

# Agenda Report

August 3, 2009

To: City Council

Through: Municipal Services Committee (July 28, 2009)

From: City Manager

Subject: ADOPT A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PASADENA AUTHORIZING THE GENERAL MANAGER OF THE WATER AND POWER DEPARTMENT TO ENTER INTO AGREEMENTS FOR PURCHASES, SALES, EXCHANGES AND PARTICIPATE IN AUCTIONS OF CONGESTION REVENUE RIGHTS; AND ENTER INTO AGREEMENTS INCLUDING BUT NOT LIMITED TO CONGESTION REVENUE RIGHTS ENTITY AGREEMENT, AS MAY BE MODIFIED PERIODICALLY WITH THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR

## **RECOMMENDATION:**

It is recommended that the City Council:

- 1) Find that this action is exempt from California Environmental Quality Act (CEQA) pursuant to State CEQA Guidelines Section 15061 (b) (3), the General Rule that CEQA only applies to projects that may have an affect on the environment.
- 2) Adopt a resolution authorizing the General Manager of the Water and Power Department to enter into agreements for purchases, sales, exchanges, and participate in auctions of Congestion Revenue Rights (CRR); and enter into agreements including but not limited to CRR Entity Agreement, as may be modified periodically with the California Independent System Operator (CAISO).

## **EXECUTIVE SUMMARY:**

Pasadena Water and Power (PWP) imports the majority of the electrical energy needed to serve its customers from remote generation resources, including long term contracts and spot market purchases. PWP also secures long term transmission rights for most of its imported resources to ensure delivery of resources to PWP's customers at fixed prices and terms thus reducing price volatility. The CAISO recently implemented an energy market structure that introduces a new financial instrument called Congestion Revenue Rights that are used in place of physical transmission contracts. While CRRs do not guarantee the physical flow of power from PWP's remote resources to PWP's customers, they can be

used to mitigate most of the price risk associated with bidding PWP's resources into the CAISO markets, thereby performing the essential functions of physical transmission rights.

Under Resolution 4184-2, the General Manager is authorized to enter into contracts to purchase or sell electrical energy transmission capacity to deliver energy to its customers or reduce costs to its customers through efficient asset utilization. Similarly, adopting the proposed resolution provides the clear authority to enter into the CRR Entity Agreement and transactions for CRRs, enabling PWP to continue to efficiently manage its resources and costs to provide electrical energy.

### **BACKGROUND:**

PWP imports most of its energy from owned or contracted resources including renewables located throughout the Western United States. Over the years, PWP has acquired ownership and contractual rights in various transmission systems to be able to bring energy from remote sources to Pasadena. When PWP joined the CAISO in 1999, it retained its prior transmission rights that provided continued ability to import energy from remote resources.

The CAISO implemented a new energy market structure called Market Redesign and Technology Upgrade on April 1, 2009. Under new market structure, the CAISO determines and publishes prices at each transactional location based on participating market resources and load bids on a day-ahead basis, and again in real-time, as power is actually flowing. Also, all energy schedules are settled as financial transactions (i.e., generation resources scheduled into the grid are paid the market energy price, and all energy scheduled out of the grid to meet load must pay the market energy price).

If market prices were the same everywhere, scheduling a resource to load would "wash" and the net financial settlement with the CAISO would be zero; however, the market price varies for each location due to transmission congestion and losses. This exposes PWP to market volatility in transmission costs for its remote generation or contracted resources.

Since physical transmission rights are incompatible with the new market design, the CAISO created a financial derivative instrument called CRRs to mitigate the market price risk associated with transmission congestion. CRRs are similar to physical transmission in that they enable the CRR holder to avoid market price volatility arising from day-ahead scheduling of energy from one location to another, such as importing remote resources. Also, they are only effective to the extent the physical transmission is available. Unlike physical transmission, they cannot be used in same day (real-time) markets at this time. CRRs also have some unique risks described later.

CAISO market regulations allow PWP and some other publicly-owned utilities to retain their original transmission rights until December 31, 2010. These existing transmission rights will be converted into CRRs beginning January 1, 2011, but PWP must execute the CRR Entity Agreement with the CAISO in order to obtain these converted CRR rights.

The methodology to convert transmission rights into CRRs is not fully developed, and staff believes it is likely that PWP will not receive sufficient CRRs to meet its current and future transmission needs. Notwithstanding the results of this allocation process, PWP expects a need to acquire additional CRRs in the future as it acquires more remote renewable energy resources. PWP may acquire additional CRRs through auctions operated by the CAISO or directly from other CRR holders.

Due to the evolving nature of energy markets, resource availability, energy needs, and market price volatility, PWP needs the ability to submit bids in CRR auctions and execute CRR transactions with other entities in a relatively short time. Adoption of this resolution will provide the General Manager the necessary flexibility to take advantage of CRR opportunities as they arise. This authority would extend to entering into bilateral CRR transaction enabling agreements including, but not limited to, the CRR Entity Agreement with the CAISO. This authority would also enable the necessary day-to-day CRR transactions, subject to the terms of CRR enabling agreements.

To bid in auction or transact CRRs with other entities, PWP must execute a "Candidate CRR Holder Application Form and the CRR Entity Agreement Information Request Sheet" with CAISO. PWP will also need to provide financial information that demonstrates that it will be able to meet the financial responsibilities associated with holding CRR's. PWP will be required to maintain an unsecured credit limit and/or post financial security with the CAISO in the amount at least equal to its estimated aggregate liability. Periodically, CAISO auctions CRRs of varying terms. Given the short lead times for such necessary transactions, it is recommended that the General Manager of PWP be authorized to execute CRR related agreements.

### ***Risks***

CRRs, like physical transmission, provide protection against unexpected cost increases due to volatile market prices at different locations. In order to secure the protection offered by CRRs or transmission capacity, the buyer commits to up front or fixed-cost capacity payments. Thus, both instruments are a form of insurance that may ultimately cost more, or less, than the uncertain cost exposures that are being covered or "hedged".

While there are many similarities, the risks associated with CRRs are different from those associated with physical transmission. The key difference is that CRRs are a financial derivative hedging product, settled and cleared in the CAISO markets, with a market-driven "obligation" component. Also, CRRs provide protection only in one direction of energy flow and can result in additional cost exposure if congestion occurs in the opposite direction. The benefit, or obligation, associated with CRRs is incurred regardless of whether or not the associated transmission path is used.

The incremental new risk exposure associated with obtaining necessary CRRs (or disposing of excess CRRs) is significantly less than the risk associated with importing PWP's long term resources without any transmission cost hedges in place. This risk is manageable both by limiting CRR purchases to those transmission paths used most often for PWP's long term resources and also by ensuring that energy is scheduled along the

associated path of each CRR whenever market conditions present such a risk. Furthermore, CRR transactions would be subject to PWP's Energy Risk Management Policy that limits purchases to the amount needed to deliver PWP's resources to load, and limits sales to disposition of excess CRR capacity. No speculative purchases or sales would be allowed. PWP plans to procure only those CRRs needed for its renewables resource commitments, the Magnolia Power Plant, and other resource commitments for which PWP does not have sufficient converted transmission rights.

**FISCAL IMPACT:**

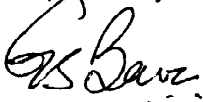
Given the uncertainty of PWP's requirements, allocation, auction and future market prices the fiscal impact cannot be determined specifically. PWP will be granted an undetermined number of CRRs at no cost. Procurement costs for additional CRRs will vary depending upon needs and prices, which under extreme circumstances could be millions of dollars annually. The potential congestion costs that would be incurred in lieu of securing sufficient CRRs cannot be estimated at this time, but would likely be much greater than the costs of CRRs and would expose PWP's rate payers to unacceptable high levels of rate volatility. All net costs or revenues associated with CRR's will be passed to PWP customers in the Energy Charge component of the electric bill. Sufficient funds are approved in budget under "Transmission Congestion Expenses for MRTU" account number 8304-401-841920-0565.

Respectfully submitted,



MICHAEL J. BECK  
City Manager

Prepared by:



Gurcharan S. Bawa  
Assistant General Manager Power Supply  
Water and Power Department

Approved by:



Phyllis E. Currie  
General Manager  
Water and Power Department

RESOLUTION NO. \_\_\_\_\_

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PASADENA AUTHORIZING THE GENERAL MANAGER OF THE WATER AND POWER DEPARTMENT TO ENTER INTO AGREEMENTS FOR PURCHASES, SALES, EXCHANGES AND PARTICIPATE IN AUCTIONS OF CONGESTION REVENUE RIGHTS; AND ENTER INTO AGREEMENTS INCLUDING BUT NOT LIMITED TO CONGESTION REVENUE RIGHTS ENTITY AGREEMENT, AS MAY BE MODIFIED PERIODICALLY WITH THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR.

WHEREAS, On April 1, 2009, the California Independent System Operator (CAISO), a public-benefit corporation responsible for operating the majority of California's power grid, implemented Market Redesign and Technology Upgrade (MRTU) to improve reliability of the electricity grid and the efficiency of the electricity market; and

WHEREAS, as a part of the MRTU implementation, the CAISO has created Congestion Revenue Rights (CRR), a set of financial instruments of varying terms by which market participants can obtain greater certainty over their potential exposure to transmission congestion costs; and

WHEREAS, beginning January 1, 2011, Pasadena Water and Power (PWP) will no longer retain any of the existing transmission rights as they will be converted into CRRs under a methodology yet to be developed by CAISO; and

WHEREAS, PWP may need CRRs to meet its current and future transmission needs, and to mitigate financial risk resulting from importing renewable energy from new sources from nearly all located outside the City of Pasadena:

NOW, THEREFORE, BE IT RESOLVED as follows:

1. Pursuant to Section 303, Subsections 1002 C and 1002 H, and Section 1006 of the City Charter, the General Manager of the Water and Power Department is hereby authorized to enter into agreements without competitive bidding for purchases, sales, exchanges, and participate in auctions of congestion revenue rights in such amounts as he/she determines to be necessary from time to time to meet the City's needs; and enter into agreements including but not limited to congestion revenue rights entity agreement, as may be modified periodically with the CAISO.
2. The agreements authorized hereunder are approved pursuant to Section 1001 of the City Charter.
3. The City Clerk is directed to attest his/her signature and affix the corporate seal of the City thereto.
4. The Finance Director is authorized and directed to expend monies from the Light and Power Fund in accordance with the terms of the agreements and consistent with the provisions of the budget.

Adopted at the regular meeting of the City Council of the City of Pasadena on the

\_\_\_\_\_ day of \_\_\_\_\_, 2009, by the

following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

APPROVED AS TO FORM:



Scott D. Rasmussen  
Sr. Assistant City Attorney