THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

BOARD ACTION

- **Board of Directors**
  Finance and Insurance Committee

3/8/2011 Board Meeting

8-1

Subject

Amend Section 8122(e)(1) of the Metropolitan Water District Administrative Code to increase the total authorized payment obligation for Colorado River Aqueduct Forward Energy commitments.

Description

Summary

Metropolitan purchases about 35 percent of the energy required to pump water from the Colorado River in the wholesale power market. In order to reduce price and supply volatility and risk, Metropolitan has utilized forward purchase contracts to lock in prices and quantities for up to 24 months in advance of need. Metropolitan only pays for the energy after it has been delivered. The Board's current policy delegates authority to the General Manager to make power purchases with a total payment obligation of up to $35 million in any 24-month period. A recent review of this limit has resulted in a recommendation for the Board to increase the limit through an amendment to the Metropolitan Water District Administrative Code.

This action will amend Code Section 8122(e)(1) to increase the total authorized payment obligation for power purchases delegated to the General Manager from the present $35 million to a new limit equal to or less than $50 million within any 24-month period. The current Code Section 8122(e) with strikeovers and proposed amending notation for a $50 million limit is shown in **Attachment 1**. The final Code Section 8122(e) with change, if adopted, is shown in **Attachment 2**.

Background

To meet the energy requirements of pumping on the Colorado River Aqueduct (CRA), Metropolitan obtains power from three basic sources. The first is from the federal hydropower projects at the Hoover and Parker dams on the Colorado River. Under near-full CRA conditions, this source supplies about 55 percent of the energy requirements. The second source is from the Southern California Edison Company (SCE) through the Service and Interchange Agreement (Benefit Energy), which satisfies 10 percent of the energy needs. The third source is from the wholesale energy marketplace. This last source is the most expensive and volatile and meets approximately 35 percent of the CRA's energy needs. The price Metropolitan pays for supplemental energy is a function of market conditions. During the 2000/01 energy crisis, the cost of this segment of the CRA's energy portfolio, which had historically been around $11 million, increased to as much as $80 million due to then market conditions. To mitigate the risk of future energy market disruptions and the resulting fiscal impact to CRA operations, on October 8, 2002, the Board approved an energy risk management policy that provided for the use of short-term (up to 24 months) energy purchases (Forward Energy) to meet future needs for supplemental energy. The cumulative payment obligation for the power purchases delegated to the General Manager was set at no more than $35 million within any 24-month period. These risk management provisions were incorporated in Section 8122(e) of Metropolitan's Administrative Code. This authority is used for purchases of Forward Energy for pumping on the CRA. Although Metropolitan makes commitments to purchase energy up to two years in advance of delivery, Metropolitan only pays for the Forward Energy after it has been delivered and utilized.

In 2003, shortly after the Board's action, California was required to reduce its use of Colorado River water to 4.4 million acre-feet (MAF) annually and the amount of water transported in the CRA was substantially reduced. In that year, the Quantification Settlement Agreement was approved, providing additional water supply opportunities that would take years to fully mature, leaving diminished supplies in the CRA for a period of time. This pumping reduction temporarily eliminated the requirement for most supplemental energy and the need for Forward Energy transactions.

Starting in mid-2008, CRA diversions returned to near-full conditions. At that time, the use of Forward Energy transactions was resumed. These transactions were for energy to be delivered within the next 24 months starting in the month after the commitment was made. For example, a Forward Energy transaction made in July of 2008 would require the energy to be delivered no later than July 31, 2010. Since July of 2008, Metropolitan has acquired nearly 1.67 million megawatt-hours (MWh) of Forward Energy within the 24-month window at the time the transaction was made. At present, Forward Energy transactions have committed to energy deliveries through the third quarter of 2012. The acquisition of this energy at a known cost has helped ensure that Metropolitan's short-term CRA energy costs will remain within budget.

Forward Energy transactions provide price certainty for multi-year CRA energy cost budget projections. With the Forward Energy purchases, Metropolitan is able to more accurately project CRA energy costs for the next two fiscal years. Another benefit has been the ability of Metropolitan to be more flexible in its day-ahead purchases of supplemental energy. Day-ahead purchases meet the pumping needs of the CRA for the next day after accounting for the resources from the federal hydro projects, SCE and the Forward Energy purchases. At times, energy suppliers will raise their prices if they believe a buyer must have the energy. Forward Energy purchases afford Metropolitan the flexibility to defer day-ahead energy purchases, which helps bring a supplier's prices down.

Review Results

In a report on Forward Energy transactions for the CRA provided to the Board on July 12, 2010, it was noted that the Forward Energy payment obligation limit of $35 million had been reached, preventing additional transactions. Given the estimated need for supplemental energy at forecast CRA deliveries and the depressed prices for Forward Energy due to the recession, Metropolitan could have continued to make transactions absent the limit. The July report concluded with a commitment to develop recommendations for modifying existing energy risk controls.

On February 8, 2011, staff presented the results of a review of the Forward Energy transaction limit. This review was based on a CRA water delivery amount of 1.1 MAF with a supplemental energy requirement of approximately 770,000 MWh. The projected supplemental energy prices used in the analysis were $45/MWh for off-peak energy and $66/MWh for on-peak. These prices are 2017 projected values and are about 50 percent higher than 2011 prices of $30/MWh off-peak and $45/MWh on-peak. Recent energy prices have been depressed for a number of reasons, including: the continuing effects of the recession and slow recovery, a surplus of natural gas and new natural gas drilling techniques. Energy prices could escalate faster than projected if economic conditions produce inflationary pressures, the demand for energy increases or new regulations hinder the drilling for natural gas. If energy prices do increase faster than projected, the Forward Energy payment obligation limit may need to be increased in the future.

Several other factors were included in the analysis of the payment obligation limit. One was the amount of supplemental off-peak versus on-peak energy required. Most of the supplemental energy acquired is for the off-peak period; however, as the elevation of Lake Mead has declined, the amount of energy Metropolitan receives from the Hoover Dam has decreased, and the amount of on-peak supplemental energy needed has increased.

Recently, Metropolitan has acquired 5 to 10 percent of the total supplemental energy required in the on-peak period. In the analysis, a conservative value of 5 percent was used, potentially understating the impact on on-peak energy prices. Another factor used in the analysis was the amount of supplemental energy to be acquired through Forward Purchases. In early 2010, Metropolitan had acquired a little over 70 percent of the supplemental energy needed for the next two years through Forward Energy purchases. The 70 percent value was retained for the analysis and leaves the remaining 30 percent of supplemental energy need to be met with near-term transactions, such as day-ahead purchases.

As a result, after reviewing the forecasted water deliveries on the CRA, the estimated supplemental energy required and the projected wholesale energy prices, staff is recommending the payment obligation limit for Forward Energy be increased up to $50 million.

With a payment obligation limit of $50 million, Metropolitan could be able to cover up to 70 percent of the estimated supplemental energy requirements for the CRA over a 24-month period, assuming the projected energy prices and need for on-peak energy does not deviate excessively from the values used in the analysis. Increasing the limit will allow Metropolitan to take further advantage of the stability in Forward Energy prices. This provides insurance against the full cost impact of a major market disruption that would cause a large variance from the multi-year CRA energy budget.

Policy

Metropolitan Water District Administrative Code Section 8122(e): Power and Transmission Contracts

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is not defined as a project under CEQA, because it 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 subject to CEQA because it involves other government fiscal activities, which do not involve any commitment to any specific project that 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 subject to CEQA pursuant to Sections 15378(b)(2) and 15378(b)(4) of the State CEQA Guidelines.

CEQA determination for Option #2:

None required

Board Options

Option #1

Adopt the CEQA determination and amend Metropolitan Water District Administrative Code Section 8122(e)(1) to increase the General Manager's authorization to negotiate contracts for power from a total payment obligation of up to $35 million within a 24-month period to $50 million.

Fiscal Impact: The fiscal impact is uncertain; however, increased Forward Energy transactions will reduce the price and supply risk Metropolitan would be exposed to in the daily energy market. Forward purchases provide insurance against the dramatic energy cost increases during a major market disruption and will increase Metropolitan's ability to proactively respond to market conditions at that time. The cost of the Forward Energy purchase is determined at the time the transaction takes place and replaces an energy purchase whose cost is not known until the day before it is needed.

Option #2

Take no action, thereby retaining the current limit of $35 million.

Fiscal Impact: No change from today. Metropolitan will continue to be limited in the amount of energy it acquires for future use with the present level of exposure to energy price and supply risk.

Staff Recommendation

Option #1

2/15/2011

Thomas DeBacker *Date*
Chief Financial Officer, Interim

2/23/2011

Jeffrey Kightlinger *Date*
General Manager

Attachment 1 – Section 8122(e) of The Metropolitan Water District of Southern California Administrative Code (showing additions and deletions)

Attachment 2 – Section 8122(e) of The Metropolitan Water District of Southern California Administrative Code (with amendment included)

Ref# WSO12608915

§ 8122. General Manager's Contracting Authority in Specified Circumstances.

(e) Power and Transmission Contracts.

(1) General Authorization. - The General Manager is authorized to negotiate and execute contracts of up to 24 months duration from the end of the current month to furnish power or transmission capability to the District or dispose of power or transmission capability available to the District. Such contracts for power or transmission capability may not exceed a total payment obligation of $~~35~~ 50 million within any 24-month period unless authorized by the Board.

(2) Reporting. - The General Manager shall report at the next regular meeting of the Board the execution of any contract authorized by this Section 8122(e).

(3) Risk management. – The General Manager shall maintain a risk management policy to provide guidance and management oversight for the purchase of supplemental energy for the Colorado River Aqueduct operations. The risk management policy shall address market and credit risks associated with the purchase of supplemental energy.

§ 8122. General Manager's Contracting Authority in Specified Circumstances.

(e) Power and Transmission Contracts.

(1) General Authorization. - The General Manager is authorized to negotiate and execute contracts of up to 24 months duration from the end of the current month to furnish power or transmission capability to the District or dispose of power or transmission capability available to the District. Such contracts for power or transmission capability may not exceed a total payment obligation of $50 million within any 24-month period unless authorized by the Board.

(2) Reporting. - The General Manager shall report at the next regular meeting of the Board the execution of any contract authorized by this Section 8122(e).

(3) Risk management. – The General Manager shall maintain a risk management policy to provide guidance and management oversight for the purchase of supplemental energy for the Colorado River Aqueduct operations. The risk management policy shall address market and credit risks associated with the purchase of supplemental energy.