



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

7/11/2017 Board Meeting

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**8-4**

**Subject**

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Adopt CEQA determination and authorize approval of agreements and authorize membership with the Arizona Electric Power Cooperative for Colorado River Aqueduct energy and transmission services

**Executive Summary**

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This action authorizes membership with Arizona Electric Power Cooperative (AEPSCO) and authorizes the execution of two agreements with AEPSCO for energy and transmission services for the Colorado River Aqueduct (CRA) beginning October 1, 2017 and terminating December 31, 2035. Early termination provisions are also provided.

**Timing and Urgency**

Presently, Southern California Edison (Edison) provides energy and transmission services for the CRA under the Service and Interchange Agreement (SIA). The SIA will terminate on September 30, 2017, and Edison has elected not to renew the agreement due to changing regulations that have impacted electric utilities. Metropolitan has evaluated several alternatives for replacing the SIA, and negotiations with AEPSCO have resulted in two agreements to provide the required services beginning October 1, 2017.

**Details**

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**Background**

Metropolitan owns a 230,000-volt transmission system that provides power to its CRA pumps located in eastern San Bernardino and Riverside Counties. Metropolitan also has long-term contracts for energy from the Hoover and Parker Dams. This energy is transmitted over the transmission lines to the CRA pumps. Additional power from the energy marketplace is acquired as needed. For the past 30 years, Metropolitan's CRA energy and transmission resources have been integrated with the power system of Edison.

Under the 1987 SIA, Edison provides numerous energy and transmission services for Metropolitan's CRA power system. Through the SIA, Edison combines Metropolitan's energy and transmission resources, including energy from the Hoover and Parker Dams, with its own resources and operates the combined systems in a manner that achieves maximum value for both parties. As the energy industry in California has changed due to deregulation in the late 1990s, the creation of the California Independent System Operator (CAISO), the energy crisis in 2000-2001, and the implementation of electrical reliability standards in 2007, Edison's ability to benefit from its agreement with Metropolitan has diminished. Consequently, Edison has determined that it will no longer provide CRA electrical services to Metropolitan upon termination of the SIA on September 30, 2017.

Metropolitan staff has evaluated options for replacing the SIA, including performing the energy and transmission services currently provided by Edison with in-house personnel. This option was determined to be infeasible and undesirable due to the associated time constraints, costs, and lack of necessary facilities and personnel. Staff determined that contracting with other entities to provide the services previously provided by Edison was the most cost-effective and operationally desirable option. This is the option Metropolitan pursued, and the proposed actions will authorize membership in AEPSCO and the execution of agreements that are the result of lengthy

negotiations. While the recommendation is not to perform these services with in-house personnel in the near-term, staff will continue to examine the feasibility of in-house personnel providing energy and transmission services in the future.

Additionally, last month the Board authorized execution of an operating agreement with the CAISO and adopted a resolution pertaining to Metropolitan's resource adequacy requirements for the CRA. Along with anticipated agreements for Edison's continuing interconnections with Metropolitan's transmission facilities, the AEPCO and CAISO agreements, once executed, will finalize the contractual arrangements necessary to continue the reliable and efficient operation of the CRA power system after the termination of the SIA on September 30, 2017.

### **Arizona Electric Power Cooperative**

To obtain energy and transmission services, Metropolitan has negotiated agreements with AEPCO. AEPCO is a non-profit, membership-based generation and transmission cooperative established in 1961 and located near Tucson, Arizona. Today AEPCO is responsible for meeting the energy and transmission needs of its members as shown in [Attachment 1](#), as well as providing limited services to non-member customers. AEPCO's Class A members participate jointly in generation and transmission projects and are primarily responsible for AEPCO's governance. Class D members, including the Central Arizona Project, receive services from AEPCO and also participate in AEPCO's governance to a more limited degree than the Class A members.

AEPCO provides energy management and scheduling services through the Alliance for Cooperative Energy Services Power Marketing LLC (ACES), a nationwide firm that provides such services for non-profit or municipal electric utilities. The utilization of ACES provides extensive experience and deep resources to obtain the best value in acquired energy resources. These energy resources are needed by Metropolitan when energy from the Hoover and Parker Dams is not sufficient to satisfy the requirements of the CRA.

AEPCO also operates over 600 miles of high voltage electric transmission lines, meeting the requirements of the national electric reliability standards through their continuously staffed, modern control center. AEPCO would provide operational services for Metropolitan's CRA transmission system, assuring compliance with federal reliability requirements. Metropolitan would continue to physically maintain and perform electrical switching as is currently done under the SIA.

As a non-profit cooperative, there are certain limitations regarding the amount of revenue AEPCO can receive from non-members to retain its non-profit status. Due to the amount of energy (and the resulting revenue) that could be acquired by AEPCO for Metropolitan during years of heavy pumping on the CRA, the revenue limitations could be exceeded if Metropolitan did not become a Class D member. For this reason, and in order for Metropolitan to have a role in AEPCO's governance, it is recommended that Metropolitan become a Class D AEPCO member.

The negotiations with AEPCO have been successfully concluded. Approval for execution of two agreements between Metropolitan and AEPCO is now being requested, along with a request for approval for Metropolitan's membership in AEPCO as a Class D member.

### **Scheduling and Trading Agreement**

The Scheduling and Trading Agreement (S&TA) will provide Metropolitan with energy management and scheduling services. The key terms and conditions of this agreement are as follows:

- Agreement term of October 1, 2017 to December 31, 2035;
- Early termination by either party with a three-year advance notice;
- AEPCO scheduling of Metropolitan's energy resources from Hoover and Parker Dams, as directed by Metropolitan;
- AEPCO procurement of supplemental energy for CRA operations when the available energy from Hoover and Parker Dams is insufficient;

- Joint development of strategies to optimize the use of Metropolitan's CRA transmission system and Hoover, Parker, and supplemental energy resources in order to minimize the cost of CRA operations while assuring a reliable energy supply;
- Metropolitan direction to AEPCO on pricing of energy transactions and credit requirements of counterparties;
- AEPCO monitoring of the CRA electrical load and energy resources to assure balanced and cost-efficient operations;
- AEPCO registration as Metropolitan's Scheduling Coordinator and scheduling of Metropolitan's CRA energy and transmission in the area controlled by the CAISO;
- AEPCO accounting, invoicing, and transaction tagging for all CRA energy matters, including validation of invoices from energy suppliers and the CAISO;
- Mutual indemnification and limitations on liability; and
- Creation of an initial \$1 million, interest-bearing deposit account to ensure that AEPCO has sufficient resources to enter into transactions on Metropolitan's behalf.

The amount of the deposit account will be evaluated by the parties after two years. The amount may be increased or decreased, by mutual agreement of the parties, depending upon what is necessary for AEPCO to make energy purchases on Metropolitan's behalf. An increase would require authorization from Metropolitan's Chief Financial Officer.

Charges for energy and scheduling services under the S&TA are on a per megawatt-hour basis for each megawatt-hour transacted. All members pay the same unit cost per megawatt-hour. This value is recalculated every year and is determined by the total cost to provide these services and the prior year's energy needs of the members. Metropolitan will use an annual average of the prior three years to smooth out the large swings in year-to-year CRA energy use. For 2018, it is estimated Metropolitan's cost would be approximately \$950,000.

### **Power System Operation Services Agreement**

Under the Power System Operation Services Agreement (PSOSA), AEPCO will provide Metropolitan with a variety of system operation services, including services that will ensure that Metropolitan's facilities are operated in compliance with national reliability standards. Since 2007, the North American Electric Reliability Corporation (NERC) has enforced a wide range of reliability standards, some of which apply to Metropolitan's electrical facilities, and has imposed penalties for violations of those standards. Under the SIA, Edison currently serves as Metropolitan's Transmission Operator (TOP). Under the PSOSA, AEPCO will assume this responsibility. The following are the key terms and conditions of the PSOSA:

- Agreement term of October 1, 2017 to December 31, 2035;
- Early termination by either party with a three-year advance notice;
- Requirement that the Scheduling and Trading Agreement remain in effect during the term of the PSOSA;
- AEPCO registration with NERC as Metropolitan's TOP and responsibility for ensuring compliance with NERC reliability standards;
- AEPCO representation of Metropolitan with regulatory agencies, including responding to audits, data requests, self-certifications, spot-checks, questionnaires, notices, and other inquiries;
- Joint responsibility to implement any corrective actions needed to assure compliance with the reliability standards for Metropolitan's facilities;
- Metropolitan responsibility for performing delegated tasks necessary to assure regulatory compliance;
- Metropolitan reimbursement of AEPCO for data and communication equipment that AEPCO installs for transmission of Metropolitan CRA energy information to AEPCO;
- Metropolitan responsibility for NERC penalties incurred by AEPCO in its role as TOP for Metropolitan's facilities, absent gross negligence or willful misconduct by AEPCO; and

- Metropolitan ability to terminate both the PSOSA and S&TA if Metropolitan incurs penalties due to AEPCO's negligence.

Charges for transmission services under the PSOSA are determined by AEPCO's cost of providing these services to Metropolitan. For 2018, it is estimated that the charges will total \$270,000, and charges will escalate annually by approximately 3 percent. Costs will be reevaluated after the second year of the contract to determine if modifications are warranted.

The terms and conditions of both the S&TA and the PSOSA may only be amended by the respective boards of the parties, but both agreements provide that the exhibits to the agreements pertaining to technical matters may be modified by mutual agreement of the authorized representatives of the parties.

### **Membership in AEPCO**

AEPCO is a generation and transmission cooperative that provides energy and transmission services to its members and customers. It is recommended that Metropolitan become a member of AEPCO. Metropolitan would be a Class D member, as it would receive energy and transmission services from AEPCO without utilizing AEPCO's energy and transmission facilities. There are four other Class D members, including the Central Arizona Project, and, collectively, the Class D members choose one member to represent them on the AEPCO Board. Membership in AEPCO requires a written request and acceptance by the AEPCO Board.

There is a \$100 membership application fee that is required when requesting membership in AEPCO. There are no annual membership fees or charges.

### **Policy**

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Policy principle on Energy/Restructuring (Minute Item 41941, June 11, 1996)

Policy principle on Energy (Minute Item 47598, August 19, 2008)

### **California Environmental Quality Act (CEQA)**

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#### **CEQA determination for Option #1:**

The proposed action is not defined as a project under CEQA (Public Resources Code Section 21065, State CEQA Guidelines Section 15378) because the proposed action will not cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment and involves continuing administrative activities, such as general policy and procedure making (Section 15378(b)(2) of the State CEQA Guidelines). In addition, the proposed action is not defined as a project under CEQA because it involves the creation of government funding mechanisms or other government fiscal activities which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment (Section 15378(b)(4) of the State CEQA Guidelines).

The CEQA determination is: Determine that the proposed action is not defined as a project under Public Resources Code Section 21065 and Sections 15378(b)(2) and 15378(b)(4) of the State CEQA Guidelines.

#### **CEQA determination for Option #2:**

None required

**Board Options**

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**Option #1**

Adopt the CEQA determination that the proposed action is not defined as a project under CEQA, and

- a. Authorize membership in the Arizona Electric Power Cooperative; and
- b. Authorize the General Manager to execute the Scheduling and Trading and Power System Operation Services Agreements with the Arizona Electric Power Cooperative.

**Fiscal Impact:** Costs for calendar year 2018 are estimated at \$1.2 million of budgeted O&M funds. Execution of these agreements and membership in AEPCO will allow Metropolitan to continue to provide reliable and cost-efficient energy and transmission services for the operation of the CRA while meeting the national electric reliability requirements.

**Business Analysis:** Metropolitan will receive energy and transmission services necessary for the efficient operation of the CRA. Expertise will be available to Metropolitan to develop strategies to effectively utilize Metropolitan’s energy resources from the Hoover and Parker Dams with additional energy transactions. These services will be provided by AEPCO in a timely and cost-effective manner.

**Option #2**

Do not authorize execution of the Scheduling and Trading and Power System Operation Services Agreements or request membership in the Arizona Electric Power Cooperative.

**Fiscal Impact:** The costs of scheduling power for CRA operations are unknown in the absence of an agreement, as are potential fines or penalties from violations of the national electric reliability standards in the absence of a Transmission Operator.

**Business Analysis:** Without these agreements, Metropolitan would be required to begin discussions with new parties if any could be found. It is unlikely that any new agreements could be in place by the time the Service and Interchange Agreement with Edison expires, or that agreements with more favorable terms could be negotiated.

**Staff Recommendation**

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Option #1

  
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 James F. Green  
 Manager, Water System Operations

6/20/2017  
Date

  
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 Jeffrey Kightlinger  
 General Manager

6/23/2017  
Date

**Attachment 1 – Arizona Electric Power Cooperative Governance**

## Arizona Electric Power Cooperative Governance

Arizona Electric Power Cooperative (AEPCO) is governed by a Board of Directors who represents the members of the cooperative.

There are four classes of membership; Class A, Class B, Class C, and Class D.

- Class A: Electric utilities who, among other things, receive all of their power from AEPCO, have turned over control of their assets to AEPCO, and are beneficiaries of the Rural Electrification Act of 1936.
- Class B: Electric utilities who have contracted for a minimum amount of power from AEPCO for a multi-year period.
- Class C: Electric utilities who have contracted for transmission services from AEPCO for a multi-year period.
- Class D: Electric utilities who have contracted for various services from AEPCO for a multi-year period. They do not receive 100% of their power from AEPCO nor have they turned over their assets to AEPCO.

At this time there are six Class A and four Class D members. There are no Class B or C members.

Class A members:

- Anza Electric Cooperative (CA)
- Duncan Valley Electric Cooperative (AZ)
- Graham County Electric Cooperative (AZ)
- Mohave Electric Cooperative (AZ)
- Sulfur Springs Electric Cooperative (AZ)
- Trico Electric Cooperative (AZ)

Class D members:

- Central Arizona Water Conservation District (Central Arizona Project) (AZ)
- Lincoln County Power District No. 1 (NV)
- Southwest Public Power Agency (AZ)
- Valley Electric Association (NV)

Metropolitan is considered an electric utility and would be a Class D member.

Each Class A member is represented by two directors on the board, selected by the member.

Class D members have collectively one director. The director is selected by a majority vote of the Class D members or unanimous agreement. Ties are broken by random selection (coin toss). Southwest Public Power Agency is the current Class D representative.

Currently the board is composed of 13 directors. Directors serve two-year terms.

Membership fee is a one-time payment of \$100.

Members are not responsible for the debts of AEPCO.

Non-members (customers) may purchase power or services from AEPCO but certain limitations exist on how much revenue can come from customers for AEPCO to retain its non-profit status.