



● **Board of Directors**  
**Engineering & Operations Committee**

July 22, 1999

**8-3**

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**Subject**

Authorization to execute the Second Amendment to the District-Edison 1987 Service and Interchange Agreement.

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**Description**

The Second Amendment to the District-Edison 1987 Service and Interchange Agreement (Agreement) allows Metropolitan to continue its discretionary energy purchases from the California Power Exchange (PX) through Southern California Edison Company (Edison). The ability to purchase energy from the PX was originally provided by the First Amendment to the Agreement that was approved by the Board on October 27, 1988 and expires September 30, 1999. The Second Amendment is coextensive with Edison's buy/sell obligation through the PX, or ten days prior notice by either Metropolitan or Edison, whichever is earlier.

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**Policy**

Administrative Code Article 8115: Negotiated Contracts.

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**Board Options/Fiscal Impacts**

**Option #1** Authorize the General Manager to execute the Second Amendment. Continued discretionary purchases by Metropolitan staff of low-cost energy from the California Power Exchange (PX) through Southern California Edison Company (Edison) will provide an estimated savings in the cost of Colorado River Aqueduct (CRA) pumping operations of \$100,000 - \$300,000 annually depending on market conditions.

**Option #2** No Action.

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**Staff Recommendation**

Option #1: Authorize the General Manager to execute the Second Amendment. This provides Metropolitan the option to purchase energy from the California Power Exchange (PX), which frequently has been the least-cost supplier.

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Stephen N. Arakawa Date  
Acting Chief of Planning & Resources

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General Manager Date

JL:jpa

**Attachment 1**  
**Attachment 2**

**Background**

Metropolitan's District-Edison 1987 Service and Interchange Agreement (Agreement) with Southern California Edison Company (Edison) provides, among other things, that Metropolitan may obtain supplemental power and exchange energy for pumping on the Colorado River Aqueduct (CRA) at Edison's incremental generation cost, which has typically been Edison's oil/gas-fired generation cost (a full discussion of the basic agreement which was entered into in May 1987 is contained in **Attachment 2**). However, as a result of California's electric industry restructuring, Edison has completed divestiture of all of its oil/gas-fired generating units. Additionally, with the commencement of operations in a restructured environment, Edison purchases all of its generation needs through the California Power Exchange (PX). In order to provide an appropriate benchmark for the pricing of supplemental power and exchange energy under the Agreement on a temporary basis, Metropolitan entered into the First Amendment to the Agreement.

The First Amendment, which expires on September 30, 1999, provides that the price for supplemental power and exchange energy under the Agreement is equal to the hourly PX market clearing price plus associated PX administrative charges and California Independent System Operator grid management charges instead of Edison's oil/gas-fired generation cost. This price is set by the market activity in the PX and at times is above Edison's former oil/gas-fired generation costs and at other times is below such costs. Generally the price has been below Edison's former oil/gas-fired generation costs in the off-peak time periods. Metropolitan typically utilizes this feature of the Agreement for the procurement of low-cost, supplemental energy. The First Amendment also provides Metropolitan with the opportunity to purchase energy from the PX through Edison without having to accept the costs and risks of directly participating in that market. Lastly, it maintains the original principle under the Agreement for pricing of this energy based on Edison's incremental cost.

In order to continue the benefits listed above after the termination of the First Amendment, staff has negotiated the Second Amendment to the Agreement providing for the same pricing options. Due to the uncertainty of possible future changes in the market structure, the Second Amendment provides for its termination by September 30<sup>th</sup> of any year in which Edison no longer has the buy/sell obligation through the PX, or ten days prior notice by either Metropolitan or Edison, whichever is earlier. With such termination, the terms of the original Agreement will again govern and Metropolitan and Edison will endeavor to develop a substitute incremental pricing methodology.

The amount of supplemental power and exchange energy Metropolitan may use in any year depends on pumping conditions on the CRA, availability of Federal resources, and the availability of other resources and their costs. Given these uncertainties, it is estimated that Metropolitan may realize a savings of \$100,000 - \$300,000 annually under the Second Amendment.

The Second Amendment will be implemented through continued operation of existing Metropolitan and Edison power facilities involving negligible or no expansion of such facilities beyond that previously existing. As such, it is exempt from the California Environmental Quality Act by Title 14 California Administrative Code Section 15301.



**MWD**

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

8-4

February 24, 1987

To: Board of Directors (Engineering and Operations Committee--Action,  
Water Problems Committee--Information,  
Finance and Insurance Committee--Information)

From: General Manager

Subject: Authority to Execute the District-Edison 1987 Service and  
Interchange Agreement

Summary

An agreement with Southern California Edison Company (Edison) is proposed whereby the District's electric system, including the Hoover and Parker generating resources available to the District, will be integrated with Edison's electric system to the mutual benefit of both parties. The agreement will improve the parties' reliability of electric service, facilitate operations, conserve resources, and assist in efficiently operating the power systems. In all cases, Edison's use of the District's resources and facilities under the agreement is subordinate to the District's use for its water supply purposes.

Specific benefits under the agreement include interchanging and banking of energy between systems, joint use of transmission facilities, purchase of supplemental power, load shedding, and a sharing of energy savings realized by the integrated operation of the two electric systems. Under the latter item, with an eight-pump flow on the Colorado River Aqueduct, Edison will provide the District with sufficient benefit energy to pump approximately 100,000 acre-feet per year of water into the District's service area. The term of the agreement is coextensive with the District's newly executed Hoover contract (30 years), except that either party may terminate the agreement on five years' notice.

Your Board's authorization to execute the District-Edison 1987 Service and Interchange Agreement is exempt from compliance with the California Environmental Quality Act.

Recommendation

That the General Manager be authorized to execute the District-Edison 1987 Service and Interchange Agreement substantially in accordance with the terms outlined in this letter, such agreement to be approved as to form by the General Counsel.

Detailed Report

The District and Southern California Edison Company (Edison) have negotiated the proposed "District-Edison 1987 Service and Interchange Agreement," which is to replace the existing "District-Edison 1958 Service and Interchange Contract," which expires on May 31, 1987. The proposed agreement, as does the existing agreement, provides for the integrated operation of the District's and Edison's electric systems to the mutual benefits of both parties; however, the terms have been modified from the existing agreement to reflect changes in operational needs and benefits.

The principal provisions of the proposed agreement are as follows:

1. Effective date and term - The agreement will be effective June 1, 1987, and will be coextensive with the term of the District's newly executed Hoover Contract (September 30, 2017, 30 years), except that either party may terminate the agreement on five years' notice.
2. Integration of Electric Systems - Subordinate to the District's use of its electric system for its water supply purposes and the efficient operation thereof, the District will integrate the operation of its electric system with the operation of Edison's electric system.

Comment: This provision sets the foundation through which the other provisions of the agreement operate and through which the benefits flow to the parties. It is in itself a benefit to both the District and Edison. The benefit to the District is that it requires Edison to maintain the electric control area responsibility for the District's electric system. This includes providing electrical spinning reserves and automatic generation control to match generating resources to loads and to maintain system frequency and integrity. From Edison's perspective, it provides for the combined base-load operation of the District's facilities with Edison's peaking operation. This improves Edison's system reliability, increases its efficiency of

operation, and assists in alleviating minimum-load problems on Edison's electric system.

3. Edison Purchase Power - Edison will supply the District with supplemental power for pumping on its Colorado River Aqueduct, and the District will pay for such power at Edison's incremental generating cost.

Comment: This will provide the District with an additional source to augment its federal resources and increase its pumping on the Colorado River Aqueduct. The amount of the resource the District would use would depend on pumping conditions on the Colorado River Aqueduct, availability of federal resources, and the availability of other resources and their cost, including those resources expected to be available from the California State Department of Water Resources. The cost of the power will be dependent primarily upon the time of purchase and the price of oil and natural gas.

4. Use of Unused Energy - The District's Hoover and Parker energy supplemental to its needs for water supply purposes will be resold to Edison by the District at the Hoover energy rate in effect at the time.

Comment: It is unlikely that there will be any energy available to Edison under this provision, since the District is planning to make any federal energy that is surplus to its needs on the Colorado River Aqueduct available for use on the State Water Project. However, in the event of unusual operational conditions in which neither project can use the energy, this principle provides a firm market with Edison for the energy. This would be primarily a benefit to Edison, since the price of the energy would be substantially below Edison's alternative cost.

5. Interchange of Energy - Edison will have the right to use during its peak periods the District's Hoover and Parker energy that would have normally been generated off-peak. Edison will return such energy to the District off-peak.

Comment: This is the central benefit of the agreement to Edison. It permits Edison to optimize its system efficiency by maximizing its hydrogeneration during peak times and shutting down its less efficient steam generators. Then during off-peak periods, the energy is returned using Edison's more efficient generators or other sources available to it. Simply stated, this provision allows Edison to realize substantial energy

savings on its system by optimizing its system efficiency.

6. Exchange of Energy - Edison will, during a month, bank the District's Hoover energy and Parker energy that is surplus to the District's needs for that month, and will return it to the District during another month during the year in which the District is deficient in energy. The District will pay Edison's incremental cost, if any, for such banking arrangement.

Comment: This provision is a benefit to the District, although there can be benefits to Edison. It permits the District to shape its federal resources to meet its pumping needs; however, the District is required to pay Edison's incremental costs, if any, associated with such energy exchange. The benefits to Edison would occur in the event such load shaping decreases Edison's overall cost (i.e. the cost of the return energy is less than the cost of generating the energy on Edison's system at the time the energy is banked).

7. Use of Unused Generating Capacity - Edison will have the right to use for its electric system that generating capacity available to the District from Hoover Power Plant and Parker Power Plant in excess of the District's requirements for its water supply purposes. Edison will reimburse the District for any increased generating charges the District is obligated to pay as a result of Edison's use of the capacity.

Comment: This provision, as with the interchange of energy principle, permits Edison to save energy on its system by maximizing its peak use of hydrogeneration and reducing the use of its less efficient generators. As the District's peak load is reduced, the hydrogeneration available to Edison increases, resulting in greater efficiency on Edison's system.

8. Load Interruption - The District, at Edison's request, will interrupt its electrical pumping load at its Intake and Gene Pumping plants to the extent such interruption can be made without reducing or restricting the District's water deliveries as measured at its Hinds Pumping Plant.

Comment: This provision, as with the unused capacity principle, further increases the amount of hydrogeneration available to Edison for maximizing its system efficiency.

9. Replacement Capacity - If during the period of October 1 through May 31 of each year, the District's entitlement to capacity from Hoover Power Plant or Parker Power Plant is reduced, Edison will simultaneously with such reduction provide to the District replacement capacity equivalent to the lesser of such reduction or the requirement of the District's water supply electrical loads.

Comment: This provision is a benefit to the District by firming the District's federal resources during Edison's off-peak season. Absent the arrangement, the District would either need to purchase capacity during generator outages, or shut down a portion of its pumping load.

10. Use of Transmission Systems - Edison will have the right to use the unused capacity of the District's transmission system for transmitting its power to its main system or loads; and the District will have the firm right to 110 megawatts of transmission capacity on Edison's system between Hinds Pumping Plant and Edison's Vincent Substation for transmitting power back and forth between the State Water Project's and the Colorado River Aqueduct's electric systems.

Comment: This provision provides benefits to both the District and Edison. It provides the District with the necessary transmission capability for coordinating and complementing the power operations between the State Water Project and the Colorado River Aqueduct, and it provides Edison with the transmission capability to serve its loads at Camino Switching Station, Iron Mountain Pumping Plant and Eagle Mountain Pumping Plant, as well as additional east to west transfer capability for blocks of power from the southwestern United States to Edison's main system.

11. Benefit Energy - To balance the benefits the parties derive under the above principles, Edison will provide the District with benefit energy. The amount of benefit energy will depend on Metropolitan's variance below or above 290 megawatts (eight-pump flow on Colorado River Aqueduct) of electrical demand.

Comment: As previously indicated, a central feature of the agreement is the energy savings Edison realizes through optimizing its system efficiency with the combining of loads and resources of the District and Edison. Such energy savings increases as the District's electrical demands are reduced. This provision provides for Edison to share a

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portion of that energy savings with the District in order to balance the overall benefits to the parties under the agreement. It is estimated that the benefit energy to be received under this provision when on an eight-pump flow could be sufficient to pump approximately 100,000 acre-feet per year.

As set forth in the comments above, the agreement will improve the reliability of the District's electric system, complement the District's matching of its loads to its resources, and substantially reduce the District's total power costs for the next thirty years.

The District-Edison 1987 Service and Interchange Agreement will be implemented through continued operation of existing Metropolitan and Edison power facilities involving negligible or no expansion of such facilities beyond that previously existing. As such, it is exempted from the California Environmental Quality Act by Title 14 California Administrative Code Section 15301.

Carl Boronkay

RWA: ks