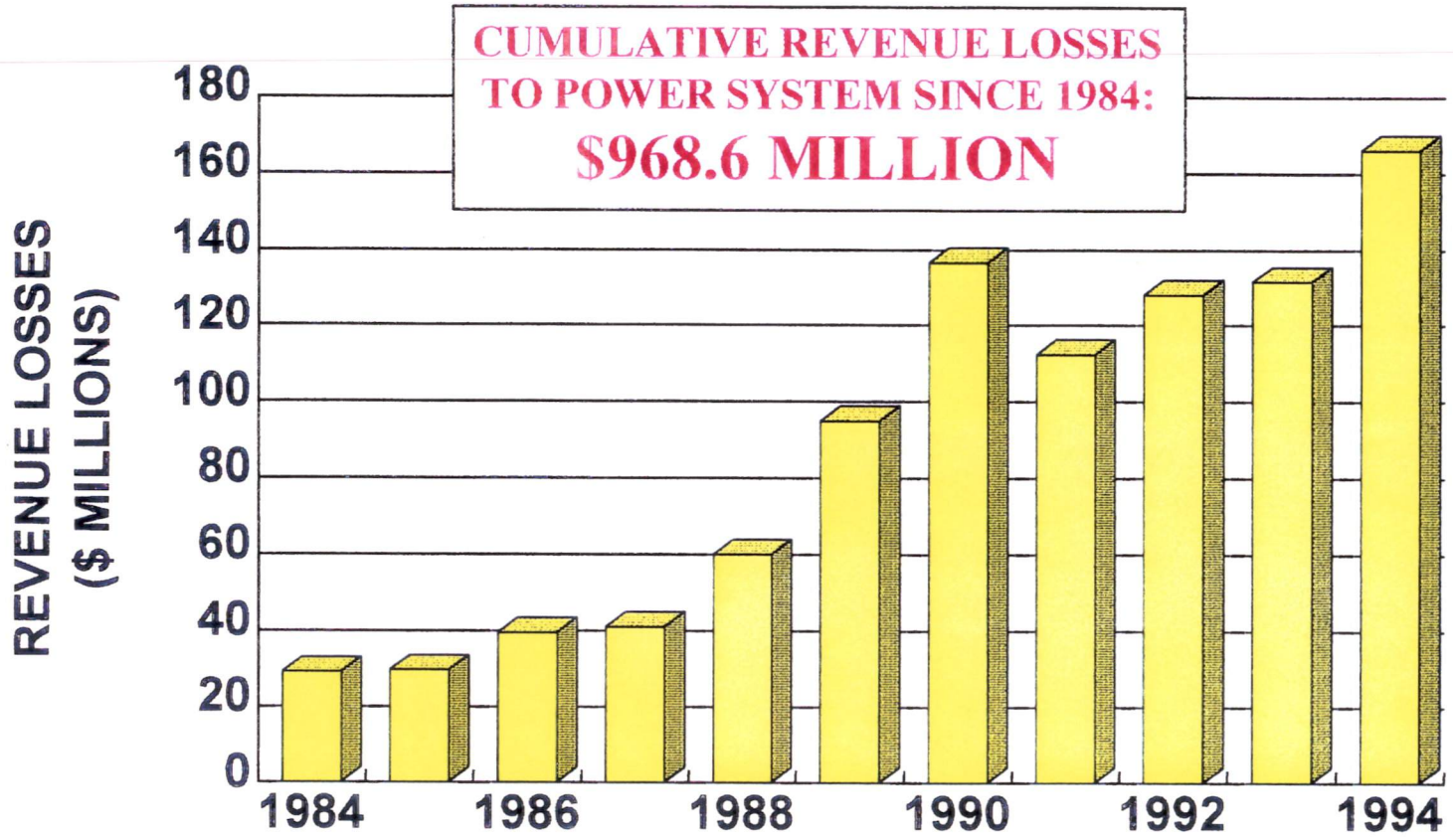
REVENUE IN $1,000
1,835,132

APPENDIX E

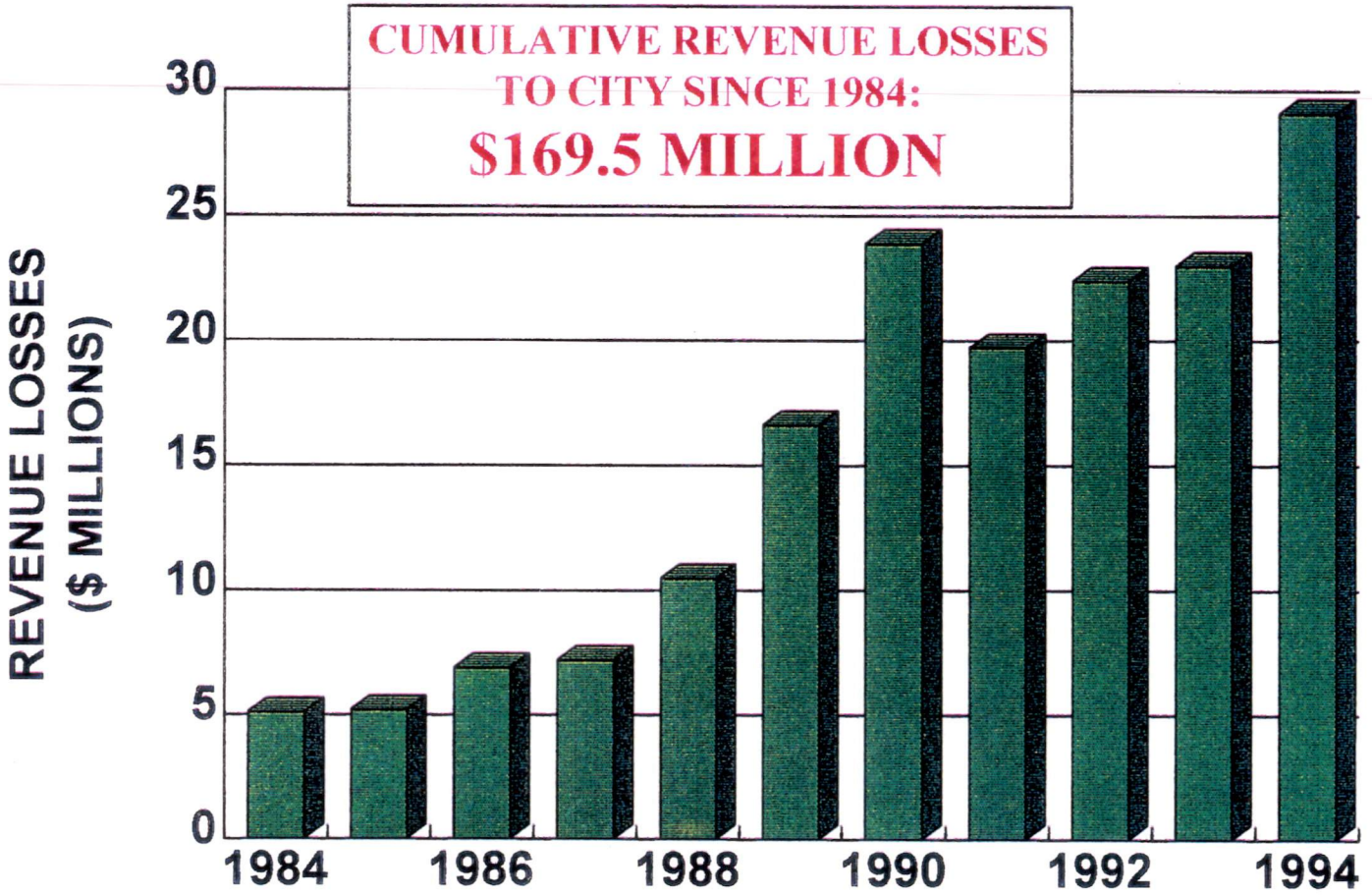
Financial Impacts of Cogeneration

1. Annual Revenue Losses to DWP from Cogeneration
2. Annual Revenue Losses to City from Cogeneration

ANNUAL REVENUE LOSSES TO POWER SYSTEM FROM COGENERATION



ANNUAL REVENUE LOSSES TO CITY FROM COGENERATION*



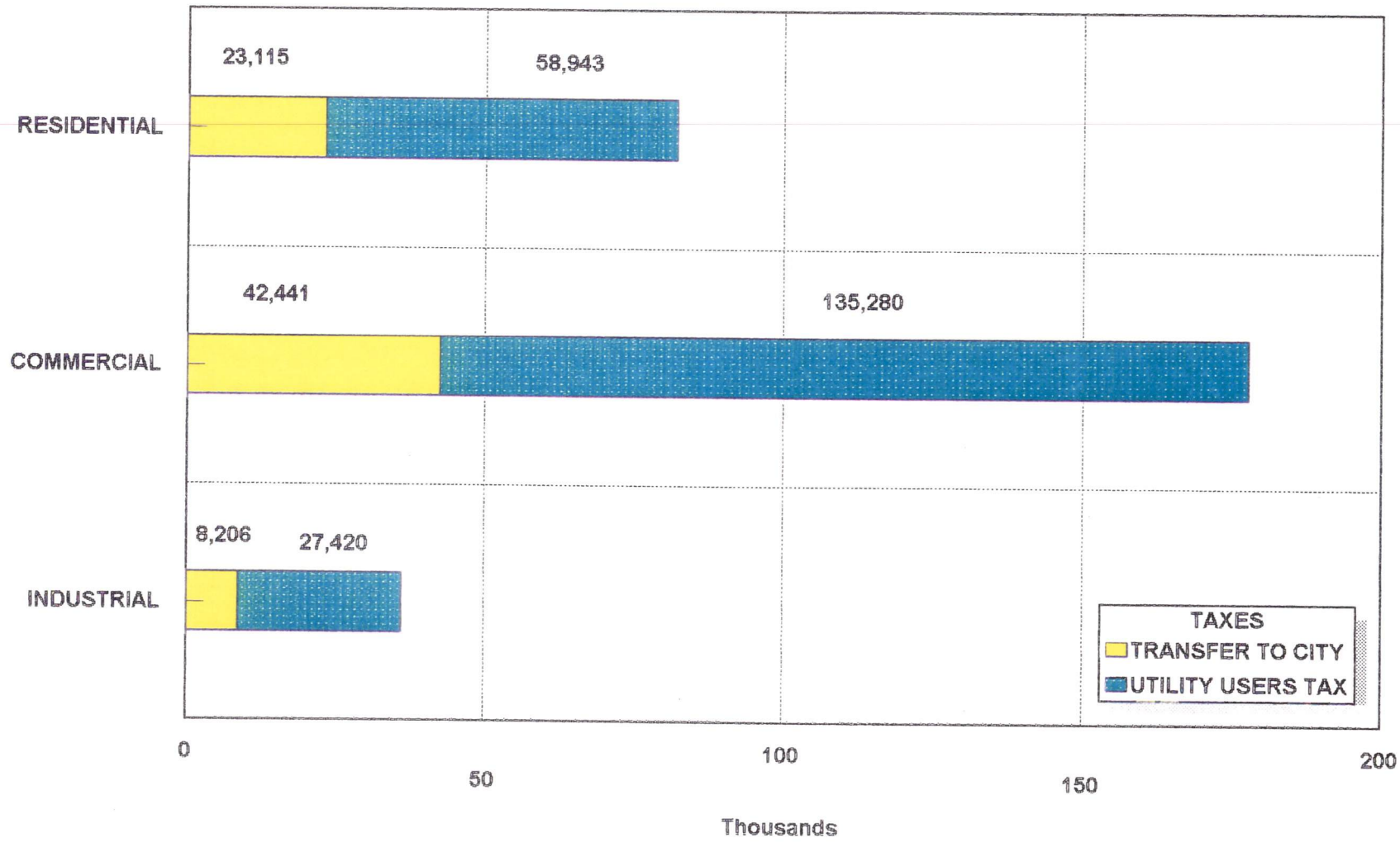
*FROM LOSS OF UTILITY USER'S TAX
AND TRANSFER ON ELECTRIC REVENUES

APPENDIX F

Annual Revenue to City of Los Angeles

ANNUAL REVENUE TO CITY OF LOS ANGELES

FOR CUSTOMER CLASSES FOR 12 MONTHS ENDING JUNE 1993 CITY TAXES INCLUDE : RESIDENTIAL =10%, COMMERCIAL AND INDUSTRIAL = 12.5%



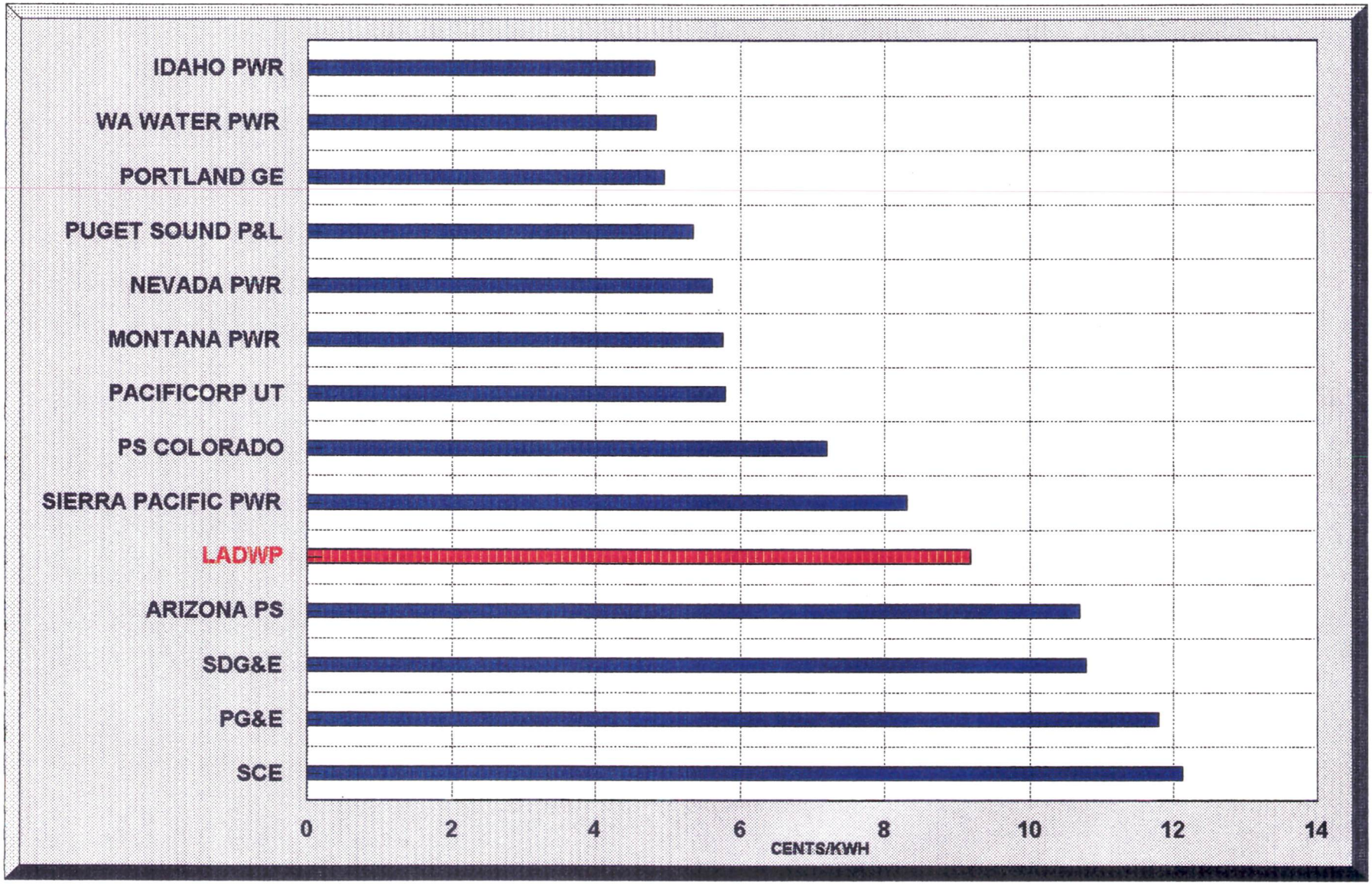
INFORMATION BASED ON ANNUAL REPORT FOR 1992-1993

APPENDIX G

Profiles of Electricity Prices within WSCC

1. Residential
2. Commercial
3. Industrial

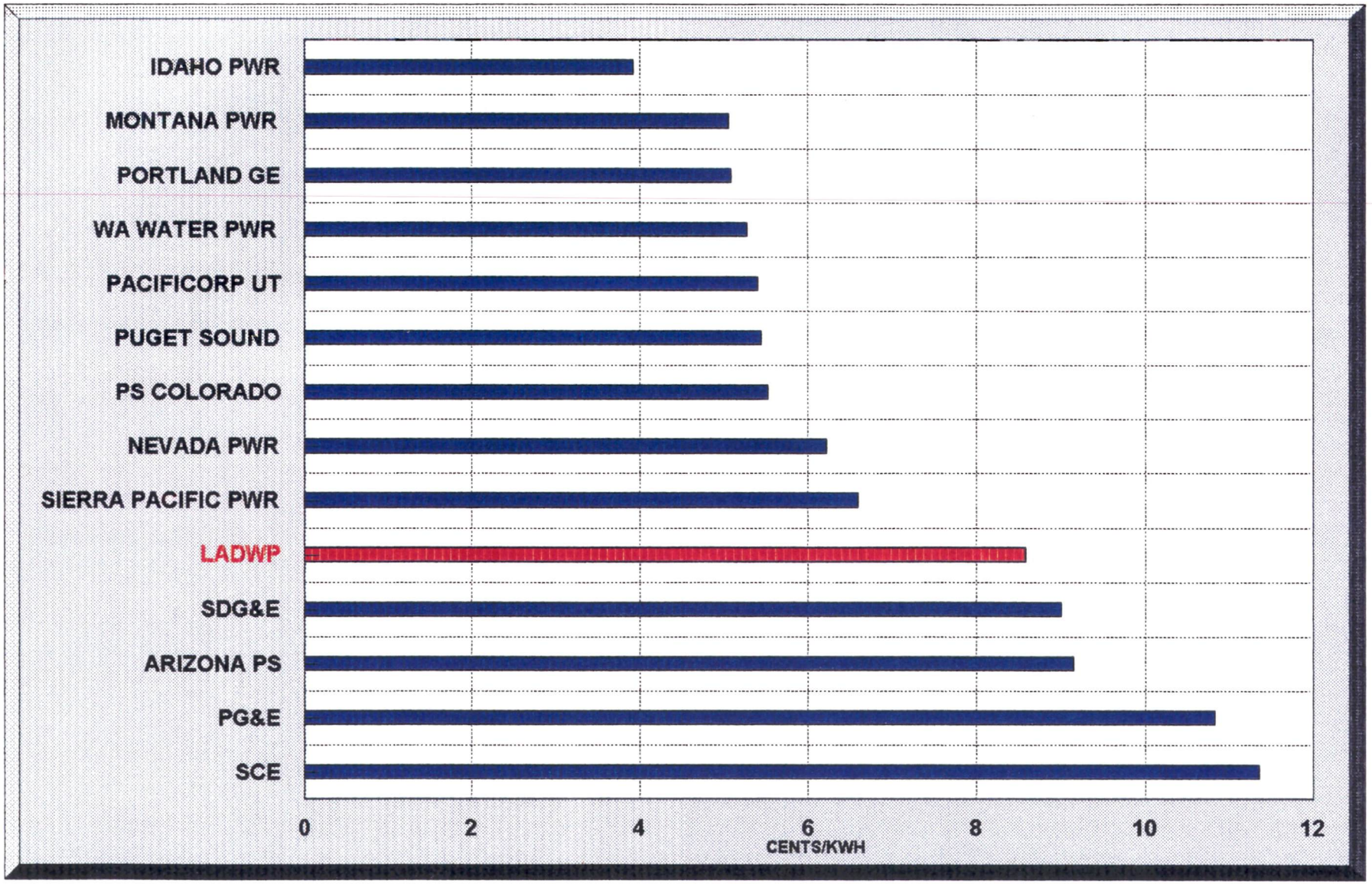
RATE PROFILE OF AVERAGE ELECTRICITY PRICES CENTS/KWH FOR RESIDENTIAL CUSTOMERS



SOURCE: G.R. PUGH UTILITY DATABASE 12-1992

5-10-1994

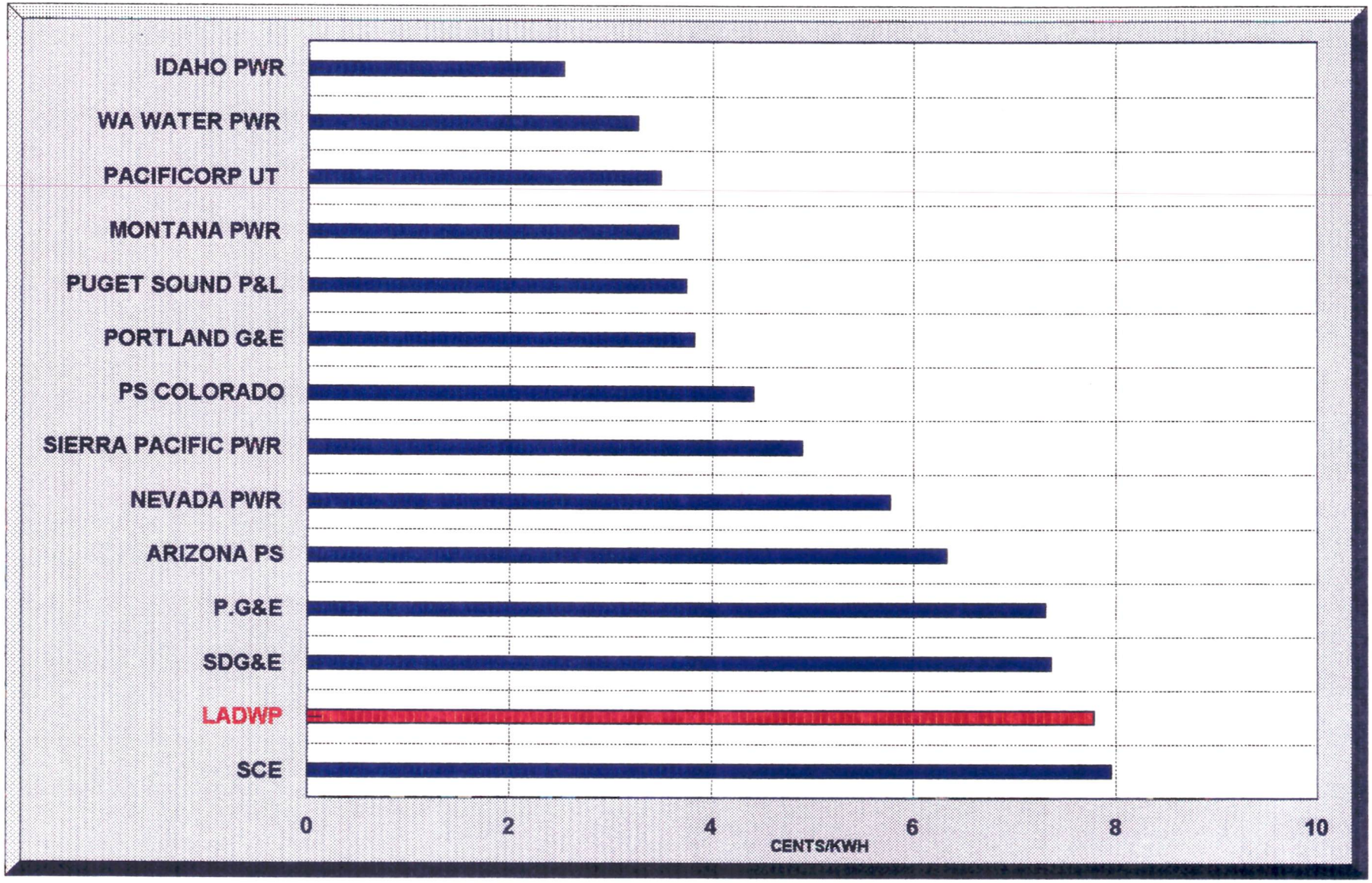
RATE PROFILE OF AVERAGE ELECTRICITY PRICES CENTS/KWH FOR COMMERCIAL CUSTOMERS



SOURCE: G.R. PUGH UTILITY DATABASE 12-1992

5-10-1994

RATE PROFILE OF AVERAGE ELECTRICITY PRICES CENTS/KWH FOR INDUSTRIAL CUSTOMERS



SOURCE: G.R. PUGH UTILITY DATABASE 12-1992

5-10-1994

APPENDIX H

"Strategic Issues Paper", by Ralph Cavanagh, Natural Resources Defense Council

PREFACE

The specter of retail wheeling looms large on the strategic planning landscape for many electric utility companies in North America. Citing analogies to other industries and international examples of electric utility industry restructurings, some observers contend that the U.S. has already ventured onto a slippery slope that will inevitably lead to retail wheeling. Such a result would have far-reaching implications for the utility's role in providing energy efficiency services. On the other hand, there is evidence to suggest that the outcome is still far from predetermined: formidable coalitions against retail wheeling are emerging, and their proponents have largely carried the day in federal and state regulatory proceedings to date.

While E SOURCE takes no advocacy position in this or other policy debates, we will present various perspectives on retail wheeling and other related issues as part of our ongoing series of *Strategic Issues Papers*, especially as they relate to the challenge of reinventing demand-side management as a value-added customer service.

In "The Great 'Retail Wheeling' Illusion," Ralph Cavanagh forcefully presents the case against retail wheeling, posing instead an alternative vision of where the industry should be headed. Noting that "retail wheeling cannot happen without active and continuing support from state regulators," he argues that it would do little more than "allow opportunistic behavior by large customers at everyone else's expense." Retail wheeling, he suggests, would offer only the illusion of customer choice, backed by nothing more than a reallocation of existing costs.

It is possible to envision several different outcomes to the retail wheeling debate—including the evolution of various hybrid forms of "managed competition" at the retail level. In all of these scenarios, however, intensifying retail competition is likely to be a driving force for industry restructuring. If utilities hope to move up the value chain in order to retain market share and achieve better than commodity-market rates of return, they will have to do so by developing highly differentiated energy services packages incorporating features such as power quality management; innovative pricing, billing, and financial risk management; and customer-oriented energy efficiency services. In doing so, the biggest commercial opportunities—and the highest barriers to entry—may be those associated with providing the technically rich services necessary to unlock opportunities for energy savings, productivity enhancement, or environmental cost mitigation opportunities previously overlooked by energy managers and utility rebate programs. Almost by definition, this will be the domain of a relatively small number of service providers. These opportunities, and the industry structure that they imply, will be the subject of a subsequent paper in this series.

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3.	The Great "Retail Wheeling" Illusion	10
	3.1 Retail Wheeling Is Not Desirable	11
	3.2 Retail Wheeling Is Not Inevitable	13
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THE GREAT "RETAIL WHEELING" ILLUSION—AND MORE PRODUCTIVE ENERGY FUTURES

MARCH 1994

Ralph Cavanagh
Energy Program Director, Natural Resources Defense Council

EXECUTIVE SUMMARY

The current debate over the competitive restructuring of the electric power industry is critical from both economic and environmental perspectives. Some observers believe that the industry transition already underway must lead to a system that requires retail customers to "choose" among competing electricity suppliers. However, all attempts to introduce broad-scale "retail wheeling" in the United States have failed; instead, state regulators are choosing a path that emphasizes competition and choice, but acknowledges fundamental differences between wholesale and retail markets. Given the physical laws governing the movement of power over centrally controlled grids, the choice offered to customers through retail wheeling of electricity is a fiction—a reallocation of costs is all that is really possible. Everyone wants to be able to claim the cheapest electricity on the system; unfortunately, there is not enough to go around. By endorsing the fiction of retail wheeling for certain types of customers, regulators would be recasting the retail electricity business as a kind of commodity exchange. That would reward suppliers who could minimize near-term unit costs of electricity while simultaneously destroying incentives for many investments—including cost-effective energy efficiency improvements and renewable energy generation—that reduce long-term energy service costs to society as a whole. This result, which has been analogized unpersuasively to trends in telecommunications and natural gas regulation, is neither desirable nor inevitable. States should go on saying no to retail wheeling in order to be able to create something better: regulatory reforms that align utility and societal interests in pursuing a least-cost energy future.

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1.
THE INDUSTRY TRANSITION AHEAD

One of our most important industries is in transition from comfortably entrenched monopoly status to largely uncharted territory, which clearly will feature much more competitive deliveries of a much wider range of services. Structures of regulation and management that dominated electric utilities for the better part of a century are giving way, and the debate over their replacements is critical from both economic and environmental perspectives.

That debate reflects some fundamental differences over the nature and future of the electricity industry. Few participants simply defend business as usual; the argument is over how best to realize the values implicit in expanded competition and choice, while overcoming some formidable environmental challenges and respecting equity concerns.

This paper has two objectives. The more important is to describe and champion utilities' ongoing evolution into highly competitive resource-portfolio managers and environmental stewards whose principal motivation is to minimize customers' energy service costs. A complementary aim is to resist an ill-founded campaign to derail that transition. Central to this campaign is a concept called "retail wheeling," which has long resisted capture in language satisfying minimum standards of intelligibility.

RETAIL WHEELING WOULD DESTROY INCENTIVES FOR SUPPLIERS TO MINIMIZE LIFECYCLE COSTS OF ENERGY SERVICES

At base, retail wheeling is a classic exercise in disguising an appeal for special privilege as the pursuit of civic virtue. The term itself refers to a fictional exclusive connection over a complex power grid between a particular business or household and a distant power supplier. Through systems of these fictional connections, as explained more fully below, regulators would at a stroke redefine the retail electricity business as a kind of commodity exchange, which in turn would reward suppliers who could minimize near-term unit costs of electricity while destroying incentives for many investments that could have reduced long-term energy service costs to consumers.

Prominent among the likely casualties would be cost-effective energy efficiency improvements and renewable energy generation. Yet the biggest losers might well be retail wheeling's supposed industrial constituency, which would sacrifice much more promising options in the very act of securing a grossly oversold remedy for competitive ills.

This outcome, which has been analogized unpersuasively to trends in telecommunications and natural gas regulation, is neither desirable nor inevitable. Retail wheeling cannot happen without active and continuing support from state regulators; it is they and their legislators and constituents who will make this decision across the United States. No technology or historical imperative will preordain the result, which is about flows of dollars rather than electricity—and about how utilities should be managed and motivated. Retail wheeling is not "deregulation"; it would require a huge, complex, and continuing new exercise of regulatory authority.

Of course, there is always a temptation to invoke contrived historical imperatives as substitutes for the merits of a policy dispute, even as there are always brokers eager to enrich themselves by inventing new and mystifying transactions that increase commissions but not productivity or product quality. One responsibility of legislators and utility regulators is simply to see such efforts for what they are; as increasing numbers do just that by rejecting retail wheeling, the policy is losing any pretense of momentum.

This debate turns in part on key features of the retail electric utility business, including a critical distinction between the emerging reality of retail ***competition*** and the older fiction of retail ***wheeling***. Section 3 below explores these issues.

The most compelling reason to reject retail wheeling is its incompatibility with the utility industry's transition toward a structure that is at once more competitive and more attuned to pressing concerns of environmental stewardship. That structure is the subject of Section 4.

It is important first, however, to recall key goals of utility regulation that must inform any evaluation of reform agendas. Section 2 reviews why the electric utility industry has so long been viewed so rightly as "affected with the public interest,"[1] and what the industry's most innovative regulators have been doing to vindicate that interest.

2.
A BUSINESS "AFFECTED WITH THE PUBLIC INTEREST"

At about $187 billion in 1992, the U.S. electric bill was equivalent to three percent of the Gross National Product.[2] That is hardly an inconsequential figure, but it grossly understates the importance of this industry to its customers' quality of life.

As regards sulfur dioxide, oxides of nitrogen, and carbon dioxide, for example, electricity's share of total U.S. emissions is two-thirds, one-third, and one-third, respectively. In other words, from the perspective of preventing acid rain and stabilizing greenhouse-gas concentrations in the atmosphere, the electric utility sector is the economy's most important point of leverage. It is also crucial on issues of radioactive waste disposal, nuclear proliferation, and the preservation of free flowing rivers.

FROM AN ENVIRONMENTAL PERSPECTIVE, THE UTILITY SECTOR IS THE ECONOMY'S MOST IMPORTANT LEVERAGE POINT.

Nor does its share of GNP adequately capture the importance of electricity to U.S. households and businesses. Electricity is now responsible for almost 36 percent of total U.S. energy consumption, a fraction that has doubled since 1960.[3] Compared with 1973, U.S. electricity sales in 1992 had grown by more than 60 percent, even as total energy use had increased by only 11 percent, and consumption of fossil fuels had hardly changed.[4] Trade and popular publications abound with credible affirmations that our quality of life depends in significant part on reliable electricity service.

As electricity supply has expanded, its sources have become both more diverse and much more competitive. Utilities' monopoly over generation in the United States is long gone; more than half the megawatts added since 1989 have been independently owned.[5] On the customer's side of the meter, equally independent companies are offering myriad ways to cut bills and improve service by using electricity more efficiently or substituting nonelectrical equipment.

However, the rationale for retaining unified management of some parts of the electricity sector remains strong and largely unchallenged. Transmission grids, over which power supplies are balanced and transferred, require unified control. In their interdependence and complexity, the four giant North American grids call to mind the natural ecosystems that they so profoundly influence. For ecologists, a first principle is that everything is connected to

everything else. And no electrical generator can engage anywhere on one of this continent's great synchronized networks without being felt everywhere on the grid;[6] no power sale can be executed without instantaneous and imperfectly understood impacts on all of the grid's branching connections.

These and related considerations have divided the giant grids into tightly coordinated control areas, which use central computers and automatic devices to determine when power plants cycle on and off. "Centralized planning and control" may be out of fashion as a domestic economic ideology, but it remains the unchallenged law of every operating electrical grid.[7]

In all of these respects, electric power systems are profoundly different from the natural gas or telecommunications industries to which they are sometimes analogized. For these industries, a major theme in recent years has been the proliferation of competing transmission systems. But no one anticipates installation of multiple electrical grids. For the foreseeable future, customers who want access to a varied and integrated mix of distant power suppliers will have only one grid to plug into.

ELECTRIC POWER SYSTEMS ARE PROFOUNDLY DIFFERENT FROM THE NATURAL GAS OR TELECOMMUNICATIONS INDUSTRIES, WHERE COMPETING TRANSMISSION SYSTEMS HAVE PROLIFERATED.

Just as multiple decisionmakers cannot operate a transmission system reliably, they cannot orchestrate a diversified mix of resources for meeting a healthy economy's electrical service needs at the lowest possible lifecycle costs. A central theme of modern regulation has been utilities' portfolio management function: choosing and buying the combination of generating resources, purchased power, and demand-side efficiency improvements that will minimize the lifecycle cost of reliable energy services for customers collectively.

While there is much dissatisfaction with utilities' performance historically as portfolio managers, few would go so far as to suggest that these diversification and aggregation functions are without value. Both grid control and resource-portfolio development are classic "natural monopolies" that cannot be broken up without imposing significant costs on customers and society generally. That does not mean, of course, that it is physically impossible to have multiple entities making decisions about acquiring resources for a utility system, any more than it is physically impossible to run multiple power distribution lines into a building. But in either case abandoning that particular monopoly would mean higher costs for customers and for society.

The portfolio functions take on particular importance in light of pervasive evidence that utilities can overcome market barriers to very large and economical energy savings.[8] As a National Academy of Sciences panel stated bluntly in 1991, "The efficiency of practically every end use of energy can be improved relatively inexpensively."[9] The nation's largest utility recently told the U.S. Department of Energy that energy savings represent "America's largest, least-costly untapped resource option. The efficiency gains of the last two decades, while considerable, have not come close to exhausting the full potential for saving energy more cheaply than producing it."[10] The role of utilities in realizing that potential is widely acknowledged and steadily growing. In 1992, energy efficiency investments by major U.S. utilities are estimated to have exceeded $2.5 billion, compared with less than $1 billion three years earlier.[11] In California alone between 1990 and 1993, four utilities' energy efficiency programs yielded their customers "an estimated $1.9 billion in lifecycle net resource benefits," after accounting for rebate and administrative costs and all other utility and participant costs.[12]

Regulators' efforts to secure such benefits, and to improve energy-resource portfolio management generally, have focused increasingly on giving utilities more balanced and performance-based incentives. Essential to this enterprise, in the phrase of the National Association of Regulatory Utility Commissioners, are mechanisms for "ensur[ing] that the successful implementation of a utility's least-cost [investment and procurement] plan is its most profitable course of action."[13] The U.S. Congress endorsed that objective strongly in the National Energy Policy Act of 1992 for both electric and gas utilities.[14] Achieving it should mobilize utilities against the barriers that obstruct cost-effective efficiency; this in turn should spur the growth of a competitive energy efficiency services industry and provide customers with more choices about energy-service quality and cost.[15]

NO INSTITUTION CAN DUPLICATE UTILITIES' ABILITY TO ORCHESTRATE COST-EFFECTIVE INVESTMENTS IN ENERGY EFFICIENCY.

The vision of the electricity business emerging from these and many other sources is one that uniformly emphasizes competition and choice, but adapts to fundamental differences between wholesale and retail markets. In the wholesale marketplace, where utilities buy and sell power for resale, the goal is to minimize bulk power costs; policymakers are trying to make generation more competitive and to offer entrepreneurs open access to the centralized grid.

Retail electricity markets, on the other hand, turn on quality, quantity, and price of energy *services*. Residences and businesses have no interest in buying or reselling kilowatt-hours; they are really purchasing the heating, lighting, mechanical drive, and other services that kilowatt-hours provide. Strategies designed solely to hold kilowatt-hour costs down overlook

opportunities to cut service costs by increasing the efficiency of electricity-consuming equipment; that was one lesson of the 1960s and 1970s, when utilities and their regulators often focused on retail rates to the ultimate detriment of bills.

Many of today's regulators have been responding, at least implicitly, to the natural monopoly characteristics of utilities' portfolio management function. If society is systematically underinvesting in efficiency relative to supply, obvious gains can result from ensuring that prospective generation investors evaluate efficiency options on equal terms. Those who need additional energy services and those best positioned to achieve improved efficiencies often will be different and widely separated entities; no institution has rivalled utilities in their capacity to bring both groups together for mutual advantage.

For dispersed renewable energy resources with intermittent "fuels," the portfolio manager's role is different but no less important; wind and solar resources that would not fit the demand profile of any small group of customers can be invaluable supplements to an integrated, diversified system that is meeting the needs of a utility's service territory.[16]

In sum, valuable resource diversification can be achieved, and investment in reserves and duplicative generation can be minimized, if utilities retain responsibility for portfolio management. Recent work by the Northwest Power Planning Council provides a quantitative assessment of these values; after comparing multiple scenarios of both centralized and disaggregated resource development over the next twenty years in its four-state region, the Council found that potential benefits of some $2.5 billion could be secured from "the improved coordination of resource development."[17]

The natural-monopoly characteristics of portfolio management are not, of course, grounds for vesting the function permanently in the same entity. Attorney Scott Hempling has argued persuasively for giving potential new managers periodic opportunities to challenge the incumbent; criteria that might be used by the judges are addressed in Section 4 below.

3.
THE GREAT "RETAIL WHEELING" ILLUSION

For a small but vocal group of commentators, many or most of the considerations reviewed above are beside the point. This camp wants to move electric utilities toward a very different destination, although there is sometimes confusion about whether they are seeking something new or hearkening back to an earlier era of regulation.

It is crucial at the outset to distinguish "retail wheeling" from what Professor Paul Joskow has called "retail competition."[18] In the "competition" category, Joskow puts consumers' opportunities to install their own generators or substitute new end-use equipment that needs less (or no) electricity to provide equivalent or better service. Those who hear retail wheeling advocates invoke "competition" and "choice" often assume that they must be referring to one or more of these options for physically altering a customer's electricity service, or for substituting equipment using other fuels.

IT IS CRUCIAL TO DISTINGUISH RETAIL WHEELING FROM RETAIL COMPETITION.

Yet in fact retail "wheeling" initially changes nothing about electricity service except its cost allocation. In some variants, participants would get instant access to wholesale commodity prices, which are driven by sales of surplus power from previously constructed generators. Since owners of these facilities are motivated to sell their surplus at any price that exceeds short run operating costs, they can almost always undercut rates posted by a retail utility that is attempting to recover fixed as well as operating costs.

Another option, which the Appendix addresses in more detail, would limit retail wheeling to intervals when the host utility needed new generating capacity. Participants could then appropriate, for their exclusive benefit, cost reductions associated with new generation anywhere on the grid that was priced below the utility's average costs. The alternative, of course, is to spread such benefits over the entire utility system.

Those who seek retail wheeling typically aim to change only one thing about their current electricity services: they want to shift elsewhere some of the costs that they are now paying. In this aspiration they are joined, of course, by approximately all of mankind.

These particular supplicants' prospects would be minimal except for an undeniable ingenuity in recasting their aspirations. The plea goes roughly as follows: we're tired of dealing with the same old utility company and we want a chance to shop around for our power supplies so we can find the lowest prices; it works just fine for supermarkets and gas stations—why not electricity?

RETAIL WHEELING INITIALLY CHANGES NOTHING ABOUT ELECTRICITY SERVICE EXCEPT ITS COST ALLOCATION.

Note, however, that at no time in this litany is there any mention of breaking free from the electrical grid or taking advantage of any of the other physical alternatives for improving on business-as-usual electricity use. For industrial customers needing infusions of productivity and competitiveness, some of these omissions represent important lost opportunities—and retail wheeling ultimately represents an unrewarding dead end.

3.1 RETAIL WHEELING IS NOT DESIRABLE

Much of today's utility regulation is designed to open markets to more competitors and more choices. But creating the fictional "choice" that retail wheeling represents, and calling it "competition," is really an exercise in benefitting the few at the expense of the many.

Of course, strictly speaking, the debate over retail wheeling really cannot be about "choice" at all. Because of the basic nature of electricity and transmission lines, customers cannot change the physical movement or origins of the electricity entering their buildings by "choosing" a new supplier. Electricity moves in response to physical laws and centralized controls that are independent of any contracts that might be made by suppliers and retail customers.

Individual customers can measure how much they use at a building or plant, but they cannot influence where it comes from. At any given time, all of the power plants owned by all of a grid's interconnected utilities are working *together* to meet our collective electricity needs.

Everyone wants to be able to claim the cheapest electricity on the system—but unfortunately there is not enough to go around. Everyone would like someone else to pay for higher-cost new energy resources, environmental safeguards, and transmission upgrades—but without them no utility could maintain a clean and reliable system. If we were to let a few customers escape their share of this collective investment, either it could not be sustained or the rest would have to pay more.

The ensuing erosion of utilities' capacity to assemble energy-resource portfolios would put other forms of upward pressure on energy bills. Section 2 above reviewed the reasons why many states encourage utilities to invest in opportunities to save energy that are less costly than the avoided power production. Everyone benefits when we can reduce the cost of energy services by improving energy efficiency in this way.

EVERYONE WANTS TO CLAIM THE CHEAPEST ELECTRICITY ON THE SYSTEM.

Yet energy savings mean reduced energy sales volumes for utilities, which must then raise electricity prices slightly to recover the fixed costs of their power supply systems; should that translate instantly into a competitive advantage for suppliers that invest nothing in delivering energy savings? Retail wheeling advocates say yes, ignoring the costs that all of us will have to pay if utilities collectively abandon energy efficiency programs. Some of the most severely jeopardized programs yield the added benefit of helping indigent customers afford basic energy services, by targeting energy savings in their homes.

Why don't the same objections confront efforts to create analogous regulatory "fictions" about the movement of power in wholesale markets? As Section 4 will explain more fully, at the wholesale level the fictions bring societal benefits without imposing remotely comparable costs.

WHOLESALE ELECTRICITY MARKETS REALLY ARE COMMODITY MARKETS.

The wholesale markets really *are* commodity markets, in which kilowatt-hours are traded exclusively for resale. A single-minded focus on minimizing rates per kilowatt-hour makes much more sense at that level than it does in the retail service context. Moreover, the goals of open wholesale markets and cost-minimizing portfolio management are wholly consistent, as long as utilities remain the only buyers on the wholesale markets.

Those who want to change that policy typically overlook one additional category of regulatory costs. If utilities and their regulators were to lose their system-wide resource-portfolio management and planning functions, resource development would have to emerge at least in part through uncoordinated private contracts.[19] Lacking the legitimacy of an integrated plan reflecting state-wide priorities and oversight, such development would be extremely vulnerable to the conflicting desires of local land-use planners and property owners. Siting and building generation is difficult enough when the sponsors can credibly invoke findings from integrated plans that address the interests of consumers collectively; to remove that broader rationale is to invite paralysis.

Also troubling are the openings for opportunistic behavior that retail wheeling creates. Those who "leave" their local utility when wholesale prices drop may want to return in haste when market conditions change. Should they be permitted to do so without restriction, in line with utilities' traditional obligation to serve all applicants? Some retail wheeling legislation has assumed as much, ignoring potential costs to other customers who may have to underwrite part of their utilities' ensuing resource acquisitions. And even explicit contractual disavowals of any utility obligation to serve retail-wheeling beneficiaries would have minimal value in the face of later appeals by politically influential customers who no longer found the contracts advantageous.

RETAIL WHEELING WOULD INVITE OPPORTUNISTIC BEHAVIOR BY LARGE CUSTOMERS AT EVERYONE ELSE'S EXPENSE.

Of course, those declared eligible for retail wheeling might never actually take advantage of the opportunity, if they received enough price concessions from their host utility. Some concessions are already occurring in response to credible threats of self-generation or shifts of production to other states.

One prospect, then, is that the principal impact of retail wheeling would be to provide additional leverage in rate proceedings and negotiations to parties already amply endowed, at the expense of those less favorably situated. In other words, by enacting this "reform" regulators could find themselves simply increasing the cost to other customers of maintaining some contribution to system costs by the largest customers. As the staff of the New York Department of Public Service recently concluded, retail wheeling "takes exactly those customers that tend to have viable competitive options and gives them even more options with which to leverage for discounts from the local utility."[20] It is obvious why the largest customers would want this, and it is at least equally clear why everyone else has good cause to object.

3.2 RETAIL WHEELING IS NOT INEVITABLE

The greatest single obstacle to the retail wheeling agenda may be its reliance on explicit endorsements by the very regulators charged with overseeing the systems that the proponents want to displace. For all the reasons canvassed earlier, retail wheeling has nothing to do with technological change or the evolution of new kinds of marketplace service and competition. Instead, it has everything to do with amending state regulators' policy guidelines and accounting conventions. Telling those regulators that retail wheeling is "inevitable" amounts to hoping that they will abandon their own prerogatives and simply give proponents what they want.[21] The results so far have been very much otherwise.

Nonetheless, a common tactic in the retail wheeling debate is to claim that the practice is breaking out, or about to break out, all over.[22] Some proponents of retail wheeling even insist that it has been with us for years, and in one very narrow sense they have a point: there is a long if scarcely honorable tradition of reserving inexpensive power supplies for the exclusive benefit of favored constituents with large electricity appetites and at least comparable political clout. The aluminum industry has been a frequent beneficiary, but special deals have been struck at various times for parties as varied as Shearson Lehman Brothers, Owens-Corning Fiberglass, the General Motors Corporation, and California's Lawrence Livermore Laboratory.[23]

This is a practice almost as old as commerce in electricity. Whatever its merits—and its net effect almost certainly is to suppress job growth[24]—it does not force a commodity model on the retail electricity business or challenge utilities' portfolio management role. It is astonishing, moreover, to see this kind of selective governmental intervention in the marketplace embraced as "retail wheeling" by those who claim to be advocates of unfettered competition.

ALL ATTEMPTS TO INTRODUCE BROAD-SCALE RETAIL WHEELING IN THE U.S. HAVE FAILED.

Nor have these analogies proved persuasive to state level decisionmakers. All attempts to introduce broad-scale retail wheeling in the United States have failed. The federal government said no in legislation passed late in 1992; industrial interests had "urged Congress to allow retail wheeling as part of the Energy Policy Act."[25] Congress responded by *prohibiting* federally ordered retail wheeling and leaving unchanged the authority of individual states to act on the issue.[26]

Then, as the debate shifted to the state level, New Mexico, Rhode Island, Texas, and California put the idea on hold in 1993.[27] A Michigan administrative law judge not only turned down a proposed retail wheeling "experiment," but concluded that his commission lacked authority to mandate retail wheeling. Others are taking a look at the issue; most if not all can be expected to decline once they have tallied all the costs and benefits. The Appendix to this paper gives further details on the state-by-state campaign. This is not to suggest that states will suddenly abandon special electricity subsidies for favored industries; Nevada is the latest entrant in that particular sweepstakes. Thus, when the headline in *The Energy Daily* of July 7, 1993 read "Nevada Adopts Retail Wheeling Bill," a less newsworthy but more accurate version would have been "Nevada Legislature Tries to Lure Steel Plant from Arizona."

When proponents try to expand the scope of retail wheeling, however, the same motivations that drove Nevada's bill begin to work against them. The first state to accept the retail wheeling model will be putting its own utilities in play with no assurance of reciprocity from

neighboring jurisdictions. Or, in the more pungent terms of one New Mexico commentator, "If you're the only kid on the block saying 'play with my toy,' then everyone will play with your toy."[28] Formidable coalitions against retail wheeling are emerging across the United States, as evidenced most recently in a Joint Declaration signed by fifty-odd institutional representatives of consumer, low-income, independent-power, energy efficiency, and environmental interests.[29] Moody's Investors Service acknowledged the strength of such groups in a pivotal state when it reaffirmed bond ratings for two major California utilities, "in part because the environment for retail wheeling in California is not favorable."[30]

FORMIDABLE COALITIONS AGAINST RETAIL WHEELING ARE EMERGING.

No discussion of this topic is complete without analogies to recent infusions of competition into the airline, telecommunications, and natural gas industries. Yet it bears repeating that the issue is not whether the retail electricity business will become more competitive, but on what terms that competition should proceed. And none of these case studies lends much plausibility to the retail wheeling option.

For example, regulatory reform for telecommunications was driven by a growing array of options for physically bypassing the transmission system;[31] regulators never supplemented these options by creating the illusion of bypass. At considerable cost, the natural gas industry was reorganized around a commodity model for some retail markets—but it took a decade of focused federal regulatory intervention and there was little if any consumer or environmental opposition. For airlines, the regulatory action most comparable to retail wheeling would have been to allow passengers on United or American flights to designate Southwest as their carrier—without changing planes or destinations.

THE COUNTRIES THAT HAVE INSTITUTIONALIZED RETAIL WHEELING USED THE MANDATE OF THEIR CENTRAL GOVERNMENTS.

The handful of countries that have institutionalized retail wheeling used the mandate of central governments. That option is foreign to U.S. electric regulatory tradition and prohibited by U.S. law, as noted earlier. Moreover, the examples set abroad are proving to be anything but compelling.

The most celebrated case in point is the United Kingdom. In March 1990, a determined Thatcher administration executed a nationwide "privatization" of a wholly state-owned generation and transmission system. At a stroke, what had been one gigantic nationwide generating company became two gigantic nationwide generating companies engaged in a less than robust competition. Also announced was a phase-in of retail wheeling. Nuclear power plants were shepherded into a special status that effectively exempted them from competitive pressures. Excerpts from a November 1992 review by the *Financial Times* of London provide an eloquent overall assessment:

- "In the long runup to privatization, a number of factors combined to pull the plan far from its original aims and to produce a hybrid system which has caused many new difficulties without establishing a fully commercial market . . . The protected market shares of nuclear, natural gas and, possibly, British Coal, have pushed the area open to competition to the margins of the system.
- The system seems particularly ill-adapted to changes intended to redirect electricity generation or to reduce electricity consumption for environmental reasons.
- The benefits which were promised . . ., namely cheaper prices, have not emerged, and even the biggest consumers have complained . . . that the prices in the new system are making their businesses uncompetitive against companies in the rest of Europe.
- The new system in the U.K. has been closely studied by many other countries but is unlikely to be imitated."[32]

In July 1993, the U.K.'s principal electricity regulator published an equally ominous review of recent developments:

- "I have once again received strong complaints about increasing prices in the electricity Pool . . . If present prices are maintained, overall Pool Selling Price will be nearly 20 percent higher than last year, following an 8 percent increase over the previous year.
- The need to cover avoidable costs does not justify any further price increase—nor did it justify a price increase as high as the recent one.
- There is widespread concern at the perceived ability of major generators to raise prices at will. The position of market power which the major generators hold in generation has adverse implications for the effectiveness of competition in supply."[33]

These problems certainly are not outgrowths exclusively or even primarily of retail wheeling; obviously British wholesale markets are still far less competitive than many of their U.S. counterparts. But the U.K.'s loss of luster has clear ramifications for claims that retail wheeling is politically irresistible. Other unwelcome outgrowths of the new U.K. regime were a fifty percent reduction in research and development outlays and strong incentives for distribution companies "to sell more electricity as this is the only way that they can earn revenue."[34] In mid-1993, the U.K. electricity regulator responded—tardily and ironically—with an effort to break the link between the distribution companies' profits and their sales volumes.[35]

The Norwegian case is even less mature, but it already offers cautionary tales. Restructuring began in January 1991; robust retail wheeling options are available only to large customers, who are using them to take advantage of depressed spot market prices induced by large power surpluses. "Most of the current contracts are . . . short term, one year is the most common."[36]

No Norwegian institution is acting as an electric-resource portfolio manager; instead, a scramble is on to use up the existing portfolio. Utilities are introducing promotional practices in efforts to boost electricity consumption, which—at 19,000 kWh per household per year—already ranks among the highest in the world.[37] Utilities have no incentive to invest in end-use efficiency.[38] Norway is unique in its virtually exclusive reliance on an overbuilt hydropower system, but these policies are destroying potentially lucrative and socially productive opportunities to displace fossil fuels elsewhere. For any country whose utilities retain significant fossil dependence, the environmental implications of the Norwegian model should be appalling.

4.
SUSTAINABLE ENERGY FUTURES

Retail wheeling advocacy begins from the incontestable premise that commodity markets are more competitive when there are multiple buyers and sellers of the commodities. It errs in its attempt unreflectively to impose that insight on retail markets for electricity services, where a commodity orientation is both economically and environmentally inappropriate.

But this same orientation is well suited to wholesale markets, as the framers of the National Energy Policy Act understood; even as they were ousting federal authorities from any role in promoting retail wheeling, they were working to install the prerequisites for competitive commodity markets at the wholesale level. If 3,000-odd utilities can choose freely among an even wider universe of potential generators and brokers, incentives to maximize efficiency and minimize costs of generation will become much stronger. That is also the principal social benefit typically claimed for *retail* wheeling. If we can get it by reforming wholesale markets, partisans on every side of this issue will have cause to rejoice. That goal is not yet realized and abundant barriers remain to be eliminated, which is one more reason for a large number of potential allies not to get sidetracked on peripheral disputes.

THE CASE AGAINST RETAIL WHEELING IS NOT AN ARGUMENT FOR PERPETUATING THE STATUS QUO.

Moreover, the case against retail wheeling is not an argument for perpetuating the status quo in utility regulation. Traditional cost-of-service regulation hardly motivates utilities to be least-cost service providers and portfolio managers; instead, as documented extensively elsewhere, it perversely ties utilities' profits to their energy sales volumes. Equally perversely, it also tends to reward utilities' shareholders based—in Tom Page's phrase—on "tonnage of capital expended" by utility managers.

These problems are not intractable; indeed, they increasingly are recognized as largely unintended outgrowths of an obsolete system of price regulation. Modern regulators want performance-based systems that do not bias utilities' investment choices inappropriately. Achieving that objective requires first breaking the link between utilities' profits and sales, and then tying those profits systematically to progress in improving operating efficiencies, reducing customers' bills, and minimizing environmental costs.

The first of these initiatives is straightforward, and represents a substantial step forward by itself. Mechanisms for "decoupling" profits from sales are in place in California, New York,

and Washington; Oregon and Montana should follow soon, and the issue is now on every state's agenda as a result of the National Energy Policy Act.[39] There are several proven "decoupling" options; they operate through regular but extremely modest rate fluctuations in both directions (which are not intended to affect utilities' overall profitability).[40]

Balanced systems of performance-based rewards are more complex, but can draw on an extensive base of experience around the nation. The point is to ensure that utilities' earnings opportunities are not skewing choices among purchased power, utility-owned resources, and energy efficiency improvements. More than a dozen states are experimenting with "shared savings" systems, which reward utilities for investment in cost-effective energy efficiency improvements. Extensive interest has emerged also in systems for acknowledging exemplary performance in fuel and power procurement. Former Maine regulator David Moskovitz has championed the principle that utilities' shareholders should be compensated based on relative changes in customers' average bills, compared to similarly situated utilities. Along the lines of the Scott Hempling proposal noted earlier, regulators also could respond to poor performance by soliciting new candidates for the culprit's retail-service franchise.

As to environmental costs, simply ensuring that utilities are held responsible for minimizing financial risks from plausible carbon dioxide regulations is a strong step in the right direction.[41] This is a further addition to the long list of benefits that utilities can secure much better in their role as systemwide portfolio managers than any substitutes that retail wheeling regimes are likely to produce.

All of these systems represent a decisive break with conventional practice, but it is not in the provision of incentives that their innovations lie. The soundest cliche of regulatory policy may be that "all regulation is incentive regulation."[42] The challenge lies in aligning those incentives with societal interests.

Once that is accomplished, through systems that combine decoupling with the performance-based features discussed above, portfolio management can be left largely in the hands of utility managers. The need for regulatory oversight of utilities' procurement decisions varies inversely with the rationality of their incentive systems; a few states have found themselves recently at the wrong end of both spectrums, and are busy setting matters right.

Increasing competition should both pervade and complement the wholesale-commodity and the retail-service regimes outlined in this section. Wholesale markets will open to receive more independent generators; they also will accommodate conservation-based power transfers, in which inexpensive energy savings become the basis for more lucrative resale of the saved energy. A defect of traditional cost-of-service regulation is that utilities typically have no financial incentive to invest in energy savings that cost less than wholesale power prices; in general, retail sales of inefficiently used electricity are more lucrative than any resales of the saved energy, because the retail price per kilowatt-hour is almost always higher and the utility gets to keep the difference. Again, the solution lies in combining decoupling mechanisms with performance-based rewards and penalties.

In their retail functions, utilities must contend with both increasingly attractive self-generation technologies and a host of independent companies with energy efficiency options

to sell. But this competition will turn on who can provide the best energy service at the lowest total cost to the customer; it is a battle of energy-service bills, not energy-commodity costs. That is good news for both the economy and the environment.

Under this system, those who want access to the integrated grid must share utilities' costs of creating and sustaining the balanced resource portfolio that is needed in order to maximize the benefits of the grid to society. Those costs should be allocated based on the relative responsibility of customer classes for the addition of new resources, whether efficiency- or generation-based.[43]

RETAIL COMPETITION SHOULD BE A BATTLE OF ENERGY SERVICE BILLS, NOT ENERGY COMMODITY COSTS.

If individual customers can get a better deal by leaving the grid, they are free to take it; utilities' continuing challenge will be to minimize the number of customers for whom that condition holds. Part of the answer may be increased pricing flexibility, but the best way to meet the challenge is simultaneously to help customers seize all cost-effective efficiency options and to minimize utilities' generation and procurement costs.[44] The result should be increased choice and competitive benefits for all customers, not just those politically potent enough to win favorable cost accounting under retail wheeling.

This system is not hypothetical or visionary; it is emerging across much of the United States. Its strength comes in part from its intrinsic appeal to the very utilities and industries that are central to its success; it stakes out their future in the arena of value-added services, as opposed to a commercial existence based on the churning of cheap commodities. It is in part because retail wheeling advocates are pulling in exactly the opposite direction that they are unlikely to succeed.

Ironically, among the biggest potential winners under the service/portfolio model are the large industrial customers that some see as retail wheeling's principal constituency. Appropriately, these customers have been winning increased access to the very utility-financed energy efficiency investments that retail wheeling imperils, and they have been the largest beneficiaries of substantial reductions in inflation-adjusted electricity costs.[45]

From 1981 to 1992, the U.S. electricity bill actually dropped by about five percent in real terms despite a growth in electricity sales of 28 percent; this record contrasts sharply with that compiled between 1973 and 1981, when the same annual costs *increased* by almost 78 percent although electricity sales increased by only 25 percent.[46] Industrial customers have fared even better in recent years than those figures indicate; over the last decade, average industrial electricity prices dropped, as a fraction of average residential prices, from more than 70 percent (in 1982) to about 60 percent (in 1992).[47] Regulators might be forgiven for wondering whether wrenching course changes should wait until something is more obviously broken.

5.
CONCLUSION

If utilities were going to live or die solely by how low they could drive the short-term commodity price of electricity, they would have every reason to resist investments to reduce pollution or to help customers save energy. Less responsible companies would gain an unjustified advantage, even as the industry's overall marketing strategy returned with a vengeance to an ancient and discredited slogan: "the more you use, the less you pay." That particular incentive system left a legacy of both economic and environmental waste.

There is no disputing that the utility business is changing and that competition for energy services is increasing. Utilities cannot expect either to build power plants or provide energy conservation services unless they do it better than a host of independent companies. Regulators should accept and welcome that kind of genuine competition; it is the sham variety that they should reject.

Everyone stands to gain from a search for better energy services that cost less; today's increasingly competitive marketplace is yielding a host of exciting new technologies and efficiencies. As a result, every utility must earn its customers' business, and those that cannot will not survive. But beware those who would rewrite the rules of competition for their own benefit, and drive a wedge between society's and utilities' interests.

APPENDIX I: NOTES ON SOME RECENT RETAIL WHEELING CAMPAIGNS

A. NEW MEXICO, 1993

State Senator Tom Wray's SB 501 was a retail-wheeling purist's delight. It would have given retail customers automatic access to wholesale market prices, while allowing them to return at any time to conventional utility pricing without penalty. It also guaranteed that no customer class could be forced to bear higher costs as a result of others' retail wheeling elections, which could only have been achieved over the prostrate forms of aroused and distressed utility shareholders. An environmental/utility coalition helped extinguish S.B. 501 in March of 1993; the issue was referred to an "interim committee" for study over the next two years.

B. RHODE ISLAND, 1993

The instigator here was Hydro-Quebec, which sought to win new industrial revenues from Rhode Island. The proposed deal, while often characterized as retail wheeling for industrial customers, was more complex; it would have required a series of transactions involving the state's Public Utilities Commission, its regulated utilities, and their industrial customers. Key terms of the offer were as follows:

- Hydro-Quebec would sell 250 megawatts at a 65 percent capacity factor for four years on a take-or-pay basis;
- The price would start at 4.4 cents per kilowatt-hour and would escalate automatically over the four year period by a total of at least 20 percent, not including charges for using the New England transmission system and a supplemental escalator tied to the spot market price of oil (for every dollar increase in that price above $17 per barrel, the electricity price would increase by 6 percent).

In the view of analysts hired by the Rhode Island Public Utilities Commission, these redirected dollar flows would have shifted costs of about $26 million per year to Rhode Island's non-industrial customers, with rate impacts of up to 40 percent.[48] A PUC press statement issued in May of 1993 diplomatically declared "that the power offered does not meet Rhode Island's needs at this time."[49]

C. TEXAS, 1991

Proponents of retail wheeling sometimes cite a proposed Texas PUC rule that would:

> allow cogenerators to wheel power from a qualifying [generating] facility (QF) to a portion of existing or new utility retail load. The utility would buy power from a QF at a price agreed to between the QF and the customer, and then resell it to the customer at no markup except for a compensatory transmission service fee. Since these transactions would be allowed only when the utility needs additional capacity and will be limited to no more capacity than the utility is otherwise seeking to add itself, this proposal will not create a "stranded investment" problem for the utility. Such transactions would also be limited to 10 MW or more in order to avoid administrative complications.[50]

One outgrowth of all these "avoided administrative complications," of course, is that large industrial customers would get the best of all worlds at everyone else's expense: whenever new power supply were available at costs below system average costs, they would reserve the full economic benefit for themselves. When conditions were otherwise, they could go on buying power at system average rates. Under the circumstances, it is not surprising that the author and proponent of the amendment was "a voluntary association of large industrial electricity consumers in the State of Texas."[51] The proposal has attracted no discernible PUC interest since its publication in December of 1991.

D. NEVADA, 1993

Nevada's "retail wheeling bill" (SB 231) amended Chapter 704 of the Nevada Revised Statutes. It only applied to new industrial loads that agreed to remain in Nevada for 30 years, post appropriate security to defray any utility-incurred costs [section 2], make a capital investment of $50 million in Nevada, and were "engaged in the primary trade of preparing, fabricating, manufacturing or otherwise processing raw material or an intermediate product through a process in which at least 50 percent of the material or product is recycled on site" [section 4]. The number of companies that were in a position to meet all of these conditions did not exceed one.

For such a business, "the public service commission of Nevada may authorize a public utility that furnishes electricity for the business to purchase or transmit a portion of the electricity provided to the business to reduce the overall cost of the electricity to the business" [section 2]. The Commission must "ensure that the rates or charges assessed to other customers of the public utility do not subsidize the cost of providing service to the business."[52]

When this article went to press, the steel rolling mill that inspired all these legislative gyrations was leaning toward relocation in Arizona.

E. MICHIGAN, 1992–1994

The Association of Businesses Advocating Tariff Equity (ABATE) filed an application in August 1992 to set aside for its members 150 MW of new power supply whenever Michigan utilities require additional capacity. Participants in this "experiment" would be required to have a minimum demand of 5 MW; they would be able to assign their purchase commitment to other customers, and they could resume service at otherwise applicable electricity prices after five years without penalty. Also seeking permission to undertake comparable experiments were the Dow Chemical Company and several other entities, including a number of Michigan colleges and universities.

Staff for the Michigan Commission calculated that the proposed experiment would shift costs to nonparticipants totalling at least $41 million per year. Supplemental costs significantly above even that sum would follow inevitable increases in utilities' overall cost of capital.[53] A utility witness acidly concluded that "dollars will be wheeled out of the pockets of nonretail wheeling customers and into the pockets of retail wheeling customers and their new suppliers."[54] A senior Commission staffer offered a related objection:

> "[T]he industrial customers want the best of both worlds; protection for most of their supply in terms of rates, conditions of service, etc. as they have under current regulatory law and practice and, at the same time, permission to take advantage of windows of opportunity that might present themselves due to supply niches beyond the local utility system."[55]

On August 27, 1993, an Administrative Law Judge filed a 108-page Proposal for Decision, recommending against adoption of the proposed experimental retail wheeling programs.[56] The proposed decision included findings that (1) state Commissions are not preempted by federal law from authorizing retail wheeling;[57] (2) Michigan state law does not grant the Commission authority to mandate retail wheeling, although regulation of voluntary programs is permitted; (3) third-party providers of retail wheeling would be delivering the functional equivalent of public utility service and would have to obtain certificates of public convenience and necessity; (4) proponents' specific retail wheeling proposals are contrary to the public interest, because nonparticipants "will most likely be negatively affected";[58] (5) retail wheeling implies changes in utilities' obligation to serve participants; (6) utilities should be encouraged to develop new rates and service options to meet the needs of their customers; and (7) the Commission should authorize its utilities to negotiate "voluntary retail wheeling programs" when they need new supplies of electricity ("[t]he Commission should address these voluntary retail wheeling programs on a case-by-case basis to determine whether they are in the public interest"[59]).

As of March 1994, the matter remained under consideration at the Michigan Commission.

APPENDIX II:
JOINT DECLARATION ON THE ELECTRIC UTILITY INDUSTRY

We are customers, suppliers, constituents, and employees of the electric utility industry. While we do not agree on all issues surrounding the future of the industry, we believe that regulatory choices should respond to concerns of system-wide cost minimization, customer choice, customer equity, reliability of service, risk reduction, and environmental stewardship. We believe that these values can be reconciled, and we see many opportunities for positive change in the industry. For example, we believe that energy efficiency improvements and nonpolluting generation technologies can work to the advantage of both utility customers and society as a whole. We generally support a more competitive electricity business, and many of us have worked to enact legislative and regulatory reforms that create more opportunities for non-utility providers and more consumer choices.

We also unite in opposing a concept called "retail wheeling." So-called "retail wheeling" refers to a fictional exclusive connection over an electric transmission system between a single customer and a power supplier other than the local utility. Of course, in actual fact, the power from generators attached to a transmission network is totally intermingled throughout the grid. State regulators are responsible for dividing these systems' total costs fairly among all their users. By endorsing the fiction of retail wheeling, regulators would find themselves reallocating literally billions of dollars in costs associated with the existing power systems. At the same time, they would be redefining the retail electricity business as a kind of commodity exchange, run on the discredited principle of "the more you use, the less you pay." Retail wheeling encourages utilities to ignore making investments that will lower utility costs and environmental impacts over the long run.

We see in such a system many losers and relatively few winners. Retail wheeling doesn't move electricity but it does move dollars and change incentives. Among the losers would be those who consume relatively small quantities of electricity (most of us) and those with a stake in improved environmental quality (all of us).

This outcome, which supporters compare unpersuasively to recent changes in telecommunications and natural gas regulation, is neither desirable nor inevitable. Retail wheeling is not "deregulation"; it would require huge, complex and continuing new exercises of regulatory authority. No technological or other imperative compels this result, which involves a policy decision that rests with our state legislators and regulators. We urge them to reject retail wheeling and to endorse something much better: the utility industry's transition toward a structure that is at once more competitive and more attuned to pressing concerns of customer equity and environmental stewardship.

CONFIRMED SIGNERS OF JOINT DECLARATION AS OF 3/2/94

CONSUMER GROUPS

Citizens Advisory Panel, NY [Gordian Raacke]

Colorado Office of Consumer Counsel, CO [Ron Binz]

Maryland Office of People's Counsel, MD [John M. Glynn]

Nevada Attorney General's Office of Advocate for Customers of Public Utilities, NV [Fred Schmidt]

Texas Citizen Action, TX [Tim Curtis]

Toward Utility Rate Normalization, CA [Bob Finkelstein]

INDEPENDENT ENERGY SERVICE COMPANIES

Citizens Conservation Corporation, MA [Stephen T. Morgan]

Energy Masters Corporation, MO [Donald C. Smith]

EUA Cogenex Corporation, MA [Joseph S. Fitzpatrick]

EUA Nova, RI [Richard Eannarino]

Heatac General Systems, PA [Ron Robertson]

National Association of Energy Service Companies, DC [Terry E. Singer]

Onsite Energy, CA [Richard T. Sperberg]

Proven Alternatives, CA [Richard Miller]

SYCOM Enterprises, NJ [S. Lynn Sutcliffe]

Viron Energy Services, MO [George Diehl]

INDEPENDENT POWER PRODUCERS

American Wind Energy Association, DC [Randall Swisher]

California Solar Energy Industries Association, CA [Lee Nelson]

Kenetech Windpower, CA [Robert T. Boyd]

Magma Power Company, CA [David Olsen]

Solar Energy Industries Association, DC [Scott Sklar]

LABOR

IBEW Local 18, Los Angeles, CA [Brian D'Arcy]

IBEW Local 47, Diamond Bar, CA [Rae Sanborn]

IBEW Local 57, Salt Lake City, UT [Blaine Newman]

IBEW Local 77, Seattle, WA [Ray Warren]

IBEW Local 111, Denver, CO [Bob Mason]

IBEW Local 125, Portland, OR [Bill Miller]

IBEW Local 266, Phoenix, AZ [Terry Miller]

IBEW Local 465, San Diego, CA [Michael Avitt]

IBEW Local 611, Albuquerque, NM [Chris Frentzel]

IBEW Local 768, Kalispell, MT [Alan Solum]

IBEW Local 1116, Tuscon, AZ [Kyle Carl]

IBEW Local 1245, Walnut Creek, CA [Jack McNally]

IBEW Local 1260, Honolulu, HI [Norm Ahakuelo]

IBEW Local 1339, Orchard Park, NY [Charles Conine]

Utility Workers Union of America, Local 246, Los Alamitos, CA [Carl Wood]

LOW-INCOME ADVOCACY GROUPS

Human Resource Council, MT [Jim Morton]

The Opportunity Council, WA [Michael Karp]

Vermont Low-Income Advocacy Council, VT [John J. McCullough III]

PUBLIC INTEREST GROUPS

American Planning Association, FL [Marcia Elder]

Clean Air Council, PA [Elizabeth B. Thompson]

Conservation Law Foundation, MA [Armond Cohen]

Environmental Planning Lobby, NY [Lee Wasserman]

Greenpeace, DC [Fred Munson]

Izaak Walton League of America, MN [Paul Hansen]

Komanoff Energy Associates, NY [Charles Komanoff]

Land and Water Fund of the Rockies, CO [Frances M. Green]

Legal Environmental Assistance Foundation, FL [B. Suzi Ruhl]

Mid-Atlantic Energy Project, NJ/PA [Daniel W. Rosenblum]

Natural Resources Defense Council, NY [Ralph Cavanagh]

Northwest Conservation Act Coalition, WA/OR/ID/MT [K.C. Golden]

Pace University Center for Environmental Legal Studies, NY [Richard Ottinger]

Planet Well, FL [Linda Young]

Sierra Club, CA [Rich Ferguson]

Southern Environmental Law Center, VA [Jeff Gleason]

Vermont Energy Investment Corporation, VT [Beth Sachs]

Vermont Public Interest Research Group, VT [Jenny Carter]

NOTES AND REFERENCES

1 The phrase appears in a dissenting opinion by Justice Brandeis. See New State Ice Co. v. Liebmann, 285 U.S. 262, 301 (1932).

2 The figure reflects calculations by NRDC's Allan Chen, based on data from the U.S. Energy Information Administration's *Monthly Energy Review* (March 1993) and GNP deflators from the *Economic Report of the President 1992*. Historically, electric utilities have been the nation's most capital-intensive industry; for example, over the two years ending in 1987, their investments in plant and equipment exceeded the combined total for all of America's airlines, railroads, mines, aerospace companies, and iron and steel foundries. "Capital Spending to Rise Sharply in 1988," *Electrical World* (January 1988), p. 29 ($65 billion for electric utilities versus $64 billion for the other five industrial groups combined, for 1986–1987). In the 1990s utilities' capital investment has dropped, but still exceeds $20 billion per year. "Mountain of Imponderables Hides Industry's Future," *Electrical World* (November 1992), p. 10 (estimated $23.7 billion of electric-utility construction outlays in 1992, $15.9 billion of which covered transmission and distribution).

3 Data are for 1992, from the March 1993 edition of U.S. DOE's *Monthly Energy Review*. Energy input at U.S. electric utilities approached 30 quadrillion Btu; total U.S. energy consumption was just over 82 quadrillion Btu.

4 Data from [3]. Total U.S. fossil fuel consumption, in quadrillion Btu, increased by less than four percent between 1973 and 1992. Petroleum and natural gas use actually declined. In Btu per dollar of gross domestic product, the U.S. economy's energy needs dropped by more than 26 percent.

5 A 1993 survey reports that "[t]he independent power industry is now contributing 47,597 MW to the U.S. electricity supply, and has 93,000 MW under construction or in various states of development." *Electrical World* (April 1993), p. 17. The projected capacity additions are dominated by gas technologies (41%) and hydropower (30%), with other renewables and coal accounting for 13% and 17%, respectively. In 1991 and 1992 alone, 254 independently owned projects went into operation, totalling more than 9,000 MW.

6 Two of the grids cover Quebec and Texas, respectively. The other two divide the remainder of the continent north of the Mexican border.

7 See, for example, J. A. Casazza, "The Changing World of Electric Power Transmission," *American Power Conference Address* (April 14, 1993), p. 2 ("Coordination of individual company plans on a regional basis was essential and generally practiced . . . most of the transmission systems developed in the United States as if they were a single system even though there were many different owners"). All discussions of transmission in this paper owe a substantial debt to Jack Casazza of CSA Energy Consultants and Jim Jones of the Bonneville Power Administration.

8 For an excellent overview of the market barriers, see *Building Energy Efficiency*, U.S. Congress Office of Technology Assessment (May 1992), pp. 73–85 (outlining numerous reasons "why energy efficiency has not been implemented to the level that appears economically justified").

9 *Policy Implications of Greenhouse Warming*, National Academy of Sciences Committee on Science, Engineering and Public Policy (1991), p. 74.

10 "Joint Comments of the Natural Resources Defense Council and the Pacific Gas and Electric Company on the U.S. Department of Energy's National Energy Strategy" (July 1990), p. i. For

extended variations on the same theme, see *Partnerships to Progress: The Report of the President's Commission on Environmental Quality* (1993), pp. 28–30 (estimates of the technical potential for cost-effective electric efficiency "range between 30 and 75 percent of total electric use"); Office of Technology Assessment [8]; Alliance to Save Energy et al., *America's Energy Choices* (1991); American Gas Association et al., *An Alternative Energy Future* (April 1992); U.S. Department of Energy, *National Energy Strategy: Powerful Ideas for America* (February 1991).

11 Veronika Rabl, personal communication (March 1, 1994), Electric Power Research Institute, P.O. Box 10412 Palo Alto, CA 94303, tel 415-855-2401, fax 415-855-2954.

12 California Public Utilities Commission, Decision 93-09-078 (September 17, 1993), p. 24.

13 National Association of Regulatory Utility Commissioners (NARUC), *Profits and Planning Through Least-Cost Planning* (November 1989), p. 57 (from "Resolution in Support of Incentives for Electric Utility Least-Cost Planning," adopted July 27, 1989).

14 See National Energy Policy Act of 1992, sections 111 and 115.

15 This trend has been guided and chronicled in a series of excellent publications by the National Association of Regulatory Utility Commissioners (NARUC); see, for example, volumes I and II of NARUC's *Least-Cost Utility Planning Handbook*, and the proceedings of NARUC's four national conferences on integrated resource planning.

16 This point figures strongly in the opposition to retail wheeling from the American Wind Energy Association and the Solar Energy Industries Association. See *Wind Energy Weekly* (September 13, 1993), p. 1.

17 Northwest Power Planning Council, *1991 Northwest Conservation and Electric Power Plan*, v. II, part II (1991), pp. 793–795.

18 Professor Joskow presented this dichotomy at an Aspen seminar convened by the Energy Foundation in July of 1993. Readers should not assume that he endorses my application of it.

19 As Armond Cohen has pointed out, "[a]t its core, retail wheeling . . . seek[s] to substitute short-term contractual decisions" for coherent system planning. Armond Cohen, *Retail Wheeling and Rhode Island's Energy Future: Issues, Problems, and Lessons from Europe* (July 1993), p. 8. The same point is echoed strongly by the Northwest Power Planning Council in *Restructuring of the Electric Utility Industry: Implications for the Goals of the Northwest Power Act* (January 24, 1994), p. 30.

20 Raj Addepalli et al., Staff Report, New York Department of Public Services, Case No. 93-M-0229 (October 8, 1993), p. 33 (evaluation of proposed retail-wheeling system for customers with demands of 2 MW or more).

21 See, for example, Douglas Houston, *Demand-Side Management: Ratepayers Beware!* (November 1992), p. 33 ("[u]nregulated suppliers eventually could break into captive retail markets, in particular to serve industrial customers"); Bernard Black and Richard Pierce, "The Choice Between Markets and Central Planning in Regulating the U.S. Utility Industry," *Columbia Law Review*, v. 93 (1993), pp. 1339, 1353 (quoting predictions that retail wheeling is inevitable within two to five years).

22 See, for example, "Utilities Brace for a Buyer's Market in Electricity," *New York Times*, (May 9, 1993), p. 10F: "At least four states—California, Michigan, New Mexico and Texas—are experimenting with, or considering, access at the retail level."

23 See, for example, R. John Dingle, "Retail Wheeling in the Electric Utility Industry: It's Working," *Cogeneration and Resource Recovery* (July/August 1992); Mary O'Driscoll, "Elcon Study Tracks Retail Wheeling Developments," *The Energy Daily* (July 26, 1993), p. 1 (examples of retail wheeling for the benefit of particular end users, including Dow Chemical and Aetna Life and Casualty).

24 This form of retail wheeling shifts costs from large, energy-intensive businesses to entities that use less electricity. Yet "nearly all of the U.S. industrial job growth in the last five years has come from firms with less than 20 employees; job growth in larger firms has been modest or negative." Armond Cohen, *Retail Wheeling and Rhode Island's Energy Future: Issues, Problems, and Lessons from Europe* (July 1993), p. 25 (citing April 1993 report by Cognetics, Inc.). For an extended analysis of promotional rates, see Ralph Cavanagh, "Responsible Power Marketing in an Increasingly Competitive Era," *Yale Journal on Regulation*, v. 5, no. 331 (1988).

25 "California's Electric Services Industry: Perspectives on the Past, Strategies for the Future," Division of Strategic Planning, California Public Utilities Commission (February 1993), p. 126 (citing Letter from "A Coalition of Industrial Electricity Users" to The Honorable John Dingell, June 16, 1992).

26 Section 722 of the Energy Policy Act provides in part that "No order issued under this Act shall be conditioned upon or require the transmission of electric energy (1) directly to an ultimate consumer or (2) to, or for the benefit of, an entity if such electric energy would be sold by such entity directly to an ultimate consumer . . . Nothing in this subsection shall affect any authority of any State or local government under State law concerning the transmission of electric energy directly to an ultimate consumer."

Some contend that federal law now leaves states without authority to order retail wheeling. See "Written Comments of Municipal Utilities on Strategies for Regulating Investor-Owned Utilities" (March 15, 1993), CPUC, pp. 15–16 (arguing that "the subject matter of transmission access for electricity in interstate commerce is preempted by federal law"). Detroit Edison has advanced a similar argument (Case Nos. U-10143 & U-10176, Direct Testimony of M.E. Champley (March 1, 1993) pp. 57-58), which an administrative law judge rejected. Proposal for Decision by Administrative Law Judge Robert E. Hollenshead, Case Nos. U-10143 & 10176 (August 27, 1993).

27 California's foray is the only one not addressed in the Appendix; it took the form of a general letter of inquiry by Senator Robert Presley, Chairman of the Senate Commission on Appropriations. He received vivid responses from a wide range of interests and has not taken further action.

28 *Electric Power Alert* (March 17, 1993), p. 1.

29 This "Joint Declaration on the Electric Utility Industry" was released on March 7, 1994; the text and a list of signers is attached as an Appendix.

30 "Moody's: Retail Wheeling is 'Inevitable'," *The Electricity Daily* (January 4, 1994), p. 1 (citing Moody's report on Southern California Edison and San Diego Gas & Electric).

31 See, for example, S. Coll, *The Deal of the Century* (1986), p. 358 (quoting U.S. District Court Judge Harold Greene):

> The basic fact of the phone industry is that it grew up when it was a natural monopoly: wooden poles and copper wires. Once it became possible to bypass this network through microwaves, AT&T's monopoly could not survive.

32 Andrew Holmes, *Privatising British Electricity: Restructuring and Resistance* (November 1992), pp. 1–2.

33 Office of Electricity Regulation [UK], *Pool Price Statement* (July 1993), pp. i–iii.

34 See Ragnar Lofstedt, *Energy Conservation in England and Wales—What Has Happened Following Privatization of the Electric Sector* (1993), pp. 117–118.

35 The new system appears in an undated document issued by the Office of Electricity Regulation entitled "The Supply Price Control: Proposals." The document proposes to fix total revenue per distribution company at 10 million pounds, "plus an allowance per customer served plus an allowance per kilowatt hour sold" (p. iii). The action responds to "concern that the present form of price control provides an artificial incentive for the [distribution companies] to sell more units, when in fact a more economic way of meeting customers' requirements might be through investments to reduce the amount of energy required" (p. iv). Unfortunately, this reform is set to expire with the onset of universal retail wheeling in 1998.

36 See Jan Moen, "A Review of Developments in Key Markets—Norway," *World Electricity*, 9 & 10 (November 1992), pp. 13.3–13.4. Full retail wheeling prerogatives are reserved for loads above 2 MW and 5 GWh.

37 See Moen [36], p. 13.3 (promotional tariffs to promote increased use of electricity for space heat); K. Livik et al., *Consequences For Tariffs and End-Use After Deregulation: Experiences From the Norwegian Utility Industry* (1993), p. 97 (mean household consumption).

38 See Livik et al. [37], p. 100: "Except in very special cases the deregulated market so far [has] created very few incentives for utility companies to invest in cost-effective customer energy efficiency . . . The Energy Act has caused frustration and uncertainty for both the utilities and consumers regarding the role of energy efficiency and DSM."

39 Section 111 requires every state to take up the issue within two years of the Act's October 1992 effective date. Washington recently reaffirmed its decoupling mechanism; see "As Puget Power Appeals Rate Case, Observers Hail PRAM Reprieve," *Clearing Up* (October 4, 1993), p. 11.

40 The point is simply to ensure that profitability is not affected by sales fluctuations that regulators did not anticipate when they determined appropriate price levels for utility services. For a comprehensive empirical assessment of decoupling systems in operation, see Joseph Eto, Steven Stoft, and Timothy Belden, *The Theory and Practice of Decoupling*, Lawrence Berkeley Laboratory (January 1994).

41 See R. Cavanagh, A. Gupta, D. Lashof and M. Tatsutani, "Utilities and Fossil Fuel Emissions: Who Bears the Risks of Future Regulation?," *The Electricity Journal* (March 1993), p. 64 (citing CO2 risk-shifting policies adopted recently by regulators in California, Oregon, and Wisconsin).

42 Peter Bradford, Chair of the New York Public Service Commission, either originated this phrase or should have.

43 An incisive review of these cost allocation issues appears in Marika Tatsutani, "Allocation of DSM Costs to Utility Customers," NRDC (September 1993); and Paul Centolella, Barbara Barkovitch, and Katherine Yap, "Cost Allocation for Electric Utility Conservation and Load Management Programs," National Association of Regulatory Utility Commissioners (February 1993).

44 A compelling case study is recounted in *California Energy Markets* (January 28, 1994), p.7: "In exchange for deferring a proposed cogeneration plant, [Southern California] Edison will pay [Rancho Mirage's Eisenhower Medical Center] up to $600,000 to install energy efficiency

measures in lieu of a rate discount . . . The special agreement with Eisenhower runs for 10 years."

45 See, for example, Jennifer Jordan and Steven Nadel, "Industrial Demand-Side Management Programs: What's Happened, What Works, What's Needed," Pacific Northwest Laboratories (March 1993), p. 5, concluding that "experience to date shows that successful programs can be designed and indicates ways to design even more successful programs in the future."

46 The cost figures reflect calculations by NRDC's Allan Chen, which are described in [2] above. Sales data are from *Monthly Energy Review*, U.S. Department of Energy, Energy Information Administration (March 1993), p. 91.

47 These data are drawn from the Edison Electric Institute's *1992 Statistical Yearbook;* they appear in Bruce Edelston, "Retail Wheeling: Prospects, Problems, Alternatives," *WECA Financial Forum* (January 20, 1994).

48 H. Yoshimura, "Evaluation of the Hydro-Quebec Firm Power and Energy Proposal," La Capra Associates (January 29, 1993).

49 "Statement Regarding Hydro-Quebec and Rhode Island Negotiations for Electric Power Sales" (issued May 1993, and referencing May 11, 1993 meeting between James J. Malachowski, Chairman of the Rhode Island Public Utilities Commission, and M.-Bernard Guertin, Director of External Markets for Hydro-Quebec).

50 Petition of Texas Industrial Energy Consumers for Amendment of PUC Substantive Rules 23.31 and 23.66 (filed December 3, 1991), p. 4.

51 Petition [50], p. 2.

52 Petition [50].

53 See Direct Testimony of John Abramson, Director of the Electric Division, Michigan Public Service Commission, Case Nos. U-10143 & U-10176 (March 1, 1993), pp. 22–23 (estimating $59 million per year impact on Detroit Edison's revenue requirement as a result of forced shift to use of more equity and less debt capital in company's capital structure in the aftermath of retail wheeling) and p. 49 (estimating Michigan utilities' potential loss of operating income under the experiment).

54 Direct Testimony of M.E. Champley, Vice President, Detroit Edison, Case Nos. U-10143 & 10176 (March 1, 1993), p. 42.

55 Direct Testimony of John Abramson [53], pp. 35–36.

56 Proposal for Decision by Administrative Law Judge Robert E. Hollenshead, Case Nos. U-1-143 & U-10176 (August 27, 1993).

57 See Proposal [56], pp. 60–61; the judge's very brief analysis relies exclusively on the disclaimer of intent to "affect" state authority over retail wheeling in section 722(3) of the National Energy Policy Act of 1992.

58 The Administrative Law Judge also concluded that "[i]n order for retail wheeling to be in the public interest, there should be a showing that there will be a net benefit to all ratepayers or at least a showing that customers not participating in retail wheeling will not be negatively affected." Proposal [56], p. 79.

59 Proposal [56], p. 108.

ACKNOWLEDGMENTS

I received a wealth of constructive and trenchant comments; I should note a particular debt to Ashley Brown, Jack Casazza, Richard Flynn, David Goldstein, Ashok Gupta, Bill Hogan, Charles Komanoff, Dan Lashof, James Malachowski, Alan Miller, Peter Miller, David Moskovitz, and Marika Tatsutani.

APPENDIX I

Summary Background - History of Deregulation of the Electric Utility Industry

Backgrounder
History of Deregulation of the Electric Utility Industry

The announcement by the California Public Utilities Commission (CPUC) to restructure the electric utility industry in California on April 20, 1994, along the lines of performance based ratemaking and direct access is the most powerful policy statement on opening up the electric utility to competition to date. The driving forces behind the CPUC's proposal are that California electric utilities' high electricity rates are not competitive, the urgent need for the State to attract and retain industrial and commercial businesses and the realization that the CPUC's regulatory processes that were put into place decades ago may no longer be appropriate to oversee the evolving structure of the electric utility industry. The CPUC's far-reaching proposal, which would allow all consumers to choose their source of electricity by the year 2002, set the standard by which all other proposals will be judged, making California the battle ground on which the electric utilities, their consumers and competitors will wrestle with the retail wheeling issue.

California has "***seized the day***" with this action, saying to the business community that California wants to help them become competitive, that business should relocate to California and to the residential customers that they will be given a choice to choose another supplier with lower prices instead of their local utility which they may perceive to be high priced and unresponsive to their needs.

Although the regulated electric utility industry has been engaged in competition for decades with the regulated and now deregulated natural gas industry, it has been only in recent times that the word "competition" has come to mean competition within the electric utility industry itself. Beginning in 1978 with the enactment of the federal Public Utility Regulatory Policies Act (PURPA) which, under Title II of PURPA, created a new class of power producers called Qualifying Facilities (QFs) that was given the right to require electric utilities to interconnect with them, provide backup power to them and purchase their power. The entry of QFs into the generation sector of the electric utility industry affected the need and timing of that need for new generation resources built by electric utilities, especially in California.

PURPA also provided substantial tax investment credits for renewable energy technologies. These tax credits and similar tax credits offered by California spurred a strong growth in wind and solar generation technologies in the State. Social issues, not competitive concerns, were driving the industry towards a larger and more diverse pool of generation resources. This was evident in the willingness of regulatory agencies to incorporate the higher cost attributable to renewable resources into the utility rates.

In the early 1980s, a period when electricity prices began a steep ascent (unremarkably, also a period where the post-prudence reviews of utility generating projects reached it peak), large nuclear generating station projects began to unravel, with

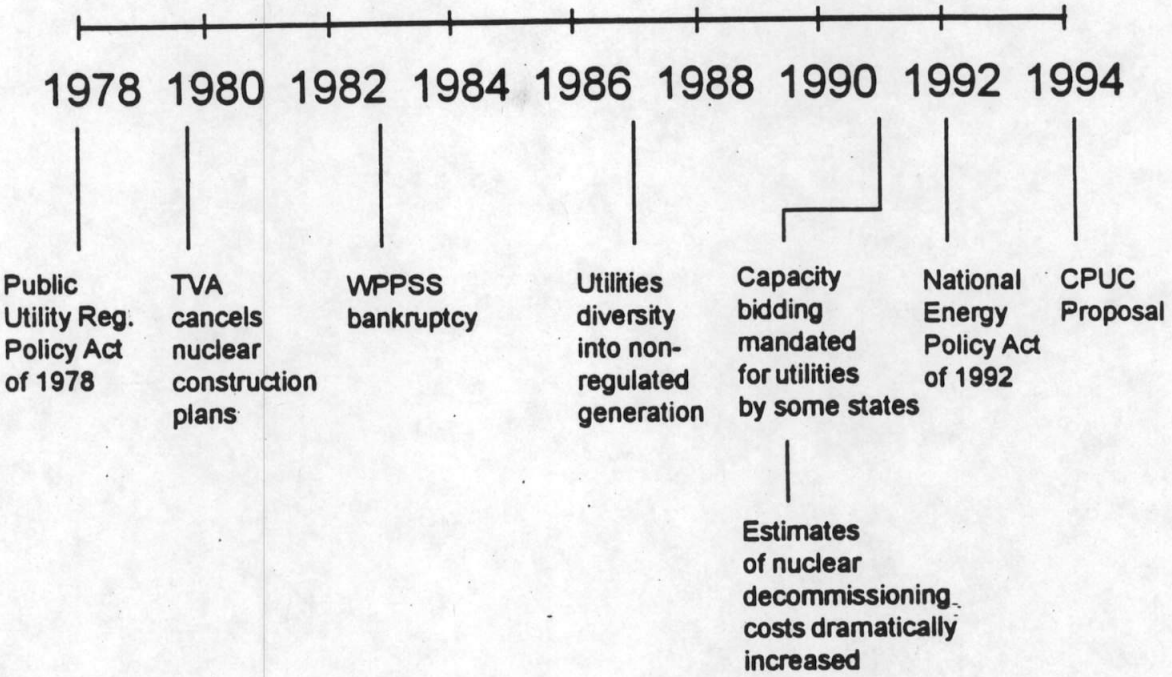
Tennessee Valley Authority canceling its nuclear construction plans and the Washington Public Power Supply System declaring bankruptcy. In the mid-1980s, the investor-owned utilities began to invest in non-regulated generation in order to reduce their shareholders' exposure to the regulatory agencies propensity towards imposing post-prudence reviews on their generation projects and the resulting denial of applications to ratebase the shareholders' investments in those projects on the basis that certain costs were imprudent or that since there were less expensive resources available to the utility the decision to build the generating station itself was an imprudent one.

In 1988 the Federal Energy Regulatory Commission (FERC) issued three notices of proposed rulemaking (NOPRs) that addressed FERC's perceptions of the appropriate forms of the PURPA framework. Although these NOPRs didn't result in any explicit rule changes, they signaled a new interest in competitive mechanisms. Following the NOPRs, FERC approved a number of wholesale transactions involving non-QF suppliers at market prices and in approving the Pacific Power and Light and Utah Power and Light merge, the FERC, in its concern over anti-competitive effects of the merger, included specific transmission access conditions for third party sellers.

In the late 1980s, the attention of the regulatory community shifted to the integrated resource planning (IRP) process as a means of accounting for environmental damages associated with different types of resources that could arise from the resource acquisition process. Although the consideration of externalities in resource planning originated in the east, the leadership on the issue quickly manifested it self in California. The accounting for externalities in the resource planning and procurement process boosted the stock of independent power producers who owned renewable resources and businesses specializing in energy efficiency resources. The introduction of externalities in the supply planning and acquisition process for investor-owned utilities impacted their existing utility generation resources. Externalities in the planning process resulted in need for additional capacity sooner than would have been under the non-IRP process and made some types of renewable generation such as geothermal resources cost-effective.

The federal electric utility competition agenda shifted from the regulatory arena to the legislative arena with the enactment of the National Energy Policy Act of 1992 (EPAct). EPAct introduced a new class of power producers named Exempt Wholesale Generators (EWGs) and authorized the FERC to mandate wholesale wheeling on all transmission systems, irrespective of whether the transmission systems were privately or publicly owned. Notably, FERC was not authorized to order retail wheeling, that aspect was left for the individual states to ponder. During the year following EPAct, several states have been legislatively-active, passing a few laws that authorized limited access to retail wheeling for potential state economic gain. Although California hasn't introduced any legislation on this issue, there will most assuredly be a number of bills for and against the opportunity for consumers to gain direct access as envisioned by the CPUC.

Timeline of Change
Electric Industry



Final Draft Report

Potential Effects of the CPUC's Proposal on the City's Ratepayers

Order Instituting Rulemaking on the Commission's Proposed Policies Governing Restructuring California's Electric Services Industry and Reforming Regulation — R.94-04-031 and I.94-04-032

May 9, 1994

Conservation and Planning Division
Los Angeles Department of Water and Power

POTENTIAL EFFECTS OF THE CALIFORNIA PUBLIC UTILITIES COMMISSION'S (CPUC) PROPOSAL ON THE CITY'S RATEPAYERS

Prepared By
Los Angeles Department of Water and Power (DWP)

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EXECUTIVE SUMMARY

CPUC's Proposal to Reform California's Electric Utility Industry and its Potential Impacts to the City of Los Angeles and DWP

Introduction

The electric utility industry has been undergoing significant restructuring primarily through legislative and regulatory reform measures for many years. In 1978 the Public Utility Regulatory Policy Act was passed to encourage non-utility generation and in 1992, the National Energy Policy Act deregulated the wholesale energy market to promote competition in the generation sector.

On April 20, 1994, the California Public Utilities Commission (CPUC) released a proposal that would restructure California's privately owned electric utility industry through a variety of initiatives, the most striking of which is "direct access". This principal of "direct access" gives customers the right to choose their electrical energy supplier.

Although the CPUC does not have jurisdiction over municipal utilities like DWP, their proposal places pressure on all California utilities to aggressively compete to retain and attract customers. Jurisdictional boundaries cannot impede competitive pressures for very long.

This report outlines the CPUC's proposal, its potential impacts upon the City's stakeholders, recommends a position on the proposal, and suggests actions that should be taken now. Appendices are provided to support information in greater detail.

Highlights of the CPUC's Proposal

Date:	Direct Access for:	Relationship to DWP Customer Base: Customers Impacted	Annual Revenues (millions)	Contribution to City Revenues[2] (millions)
1/1/96	Large Industrial Customers (>50 kV)	NA[1]	NA[1]	NA[1]
1/1/98	Small Industrial Customers	15,000	$219	$36
1/1/99	All Commercial Customers	190,000	$1,082	$178
1/1/02	All Residential Customers	1,160,000	$589	$82
		Totals	$1,891	$296

1 DWP does not have Customers in the Large Industrial category -- 50 kV and above (however there may be pressure from customer groups to lower this to 30 kV).

2 Represents annual transfer to City and utility user taxes.

Other Highlights of the CPUC Proposal

- The traditional cost of service regulation will be replaced by Performance Based Rates. The CPUC will set an earnings ceiling and floor and allow the utilities to capture or lose additional earnings within this bandwidth based upon the utility's performance.
- Environmental programs will be funded on a voluntary basis, whereas social programs will be funded directly via surcharges applied to all consumers or from the State's General Fund.
- Utilities will be obligated to serve native customers not choosing to go to another supplier.
- Utilities will be allowed to apply surcharges to cover stranded investments on the "uneconomic portion" of their generation.
- The CPUC is requesting comments on their proposal by May 20, 1994.

Potential Impacts Upon the City's Stakeholders

- DWP - loss of revenues if non-competitive
- Residential - rates will rise via removal of existing subsidization
- Industrial and Large Commercial - rates will fall
- City Hall - reduction in transfer from DWP via lower revenues and utility user taxes
- Environmental / Social Programs - decreased funds available for such programs

Threats to City

- DWP's industrial rates are higher than SCE's
- DWP is less flexible than competitors under City Charter and Civil Service rules
- Large financial obligations incurred under a monopolistic structure are at risk in a deregulated structure
- The cost of borrowing could significantly increase due to negative ratings by financial community
- Tax-exempt status could be in jeopardy if DWP sells outside of the City of Los Angeles
- The increasing costs of strict air compliance regulations in the Los Angeles Basin reduces DWP's regional competitiveness.

Recommended Position on the CPUC Proposal

The City endorses the "spirit" of competition in the electric utility industry. The goals of the CPUC's proposal are ambitious, however, there is concern with various aspects of the proposal which may adversely impact the City of Los Angeles and its ratepayers. How the CPUC intends to mitigate these impacts is of critical interest to the City.

The main concerns are to maintain the operational integrity of the electric network, avoid reversing the positive gains made by environmental and social programs, and to avoid any type of plan that would unjustly benefit any one customer group at the expense of another.

The CPUC's proposal will be debated within the regulatory / political forums. The City should actively participate in this process to influence and shape the ultimate outcome of the CPUC's plan in order to safeguard the City's interests.

Recommended Actions for DWP

In anticipation of market-based competition, electric utilities throughout the nation are taking significant steps to improve their ability to compete on price and service. With the support of the City, DWP also needs to prepare for aggressive competition whether it originates from the CPUC's current proposal or from market forces.

A "no-regrets" plan should be developed and implemented based on the following action items:

- Continued cost-cutting and aggressive marketing of services and surplus assets.
- Developing and implementing financial strategies to improve competitiveness.
- Revising Charter and Civil Service Rules to enhance DWP's ability to compete.
- Streamlining and restructuring the DWP's current organization with the long term objective of operating in a competitive environment.
- Improving the DWP's public image since it significantly impacts competitiveness.

MAIN REPORT

Potential Effects of the CPUC's Proposal on the City's Ratepayers

On April 20, 1994, the California Public Utilities Commission (CPUC) issued a proposal that would fundamentally and significantly restructure California's electric service industry. This proposal replaces the monopolistic structure of past decades with a competitive market. The policies are based on the principle of "Direct Access" -- that is, consumers will have the opportunity to choose their electrical supplier. While the CPUC does not have jurisdiction over municipal utilities like DWP, the proposal places pressure on all California utilities to be competitive and retain customers.

The main goal of the CPUC's proposal is to improve California's overall competitive position. While DWP endorses the "spirit" of competition in the electric utility industry, we are concerned with various aspects of the proposal which may adversely impact some of our customers and the City of Los Angeles. We are also concerned with how these impacts will be mitigated.

Based on the potential far-reaching consequences of this ambitious proposal, it is strongly suggested that the City be an active participant in this process to shape and guide the ultimate outcome.

I. Highlights of the CPUC's Proposal

Proposed Implementation Schedule for Direct Access:

Beginning in:	
1/1/96	Large Industrial Consumers (50-kV and above)
1/1/98	Small Industrial Consumers
1/1/99	All Commercial Consumers
and by:	
1/1/2002	All remaining consumers

Major Provisions

Direct Access

The CPUC's proposal contains the following provisions governing Direct Access (Retail Wheeling):

- The utility retains its traditional "obligation to serve" only for those consumers who elect not to choose Direct Access.
- Consumers who elect to participate in Direct Access have the freedom to procure generation services directly from nonutility providers.
- Phase 1 in 1996 -- Direct Access for Large Industrial Customers, will apply to consumers at 50-kV and above. (This may be lowered to 30-kV during the scheduled hearings.)
- Direct access consumers must give utilities 12 months notice before returning to status of tariffed utility service customer (may be waived by the utility). Direct access customers may return earlier however they will not be guaranteed the tariffed rate.
- Investor-owned utilities (IOUs) may freely negotiate prices with Direct Access consumers.
- Regional Transmission Groups are the primary means of supporting Direct Access.

Performance-Based Rates

Performance-Based Rates (PBR) will provide the IOUs with performance-based regulation with an earnings floor and ceiling that will provide a "soft-landing" for the utilities during the deregulatory transition period. PBR also gives the IOUs an opportunity to increase their earnings if they operate more productively.

Key features of PBR contained in the policy are:

- Replaces "cost-of-service" regulation with performance-based regulation.
- Decouples rates and costs.
- Decouples rate base and earnings.
- Establishes new accounting rules.
  - A separate accounting system will be established for generation.
  - All generation plant investment will be decoupled from rate base.

Stranded Investments

A stranded investment occurs when an investment has been made on behalf of a customer who chooses to leave the system before the utility has fully recovered the cost of the investment.

The CPUC's proposal on stranded investments allows IOUs to recover the "uneconomic portion" of their generating assets via a "competition transition charge" assessed as part of a Direct Access consumer's demand charge. It appears Direct Access consumers will be responsible for compensating the native utility for their contribution to any stranded investments.

Other Provisions

- Environmental Programs -- Type and funding would be determined by the "market". Customers could choose to purchase "green electric service", if they wish.
- Social Programs -- Funded by end user surcharges that are spread across all consumer classes.
- Energy Efficiency -- Achieved through the implementation of real-time pricing in coordination with a spot energy market.

- Transmission and Distribution (T/D) Systems -- Operation and control remain under the utilities' jurisdiction. Nonutility distribution systems would not be allowed. (It is likely that the CPUC will retain regulatory control over T/D to insure against monopoly abuse.)
- SO4 Contracts -- Eliminated through a process of negotiations (This would free up a substantial amount of independent power to compete in the new competitive market , but would also significantly reduce generation available under direct utility control) .

CPUC's Request for Comments

The CPUC is requesting parties to comment by May 20, 1994. Specifically on the following items:

- "The proposed schedule governing the direct access eligibility of the consumer classes."
- "Whether the competitive market they hope to foster necessarily depends on ordering the utilities to divest themselves of generating assets."
- "Whether a competitive market for generation depends, at a minimum, on the CPUC ordering the utilities to create separate accounts for its generating and transmission assets."
- "Whether prohibiting the utility from offering generation services with in its own service territory represents a preferable alternative to divestiture or separate accounts."
- "Whether the CPUC should first establish a spot market (like the United Kingdom Pool) or other market instruments to foster a competitive market or should the CPUC foster an environment in which the market develops and operates these mechanisms and tools?"
- "Whether the successful implementation of the CPUC's direct access proposal depends on a mechanism similar to the Pool to

address the vital link between the move to increase reliance on bilateral or multi-lateral contracts and the need for system reliability?"

The CPUC also asks respondents to propose alternative frameworks based on "let the market decide" (to replace the Biennial Resource Plan Update).

II. Applicability to the City of Los Angeles

Under existing statutes, the CPUC has no jurisdiction over the policies, practices or operations of municipal utilities. However, DWP traditionally tends to reflect the operational policies of the State's IOUs. The CPUC's proposed order is **directly** applicable only to the State's IOUs. Although if adopted, the proposal would have significant **indirect** impacts to municipal utilities. California's electric IOU's serve over 90% of the state's geography. If municipals are not competitive, it is extremely unlikely that they will be able to retain their customers -- regardless of local policies. Municipal power consumers, particularly the larger commercial and industrial energy intensive users, will demand similar opportunities for choice.

III. Suggested LA City position on CPUC Proposal

The City desires the lowest rates and best possible service for our customers. We endorse the "spirit" of competition in the electric utility industry. The goals of the CPUC's proposal are ambitious, however, we are concerned with various aspects of the proposal which may adversely impact some of our customers and the City of Los Angeles. We are also concerned with how these impacts will be mitigated.

Our main concerns are to maintain the operational integrity of the electric network, avoid reversing the positive gains made by our environmental and social programs, and to avoid any type of plan that would benefit any one customer group at the expense of another.

Based on the potential far-reaching consequences of this ambitious proposal, the DWP/City should participate in guiding the ultimate outcome of the CPUC's plan, to provide the greatest aggregate benefit to all stakeholders. For example, the CPUC proposal now advocates that industrial customers should have direct access first. This may put DWP at a disadvantage. However, what if residential consumers were allowed to have direct access first (as it is occurring in New Zealand)? This may put DWP at an advantage over our neighboring utilities. On the other hand, DWP would remain at a disadvantage with regard to many utilities outside of California.

DWP recommends that the following positions be considered:

CPUC should extend its implementation schedule.

The proposed schedule for phasing in "Direct Access" does not allow sufficient planning time to investigate the impacts of such sweeping regulatory reform and to analyze the critical impacts to all stakeholders. The integrity of the electrical supply system in California as well as utilities interconnected to the California grid are at risk under the CPUC proposal and the time to analyze the depth and breadth of the proposed reform is not adequate as proposed.

Environmental Policy

Overtime, the City's environmental policy has serviced Los Angeles well. However, if CPUC adopts a "market based" environmental strategy, the City should review it overall policies and the methods for achieving its goals so City policies do not place its electric utility at a business disadvantage.

The City's policy has supported legislation and programs that:

- Provide incentives to promote energy efficiency; to remove impediments to the use of energy-efficient devices and to

encourage use of cost-effective end-use technologies for commercial, industrial and residential applications.

- Encourage the use of resource planning processes that consider the total costs of providing electric energy and provide incentives for electric utilities to use least-cost planning/integrated resource planning principles in their resource planning efforts while protecting the utility's ratepayer's electric service reliability.

- It has been DWP's practice to resolve operational issues with environmental implications through a collaborative process with the appropriate stakeholders.

Wholesale Competition

Wholesale competition through EPACT 92 must have a chance to work. The benefits of wholesale competition have not been fully realized; i.e. the effect of wholesale competition under EPACT 92 has not been fully validated. To move to open and direct access at this early juncture without analyzing the effects of wholesale competition is premature.

Under EPACT 92, competition among energy providers will intensify. Conventional, High Tech, Renewables and Demand Side Energy Services have been given access to the utility market through the grid. The utilities are presently held accountable for meeting the electrical energy needs of their customers by their various governing authorities. Competition among the aforementioned energy provider groups has already and continues to promote better and more efficient production of electrical energy in California and surrounding States.

Competition at the retail level may hinder the necessary R&D to advance the development of new and more efficient technologies. The marketplace will no doubt focus on the short-term aspects of "price"

rather than the long-term needs of ensuring a technically advanced electrical supply.

Public Trust Policy

An appropriate policy to promote greater competition at the retail level must ensure not only mitigation of financial risk but also the attainment of long-term social and environmental goals. The CPUC's proposal attempts to mitigate utilities' near term financial risk through transition fees. Maintenance of social programs would be handled through billing surcharges. Maintenance and improvement of environmental quality through energy efficiency programs, demand side management and the investment in renewable resources are explicitly remanded to existing and future competitive energy markets.

Until it can be demonstrated that the competitive market will efficiently and effectively result in the procurement of socially and environmentally desirable resources, that responsibility should remain under local control.

IV. Potential impact on City's Electric Utility consumers under CPUC proposal.

If a statewide open competitive market develops, it is almost a certainty that the City's electric power consumers will demand similar opportunities of choice. The following impacts could then reasonably be expected:

Residential Consumers

- During the first three years, residential rates will increase as cross-subsidies from commercial and industrial sectors are eliminated or reduced.

- By the year 2002, residential consumers will be able to choose their energy provider.
- Residential consumers may be burdened with cost of stranded investment. (It is still unclear, under the CPUC's plan, how the "competition transition costs" may mitigate this).

Commercial and Industrial Consumers

- Will view stopping cross-subsidies as positive event.
- Will expect the price of power they pay to reflect their full cost of service.
- Will have opportunity to shop for lower priced power.
- Will view this as an opportunity to make them more profitable by reducing their operating costs.
- If properly implemented, will perceive that this could attract new business and increase employment in LA.
- Will desire ability to negotiate for power supply directly like other commodities.

V. Potential Impacts on City/DWP from CPUC's Proposal

Loss of Existing Large Customers and Revenues

Under the CPUC's plan, DWP could lose a substantial portion of its existing customers due to competition. Competitors may include neighboring utilities, exempt wholesale generators, marketers or brokers. They will likely target DWP's largest consumers. For example, the top 100 of DWP's 1.2 million customers represents $489 million or 25% of DWP's annual electric revenues. If a competitor were to successfully take these top 100 customers by providing lower priced power and better service, either real or perceived, the City could stand to lose $61 million annually in related transfer and taxes. Refer to Appendix C and E.

To compete on price, DWP must do so within each particular customer segment. Average **system** rates are not an appropriate indicator of competitiveness. For example:

- DWP's average **residential** rates are 22% **below** that of SCE's
- DWP's average **commercial** rates are 6% **below** that of SCE's
- DWP's average **industrial** rates are 36% **above** that of SCE's

Graphs in Appendix B comparing DWP's rates with SCE's indicate that DWP's industrial rates exceed those of SCE, and DWP'S commercial and residential rates also appear to be converging toward SCE's.

A more drastic picture emerges when DWP's rates are contrasted with the average customer segment rates of some of the other utilities in the western region. Many of those utilities have the ability to access our service areas. Many of the utilities in the charts have "cheap" seasonal power available for sale into higher priced markets, like DWP's, if the CPUC's proposal of "direct access" becomes a reality.

For example, DWP is substantially less competitive than those utilities in the Northwest, many of which have transmission access to our service area. For a comparison of DWP's rates with other California utilities and regional utilities refer to Appendix F.

Uneconomic Bypass

The potential exists for a customer to leave the system because DWP's regulated price is higher than a competitor's, but DWP's marginal price is lower than the competitor's. The net result is the consumer will leave, for a price somewhere between DWP's marginal and system average cost.

Stranded Investments --- Who pays?

For a municipal utility, stranded investments can only be recovered from the customers that remain on its system. Stranded investments will cause the rates of those remaining customers to increase thereby creating an incentive for other customers to leave the system. The "details" of the CPUC's proposal in this area, which will be scrutinized closely by DWP, are of utmost concern.

Environmental / Social Programs at risk

The CPUC proposes that the funding for social programs be obtained by placing a surcharge on the end users bill.

The CPUC envisions that environmental programs would be funded through voluntary participation by consumers through the purchase of "green electric service".

With the emphasis on spot market pricing and short-term marginal costs, the CPUC's proposal provides disincentive for investment in environmentally responsible programs. Furthermore, absent regulatory mandate, a price driven competitive market could be expected to be governed by high volume sales of the lowest price commodity available. Such a practice is inconsistent with energy efficiency programs, demand side management and renewable resource procurement.

Financial Implications

Risk of Losing Tax Exempt Status:

The U. S. Tax Reform Act of 1986 limits the amount of sales that can be made to private entities from resources financed through tax exempt debt. Under the CPUC proposal, DWP could potentially serve other customers besides its "native" customers -- that is, private entities. However, the cumulative

amount of the sales to these private parties exceeded the statutory limits, DWP could lose its tax exempt status.

Lower Ratings by Rating Agencies (Higher borrowing costs)

Negative ratings by agencies such as Moody's, Fitch, S&P, Lehman Brothers, Duff & Phelps Inc., affect the real or perceived risk of investing to investors. The greater the perceived risk, the higher the cost of borrowing.

The DWP Power System on average, borrows approximately $200 million annually not including any major projects financing. Any downgrading of DWP's ratings will have an adverse increase in interest cost to DWP.

The financial community is closely monitoring the prospects of open competition in the electric utility industry. The mere announcement of the CPUC's proposed regulatory reform plan for the investor owned utilities has resulted in the State's IOU being placed on credit watch.

Moody's will evaluate municipal utilities according to their overall "at risk" profile, namely:

Profile #1: Heavy Industrial Customer Base
Profile #2: Subsidy of City's General Fund
Profile #3: High-Cost, Excess Baseload

Moody's rates a utility's ability to compete based on three basic criteria:

Price -- The utility's price of electricity; historical and current rates, its standing compared to it neighboring utilities and to others having access to the utility over the grid.

Cost -- Market based pricing will become more important as competition heats up. A utility's costs will largely determine the flexibility it has in establishing prices for electricity.

Flexibility to compete -- In a deregulated electric marketplace, analysis of a utility's margin--or flexibility to compete while maintaining a financially sound position--is critical to credit quality.

For additional rating information, see Appendix A.

Moody's concludes:

"Credit position will be determined substantially by a municipal utility's adaptation to the changing electric marketplace. The margin between a utility's price and cost structure will be important in the short- and long-term, particularly as it relates to protection of debt service coverage. Moody's will place increased emphasis on the flexibility the utility has to compete and adapt to the changing market while maintaining financial integrity".

DWP's Large Long and Short-term Financial Obligations:

Power System Long-term Bonds	$2,600,000,000
Power System Short-term Bonds	$148,000,000
JPA Obligations	$5,300,000,000
Long-term Power Contracts	$624,000,000

Increased cost exposure from air quality compliance

DWP's ability to maintain a resource portfolio based on existing and emerging social and environmental needs would be severely jeopardized since such resources would become economically unjustifiable based on anticipated market conditions.

Transfer uncertainty

If DWP were to lose substantial market share to competitors and offsetting sales could not be made in a timely way or the price of power sold discounted in order to make the offsetting sale, DWP's Gross Income will be reduced. Transfers to the City are tied directly to DWP's Gross Income and the transfer would be proportionally affected.

Lost Revenues

To demonstrate the impact of loss revenues, the historical impacts of co-generation on the City of Los Angeles has resulted since 1984 in lost gross revenues of approximately $1-billion. The associated loss in gross City taxes revenues was $170 million. Refer to Appendix D. (The net effect of lost revenue is less than "gross", as operating expenses were also lower and electric utility taxes were partially offset by "gas" utility taxes).

Competitive Implications -- Unlevel playing field is created

Under the CPUC proposal, DWP will be competing on an unlevel playing field. DWP is facing competitors, such as independent power producers and IOUs, who have greater flexibility to negotiate terms of sale and price of electricity and who are presently not required to fund social and environmental programs.

Inflexibility created by charter and civil service rules make it difficult for DWP to effectively compete.

In the past the City Charter has served DWP well. However, in a deregulated and highly competitive electricity market, several of the guidelines of the City Charter would require change. The CPUC which regulates SCE, SDG&E, and PG&E is positioning its utilities to

compete in a new arena, so too must the City of Los Angeles provide the necessary regulatory changes to allow DWP to remain competitive.

The City Charter contains a major constraint as it presently limits DWP's ability to sell "retail" outside the City. For example, DWP is currently allowed to sell only "surplus" power. This worked well under a monopoly situation, however, in an environment where DWP can now lose customers to a competitor, it must have the ability to negotiate and commit to longer term power supply arrangements with others to offset any lost market share.

DWP's rate ordinance provides little rate flexibility. SCE can now undercut our rates under the CPUC's proposed Performance Based Ratemaking which means that SCE's industrial rates would soon be open to negotiation --- a substantial advantage.

DWP also needs more flexibility to cut costs. The inflexibility created by Charter and Civil Service rules inhibit DWP's ability to effectively reduce costs and be more competitive. The two primary restrictions in terms of cost cutting are in the areas of Civil Service/Personnel Rules and Purchasing/Contracts.

For example, the application of Charter-based Civil Service rules provides a narrow interpretation of job classifications (duties) which prevents the efficient restructuring of job duties with resultant lower staffing levels for some tasks.

Currently, the City Council must approve contracts of terms longer than three years. The entire City approval process is very slow. In the near future DWP may be operating in an environment where a timely response to customers' "bids" for future power supply will be required. Under the current Charter-mandated system DWP will be at a major disadvantage with competitors who are able to bid and execute contracts quickly.

DWP is not structured to compete under the proposed CPUC model -- this must be changed if DWP is to compete in a new competitive arena.

VI. What does DWP need to do to compete?

In anticipation of market-based competition, electric utilities throughout the nation are taking significant steps to improve their ability to compete on price and service. The actions below are "no-regrets" strategies that DWP should implement now. Many of these actions are being implemented by utilities throughout California and the entire U. S.

1. Continue aggressive cost containment.
2. Streamline organization --- Reduce staff levels.
3. Restructure organization with the following attributes:
   Business Units
   Institute activity based cost accounting system
   Asset management based
   Customer Focus --- Retail and wholesale
   Establish Marketing / Pricing and Sales Departments
   Comprehensive benchmarking programs
   Outsourcing
   Unbundle services and rates
4. Reduce and/or restructure rates
5. Restructure short-term rates

   Based on continuing and extensive competitor and market research, estimate expected future market electricity prices for each customer class.

   Develop integrated strategies to reduce long-term rates below those expected market driven rates at the time of deregulation.

Separate the Power System into generation, transmission and distribution components and evaluate the impact of deregulation on each.

Develop financial strategies to enhance the competitive position of each of these components, such as accelerated depreciation and/or early debt retirement.

Consider using short-term strategic rate increases to accelerate debt repayment. This could result in significant long-term rate reductions that could improve DWP's overall competitive position.

6. Develop strategies to reduce debt.
7. Prepare charter amendments aimed at making DWP competitive within industry.
8. Enter into long-term contracts with large customers
9. Develop strategies to protect tax exempt status.
10. Develop strategies to employ JPA to compete with non-regulated IOU subsidiaries.
11. Train DWP management and employees in newly required competitive business skills.
    Audit current skill and abilities.
    Establish desired skills level profile for employee groups.
    Develop and deliver effective and appropriate training.
    Reinforce "competitive message" in employee communications.

VII. Responses to CPUC Proposal by California's IOU's

Our neighboring IOU utilities have responded to the CPUC's announced proposal. The following quotes are from press releases by San Diego Gas and Electric and Southern California Edison.

April 20, 1994

Edison responds to CPUC Report about Future of Electric Utility Business

"John E. Bryson, chairman and chief executive officer of Southern California Edison, today described the California Public Utilities Commission's "Proposal to Consider a Restructuring of California's Electric Services Industry" as a thoughtful proposal for the future of the electric utility business in California. Edison agrees with the Commission's goal of bringing the benefits of competition to all customers"

SDG&E Encouraged by Today's CPUC Proposal

"San Diego Gas & Electric said today's California Public Utility Commission (CPUC) proposal to encourage future competition in the electricity industry affirms the company's business direction."

APPENDICES

A. How the Financial Community Sees the Future

B. Rate Comparisons

1. DWP/SCE Comparison - Historic (By Customer Segment)
2. Rate Projections - Average Price (DWP, SCE, PG&E, SDG&E AND SMUD)
3. Historical Rates - Average Price (DWP, SCE, PG&E, SDG&E AND SMUD)

C. Customer Segmentation / Revenue by Segment

D. Financial Impacts of Cogeneration

1. Annual Revenue Losses to DWP from Cogeneration
2. Annual Revenue Losses to City from Cogeneration

E. Annual Revenue to City of Los Angeles

F. Profiles of Electricity Prices within WSCC

1. Residential
2. Commercial
3. Industrial

G. "Strategic Issues Paper", by Ralph Cavanagh, Natural Resources Defense Council

H. Summary Background - History of Deregulation of the Electric Utility Industry

APPENDIX A

How the Financial Community Sees the Future

1. Morgan Stanley
2. Fitch Investor Service
3. Standard & Poors and Moody's
4. Washington International Energy Group

MORGAN STANLEY MEMORANDUM

SELECTED HIGHLIGHTS

U.S. Investment Research -- Electric Utilities

10/25/93

Eight Characteristics of Superior Management Needed in Evolving Electric Utility Industry

1. Proven track record
2. Activity based accounting
3. Clear focused strategy
4. Ability to clearly communicate benefits of strategy
5. Superior political skills to manage regulation
6. Strong cost management skills
7. Operating skills
8. Acceptance and encouragement of change

Selected Excerpts

- Companies that face the greatest risk in the competitive marketplace are SCEcorp, Commonwealth Edison, and FPL Group.
- Electric Utility Industry is not likely to follow path of Cable TV - that is, charge whatever price the market will bear. It will likely evolve into regulated competition.
- The most significant problem facing the Electric Utility Industry is a crisis in management.
- Purchased power will not offer as much benefit as most believe.
- The most important area for improvement in management processes is in the area of activity-based accounting. Utilities do not have clear ideas on the genesis of their current costs or where costs may be headed.

BPU - EJF
04/29/94

FITCH'S INVESTOR SERVICE

What Successful Utilities Need in a Competitive Environment

- ✓ Proactive Management
- ✓ Competitive Rates
- ✓ Incentive-Based Regulation
- ✓ Efficient Plan
- ✓ Diverse Service Area
- ✓ Strong Cash Flow

BPU - EJF
04/29/94

FITCH'S INVESTOR SERVICE

Global Power Ratings Checklists

✓ MANAGEMENT - 20%

- Experience/Depth
- Ability to Manage Risk
- Strategic Planning
- Customer Relationships
- Economic Development Efforts
- Diversification Strategy
- Relationship with Regulators/Board
- Financial Targets

✓ RATES - 20%

- Rate Design
- Ability to Discount
- Price Caps
- Predatory Competitors
- Average System Rates
- Rates - Retail Supplier
- Rates - Wholesales Supplier
- Rate Increases

✓ FINANCIAL/LEGAL - 20%

Financial

- Coverage
- Cash Flow
- Capital Improvement Program
- Decommissioning Plan
- Asset Quality
- Capitalization
- Profitability
- Dividend Payout
- Transfer Policy

Legal

- Security Provisions
- Litigation
- Writedown of Assets

✓ PLANT - 15%

- Total Capacity (MW)
- Fuel Mix
- Fuel Agreements
- Reserve Margin
- Regional Reserve Margin
- Purchased Power

Generating Plant Statistics

- Average Production Costs
- Marginal Production Costs
- Unit Characteristics
- Average Plant Age
- Environmental Factors

Transmission

- Regional Interconnections
- Ability to Buy/Sell
- Wheeling Rates
- Siting of New Lines
- Regulatory Issues

Distribution

- Variable Cost
- Fixed Cost

✓ REGULATION - 15%

- Regulatory Agency
- Quality of Regulation
- Commission Policies

✓ DEMOGRAPHICS - 10%

- Customer Growth Trends
- Diversity of Large Customers
- Exposure to Energy Intensive Customers
- Diversity of Employment
- Employment Growth
- Unemployment
- Per Capita Income Comparison
- Revenue Breakdown by Customer Class

BPU - EJF
04/29/94

STANDARD & POOR'S AND MOODY'S

Factors of Moody's review of municipal electric revenue debt:

- Rate comparison with neighboring utilities
- Rate comparison, in particular, for industrial customers.
- State regulatory provisions regarding retail wheeling.
- Future long-term threats to competitive position: impact of issues such as decommissioning costs and Clean Air compliance.
- Expiration dates and the renewal process for wholesale contracts, franchise and territory agreements.

Credit considerations for S&P include:

- Retail rates
- Operating efficiency
- Diversity of resources
- Customer focus
- Financial and political flexibility
- Transfer policies and uncertainty

S&P will place increasing weight on:

- Responsiveness of management to react to change
- Rates, especially where there are vulnerable customers
- Efficiencies, as measured by existing and possibly new operating and financial ratios.
- Cash flow stability

BPU - EJF
04/29/94

THE TEN THINGS EVERY UTILITY NEEDS TO DO

Source: Washington International Energy Group
appeared in the Energy Daily, 1/12/94

1. Review the long-term economic viability of each generation unit. Shutter, retire, sell or decide to operate them forever. Squeeze everything you can out of your assets.
2. Write off debt now while there is still time, particularly nuclear debt.
3. Get a grasp of real costs by establishing profit centers with real-time accountability.
4. Build a capability to find out which of your customers and sectors are really profitable and which are not.
5. Establish a corporate intelligence function. Shift consulting dollars away from useless quantitative exercises and give it to companies that can give you instant market input.
6. Revolutionize and upgrade your marketing and rate operations. They are your most valuable assets.
7. Confront state regulators head on with the news that the world is changing and that they must give you more freedom to make decisions. Tell them you won't let them micro-manage you any more. IRP, DSM, EE (energy efficiency) and all the other cost-intensive efforts will have to be cut way back or abandoned unless they make money. Information is your most vital asset, state and federal regulators need to allow you to keep more of it proprietary.
8. Put an end to the "management of the month" approach. Make it very simple: It's about survival.
9. If you think you've right-sized, think again. Make heavy-duty cuts but do it once and get it over with. It isn't fair to employees to keep the sword hanging over their heads.
10. Start taking risk. You'll find it exhilarating. You'll make plenty of mistakes, but eventually you'll get the hang of it and start to make the right decisions.

BPU - EJF
04/29/94

APPENDIX B

Rate Comparisons

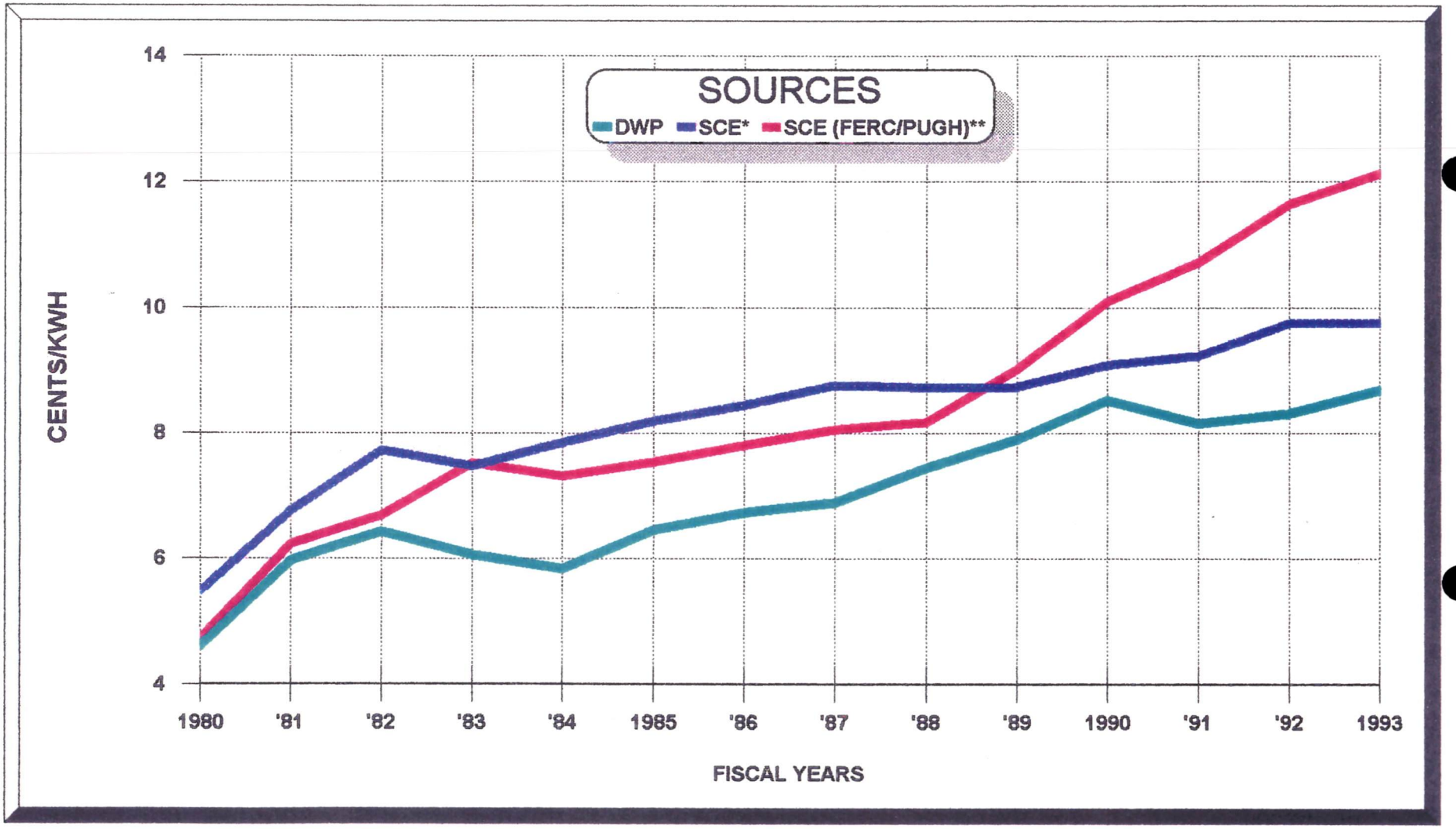
1. DWP/SCE Comparison - Historic (By Customer Segment)

2. Rate Projections - Average Price (DWP, SCE, PG&E, SDG&E AND SMUD)

3. Historical Rates - Average Price (DWP, SCE, PG&E, SDG&E AND SMUD)

AVERAGE RETAIL RATE CENTS/KWH

FOR RESIDENTIAL CUSTOMERS

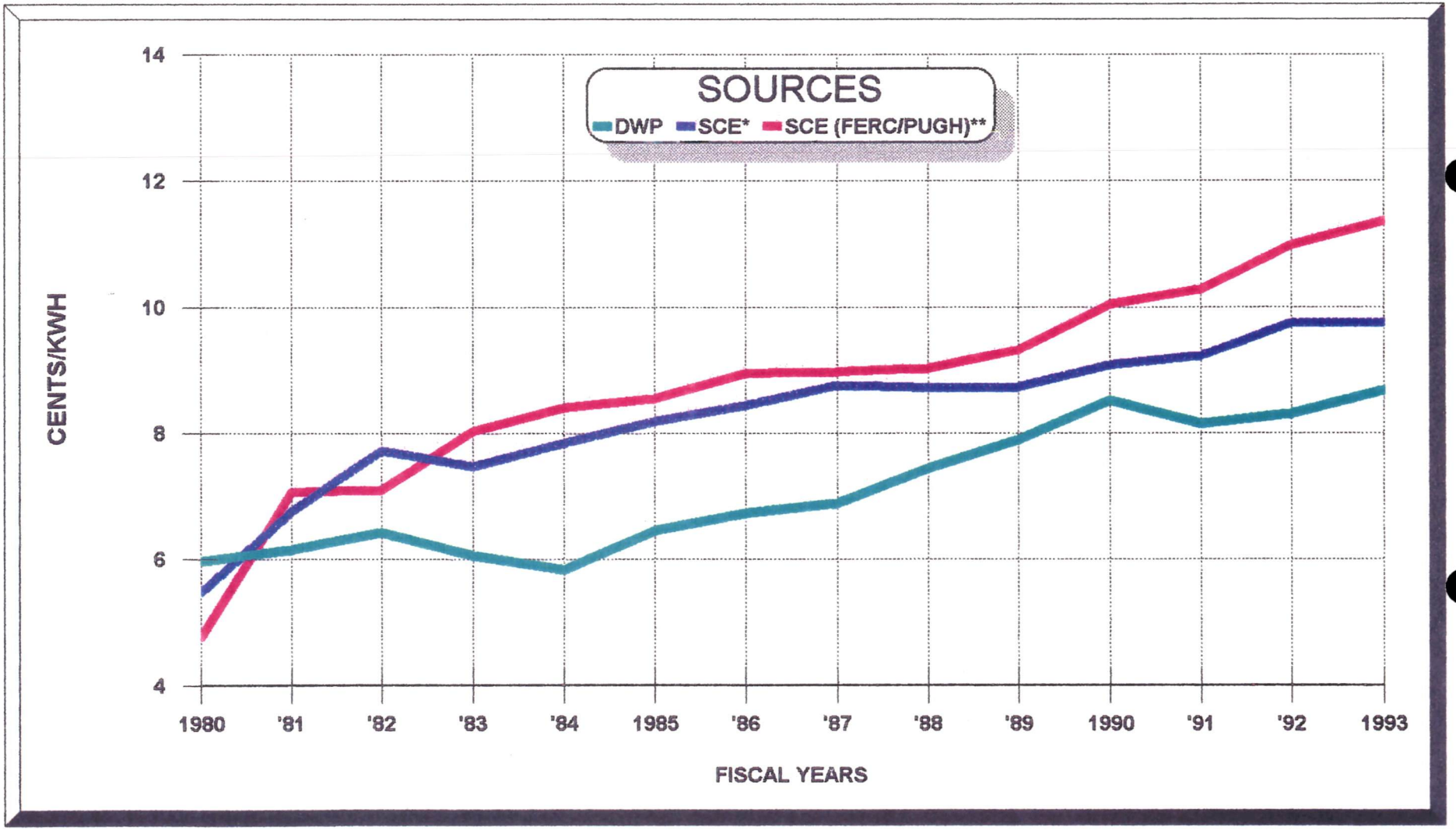


SOURCES:
* SCE RATES BASED ON SCE DATA PROVIDED TO LADWP BY SCE.
** RATES ESTIMATES BASED ON FERC DATA COMPILED BY G.R.PUGH UTILITY DATABASE 12-1992.

5-10-1994

AVERAGE RETAIL RATE CENTS/KWH

FOR COMMERCIAL CUSTOMERS

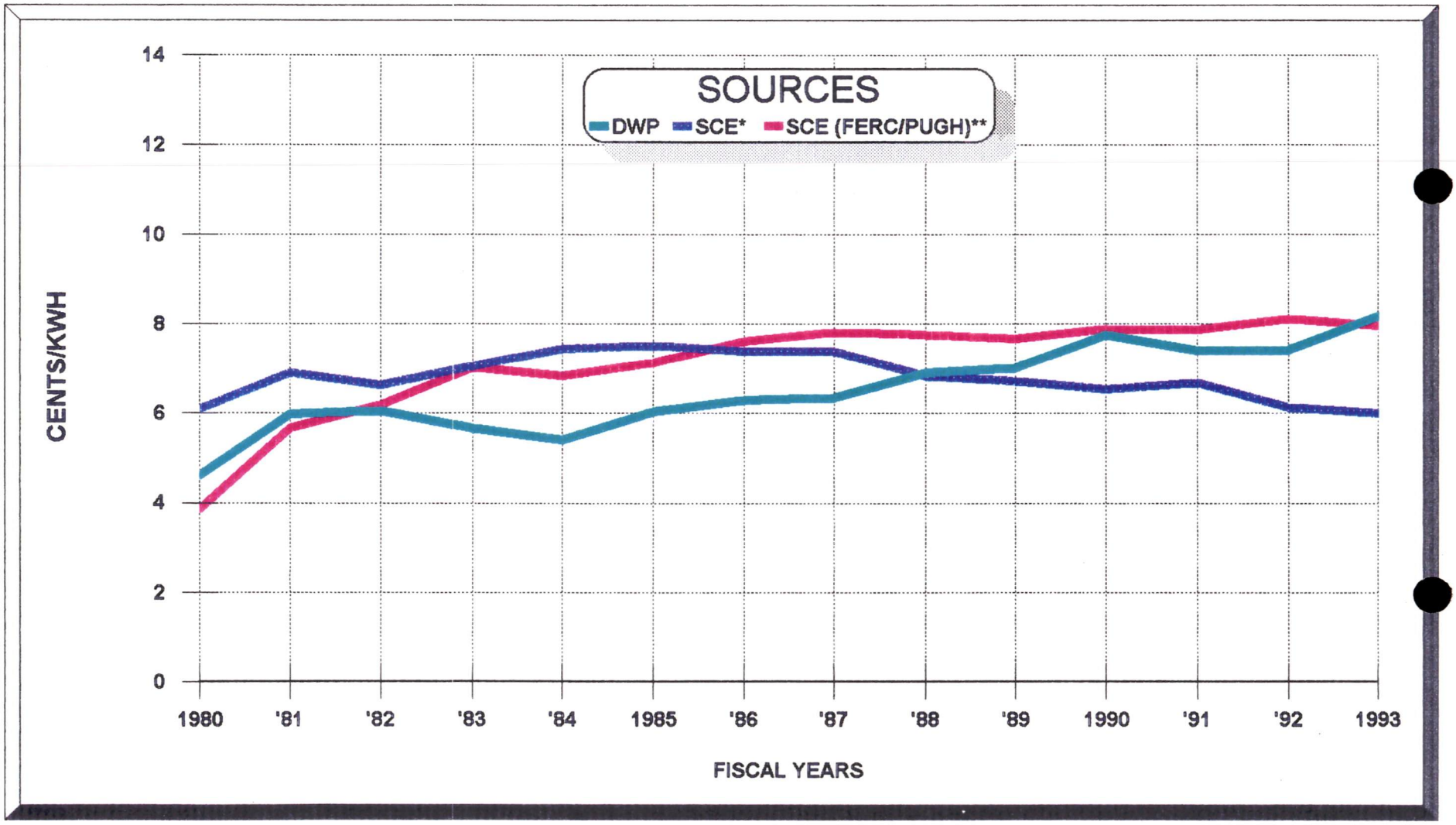


SOURCES:
* SCE RATES BASED ON SCE DATA PROVIDED TO LADWP BY SCE.
** RATES ESTIMATES BASED ON FERC DATA COMPILED BY G.R.PUGH UTILITY DATABASE 12-1992.

5-10-1994

AVERAGE RETAIL RATE CENTS/KWH

FOR INDUSTRIAL CUSTOMERS

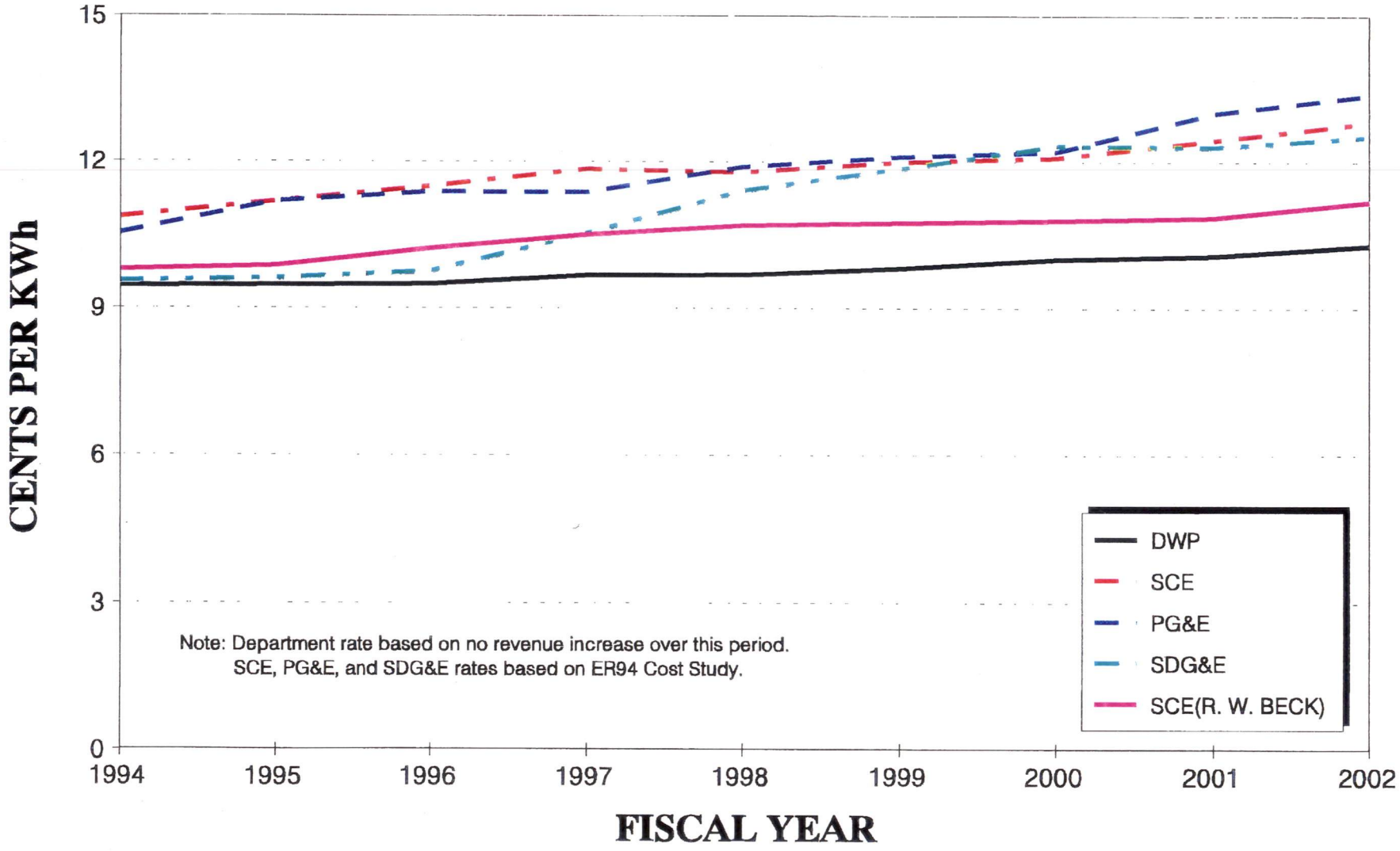


NOTES:
*SCE RATES BASED ON ESC DATA PROVIDED TO LADWP BY SCE.
** RATES ESTIMATES BASED ON FERC DATA COMPILED BY G.R. PUGH UTILITY DATABASE 12-1992.

5-10-1994

AVERAGE PRICE OF ELECTRICITY COMPARISON

DWP VS. SCE, PG&E, AND SDG&E

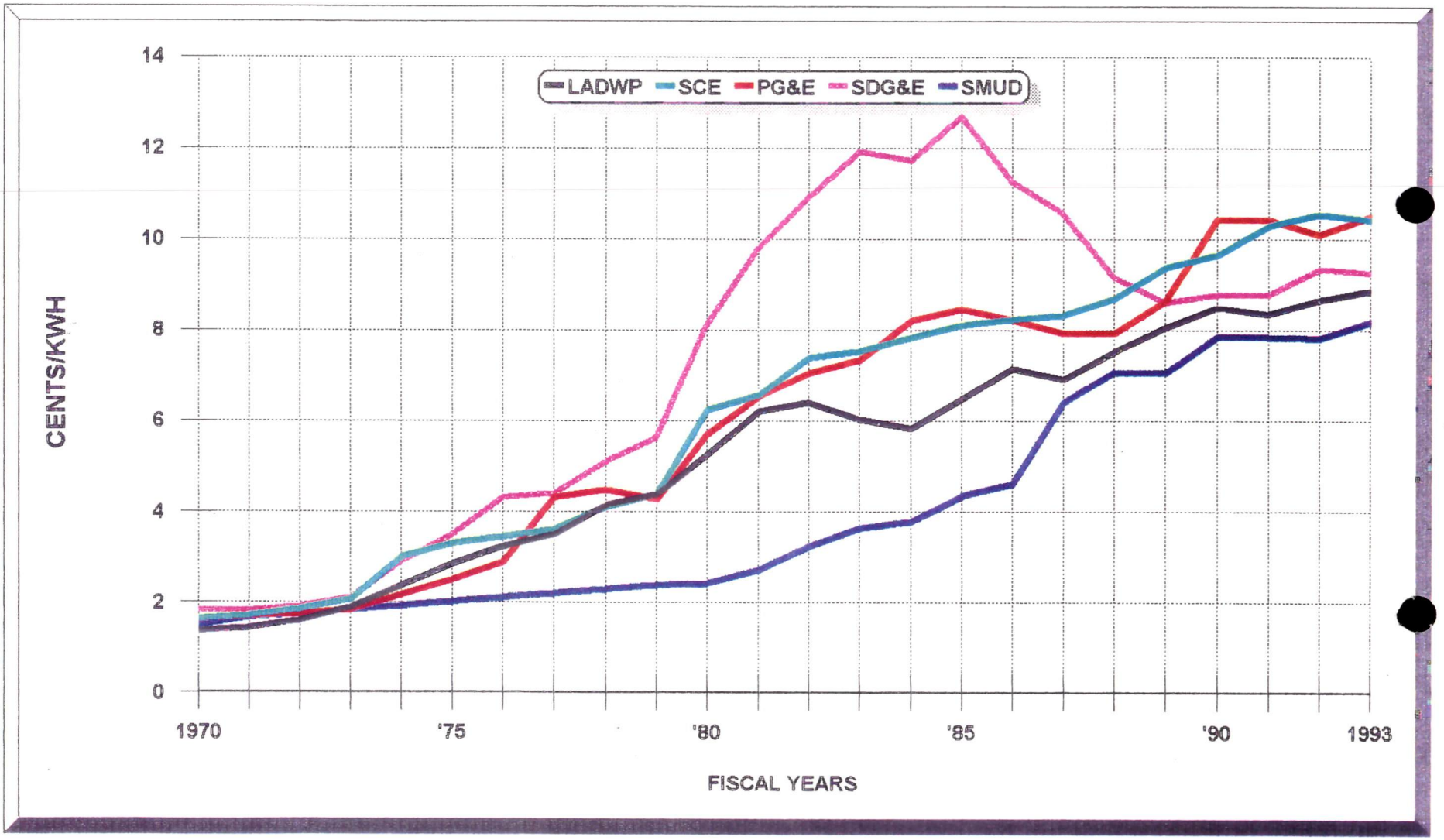


Assumptions: Natural gas price based on suggested forecast
by CEC for ER94.
Preliminary 1994 Load Forecast.

D:\CHARISMA\SCE_MAY.GRF

AVERAGE RETAIL RATE CENTS/KWH

SELECTED CALIFORNIA UTILITIES

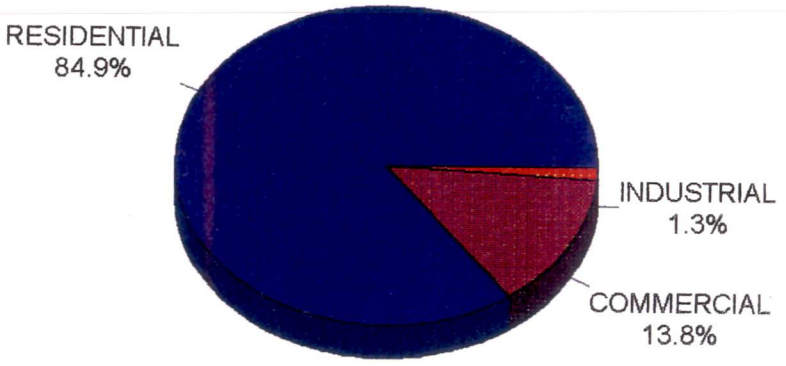


CONSERVATION PLANNING
CORPORATE/STRATEGIC PLANNING

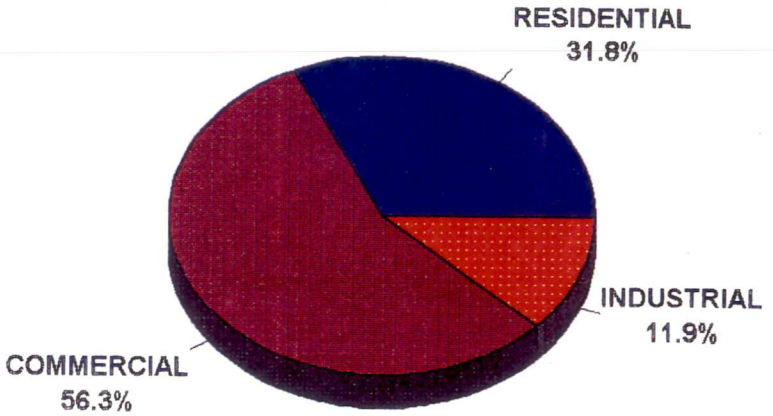
APPENDIX C

Customer Segmentation / Revenue by Segment

LOS ANGELES DEPARTMENT OF WATER AND POWER
AVERAGE NUMBER OF CUSTOMERS AND REVENUE
12 MONTHS ENDING MONTH OF NOVEMBER 1993



NUMBER OF CUSTOMERS
1,314,492



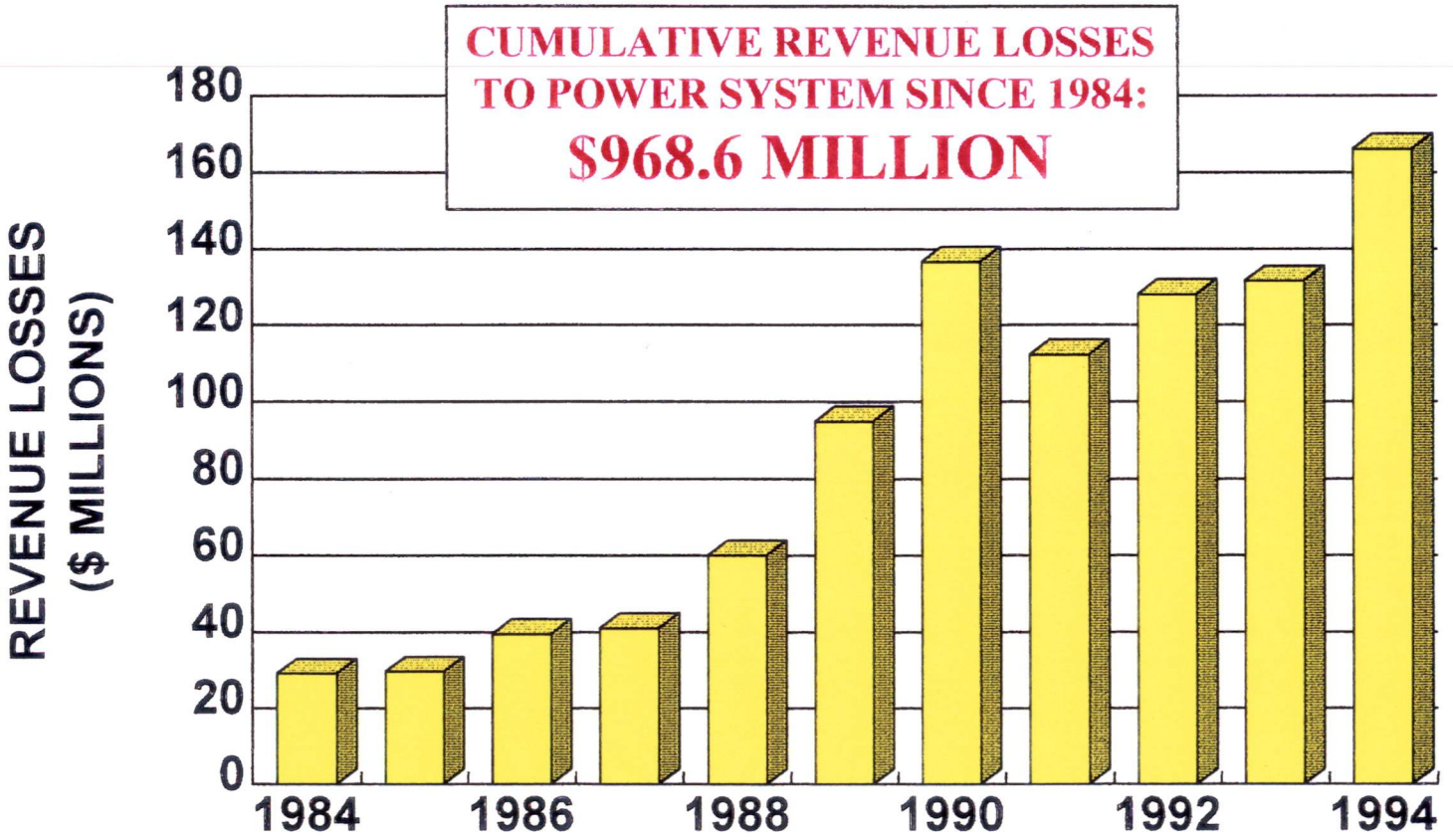
REVENUE IN $1,000
1,835,132

APPENDIX D

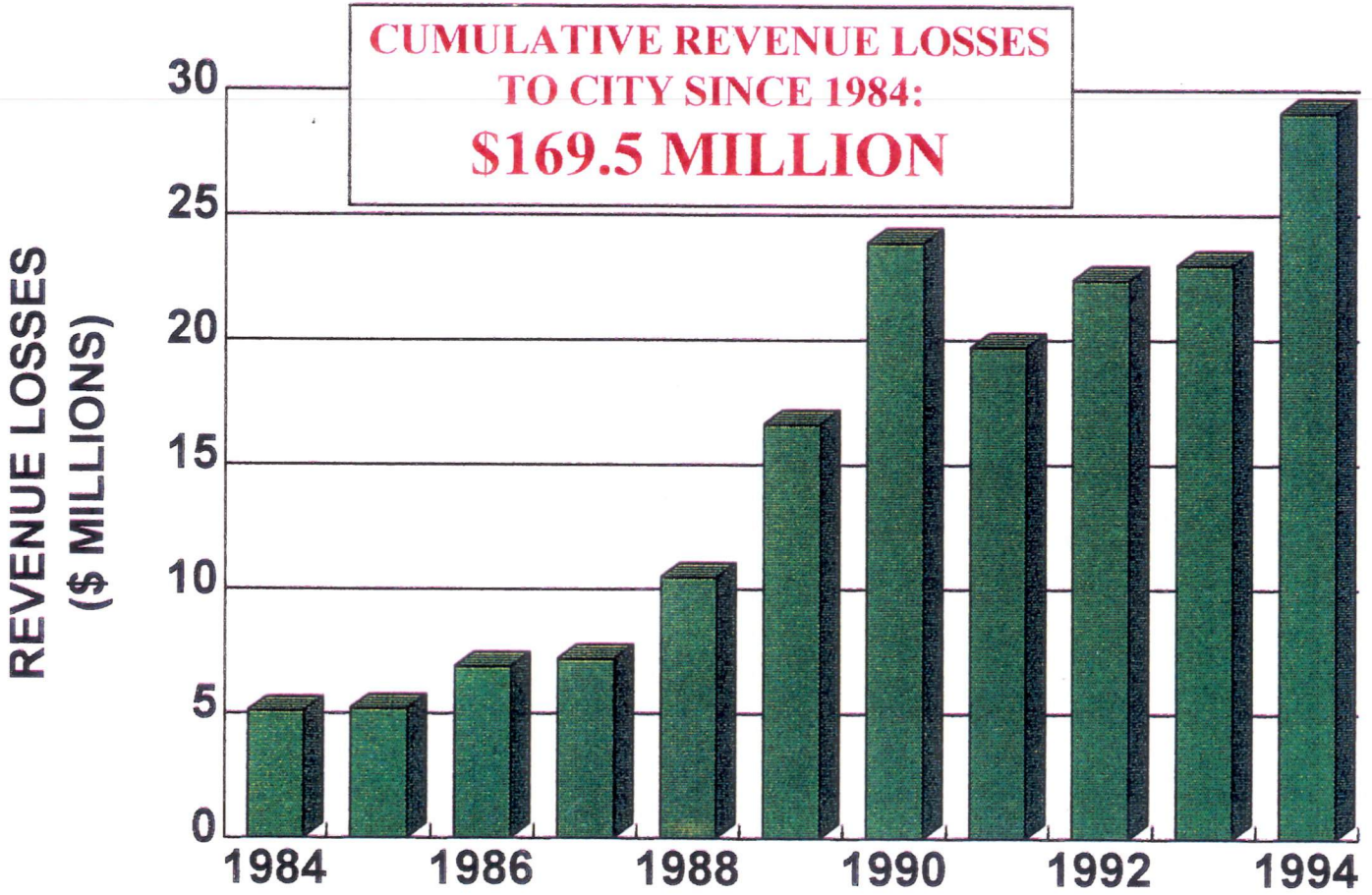
Financial Impacts of Cogeneration

1. **Annual Revenue Losses to DWP from Cogeneration**
2. **Annual Revenue Losses to City from Cogeneration**

ANNUAL REVENUE LOSSES TO POWER SYSTEM FROM COGENERATION



ANNUAL REVENUE LOSSES TO CITY FROM COGENERATION*



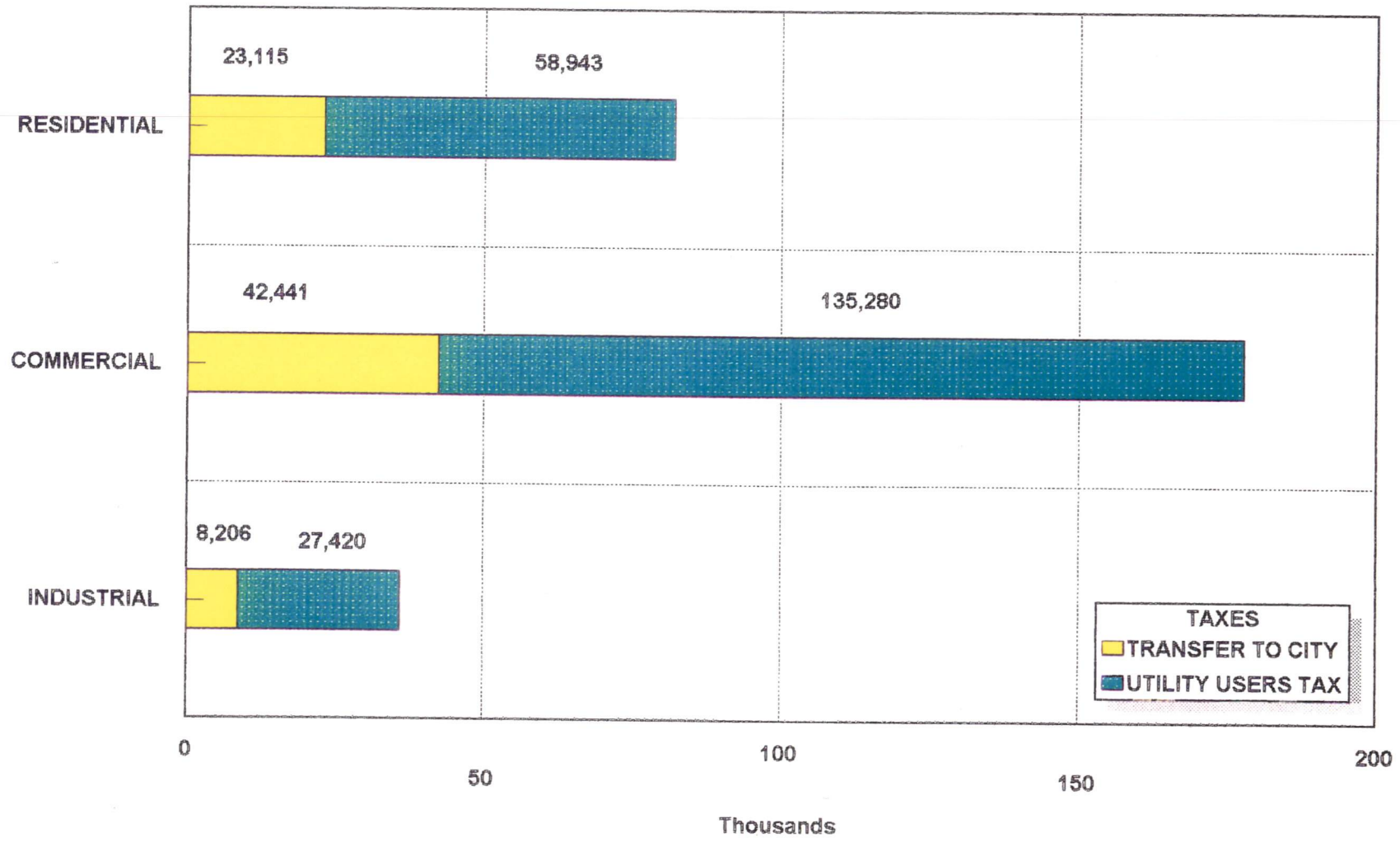
*FROM LOSS OF UTILITY USER'S TAX
AND TRANSFER ON ELECTRIC REVENUES

APPENDIX E

Annual Revenue to City of Los Angeles

ANNUAL REVENUE TO CITY OF LOS ANGELES

FOR CUSTOMER CLASSES FOR 12 MONTHS ENDING JUNE 1993 CITY TAXES INCLUDE : RESIDENTIAL =10%, COMMERCIAL AND INDUSTRIAL = 12.5%



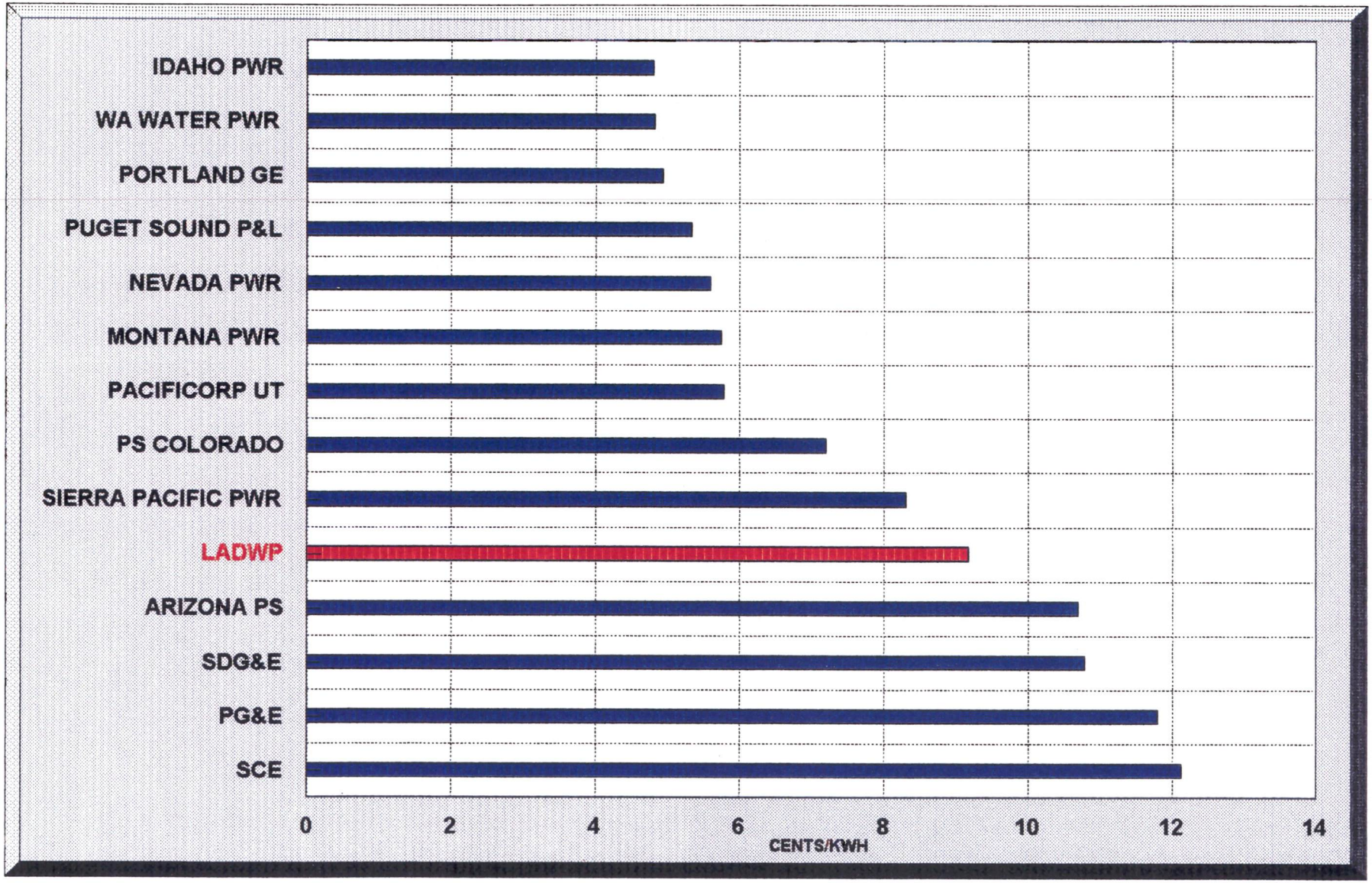
INFORMATION BASED ON ANNUAL REPORT FOR 1992-1993

APPENDIX F

Profiles of Electricity Prices within WSCC

1. Residential
2. Commercial
3. Industrial

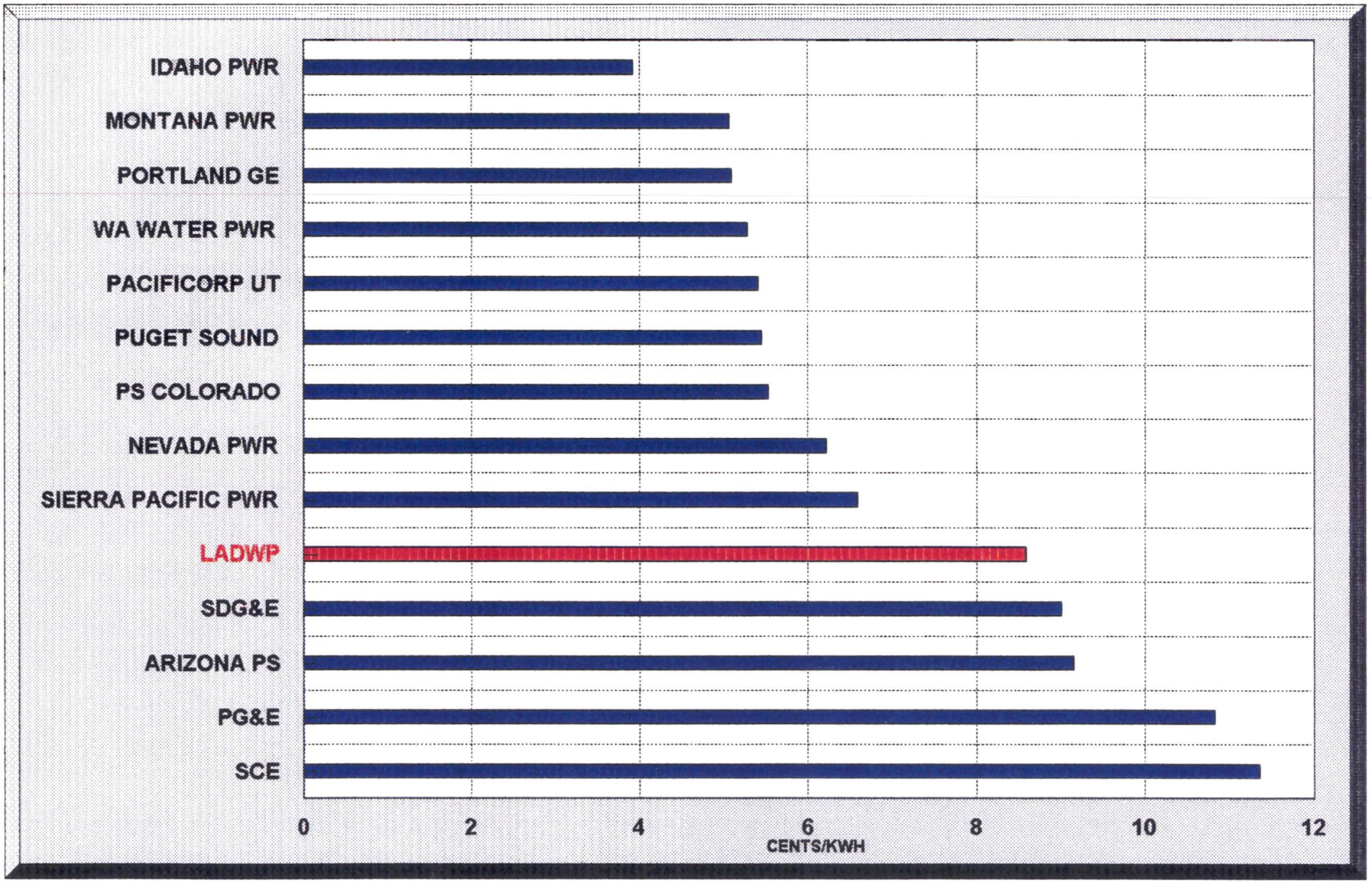
RATE PROFILE OF AVERAGE ELECTRICITY PRICES CENTS/KWH FOR RESIDENTIAL CUSTOMERS



SOURCE: G.R. PUGH UTILITY DATABASE 12-1992

5-10-1994

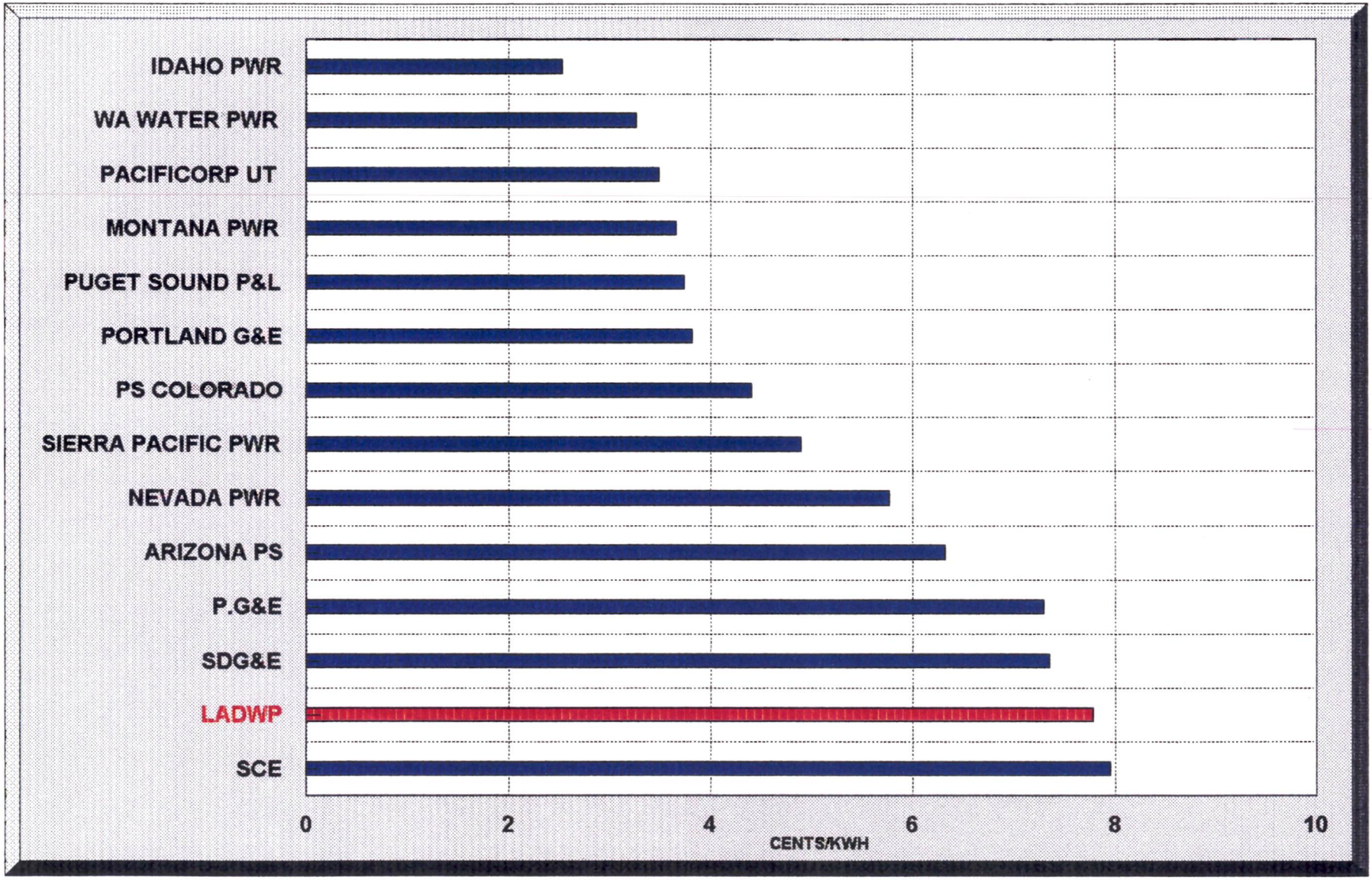
RATE PROFILE OF AVERAGE ELECTRICITY PRICES CENTS/KWH FOR COMMERCIAL CUSTOMERS



SOURCE: G.R. PUGH UTILITY DATABASE 12-1992

5-10-1994

RATE PROFILE OF AVERAGE ELECTRICITY PRICES CENTS/KWH FOR INDUSTRIAL CUSTOMERS



SOURCE: G.R. PUGH UTILITY DATABASE 12-1992

5-10-1994

APPENDIX G

"Strategic Issues Paper", by Ralph Cavanagh, Natural Resources Defense Council

PREFACE

The specter of retail wheeling looms large on the strategic planning landscape for many electric utility companies in North America. Citing analogies to other industries and international examples of electric utility industry restructurings, some observers contend that the U.S. has already ventured onto a slippery slope that will inevitably lead to retail wheeling. Such a result would have far-reaching implications for the utility's role in providing energy efficiency services. On the other hand, there is evidence to suggest that the outcome is still far from predetermined: formidable coalitions against retail wheeling are emerging, and their proponents have largely carried the day in federal and state regulatory proceedings to date.

While E SOURCE takes no advocacy position in this or other policy debates, we will present various perspectives on retail wheeling and other related issues as part of our ongoing series of *Strategic Issues Papers*, especially as they relate to the challenge of reinventing demand-side management as a value-added customer service.

In "The Great 'Retail Wheeling' Illusion," Ralph Cavanagh forcefully presents the case against retail wheeling, posing instead an alternative vision of where the industry should be headed. Noting that "retail wheeling cannot happen without active and continuing support from state regulators," he argues that it would do little more than "allow opportunistic behavior by large customers at everyone else's expense." Retail wheeling, he suggests, would offer only the illusion of customer choice, backed by nothing more than a reallocation of existing costs.

It is possible to envision several different outcomes to the retail wheeling debate—including the evolution of various hybrid forms of "managed competition" at the retail level. In all of these scenarios, however, intensifying retail competition is likely to be a driving force for industry restructuring. If utilities hope to move up the value chain in order to retain market share and achieve better than commodity-market rates of return, they will have to do so by developing highly differentiated energy services packages incorporating features such as power quality management; innovative pricing, billing, and financial risk management; and customer-oriented energy efficiency services. In doing so, the biggest commercial opportunities—and the highest barriers to entry—may be those associated with providing the technically rich services necessary to unlock opportunities for energy savings, productivity enhancement, or environmental cost mitigation opportunities previously overlooked by energy managers and utility rebate programs. Almost by definition, this will be the domain of a relatively small number of service providers. These opportunities, and the industry structure that they imply, will be the subject of a subsequent paper in this series.

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2.	A Business "Affected With The Public Interest"	6
3.	The Great "Retail Wheeling" Illusion	10
	3.1 Retail Wheeling Is Not Desirable	11
	3.2 Retail Wheeling Is Not Inevitable	13
4.	Sustainable Energy Futures	18
5.	Conclusion	21
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THE GREAT "RETAIL WHEELING" ILLUSION—AND MORE PRODUCTIVE ENERGY FUTURES

MARCH 1994

Ralph Cavanagh
Energy Program Director, Natural Resources Defense Council

EXECUTIVE SUMMARY

The current debate over the competitive restructuring of the electric power industry is critical from both economic and environmental perspectives. Some observers believe that the industry transition already underway must lead to a system that requires retail customers to "choose" among competing electricity suppliers. However, all attempts to introduce broad-scale "retail wheeling" in the United States have failed; instead, state regulators are choosing a path that emphasizes competition and choice, but acknowledges fundamental differences between wholesale and retail markets. Given the physical laws governing the movement of power over centrally controlled grids, the choice offered to customers through retail wheeling of electricity is a fiction—a reallocation of costs is all that is really possible. Everyone wants to be able to claim the cheapest electricity on the system; unfortunately, there is not enough to go around. By endorsing the fiction of retail wheeling for certain types of customers, regulators would be recasting the retail electricity business as a kind of commodity exchange. That would reward suppliers who could minimize near-term unit costs of electricity while simultaneously destroying incentives for many investments—including cost-effective energy efficiency improvements and renewable energy generation—that reduce long-term energy service costs to society as a whole. This result, which has been analogized unpersuasively to trends in telecommunications and natural gas regulation, is neither desirable nor inevitable. States should go on saying no to retail wheeling in order to be able to create something better: regulatory reforms that align utility and societal interests in pursuing a least-cost energy future.

RALPH CAVANAGH is Energy Program Director at the San Francisco office of the Natural Resources Defense Council, where he works principally on energy and water policy and responses to the threat of global warming. He received his undergraduate and law degrees from Yale University. Before joining NRDC, Cavanagh served the U.S. Department of Justice as an Attorney-Advisor. He has held appointments as a Lecturer on Law at the Stanford and Harvard Law Schools. For his contributions to strategic planning and conservation efforts in the electric utility sector, he was named the 1986 recipient of the Bonneville Power Administration's Award for Exceptional Public Service. In 1987, he was appointed to a five-year term on the Energy Engineering Board of the National Academy of Sciences. He also serves as Vice-Chairman of the Coalition on Energy Efficiency and Renewable Technologies (CEERT), which unites representatives of the environmental, energy efficiency, and renewable-energy communities. In 1991, he was appointed to the Advisory Council of the Electric Power Research Institute and the Energy Subcommittee of the President's Commission on Environmental Quality.

1.
THE INDUSTRY TRANSITION AHEAD

One of our most important industries is in transition from comfortably entrenched monopoly status to largely uncharted territory, which clearly will feature much more competitive deliveries of a much wider range of services. Structures of regulation and management that dominated electric utilities for the better part of a century are giving way, and the debate over their replacements is critical from both economic and environmental perspectives.

That debate reflects some fundamental differences over the nature and future of the electricity industry. Few participants simply defend business as usual; the argument is over how best to realize the values implicit in expanded competition and choice, while overcoming some formidable environmental challenges and respecting equity concerns.

This paper has two objectives. The more important is to describe and champion utilities' ongoing evolution into highly competitive resource-portfolio managers and environmental stewards whose principal motivation is to minimize customers' energy service costs. A complementary aim is to resist an ill-founded campaign to derail that transition. Central to this campaign is a concept called "retail wheeling," which has long resisted capture in language satisfying minimum standards of intelligibility.

RETAIL WHEELING WOULD DESTROY INCENTIVES FOR SUPPLIERS TO MINIMIZE LIFECYCLE COSTS OF ENERGY SERVICES

At base, retail wheeling is a classic exercise in disguising an appeal for special privilege as the pursuit of civic virtue. The term itself refers to a fictional exclusive connection over a complex power grid between a particular business or household and a distant power supplier. Through systems of these fictional connections, as explained more fully below, regulators would at a stroke redefine the retail electricity business as a kind of commodity exchange, which in turn would reward suppliers who could minimize near-term unit costs of electricity while destroying incentives for many investments that could have reduced long-term energy service costs to consumers.

Prominent among the likely casualties would be cost-effective energy efficiency improvements and renewable energy generation. Yet the biggest losers might well be retail wheeling's supposed industrial constituency, which would sacrifice much more promising options in the very act of securing a grossly oversold remedy for competitive ills.

This outcome, which has been analogized unpersuasively to trends in telecommunications and natural gas regulation, is neither desirable nor inevitable. Retail wheeling cannot happen without active and continuing support from state regulators; it is they and their legislators and constituents who will make this decision across the United States. No technology or historical imperative will preordain the result, which is about flows of dollars rather than electricity—and about how utilities should be managed and motivated. Retail wheeling is not "deregulation"; it would require a huge, complex, and continuing new exercise of regulatory authority.

Of course, there is always a temptation to invoke contrived historical imperatives as substitutes for the merits of a policy dispute, even as there are always brokers eager to enrich themselves by inventing new and mystifying transactions that increase commissions but not productivity or product quality. One responsibility of legislators and utility regulators is simply to see such efforts for what they are; as increasing numbers do just that by rejecting retail wheeling, the policy is losing any pretense of momentum.

This debate turns in part on key features of the retail electric utility business, including a critical distinction between the emerging reality of retail ***competition*** and the older fiction of retail ***wheeling***. Section 3 below explores these issues.

The most compelling reason to reject retail wheeling is its incompatibility with the utility industry's transition toward a structure that is at once more competitive and more attuned to pressing concerns of environmental stewardship. That structure is the subject of Section 4.

It is important first, however, to recall key goals of utility regulation that must inform any evaluation of reform agendas. Section 2 reviews why the electric utility industry has so long been viewed so rightly as "affected with the public interest,"[1] and what the industry's most innovative regulators have been doing to vindicate that interest.

2.
A BUSINESS "AFFECTED WITH THE PUBLIC INTEREST"

At about $187 billion in 1992, the U.S. electric bill was equivalent to three percent of the Gross National Product.[2] That is hardly an inconsequential figure, but it grossly understates the importance of this industry to its customers' quality of life.

As regards sulfur dioxide, oxides of nitrogen, and carbon dioxide, for example, electricity's share of total U.S. emissions is two-thirds, one-third, and one-third, respectively. In other words, from the perspective of preventing acid rain and stabilizing greenhouse-gas concentrations in the atmosphere, the electric utility sector is the economy's most important point of leverage. It is also crucial on issues of radioactive waste disposal, nuclear proliferation, and the preservation of free flowing rivers.

FROM AN ENVIRONMENTAL PERSPECTIVE, THE UTILITY SECTOR IS THE ECONOMY'S MOST IMPORTANT LEVERAGE POINT.

Nor does its share of GNP adequately capture the importance of electricity to U.S. households and businesses. Electricity is now responsible for almost 36 percent of total U.S. energy consumption, a fraction that has doubled since 1960.[3] Compared with 1973, U.S. electricity sales in 1992 had grown by more than 60 percent, even as total energy use had increased by only 11 percent, and consumption of fossil fuels had hardly changed.[4] Trade and popular publications abound with credible affirmations that our quality of life depends in significant part on reliable electricity service.

As electricity supply has expanded, its sources have become both more diverse and much more competitive. Utilities' monopoly over generation in the United States is long gone; more than half the megawatts added since 1989 have been independently owned.[5] On the customer's side of the meter, equally independent companies are offering myriad ways to cut bills and improve service by using electricity more efficiently or substituting nonelectrical equipment.

However, the rationale for retaining unified management of some parts of the electricity sector remains strong and largely unchallenged. Transmission grids, over which power supplies are balanced and transferred, require unified control. In their interdependence and complexity, the four giant North American grids call to mind the natural ecosystems that they so profoundly influence. For ecologists, a first principle is that everything is connected to

everything else. And no electrical generator can engage anywhere on one of this continent's great synchronized networks without being felt everywhere on the grid;[6] no power sale can be executed without instantaneous and imperfectly understood impacts on all of the grid's branching connections.

These and related considerations have divided the giant grids into tightly coordinated control areas, which use central computers and automatic devices to determine when power plants cycle on and off. "Centralized planning and control" may be out of fashion as a domestic economic ideology, but it remains the unchallenged law of every operating electrical grid.[7]

In all of these respects, electric power systems are profoundly different from the natural gas or telecommunications industries to which they are sometimes analogized. For these industries, a major theme in recent years has been the proliferation of competing transmission systems. But no one anticipates installation of multiple electrical grids. For the foreseeable future, customers who want access to a varied and integrated mix of distant power suppliers will have only one grid to plug into.

ELECTRIC POWER SYSTEMS ARE PROFOUNDLY DIFFERENT FROM THE NATURAL GAS OR TELECOMMUNICATIONS INDUSTRIES, WHERE COMPETING TRANSMISSION SYSTEMS HAVE PROLIFERATED.

Just as multiple decisionmakers cannot operate a transmission system reliably, they cannot orchestrate a diversified mix of resources for meeting a healthy economy's electrical service needs at the lowest possible lifecycle costs. A central theme of modern regulation has been utilities' portfolio management function: choosing and buying the combination of generating resources, purchased power, and demand-side efficiency improvements that will minimize the lifecycle cost of reliable energy services for customers collectively.

While there is much dissatisfaction with utilities' performance historically as portfolio managers, few would go so far as to suggest that these diversification and aggregation functions are without value. Both grid control and resource-portfolio development are classic "natural monopolies" that cannot be broken up without imposing significant costs on customers and society generally. That does not mean, of course, that it is physically impossible to have multiple entities making decisions about acquiring resources for a utility system, any more than it is physically impossible to run multiple power distribution lines into a building. But in either case abandoning that particular monopoly would mean higher costs for customers and for society.

The portfolio functions take on particular importance in light of pervasive evidence that utilities can overcome market barriers to very large and economical energy savings.[8] As a National Academy of Sciences panel stated bluntly in 1991, "The efficiency of practically every end use of energy can be improved relatively inexpensively."[9] The nation's largest utility recently told the U.S. Department of Energy that energy savings represent "America's largest, least-costly untapped resource option. The efficiency gains of the last two decades, while considerable, have not come close to exhausting the full potential for saving energy more cheaply than producing it."[10] The role of utilities in realizing that potential is widely acknowledged and steadily growing. In 1992, energy efficiency investments by major U.S. utilities are estimated to have exceeded $2.5 billion, compared with less than $1 billion three years earlier.[11] In California alone between 1990 and 1993, four utilities' energy efficiency programs yielded their customers "an estimated $1.9 billion in lifecycle net resource benefits," after accounting for rebate and administrative costs and all other utility and participant costs.[12]

Regulators' efforts to secure such benefits, and to improve energy-resource portfolio management generally, have focused increasingly on giving utilities more balanced and performance-based incentives. Essential to this enterprise, in the phrase of the National Association of Regulatory Utility Commissioners, are mechanisms for "ensur[ing] that the successful implementation of a utility's least-cost [investment and procurement] plan is its most profitable course of action."[13] The U.S. Congress endorsed that objective strongly in the National Energy Policy Act of 1992 for both electric and gas utilities.[14] Achieving it should mobilize utilities against the barriers that obstruct cost-effective efficiency; this in turn should spur the growth of a competitive energy efficiency services industry and provide customers with more choices about energy-service quality and cost.[15]

NO INSTITUTION CAN DUPLICATE UTILITIES' ABILITY TO ORCHESTRATE COST-EFFECTIVE INVESTMENTS IN ENERGY EFFICIENCY.

The vision of the electricity business emerging from these and many other sources is one that uniformly emphasizes competition and choice, but adapts to fundamental differences between wholesale and retail markets. In the wholesale marketplace, where utilities buy and sell power for resale, the goal is to minimize bulk power costs; policymakers are trying to make generation more competitive and to offer entrepreneurs open access to the centralized grid.

Retail electricity markets, on the other hand, turn on quality, quantity, and price of energy *services*. Residences and businesses have no interest in buying or reselling kilowatt-hours; they are really purchasing the heating, lighting, mechanical drive, and other services that kilowatt-hours provide. Strategies designed solely to hold kilowatt-hour costs down overlook

opportunities to cut service costs by increasing the efficiency of electricity-consuming equipment; that was one lesson of the 1960s and 1970s, when utilities and their regulators often focused on retail rates to the ultimate detriment of bills.

Many of today's regulators have been responding, at least implicitly, to the natural monopoly characteristics of utilities' portfolio management function. If society is systematically underinvesting in efficiency relative to supply, obvious gains can result from ensuring that prospective generation investors evaluate efficiency options on equal terms. Those who need additional energy services and those best positioned to achieve improved efficiencies often will be different and widely separated entities; no institution has rivalled utilities in their capacity to bring both groups together for mutual advantage.

For dispersed renewable energy resources with intermittent "fuels," the portfolio manager's role is different but no less important; wind and solar resources that would not fit the demand profile of any small group of customers can be invaluable supplements to an integrated, diversified system that is meeting the needs of a utility's service territory.[16]

In sum, valuable resource diversification can be achieved, and investment in reserves and duplicative generation can be minimized, if utilities retain responsibility for portfolio management. Recent work by the Northwest Power Planning Council provides a quantitative assessment of these values; after comparing multiple scenarios of both centralized and disaggregated resource development over the next twenty years in its four-state region, the Council found that potential benefits of some $2.5 billion could be secured from "the improved coordination of resource development."[17]

The natural-monopoly characteristics of portfolio management are not, of course, grounds for vesting the function permanently in the same entity. Attorney Scott Hempling has argued persuasively for giving potential new managers periodic opportunities to challenge the incumbent; criteria that might be used by the judges are addressed in Section 4 below.

3.
THE GREAT "RETAIL WHEELING" ILLUSION

For a small but vocal group of commentators, many or most of the considerations reviewed above are beside the point. This camp wants to move electric utilities toward a very different destination, although there is sometimes confusion about whether they are seeking something new or hearkening back to an earlier era of regulation.

It is crucial at the outset to distinguish "retail wheeling" from what Professor Paul Joskow has called "retail competition."[18] In the "competition" category, Joskow puts consumers' opportunities to install their own generators or substitute new end-use equipment that needs less (or no) electricity to provide equivalent or better service. Those who hear retail wheeling advocates invoke "competition" and "choice" often assume that they must be referring to one or more of these options for physically altering a customer's electricity service, or for substituting equipment using other fuels.

IT IS CRUCIAL TO DISTINGUISH RETAIL WHEELING FROM RETAIL COMPETITION.

Yet in fact retail "wheeling" initially changes nothing about electricity service except its cost allocation. In some variants, participants would get instant access to wholesale commodity prices, which are driven by sales of surplus power from previously constructed generators. Since owners of these facilities are motivated to sell their surplus at any price that exceeds short run operating costs, they can almost always undercut rates posted by a retail utility that is attempting to recover fixed as well as operating costs.

Another option, which the Appendix addresses in more detail, would limit retail wheeling to intervals when the host utility needed new generating capacity. Participants could then appropriate, for their exclusive benefit, cost reductions associated with new generation anywhere on the grid that was priced below the utility's average costs. The alternative, of course, is to spread such benefits over the entire utility system.

Those who seek retail wheeling typically aim to change only one thing about their current electricity services: they want to shift elsewhere some of the costs that they are now paying. In this aspiration they are joined, of course, by approximately all of mankind.

These particular supplicants' prospects would be minimal except for an undeniable ingenuity in recasting their aspirations. The plea goes roughly as follows: we're tired of dealing with the same old utility company and we want a chance to shop around for our power supplies so we can find the lowest prices; it works just fine for supermarkets and gas stations—why not electricity?

RETAIL WHEELING INITIALLY CHANGES NOTHING ABOUT ELECTRICITY SERVICE EXCEPT ITS COST ALLOCATION.

Note, however, that at no time in this litany is there any mention of breaking free from the electrical grid or taking advantage of any of the other physical alternatives for improving on business-as-usual electricity use. For industrial customers needing infusions of productivity and competitiveness, some of these omissions represent important lost opportunities—and retail wheeling ultimately represents an unrewarding dead end.

3.1 RETAIL WHEELING IS NOT DESIRABLE

Much of today's utility regulation is designed to open markets to more competitors and more choices. But creating the fictional "choice" that retail wheeling represents, and calling it "competition," is really an exercise in benefitting the few at the expense of the many.

Of course, strictly speaking, the debate over retail wheeling really cannot be about "choice" at all. Because of the basic nature of electricity and transmission lines, customers cannot change the physical movement or origins of the electricity entering their buildings by "choosing" a new supplier. Electricity moves in response to physical laws and centralized controls that are independent of any contracts that might be made by suppliers and retail customers.

Individual customers can measure how much they use at a building or plant, but they cannot influence where it comes from. At any given time, all of the power plants owned by all of a grid's interconnected utilities are working *together* to meet our collective electricity needs.

Everyone wants to be able to claim the cheapest electricity on the system—but unfortunately there is not enough to go around. Everyone would like someone else to pay for higher-cost new energy resources, environmental safeguards, and transmission upgrades—but without them no utility could maintain a clean and reliable system. If we were to let a few customers escape their share of this collective investment, either it could not be sustained or the rest would have to pay more.

The ensuing erosion of utilities' capacity to assemble energy-resource portfolios would put other forms of upward pressure on energy bills. Section 2 above reviewed the reasons why many states encourage utilities to invest in opportunities to save energy that are less costly than the avoided power production. Everyone benefits when we can reduce the cost of energy services by improving energy efficiency in this way.

EVERYONE WANTS TO CLAIM THE CHEAPEST ELECTRICITY ON THE SYSTEM.

Yet energy savings mean reduced energy sales volumes for utilities, which must then raise electricity prices slightly to recover the fixed costs of their power supply systems; should that translate instantly into a competitive advantage for suppliers that invest nothing in delivering energy savings? Retail wheeling advocates say yes, ignoring the costs that all of us will have to pay if utilities collectively abandon energy efficiency programs. Some of the most severely jeopardized programs yield the added benefit of helping indigent customers afford basic energy services, by targeting energy savings in their homes.

Why don't the same objections confront efforts to create analogous regulatory "fictions" about the movement of power in wholesale markets? As Section 4 will explain more fully, at the wholesale level the fictions bring societal benefits without imposing remotely comparable costs.

WHOLESALE ELECTRICITY MARKETS REALLY ARE COMMODITY MARKETS.

The wholesale markets really ***are*** commodity markets, in which kilowatt-hours are traded exclusively for resale. A single-minded focus on minimizing rates per kilowatt-hour makes much more sense at that level than it does in the retail service context. Moreover, the goals of open wholesale markets and cost-minimizing portfolio management are wholly consistent, as long as utilities remain the only buyers on the wholesale markets.

Those who want to change that policy typically overlook one additional category of regulatory costs. If utilities and their regulators were to lose their system-wide resource-portfolio management and planning functions, resource development would have to emerge at least in part through uncoordinated private contracts.[19] Lacking the legitimacy of an integrated plan reflecting state-wide priorities and oversight, such development would be extremely vulnerable to the conflicting desires of local land-use planners and property owners. Siting and building generation is difficult enough when the sponsors can credibly invoke findings from integrated plans that address the interests of consumers collectively; to remove that broader rationale is to invite paralysis.

Also troubling are the openings for opportunistic behavior that retail wheeling creates. Those who "leave" their local utility when wholesale prices drop may want to return in haste when market conditions change. Should they be permitted to do so without restriction, in line with utilities' traditional obligation to serve all applicants? Some retail wheeling legislation has assumed as much, ignoring potential costs to other customers who may have to underwrite part of their utilities' ensuing resource acquisitions. And even explicit contractual disavowals of any utility obligation to serve retail-wheeling beneficiaries would have minimal value in the face of later appeals by politically influential customers who no longer found the contracts advantageous.

RETAIL WHEELING WOULD INVITE OPPORTUNISTIC BEHAVIOR BY LARGE CUSTOMERS AT EVERYONE ELSE'S EXPENSE.

Of course, those declared eligible for retail wheeling might never actually take advantage of the opportunity, if they received enough price concessions from their host utility. Some concessions are already occurring in response to credible threats of self-generation or shifts of production to other states.

One prospect, then, is that the principal impact of retail wheeling would be to provide additional leverage in rate proceedings and negotiations to parties already amply endowed, at the expense of those less favorably situated. In other words, by enacting this "reform" regulators could find themselves simply increasing the cost to other customers of maintaining some contribution to system costs by the largest customers. As the staff of the New York Department of Public Service recently concluded, retail wheeling "takes exactly those customers that tend to have viable competitive options and gives them even more options with which to leverage for discounts from the local utility."[20] It is obvious why the largest customers would want this, and it is at least equally clear why everyone else has good cause to object.

3.2 RETAIL WHEELING IS NOT INEVITABLE

The greatest single obstacle to the retail wheeling agenda may be its reliance on explicit endorsements by the very regulators charged with overseeing the systems that the proponents want to displace. For all the reasons canvassed earlier, retail wheeling has nothing to do with technological change or the evolution of new kinds of marketplace service and competition. Instead, it has everything to do with amending state regulators' policy guidelines and accounting conventions. Telling those regulators that retail wheeling is "inevitable" amounts to hoping that they will abandon their own prerogatives and simply give proponents what they want.[21] The results so far have been very much otherwise.

Nonetheless, a common tactic in the retail wheeling debate is to claim that the practice is breaking out, or about to break out, all over.[22] Some proponents of retail wheeling even insist that it has been with us for years, and in one very narrow sense they have a point: there is a long if scarcely honorable tradition of reserving inexpensive power supplies for the exclusive benefit of favored constituents with large electricity appetites and at least comparable political clout. The aluminum industry has been a frequent beneficiary, but special deals have been struck at various times for parties as varied as Shearson Lehman Brothers, Owens-Corning Fiberglass, the General Motors Corporation, and California's Lawrence Livermore Laboratory.[23]

This is a practice almost as old as commerce in electricity. Whatever its merits—and its net effect almost certainly is to suppress job growth[24]—it does not force a commodity model on the retail electricity business or challenge utilities' portfolio management role. It is astonishing, moreover, to see this kind of selective governmental intervention in the marketplace embraced as "retail wheeling" by those who claim to be advocates of unfettered competition.

ALL ATTEMPTS TO INTRODUCE BROAD-SCALE RETAIL WHEELING IN THE U.S. HAVE FAILED.

Nor have these analogies proved persuasive to state level decisionmakers. All attempts to introduce broad-scale retail wheeling in the United States have failed. The federal government said no in legislation passed late in 1992; industrial interests had "urged Congress to allow retail wheeling as part of the Energy Policy Act."[25] Congress responded by *prohibiting* federally ordered retail wheeling and leaving unchanged the authority of individual states to act on the issue.[26]

Then, as the debate shifted to the state level, New Mexico, Rhode Island, Texas, and California put the idea on hold in 1993.[27] A Michigan administrative law judge not only turned down a proposed retail wheeling "experiment," but concluded that his commission lacked authority to mandate retail wheeling. Others are taking a look at the issue; most if not all can be expected to decline once they have tallied all the costs and benefits. The Appendix to this paper gives further details on the state-by-state campaign. This is not to suggest that states will suddenly abandon special electricity subsidies for favored industries; Nevada is the latest entrant in that particular sweepstakes. Thus, when the headline in *The Energy Daily* of July 7, 1993 read "Nevada Adopts Retail Wheeling Bill," a less newsworthy but more accurate version would have been "Nevada Legislature Tries to Lure Steel Plant from Arizona."

When proponents try to expand the scope of retail wheeling, however, the same motivations that drove Nevada's bill begin to work against them. The first state to accept the retail wheeling model will be putting its own utilities in play with no assurance of reciprocity from

neighboring jurisdictions. Or, in the more pungent terms of one New Mexico commentator, "If you're the only kid on the block saying 'play with my toy,' then everyone will play with your toy."[28] Formidable coalitions against retail wheeling are emerging across the United States, as evidenced most recently in a Joint Declaration signed by fifty-odd institutional representatives of consumer, low-income, independent-power, energy efficiency, and environmental interests.[29] Moody's Investors Service acknowledged the strength of such groups in a pivotal state when it reaffirmed bond ratings for two major California utilities, "in part because the environment for retail wheeling in California is not favorable."[30]

FORMIDABLE COALITIONS AGAINST RETAIL WHEELING ARE EMERGING.

No discussion of this topic is complete without analogies to recent infusions of competition into the airline, telecommunications, and natural gas industries. Yet it bears repeating that the issue is not whether the retail electricity business will become more competitive, but on what terms that competition should proceed. And none of these case studies lends much plausibility to the retail wheeling option.

For example, regulatory reform for telecommunications was driven by a growing array of options for physically bypassing the transmission system;[31] regulators never supplemented these options by creating the illusion of bypass. At considerable cost, the natural gas industry was reorganized around a commodity model for some retail markets—but it took a decade of focused federal regulatory intervention and there was little if any consumer or environmental opposition. For airlines, the regulatory action most comparable to retail wheeling would have been to allow passengers on United or American flights to designate Southwest as their carrier—without changing planes or destinations.

THE COUNTRIES THAT HAVE INSTITUTIONALIZED RETAIL WHEELING USED THE MANDATE OF THEIR CENTRAL GOVERNMENTS.

The handful of countries that have institutionalized retail wheeling used the mandate of central governments. That option is foreign to U.S. electric regulatory tradition and prohibited by U.S. law, as noted earlier. Moreover, the examples set abroad are proving to be anything but compelling.

The most celebrated case in point is the United Kingdom. In March 1990, a determined Thatcher administration executed a nationwide "privatization" of a wholly state-owned generation and transmission system. At a stroke, what had been one gigantic nationwide generating company became two gigantic nationwide generating companies engaged in a less than robust competition. Also announced was a phase-in of retail wheeling. Nuclear power plants were shepherded into a special status that effectively exempted them from competitive pressures. Excerpts from a November 1992 review by the *Financial Times* of London provide an eloquent overall assessment:

- "In the long runup to privatization, a number of factors combined to pull the plan far from its original aims and to produce a hybrid system which has caused many new difficulties without establishing a fully commercial market . . . The protected market shares of nuclear, natural gas and, possibly, British Coal, have pushed the area open to competition to the margins of the system.
- The system seems particularly ill-adapted to changes intended to redirect electricity generation or to reduce electricity consumption for environmental reasons.
- The benefits which were promised . . ., namely cheaper prices, have not emerged, and even the biggest consumers have complained . . . that the prices in the new system are making their businesses uncompetitive against companies in the rest of Europe.
- The new system in the U.K. has been closely studied by many other countries but is unlikely to be imitated."[32]

In July 1993, the U.K.'s principal electricity regulator published an equally ominous review of recent developments:

- "I have once again received strong complaints about increasing prices in the electricity Pool . . . If present prices are maintained, overall Pool Selling Price will be nearly 20 percent higher than last year, following an 8 percent increase over the previous year.
- The need to cover avoidable costs does not justify any further price increase—nor did it justify a price increase as high as the recent one.
- There is widespread concern at the perceived ability of major generators to raise prices at will. The position of market power which the major generators hold in generation has adverse implications for the effectiveness of competition in supply."[33]

These problems certainly are not outgrowths exclusively or even primarily of retail wheeling; obviously British wholesale markets are still far less competitive than many of their U.S. counterparts. But the U.K.'s loss of luster has clear ramifications for claims that retail wheeling is politically irresistible. Other unwelcome outgrowths of the new U.K. regime were a fifty percent reduction in research and development outlays and strong incentives for distribution companies "to sell more electricity as this is the only way that they can earn revenue."[34] In mid-1993, the U.K. electricity regulator responded—tardily and ironically—with an effort to break the link between the distribution companies' profits and their sales volumes.[35]

The Norwegian case is even less mature, but it already offers cautionary tales. Restructuring began in January 1991; robust retail wheeling options are available only to large customers, who are using them to take advantage of depressed spot market prices induced by large power surpluses. "Most of the current contracts are . . . short term, one year is the most common."[36]

No Norwegian institution is acting as an electric-resource portfolio manager; instead, a scramble is on to use up the existing portfolio. Utilities are introducing promotional practices in efforts to boost electricity consumption, which—at 19,000 kWh per household per year—already ranks among the highest in the world.[37] Utilities have no incentive to invest in end-use efficiency.[38] Norway is unique in its virtually exclusive reliance on an overbuilt hydropower system, but these policies are destroying potentially lucrative and socially productive opportunities to displace fossil fuels elsewhere. For any country whose utilities retain significant fossil dependence, the environmental implications of the Norwegian model should be appalling.

4.
SUSTAINABLE ENERGY FUTURES

Retail wheeling advocacy begins from the incontestable premise that commodity markets are more competitive when there are multiple buyers and sellers of the commodities. It errs in its attempt unreflectively to impose that insight on retail markets for electricity services, where a commodity orientation is both economically and environmentally inappropriate.

But this same orientation is well suited to wholesale markets, as the framers of the National Energy Policy Act understood; even as they were ousting federal authorities from any role in promoting retail wheeling, they were working to install the prerequisites for competitive commodity markets at the wholesale level. If 3,000-odd utilities can choose freely among an even wider universe of potential generators and brokers, incentives to maximize efficiency and minimize costs of generation will become much stronger. That is also the principal social benefit typically claimed for *retail* wheeling. If we can get it by reforming wholesale markets, partisans on every side of this issue will have cause to rejoice. That goal is not yet realized and abundant barriers remain to be eliminated, which is one more reason for a large number of potential allies not to get sidetracked on peripheral disputes.

THE CASE AGAINST RETAIL WHEELING IS NOT AN ARGUMENT FOR PERPETUATING THE STATUS QUO.

Moreover, the case against retail wheeling is not an argument for perpetuating the status quo in utility regulation. Traditional cost-of-service regulation hardly motivates utilities to be least-cost service providers and portfolio managers; instead, as documented extensively elsewhere, it perversely ties utilities' profits to their energy sales volumes. Equally perversely, it also tends to reward utilities' shareholders based—in Tom Page's phrase—on "tonnage of capital expended" by utility managers.

These problems are not intractable; indeed, they increasingly are recognized as largely unintended outgrowths of an obsolete system of price regulation. Modern regulators want performance-based systems that do not bias utilities' investment choices inappropriately. Achieving that objective requires first breaking the link between utilities' profits and sales, and then tying those profits systematically to progress in improving operating efficiencies, reducing customers' bills, and minimizing environmental costs.

The first of these initiatives is straightforward, and represents a substantial step forward by itself. Mechanisms for "decoupling" profits from sales are in place in California, New York,

and Washington; Oregon and Montana should follow soon, and the issue is now on every state's agenda as a result of the National Energy Policy Act.[39] There are several proven "decoupling" options; they operate through regular but extremely modest rate fluctuations in both directions (which are not intended to affect utilities' overall profitability).[40]

Balanced systems of performance-based rewards are more complex, but can draw on an extensive base of experience around the nation. The point is to ensure that utilities' earnings opportunities are not skewing choices among purchased power, utility-owned resources, and energy efficiency improvements. More than a dozen states are experimenting with "shared savings" systems, which reward utilities for investment in cost-effective energy efficiency improvements. Extensive interest has emerged also in systems for acknowledging exemplary performance in fuel and power procurement. Former Maine regulator David Moskovitz has championed the principle that utilities' shareholders should be compensated based on relative changes in customers' average bills, compared to similarly situated utilities. Along the lines of the Scott Hempling proposal noted earlier, regulators also could respond to poor performance by soliciting new candidates for the culprit's retail-service franchise.

As to environmental costs, simply ensuring that utilities are held responsible for minimizing financial risks from plausible carbon dioxide regulations is a strong step in the right direction.[41] This is a further addition to the long list of benefits that utilities can secure much better in their role as systemwide portfolio managers than any substitutes that retail wheeling regimes are likely to produce.

All of these systems represent a decisive break with conventional practice, but it is not in the provision of incentives that their innovations lie. The soundest cliche of regulatory policy may be that "all regulation is incentive regulation."[42] The challenge lies in aligning those incentives with societal interests.

Once that is accomplished, through systems that combine decoupling with the performance-based features discussed above, portfolio management can be left largely in the hands of utility managers. The need for regulatory oversight of utilities' procurement decisions varies inversely with the rationality of their incentive systems; a few states have found themselves recently at the wrong end of both spectrums, and are busy setting matters right.

Increasing competition should both pervade and complement the wholesale-commodity and the retail-service regimes outlined in this section. Wholesale markets will open to receive more independent generators; they also will accommodate conservation-based power transfers, in which inexpensive energy savings become the basis for more lucrative resale of the saved energy. A defect of traditional cost-of-service regulation is that utilities typically have no financial incentive to invest in energy savings that cost less than wholesale power prices; in general, retail sales of inefficiently used electricity are more lucrative than any resales of the saved energy, because the retail price per kilowatt-hour is almost always higher and the utility gets to keep the difference. Again, the solution lies in combining decoupling mechanisms with performance-based rewards and penalties.

In their retail functions, utilities must contend with both increasingly attractive self-generation technologies and a host of independent companies with energy efficiency options

to sell. But this competition will turn on who can provide the best energy service at the lowest total cost to the customer; it is a battle of energy-service bills, not energy-commodity costs. That is good news for both the economy and the environment.

Under this system, those who want access to the integrated grid must share utilities' costs of creating and sustaining the balanced resource portfolio that is needed in order to maximize the benefits of the grid to society. Those costs should be allocated based on the relative responsibility of customer classes for the addition of new resources, whether efficiency- or generation-based.[43]

RETAIL COMPETITION SHOULD BE A BATTLE OF ENERGY SERVICE BILLS, NOT ENERGY COMMODITY COSTS.

If individual customers can get a better deal by leaving the grid, they are free to take it; utilities' continuing challenge will be to minimize the number of customers for whom that condition holds. Part of the answer may be increased pricing flexibility, but the best way to meet the challenge is simultaneously to help customers seize all cost-effective efficiency options and to minimize utilities' generation and procurement costs.[44] The result should be increased choice and competitive benefits for all customers, not just those politically potent enough to win favorable cost accounting under retail wheeling.

This system is not hypothetical or visionary; it is emerging across much of the United States. Its strength comes in part from its intrinsic appeal to the very utilities and industries that are central to its success; it stakes out their future in the arena of value-added services, as opposed to a commercial existence based on the churning of cheap commodities. It is in part because retail wheeling advocates are pulling in exactly the opposite direction that they are unlikely to succeed.

Ironically, among the biggest potential winners under the service/portfolio model are the large industrial customers that some see as retail wheeling's principal constituency. Appropriately, these customers have been winning increased access to the very utility-financed energy efficiency investments that retail wheeling imperils, and they have been the largest beneficiaries of substantial reductions in inflation-adjusted electricity costs.[45]

From 1981 to 1992, the U.S. electricity bill actually dropped by about five percent in real terms despite a growth in electricity sales of 28 percent; this record contrasts sharply with that compiled between 1973 and 1981, when the same annual costs *increased* by almost 78 percent although electricity sales increased by only 25 percent.[46] Industrial customers have fared even better in recent years than those figures indicate; over the last decade, average industrial electricity prices dropped, as a fraction of average residential prices, from more than 70 percent (in 1982) to about 60 percent (in 1992).[47] Regulators might be forgiven for wondering whether wrenching course changes should wait until something is more obviously broken.

5.
CONCLUSION

If utilities were going to live or die solely by how low they could drive the short-term commodity price of electricity, they would have every reason to resist investments to reduce pollution or to help customers save energy. Less responsible companies would gain an unjustified advantage, even as the industry's overall marketing strategy returned with a vengeance to an ancient and discredited slogan: "the more you use, the less you pay." That particular incentive system left a legacy of both economic and environmental waste.

There is no disputing that the utility business is changing and that competition for energy services is increasing. Utilities cannot expect either to build power plants or provide energy conservation services unless they do it better than a host of independent companies. Regulators should accept and welcome that kind of genuine competition; it is the sham variety that they should reject.

Everyone stands to gain from a search for better energy services that cost less; today's increasingly competitive marketplace is yielding a host of exciting new technologies and efficiencies. As a result, every utility must earn its customers' business, and those that cannot will not survive. But beware those who would rewrite the rules of competition for their own benefit, and drive a wedge between society's and utilities' interests.

APPENDIX I: NOTES ON SOME RECENT RETAIL WHEELING CAMPAIGNS

A. NEW MEXICO, 1993

State Senator Tom Wray's SB 501 was a retail-wheeling purist's delight. It would have given retail customers automatic access to wholesale market prices, while allowing them to return at any time to conventional utility pricing without penalty. It also guaranteed that no customer class could be forced to bear higher costs as a result of others' retail wheeling elections, which could only have been achieved over the prostrate forms of aroused and distressed utility shareholders. An environmental/utility coalition helped extinguish S.B. 501 in March of 1993; the issue was referred to an "interim committee" for study over the next two years.

B. RHODE ISLAND, 1993

The instigator here was Hydro-Quebec, which sought to win new industrial revenues from Rhode Island. The proposed deal, while often characterized as retail wheeling for industrial customers, was more complex; it would have required a series of transactions involving the state's Public Utilities Commission, its regulated utilities, and their industrial customers. Key terms of the offer were as follows:

- Hydro-Quebec would sell 250 megawatts at a 65 percent capacity factor for four years on a take-or-pay basis;
- The price would start at 4.4 cents per kilowatt-hour and would escalate automatically over the four year period by a total of at least 20 percent, not including charges for using the New England transmission system and a supplemental escalator tied to the spot market price of oil (for every dollar increase in that price above $17 per barrel, the electricity price would increase by 6 percent).

In the view of analysts hired by the Rhode Island Public Utilities Commission, these redirected dollar flows would have shifted costs of about $26 million per year to Rhode Island's non-industrial customers, with rate impacts of up to 40 percent.[48] A PUC press statement issued in May of 1993 diplomatically declared "that the power offered does not meet Rhode Island's needs at this time."[49]

C. TEXAS, 1991

Proponents of retail wheeling sometimes cite a proposed Texas PUC rule that would:

> allow cogenerators to wheel power from a qualifying [generating] facility (QF) to a portion of existing or new utility retail load. The utility would buy power from a QF at a price agreed to between the QF and the customer, and then resell it to the customer at no markup except for a compensatory transmission service fee. Since these transactions would be allowed only when the utility needs additional capacity and will be limited to no more capacity than the utility is otherwise seeking to add itself, this proposal will not create a "stranded investment" problem for the utility. Such transactions would also be limited to 10 MW or more in order to avoid administrative complications.[50]

One outgrowth of all these "avoided administrative complications," of course, is that large industrial customers would get the best of all worlds at everyone else's expense: whenever new power supply were available at costs below system average costs, they would reserve the full economic benefit for themselves. When conditions were otherwise, they could go on buying power at system average rates. Under the circumstances, it is not surprising that the author and proponent of the amendment was "a voluntary association of large industrial electricity consumers in the State of Texas."[51] The proposal has attracted no discernible PUC interest since its publication in December of 1991.

D. NEVADA, 1993

Nevada's "retail wheeling bill" (SB 231) amended Chapter 704 of the Nevada Revised Statutes. It only applied to new industrial loads that agreed to remain in Nevada for 30 years, post appropriate security to defray any utility-incurred costs [section 2], make a capital investment of $50 million in Nevada, and were "engaged in the primary trade of preparing, fabricating, manufacturing or otherwise processing raw material or an intermediate product through a process in which at least 50 percent of the material or product is recycled on site" [section 4]. The number of companies that were in a position to meet all of these conditions did not exceed one.

For such a business, "the public service commission of Nevada may authorize a public utility that furnishes electricity for the business to purchase or transmit a portion of the electricity provided to the business to reduce the overall cost of the electricity to the business" [section 2]. The Commission must "ensure that the rates or charges assessed to other customers of the public utility do not subsidize the cost of providing service to the business."[52]

When this article went to press, the steel rolling mill that inspired all these legislative gyrations was leaning toward relocation in Arizona.

E. MICHIGAN, 1992–1994

The Association of Businesses Advocating Tariff Equity (ABATE) filed an application in August 1992 to set aside for its members 150 MW of new power supply whenever Michigan utilities require additional capacity. Participants in this "experiment" would be required to have a minimum demand of 5 MW; they would be able to assign their purchase commitment to other customers, and they could resume service at otherwise applicable electricity prices after five years without penalty. Also seeking permission to undertake comparable experiments were the Dow Chemical Company and several other entities, including a number of Michigan colleges and universities.

Staff for the Michigan Commission calculated that the proposed experiment would shift costs to nonparticipants totalling at least $41 million per year. Supplemental costs significantly above even that sum would follow inevitable increases in utilities' overall cost of capital.[53] A utility witness acidly concluded that "dollars will be wheeled out of the pockets of nonretail wheeling customers and into the pockets of retail wheeling customers and their new suppliers."[54] A senior Commission staffer offered a related objection:

> "[T]he industrial customers want the best of both worlds; protection for most of their supply in terms of rates, conditions of service, etc. as they have under current regulatory law and practice and, at the same time, permission to take advantage of windows of opportunity that might present themselves due to supply niches beyond the local utility system."[55]

On August 27, 1993, an Administrative Law Judge filed a 108-page Proposal for Decision, recommending against adoption of the proposed experimental retail wheeling programs.[56] The proposed decision included findings that (1) state Commissions are not preempted by federal law from authorizing retail wheeling;[57] (2) Michigan state law does not grant the Commission authority to mandate retail wheeling, although regulation of voluntary programs is permitted; (3) third-party providers of retail wheeling would be delivering the functional equivalent of public utility service and would have to obtain certificates of public convenience and necessity; (4) proponents' specific retail wheeling proposals are contrary to the public interest, because nonparticipants "will most likely be negatively affected";[58] (5) retail wheeling implies changes in utilities' obligation to serve participants; (6) utilities should be encouraged to develop new rates and service options to meet the needs of their customers; and (7) the Commission should authorize its utilities to negotiate "voluntary retail wheeling programs" when they need new supplies of electricity ("[t]he Commission should address these voluntary retail wheeling programs on a case-by-case basis to determine whether they are in the public interest"[59]).

As of March 1994, the matter remained under consideration at the Michigan Commission.

APPENDIX II:
JOINT DECLARATION ON THE ELECTRIC UTILITY INDUSTRY

We are customers, suppliers, constituents, and employees of the electric utility industry. While we do not agree on all issues surrounding the future of the industry, we believe that regulatory choices should respond to concerns of system-wide cost minimization, customer choice, customer equity, reliability of service, risk reduction, and environmental stewardship. We believe that these values can be reconciled, and we see many opportunities for positive change in the industry. For example, we believe that energy efficiency improvements and nonpolluting generation technologies can work to the advantage of both utility customers and society as a whole. We generally support a more competitive electricity business, and many of us have worked to enact legislative and regulatory reforms that create more opportunities for non-utility providers and more consumer choices.

We also unite in opposing a concept called "retail wheeling." So-called "retail wheeling" refers to a fictional exclusive connection over an electric transmission system between a single customer and a power supplier other than the local utility. Of course, in actual fact, the power from generators attached to a transmission network is totally intermingled throughout the grid. State regulators are responsible for dividing these systems' total costs fairly among all their users. By endorsing the fiction of retail wheeling, regulators would find themselves reallocating literally billions of dollars in costs associated with the existing power systems. At the same time, they would be redefining the retail electricity business as a kind of commodity exchange, run on the discredited principle of "the more you use, the less you pay." Retail wheeling encourages utilities to ignore making investments that will lower utility costs and environmental impacts over the long run.

We see in such a system many losers and relatively few winners. Retail wheeling doesn't move electricity but it does move dollars and change incentives. Among the losers would be those who consume relatively small quantities of electricity (most of us) and those with a stake in improved environmental quality (all of us).

This outcome, which supporters compare unpersuasively to recent changes in telecommunications and natural gas regulation, is neither desirable nor inevitable. Retail wheeling is not "deregulation"; it would require huge, complex and continuing new exercises of regulatory authority. No technological or other imperative compels this result, which involves a policy decision that rests with our state legislators and regulators. We urge them to reject retail wheeling and to endorse something much better: the utility industry's transition toward a structure that is at once more competitive and more attuned to pressing concerns of customer equity and environmental stewardship.

CONFIRMED SIGNERS OF JOINT DECLARATION AS OF 3/2/94

CONSUMER GROUPS

Citizens Advisory Panel, NY [Gordian Raacke]

Colorado Office of Consumer Counsel, CO [Ron Binz]

Maryland Office of People's Counsel, MD [John M. Glynn]

Nevada Attorney General's Office of Advocate for Customers of Public Utilities, NV [Fred Schmidt]

Texas Citizen Action, TX [Tim Curtis]

Toward Utility Rate Normalization, CA [Bob Finkelstein]

INDEPENDENT ENERGY SERVICE COMPANIES

Citizens Conservation Corporation, MA [Stephen T. Morgan]

Energy Masters Corporation, MO [Donald C. Smith]

EUA Cogenex Corporation, MA [Joseph S. Fitzpatrick]

EUA Nova, RI [Richard Eannarino]

Heatac General Systems, PA [Ron Robertson]

National Association of Energy Service Companies, DC [Terry E. Singer]

Onsite Energy, CA [Richard T. Sperberg]

Proven Alternatives, CA [Richard Miller]

SYCOM Enterprises, NJ [S. Lynn Sutcliffe]

Viron Energy Services, MO [George Diehl]

INDEPENDENT POWER PRODUCERS

American Wind Energy Association, DC [Randall Swisher]

California Solar Energy Industries Association, CA [Lee Nelson]

Kenetech Windpower, CA [Robert T. Boyd]

Magma Power Company, CA [David Olsen]

Solar Energy Industries Association, DC [Scott Sklar]

LABOR

IBEW Local 18, Los Angeles, CA [Brian D'Arcy]

IBEW Local 47, Diamond Bar, CA [Rae Sanborn]

IBEW Local 57, Salt Lake City, UT [Blaine Newman]

IBEW Local 77, Seattle, WA [Ray Warren]

IBEW Local 111, Denver, CO [Bob Mason]

IBEW Local 125, Portland, OR [Bill Miller]

IBEW Local 266, Phoenix, AZ [Terry Miller]

IBEW Local 465, San Diego, CA [Michael Avitt]

IBEW Local 611, Albuquerque, NM [Chris Frentzel]

IBEW Local 768, Kalispell, MT [Alan Solum]

IBEW Local 1116, Tuscon, AZ [Kyle Carl]

IBEW Local 1245, Walnut Creek, CA [Jack McNally]

IBEW Local 1260, Honolulu, HI [Norm Ahakuelo]

IBEW Local 1339, Orchard Park, NY [Charles Conine]

Utility Workers Union of America, Local 246, Los Alamitos, CA [Carl Wood]

LOW-INCOME ADVOCACY GROUPS

Human Resource Council, MT [Jim Morton]

The Opportunity Council, WA [Michael Karp]

Vermont Low-Income Advocacy Council, VT [John J. McCullough III]

PUBLIC INTEREST GROUPS

American Planning Association, FL [Marcia Elder]

Clean Air Council, PA [Elizabeth B. Thompson]

Conservation Law Foundation, MA [Armond Cohen]

Environmental Planning Lobby, NY [Lee Wasserman]

Greenpeace, DC [Fred Munson]

Izaak Walton League of America, MN [Paul Hansen]

Komanoff Energy Associates, NY [Charles Komanoff]

Land and Water Fund of the Rockies, CO [Frances M. Green]

Legal Environmental Assistance Foundation, FL [B. Suzi Ruhl]

Mid-Atlantic Energy Project, NJ/PA [Daniel W. Rosenblum]

Natural Resources Defense Council, NY [Ralph Cavanagh]

Northwest Conservation Act Coalition, WA/OR/ID/MT [K.C. Golden]

Pace University Center for Environmental Legal Studies, NY [Richard Ottinger]

Planet Well, FL [Linda Young]

Sierra Club, CA [Rich Ferguson]

Southern Environmental Law Center, VA [Jeff Gleason]

Vermont Energy Investment Corporation, VT [Beth Sachs]

Vermont Public Interest Research Group, VT [Jenny Carter]

NOTES AND REFERENCES

1 The phrase appears in a dissenting opinion by Justice Brandeis. See New State Ice Co. v. Liebmann, 285 U.S. 262, 301 (1932).

2 The figure reflects calculations by NRDC's Allan Chen, based on data from the U.S. Energy Information Administration's *Monthly Energy Review* (March 1993) and GNP deflators from the *Economic Report of the President 1992*. Historically, electric utilities have been the nation's most capital-intensive industry; for example, over the two years ending in 1987, their investments in plant and equipment exceeded the combined total for all of America's airlines, railroads, mines, aerospace companies, and iron and steel foundries. "Capital Spending to Rise Sharply in 1988," *Electrical World* (January 1988), p. 29 ($65 billion for electric utilities versus $64 billion for the other five industrial groups combined, for 1986–1987). In the 1990s utilities' capital investment has dropped, but still exceeds $20 billion per year. "Mountain of Imponderables Hides Industry's Future," *Electrical World* (November 1992), p. 10 (estimated $23.7 billion of electric-utility construction outlays in 1992, $15.9 billion of which covered transmission and distribution).

3 Data are for 1992, from the March 1993 edition of U.S. DOE's *Monthly Energy Review*. Energy input at U.S. electric utilities approached 30 quadrillion Btu; total U.S. energy consumption was just over 82 quadrillion Btu.

4 Data from [3]. Total U.S. fossil fuel consumption, in quadrillion Btu, increased by less than four percent between 1973 and 1992. Petroleum and natural gas use actually declined. In Btu per dollar of gross domestic product, the U.S. economy's energy needs dropped by more than 26 percent.

5 A 1993 survey reports that "[t]he independent power industry is now contributing 47,597 MW to the U.S. electricity supply, and has 93,000 MW under construction or in various states of development." *Electrical World* (April 1993), p. 17. The projected capacity additions are dominated by gas technologies (41%) and hydropower (30%), with other renewables and coal accounting for 13% and 17%, respectively. In 1991 and 1992 alone, 254 independently owned projects went into operation, totalling more than 9,000 MW.

6 Two of the grids cover Quebec and Texas, respectively. The other two divide the remainder of the continent north of the Mexican border.

7 See, for example, J. A. Casazza, "The Changing World of Electric Power Transmission," *American Power Conference Address* (April 14, 1993), p. 2 ("Coordination of individual company plans on a regional basis was essential and generally practiced . . . most of the transmission systems developed in the United States as if they were a single system even though there were many different owners"). All discussions of transmission in this paper owe a substantial debt to Jack Casazza of CSA Energy Consultants and Jim Jones of the Bonneville Power Administration.

8 For an excellent overview of the market barriers, see *Building Energy Efficiency*, U.S. Congress Office of Technology Assessment (May 1992), pp. 73–85 (outlining numerous reasons "why energy efficiency has not been implemented to the level that appears economically justified").

9 *Policy Implications of Greenhouse Warming*, National Academy of Sciences Committee on Science, Engineering and Public Policy (1991), p. 74.

10 "Joint Comments of the Natural Resources Defense Council and the Pacific Gas and Electric Company on the U.S. Department of Energy's National Energy Strategy" (July 1990), p. i. For

extended variations on the same theme, see *Partnerships to Progress: The Report of the President's Commission on Environmental Quality* (1993), pp. 28–30 (estimates of the technical potential for cost-effective electric efficiency "range between 30 and 75 percent of total electric use"); Office of Technology Assessment [8]; Alliance to Save Energy et al., *America's Energy Choices* (1991); American Gas Association et al., *An Alternative Energy Future* (April 1992); U.S. Department of Energy, *National Energy Strategy: Powerful Ideas for America* (February 1991).

11 Veronika Rabl, personal communication (March 1, 1994), Electric Power Research Institute, P.O. Box 10412 Palo Alto, CA 94303, tel 415-855-2401, fax 415-855-2954.

12 California Public Utilities Commission, Decision 93-09-078 (September 17, 1993), p. 24.

13 National Association of Regulatory Utility Commissioners (NARUC), *Profits and Planning Through Least-Cost Planning* (November 1989), p. 57 (from "Resolution in Support of Incentives for Electric Utility Least-Cost Planning," adopted July 27, 1989).

14 See National Energy Policy Act of 1992, sections 111 and 115.

15 This trend has been guided and chronicled in a series of excellent publications by the National Association of Regulatory Utility Commissioners (NARUC); see, for example, volumes I and II of NARUC's *Least-Cost Utility Planning Handbook*, and the proceedings of NARUC's four national conferences on integrated resource planning.

16 This point figures strongly in the opposition to retail wheeling from the American Wind Energy Association and the Solar Energy Industries Association. See *Wind Energy Weekly* (September 13, 1993), p. 1.

17 Northwest Power Planning Council, *1991 Northwest Conservation and Electric Power Plan*, v. II, part II (1991), pp. 793–795.

18 Professor Joskow presented this dichotomy at an Aspen seminar convened by the Energy Foundation in July of 1993. Readers should not assume that he endorses my application of it.

19 As Armond Cohen has pointed out, "[a]t its core, retail wheeling . . . seek[s] to substitute short-term contractual decisions" for coherent system planning. Armond Cohen, *Retail Wheeling and Rhode Island's Energy Future: Issues, Problems, and Lessons from Europe* (July 1993), p. 8. The same point is echoed strongly by the Northwest Power Planning Council in *Restructuring of the Electric Utility Industry: Implications for the Goals of the Northwest Power Act* (January 24, 1994), p. 30.

20 Raj Addepalli et al., Staff Report, New York Department of Public Services, Case No. 93-M-0229 (October 8, 1993), p. 33 (evaluation of proposed retail-wheeling system for customers with demands of 2 MW or more).

21 See, for example, Douglas Houston, *Demand-Side Management: Ratepayers Beware!* (November 1992), p. 33 ("[u]nregulated suppliers eventually could break into captive retail markets, in particular to serve industrial customers"); Bernard Black and Richard Pierce, "The Choice Between Markets and Central Planning in Regulating the U.S. Utility Industry," *Columbia Law Review*, v. 93 (1993), pp. 1339, 1353 (quoting predictions that retail wheeling is inevitable within two to five years).

22 See, for example, "Utilities Brace for a Buyer's Market in Electricity," *New York Times*, (May 9, 1993), p. 10F: "At least four states—California, Michigan, New Mexico and Texas—are experimenting with, or considering, access at the retail level."

23 See, for example, R. John Dingle, "Retail Wheeling in the Electric Utility Industry: It's Working," *Cogeneration and Resource Recovery* (July/August 1992); Mary O'Driscoll, "Elcon Study Tracks Retail Wheeling Developments," *The Energy Daily* (July 26, 1993), p. 1 (examples of retail wheeling for the benefit of particular end users, including Dow Chemical and Aetna Life and Casualty).

24 This form of retail wheeling shifts costs from large, energy-intensive businesses to entities that use less electricity. Yet "nearly all of the U.S. industrial job growth in the last five years has come from firms with less than 20 employees; job growth in larger firms has been modest or negative." Armond Cohen, *Retail Wheeling and Rhode Island's Energy Future: Issues, Problems, and Lessons from Europe* (July 1993), p. 25 (citing April 1993 report by Cognetics, Inc.). For an extended analysis of promotional rates, see Ralph Cavanagh, "Responsible Power Marketing in an Increasingly Competitive Era," *Yale Journal on Regulation*, v. 5, no. 331 (1988).

25 "California's Electric Services Industry: Perspectives on the Past, Strategies for the Future," Division of Strategic Planning, California Public Utilities Commission (February 1993), p. 126 (citing Letter from "A Coalition of Industrial Electricity Users" to The Honorable John Dingell, June 16, 1992).

26 Section 722 of the Energy Policy Act provides in part that "No order issued under this Act shall be conditioned upon or require the transmission of electric energy (1) directly to an ultimate consumer or (2) to, or for the benefit of, an entity if such electric energy would be sold by such entity directly to an ultimate consumer . . . Nothing in this subsection shall affect any authority of any State or local government under State law concerning the transmission of electric energy directly to an ultimate consumer."

Some contend that federal law now leaves states without authority to order retail wheeling. See "Written Comments of Municipal Utilities on Strategies for Regulating Investor-Owned Utilities" (March 15, 1993), CPUC, pp. 15–16 (arguing that "the subject matter of transmission access for electricity in interstate commerce is preempted by federal law"). Detroit Edison has advanced a similar argument (Case Nos. U-10143 & U-10176, Direct Testimony of M.E. Champley (March 1, 1993) pp. 57-58), which an administrative law judge rejected. Proposal for Decision by Administrative Law Judge Robert E. Hollenshead, Case Nos. U-10143 & 10176 (August 27, 1993).

27 California's foray is the only one not addressed in the Appendix; it took the form of a general letter of inquiry by Senator Robert Presley, Chairman of the Senate Commission on Appropriations. He received vivid responses from a wide range of interests and has not taken further action.

28 *Electric Power Alert* (March 17, 1993), p. 1.

29 This "Joint Declaration on the Electric Utility Industry" was released on March 7, 1994; the text and a list of signers is attached as an Appendix.

30 "Moody's: Retail Wheeling is 'Inevitable'," *The Electricity Daily* (January 4, 1994), p. 1 (citing Moody's report on Southern California Edison and San Diego Gas & Electric).

31 See, for example, S. Coll, *The Deal of the Century* (1986), p. 358 (quoting U.S. District Court Judge Harold Greene):

> The basic fact of the phone industry is that it grew up when it was a natural monopoly: wooden poles and copper wires. Once it became possible to bypass this network through microwaves, AT&T's monopoly could not survive.

32 Andrew Holmes, *Privatising British Electricity: Restructuring and Resistance* (November 1992), pp. 1–2.

33 Office of Electricity Regulation [UK], *Pool Price Statement* (July 1993), pp. i–iii.

34 See Ragnar Lofstedt, *Energy Conservation in England and Wales—What Has Happened Following Privatization of the Electric Sector* (1993), pp. 117–118.

35 The new system appears in an undated document issued by the Office of Electricity Regulation entitled "The Supply Price Control: Proposals." The document proposes to fix total revenue per distribution company at 10 million pounds, "plus an allowance per customer served plus an allowance per kilowatt hour sold" (p. iii). The action responds to "concern that the present form of price control provides an artificial incentive for the [distribution companies] to sell more units, when in fact a more economic way of meeting customers' requirements might be through investments to reduce the amount of energy required" (p. iv). Unfortunately, this reform is set to expire with the onset of universal retail wheeling in 1998.

36 See Jan Moen, "A Review of Developments in Key Markets—Norway," *World Electricity*, 9 & 10 (November 1992), pp. 13.3–13.4. Full retail wheeling prerogatives are reserved for loads above 2 MW and 5 GWh.

37 See Moen [36], p. 13.3 (promotional tariffs to promote increased use of electricity for space heat); K. Livik et al., *Consequences For Tariffs and End-Use After Deregulation: Experiences From the Norwegian Utility Industry* (1993), p. 97 (mean household consumption).

38 See Livik et al. [37], p. 100: "Except in very special cases the deregulated market so far [has] created very few incentives for utility companies to invest in cost-effective customer energy efficiency . . . The Energy Act has caused frustration and uncertainty for both the utilities and consumers regarding the role of energy efficiency and DSM."

39 Section 111 requires every state to take up the issue within two years of the Act's October 1992 effective date. Washington recently reaffirmed its decoupling mechanism; see "As Puget Power Appeals Rate Case, Observers Hail PRAM Reprieve," *Clearing Up* (October 4, 1993), p. 11.

40 The point is simply to ensure that profitability is not affected by sales fluctuations that regulators did not anticipate when they determined appropriate price levels for utility services. For a comprehensive empirical assessment of decoupling systems in operation, see Joseph Eto, Steven Stoft, and Timothy Belden, *The Theory and Practice of Decoupling*, Lawrence Berkeley Laboratory (January 1994).

41 See R. Cavanagh, A. Gupta, D. Lashof and M. Tatsutani, "Utilities and Fossil Fuel Emissions: Who Bears the Risks of Future Regulation?," *The Electricity Journal* (March 1993), p. 64 (citing CO2 risk-shifting policies adopted recently by regulators in California, Oregon, and Wisconsin).

42 Peter Bradford, Chair of the New York Public Service Commission, either originated this phrase or should have.

43 An incisive review of these cost allocation issues appears in Marika Tatsutani, "Allocation of DSM Costs to Utility Customers," NRDC (September 1993); and Paul Centolella, Barbara Barkovitch, and Katherine Yap, "Cost Allocation for Electric Utility Conservation and Load Management Programs," National Association of Regulatory Utility Commissioners (February 1993).

44 A compelling case study is recounted in *California Energy Markets* (January 28, 1994), p.7: "In exchange for deferring a proposed cogeneration plant, [Southern California] Edison will pay [Rancho Mirage's Eisenhower Medical Center] up to $600,000 to install energy efficiency

measures in lieu of a rate discount . . . The special agreement with Eisenhower runs for 10 years."

45 See, for example, Jennifer Jordan and Steven Nadel, "Industrial Demand-Side Management Programs: What's Happened, What Works, What's Needed," Pacific Northwest Laboratories (March 1993), p. 5, concluding that "experience to date shows that successful programs can be designed and indicates ways to design even more successful programs in the future."

46 The cost figures reflect calculations by NRDC's Allan Chen, which are described in [2] above. Sales data are from *Monthly Energy Review*, U.S. Department of Energy, Energy Information Administration (March 1993), p. 91.

47 These data are drawn from the Edison Electric Institute's *1992 Statistical Yearbook;* they appear in Bruce Edelston, "Retail Wheeling: Prospects, Problems, Alternatives," *WECA Financial Forum* (January 20, 1994).

48 H. Yoshimura, "Evaluation of the Hydro-Quebec Firm Power and Energy Proposal," La Capra Associates (January 29, 1993).

49 "Statement Regarding Hydro-Quebec and Rhode Island Negotiations for Electric Power Sales" (issued May 1993, and referencing May 11, 1993 meeting between James J. Malachowski, Chairman of the Rhode Island Public Utilities Commission, and M.-Bernard Guertin, Director of External Markets for Hydro-Quebec).

50 Petition of Texas Industrial Energy Consumers for Amendment of PUC Substantive Rules 23.31 and 23.66 (filed December 3, 1991), p. 4.

51 Petition [50], p. 2.

52 Petition [50].

53 See Direct Testimony of John Abramson, Director of the Electric Division, Michigan Public Service Commission, Case Nos. U-10143 & U-10176 (March 1, 1993), pp. 22–23 (estimating $59 million per year impact on Detroit Edison's revenue requirement as a result of forced shift to use of more equity and less debt capital in company's capital structure in the aftermath of retail wheeling) and p. 49 (estimating Michigan utilities' potential loss of operating income under the experiment).

54 Direct Testimony of M.E. Champley, Vice President, Detroit Edison, Case Nos. U-10143 & 10176 (March 1, 1993), p. 42.

55 Direct Testimony of John Abramson [53], pp. 35–36.

56 Proposal for Decision by Administrative Law Judge Robert E. Hollenshead, Case Nos. U-1-143 & U-10176 (August 27, 1993).

57 See Proposal [56], pp. 60–61; the judge's very brief analysis relies exclusively on the disclaimer of intent to "affect" state authority over retail wheeling in section 722(3) of the National Energy Policy Act of 1992.

58 The Administrative Law Judge also concluded that "[i]n order for retail wheeling to be in the public interest, there should be a showing that there will be a net benefit to all ratepayers or at least a showing that customers not participating in retail wheeling will not be negatively affected." Proposal [56], p. 79.

59 Proposal [56], p. 108.

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I received a wealth of constructive and trenchant comments; I should note a particular debt to Ashley Brown, Jack Casazza, Richard Flynn, David Goldstein, Ashok Gupta, Bill Hogan, Charles Komanoff, Dan Lashof, James Malachowski, Alan Miller, Peter Miller, David Moskovitz, and Marika Tatsutani.

APPENDIX H

Summary Background - History of Deregulation of the Electric Utility Industry

Backgrounder
History of Deregulation of the Electric Utility Industry

The announcement by the California Public Utilities Commission (CPUC) to restructure the electric utility industry in California on April 20, 1994, along the lines of performance based ratemaking and direct access is the most powerful policy statement on opening up the electric utility to competition to date. The driving forces behind the CPUC's proposal are that California electric utilities' high electricity rates are not competitive, the urgent need for the State to attract and retain industrial and commercial businesses and the realization that the CPUC's regulatory processes that were put into place decades ago may no longer be appropriate to oversee the evolving structure of the electric utility industry. The CPUC's far-reaching proposal, which would allow all consumers to choose their source of electricity by the year 2002, set the standard by which all other proposals will be judged, making California the battle ground on which the electric utilities, their consumers and competitors will wrestle with the retail wheeling issue.

California has "***seized the day***" with this action, saying to the business community that California wants to help them become competitive, that business should relocate to California and to the residential customers that they will be given a choice to choose another supplier with lower prices instead of their local utility which they may perceive to be high priced and unresponsive to their needs.

Although the regulated electric utility industry has been engaged in competition for decades with the regulated and now deregulated natural gas industry, it has been only in recent times that the word "competition" has come to mean competition within the electric utility industry itself. Beginning in 1978 with the enactment of the federal Public Utility Regulatory Policies Act (PURPA) which, under Title II of PURPA, created a new class of power producers called Qualifying Facilities (QFs) that was given the right to require electric utilities to interconnect with them, provide backup power to them and purchase their power. The entry of QFs into the generation sector of the electric utility industry affected the need and timing of that need for new generation resources built by electric utilities, especially in California.

PURPA also provided substantial tax investment credits for renewable energy technologies. These tax credits and similar tax credits offered by California spurred a strong growth in wind and solar generation technologies in the State. Social issues, not competitive concerns, were driving the industry towards a larger and more diverse pool of generation resources. This was evident in the willingness of regulatory agencies to incorporate the higher cost attributable to renewable resources into the utility rates.

In the early 1980s, a period when electricity prices began a steep ascent (unremarkably, also a period where the post-prudence reviews of utility generating projects reached it peak), large nuclear generating station projects began to unravel, with

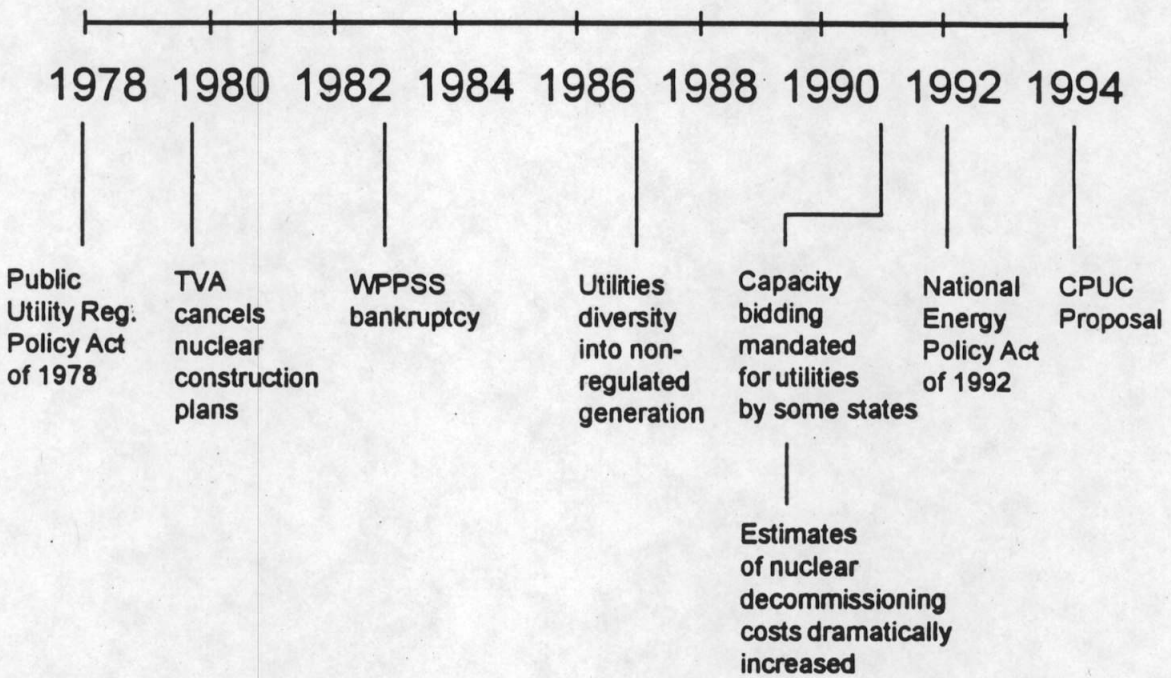
Tennessee Valley Authority canceling its nuclear construction plans and the Washington Public Power Supply System declaring bankruptcy. In the mid-1980s, the investor-owned utilities began to invest in non-regulated generation in order to reduce their shareholders' exposure to the regulatory agencies propensity towards imposing post-prudence reviews on their generation projects and the resulting denial of applications to ratebase the shareholders' investments in those projects on the basis that certain costs were imprudent or that since there were less expensive resources available to the utility the decision to build the generating station itself was an imprudent one.

In 1988 the Federal Energy Regulatory Commission (FERC) issued three notices of proposed rulemaking (NOPRs) that addressed FERC's perceptions of the appropriate forms of the PURPA framework. Although these NOPRs didn't result in any explicit rule changes, they signaled a new interest in competitive mechanisms. Following the NOPRs, FERC approved a number of wholesale transactions involving non-QF suppliers at market prices and in approving the Pacific Power and Light and Utah Power and Light merge, the FERC, in its concern over anti-competitive effects of the merger, included specific transmission access conditions for third party sellers.

In the late 1980s, the attention of the regulatory community shifted to the integrated resource planning (IRP) process as a means of accounting for environmental damages associated with different types of resources that could arise from the resource acquisition process. Although the consideration of externalities in resource planning originated in the east, the leadership on the issue quickly manifested it self in California. The accounting for externalities in the resource planning and procurement process boosted the stock of independent power producers who owned renewable resources and businesses specializing in energy efficiency resources. The introduction of externalities in the supply planning and acquisition process for investor-owned utilities impacted their existing utility generation resources. Externalities in the planning process resulted in need for additional capacity sooner than would have been under the non-IRP process and made some types of renewable generation such as geothermal resources cost-effective.

The federal electric utility competition agenda shifted from the regulatory arena to the legislative arena with the enactment of the National Energy Policy Act of 1992 (EPAct). EPAct introduced a new class of power producers named Exempt Wholesale Generators (EWGs) and authorized the FERC to mandate wholesale wheeling on all transmission systems, irrespective of whether the transmission systems were privately or publicly owned. Notably, FERC was not authorized to order retail wheeling, that aspect was left for the individual states to ponder. During the year following EPAct, several states have been legislatively-active, passing a few laws that authorized limited access to retail wheeling for potential state economic gain. Although California hasn't introduced any legislation on this issue, there will most assuredly be a number of bills for and against the opportunity for consumers to gain direct access as envisioned by the CPUC.

Timeline of Change
Electric Industry



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BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking on the Commission's Proposed Policies Governing Restructuring California's Electric Services Industry and Reforming Regulation	)	FILED PUBLIC UTILITIES COMMISSION APRIL 20, 1994 SAN FRANCISCO OFFICE R.94-04-031
Order Instituting Investigation on the Commission's Proposed Policies Governing Restructuring California's Electric Services Industry and Reforming Regulation	)	I.94-04-032

ORDER INSTITUTING RULEMAKING AND
ORDER INSTITUTING INVESTIGATION

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STATE OF CALIFORNIA

PUBLIC UTILITIES COMMISSION

PROPOSED POLICY STATEMENT ON RESTRUCTURING CALIFORNIA'S ELECTRIC SERVICES INDUSTRY AND REFORMING REGULATORY POLICY

SUMMARY

By this order, we open a rulemaking proceeding to consider a restructuring of California's electric services industry. The program we propose for comment would permit some consumers to choose direct access to the competitive market for generation services by January 1, 1996. Choice among competing generation service providers through direct access would be opened to all consumers by January 1, 2002. Simultaneous with our proposal to establish direct access for the state's consumers, we would replace traditional cost-of-service regulation with performance based regulation.

While our minds are open to modifications of our proposal, or even the substitution of what we could come to be convinced is a superior suggestion, we are single-minded in its objective--to lower the cost of electric service to California's residential and business consumers without sacrificing the utility's financial integrity. As we engage the state's stakeholders in a discussion over the next several months, our principal interest shall be to determine, with the assistance of parties, whether our proposal meets that objective.

The respondent utilities to this rulemaking will, and interested parties may, file comments on these proposed rules within 30 days. The respondent utilities will, and parties may, file reply comments 15 days thereafter. Subsequent to those filings, we intend to hold

one, or several, full panel hearings to allow parties to address the full Commission with respect to the proposal we set forth and any comments submitted. Our final decision in this matter will rely heavily on the comments we receive and the participation of the state's many stakeholders.

We also open today a companion investigation to this rulemaking, naming the same utility respondents. This investigation will serve as the forum for taking evidence should we determine that, based on the comments filed on this rulemaking, evidentiary hearings are necessary to resolve any particular issues. It will also serve as the forum to address issues of service unbundling and the potential for uneconomic utility generating assets as discussed further below.

Respondents to the two proceedings initiated today are Pacific Gas & Electric Company (PG&E), Southern California Edison Company (Edison), San Diego Gas & Electric Company (SDG&E), Southern California Gas Company (SoCalGas), Sierra Pacific Power Company (Sierra), and Pacific Power and Light Company (PP&L).

Since R.94-04-031 and I.94-04-032 involve related issues of law and fact, it is appropriate to consolidate these two dockets pursuant to Rule 55 of the Commission's Rules of Practice and Procedure. Consolidation provides the Commission with maximum decision-making flexibility in addressing the issues before it in these proceedings. For administrative convenience, the rulemaking will be the lead docket, and all filings shall be made in that docket unless otherwise specified.

BACKGROUND

Origins of the Commission's Proposed Policy

In February 1993, with the release of our Division of Strategic Planning's report entitled *California's Electric Services Industry: Perspectives on the Past, Strategies for the Future*, this Commission embarked on a comprehensive reexamination of the structure of California's electric services industry and the regulatory policies governing it. With the issuance of this proposed policy statement, the Commission requests comment on the proposed vision it sets forth for California's electric services industry, and the proposed strategy offered to achieve that vision. To the extent parties choose to offer alternatives to our proposal, those alternatives should be comprehensive, addressing both industry structure and California's regulatory framework.

The release of the Division's report followed closely on the heels of the passage of the Energy Policy Act of 1992 (EPAct).[1] EPAct sets forth a long term, comprehensive vision for the nation's electric services industry. EPAct embraces increased competition and a greater reliance on market mechanisms as the preferred means to develop, deliver and market energy services in the United States. Many believe, as do we, that EPAct promises to bring significant change to the industry. We discuss the potential for such change more fully below.

In order to achieve the vision articulated in EPAct, Congress significantly reformed federal laws. Some of these laws, the Federal Power Act and the Public Utility Holding Company Act in particular, were originally enacted as far back as the 1930s. In other cases, EPAct broadened and more clearly defined federal regulatory jurisdiction. For the most part, however, Congress refrained from imposing a single, prescriptive approach on the nation. Appropriately, Congress chose instead to grant states and regions broad latitude to

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[1] Public Law 102-486, 106 Stat. 2776 (1992).

develop the specific policies and programs required to make EPAct's vision a reality. Faced with the most sweeping federal energy legislation in almost two decades, and increasingly concerned with the adequacy of California's own regulatory framework, we directed our Division of Strategic Planning to prepare its report.

We requested comments on the report and received submittals from a wide variety of interests, including consumer groups, the state's municipal and investor-owned electric and gas utilities, environmental organizations, nonutility service providers, federal, state and regional government entities, legislators, academics and industry consultants.[2] With the benefit of those comments, we held three full panel policy hearings, at which industry experts and stakeholders from California, the nation, and abroad offered insights for our consideration. In this way, we gauged the need to reformulate California's energy and regulatory policy and respond to the changing structure of the electric services industry.[3] At the hearings we discussed the problems facing California and the reasons why restructuring and reform might be necessary. Participants were asked to offer a vision and suggest the means necessary to achieve it. At our third policy hearing, each of the state's investor-owned utilities presented to Commissioners and the hearing's other participants its proposed vision and implementation strategy.

After our policy hearings, we asked specific questions of interested participants and observers; those questions were intended to further explore certain issues surrounding restructuring and reform raised in written comments on the Division's report and at the hearings. Many diverse stakeholders responded to our inquiry.[4]

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[2] A list of those who responded to the Division's report is attached as Appendix B.

[3] The agendas and lists of participants from the policy hearings are attached as Appendix C.

[4] Both the questions issued and the list of respondents are included as Appendix D.

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A Consensus for Reform

The views, opinions and suggestions offered by the stakeholders during the course of our process were as varied and diverse as the interests they represent. As striking as the diversity of opinion, however, was the clear consensus which emerged during our policy deliberations. Despite their many differences, stakeholders overwhelmingly agreed on one thing--***the Commission must fundamentally reform California's regulatory policy governing investor-owned electric utilities***. There was considerably less agreement, however, on whether ***industry restructuring*** ought to accompany regulatory policy reform. The Commission continues to enunciate its belief that California needs regulatory reform. Our proposed policies address the need to reform California's energy regulation, as well as the need to restructure the industry.

We believe that recent events, and the circumstances facing California, demand that the Commission move decisively to enact fundamental reform. The following specific reasons persuade us that this is the case:

- *Command-and-control and cost-of-service regulation, and government central planning are fundamentally at odds with, and ill-suited to, the increasingly competitive electric services industry confronting California and its utilities. The federal government has already recognized the need for significant reform and showed considerable leadership and foresight with the passage of EPAct.*[5]

- *California's investor-owned utilities currently charge some of the highest prices in the country. This distressing fact prompts us to explore reasonable alternatives to the current framework. Our express objective is to establish a new framework that does a considerably better job of exerting downward pressure on the prices California's*

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[5] We recognize that between the end of the Second World War and the oil embargo of 1973, the traditional cost-of-service regulatory model governing vertically integrated, natural monopolies appeared to many to work remarkably well. We note, however, that, as described in our Division of Strategic Planning's recent report, the conditions under which that success occurred have faded. (See Division of Strategic Planning, op. cit., pp 27-56.)

residential and business consumers must pay for investor-owned electric services.[6]

- *This Commission has actively promoted when appropriate policies designed to harness market forces and establish market-based regulatory solutions in each of the industries it oversees, including the electric services industry. With respect to the electric services industry, the Commission's aggressive promotion of competition in electric generation pursuant to the Public Utility Regulatory Policies Act of 1978, and our more recent efforts to bring competition to utility energy efficiency programs as called for in P.U. Code 747, stand out in particular.*

If we ignore the rapid change already upon us, we place California's investor-owned utilities and the state's economy at considerable risk. Revenues of the state's investor-owned electric utilities exceeded $18 billion in 1993, representing approximately two percent of California's gross state product. The majority of California businesses, which make up the remaining ninety-eight percent of California's almost $800 billion economy, depend heavily on reliable, safe and competitively-priced electric service.

California's electric strategy must therefore look beyond simply preventing businesses from falling victim to challenging economic times or leaving the state altogether for lower cost destinations. California must shy away from proposals which simply ***maintain*** the current level of economic activity, and we must opt instead for a strategy which fosters economic ***growth***, enhancing the state's competitiveness, and increasing business opportunities. By ensuring the development and delivery of high quality, low cost electric service, this Commission, the state's investor-owned utilities, and the electric services industry generally, can contribute significantly to the revitalization and sustained growth of

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[6] The utilities, and Edison in particular, have offered very useful information detailing some of the reasons for which the cost of providing electric service in California tends to be higher relative to other locations. The principal reasons cited by Edison include California's temperate climate; California's energy usage patterns; California's customer mix relative to other states, particularly its greater number of residential compared to industrial consumers; and the portfolio of utility resources available to deliver electric service. (Edison comments to the Division of Strategic Planning's report, pp 3-10.) While we concur that these factors may indeed contribute to higher prices for electricity in California compared to other states, we are not convinced these factors fully explain why California energy prices in some cases approach twice the national average.

California's economy. In addition, California's residential consumers can look forward to relief from some of the highest electricity prices in the country, without compromising either safety or reliability of service. With this in mind, our proposed vision and implementation strategy build upon existing competition in the electric services industry to foster a truly competitive market for California.

This Commission must respond promptly to remedy the ills which currently plague California's electric service industry. In addition to the state's high rates, these ills include a regulatory structure that 1) is out of step and often in conflict with a changing, more competitive industry; 2) offers the utility at best weak incentives to operate and invest efficiently; 3) is composed of numerous, costly, and administratively burdensome proceedings; and, 4) creates unnecessary barriers to, and therefore threatens the quality of, public participation. We are equally compelled to respond expeditiously to the sweeping changes enacted at the federal level and underway across the nation. This being said, we recognize that the Legislature can assist in the timely implementation of our proposal. With the proposal issued for comment today, we look forward to working with the Legislature, and offering any assistance necessary, to take the important first steps toward revitalizing California energy policy.

The Goals of Our Policy Making Process

We designed our reexamination of California's energy regulatory policy and industry structure with two key goals in mind: 1) Exploit alternatives to litigation as much as possible, and 2) focus on a comprehensive, long term solution to the challenges confronting California.

First, we intend to rely significantly on alternatives to traditional procedures for establishing broad policies for the restructuring of the electric services industry and the regulations governing it. We recognize that the litigious, adversarial environment of the

hearing room is ill-suited to policy development. We further recognize that programs succeed when their development is guided by clear, unambiguous policy direction. We have therefore refrained from litigation in this matter thus far. Beyond our efforts to ensure that this Commission clearly delineates between policy *development* and the *implementation* of policy, we continue our concerted efforts to substitute when appropriate alternatives to formal litigation. We intend to turn to formal litigation of disputes ***only after*** the Commission is assured that we have afforded parties the opportunity to exhaust the considerable array of alternatives.

Second, we have taken a comprehensive, long term view in our policy deliberations in this matter, and we continue this approach for each of the industries we oversee. All too often, regulatory and industry reforms arrive piecemeal, with portions of the overarching regulatory framework, or industry structure, addressed in isolation from the whole. While a single reform may appear to offer potential benefits when viewed in isolation, it may also impose costs on other areas of the regulatory framework. Those costs may ultimately outweigh the benefits of reform, and bring into question the desirability of enacting it at all.

For example, the severe dislocations of the US electric industry stemming from the fuel supply disruptions of the 1970s required speedy and decisive action by this Commission.[7] The variety of reforms enacted in response to those challenging times served a well-intentioned purpose and contributed significantly to overcoming very difficult times. But the reforms occurred piecemeal, making it difficult to assess the effect one single reform might have on the others, or the linkage to the existing regulatory framework. Equally important, as described in the Division of Strategic Planning's report, the reforms responded to conditions which no longer persist. Thus, California has paid a price. Our state finds itself with a fragmented, outdated, arcane, and unjustifiably complex set of regulatory

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[7] See *California's Electric Services Industry: Perspectives on the Past, Strategies for the Future*, Division of Strategic Planning, pp 27-79.

policies. In many cases duplicative and conflicting programs and incentives further frustrate and confuse market signals.

The Proposed Policies and Implementation Strategy

With this proposal, we intend to take the important first steps necessary to remedy the regulatory inadequacies plaguing California's electric services industry. Our comprehensive review has convinced us that change is necessary. We resist the tendency to drape outmoded regulatory approaches onto new and dynamic circumstances. Instead, we propose a comprehensive framework designed to harness and responsibly manage change for the benefit of California's consumers, its businesses, and the state's economy.

We recognize that attempts to predict, plan or mandate a single electric future for California means more of the same--central planning and micro-management. For this reason, the vision and strategy we propose for comment take a different tack. We attempt to achieve a clearly articulated set of goals--goals designed to bring benefits to California's consumers of electric services, large and small alike. We look principally, though not blindly, to markets and the private sector, rather than to command-and-control regulation, as the preferred means to achieve the goals established and benefits identified. Where competition, or the potential for competition, exists, our proposal attempts to exploit rather than ignore it. Our proposed vision and strategy attempts to guide rather than dictate. We intend to provide for all stakeholders the flexibility and signals required to make mid-course corrections and respond nimbly to changing circumstances.

Evidence of changes in the way energy products and services are developed, delivered and consumed is already apparent in California and across the nation. From our experience with increased competition and emerging market forces in the telecommunications and natural gas industries, we learned we cannot fully immunize the suppliers and consumers of energy services from the effects of those changes. Our experience with restructuring in the nation's

natural gas industry demonstrates that, unless properly managed, some consumers may ultimately bear a disproportionate share of the cost burden that accompanies such transitions. We intend to continue to ensure a fair distribution of the costs of California's electric services infrastructure. This includes costs attributable to current and future changes. Specifically, as California confronts the challenges and changes ahead, we will not tolerate cost-shifting among customer classes. We will be particularly vigilant in our efforts to prevent costs from being shifted to residential consumers. With few exceptions, we intend to guard the fundamental principles derived from the Commission's cost allocation policies, and the result fostered by the application of those principles. Both the policies and the proposed modifications are described in more detail below.

In developing these proposed policies, we sought a broad scope of participation. We have profited from that participation. We better understand the effect particular policy and/or regulatory changes might impose on the various stakeholders as a result. In particular, we recognize the potential effects such changes might bring to the individuals and businesses that depend on electric services in California. We recognize that specific stakeholder representatives may assert that the change our proposal seeks is at odds with that group's particular interests as reflected in the *status quo* industry and regulatory arrangements. We have consciously attempted to craft a proposal which balances competing interests and, most important, which best serves Californians as a whole. We are hopeful that parties responding to our proposal will take a similar approach.

The Division of Strategic Planning's report launching our policy review, the suggestions, proposals and recommendations offered at our policy hearings, and the written comments submitted by California's energy services community have each contributed significantly to the policy statement we propose today. In our previous deliberations, and in comments submitted, considerable time and resources have been devoted to exploring what long term goals--what "vision"--ought to guide California's electric services industry, and the

specific steps required to achieve those goals. Now is the time to advance the dialogue. This proposal marks the beginning of the Commission's formal examination of the electric services industry. We intend to continue our practice of convening full panel hearings to discuss with the state's varied interest groups matters as vital as those included in today's proposal. We intend to hold those hearings during the month of June.

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A VISION FOR THE FUTURE OF CALIFORNIA'S ELECTRIC SERVICES INDUSTRY

The Fundamentals of Our Vision

We propose to revitalize California's vision for the electric services industry, and offer a long term, comprehensive package of policies and programs necessary to make that vision a reality. Our proposed package addresses both industry restructuring and regulatory reform.

We foresee a California in which:

1. ***California's consumers gradually enjoy direct access to generation suppliers, marketers, brokers and other service providers in the competitive marketplace for energy services.***

2. ***All of California's consumers have a reasonable and fair opportunity to enjoy the benefits of an increasingly competitive electric services industry.***

3. ***California's consumers enjoy direct access to the most efficient, environmentally sound electric services infrastructure available.***

4. ***Competitive electric services make a significant contribution to growth, productivity, competitiveness, and job creation throughout the state's economy.***

5. ***All Californians enjoy universal access to a basic and affordable package of electric services which reflects and keeps pace with innovation taking place in the broader, competitive market for electric services.***

Specifically, we envision an electric services industry in which consumers choose freely whether to:

1) remain subject to the tenets of the traditional regulatory compact and retain the regulated utility as the consumer's sole "portfolio manager" for energy

services;[8] ***or***,

2) leave the traditional regulatory compact and contract directly with generation and other service providers to tailor a portfolio of energy services, thus foregoing the utility's portfolio management services; ***or***,

3) leave the traditional regulatory compact to contract with energy service brokers, marketers, or other service providers, who, on behalf of the consumer, act as an independent portfolio manager.[9]

Clearly, the vision we propose and the strategy to achieve it mark the end of one era and the beginning of another. In this new era, consumers will no longer be automatically subject to a monopoly franchise and thus dependent upon the utility as the sole provider of retail electric services.[10] Furthermore, we believe that a managed and responsible shift to consumer choice through direct access promises to steer the utilities and other nonutility service providers away from the hearing room, and to more productive, consumer-oriented strategies focussed on delivering a diverse array of competitively priced, high-value products and services. As in other product and service markets, choice will appropriately decentralize decision-making and give consumers ***direct*** influence over the development, delivery,

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[8]Those tenets are outlined below in the section discussing our proposed implementation strategy.

[9]The rights and responsibilities comprising the "new compact" which we propose to apply to consumers opting to leave the traditional compact are also detailed in our proposed implementation strategy. We use broker and marketer in the traditional sense: "broker" refers to service providers who take no title to the service or product; "marketer" refers to providers who purchase for resale. Recently, the Federal Energy Regulatory Commission (FERC) disclaimed jurisdiction over Enron Power Marketing Inc.'s brokering activities, and will allow its marketing activities to go forward based on market-based rates.

[10]We recognize that all consumers have some level of access to energy services which to varying degrees escapes both the state's energy regulatory apparatus and the utility's monopoly franchise. For large consumers, these alternatives include self-generation and flight from California to reestablish business in another state. In addition, all consumers can purchase energy efficiency services from private, unregulated firms, commonly referred to as energy service companies, or ESCOs. But as we discuss further below, these options are not necessarily optimal in every case from a societal perspective; from the state's perspective, the option of moving to another state can be particularly harmful to remaining consumers, the utilities' financial position and the state's economy. In addition, California's current regulatory framework governing the industry tends in many cases to raise significant barriers for consumers to adopt economic alternatives, and in other cases, offers consumers perverse incentives when choosing among alternatives. Our goal is to expand the number of low cost, valuable options and to facilitate their use by consumers.

consumption and price of energy services. We believe this shift will benefit both large and small electric consumers, providers of electric services, including the utilities we oversee, California businesses, and the state's economy.

In the policies we propose for California, ***consumer choice through direct access***--"retail wheeling" in the jargon of the industry--represents the cornerstone of our vision for the electric services industry. We believe that the proposed strategy accompanying our vision promises to 1) achieve that vision efficiently, fairly, and as predictably as can be expected in the face of rapid change, and 2) maintain California's enduring goals for the industry--electric service that is safe, reliable, reasonably priced and responsive to environmental concerns.

The Events and Observations Guiding Our Vision

Several key observations guide and support our vision:

1) A wholesale market for electric services, and the attendant institutional, financial and contractual arrangements necessary to facilitate a more vibrant market, currently exist and continue to develop. A direct access policy for California, and the transmission provisions of EPAct, promise to expand the market and enhance efficiency;

2) California and federal energy policy began some time ago to shift away from vertically integrated, natural monopolies and command-and-control regulation as the basis for organizing the electric services industry. State and federal energy policy look increasingly to markets and competition as the new organizing principles to bring the benefits of electric services to consumers;

3) Wholesale power markets have increased benefits for consumers and producers, and brought those benefits to more consumers than would be the case without these markets. Injecting additional competition in power markets will continue that trend;

4) Wholesale power markets have not compromised safety or system reliability within a specific utility's service territory, or within the infrastructure as a whole in the West;

indeed, those markets have tended to enhance reliability;[11] and,

5) The convergence of telecommunications technologies and electric services will greatly facilitate competition, thereby benefitting consumers; this meshing of industries will further benefit consumers as new market arrangements, products and services emerge, and information and transactions costs fall.

Each of these observations is discussed in greater detail below.

The Link Between Wholesale Electric Markets and Direct Access

Many of the institutional and contractual arrangements, financial instruments, and information systems necessary to support direct access and retail competition in the electric services industry already exist, and continue to develop, just as they have in the natural gas and telecommunications industries.

For example, with respect to institutional arrangements, it has been decades since California's utilities relied exclusively on their own infrastructure to provide retail service. Throughout the country, the predominately voluntary development of interconnected transmission networks have enhanced beneficial wholesale energy transactions, and facilitated the development of sophisticated contractual arrangements and financial instruments. In the West, these arrangements arose primarily from the Western System Coordinating Council (WSCC). Though the WSCC was initially created to enhance reliability among utilities, grid interconnection and advanced telecommunications currently allow members to engage in an increasing number of trades which benefit WSCC members and their retail consumers. Advanced telecommunications have played a significant role in dramatically lowering the costs of collecting and analyzing trading data, and the costs of performing trades. By reducing these costs, the industry-led WSCC increased the ability of members to engage in a growing number of beneficial wholesale trades.

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[11]The infrastructure's impressive performance after the Northridge earthquake in Southern California is testimony to the high degree of control and coordination which can and must exist in a highly decentralized network of generating resources and loads.

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Approved by FERC in 1991, the Western Systems Power Pool (the Pool) is now a permanent institution in the West and represents another industry-led institution facilitating trades within the industry. The Pool significantly improves upon the arrangements WSCC members have developed and benefited from for some time. The Pool contains approximately 60 members and serves twenty-two states, a Canadian province and sixty million people.[12] The Pool is centrally managed by a single computer hub located in Phoenix, Arizona; it relies on sophisticated telecommunications technology to provide a forum in which to engage in short-term trades for electric energy, capacity, exchanges and transmission services. Through the Pool, members engage in mutually beneficial transactions and make more efficient use of the West's generation and transmission infrastructure.

The Pool's success exhibits the importance of severing the link between ***ownership*** of the electric services infrastructure and the ***use*** of the infrastructure. Severing this link is integral to the achievement of our vision. It is precisely the severing of this link, under terms and conditions agreed to by Pool members and approved by FERC, which allows considerable benefits to flow widely from more than one thousand monthly offers. Moreover, this separation of ownership and use has not compromised the high degree of central ***control and coordination*** necessary for the efficient, safe and reliable operation of an infrastructure as dynamic, complex and far-reaching as that necessary to deliver electric services in California and the West. Indeed, the ***current*** institutional arrangements governing electric power in the region are so stable and robust that the New York Mercantile Exchange has announced it has chosen the West as the site of its first futures contract for electricity. The futures contract can provide a significant and useful instrument for buyers and sellers in the West to manage risk. It can further enhance wholesale transactions and foster continued development of financial instruments designed to manage risk.

Yet despite the success of the Pool, and other industry-led pools throughout the

[12]Appendix E lists the Pool's current members.

country, government and a variety of stakeholders have expressed concern that impediments persist within these quasi "markets" and continue to hamper the development of a robust electric services market. A frequent concern is the relationship between ownership and use of the electric transmission infrastructure.

First, while the current arrangements governing transactions function quite smoothly, not all power providers operating in the broader industry enjoy pool membership. As such, for suppliers who are ***not*** pool members, the information and transaction costs associated with selling power outside the Pool can pose significant barriers to access and efficient use of the infrastructure. Non-members also suggest that these barriers frustrate the efficient expansion of the transmission system. Finally, those wishing to benefit from wholesale markets by ***buying*** from the pool may face similar barriers to the extent that they, too, neither enjoy membership in the pool, nor own transmission assets.

Fundamental Changes in Energy Policy Sever the Link Between Ownership and Use

With EPAct, Congress effectively severed the link between ownership and use of the nation's electric transmission infrastructure. In so doing, Congress took the first important and necessary steps toward achieving the goal of eliminating barriers to increased efficiency in wholesale power markets. EPAct severs the link by amending Title VII of The Federal Power Act to place with FERC authority to require transmission owners to provide wholesale transmission service.

The debate over, and subsequent passage of, EPAct prompted development of yet another industry led institution--the "regional transmission group" (RTG)--with the hope that RTGs can provide an effective forum in which to provide access to the grid. We believe that, ultimately, RTGs are likely to merge with industry-led pools and reliability councils to form an integrated market for transmission, or set of markets, in the West, further increasing

competitive framework and industry structure we advance today.

Though bold and ambitious, our proposed vision represents the next logical and desirable step in an evolution begun in earnest with the passage of the Public Utility Regulatory Policies Act of 1978 (PURPA), and advanced in 1992 by passage of EPAct. Our proposal takes an incremental step toward a destination envisioned some time ago. It is constructed using the basic principles clearly present in the ***current*** institutional arrangements governing power markets and pools. These principles include efficiency and fairness; respect for adequate system control, coordination and reliability; sophisticated bilateral and multilateral contractual, financial and technical arrangements; and the use of advanced telecommunications products and services to facilitate transactions.

Our proposal is designed to launch us from the end of one era--that of PURPA-- to the beginning of a new era articulated by EPAct.[15] It will, if implemented, result in a more competitive, consumer-driven electric services industry. By focussing on competition, our vision of consumer choice through direct access simply follows where EPAct leads. Through its passage of EPAct, Congress has affirmed what already exists--or soon will--in both the US and abroad.[16]

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[15]We find considerable merit in the recent statements of one utility chief executive officer: "Is there a difference between wholesale and retail wheeling? Are the principles we apply to wholesale wheeling issues equally applicable to some retail wheeling issues? I believe they are, and suggest that we should talk simply about wheeling, and drop the separate wholesale and retail labels." See John E. Hayes, Jr., chairman of the board, president, and CEO, Western Resources Inc., *Fortnightly*, February 1, 1994, pp 17-19. We find the recent comments of TransAlta Utility Corp.'s chairman equally informative. He urges utilities to "...consider shaping the industry's future by addressing issues such as transmission access and retail wheeling." See Harry Schaefer, "Are Electrics Headed for a Fall?", *Fortnightly*, March 15, 1994, pp 15-16.

[16] We note that the Michigan Public Service Commission initiated a five-year, experimental retail wheeling program on April 11, 1994. We note as well that the State of Connecticut's Department of Public Utility Control recently opened an investigation into retail electric transmission service (Docket No. 93-09-29). In addition, the direction we propose to take California's electric services industry is akin, though distinct in many respects, to that taken by, or under consideration in, the countries of Europe, Scandinavia, Central and South America and others. A growing number of stakeholders in the US are examining these models. More recently, the Province of British Columbia's Ministry of Energy, Mines and Petroleum Resource announced in September

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the system's efficiency, benefits and beneficiaries.[13]

We applaud the rich history of cooperation that has allowed industry-led institutions like the WSCC and the Pool to flourish. These institutional arrangements have brought significant economic benefits to consumers and enhanced system reliability. We support the development of industry-led transmission groups and we welcome FERC's authority under EPAct to foster competitive wholesale power markets. We note, however, that Congress expressly retained a vital and considerable role for the states with respect to the use and expansion of the electric transmission system. Specifically, Congress left the states' jurisdiction over retail rates intact, and clarified that the prohibition on FERC-ordered retail wheeling did not affect state "...authority...concerning the transmission of electric energy directly to an ultimate consumer."[14] We believe that preserving the states' role in both areas is appropriate. Yet we recognize that EPAct did not clarify all the boundaries of federal and state jurisdiction--ambiguities which have created some conflicts in the past. In addition to the jurisdictional gaps which persist between state and federal authority, we recognize as well the current dearth of institutional arrangements designed to guide the operations of international electric services markets in North America.

We are nonetheless confident that the policies and strategies we propose today for California build upon and generally support the policies and goals set forth in EPAct, as well as those established by FERC. We do not, therefore, anticipate conflict. Indeed, we intend to work closely and cooperatively with FERC to ensure a smooth transition to the new

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[13]The WSCC recently broadened its membership to include independent power producers. These same power producers are active participants in the development of the Western Regional Transmission Association (WRTA), initiated and sponsored by WSCC members. As proposed, WRTA would include industry participants in the Western states, Canada and Mexico. FERC recently ordered the WSPP to open membership and participation to qualifying facilities seeking to participate in the Pool. The order does not require QFs gaining member status to waive any rights granted them under PURPA (See Western Systems Power Pool, 66 FERC ¶61, 201, 1994).

[14]See Section 722 of EPAct, which amends Section 212 of the Federal Power Act.

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The Need for a More Consumer-oriented Vision

The response we received from consumers during our reexamination of the electric services industry and California's regulation significantly shaped our proposed policy. For example, many of California's large consumers expressed frustration and confusion over the fact that while they can, ***if they so choose***, forego bundled utility natural gas service and go directly to the competitive natural gas market to arrange service, they are prohibited from enjoying the benefits of competition in the electric power industry. These consumers point to the vast array of new products and services that have emerged in the natural gas industry as a result of increased competition and consumer choice, including financial instruments designed to manage risk. Consumers argue that the disaggregation and development of new natural gas products and services allow consumers to tailor services to meet their particular needs, and compete more effectively in an increasingly global marketplace as a result. They point to the fact that prior to the changes in federal and state gas policies promoting increased competition, direct access and consumer choice, the majority of these new products and services did not exist, nor did most foresee their emergence. Instead, they assert, prior to the enactment of those policies, consumers were forced to accept a single, bundled service from the utility, or select from a comparatively limited array of service options if the utility felt a "real" threat of bypass existed. Finally, they point to significant reductions nationally in the price of natural gas and natural gas services since change first took hold in the natural

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1993 its approval of a "Power Exchange Operation" (PEO) sponsored by B.C. Hydro and its wholly-owned marketing subsidiary, POWEREX. According to POWEREX, "The objective of the PEO is to provide both electricity suppliers and consumers with greater access to an active, short-term electricity market." The PEO establishes a short term (less than one year) electricity market. Products and services offered by the PEO include buying and selling short-term firm and interruptible energy and capacity, storing and lending energy, and providing wholesale and retail wheeling services. PEO transactions are not regulated and are made through negotiations and/or prices offered on the PEO's computer bulletin board. Participation is voluntary; eligible members include utilities, large consumers who purchase power at the 60 kV transmission level and above, independent power producers and cogenerators. See, the Ministry's press release of September 17, 1993, In the Matter of the Utilities Commission Act S.B.C., 1980, C.60; and In the Matter of an Application by POWEREX and B.C. Hydro for an Energy Project Certificate and an Energy Operation Certificate for a Power Exchange Operation; and POWEREX, "Briefing Session - Fall 1993: Power Exchange Operation." Though a number of differences exist between our direct access proposal and the Province of British Columbia's, an intolerance for cost-shifting among consumers represents one among several notable similarities.

gas industry.

Faced with the successful results of changes in the natural gas and telecommunications industries; average prices for electric service in California which in some cases approach ***twice*** the national average and exceed that of our neighboring states by a significant amount; a vibrant and competitive electric supply industry; and the necessary technical capability, consumers increasingly support change and reform.[17] We find considerable merit in consumer calls for direct access to electricity services. We intend to ensure that all consumers, large and small alike, benefit from our proposal. Our policy introducing direct access through consumer choice to the electric industry responds affirmatively and directly to the problems identified by California's policy makers and the industry's stakeholders; it advances national and state policies. Most important, our policy responds to consumers.

The Convergence of Telecommunications with Electric Services Promotes Direct Access

We expect telecommunications advances to accelerate the pace at which competition and market forces erode the monopoly franchise and alter industry structure. Advanced telecommunications continue to dramatically lower the cost of information and the cost of transacting business across most industries. The evidence is perhaps most striking in financial markets, where telecommunications technology has helped create a global financial system. And though financial markets have led the trend, the convergence of telecommunications with other forms of commerce, including the electric services industry, is accelerating rapidly.

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[17]It is important to note that, contrary to some assertions, large, mostly industrial consumers, are not the only consumers advocating choice and direct access. At least one representative of residential consumers, while urging the Commission to exercise extreme caution and diligence, nonetheless supported changes which would allow residential consumers to choose a service provider other than the utility. (See remarks of Michael Shames, Utility Consumer Action Network, Reporter's Transcript, Full Panel Hearing on Crafting a Vision for California's Electric Services Industry, May 25, 1993, pp 98-101.) We understand that there may not currently exist among all consumer groups a consensus on the issue of whether the state should, as a matter of policy, grant consumers the ability to choose among service providers through direct access.

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With respect to the electric services and natural gas industries, telecommunications will continue increasingly to 1) lower the cost of integrating information and data, 2) enhance system coordination and control, and 3) facilitate and expand the operation of markets that already exist. Telecommunications promises to further advance direct access and retail competition by shifting greater influence to the consumer over the development, delivery and consumption of products and services. For example, fiber optics and other telecommunications technologies connected to television and personal computer technologies ***currently*** allow information to flow instantaneously in both directions between the utility and the consumer.[18] The technology allows the utility to charge prices which vary to reflect the fact that the cost of providing service changes throughout the day, and provides the consumer with information to manage energy use directly and more effectively.[19] Consumers can track price changes throughout the day and, based on that information, operate appliances or industrial equipment when it is most economic to do so. In short, ***currently available*** technology effectively connects the retail consumer to the power plant. Following on the heels of other US utilities, PG&E announced it will offer telecommunications-based energy management services to a select market segment through an alliance with Microsoft and TeleCommunications, Inc. (TCI).

These changes in the way the utility can deliver and price products and services, and in the way consumers can directly determine which services to select and when, promise to greatly increase efficiency in two fundamental respects. First, since consumers face price signals which more accurately reflect the cost of providing service, their choices governing energy use, including whether to invest in energy efficient devices, are apt to lead to more efficient use of resources generally. Second, better price signals, and the change in

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[18]The convergence of telecommunications and electric services may occur more rapidly than most expect as some electric utilities look to ease their entrance into the telecommunications industry through legislation currently pending before Congress.

[19]This sort of price differentiation is commonly referred to as "time of use," or "real time" pricing. Californian's IOUs currently offer time of use pricing and the customized devices required to allow it.

consumption patterns they are likely to engender, will enhance efficiency in the use of generation and transmission resources. Continued advances in metering and billing technologies--frequently cited as key stumbling blocks to decentralization, direct access and consumer choice--will further lower information and transaction costs and help disseminate these technologies and services to consumers more broadly and rapidly.[20]

An Industry Poised for Change

A growing number of utility managers has already responded to the prospect for change and increased competition in the industry. We appreciate the joint efforts of San Diego Gas & Electric and the Commission's Division of Ratepayer Advocates to reform regulation in California. These incentive, or "performance based," regulatory proposals promise to ease the utilities' and the state's transition toward a more competitive industry structure. We have already adopted portions of the incentive proposal submitted by DRA and SDG&E.[21] We are encouraged that Edison and PG&E have followed SDG&E's lead and filed regulatory reform initiatives of their own[22]

California's utilities, with Commission support and guidance, have responded well to change in the past. We expect that trend to continue. But the significant reform proposals offered by the utilities and the Division of Ratepayer Advocates represent only the first steps in a transition toward consumer choice and direct access that will require additional reforms, and in some cases, fundamental change. The reform proposals represent important first

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[20]In the United Kingdom, where consumers currently enjoy direct access, metering technology and customized billing arrangements have advanced considerably. Similar advances have occurred, and continue to develop, in the US natural gas and telecommunications industries.

[21]See D.93-06-092.

[22]See A.93-12-029 and A.94-03-008.

steps, which neither conflict with nor impede our proposal.[23] We propose to adopt as Commission policy the conscious shift from our traditional cost-of-service framework toward performance-based regulation, which we find more compatible with competitive markets in electricity.

Other utility managers have taken more aggressive positions than California's utilities in response to emerging competitive conditions. One company, LG&E Energy Corp. has announced it intends to "de-integrate" its business, creating a new power generation, marketing and brokering unit which will operate independently from the company's retail utility distribution business. In addition, new power marketing and brokering firms have formed, similar to those operating in natural gas markets. At least one firm has received exemption from FERC jurisdiction over its brokering activities, while securing for its marketing unit FERC approval to sell at market-based prices. Finally, a sizable majority of the major rating agencies and investment firms have announced they intend to fundamentally redefine their methods of evaluating utility debt and investment quality. These new methods will focus predominately on the utility's perceived ability to compete.[24]

Taken together, these observations support our belief that the institutional, contractual and financial arrangements, and the technical capabilities required to bring to consumers the benefits of increased choice through direct access already exist and continue to develop. We foresee arrangements in the electric services industry similar, but not necessarily identical, to those currently operating and/or under development in competitive natural gas and telecommunications markets. In particular, we foresee an industry in which:

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[23]Notably, PG&E's proposal, while failing to grant consumers direct access to alternative providers, is similar in key respects to the proposal we offer for comment today.

[24]See, for example, Merrill Lynch's Bi-Monthly Review of the Utility Industry (August 23, 1993, November-December, 1993, and January-February 1994); and Morgan Stanley, "Of Elephants and Blind Men: Assessing the Risks of Competition," October 25, 1993; and Prudential Securities Electric Utilities Competitive-Risk Study, "Ready or Not, Competition Is On Its Way"; and Fitch Research, "Electric Utilities' Competitive Risk."

- Consumers--including individuals, businesses, towns, cities, communities, and organizations--seek customized, highly disaggregated products and services to best fit their individual needs;

- Consumers choose from a broad array of competing service providers to manage their energy portfolio, including the utility, nonutility firms, marketers, brokers and others;

- Consumers face market-based prices for competitively delivered products and services, and regulated prices for residual monopoly services; and,

- Consumers enjoy a wide array of innovative new products and services designed to manage risk.

In the move toward increased competition and reliance on market forces in the electric services industry, both nationally and abroad, considerable focus has been given to the importance of spot markets and other market tools. For example, in the United Kingdom, the government created and now regulates an electricity spot market, known as "the Pool," as part of its privatization and restructuring efforts. We find certain attributes of the Pool particularly appealing. For example, it provides industry participants with a market price for electricity each half hour. This component of the Pool provides consumers with price signals that help to increase the efficiency with which consumers make use of electric services; these same prices provide generators with signals that help to increase the efficiency with which new power plants are constructed.[25] The Pool also ensures that the nation's stock of generating plants is subject to economic dispatch, and the requirements of system control and coordination. Equally attractive in our view is the Pool's function to separate the physical generation, transmission and receipt of electricity from the financial consequences of bilateral contracts aimed at an allocation of market opportunities and risks. The separation of physical transactions from the risk of contract failure with respect to the "contracts for differences" adds both stability and reliability to the delivery of a commodity we continue to

[25]Under the UK electric system, government does not determine whether resources are "needed." Those decisions are left to the marketplace. Government continues to undertake environmental review of proposed plants, however.

regard as a necessary.

To some extent, the pool could be considered as offering a "bundled" service package of 1) spot market for electricity, 2) coordination and transmission services and access,[26] 3) voltage support and system reliability, and 4) back-up power in case of non-performance by generation service providers. A UK-style pool may minimize transaction costs for consumers choosing direct access as well as mitigating the financial and operational risks that might otherwise be inherent in traditional bi-lateral arrangements betweeen buyers and sellers.

We recognize that in other commodity markets, the design, development and operation of a spot market, and other market tools, are left to the marketplace. We recognize as well that a working spot market, and other financial instruments, can significantly lower transactions and information costs, and facilitate competition. Nonetheless, given the apparent benefits of the UK's Pool, we ask parties to comment on whether we ought to foster an environment in which the market develops and operates these mechanisms and tools, or whether the competitive market we hope to foster as part of this proposal in fact depends on the Commission first establishing a spot market, UK-style Pool, or other market instruments. In particular, we ask parties to address whether the successful implementation of our direct access proposal depends on a mechanism similar to the Pool established in the UK to address the vital link between the move to increased reliance on bilateral, or multi-lateral contracts, and the need for system reliability.

Getting From Here to There

We offer for comment our ***long term*** proposal for the electric services industry. Like

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[26]Physical operation of the transmission system in the UK is done by a single firm, owned by the country's distribution companies. Although England currently utilizes only one Pool, it may be more efficient to designate more than one Pool if necessary to reflect the various sub-markets for energy that may exist due to transmission constraints.

EPAct, we envision an increasingly competitive, more efficient energy services industry. Our vision foresees a significant broadening of the participants who enjoy access to a competitive commodity market for power. Moveover, we propose what we believe are the changes required to solve the inadequacies that currently hamper the industry and California's regulatory framework governing it.

Our vision will not emerge, nor will we attempt to force its emergence, overnight. We recognize that the road to our ultimate vision is neither short nor easily travelled. We believe, nonetheless, that the foundation exists on which to foster a more consumer-oriented, competitive industry and grow the state's economy. Since the challenges facing California's electric services industry are similar, and in some cases identical, to issues the Commission has already addressed, or is currently addressing, as part of the transition to increased competition in the natural gas and telecommunications industries, the Commission is well-situated to guide and manage the transition.

Consistent with this Commission's constitutional duties, our proposal affirms this Commission's long-standing mandate to ensure that all consumers receive adequate, safe, reliable and reasonably priced electric service. Our proposal recognizes and embraces California's commitment to resource diversity and environmental quality. In the next section detailing our proposed implementation strategy, we briefly describe how our policy proposal ensures that the Commission will achieve these goals.

Finally, the Legislature can greatly assist in bringing the state the benefits our proposed vision promises. We intend to work cooperatively with the Legislature and will propose a legislative package designed to facilitate consumer choice through direct access and increased competition in the electric services industry.

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ACHIEVING THE VISION: AN EVOLVING REGULATORY COMPACT AND A TWO-TRACK STRATEGY FOR CHANGE

Strategy Summary

We propose a two-track strategy to achieve our vision. First, in those areas of the electric services business which exhibit natural monopoly attributes, or where market power persists, we intend to replace our traditional cost-of-service regulatory framework with alternatives better focussed on utility performance and efficiency. Second, in those areas of the business where competition offers a superior means of organizing the development, delivery and consumption of services, we intend to replace the traditional regulatory framework with the discipline of market forces.[27] We intend to pursue the first track through the utilities' current initiatives to establish performance-based regulation in California; pursuit of the second track requires further evolution of California's regulatory compact and fundamental changes in the state's current regulatory framework.

Finally, our proposal focusses explicitly on the need to manage the transition to increased competition; we offer a long-term, staged implementation strategy designed to ensure that California achieves its vision in a manner that is fair to all stakeholders. And like our proposed vision for the industry, our implementation strategy is explicitly consumer-oriented. Key among the principles of fairness guiding our proposed implementation strategy is our continued commitment to prevent the inequitable shifting of costs among consumers, irrespective of whether those costs arise from uneconomic utility assets or from attempts to subsidize services with the hopes of gaining competitive advantage and market share. In addition, we are committed to ensuring that, in the end, the program we adopt does not

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[27]Those areas of the business we consider ripe for competition include generation services, energy efficiency services, and what is commonly known in the natural gas industry as the "merchant" function, which might include in the electric services industry power brokers, marketers and other service providers. We believe the attributes tied to electric distribution (increasingly referred to as the "wires business"), transmission, and system coordination and control services require that these areas of the business continue under regulation, albeit a form of regulation better suited to more competitive conditions.

sacrifice the utilities' financial integrity.

We summarize the key components of our proposed strategy as follows:

1. ***The proposed regulatory strategy for direct access in California's electric services relies on two parallel tracks.***

The first track applies to consumers who wish to continue to receive bundled utility service. This track seeks to replace traditional cost-of-service regulation with alternatives more precisely focussed on performance and efficiency, goals traditional regulation has difficulty achieving. The second track applies to consumers who elect to take advantage of the competitive markets for generation services. This latter track replaces traditional economic regulation governing generation services with the disciplining forces of competitive markets.

As California moves to consumer choice through direct access, a principal concern of this Commission will be to ensure that utilities do not shift costs between direct access and utility service consumers. We will institute a proceeding to explore how to construct accounting barriers between the costs of serving utility service and direct access consumers; that proceeding will include the identification, and fair allocation of, any uneconomic utility assets. We propose to leave the current allocation of costs among consumer classes intact; that allocation will serve as the program's starting point.

2. ***The utility retains its traditional obligation to serve only for those consumers who elect not to choose direct access, opting instead to continue to receive bundled service from the utility.***

Under our proposal, these consumers are known as **"utility service"** customers and would include, in the first stage of the proposed transition strategy, all but the largest consumers. The utility continues to provide traditional bundled services (generation, energy

efficiency, coordination and system control, transmission and distribution). The utility procures generation and energy efficiency services from competitive markets and from existing utility assets. The utility retains the option to construct new generation facilities to serve these consumers.

3. ***Consumers who elect to participate in the direct access program will have the freedom to procure generation services directly from nonutility service providers.***

These consumers are known as **"direct access"** customers. The utility no longer enjoys an exclusive franchise for direct access consumers. Commensurately, we propose to modify the utility's duty to serve in this more competitive sector. We propose to allow regulated utilities to compete to provide generation services to direct access consumers, recognizing that regulatory oversight is necessary in this case to mitigate the utility's market power with respect to ownership of transmission. Under our proposal, the utility is obligated to provide transmission and distribution services on a nondiscriminatory basis to direct access consumers who require such services.

4. ***The direct access classification is a voluntary one.***

In the early stages of the transition, the Commission will define a minimum eligibility level that consumers seeking direct access status must meet. Beginning **January 1, 1996**, direct access will be available to customers receiving service at the transmission level (50 kilovolts and greater.) By **January 1, 2002**, we propose to make ***all*** consumers eligible for direct access. Eligible consumers are not obligated to become direct access consumers. Eligible customers who do not choose direct access may remain utility service customers and will continue to receive bundled, regulated service from the utility, including generation services.

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5. The utility remains the provider of last resort for all consumers.

Direct access consumers wishing to return to the tariffed, bundled utility service, may only do so after providing the utility notice of no less than twelve months. The utility may waive all or part of the twelve-month requirement. A direct access consumer that has returned to the utility service classification must give the utility an additional twelve-month notice before returning to direct access status. The utility is required to provide service to consumers who wish to return to the utility system in less than twelve months, but who do not receive a waiver. The utility is not required, however, to offer service to such customers at the tariffed rate. Rather, the returning consumer must fairly compensate the utility for the incremental costs incurred to provide service until the twelve-month notice period has expired.

We believe these requirements are necessary and appropriate in order to **1)** ensure the utility has ample opportunity to plan to meet demand, and **2)** prevent uneconomic decisions that might otherwise arise if consumers could choose without restriction between the tariffed "utility service" price and the market price direct access consumers face.

6. For direct access customers, the Commission will focus on ensuring nondiscriminatory transmission, distribution and coordination and system control services.

We believe rigorous competition in the generation sector offers a superior means of ensuring reasonable prices for generation services when compared to traditional regulatory methods.[28] Transmission and distribution services, as well as system control and coordination services, will continue to receive regulatory oversight.

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[28]During the transition, we propose that the utility not be allowed to charge prices which fall below the company's marginal cost or exceed the current tariff.

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7. The proposal fundamentally modifies the regulatory structure governing utility resource procurement--the Biennial Resource Plan Update proceeding is eliminated.[29]

The State's current resource planning apparatus, including the Update proceeding, regularly establishes, under prescriptive rules, the amount of capacity the utilities subject to competitive auction. Our proposal significantly modifies the utility's obligation to serve direct access consumers, as well as the utility's resource procurement obligations. For utilities choosing to compete to provide generation services to direct access consumers, we propose to no longer allow the utility to enter into ratebase capital expenses used to develop, operate or maintain generation resources. Instead, the utilities' shareholders will bear the risk and enjoy the rewards related to the delivery of those services. The Commission will closely monitor the effect of utility participation in order to protect against the potential for self-dealing and cross-subsidization. We recognize that the proposal to allow utilities to continue to buy and sell generation services requires considerably greater regulatory oversight than would otherwise be necessary if the utility were solely a buyer. At this time we propose to relax somewhat our goal of reduced regulatory burdens in order to allow utilities to participate in this market.

We propose to eliminate the Update and establish new policies governing resource procurement which more accurately reflect the realities of an increasingly competitive market for electric services. Our proposal fundamentally alters the regulatory system governing resource procurement. The Commission and the Legislature, who share responsibility for establishing resource procurement goals and policies for California's investor-owned utilities, have traditionally played a considerable role in promoting resource diversity and environmental sensitivity in the development and operation of electric generating resources. Despite the state's success in enhancing resource diversity and maintaining environmental

[29]Our proposal to eliminate the Update proceeding in no way touches upon the disposition of the solicitation currently pending before the Commission.

quality, these important goals will continue under any restructured resource procurement program.

California's Regulatory Compact Must Evolve

The state's regulatory compact represents the means by which California has historically developed and implemented regulatory strategies designed to bring the benefits of electric services to the state's consumers. Based on the industry's traditional organizing principle, in which vertically integrated utilities represented the principal, if not exclusive provider of electric services, that compact served a useful purpose. Most argue that the compact, despite its shortcomings, served the state well.

The traditional compact is composed of several key components. First, it grants the utility monopoly franchise rights. Second, it ensures the utility's financial integrity by granting it an opportunity to recover reasonably incurred expenses and earn a fair return on its investment. In return for these privileges, the utility is subject to regulation by this Commission according to jurisdiction granted it under the state constitution and by statute; with that jurisdiction comes the Commission's duty to ensure the utility provides safe, reliable and reasonably priced service to all consumers within its monopoly franchise according to terms and conditions which do not unduly discriminate against any consumer.

Since the circumstances surrounding the industry have changed dramatically over the past two decades, and since the pace of change is likely to accelerate, we are convinced that California's regulatory compact must also change if we expect the state's consumers and California's economy to continue to benefit from this vital industry. The compact's tenets were never intended to be, nor have they remained, fixed. Rather, they have rightly evolved to correspond to the changes any industry and economy inevitably undergo. With this proposed strategy, that evolution continues.

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Nonetheless, the Commission's fundamental and enduring duty to protect California's consumers of electric service remains unchanged, and will persist during, and subsequent to, the transition to direct access. Yet, the means used to ensure adequate protection must change to better reflect increasing competition and a rapidly changing market structure.

This does not mean we intend to, nor will we, abandon our oversight of the industry, or abdicate our fundamental duties and responsibilities. Nor should parties construe our proposal as one which looks blindly to competitive markets as a regulatory panacea. Rather, our strategy recognizes and welcomes change. It recognizes that competitive markets, where they exist and function reasonably well, offer a superior regulatory tool when compared to command-and-control regulation and government central planning designed for an era that has passed and will not return. It emphasizes a significant shift to a considerably streamlined and more efficient, more rational regulatory approach. That shift is both appropriate and necessary in order to keep pace with changes already underway and likely to arise in the future. In short, our strategy offers an organizing principle that explicitly recognizes, and responds effectively to, the challenges this state faces; it ensures adequate, if not superior consumer protection; and, as important, it offers considerably greater potential for the state's consumers and its economy to benefit from electric services.

We recognize that as competition develops, the balance of this Commission's enduring duties will shift somewhat, focussing more on maintaining the integrity of the marketplace where competition is preferable to traditional regulation, while at the same time ensuring the same, or higher, degree of diligent oversight in those sectors of the industry less susceptible to competitive forces.

A Two-Track Strategy For Reform

In the first track of our proposed strategy, we propose to replace cost-of-service regulation with performance-based regulation, thereby altering the means by which the

traditional regulatory compact is upheld and just and reasonable rates are ensured. In the second track we propose to alter the regulatory compact itself.

The First Track: In the Absence of Competition, Replace Traditional Cost-of-Service Regulation with Alternatives Better Focussed on Performance

A bundled utility service package, offered under price, terms and conditions approved by this Commission, must remain as a viable option for consumers. Moreover, for consumers who prefer direct access but who are not yet eligible, bundled utility service is likely to remain their only viable service option. We intend to replace cost-of-service regulation with performance-based regulation. Doing so neither changes the compact's tenets, nor threatens fulfillment of those tenets. We make this change for several reasons.

First, prices for electric services in California are simply too high.[30] The shift to performance-based regulation can provide considerably stronger incentives for efficient utility operations and investment, lower rates, and result in more reasonable, competitive prices for California's consumers. Performance-based regulation also promises to simplify regulation and reduce administrative burdens in the long term.[31] Second, since the utilities' performance-based proposals currently before us leave both industry structure and the utility franchise fundamentally intact, consumers can expect service, safety and reliability to remain

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[30]As part of the process leading to the issuance of this proposal, a variety of stakeholders and experts offered useful insights in an attempt to explain why California's prices are so high. Many argued that the utilities' overhead expenses are higher than utilities elsewhere in the country; that the utilities' assets--nuclear assets in particular--are uneconomic; that the contracts utilities signed with qualifying facilities over the past decade as part of this Commission's competitive procurement program are uneconomic; that the costs related to all forms of regulation in California are higher than in other states; and that legislative and Commission mandates are more extensive and costly than those imposed on utilities in other states. The program we propose, from direct access to performance-based regulation, to working with the Legislature to examine the need for reform of certain P. U. Codes, attempts to address each of these factors.

[31]We say this recognizing that in the short term, completing our obligations under the traditional framework, while ushering in a new framework, will require additional resources.

at their historically high levels. Third, the utilities' reform proposals are likely to provide an opportunity to earn that is at a minimum comparable to opportunities present in cost-of-service regulation.[32] Finally, performance-based regulation can assist the utilities in developing the tools necessary to make the successful transition from an operating environment directed by government and focussed on regulatory proceedings, to one in which consumers, the rules of competition, and market forces dictate.[33] This is of critical importance in our view. Competition and change in the electric services industry are to a large degree taking place outside the purview of both state and federal regulators. California's utilities must develop the consumer-oriented skills that firms in highly competitive markets regularly face.

We look to the utility-initiated reform proposals to implement the first track of our strategy. We reject at this time attempts to devise a single, uniform approach which must apply to each utility. Despite the positive response to the utilities' recent solicitations, the State's planning apparatus, including the Update proceeding, is in our view outmoded, unnecessarily lengthy and too costly. We do not intend to relive that experience as we implement the first track of our strategy. Instead, each utility may offer proposals to best meet its particular circumstances, though any proposal must meet the broad goals and requirements established in our final policy statement, as well as any legislative requirements applicable now or at the time we approve the utility proposals. We will allow the utilities'

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[32]Our views are tempered by the recognition that performance-based regulation is not without shortcomings. For example, many point to the fact that while PG&E's Diablo Canyon nuclear facility has performed remarkably well, the costs PG&E's consumers incur as a result of the performance agreement's design features are troubling. As such, we intend to ensure that the utilities' performance based proposals promise benefits to consumers, as well as to shareholders, in the event of superior utility performance.

[33]We note that under our vision for the future, nothing would prevent service providers from competing with the utility to offer bundled service options. These providers would necessarily have to secure some services from the utility (e.g., distribution, control and coordination services, and perhaps, transmission services), but could secure other services, including generation and energy services, from alternative providers. This competitive threat will apply additional downward pressure on utility costs, and further help to ensure reasonably priced services for the state's consumers.

proposals ample opportunity to operate in order to evaluate the results in a comprehensive and meaningful way. In so doing, we will obtain a broader and richer understanding of what works, what doesn't, and why.

The Second Track: Where Competition Exists, or the Potential for Competition Exists, Replace Economic Regulation with the Discipline of Market Forces

Recent competitive solicitations for power by California's investor-owned utilities, the state's publicly-owned utilities, and other utilities across the nation highlight the intense competition that already exists in the generation sector of the electric services industry. These results demonstrate that the opportunity exists to exploit more effectively and efficiently what amounts to the untapped potential for robust power markets in California and in the West. The reforms enacted by Congress in 1992 took the first important steps to fulfill that promise. Our proposal follows in those steps by taking the additional actions necessary to replace outdated regulatory mechanisms governing the generation sector with market forces and competition.

- Beginning **January 1, 1996**, all consumers who receive service at the transmission level will be eligible to choose freely and directly from alternative providers in the competitive market for generation services. This group will be required to designate by **July 1, 1995** whether they intend to elect to participate in the direct access program.

- Having gauged the success of, and made any necessary modifications to, our program, we will expand eligibility to consumers taking distribution from the utility at the primary level beginning **January 1, 1997.**

- **Beginning January 1, 1998**, consumers taking distribution at the secondary level will be eligible to choose direct access.

- Beginning **January 1, 1999**, all commercial customers will be eligible.

- By **January 1, 2002**, depending on the success of the program, we intend to broaden eligibility to include ***all*** consumers.

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We ask parties to comment on our proposed schedule governing eligibility.

To facilitate the move to consumer choice through direct access, we will work with the Legislature to amend those sections of the Public Utilities Code necessary to exempt California-based generation service providers wishing to offer retail service from regulation as public utilities by this Commission. Though we recognize implementation of our proposal does not depend on amending the Code in this way, we believe doing so will greatly enhance entry into the competitive market for generation services.

Despite the competitive nature of the generation sector, the natural monopoly character of electric distribution and system control and coordination demands that this Commission's fundamental duty and powers to protect consumers remain intact, even for direct access consumers. We do not intend to allow the utility to use these vital functions to unfairly treat consumers who choose to tap the competitive generation market.

EPAct gives FERC explicit authority to mandate wholesale access to the transmission system and determine the appropriate arrangements governing wholesale access. We welcome FERC's new authority in this area. We have for some time recognized that the lack of transmission access can present a significant impediment to a competitive electric services market. Our transmission investigation, begun in 1990, has at its core the explicit goal of establishing transmission access arrangements that are both fair to the provider and not unduly discriminatory to those requesting service. More recently, in a letter to the leadership of the Legislature describing his proposal to reorganize California's energy agencies, the Governor proposed to "...centralize the task of opening the transmission grid to all users in our Public Utilities Commission."[34] We look forward to working with FERC to develop the transmission pricing policies necessary to support a more competitive electric

[34]Letter from Governor Wilson to Senators Roberti and Maddy, and Assemblymen Brown and Brulte, December 1, 1993.

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services industry.

At the same time, the State of California, through this Commission and other regulatory bodies, has extensive jurisdiction over siting and certification of new power plants and transmission lines constructed in California. EPAct explicitly reserved state jurisdiction over siting and environmental review. Furthermore, FERC recognizes state regulatory jurisdiction over retail franchise matters, including compensation for stranded generation investment to serve retail customers.[35] We believe FERC shares our goal of increased competition in the electric services industry and we intend to coordinate with FERC where necessary to ensure the successful development of our direct access program.

To foster the expeditious development of fair and open transmission access, FERC has expressed its support for an industry-led solution through the formation of regional transmission groups, or RTGs. We join enthusiastically in that support. However, any RTG seeking our support must demonstrate that its governing principles leave ample room for adequate protection of California's consumers by this Commission. But despite widespread support for industry-led solutions such as RTGs, many aspiring RTGs hoping to receive FERC approval seem unable to form a consensus among the numerous interest groups around the guidelines governing formation and operation.[36] We are hopeful that any historic, potentially parochial differences that may have existed among parties and plagued efforts to establish open transmission access in the past will not hamper the successful formation of RTGs. We believe RTGs can transcend issues which in the past may have hindered

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[35]See United Illuminating Company, 63 FERC ¶61, 212, Rehearing. denied, 64 FERC ¶61, 087 (1993).

[36]We note that any RTG seeking FERC approval must satisfy a minimum set of threshold requirements set forth in FERC's recent policy statement on RTG formation. From our perspective, key among those is the requirement that potential RTGs "...involve the states in whatever way is most effective...particularly in the formative stages...to ensure that the RTGs governing agreement recognizes that actions taken by RTG members under an RTG agreement ...[are] consistent with state and local law." (64 FERC ¶61,138, p. 15, mimeo.) California's utilities should recognize that FERC's policy comes in addition to this Commission's requirement that the RTG bylaws leave ample room for consumer protection.

wholesale transmission access in the industry. Moreover, we believe RTGs can accommodate direct access to all consumers and prefer that the utilities look principally to RTGs as the primary means for establishing direct access. Finally, we hope other states will consider direct access proposals. This would help to facilitate efficient consumer power markets in the West by potentially minimizing the potential for regional differences. We will work with our colleagues in other states to help create a better understanding of our proposed strategy.

Direct Access Requires Ratemaking Reform

We offer consumers the opportunity to tap the competitive generation market because we believe that competition in that sector is vibrant, and promises to do a comparable, if not better, job of disciplining prices when compared to traditional regulatory approaches.

Under our proposal, direct access consumers must nonetheless continue to secure some services from the utility, including distribution, system control and coordination, and any other ancillary services required. Most are likely to require transmission services from the utility, at least in the near term. To ensure the utility offers reasonable prices for these services, we propose to initiate an investigation to disaggregate, or "unbundle," the current utility service package into discrete services, and assign prices to those services. In addition to serving the purpose of ensuring just and reasonable rates, this service unbundling proceeding will help to achieve at least three other important goals.

First, it provides consumers with the information necessary to assess whether to continue to receive generation services directly from the utility or look to the competitive market for electric generation services. Second, consumers must face appropriate price signals if we hope to avoid fostering perverse economic incentives. Those signals should reflect the marginal cost of providing service. We cannot be certain that consumers in a competitive market receive appropriate signals without unbundling services and costs. With

services and prices unbundled, we propose to allow the utility to compete to retain and increase its market share in generation services. This would include allowing the utility to negotiate prices directly with direct access consumers. Under our proposal, the price the utility negotiates may not fall below its marginal cost of providing service. Finally, as described below, the programs we propose are explicitly designed to harness competition ***without*** cost-shifting, and ***without*** uneconomic bypass. Unbundling services and prices will help to prevent both.

This Commission has gained considerable experience in the natural gas and telecommunications industries with respect to the importance of unbundling in the face of competition, and the steps necessary to accomplish the task. That experience will assist us as we move to implement direct access in the electric services industry. The Commission's long-standing ratemaking policies grounded in marginal cost principles will facilitate the task of unbundling.

Direct Access and The Duty to Serve

The utility's historic obligation to provide safe, reliable, reasonably priced electric service extends to all consumers within the boundaries of its designated franchise. For all practical purposes, the duty to serve under the traditional compact requires the utility to provide service on demand according to rates, terms and conditions approved by this Commission. The duty to serve represents one of the most important components of the regulatory bargain and significantly differentiates the utility from its nonutility competitors. California's investor-owned utilities have lived up to this specific obligation under the compact well; their exemplary performance with respect to ensuring reliable service, in both certain and uncertain times, has benefitted the state's consumers. But in an industry whose organizing principle is grounded in direct access, the duty to serve must evolve.

Under our proposal, the utility retains the traditional duty to serve for consumers who

continue to receive bundled, tariffed utility service. This includes consumers who choose not to exercise their option to pursue direct access and those not yet eligible to participate as part of the transition.[37] We propose to modify substantially the utility's duty to serve for consumers who choose to participate in the direct access program. Modifications are necessary to ensure that the compact is fair to all stakeholders and reflects the realities that competition and consumer access through direct access promise.

To allow eligible consumers to choose without restriction between the regulated price for bundled utility service and the price offered by the generation services market may severely reduce the utility's ability to plan for, and reliably serve, its remaining customers. Absent modifications to the compact's traditional duty to serve, consumers may make choices about electric services which they find economically attractive, but which are undesirable with respect to the broader goal of allocating society's resources efficiently. That is, the consumer may choose to leave the utility franchise because the ***regulated price*** the utility charges is higher than the price offered in the generation market for comparable service, despite the fact that the utility's ***marginal cost*** of providing the service is actually less.[38] This Commission has aggressively developed policies to discourage what is referred to as "uneconomic bypass" in each of the industries we oversee. As such, uneconomic bypass by no means represents a novel challenge to California's utilities, or to this Commission. Indeed, our policies designed to deter uneconomic bypass in California's electric services industry have enjoyed considerable success.[39] Yet despite this success, we are nonetheless

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[37]Again, under our proposal, all consumers enjoy the opportunity to choose direct access on January 1, 2002.

[38]Generally, this occurs when, as is currently the case in California, the utility's average cost of providing service exceeds its marginal cost.

[39]Those policies apply in our Expedited Application Docket and are described in D.87-05-071. They allow the utility to negotiate prices with consumers credibly threatening to bypass; those prices cannot fall below the utility's marginal cost of providing the service. This policy expressly supports *economic* bypass, but leaves with remaining consumers the responsibility to compensate through higher rates any losses the utility incurs due to price discounts. With the threat of bypass diminished we closed the docket in 1990. (See the Division of

concerned about two troubling aspects of those policies. With the threat of bypass on the rise again, we believe it is appropriate to revisit those policies.

First, we are not comfortable with the fact that consumers represent the sole contributor to the costs of increased competition and bypass; that is, consumers are expected to bear one hundred percent of the financial burden resulting from any revenue shortfall created by competition in the form of discounts offered to consumers threatening bypass. Second, we do not believe the utility faces sufficient incentives to negotiate aggressively with consumers since shareholders are effectively shielded from the financial consequences of discounted prices.

Given these concerns, we believe the time is ripe to distribute more equitably the costs associated with increased competition in the electric services industries. In so doing, however, we believe it is comparably important to enhance the utility's ability to compete aggressively for market share and discourage uneconomic bypass. Finally, we see no reason to alter the Commission's long-standing policy of not impeding ***economic*** bypass of the utility's system.

With these considerations in mind, we propose that the following principles comprise California's policy governing its investor-owned electric utilities' duty to serve in a new era marked by consumer choice through direct access:

- The utility may compete to retain direct access consumers based on disaggregated prices and services.

- The utility may negotiate prices with direct access consumers which diverge from tariffs for generation and generation-related services (e.g., coordination and system

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Strategic Planning's report, pp 78-79).

control services, backup services, etc.). Those prices will receive streamlined regulatory scrutiny and enjoy expedited approval procedures. The terms and conditions governing pricing flexibility will be established as part of the service unbundling proceeding we propose. At a minimum, we propose to allow the utility to freely negotiate prices with direct access customers as long as those prices do not exceed current tariffs or fall below the company's marginal cost.

- Utility shareholders will contribute to the full recovery of revenue shortfall and receive the gains resulting from any price discounts the utility offers consumers. We will establish a revenue or price cap framework to govern utility operations related to direct access service. Like caps applied in other industries (and proposed by California's utilities in their PBR initiatives), the framework will include a formula which explicitly accounts for inflation, productivity, and events beyond utility control (the so-called "z factor"). In addition, the framework will include a symmetric band, comprised of a floor and ceiling, governing utility earnings. The ceiling will limit the aggregate amount utility shareholders may earn, while the floor will limit shareholders' exposure to revenue losses due to increased competition.

- Direct access consumers will contribute to the recovery of the uneconomic portion, if any, of the utility's generating assets resulting from our new competitive framework. Direct access consumers will make that contribution in the form of a "competition transition charge" assessed as part of the demand charge. We will open a proceeding to establish the mechanism governing the competition transition charge.

It is critical to recognize a key component of our proposal. The utility is ***not*** at risk for the total revenues customers eligible for direct access currently contribute to the utility's revenue requirement. On the contrary, the actual amount at risk is a fraction of that contribution. Under our proposal, the utility is at risk *only* for those revenues

tied to the ***economic*** portion of the utility's generating assets, and any overhead tied to the delivery of generation services. We do not propose to place at risk the ***uneconomic*** portion of the utilities generating assets.[40]

We propose the following methodology to determine the extent to which the utility currently holds uneconomic assets. We propose to use the utilities' system marginal cost of generation to determine the market value of ***each*** utility plant.[41] Individual plants whose marginal cost falls below the system marginal cost will have a positive market value; those whose marginal cost exceeds the system's will have negative market value. If the net difference between the utility's stock of economic and uneconomic assets is positive, then there is a gain to be distributed between consumers and shareholders. If the net difference is negative, those losses will be reflected in the "competition transition charge" assessed to each customer's demand charge.[42] When assessing the charge, we propose not to allow any class' overall allocation of generation costs or amortization schedules to exceed current levels. That is, we will not allow the determination of uneconomic assets to act as a forum for shifting generation costs, uneconomic or otherwise, among classes or across generations. Finally, we will examine the need to establish a time-table to recover any uneconomic costs which corresponds with our scheduled expansion of direct access to all consumers. This option may ensure that we do not jeopardize the ability of the utility to recover any uneconomic assets identified.

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[40]We intend to include in our investigation into uneconomic assets consideration of any costs related to existing utility obligations under ISO4 contracts, as well as costs tied to any long term fuel contracts the utility may hold.

[41]We propose to use the utility's marginal cost of generation as a proxy for the market price of electricity in determining the market value of each power plant.

[42]In addition, we propose to consider establishing an additional line item to reflect the cost of funding utility programs to which competing nonutility providers are not subject (e.g., economic development rates, low-emission vehicles, and programs designed for low-income consumers). To the extent the utility continues to fund these important programs, we believe direct access consumers should continue to contribute.

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With respect to any additional financial exposure our program may impose on the utility, several aspects of our program and current utility strategies help to mitigate that exposure. First, each of the state's IOUs has begun to take steps to reduce costs. Second, we provide the utility with the tools necessary to compete aggressively to retain and expand market share in generation services, and discourage uneconomic bypass, further moderating the utility's financial exposure. Third, we expect the utility's competitive position to improve, and its financial exposure to decrease somewhat, as energy payments made to QFs holding ISO4 contracts fall from prices based on forecasted fuel prices to prices based on the utility's actual avoided cost. Fourth, we will account for any incremental risk our direct access proposal imposes on the utility in the next cost of capital proceeding. Finally, both PG&E and Edison have aggressive, successful power producing affiliates.

- The utility remains the provider of last resort for ***ALL*** consumers. ***However,***

  1) direct access consumers who subsequently wish, for whatever reason, to return to the status of tariffed, utility service customer may only do so after having provided the utility notice of no less than twelve months. The utility has the discretion to waive any, or some portion of, the twelve month requirement; but,

  2) the utility must provide generation services to direct access consumers who wish to return to the utility system in less than twelve months and to whom the utility has chosen not to grant a waiver. In this case, the utility is not required to offer service at the tariffed rate. Instead, the returning consumer must fairly compensate the utility for the costs actually incurred in arranging for and delivering service until the twelve month period has expired. Finally, the returning customer must also provide the utility with notice of not less than twelve months before again exercising eligibility for direct access.

With these guidelines, our proposed strategy governing direct access achieves several goals. First, it provides the utility with the flexibility necessary to plan effectively and ensure reliable service. Second, it promises to increase efficiency and lower rates, since competition tends to discipline costs more effectively and efficiently than regulation. Third, by establishing a mechanism which discourages uneconomic bypass, allows economic bypass, and more fairly distributes the costs of bypass, our proposal offers the potential for a better allocation of resources and a more equitable distribution of any costs tied to competition.

Finally, by including them as an explicit line item in the demand charge, our proposal addresses directly any uneconomic assets resulting from the transition to increased competition, and prevents any shifting of those costs among consumers. We will formally identify the magnitude of the potential costs, if any, attributable to uneconomic assets. We do not intend to tolerate cost shifting among California's consumers of electric services in the transition to direct access. This principle has guided, and will continue to guide, this Commission's structuring of prices for utility electric services rendered for some time. We intend to remain vigilant in our continued pursuit of that principle. To guard against cost shifting from the outset, we will not revisit the allocation currently assigned to the different consumer classes. We propose that those commitments remain intact.

We now turn to the effects our proposal might have on the Commission's ability to achieve the state's enduring goals for the industry.

Fairness to the Utility

We believe the shift to performance-based regulation and the components of our proposed direct access program maintain or enhance the utility's opportunity to earn.

Direct Access, Integrated Resource Planning and Efficient Infrastructure Investment

Some suggest that EPAct offers states and the nation a conflicted vision. This alleged

conflict appears to stem from EPAct's clarity of vision with respect to increased reliance on competition as the means to increase benefits for consumers on the one hand, and its encouragement of integrated resource planning on the other. Some see competition as fundamentally incompatible with government-sponsored central planning, which is how many have come to view integrated resource planning (IRP). We disagree that robust competition and rational IRP cannot co-exist.

This being said, we believe there no longer remains a place in the competitive vision that EPAct articulates and fosters for the complicated, government-sponsored central planning California has practiced. The laws that created and now dictate planning in California were more necessary and appropriate when vertically integrated, investor-owned monopolies dominated the electric services landscape; when the nation faced an imminent threat to its security of supply; when inflation was high; and when utility demand forecasts and construction costs were high as well. None of these conditions remains.[43] Most significantly, the utilities face a mature, financially and technically competent, and considerably influential nonutility power industry, which increasingly includes utility affiliates.[44]

The most striking evidence that California's current integrated resource planning process must now change came with the response of the nonutility power industry to the state's investor-owned utilities' recent solicitation for power contracts.

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[43]We recognize that there is always some possibility that the nation's security of supply may be threatened. However, the likelihood is significantly less that the electric services industry will fall prey to the sort of supply disruptions experienced during the 1970s. The impressive increase in the diversity of California's electric services infrastructure and considerably improved gas supply have played a vital role in diminishing that likelihood significantly.

[44]Edison's affiliate, Mission Energy, and PG&E's affiliate, U.S. Generating Co., are two of the world's largest and most successful independent project developers. U.S. Generating Co. qualified for more than 700 of the approximately 1,400 MWs of power contracts in SDG&E's and Edison's recent solicitations.

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Clearly, the results of the auction administered by this Commission have not come absent considerable challenges, difficulties, and shortcomings. But two things are clear. First, the supply of competitively-priced power is considerable. The offers for capacity were ***six times greater than the amount requested.***[45] Second, the government-sponsored process used to predict "what the utility would do" has little or no bearing on what the market has, and is willing, to offer. Most notable among the results is the remarkable disparity between the price the current planning process estimated California's consumers would have to pay for renewable resources and the actual price offered by the market. In some cases, the market offered renewable electric services for less than one half the price estimated by the State.[46] Similar disparities exist between the price the State forecasted for fossil-fired resources and the price the market actually delivered.

Given the intense competitiveness and size of the current generation market, and the difference between government forecasts and market realities, we propose to eliminate the state's current procurement process, the Biennial Resource Plan Update (the Update). Rather than spend what are increasingly scarce State and private resources on "forecasting," or "predicting," a competitive market waiting to be tapped, California should instead embark on an investment strategy which exploits that market directly for the benefit of the state's consumers. Doing so would allow the State's resources and private capital to be directed to other, more productive uses providing vital services, creating jobs, and improving California's economy.

Faced with the same intense competition in the marketplace for natural gas, this Commission, the Energy Commission, and Governor Wilson support a policy which looks to

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[45]PG&E, Edison, and SDG&E solicited bids for approximately 1,360 megawatts of capacity; combined, they received offers exceeding 8,600 megawatts.

[46]If the state had relied solely on the government planning process rather than join it with a competitive auction, California's consumers would face significantly higher prices for the valuable, competitively-priced renewable resources in which the state's utilities are now poised to invest.

the market to determine incremental capacity investment. California has properly rejected government-sponsored capacity and investment planning for the natural gas industry. Given the evidence of comparable competition in electric generation in California, the West, and across the country, we believe California ought to pursue a comparable "let the market decide policy" for incremental investment in electric generation services.[47] We believe California can pursue this policy without compromising the state's goals for the industry.

We do not believe our proposal to establish direct access and consumer choice in California's electric services industry conflicts whatsoever with the fundamental spirit of integrated resource planning. It simply achieves it in a new, more effective and less burdensome way. We believe the spirit of IRP is, and ought to be, grounded in best business practices and sound public policy: ***Carefully consider a wide-range of investment options, balance short-term and long-term goals, quantify as many costs and benefits as possible, and do not ignore those factors which resist quantification.***

We find ourselves in considerable agreement with the Public Utility Commission of Texas, which recently required Houston Light & Power, as part of its resource evaluation, "...to solicit and evaluate proposals under which it would provide self-service wheeling within its service territory for the purpose of deferring or eliminating the need for the proposed...[power] plant."[48] Logically, the Texas Commission effectively--and appropriately--found self-service wheeling to be a legitimate and pertinent option in

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[47]We recognize this shift in policy requires amending and/or eliminating some current statutes. We are prepared to work closely with the Legislature and the Administration to craft the legislation required to make this important policy shift.

[48]Public Utility Commission of Texas, Order in Docket No. 12138, "Notice of Intent of Houston Lighting and Power Company for a Certificate and Convenience and Necessity for Advanced Gas Turbine Projects," December 22, 1993.

integrated resource planning.[49] We therefore disagree with those who assert that direct access through consumer choice conflicts with, or is contrary to, integrated resource planning's basic principles; rather, we believe the policies we propose are fundamentally consistent with the spirit of integrated resource planning since it includes, rather than excludes, opportunities to increase the efficiency of the development, delivery and consumption of electric services.

We encourage parties to propose alternative frameworks based on "let the market decide" to replace the Update. While we do not intend to establish a formal collaborative process, we further encourage the utilities to work with all of the state's stakeholders to devise such a framework prior to making any formal filing with the Commission. Like the performance-based regulation initiatives, we will not at this time consolidate any utility resource procurement proposals, or attempt to impose a single, uniform framework on each of the states' IOUs. We inform the utilities, however, that for those choosing to remain in the business of constructing, owning and/or operating power plants, investment in those plants will necessarily receive considerably greater regulatory scrutiny than would procurement by utilities who have voluntarily exited the new generation business, as PG&E has thus far offered to do. For utilities who no longer invest directly in power plants, we intend to engage in the minimum necessary oversight.

Our concern with allowing the utility to remain as both buyer and seller of generation services stems largely from experience with competition in the natural gas and telecommunications industries. We choose not to propose that the utilities divest themselves of their generation or transmission assets at this time. We are not yet convinced that absent divestiture in the electric services industry, consumers will necessarily be deprived of the benefits of competition our proposal seeks to create. We ask parties to comment on whether

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[49]Self-service wheeling refers to the situation in which the entity providing the power also consumes the power at another site.

the competitive market we hope to foster necessarily depends on ordering the utilities to divest themselves of generating assets. Parties should look to the Commission's and California's experience in the natural gas and telecommunications industries when responding. We further ask parties to comment on whether a competitive market for generation services depends, at a minimum, on this Commission ordering the utilities to create separate accounts for its generating and transmission assets. Finally, we ask parties to comment on whether prohibiting the utility from offering generation services within its service territory represents a preferable alternative to divestiture or separate accounts.[50]

Environmental Quality, Fuel Diversity and Energy Efficiency

We believe our proposal will assist in statewide efforts to improve environmental quality and resource diversity. First, under our proposal resource additions pursued in California do not escape the requirements of California's Environmental Quality Act (CEQA), which represent some of the strictest and most effective environmental safeguards in the country. In addition, our proposal builds significantly on Southern California Edison's "green pricing" proposal.[51] Dubbed "Accelerating Renewable Resource Development Through Customer Choice," Edison's "green pricing" initiative would allow consumers to ***choose*** to pay somewhat more for electric service, promising to devote the surcharge directly to the acquisition of renewable resources. By choosing to pay the surcharge and support investment in these resources, consumers would enjoy, according to Edison's proposal, the

[50]Finally, we note that nothing prevents the utility from requesting that the Commission entertain utility-sponsored proposals to create separate generating or transmission affiliates, or divest themselves of generating and/or transmission assets.

[51]David Moskovitz, of the Regulatory Assistance Project, is one of the original designers of "Green Pricing." See "'Green Pricing': Why Not Customer Choice?," The Electricity Journal, October 1993. Though Edison met extensively with stakeholders, the company ultimately decided to postpone filing an application implementing the proposal.

added benefits associated with enhanced air quality and increased fuel diversity.[52]

The consumer's ability to choose directly among products and services to achieve particular social objectives is far reaching and expanding. Our proposal follows the spirit of Edison's consumer-oriented approach to environmental quality and resource diversity, but does so, we believe, more directly and effectively. Rather than require reliance on a single provider--the utility--from whom to secure "green electric service," our proposal allows consumers to choose from a wide array of "green" service providers, marketers and brokers, just as consumers currently choose, for example, among a wide variety of products using recycled materials and "socially responsible" investment portfolios. Thus, our proposal, like Edison's, appropriately places greater reliance on consumer choice; it differs from Edison's, however, to the extent it allows "green consumers" to choose among a potentially wide array of competing "green service providers."[53]

Finally, we believe the time is ripe to begin to work with the Legislature to reexamine current laws requiring that a portion of the utility's infrastructure investment be set aside for renewable resources. Through direct access and consumer choice, our proposed policy offers market incentives and signals to invest in resources which contribute to both increased fuel diversity and the success and competitiveness of renewable energy service providers.

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[52]Clearly, since the utility cannot direct electrons generated at a particular plant to a specific end user, those choosing to pay the higher, "green tariff" would not receive "green electrons" produced by the renewable resource. Rather, the consumer choosing the tariff contributes to rendering the overall infrastructure, and the services it supports, more diverse and less polluting. All consumers would enjoy those benefits, whether they choose the "green price" or not.

[53]Our proposal differs from Edison's in another important respect. Our proposal does not assume *a priori* that services offered by renewable resources are necessarily more costly than other services. Our proposal therefore does not *require* consumers to pay more for generation services provided by renewable service providers. Rather, the price paid is determined through negotiations in the competitive marketplace between the seller and the buyer of "green services."

Our proposal also furthers the state's and this Commission's continued and aggressive efforts to promote investment in cost-effective energy efficiency. With respect to utility service customers, each of the utility's performance-based ratemaking initiatives focusses directly on exploiting opportunities to increase the efficiency with which energy services are delivered and consumed. Those initiatives continue to include a regulatory mechanism which breaks the link between utility sales and revenues. We expect those mechanisms to focus solely on lost revenues directly attributable to energy efficiency programs. This represents a marked change from the Energy Rate Adjustment Mechanism (ERAM), which allows recovery of revenues lost for reasons other than those related to energy efficiency programs. With respect to direct access consumers, we believe our proposal provides considerable incentives to invest in energy efficiency and offers an approach to achieving energy efficiency goals that California ought to test.

Our extensive efforts to establish competitive procurement policies for energy services delivered to utility service customers shows that a vibrant market exists for energy efficiency services. We agree with those who assert that energy efficiency services represent a strategic asset when competing for market share and attempting to prevent bypass. We believe that both the utility and independent energy efficiency service companies (ESCOs) can and will compete aggressively to provide services to all consumers in California, irrespective of status as a utility service or direct access consumer. But we expect particularly intense competition among providers vying to provide energy efficiency services to consumers who choose the direct access route.

We believe these incentives are sufficient to forego, on a trial basis, reliance on a decoupling regulatory mechanism for utility service to direct access customers. Thus, we propose to discontinue the energy rate adjustment mechanism (ERAM) and all other balancing accounts and rate adjustment mechanisms for direct access consumers. In an era of increased competition, we believe the utility must become increasingly sensitive to the

consumer. The utility can easily achieve this increased sensitivity without jeopardizing the state's energy efficiency goals. The utility is free to offer energy efficiency services to direct access consumers; however, just as will be the case for generation services, it may not finance these programs through rates charged to utility service consumers.[54] We are convinced that this approach merits experimentation. We will closely monitor the results, and make any changes necessary to ensure California and its investor-owned utilities remain a leader in energy efficiency.

Finally, we expect and will require the utilities to subject to competitive solicitations all future demand-side management programs designed to serve those who remain utility service consumers.

We will continue to refine our regulatory policies governing utility demand-side management in our consolidated rulemaking and investigation. The vision and strategy we propose today for the electric services industry, and the rapid changes underway in the industry, require that we continue to scrutinize those policies closely.

Safe and Reliable Electric Service

Breaking the link between ownership and use of the electric transmission grid represents the cornerstone of our proposed vision and strategy. We do not, however, propose to diminish the importance of, or need for, system control and coordination. Under our proposal, the utility's stewardship of, and responsibility for, system control and coordination remain intact, as does its obligation to provide safe and reliable service. Moreover, ensuring safe and reliable service represents one of this Commission's most fundamental duties. We will not allow any reforms to compromise either safety or

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[54]We ask parties to comment on whether we should alter our current policy and require shareholders to bear the risk and receive the gain of all utility investment in energy efficiency, irrespective of whether the program targets utility service or direct access consumers.

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reliability.[55]

The Pursuit of Broader Social Objectives

This Commission and the Legislature have increasingly called upon California's investor-owned electric utilities to engage in activities which in certain instances reach beyond the goal of simply providing safe, reliable and reasonably priced electric service to achieve other vital, though considerably broader, objectives. These mandates designed to support important social goals include, among others, investment in electric and other low-emission vehicles, subsidized rate structures to promote economic development, and programs to assist low-income consumers.

We fully support the goals of these programs and promote utility activities in each. We will not tolerate any retreat from our continued efforts to ensure California's consumers, including our low-income citizens, enjoy universal access to a basic, affordable and up-to-date package of electric services. And while we strongly support programs which strive to achieve broader social objectives, we believe the time is ripe to reexamine the appropriateness of mandating that the utility act as the principal agent charged with designing, implementing and bearing the costs of those programs. Competition and restructuring in the electric services industry is for the most part taking place beyond the reach of regulatory jurisdictions. As competition's hold on the industry tightens, and the pace of change quickens, the ability of the utility, or any other service provider, to absorb unilaterally the costs of these programs, and simultaneously compete for consumer loyalty and market share, will diminish significantly.

For both types of programs--low income programs with a direct link to the electric

[55]Again, we are cognizant of the fact that voluntary, regional transmission groups offer a superior alternative to the "single utility" control and coordination model, and as such, we can expect these groups to replace existing institutional arrangements. Our proposal in no way conflicts with the premise on which RTGs are founded, nor should direct access frustrate their formation.

services industry, and programs designed to achieve broader social objectives--we believe California ought to examine alternative funding arrangements. For example, the state might establish fees to which all consumers of electric services are subject in the form of an "end user surcharge." Alternatively, these programs might be more effectively and efficiently funded through the State's general fund, or some combination of the two might be pursued. We intend to work with the Legislature and other stakeholders to explore and implement alternative funding mechanisms for these important programs. At this time, we propose to establish, as part of each consumers demand charge, a separate line item reflecting the costs of these programs. In this way, all consumers will contribute to the delivery of these important services.

Conclusion

Two parallel tracks comprise the strategy we propose to achieve our vision. One continues with the utility initiatives designed to replace cost-of-service with performance-based regulation. The second implements consumer choice through direct access. The two work together to achieve in a much more effective and efficient manner the Commission's, and California's, goals for the electric services industry.

This two track approach serves an additional, equally significant function. It ensures that the transition to direct access in the electric industry takes place in a well managed and responsible, yet responsive manner. It is principally for this reason that our proposal initially limits the number of consumers eligible to choose directly among service providers through direct access. The program we propose allows a sufficient number of consumers to choose to participate, thereby establishing a meaningful "first step." It is of sufficient size to establish meaningful information and data, on the basis of which this Commission intends to assess in a thorough manner the effectiveness of its program, and make any modifications and/or changes required. In addition, since we spread eligibility over a multi-year period, our proposal allows ample time for stakeholders to plan, adjust and develop strategies.

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Finally, because our proposal places what we roughly estimate to be less than five percent of each utility's revenues potentially in risk at the first stage, our proposed strategy represents a measured approach, and does not threaten the utilities' financial integrity. Our proposal represents a significant yet necessary departure from the past. We prefer a "soft-landing" to our new destination; our proposal ensures it.

The following section provides our proposed schedule implementing direct access through consumer choice.

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PROPOSED IMPLEMENTATION

Our strong preference is to deliberate and establish fundamental, guiding policies at the beginning of a process, not at the conclusion. In our view, many of the difficulties faced by this Commission in the past stem at least partly from the failure to clearly identify and subsequently adhere to an overall policy formulation. This policy statement marks the end of our informal policy deliberations and the beginning of our formal policy review. The following section outlines the next steps which bring us to the most challenging stage of this process.

Table 1 is a proposed schedule for the steps necessary to consider this policy statement and implement the strategy it defines. Implementation efforts requiring additional Commission proceedings are shown on the table in **bold-faced** type. Below, we provide further explanation and detail on each step required for the implementation of this policy statement. We recognize that the implementation will require further refinement and we look forward to any comments that parties may have on either the scope or detail of the Commission's future efforts.

Proposed Schedule and Road Map

- With the issuance of this proposed policy statement, parties are given 30 days to submit **written comments**, and 15 days to submit **reply comments** on the policies proposed in this document. The Commission will then hold a **full panel hearing** on June 14, 1994 to allow parties to present oral arguments before the full Commission. Further full panel hearings will be scheduled for July 1994 if deemed necessary.

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TABLE 1
PROPOSED IMPLEMENTATION SCHEDULE

Comment Period on proposed policy statement: • written comments (30 days) • reply comments (15 days)	**Begins:** April 20, 1994	**Completed:** May 20, 1994 June 6, 1994
Full Panel Hearing to allow parties to present oral arguments	June 14, 1994	
Policy statement issued which determines: • eligibility level for direct access • utility participation in generation market for direct access consumers	August 1994	
Investigation opened into cost allocation and potential for uneconomic utility assets	Begins: September 1994	Completed: May 31, 1995
Investigation opened into unbundling and pricing of utility services for direct access	Begins: September 1994	Completed: May 31, 1995
Eligible transmission level consumers seeking direct access notify utilities	July 1, 1995	
Performance-based regulation proposals for utility service customers implemented		Completed: January 1, 1996
CPUC works with Legislature on amendments to resource procurement mandates		Completed: January 1, 1996
Transmission level consumers who have chosen direct access are free to purchase generation services from nonutility providers	January 1, 1996	
Investigation into success of direct access program and reasonableness of expanding eligibility to include all customers	Begins: July 1, 1996	

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TABLE 1

(continued)

Primary level consumers eligible for direct access	**Begins:** January 1, 1997	
Secondary level consumers eligible for direct access	January 1, 1998	
All commercial consumers eligible for direct access	January 1, 1999	
All consumers eligible for direct access	January 1, 2002	

The Commission proposes to complete and issue a **Final Policy Statement** during August 1994. The policy statement will define several crucial aspects of the Commission's reforms including:

1) The eligibility level for the initial group of consumers wishing direct access to nonutility generation supplies. (This has initially been set at the transmission level but is subject to discussion and modification during the deliberations on the policy statement.)

2) Whether we ought to permit utility participation in the generation market for direct access consumers. (The proposed policy statement has initially allowed continued utility participation in the generation market for direct access consumers along with a commensurate level of regulatory oversight. But again, we anticipate that this will be a subject of some debate during the policy statement deliberations.)

- The Commission will open an **Investigation** to examine the potential for and allocate the uneconomic portion of the utility generating asset base. This will not include shifting

current allocations of generation costs from one consumer class to another. This proceeding will also establish the price/revenue cap formula, as well as floors and ceilings, governing utility earnings in the direct access market. The proceeding should begin as soon as possible after the conclusion of the policy statement and must be completed by May 31, 1995 so that eligible customers may choose direct access by **July 1, 1995.**

- The Commission will open an **Investigation** to examine unbundling utility services. Interactions with FERC will be particularly important for transmission services required by direct access consumers. This proceeding should begin as soon as possible after the conclusion of the policy statement and must be completed by **May 31, 1995** so that eligible customers may choose direct access by July 1, 1995.

- Eligible consumers seeking direct access must notify the utility by July 1, 1995 of their intention to either remain utility service customers or become direct access customers. This date strikes a reasonable balance between the need to know as soon as possible so that potential uneconomic assets can be determined and the need to give consumers the time necessary to make in informed decision.

- Performance-based regulation proposals from electric utilities are in various stages in the Commission's formal review process. To the extent these programs form the basis for the regulatory framework for utility service customers we hope to complete them by the implementation date of January 1, 1996.

- The Commission must immediately begin to work with the Legislature to amend existing mandates which can restrict the ability of utilities to compete to serve direct access consumers.

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- On January 1, 1996, eligible transmission level consumers that have notified the utility will become direct access consumers and are free to purchase generation services from nonutility providers or the utility, if they wish. Eligible consumers who have chosen to remain utility service consumers will have to give utilities twelve months notice after January 1, 1996, if they subsequently wish to become direct access consumers.

- On July 1, 1996, the Commission will open an **Investigation** to assess the success of the direct access program and to determine the reasonableness of expanding eligibility.

- We propose to expand eligibility to the direct access class as follows:

1) Customers taking distribution from the utility at the primary level will be eligible January 1, 1997

2) Customers taking distribution at the secondary level will be eligible January 1, 1998.

3) All commercial customers will be eligible January 1, 1999.

4) All consumers will be eligible for direct access by January 1, 2002.

COM/*

IT IS ORDERED that:

1. Pacific Gas and Electric Company (PG&E), San Diego Gas and Electric Company (SDG&E), Southern California Gas Company (SoCalGas), Southern California Edison (Edison), Sierra Pacific Power Company (Sierra), and Pacific Power & Light (PP&L) are named respondents to this proceeding; respondents shall file comments on these proposed policies. Interested parties may also file comments.

2. Comments shall be filed in the Commission's docket office by May 20, 1994, and reply comments shall be filed by June 6, 1994. Both comments and reply comments shall be served on all parties on the service list for this proceeding.

3. Two copies of all comments and reply comments shall also be submitted (one on paper and one on 3.5 inch disk in Word Perfect or ASCII format) to the Division of Strategic Planning.

4. All parties wishing to be on the service list for this proceeding shall notify the Commission's Process Office and the Division of Strategic Planning by letter within ten days from the date of mailing of this order. A service list shall be created and distributed within twenty days.

5. The Executive Director shall serve a copy of this order on each respondent as well as on all appearances in I.89-07-004 and I.90-09-050 (investigations on the Biennial Resource Plan Update) as well as A.92-10-017, A.93-12-029, A.94-03-008, and A.92-12-006 (performance based regulation applications of SDG&E, Edison, PG&E, and PP&L, respectively) .

This order is effective today.

Dated April 20, 1994, at San Francisco, California.

DANIEL Wm. FESSLER
President
PATRICIA M. ECKERT
NORMAN D. SHUMWAY
P. GREGORY CONLON
JESSIE J. KNIGHT, Jr.
Commissioners

I will file a concurring statement.
/s/ DANIEL Wm. FESSLER
Commissioner

APPENDIX A

SUMMARY OF PROPOSED POLICIES FOR CALIFORNIA'S ELECTRIC SERVICES INDUSTRY AND ITS REGULATION

1. Despite increased competition and restructuring in the electric services industry, the Commission's enduring mandate remains intact: to ensure California's consumers receive reasonably priced, environmentally sound, safe and reliable electric service.

2. As market forces play an increasing role in the delivery of electric services, the Commission's enduring duty to protect consumers broadens to that of maintaining the integrity of the marketplace in the competitive sectors of the industry, while continuing to exercise adequate oversight in those sectors where competition is absent or insufficient.

3. Where competition is absent or insufficient, the Commission seeks to replace traditional economic regulation with alternatives better focussed on performance and efficiency ("performance based ratemaking"). The Commission will do so through the utilities regulatory reform proposals currently pending. The Commission will not require that a single performance based ratemaking mechanism apply to each utility.

4. The Commission seeks to substitute traditional economic regulation with the discipline of market forces in those areas of the electric services industry where competition, or the potential for competition, exists.

5. Consumers should face market-based prices for products and services delivered in competitive sectors of the electric services industry, and tariffed prices for services delivered in sectors where competition is either absent or insufficient.

6. The Commission will continue its commitment to ensuring California's consumers of electricity, including low-income consumers, enjoy universal access to a basic and affordable package of electric services which reflects and keeps pace with innovation in the broader, competitive market for electric services.

7. California's consumers shall gradually enjoy direct access to nonutility generation suppliers, marketers, brokers and other service providers; that access should be to the most efficient, environmentally sound electric services infrastructure available.

8. Consumers who choose to procure generation, and generation-related services, directly from the competitive market shall be known as "direct access consumers."

9. Consumers who choose to continue to receive bundled, tariffed service from the utility shall be known as "utility service" consumers.

10. The Commission shall prohibit cost shifting between direct access and utility service consumers during or after the transition to direct access, consumer choice and increased competition in the market for generation services.

11. Direct access consumers shall contribute to the recovery of past costs prudently incurred on their behalf and stranded as part of the transition to direct access and consumer choice.

12. Recovery of stranded costs shall occur through a "competition transition charge." This charge shall be included as part of the demand charge.

13. The utility shall not subsidize the costs of developing and delivering one product or service with revenues accrued from the sale of another product or service.

14. The direct access classification shall be voluntary. Eligibility for direct access shall be staged, with customers receiving distribution service at the transmission level enjoying eligibility January 1, 1996. Customers receiving service at the primary level shall be eligible for direct access January 1, 1997, and secondary level customers shall be eligible January 1, 1998. All commercial customers shall be eligible for direct access January 1, 1999, and all remaining consumers shall be eligible by January 1, 2002.

15. To provide improved information to consumers and facilitate competition and choice in the direct access market for services, the utility shall disaggregate, or "unbundle," the current utility service package and attach prices to those services. The prices assigned to those services shall reflect, to the extent practical and appropriate, the utilities' marginal cost of providing service.

16. The utility shall provide direct access consumers with transmission, distribution, system control and coordination, and other ancillary services at price, terms and conditions which are not unduly discriminatory.

17. This Commission supports the formation of regional transmission groups as the means to ensure access over the electric transportation infrastructure. The governing agreement of any such group of which a California utility is a member must not threaten this Commission's mandate to protect the state's consumers of electric services.

18. With direct access, the utility no longer enjoys a retail monopoly franchise with respect to the procurement of generation service and generation-related services. Commensurately, the Commission shall modify the terms and conditions governing the utility's traditional duty to serve, including those under which the utility shall act as provider of last resort for direct access consumers.

19. The terms and conditions of the duty to serve should include appropriate notice requirements governing direct access consumers' ability to return to the status of utility service consumer and guidelines governing the prices the utility may charge any returning consumers.

20. The utility may choose to compete to retain and increase market share with respect to generation services sought by direct access consumers.

21. The utility is granted pricing flexibility to compete effectively for direct access consumers. Prices negotiated between the utility and direct access consumers shall not exceed the utilities tariffed rate or fall below the utility's marginal cost of providing service.

22. Utility shareholders shall bear the risk of any revenue shortfall resulting from discounted prices to direct access consumers. Shareholders shall also have the opportunity to gain from increased earnings. The Commission shall limit the amount shareholders stand to lose or gain according to a ceiling placed on earnings, and a floor placed on losses. The floor and ceiling shall be included as part of a price or revenue cap ratemaking framework governing direct access utility operations. The price or revenue cap framework shall explicitly account for the effects of inflation and productivity.

23. The utility may choose to continue to construct, own and operate power plants.

24. Shareholders shall bear the financial risks related to, and have the opportunity to earn rewards resulting from, incremental power plant construction and operation. The price or revenue cap ratemaking mechanism governing direct access utility operations shall limit consumers' financial exposure to the risks of utility power contracts signed with generation service providers.

25. The procurement programs of utilities who continue to construct, own and operate plants will require and receive considerably greater regulatory scrutiny than those programs offered by utilities who exit the power plant business.

26. Procurement programs of utilities who choose to exit the commodity business altogether will require and receive the least scrutiny by this Commission.

27. The Biennial Resource Planning Update proceeding is eliminated. The Commission shall not regulate the procurement practices of utilities on behalf of direct access consumers. The Commission encourages the utilities and parties to work together to craft proposals to replace the Update for utility procurement on behalf of utility service consumers. Those proposals should focus on exploiting the competitive market to acquire least cost generation services, while respecting requirements related to procurement contained in the Public Utility Codes. Parties should file those proposals with the Commission for approval. The Commission will not require that a single resource procurement program apply to each utility.

28. This Commission remains committed to the efficient use of society's natural resources, generally, and its energy resources, specifically. The Commission remains further committed to maintaining, and when appropriate, enhancing, environmental quality in the state.

29. Utility performance based ratemaking initiatives which propose regulatory mechanisms designed to delink utility earnings from sales must focus uniquely on revenues forgone as the direct result of energy efficiency programs.

30. On a trial basis, regulatory mechanisms designed to delink utility earnings from sales shall be discontinued for utility operations in the direct access market.

31. Shareholders shall bear the risks and reap the reward of utility energy efficiency services offered to direct access consumers. The Commission shall closely monitor the results of these efforts and shall make any changes necessary to ensure California and its investor-owned utilities remain a leader in energy efficiency.

32. The Commission shall consider policies requiring that utility shareholders fund all utility energy efficiency programs.

33. The utilities shall obtain competitive bids for all future demand-side management programs designed to serve utility service consumers.

Appendix B

List of Organizations Responding to February 3, 1993
Division of Strategic Planning Report *California's Electric Services Industry, Perspectives on the Past, Strategies for the Future*

Comments submitted March 15, 1993 by:

Association of California Water Agencies

Bay Area Rapid Transit District

California Cogeneration Council

California Department of General Services

California Energy Commission

California Large Energy Consumers Association

California Public Utilities Commission, Division of Ratepayer Advocates

Center for Energy Efficiency and Renewable Technologies

Department of the Navy, Office of the General Counsel - Western Division

Destec Energy, Inc.

Electric Utility Research

Enron Power Marketing, Incorporated

Richard Hirsh, Professor, Department of History, Virginia Polytechnic Institute

Independent Energy Producers Association

Industrial Users

The Magma Power Company

Municipal Utilities (Northern California Power Agency, City of Anaheim, The Power Agency of California)

National Power PLC

Natural Resources Defense Council

Pacific Gas and Electric

Pacificorp

San Diego Gas & Electric

Sesto Lucchi

South Coast Air Quality District

Southern California Edison

Southern California Gas

Strategy Integration

Toward Utility Rate Normalization

Utility Consumer's Action Network

Utility Design, Inc.

Watson Cogeneration Company

Appendix C

Agendas and Participants in Full Panel Hearings on DSP Report

Public Utilities Commission
STATE OF CALIFORNIA
505 VAN NESS AVENUE
SAN FRANCISCO, CALIFORNIA 94102

Daniel Wm. Fessler
PRESIDENT

TEL. (415) 703-3703
FAX: (415) 703-1758

April 12, 1993

To Interested Parties:

We appreciate the thoughtful comments of the many parties who responded to the Division of Strategic Planning's study: California's Electric Services Industry: Perspectives on the Past, Strategies for the Future. With the benefit of those comments, we have crafted topics for three full panel hearings. I have included the agenda and participants for the *first* hearing. I provide a thumbnail sketch of the agendas for the second full panel hearing in May, and the third in June. Specific, detailed agendas for the May and June full panel hearings will follow.

Full Panel Hearing #1: April 22, 1993.

"Identifying Challenges and Opportunities Confronting California"

We will dedicate the first hearing to the question of *whether* the challenges and opportunities facing California and the electric services industry warrant reform of our current regulatory framework. To ensure that our decision is a well informed one, we intend to explore with hearing participants the specific reasons for which regulatory reform might be warranted. In particular, in light of current challenges and those we can expect in the future, we wish to examine the applicability and appropriateness of the traditional regulatory compact, and the programs and policies developed to date to uphold the compact.

Full Panel Hearing #2: May 25, 1993.

"Crafting a Vision for California's Electric Services Industry"

Contingent upon the information provided and views expressed in the first full panel hearing, we will focus the discussion in the second day on the need to reexamine our goals and objectives for the industry and for regulation. Drawing on the challenges and opportunities identified at the April meeting, we intend to explore with participants the role of the utility and alternative visions designed to guide the development and delivery of electric services in California. The information culled will aid us with the ultimate and vital task of articulating a comprehensive policy framework for the industry.

To the extent reform is warranted, it is vital that we first establish a clear and comprehensive set of policy goals and priorities, to which we will turn as the basis and

context for crafting regulatory reform strategies. Accordingly, we will therefore devote a portion of the second hearing to a discussion of the criteria the Commission ought to use to assess the merits of alternative reform strategies. Strategic Planning's report and the comments received propose regulatory goals as well as criteria for weighing various strategic options. Those proposals offer a meaningful foundation on which to begin the discussion.

Full Panel Hearing #3: June 24, 1993.

"Exploring Alternative Reform Strategies"

The final hearing builds further on the preceding two. In the third session, we will draw on the four strategies proposed in Strategic Planning's report as a working *framework* for our exploration of strategic reform. However, we do not intend, nor do we expect participants, to limit discussion to those options offered in the report. Instead, we encourage participants to build on the useful information provided in the report to craft still other specific reform strategies should they so chose.

A discussion of the extent to which any proposed strategy meets the goals, priorities and criteria identified in the second session represents a critical component of the third hearing.

I and my colleagues on the Commission look forward to your participation.

Sincerely,

Daniel W. Fessler,
President

AGENDA
APRIL 22 FULL PANEL HEARING

"Identifying Challenges and Opportunities Facing California"

Format

Three panels will make up the first hearing. The Chief Executive Officers of the Southern California Gas Company, San Diego Gas & Electric Company, Pacific Gas & Electric, and Southern California Edison, have graciously accepted the invitation to share their views on this vital Commission undertaking. They will join the Commissioners to comprise the first panel.

The second panel is devoted to a discussion of the *current* array of challenges and opportunities facing the state and the industry. The panel discussion will be preceded by brief presentations by industry participants, experts, and observers.

The third and final panel will focus on challenges and opportunities we can expect in the *future*. Like the second panel, brief remarks from individuals who possess pertinent expertise and experience will provide context and act as a catalyst for the dialogue among panel members.

Panel members have been selected to provide the Commission and participants with a broad-ranging set of views. The members reflect interests with expertise and experience in areas of particular significance to California; equally important, they bring experience and knowledge from other regions that will be of great use to California and to the Commission as the important task of crafting a vision and exploring strategic options moves forward.

SCHEDULE

OPENING REMARKS OF COMMISSIONERS 9:30 to 9:40

PANEL ONE: **Dialogue with Chief Executive Officers** 9:40 to 10:10

Thomas A. Page	San Diego Gas & Electric Company
Richard C. Clarke	Pacific Gas & Electric Company
Richard D. Farman	Southern California Gas Company
John E. Bryson	Southern California Edison Company

PANEL TWO: **Identifying Current Challenges and Opportunities** 10:15-11:15

Presenters:

Hon. Terrence Barnich — Illinois Commerce Commission (5 Minutes)

Edward Sheets
Executive Director — Northwest Power Planning Council (5 Minutes)

Panel Members: **Commissioners**

John Fielder — Southern California Edison
Vice President
Regulatory Policy and Affairs

Jacqueline Pfannenstiel — Pacific Gas & Electric
Vice President
Corporate Planning

Karen Edson — Industry Consultant

Michel Florio — Toward Utility Rate Normalization
Senior Attorney

John Thorndike — Merrill Lynch
Managing Director
Investment Banking

Maurice Brubaker Consultant	Federal Executive Agencies
Elena Schmid Supervisor	Division of Ratepayer Advocates
Robert Resley Director of Electric Resource Development	San Diego Gas & Electric
Jerry Jordan Executive Director	California Municipal Utilities Association

BREAK 11:15 TO 11:30

AGENDA QUESTIONS FOR THE SECOND PANEL

1) Many parties assert in their comments that neither the "natural monopoly" character of electric generation nor the utility's monopoly franchise persists in the contemporary electric services industry. Yet the utility's duty to serve flows directly from its status as monopoly provider.

Is the utility's duty to serve in conflict with the erosion of the utility's natural monopoly status and its exclusive franchise?

Is there currently an imbalance in the compact between the utility's duty to serve and the customer's "duty to purchase?"

To the extent any such imbalance exists, is the current regulatory compact well-equipped to respond to them, or are broader reforms necessary?

2) Cost-of-service regulation arose principally during an era of vertically integrated natural monopolies, when the utility enjoyed a considerably more secure franchise. In their comments, some parties point to unbalanced financial and regulatory incentives brought about by cost-of-service regulation with respect to utility operating and investment decisions governing plant construction, energy efficiency, and power purchases.

To what extent do such imbalances exist under the current regulatory structure?

Can the current regulatory framework generally, and its ratemaking approach in particular, accommodate any imbalances identified, or do they merit a broader examination of alternatives to the current framework and approach?

3) The report and some parties assert that current ratemaking practices, and many if not all of the balancing accounts and rate adjustment mechanisms, leave the utility with **a)** weak incentives to develop and deliver services in the most efficient manner, and **b)** inadequate flexibility to respond to competitive pressures. The current system is further criticized as fostering costly, burdensome, and fragmented administrative procedures.

To what extent do these assertions pose threats to California and the state's electric services industry? How much of a problem, if any, do balancing accounts and rate adjustment mechanisms pose specifically?

Does cost-of-service regulation continue to have a role in California, or should the Commission explore regulatory alternatives?

4) The report, and several parties' comments, suggest that the rate-cost gap generally, and high rates in particular, pose significant threats to the industry and to the state. Some parties assert in their comments that rates can be lowered, and the gap progressively closed, through means currently available under the existing regulatory framework. Others assert that structural reforms are required to ensure that rates diminish and the gap between the cost of providing service and rates charged for service closes over the long term. Finally, other parties suggest that both approaches are necessary.

How vital is it to close the rate-cost gap discussed in Strategic Planning's report and in comments submitted by parties?

To the extent that closure of the gap is desirable, can that occur through refinements to existing proceedings, accounts and mechanisms, or must broader structural reforms with respect to ratemaking and resource procurement be pursued?

5) Strategic Planning's report and some parties' comments point to the potential for tension among the emergence and pursuit of competition in the industry, increased reliance on market-based solutions, and the continued pursuit of broader social objectives.

Can the current regulatory framework continue to accommodate these programs in light of the market forces and changes in industry structure unleashed during the past two decades, or are structural changes in ratemaking necessary?

Are there alternative means of funding these programs other than through rates?

PANEL THREE: **Looking to the Future** 11:30 to 12:30

Presenter	**Ashley Brown**	Ohio PUC (5 Minutes)
Panel Members:	**Commissioners**	
	Michael Shames Executive Director	Utility Consumer Action Network
	Barbara Barkovich Consultant	California Large Energy Consumers Assocation
	Bruce Foster Regional Vice President	Southern California Edison
	Robert Glynn Senior Vice President & General Manager, Electric Supply Business Unit	Pacific Gas & Electric
	Ed Texeira Director	Division of Ratepayer Advocates
	Roger Sant Chief Executive Officer	AES, Inc.
	Robert Resley Director of Electric Resource Development	San Diego Gas & Electric
	Ralph Cavanagh Director, Energy Project	Natural Resources Defense Council
	S. Dave Freeman General Manager	Sacramento Municipal Utility District
	John Thorndike Managing Director Investment Banking	Merrill Lynch

AGENDA QUESTIONS FOR THE THIRD PANEL

Strategic Planning's report and parties' comments identify several trends which carry with them significant implications for the industry and for regulation.

The report suggests that these trends translate to the likelihood of increased competition within the electric services industry, leading to a growing risk to utility market share--both existing and incremental, and mounting pressure for greater customer choice through retail wheeling arrangements.

These trends include, among other things, reform of the Public Utility Holding Company Act and the Federal Power Act under the National Energy Policy Act of 1992; increased interest in and reliance on regional resource procurement and transmission planning groups; technological advances which allow increased bypass of the utility system; greater reliance on utility auctions for the acquisition of demand- and supply-side resources; challenges the industry faces meeting environmental standards; increased utility plant retirement; and the potential for further electrification.

a) **Are the trends identified, or other trends parties wish to discuss, likely to alter the structure of the industry; or can we expect few changes?**

b) **What are the implications of these future trends for the regulatory compact; and specifically the utility's duty to serve in a more competitive environment? Do they suggest that reform of the compact is desirable and/or necessary?**

c) **Building on discussions from the first panel, to what extent do the trends described in Chapter VII of Strategic Planning's report, or other trends, warrant a reexamination of the State's regulatory framework governing the industry? Can the state's current programs governing ratemaking and resource procurement accommodate changes that are likely to occur?**

d) **To what extent does the continued pursuit of social programs (e.g., low emission vehicles; programs for low-income consumers; economic development goals) mesh or conflict with the industry structure that is likely to emerge in the future?**

PUBLIC UTILITIES COMMISSION
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DANIEL WM. FESSLER
PRESIDENT

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FAX (415) 703-5091

May 14, 1993

To Interested Parties:

At our full panel hearing that took place on April 22, 1993, a sizeable majority, if not all, of the participants responded affirmatively to the hearing's key question: Is it appropriate and preferrable to ***explore*** regulatory reform?

Based on that response, we will hold a second full panel hearing to address the critical task of crafting a vision for California's electric services industry. It is our firm belief that a clear vision of industry structure must precede the redesign of California's regulatory framework. As such, we intend to explore alternative regulatory strategies at our third hearing scheduled for June 24th.

I have included the agenda and list of participants for the second full panel hearing: "Crafting a Vision for California's Electric Services Industry." We will hold the hearing in the Commission's auditorium on May 25, 1993. I and my colleagues look forward to your participation.

Sincerely,

Daniel Wm. Fessler

Daniel Wm. Fessler
President

AGENDA

"Crafting a Vision for California's Electric Services Industry"
Auditorium of the California Public Utilities Commission
May 25, 1993
10:00 A.M. to 3:30 P.M.

Chapter VII of the Division of Strategic Planning's report identifies several key trends and events which combined are likely to influence the structure of the electric services industry. These include the National Energy Policy Act of 1992; increased competition in the market for generation, energy efficiency, and transmission services; continued technological innovation; the increased development and significance of regional markets; and the gap in California between the rates charged for electric service and the cost of delivering service. As a result of these trends and events, Strategic Planning's report envisions a future industry structure with the following characteristics:

- An increasingly decentralized and highly competitive generation sector.
- Nondiscriminatory transmission access linking utility and nonutility providers to markets throughout the West.
- The maturation of spot and futures markets for generation services.
- Some customers enjoy limited, though direct, access to both utility and nonutility electric service providers.
- The increased potential for self-generation and threat of bypass of the utility system by consumers to whom a growing number of competitive service options becomes available.
- An electric utility market share increasingly at risk within its service territory.
- Increased and aggressive participation by California's investor-owned electric utilities in markets outside its service territory, both within the U.S. and abroad.

The primary focus of the discussion among panelists and Commissioners is the perceived role of the utility in the changing industry structure. Commissioners will therefore ask panelists to address the following questions:

Do panelists agree with the perspective on industry structure offered in the Division of Strategic Planning's report, or do you regard an alternative industry structure more likely? How should, and to what extent can, policymakers influence industry structure?

Given your view of industry structure, what specific duties ought the utility assume or abandon with respect to consumers and nonutility service providers? What modifications, if any, does your view suggest for the utility's duty to serve?

Does your view of the industry structure, or the view offered by the Division in its report, pose specific difficulties for a utility expected to act as competitor in a commodity market, provider of energy efficiency services, and promoter of important social objectives (such as low emission vehicles, economic development, and assistance to low income consumers)?

SCHEDULE

I. OPENING REMARKS OF COMMISSIONERS

II. PANEL ONE — **10:00 A.M. - Noon**

Presenter:	**Philip R. O'Conner, Ph.D.** Chairman & President	Palmer Bellevue Corporation
Panelists:	**Commissioners**	
	Jessica Laverty Minority Counsel	U.S. House of Representives Energy & Commerce Committee
	Donald Felsinger Senior Vice President	San Diego Gas & Electric
	Donald Vial	Economist
	Robert Glynn, Jr. Senior Vice President	Pacific Gas & Electric
	Terry Thorne Senior Vice President	ENRON
	Charles McCarthy Senior Vice President (Invited)	Southern California Edison

LUNCH BREAK: — **Noon - 1:30**

PANEL TWO: — **1:30 - 3:30**

Panelists:	**Commissioners**	
	B. Jeanine Hull Vice President	LG&E Power Systems, Inc.
	Michael Shames Executive Director	Utility Consumer Action Network
	Barbara Barkovich Energy Consultant	Barkovich & Yap

S. David Freeman General Manager	Sacramento Municipal Utility District
Ralph Cavanagh Director, Energy Project	Natural Resources Defense Council
William Hogan Professor John F. Kennedy School of Government	Harvard University

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PRESIDENT

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June 11, 1993

To Interested Parties:

On June 24, 1993 the Commission will hold its third hearing on California's electric services industry. The hearing's focus will be regulatory reform strategies designed to meet the challenges posed by the changing nature of the industry.

The hearing will take place in the Commission Auditorium from 9:30 A.M. to approximately 3:15 P.M. I have attached an agenda and list of participants.

Sincerely,

Daniel W. Fessler,
President

AGENDA

FULL PANEL HEARING
BEFORE THE CALIFORNIA PUBLIC UTILITIES COMMISSION
JUNE 24, 1993
9:30 A.M. TO 3:15 P.M.

"Exploring Alternative Regulatory Reform Strategies
for a Changing Electric Services Industry"

BACKGROUND

At the Commission's second full panel hearing, utility representatives and other panelists offered compelling visions for California's and the nation's electric services industry, and the role of the utility within that industry. Neither the utilities, nor the other industry stakeholders and experts participating as panelists, agreed however to a common vision for the structure of the state's electric services industry.

For example, Southern California Edison Company expressed its view that Californians would benefit most from an industry structure characterized by vertically integrated utility service providers. By contrast, Pacific Gas & Electric stated that the rapidly changing, highly competitive, electric services industry, and the Commission's reform efforts, have persuaded the company to withdraw altogether from the market for *new* generating facilities *within its service territory*. Like Edison, PG&E believes its vision is in the long term interest of the company's customers, its shareholders, and the state generally. Finally, San Diego Gas & Electric expressed support for, and believes both the company and the state will benefit from, either structure.

The Goal of the Third Hearing

Our third full panel hearing has two principal objectives: First, to provide each utility the opportunity to present and recommend to the Commission its preferred reform strategy in light of the company's vision offered at the May 25th hearing. Second, to allow Commissioners, with the participation of other industry stakeholders and experts, to explore, examine, and comment on the respective proposals.

This latter objective is of particular importance to the Commission. Amidst the dynamic and profound changes underway, and expected to occur, in the industry, the Commission's fundamental responsibilities endure. Of primary interest and importance to Commissioners therefore is the extent to which proposed reform strategies enhance or hinder the Commission's ability to fulfill its enduring responsibilities. At its core, the Commission's

principal duty, among others, is that of establishing the terms of service to which the state's consumers of electric service are entitled.

To achieve these objectives, utility representatives will present to Commissioners and a panel of industry stakeholders and experts their visions, and recommended regulatory strategies designed to accompany those visions. After each utility presentation, Commissioners and panel members will engage in a discussion, further examining each proposal. Each utility representative will be allotted thirty minutes to present its strategy. Each ensuing discussion will last 45 minutes.

The Components of a Reform Strategy

1. Why reform?

In Chapter VIII of its report, the Division of Strategic Planning identified several reasons for which it believes reform is warranted. The report further discussed the criteria against which any reform strategy ought to be assessed.

As the overriding impetus for reform, the Division's report asserts generally that the *ratemaking* and *resource procurement* programs under current regulation mesh neither with today's industry structure, nor with the structure California is likely to face in the future. In addition, the report points to more specific reasons for which reform in California is necessary. These reasons include:

- The Commission's traditional cost-of-service regulatory framework provides weak incentives for the utility to operate and invest efficiently;
- The Commission's current regulatory program leaves the utility with unbalanced financial incentives when choosing among investments in energy efficiency, utility-sponsored power plants, and services purchased from other providers;
- The state's centrally managed utility resource planning apparatus is anachronistic and incongruent with the realities of an increasingly competitive electric services industry;
- The Commission's current regulatory program consists of a multiplicity of balancing account, rate case, resource procurement and other proceedings, which, when taken together, tend to inflate costs and threaten the quality of public participation and Commission decision making; and,
- The current regulatory program offers utility management limited incentives and flexibility to respond to mounting competitive pressures.

The potential effects of the problems identified by the Division are simple yet profound: Higher costs to California's consumers of electric services; a hindrance to the state's economic performance, job creation, and its recovery from the current recession; and, the inefficient use of our natural resources. It is these effects, as well as others raised in our first two Full Panel Hearings, that propel this Commission forward in its examination of regulatory reform.

As important as the specific problems identified in the Division's report are the two significant links it establishes. The first is the fundamental link between the financial incentives embedded in ratemaking and the potential effects those incentives bring to bear on utility management decisions governing operations and investment. The second is the link between the way in which financial risk is allocated between utility shareholders and consumers, and the effect that allocation has on the breadth and scope of Commission regulatory proceedings generally, and our oversight responsibilities specifically. Strategic Planning asserts in its report that the problems listed above demonstrate that the financial incentives embodied in the current framework, and the current allocation of risk between shareholders and consumers, may in some instances encourage utility decisions which could frustrate Commission efforts to further the state's interests.

The report further recommends that many of the problems currently prompting reform could and ought to be addressed by better aligning the utilities financial incentives with the state's goals and priorities. Strategic Planning suggests that in so doing, the Commission can put in place financial incentives which prompt the utility to operate and invest more efficiently, while continuing to provide safe and reliable service. Reforms of this sort, the report asserts, can reduce the regulatory burden associated with numerous ratemaking proceedings; allow the state to reduce the scope of central management of utility resource planning and acquisition; lower the cost of electric service to consumers; and spur economic growth in the state.

Utility representatives are expected to address the manner in which their proposals address the problems listed here, and others they might wish to raise.

2. A Context for Assessing Alternative Reform Strategies

As discussed briefly above, the Commission's long-standing constitutional obligations will endure as both the industry and the regulation that governs it undergo change in the future. These include universal service, safe and reliable service, and service which does not unduly discriminate among consumers.

In addition, statutory responsibilities placed with the Commission over the past century, though never static, must also be adhered to despite changing circumstances. The Division of Strategic Planning's report discusses in detail the duties and responsibilities which must be included in any discussion of potential reform strategies. These include maintaining

and improving the state's environmental quality; ensuring resource diversity in the electric services infrastructure serving Californians; and the pursuit of important social objectives such as assistance for low-income individuals, the Women, Minority and Disabled Veterans Business Enterprise programs, economic development and low-emission vehicle programs.

Finally, the Commission attempts to balance these vital objectives with still others, including efficient use of resources; minimizing administrative costs; maintaining the integrity and quality of public participation; and the use of and increased reliance on market- and performance-based regulatory solutions, when appropriate.

These fundamental obligations will continue. The Commission encourages the utilities as part of this hearing to offer their perspectives on reform strategies which allow the Commission to fulfill these obligations, while at the same time providing the utility with the flexibility to pursue individual corporate strategies.

3. Effectively Managing Change

Any changes to the Commission's regulatory programs governing the state's investor-owned utilities must be well managed. Experience in the rapidly changing telecommunications and natural gas industries demonstrate that the Commission's oversight and monitoring function in the face of change is of comparable, if not greater, importance. With regulatory reform, the Commission must remain apprised of what works, what doesn't, and why. The Commission, and the utility for that matter, must, during periods of rapid change, retain the ability to make mid-course corrections when required. To make strategic corrections requires timely and useful information. As such the utility representatives should propose as part of their presentations a general description of how the utility intends to evaluate the extent to which reforms have helped to further the state's interests.

AGENDA QUESTIONS

With respect to ratemaking:
Do utility strategies propose to retain the entire array of cost adjustment, or "balancing," accounts, rate cases, and other Commission ratemaking proceedings and mechanisms?

For those the utility believes ought to be eliminated, which, if any, alternative proceedings or mechanisms ought to replace them? Specifically, if the utility proposes to eliminate *ex post* reasonableness reviews, on what alternative mechanism does the utility propose that the Commission rely to fulfill its oversight responsibilities?

Do utility strategies rely on the Commission's traditional cost-of-service regulatory framework, or do they look to performance- or market-based ratemaking approaches?

With respect to resource procurement:
Do utility proposals attempt to realign the financial incentives embedded in investment decisions governing energy efficiency, utility-sponsored plant construction, and services purchased from independent providers?

Do utility strategies propose to retain the Commission's current planning and acquisition program, or to modify that program?

On what specific mechanism would the Commission rely to fulfill its oversight responsibilities under any modifications proposed?

With respect to consumer interests:
How does the utility proposal ensure universal service for consumers who do not enjoy alternatives to utility service?

In what manner does the utility-proposed strategy offer the flexibility necessary to tailor services in a way that responds to the specific circumstances of consumers and business? For example, does the utility propose increased pricing flexibility?

With respect to increased competition:
How does the utility strategy mitigate the pressure, or eliminate the need, for retail wheeling? And given the Energy Act's affirmation of competitive markets, how does the utility proposal strategically position the company for each of the various business functions it expects to pursue (such as generation, transmission, distribution, efficiency and others)?

How does the utility strategy provide the transmission access necessary to ensure its customers benefit from the Act's provisions encouraging increased wholesale competition in generation.

SCHEDULE

I.	OPENING REMARKS OF COMMISSIONERS AND INTRODUCTIONS	9:30 - 10:00
II.	PRESENTATION BY SAN DIEGO GAS & ELECTRIC	10:00 - 10:30
III.	DISCUSSION	10:30 - 11:15
BREAK		**11:15 - 11:30**
IV.	PRESENTATION BY SOUTHERN CALIFORNIA EDISON	11:30 - NOON
V.	DISCUSSION	NOON - 12:45
LUNCH		**12:45 - 2:00**
VI.	PRESENTATION BY PACIFIC GAS & ELECTRIC	2:00 - 2:30
VII.	DISCUSSION	2:30 - 3:15

PANEL MEMBERS[1]

Ashley Brown	Professor, Harvard University
James Caldwell	Technical Director, Coalition for Energy Efficiency and Renewable Technologies (CEERT)
Phil Huyck	Senior Vice President, Trust Company of the West
Max Herbert	Secretary and Solicitor, National Power, PLC
Ed Texeira	Director, Division of Ratepayer Advocates
Dan Richard	Principal of Morse, Richard, Weisenmiller
Henry Riewerts	Fuel Manager, Nabisco, Inc.
Jack McNally	Business Manager, I.B.E.W., Local #1245, AFL-CIO

[1]Each of the members will participate on all three panels.

Participants in June 24th Hearing

Ashley Brown	John F. Kennedy School of Government, Harvard University
James Caldwell	Coalition for Energy Efficiency and Renewable Technologies
Max Herbert	National Power, PLC
Phil Huyck	Trust Company of the West
Jack McNally	International Brotherhood of Electrical Workers, Local #1245, AFL-CIO
Dan Richard	Morse, Richard, & Weisenmiller
Henry Riewerts	Nabisco, Inc.
Ed Texeira	California Public Utilities Commission, Division of Ratepayer Advocates

Appendix D

Commissioner Questions

July 15, 1993

Public Utilities Commission
STATE OF CALIFORNIA
505 VAN NESS AVENUE
SAN FRANCISCO, CALIFORNIA 94102

Daniel Wm. Fessler
PRESIDENT

TEL. (415) 703-3703
FAX: (415) 703-1758

July 15, 1993

To Interested Parties:

On June 24, 1993, the Commission conducted its third Full Panel Hearing on the state's electric services industry and the governing regulatory structure. During the hearings Commissioners heard representative views on: the problems now facing the industry and its regulators; the trends likely to continue to affect the industry; and the options for reforming the basic structure of electric services and its regulation. For different reasons, there was universal agreement that some measure of regulatory reform was required in the competitive world now emerging. There was less agreement on the need for structural reforms of electric utilities although a number of parties did call for it.

We stand convinced that comprehensive reform of the *status quo* is necessary. With the benefit of the information exchanged at the hearings and through written comments, Commissioners are now embarking on a review of regulatory reform options and the need for industry restructuring.

At the conclusion of the June 24 hearing we stated our interest in posing additional questions for consideration. Attached is a set of questions on various issues that we believe will provide necessary information for our continuing efforts. Supplemental comments containing your answers to these questions should be submitted by Monday, August 30 and should be no more than 35 double-spaced pages. Two copies should be submitted to each Commissioner's office (three copies for the President's office), with three additional copies also submitted to the Division of Strategic Planning. One copy should be sent to each party on the attached list.

We look forward to reviewing thoughtful and concise answers to the questions posed and anticipate a timely consideration of these important issues.

Sincerely,

Daniel Wm. Fessler
President

Enclosures

Questions Following Full Panel Hearings Before the California Public Utilities Commission on California's Electric Services Industry

Parties are invited to respond to the following questions in as specific and concisely detailed a manner possible. Comments should not exceed 35 pages. If parties' prior submissions provide sufficient responses, please reference them here.

A. The Regulatory Compact: Future Roles

1. Much was said during the hearings about the exclusive, or monopoly, franchise the utility enjoys within its service territory, and the utility's duty to provide universal service to consumers within that franchise.

i) Should the utility be required to retain the duty to serve consumers who have competitive alternatives to utility service?

ii) Must increased choice through retail wheeling be granted to consumers for whom the duty to serve is relaxed?

2. The Division's report discusses at length the fact that this Commission and the California Legislature require the state's investor-owned utilities to participate in programs designed to achieve important social objectives (e.g., development of low-emission vehicles and supporting infrastructure, Low Income Ratepayer Assistance program, and the Women, Minority, and Disabled Veteran Business Enterprise program). In some cases, the utility has of its own accord directly sought Commission approval to broaden its role based on the need to achieve particular social objectives. Since municipal utilities and unregulated competitors are generally not the subject of Commission or Legislative programs designed to achieve important social objectives, they generally do not incur the costs of these programs. As such, the utility may find itself disadvantaged as competition within the industry intensifies.

i) What alternative means might the Commission and the Legislature explore in order to meet these vital social objectives without placing parties at a competitive disadvantage?

3. In the telecommunications and natural gas industries, the Commission's fundamental responsibilities under the regulatory compact endure. Nonetheless, the *means* by which the Commission fulfills its enduring responsibilities in those industries continue to evolve. In particular, where workably competitive markets exist in those industries, the Commission has looked increasingly to market forces to discipline industry activities, abandoning interventionist government central planning and forecasting techniques better suited to the realities of a bygone era.

i) Do the current characteristics of California's electric services industry, and the industry structure expected in the future signal a need to modify the means by which the Commission fulfills its duties under the regulatory compact? What specific modifications ought the Commission explore?

B. Industry Structure

1. In response to the Division of Strategic Planning's report, some argue that developments in technology will accelerate the erosion of the utility's monopoly franchise, further threatening utility market share. Others claim that, in contrast to the telecommunications industry, technological change will play a modest and limited role in shaping the electric services industry during the next decade.

i) To what extent are technological improvements expected to shape California's electric services industry over the next five to ten years?

ii) To the extent advances in technology are expected to facilitate bypass of the utility system, do parties view that threat as significant enough to merit restructuring of the utility business to avoid the potential for massive stranded investment, and to position California for an increasingly competitive electric services industry?

2. The Division of Strategic Planning's report proposes four reform strategies, addressing both the industry and the state's regulatory programs governing the industry (see pp. 165-193). The strategies described in the report, though comprehensive, are clearly not exhaustive; rather, they represent proposals along a broad spectrum of options. Each, however, addresses the four fundamental subjects of any reform strategy: the regulatory compact, industry structure, ratemaking and resource procurement.

i) What are the specific positive and negative consequences of each of the four strategies offered in the Division's report. Comments should address each of the four subject areas listed above. Against what specific criteria should assessments of each be weighed? How are your criteria similar to or different from those discussed in Chapter VIII of the Division's report?

ii) During the course of the hearings, many parties suggested strategies not included in the Division's report. Please describe your preferred strategy (perhaps incorporating components of the Division's strategies), explaining specifically how that strategy addresses the subject areas and criteria mentioned above.

3. A significant portion of the three hearings focussed on the role of the utility. Specifically, Commissioners and participants discussed at length the question of whether the utility ought to remain in the market for new generating resources to meet incremental native load. In spite of the fact that the role of the utility in electric generation captured much of the discussion on industry structure, the Division of Strategic Planning's report and the ensuing hearings also addressed the utility's role in other segments of the industry.

i) What specific benefits would accrue to California if the Commission bans investor-owned electric utilities from directly competing for the opportunity to construct new generating facilities to meet incremental load within their respective service territories?

ii) Should the ban include utility proposals to repower and/or return to service existing generating facilities?

iii) Should the ban further prevent the utility from competing in its own service territory through any "exempt wholesale generators" (EWGs) it might create consistent with Title VII of the National Energy Policy Act of 1992?

If so, through what other specific arrangements might the utility bring to its customers and shareholders the potential benefits of PUHCA reform with respect to "spinning-off" existing generating assets? Should the Commission explicitly encourage the utilities to form EWGs from existing generating assets under certain conditions?

iv) What, if any, negative consequences might result from an outright ban imposed on the utility in the areas discussed in subsections i-iii above?

v) If the Commission determines that such a ban is appropriate, what specific reasons, if any, should compel the Commission ***not*** to extend that ban to energy efficiency and other utility demand-side management programs?

vi) Do parties believe that the utility, its shareholders, and the state's consumers of electric services generally would benefit significantly if the state's investor-owned utilities transferred their transmission assets to affiliates or subsidiaries regulated on a regional or federal level? Would competitive markets be enhanced and regulatory burdens lessened if the utility's role no longer included electric transmission, but instead focussed on retail distribution?

C. Ratemaking

1. Many participants to the hearings, and several who provided comments to the Division of Strategic Planning's report, agreed that under the current regulatory framework, the utility faces unbalanced incentives when choosing among investments in energy efficiency, electric transmission and distribution, utility-sponsored construction, and purchased power.

i) Are these imbalances significant enough to merit reform of Commission ratemaking policies with respect to the financial risks and rewards tied to the various investment options listed above?

ii) If so, what specific mechanism should guide such reform? Does a "price-cap" mechanism akin to the one established in the New Regulatory Framework governing the telecommunications industry represent a preferable alternative?

2. While several participants to the hearings spoke in favor of dramatically reducing, or eliminating, the use of utility cost adjustment and balancing accounts, the Commission heard little discussion of the reasons for retaining them.

i) What specific reasons support retaining any of the Commission's current accounts? Why do parties believe the Commission should eliminate them?

ii) If the Commission determines that cost adjustment accounts ought to be scaled back, or eliminated, should the Commission pursue such reform incrementally, or should a more comprehensive strategy be sought?

Would reform of cost adjustment accounts alter utility risk such that the Commission ought to revisit, or adjust, the utility's authorized rate of return?

3. The Division of Strategic Planning's report cites instances in which traditional regulatory pricing policies may frustrate economic efficiency goals, actually encourage uneconomic bypass, and hinder utility efforts to overcome competitive threats. The report further describes Commission efforts to mitigate these effects, noting that the changes made may not completely eliminate the problems, and in some cases, may create still others (see pp. 76-79 and 149-152).

i) Given the increasing threat to utility market share, and the potentially growing number of competitive options available to consumers, should the Commission expand the utility's ability to price differentiate among customers? Is the current inverted rate structure compatible with an increasingly competitive electric services industry?

Or are the incentives embodied in the Commission's current policy governing the "interruptible rate" program, the incentives tied to its "Expedited Application

Docket,"[1] and the Commission's "Equal Percentage of Marginal Cost" rate design policy adequate to allow the utility to compete?

ii) Do the Commission's EAD and interruptible rate policies place a disproportionate share of the financial risk associated with bypass on so-called "captive" customers, that is, on consumers who do not generally have the same degree of choice as large consumers of electricity, toward whom such policies are targeted?

Should shareholders bear the risk of all, or some portion, of the revenue shortfall associated with discounted contracts? What precise regulatory mechanism would govern the distribution of that risk, and the potential shortfall in revenues that might accompany it?

iii) To the extent the utility is allowed greater pricing flexibility, should the Commission require the utilities to "unbundle," or disaggregate, the costs of specific utility services, thus providing consumers with a broader array of options while ensuring that the utility charges prices which reflect the cost of delivering those services?

D. Resource Procurement

1. Both the hearing participants and interested parties offering comments to the Division's report argued that California consumers will not accrue the benefits of a competitive generation sector absent nondiscriminatory wholesale transmission access, otherwise known as "wheeling." This Commission has long recognized the critical role of transmission access in the development of competitive wholesale markets for power. Recently, California's industry-sponsored effort to form a transmission organization, the Western Association for Transmission System Coordination, or "Watsco," has experienced difficulties reaching consensus on transmission access policy.

i) Must Commission acceptance of ***any*** resource procurement reform package be contingent upon the establishment of a workable solution to transmission access, or can the Commission delink resource procurement from transmission reform?

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[1] The Commission suspended its Expedited Application Docket for electric contracts in 1990.

Organizations Submitting Replies to the July 15th Questions:

American Wind Energy Association

Association of California Water Agencies

California Department of General Services

California Energy Commission

California Large Energy Consumers Association

California Legislature, Assembly Natural Resources Committee

California Manufacturers Association, California Cogeneration Council and National Gas Resources L.P.

California Public Utilities Commission, Division of Ratepayer Advocates

Center for Energy Efficiency and Renewable Technologies

Department of the Navy, Office of the General Counsel - Western Division

Destec Energy, Inc.

Edson + Modisette

Richard F. Hirsch, Professor, Department of History, Virginia Polytechnic Institute

Independent Energy Producers Association

Industrial Users

KENETECH Corporation

Municipal Utilities (Northern California Power Agency, City of Anaheim, The Power Agency of California)

National Power PLC

Pacific Gas and Electric

Pacificorp

San Diego Gas & Electric

Sierra Pacific Power

Southern California Edison

Toward Utility Rate Normalization

Watson Cogeneration Company

Appendix E

Current Members of the Western Systems Power Pool

Western Systems Power Pool Members (1/25/94)

1. Arizona Electric Power Coop
2. Arizona Public Service
3. Bonneville Power Administration
4. British Columbia Hydro & Power Authority
5. Cajun Electric Power Coop
6. California Department of Water Resources
7. Central & Southwest Services
8. Central Louisiana Electric
9. City of Anaheim
10. City of Farmington, NM
11. City of Los Angeles Department of Water & Power
12. City of Riverside
13. City of Santa Clara
14. City Utilities of Springfield, MO
15. County of Los Alamos
16. Deseret Generation & Transmission Coop
17. Louis Dreyfus Electric Power, Inc.
18. Entergy Services
19. Eugene Water & Electric Board
20. Hetch Hetchy Water & Power (CCSF)
21. Idaho Power
22. Imperial Irrigation District
23. Kansas City Power & Light
24. Metropolitan Water District of Southern California
25. Modesto Irrigation District
26. Montana Power
27. Nevada Power
28. Northern California Power Agency
29. Oklahoma Gas & Electric
30. Pacific Gas & Electric
31. Pacificorp
32. Plains Electric Generation & Transmission Coop
33. Portland General Electric
34. Public Service of Colorado
35. Public Service of New Mexico
36. Puget Sound Power & Light
37. Rocky Mountain Generation Coop
38. Sacramento Municipal Utilities District
39. Salt River Project
40. San Diego Gas & Electric
41. Seattle City Light
42. Sierra Pacific Power
43. Southern California Edison
44. Southwestern Public Service
45. Tucson Electric Power
46. Turlock Irrigation District
47. Utah Associated Municipal Power Systems
48. Washington Water Power
49. Western Area Power Administration (Phoenix)
50. Western Area Power Administration (Sacramento)
51. Western Area Power Administration (Salt Lake City)
52. Western Resources, Inc.
53. Westplains Energy

CFI 2/03/94

R.94-04-031
I.94-04-032

ORDER INSTITUTING RULEMAKING ON THE COMMISSION'S PROPOSED POLICIES GOVERNING RESTRUCTURING OF CALIFORNIA'S ELECTRIC SERVICES INDUSTRY AND REFORMING REGULATION

FESSLER, PRESIDENT OF THE COMMISSION, CONCURRING:

I join my colleagues today in initiating a vital dialogue respecting the future of the electric services industry in California. The attempt to harness the forces of competitive generation while at the same time aligning the interests of all classes of electric ratepayers and the shareholders of our state's investor owned utilities presents a daunting challenge. Notwithstanding the difficulty, I am persuaded that the challenges addressed by our proposal are, in large part, already upon us. This being so, our task as a society is to adapt to changed circumstances while preserving our social values and aspirations. I thus agree with Governor Wilson that the traditional goals entrusted to this Commission—the assurance that Californians will have access to reliable, least cost and environmentally sound electricity—endure as the bedrock of our policy. They are not candidates for amendment. As a consequence I believe it vital that our proposal be seen for what it is, an altered strategy for the pursuit of constant goals.

In this context I write separately to expose two concerns that will occupy my attention in the months to come. They are: (1) fear that we are about to entrust the well being of California ratepayers to market forces

which are not containable within our geographic frontiers and may not be congruent with any established governmental jurisdiction; and (2) insistence that we not lose sight of the one feature of what is popularly known as the "English model" that may prove difficult for us to replicate and yet which may be responsible for the success that restructuring effort has accomplished to date. Both are ultimately reliability concerns. The first arises in a macro or industry wide focus; the second in the micro or transactional level.

In the broadest sense any reform must take into account the issue of governmental institutions and their future role in the public/private partnership which must also evolve with altered circumstances. In yesterdecade the industry was contained in vertically integrated utility operations conducted within clearly defined service territories all within the jurisdiction of a host state. In such a climate the primary role for regulating the monopoly provision of a vital necessary fell to the several states and posed little strain on the federal system.[1] Thus the match between economic activity and governmental oversight was precise and well understood. Today, much has changed and the erosion of the integrated monopoly occasioned by both technology and revised conceptual thinking undermines the most fundamental assumptions of a regulatory order which must be changed.

As an abstract proposition I endorse reliance upon the forces of competition and agree that they represent a superior disciplinary force than can be supplied over time by any system of governmental estimate or planning of which I am aware. But to say that the era of command and control has passed does not prompt the conclusion that the generation,

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[1]I make this statement aware that the movement of natural gas and electricity across states touched upon issues of interstate commerce with the consequent role of the Federal Power Commission and its modern successor.

transmission and distribution of this vital commodity has passed beyond the interest of society or the governance institutions which it has created to guard those interests. Herein lies a problem which we must surmount. The forces of a competitive marketplace for generation which have eroded the integrity of service territories are neither contained nor are they containable within the State of California. This being said I do not see the solution in the expedient of shifting responsibility to the Federal Energy Regulatory Commission or any other instrumentality of our national government. I reach this conclusion because I deem the market for electricity to be governed by a transmission grid which embraces more than a dozen Western states, two Canadian provinces, and the Mexican states of Baja California Norte and Sud. To describe the market is to depict the political problem. We have no institution or combination of institutions which can easily and effectively monitor industry performance within this market nor police against discrimination, anti-competitive practices, or unfair dealing.

There is an even more pressing reliability concern with bilateral transactions which was the topic of a recent conversation with my colleague COMMISSIONER CONLON which focused on what is popularly termed the "British pool." To my mind the pool is the heart and source of the accomplishments of that reform. A subsequent note from COMMISSIONER CONLON memorialized the major points of our discussion:

> To some extent, the pool could be considered as offering a 'bundled' service package of (1) a spot market for electricity, (2) a coordination of transmission services and access, (3) voltage support and system reliability, and (4) back-up power support in case of non-performance by energy suppliers. Absent a government-created pool, a consumer wishing to choose as energy supplier would have to undertake separate negotiations for each of these four services, and the consumer's choice of

> some of these services (such as the transmission path) may impose additional and unanticipated costs on other consumers. Although in the future each of these services may ultimately be separately packaged and priced competitively, it may be unrealistic that each will spontaneously be created during the transition period. Therefore, a pool may minimize transaction costs for those customers choosing direct access as well as eliminating the financial and operational risks that would otherwise be inherent in traditional bi-lateral arrangements between buyers and sellers.

While I may quibble with the assertion that the pool must be created by government, I agree with his observations and wish to develop my colleague's last point for it addresses the reliability issue.

In a recent issue of the *Electricity Journal* I outlined my concern that the substitution of purchased power for generation additions financed, constructed, owned and operated by a utility necessitates that society shift trust in the reliability and availability of that portion of the system from status to contract.[2] This shift poses particularly pointed implications for me as the only borrowed contracts teacher on this or any other utilities commission. I questioned whether we have in California a legal infrastructure capable of providing timely, informed, principled and predictable declarations of rights and remedial orders when, through circumstance or choice, a party fails, refuses or defectively performs on a contractual undertaking. To the extent that the British pool divorces the arrangements for the physical generation, transmission and delivery of electricity from the contracts which attempt to apportion economic outcomes, my fears of a

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[2]Fessler, FROM STATUS TO CONTRACT: RELIABILITY CONCERNS AND INFRASTRUCTURE WEAKNESS, 6 *Electricity Journal* No. 7, p. 33 (1993).

threat to the reliability in the face of inevitable contract failure are substantially reduced.[3] Absent such a device, it is my position that we are ill-advised to shift reliance to bilateral contracting which will almost certainly feature parties legally domiciled in differing and distant jurisdictions. In the weeks and months to come I will be interested in the views of others as to whether these fears are factual or fanciful.

San Francisco, California
April 20, 1994

Daniel Wm. Fessler, *President of the Commission*

[3]Termed "contracts for differences," these private bilateral bargains have as their objective providing price stability over time to parties adverse to bearing the dictates of the spot market. They do not govern the actual physical transaction with respect to generation, transmission or delivery of electricity and thus the breach of a contract for differences occasions no threat to the security of supply. For practicable purposes, all physical transactions are done within the context of the pool. Delay or imprecision in providing a remedy for breach of a contract for differences is a serious matter to the immediate parties but poses little threat to the broader society. Indeed, the transparency of the cost of the commodity makes the calculation of consequential damages a rather straightforward proposition thus avoiding the burdens to the judicial system of having to devise equitable remedies at the insistence of a victim of breach for whom the damage remedy at law has proven inadequate.

4-94

PUC Plan Would Allow Choice of Utility Firms

■ **Electricity:** Proposal is expected to cut prices. Environmentalists fear setback for their cause.

By MICHAEL PARRISH
TIMES STAFF WRITER

SAN FRANCISCO—Proposing the most dramatic overhaul ever of how Californians get electric power, the state Public Utilities Commission said Wednesday that it wants to let customers of the state's three big investor-owned utilities choose their own power source by the year 2002.

Going further than experts had expected in its campaign to cut electric prices—by breaking the utilities' monopoly on power generation—the PUC said it would introduce choice in 1996 for large industrial customers of Southern California Edison Co., San Diego Gas & Electric Co. and Pacific Gas & Electric Co.

Smaller industrial users would be added in 1998 and small-business customers in 1999. And if the PUC sticks with the plan after a set of public hearings to begin June 14, the three utilities' more than 8 million residential users will be free to select their power supplier beginning in 2002.

For customers, buying electric power will be like buying long-distance telephone service. Customers will choose their power company, and the local utility—which till now has enjoyed monopoly status within its geographic turf—will simply deliver the power to their door.

■ **RELATED STORIES:** D1

"It's a fundamental shift on the national scene," said Jan Hamrin, an energy expert and consultant to the National Assn. of Regulatory Utility Commissioners. "It will probably set a standard for everyone to focus on." A few states have launched experiments in electric deregulation, but none has proposed going so far as the PUC plan.

The commission hopes that competition among producers will significantly lower Californians' electricity bills. But consumer activists objected Wednesday to several aspects of the PUC's scheme—including a plan for ratepayers to pay off some big, existing utility investments, largely in nuclear power plants, that critics say were the companies' own mistakes.

Covering the costs of such investments—and the new way that the commission proposes to regulate utilities in the future—could stick consumers with higher costs instead of savings, critics said.

"This is a system completely stacked in favor of the utilities."

Please see PUC, A29

PUC: Customers Could Pick Power Source in Utilities Overhaul

Continued from A1

said Michel P. Florio, senior attorney for Toward Utility Rate Normalization, a San Francisco-based consumer group.

But environmentalists expressed concern that wide-open competition—with the winners being those power producers who can make electricity most cheaply—will erode the state's decades-long commitment to renewable and environmentally preferable energy sources.

The proposal would have no direct affect on power customers in the city of Los Angeles, who get electricity from the municipally owned Department of Water and Power, or in other cities with municipal utilities, including Glendale, Burbank, Pasadena, Anaheim, Riverside and Sacramento.

"But clearly it will have an impact on us," said Michael T. Moore, director of public and governmental affairs for the DWP, whose rates now are 15% to 20% below those of Southern California Edison.

The utilities had opposed deregulation through more than a year of public—if obscure—debate, but the commission proposal appears to offer them a buffer against the worst potential financial damage from deregulation.

They had feared that their shareholders would be left to pay off long-term investments in power plants that won't be competitive under the new system.

The utilities also had worried about losing their large industrial customers, some of which already have been moving operations out of state in search of cheaper electricity. Had the commission allowed only such customers to shop for power, small-business and residential ratepayers might have seen dramatic rate hikes as they shouldered more of the utilities' overhead.

"This looks like a thoughtful, well-conceived plan," said John E. Bryson, chairman and chief executive of Southern California Edison and its parent, SCEcorp. It both gives customers choice, he said, and provides "fairness to all customer groups and to utility investors who supported the development of the infrastructure that we have."

Investors seemed to signal initial agreement, though utility shares generally were strong in stock trading Wednesday. PG&E rose 62.5 cents to $29.625, SCEcorp added 12.5 cents to $16.625 and SDG&E gained 50 cents to $22.75.

The PUC also endorsed the utilities' ideas for how they would earn profits in the regulated portion of their business that will remain basically monopolistic—the delivery of electricity to homes and businesses, from whatever source.

All three utilities want to switch away from the traditional ratemaking process, which allows them to charge ratepayers the cost of their services plus a regulated profit.

They prefer a system known as performance-based ratemaking, which ties their earnings not to how much power they sell, but to their efficiency. If they cut operating costs below an annual goal set by the commission, the utilities want to be able to split the difference between savings to ratepayers and profit to their shareholders.

The commissioners also expect utilities to find new markets outside their traditional service territories, just as utilities from other parts of the country are expected to enter the electricity business in California.

Indeed, Commissioner P. Gregory Conlon said Wednesday that he would expect a regional spot market in electricity to develop, with prices updated every hour or half hour, as now exists in England and Wales. That would let utilities sell their excess power into a national transmission system for use wherever there was customer demand.

Meanwhile, environmentalists expressed concern about damage to the state's policy of encouraging diverse sources of energy, which dates to the first Middle East oil crisis in 1973. The oil shock hit California harder than any state in the nation. The Legislature and regulators quickly moved to encourage non-fossil fuels, such as wind, solar and geothermal power.

As the commission deliberated, Conlon argued for a rate surcharge in the new system to continue such support. But Wednesday's proposal leaves customers only the option of specifying—perhaps by marking a box on their bill—that they want their power purchased from one of these sources.

Otherwise, such energy sources will be left to compete with all the others—including a new class of dramatically efficient natural gas turbines—and environmentalists say some will be hard-pressed to be competitive.

Independent power producers also were furious over a PUC decision—also announced Wednesday—to hold off resolution of a bitter dispute over renewable energy.

The utilities have protested an auction that would have meant more than $1 billion worth of power contracts for independent producers. The commissioners said they would hold off adjudicating the dispute until after hearings are held on the deregulation plan.

"On the commission's first step into a competitive future, they've tripped," said an angry Jan Smutny-Jones, executive director of Sacramento-based Independent Energy Producers. He objected that further delays leave these companies with an uncertain financial future and expressed concern that the commission may not live up to the rules of the auction, which were set up years ago.

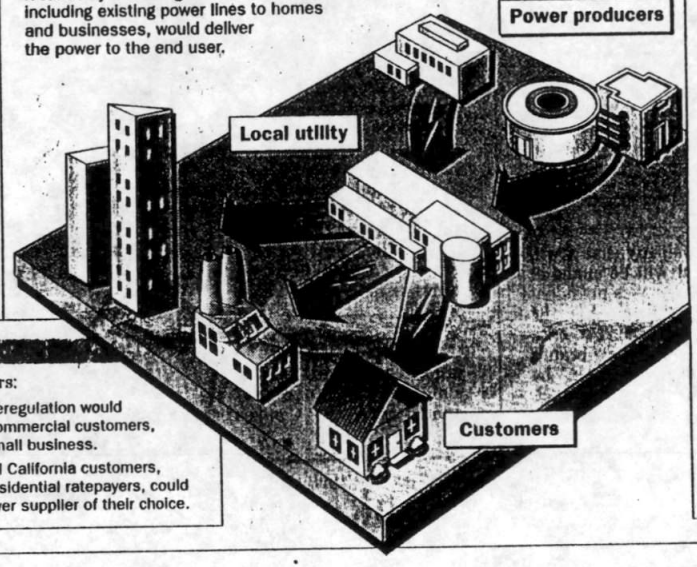
THE END OF THE

Electric Monopolies

The California Public Utilities Commission has proposed an unprecedented deregulation of the electric utility business. Over the next eight years, all customers of Southern California Edison Co., Pacific Gas & Electric Co. and San Diego Gas & Electric Co. would be freed to buy electricity from the supplier of their choice, just as they are free now to select a long-distance telephone service.

How Deregulation Would Work

Under the PUC's plan, a range of power suppliers—from the existing local utility to out-of-town utilities to independent producers—would compete to sell electricity. The local utility's existing transmission system, including existing power lines to homes and businesses, would deliver the power to the end user.



KEN OELERICH / Los Angeles Times

THE PUC'S PROPOSED TIMETABLE

Deregulation would be phased in over six years:

- **1996:** Large industrial customers could buy electric power from any producer.
- **1998:** Deregulation would extend to smaller industrial customers.
- **1999:** Deregulation would extend to commercial customers, including small business.
- **2002:** All California customers, including residential ratepayers, could choose power supplier of their choice.

IMPACT ON KEY PLAYERS

- **Customers:** The PUC says the freedom to shop North America for electric power would lower rates for all categories of consumers. But a transition fee covering the costs of big past investments by the utilities—notably for nuclear plants—would be tacked on to bills, trimming the savings.
- **Utilities:** They would win in two ways. The commission endorsed in concept their proposal to switch from traditional rate setting to a method that allows utilities to pass on savings realized from efficiency gains to shareholders and ratepayers. And the transition fee would make ratepayers—not shareholders—shoulder the costs of retiring old investments.
- **Environmentalists/Alternative energy producers:** They are unhappy with the plan to eliminate utility set-asides guaranteeing business for suppliers of environmentally benign power. Consumers would still be able to buy power from such sources, but the sources might not be competitive.

Powerful Questions

Q&A

How the Plan Would Affect Residential and Industrial Users

By MARTHA GROVES
TIMES STAFF WRITER

SAN FRANCISCO—The California Public Utilities Commission's proposal to make sweeping changes in the way the state's electricity services are regulated eventually would give all industrial and residential customers the power to choose which company they want to supply their electrical power.

Here are answers to some key questions about the plan and how it could affect utilities, customers and regulators.

Q What exactly did the PUC propose?

A The commission laid out a two-pronged plan. First, beginning Jan. 1, 1996, large industrial and commercial customers in California would be allowed to buy electricity from any source of their choosing, rather than simply from the utility company holding a monopoly in their service territory. That option would gradually, by 2002, be extended to all business and residential customers. Any customer could, of course, continue to tap the utility company as its source.

Second, the state would shift away from traditional formulas that have tied electric rates to utilities' costs for power plants and other expenses. Under that approach, major investor-owned utilities have been able to recover costs by raising rates, even if the power-generating facilities have proven uneconomical, as was the case with Pacific Gas & Electric Co.'s Diablo Canyon nuclear plant.

With the new method, known as a performance-based approach, utilities would be rewarded for more efficient operations, management and invest-

Please see Q&A, D4

Concerns Raised for Suppliers of Alternative Forms of Energy

By JAMES F. PELTZ
TIMES STAFF WRITER

The dramatic overhaul proposed Wednesday for California's electric power system sparked concern that providers of renewable energy will be priced out of the newly deregulated marketplace.

For the past decade, California has taken major steps toward ensuring that the state's three big investor-owned utilities buy a certain portion of their power from alternative sources, including power derived from the sun, wind, water and subterranean steam.

But some environmentalists said the plan laid out by the California Public Utilities Commission—in which businesses and consumers would be able to choose their own power sources within eight years—would create a market dominated by whatever firms can make electricity most cheaply.

That would hurt renewable energy firms, which are smaller than the major utilities and often can't sell their power at as low a price, critics said.

"This is unleveling the playing field between renewable systems and conventional systems," said David Goldstein, co-director of energy programs for the Natural Resources Defense Council.

But PUC Commissioner P. Gregory Conlon noted that under the new proposals, Californians would be able to choose renewable energy as their source for electricity. He predicted that many would, even if it cost more.

MAIN STORY: A1

"I think people in California would be receptive to that," Conlon said.

He also said some renewable energy firms, notably those providing wind-based power, are increasingly able to sell electricity as cheaply as the big utilities, which rely on oil and gas to generate power.

"These alternative-energy providers need to be cost-competitive, and some of them feel they already are," Conlon said.

Whatever the PUC does, Goldstein said, it would be unfair for consumers to pay more just because they chose to buy renewable power.

Please see PUC, D4

PUC: Plan Raises Concern Over Electricity Costs

Continued from D1

"Why should people with a conscience pay more for electricity than those that don't have one?" he asked. "The whole concept of environmental regulation is that these are shared costs, because they benefit everybody" by creating less pollution.

Conlon said he is seeking comments on an option that was not part of the formal PUC proposal: placing a surcharge on all Californians' electric bills that would subsidize renewable energy firms and keep them in business. Such a step would require legislation, he said.

Oil was once the dominant source for California's electric power, but that changed after the Middle East oil shocks of the 1970s. State officials responded with a unique policy that ultimately required utilities to buy a certain portion of their power from alternative sources.

Southern California Edison Co., for instance, today buys 16% of the electricity it sells from outside renewable power firms; it generates an additional 6% from its own renewable efforts, namely hydroelectricity.

Vikram Budhraja, an Edison vice president for planning and technology, said many of Edison's contracts with renewable power suppliers extend past the year 2010. "We expect them to continue," he said, regardless of the PUC's new proposals.

But Budhraja reiterated earlier Edison statements that the utility currently has no need to buy additional power from the outside. If Californians get to start choosing their own sources of electricity, he added, "our portfolic [of alternative energy purchases] would get wound down."

Tom Graff, a lawyer for the Environmental Defense Fund, said more competition in the utility business, "in the long run, is likely to be positive for both the economy and the environment." But he too said alternative energy firms "could be at risk in a deregulated" market if consumers opt only for the lowest price.

"It's one thing to go to a local grocer and buy a head of lettuce that's free of pesticides," Graff said. "But electricity is kind of a generic product. You're not getting a better type of electricity from your renewable resource, even though you may feel better about how it's generated."

Q&A: What's Being Proposed

Continued from D1

ments. To the extent that a utility could reduce costs below an established target, it could divide any savings between ratepayers and shareholders.

Q Why did the PUC propose these steps?

A The goal is to reduce the state's electricity prices—which generally run 50% higher than the national average—by fostering competition. Lower rates would make California more attractive to businesses and therefore help create jobs.

Q How would the plan work?

A PG&E, Southern California Edison Co. and San Diego Gas & Electric Co. would be required to open their transmission lines—for a fee—to companies seeking to sell electricity. Customers could choose any provider, but at least during a transition period, they would still be obligated to cover certain costs incurred by the utilities under the previous regulatory formulas. Utilities should not be forced to absorb those costs, the PUC said, since the plants were built under an earlier system.

Q Who would stand to benefit most?

A Utilities could benefit by competing without many of the previous regulatory restraints. For example, the current process of setting rates for large customers can stretch to 18 months. The new performance-based formula would put an end to that. Furthermore, utilities' shareholders would be insulated from most risk, particularly with regard to expensive nuclear power plants.

Large industrial customers could gain by having the option of shopping around for better rates.

Q What about small customers?

A Some consumer advocates fear the PUC proposal would leave small business and residential customers out in the cold by letting the utilities compete without risk. Performance-based regulation, they say, would allow utilities higher profits with less regulatory scrutiny. Also, they would have control over transmission lines and would tend to favor themselves.

The PUC said one of its chief goals is to protect residential customers by ensuring that utilities will pass on any savings from increased efficiencies to small ratepayers.

Q When would the changes take effect?

A Nothing has been formally decided. The PUC has asked interested parties to respond in writing by May 20. On June 14, it will hold its first public hearing on the proposal in Los Angeles. After that, it will determine whether other hearings are necessary before it adopts a final policy, probably in August. Customers would probably not see any effects until at least 1996.

FYI

Competition in the Electric Utility Industry
Deregulation of a Monopoly

Deregulation

The movement of monopolies, such as the electric utility industry, toward a competitive market structure is not a new phenomena in the United States. It follows the long-term national trend to deregulate many of the other industries, such as railroads, airlines, communications, natural gas, etc., that were established as monopolies on the premise that the customers of these businesses needed to be protected from the monopolistic pricing that would result if these businesses were not regulated at the national and state levels. Industries, such as the railroads, airlines, communications, and natural gas have all undergone massive restructuring as a result of their deregulation and have evolved into highly competitive businesses.

Federal Deregulation - Electricity

The national and state regulatory framework of laws and regulations, which established and guided the operations of the electric utility industry as a regulated monopoly, are unraveling at a rapid pace. With the recent enactment of the 1992 National Energy Policy Act (NEPA), the United States Congress set the stage for the deregulation of the Nation's electric utility industry. Congress, by passing NEPA, eliminated many of the barriers that kept nonutility generators from competing with the electric utility industry as providers of energy and capacity and provided a means by which the nonutility generators would be able to market their products using the Nation's interconnected transmission grid (transmission line access). NEPA was the first major piece of federal legislation dealing with the issue of acquisition of supply-side resources since Congress passed the Public Utility Regulatory Policies Act (PURPA) in 1978. Title II of PURPA introduced the concept of requiring electric utilities to purchase energy and capacity from nonutility generators called "Qualifying Facilities" (QFs). While this was not "marketplace" competition, it did establish the nonutility generation industry as a potential competitor to utility generation.

State Deregulation - Electricity

In response to Congress' attempt to open up the Nation's electricity market to competition, numerous state regulators, California regulators included, have seized the opportunity to begin moving the electric utility industry in their states from being highly regulated monopolistic businesses to more competitive marketplaces where electricity customers will have access to a greater number of electricity producers (both nonutility and utility electricity producers). In its 1992 Biennial Resource Planning Update (BRPU) for investor-owned utilities, the California Public Utilities Commission (CPUC) had QFs bidding against the electric utilities for supplying resources to meet their future loads. CPUC's ultimate goal is to have all nonutility generators, not only the QFs, and other utilities participating in the resource bidding process. CPUC is also investigating ways as part of the BRPU process to facilitate providing open transmission access to all customer classes while protecting the interests of the "core" customer classes.

Natural Gas Industry Deregulation Model

The deregulation of the natural gas industry provides a good model for the looming deregulation of the electric utility industry as the deregulation of the electric utility industry is mirroring the recent deregulation of the natural gas industry. For instance, the deregulation of the natural gas industry began with the "unbundling" of services (supply, transmission, storage, and distribution) that were historically provided as a package and the reclassification of natural gas customers into "core" and "non-core" classes. The services historically provided by the electric utility industry (supply, transmission, and distribution) are also being "unbundled" and there is movement toward redefining which electric utility customers are "core" customers and which are "non-core" customers. "Core" customers are those retail customers that lack alternatives to electric or natural gas utility service (residential and small commercial customers). "Non-core" customers are those retail customers that have access to alternatives to electric or natural gas utility service (large commercial and industrial customers). Retail customers that purchase natural gas directly from a supplier are not subject to regulatory scrutiny from Federal Energy Regulatory Commission (FERC) since FERC does not regulate first sales of gas, only resale. There is a high probability that the electric utility industry, in the future, will also see retail customers and suppliers conduct transactions for electricity that will also be exempt from regulatory oversight.

The natural gas industry in Southern California was severely impacted by the ability of its "non-core" customers to access natural gas from other suppliers and in 1991, the local distribution company (LDC), the Southern California Gas Company, reported that it lost 60 percent of its natural gas sales to nonutility suppliers (independent brokers and marketers). Nonutility suppliers now control 95 percent of the nonresidential and retail sales market. Further, LDC was forced to initiate a wave of "downsizing" and other cost-cutting measures to remain competitive. LDC has been allowed by the CPUC to alter its rate structure to more accurately reflect the long-range cost of business for various classes of customers. Because LDC needed to price its services at competitive levels, it had to apportion its costs to reflect the actual costs of serving each class of customer. As a result of this market-driven action, the residential subsidies in the natural gas rate structure, previously supported by large industrial and commercial gas users, are slowly being revised. Although LDC is relieved of its obligation to supply gas to customers purchasing their own natural gas, LDC's obligation to serve its residential customers at the regulated price remains with the LDC.

Electric Utility Industry Deregulation Model

Although hearings have begun, it is too early to determine what path the CPUC will take for deregulating California's electric utility industry. However, like the natural gas industry, the electric utility industry will be severely impacted by the ability of its "non-core" customers, and perhaps its "core" customers as well, to access electricity from other nonutility and utility suppliers. If this happens, and there is a high likelihood that it could happen, then the Department of Water and Power (Department) faces the potential loss of its large "non-core" customers (industrial and large commercial) to nonutility electricity suppliers or other electric utilities. Since the Department's 10, 50, and 300 largest customers represent 10-, 24-, and 34-percent of its sales, respectively, the loss of one or more of these customers to lower cost energy suppliers would have a

devastating effect on the rates of the small commercial and residential customer classes. These highly desirable "non-core" customers are likely to be targeted for "cherry picking" by nonutility generators.

If the deregulation of the electric industry continues to follow the natural gas deregulation model as expected, then the electric utility industry will be relieved of its obligation to serve its industrial and large commercial customers, but will be required to continue its obligation to serve its residential customers. Historically, the residential customers have been more expensive to serve than the industrial and commercial customers but have contributed considerably less to the electric system's sales on a per-customer basis.

Transmission Access in a Deregulated Environment

In addition to the introduction of open market competition at the generation level of electric utility industry, the federal energy act also made provisions for nonutility generators to gain access to transmission service at the wholesale level. NEPA gave FERC authority to order wholesale wheeling that covers transmission facilities owned and operated by both investor-owned utilities and municipally owned utilities like the Department. More specifically, FERC now has the ability to mandate access to transmission lines with excess capacity or upgrades of existing interstate transmission lines to increase capacity for other utilities, and a class of nonutility generators called Exempt Wholesale Generators.

As an owner and operator of nearly 20,000 circuit-miles of high-voltage transmission lines within and outside California, FERC's ability to mandate access for nonutility generators on the Department's transmission system is likely to have a significant impact on the City. Potentially, the Department faces problems such as:

- Having to forego economy purchases (low-priced surplus energy purchased to offset higher cost energy) because it is required to provide the transmission capacity needed to make that purchase to another utility.

- Loss of opportunities to sell surplus energy on its system because another utility or nonutility generator can sell surplus energy at a lower price to the Department's retail customers and require the Department to wheel the energy to those retail customers.

- Operational problems resulting in instability and higher energy losses in the Department's transmission system and the regional electric transmission grid to which it is interconnected.

The Deregulated Electric Utility Industry

If the deregulation of the electric utility industries follows the general processes that shaped the deregulation of the airlines, railroads, telecommunications, and natural gas industry, it is more likely that the entire electric utility industry will be re-regulated rather than totally deregulated. For example, the generation and transmission service sectors of the industry are likely to be the more deregulated than the distribution sector, but it is unlikely that any sector of the industry will completely escape some type

of regulatory overview. A few reasons for continuing some type of regulation of the electric utility industry are that electricity markets are far from perfect (buyers lack access to sellers, too few sellers to establish a competitive market, sellers unwilling to transact business with small buyers), a rate mechanism will still be needed to protect residential customers from exploitation and excessive rate structures. Furthermore, the complex nationwide transportation system for moving electrons from seller to buyer will require regulations to set a fair tariff schedule to protect large industrial and commercial customers from excessive rates and potential losses.

There is likely to be a shift away from the vertically integrated structure of most electric utilities (utilities having generation, transmission, and distribution facilities) to single function companies, such as generating, transmission, and distribution companies. Generating companies will probably be totally deregulated; transmission companies will probably be partially deregulated; and distribution companies will probably be totally regulated.

In the final analysis, the deregulation of the electric utility industry will impact the following areas:

- **Market Share**: Utilities that have uncompetitive rates will experience a loss of market share and, conversely, utilities that have competitive rates should see an increase of market share. Even in the City, where the Department has an exclusive service area, the loss of market share is still a threat as it is possible that nonutility generators will be able to siphon off commercial and industrial customers from the Department if their rates are lower than the Department's rates.

- **Customer Service**: Utilities will probably have to unbundle their services as a result of deregulation. Large "non-core" customers will demand utilities unbundle their services to reduce their costs and will expect to pay only for the services they select. Utilities that can unbundle their services will be able to identify the actual cost for providing each service and set their rates accordingly. Residential rates are expected to rise and more accurately reflect the cost of service if electric services are unbundled.

- **Social Programs**: Utilities that were required by CPUC to provide millions of dollars in support for special programs, like the low-income ratepayer assistance program, and global warming research may no longer be able to do so because of the intense competition at the generation and transmission level that is likely to develop in a deregulated environment.

ELIAS MARTINEZ
City Clerk

J. Michael Carey
Executive Officer

When making inquiries relative to this matter refer to File No.

94-0684

CITY OF LOS ANGELES
CALIFORNIA

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Pat Healy
Chief Legislative Assistant

April 29, 1994

COMMERCE, ENERGY AND NATURAL RESOURCES COMMITTEE

At the meeting of the Council held April 26, 1994 the motion (Galanter - Ferraro) attached to the file was referred to the COMMERCE, ENERGY AND NATURAL RESOURCES COMMITTEE.

Elias Martinez

City Clerk
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COMMERCE, ENERGY and NAT. RES.
APR 26 1994

MOTION

During the 1980s, a number of services traditionally dominated by monopolies were deregulated, reregulated, and generally pushed toward more competitive market structures. With the introduction of different market structures, many of the companies within these industries (i.e. gas, communications, and airlines) have been forced to adapt and evolve into highly competitive businesses.

The electric industry has not been sheltered from these competitive changes. In 1992, the U.S. Congress set the state for deregulation of the Nation's electric utility industry with the enactment of the National Energy Policy Act (NEPA). The NEPA eliminated many of the barriers that prevented out of state nonutility power generators from competing with traditional in state electric utilities for local market share.

In response to Congress' attempt to open up the Nation's electricity market, state regulators have typically seized opportunities to move their electric industries toward competitive market structures. Consistent with these trends, the California Public Utilities Commission (CPUC) recently announced its plan to increase competition within the California electric industry.

If adopted, the CPUC's proposal would make sweeping changes in the way the state's investor owned utilities (IOUs) are regulated. Under the CPUC proposal, all classes of customers would eventually have the ability to choose their power producers, while local utilities would still be responsible for transmitting and distributing that power (for a fee). The CPUC proposal would also allow IOUs to adopt performance based ratemaking structures.

The CPUC has asked all interested parties to submit comments to the Commission by May 20th. The comment period will be followed by another public hearing in Los Angeles on June 14th.

Although the California Public Utilities Commission (CPUC) regulates all of the investor owned utilities in the State, they do not have any jurisdiction over the City's Department of Water and Power. However, it appears that the CPUC's proposal may adversely affect the Department of Water and Power's ability to serve its existing customers.

For example, if there is open competition across utility service areas, uncompetitive utilities will be forced to become the low cost provider for all customer classes, or experience a loss of market share. Furthermore, heightened rate competition may force utilities to eliminate existing subsidies between customer classes, reduce spending on special ratepayer assistance programs, as well as environmental and conservation programs.

I THEREFORE MOVE that City Council Direct the Department of Water and Power to submit a report to the City Council by May 3rd that outlines the affects of the CPUC's Proposal (to reform the California electric industry's regulatory structure) on the City's ratepayers.

I FURTHER MOVE that the City Council Direct the Department of Water and Power and the Chief Legislative Analyst to prepare a City position - and set of comments on - the CPUC's Proposal (to reform the California electric industry's regulatory structure).

PRESENTED BY: Ruth Galanter

Councilwoman Ruth Galanter
6th Council District

SECONDED BY: John Ferraro

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