PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

ENERGY DIVISION

I.D. #7127
RESOLUTION E-4134
December 6, 2007

R E S O L U T I O N

Resolution E-4134. This Resolution approves, with criteria for implementation, the request by Southern California Edison Company (SCE) to amend their AB 57 Procurement Plan and pending 2006 Procurement Plan to establish upfront and achievable standards and applicable criteria for the procurement of Congestion Revenue Rights.

By Advice Letter 2141-E filed on July 24, 2007.

SUMMARY

The Commission approves, with criteria for implementation SCE's requests to amend their AB 57 Procurement Plan and pending 2006 Procurement Plan to enable SCE to establish upfront and achievable standards and applicable criteria for the procurement of Congestion Revenue Rights.

The California Public Utilities Commission (Commission) approves, with criteria for implementation, SCE's request to amend its Assembly Bill (AB) 57 Procurement Plan and pending 2006 Procurement Plan to establish upfront and achievable standards and applicable criteria for the procurement of Congestion Revenue Rights. Congestion Revenue Rights are designed to be hedges against congestion costs under the California Independent System Operator's (CAISO's) Market Redesign Technology Upgrade (MRTU) market.

BACKGROUND

The CAISO will allocate CRRs to Load Serving Entities (LSEs) based on load-share.

Currently, LSEs may obtain Firm Transmission Rights (FTRs) with which they assure transmission of energy to load. Under MRTU, the CAISO will institute

Locational Marginal Pricing (LMP) using a full network model, which will replace the current zonal model. The CAISO has suggested that LMP will help alleviate intra-zonal congestion.

Under MRTU, LSEs will no longer be able to obtain new FTRs. Rather, deliverability needs will be managed using financial tools called Congestion Revenue Rights (CRRs) rather than physical transmission rights. LMP is anticipated to expose each LSE to less stable charges for transmission congestion than under the FTR/physical transmission rights paradigm.

A CRR will entitle its owner to be paid an amount equal to the difference between the price of energy at the source (generation) and sink (load) nodes. Thus, CRRs are designed to give the owner a hedge against congestion costs caused by price differences between generation resources and load. In the first rounds of the first year's[1] CRR distribution process, the CAISO will allocate CRRs to LSEs in quantities based on load-share[2] and in source/sink combinations based on the LSE's actual grid use during the 2006 reference period. If an LSE obtains a CRR that matches its sources of power and its load, the CRR is expected to closely offset the congestion costs charged for delivering that power to load.

The CAISO's CRR allocation process consists of four tiers of allocation followed by an auction.

CAISO will distribute CRR in four tiers. Distribution of CRRs has different rules in different tiers. All CRRs distributed in the allocation tiers must, by CAISO rule, use the LSE's load aggregation point (LAP, a weighted average of LMPs for the LSE's Transmission Access Charge area[3]) as the sink. Tiers One and Two will, in year one of MRTU, be limited to nominations of CRRs with a source that

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[1] In annual CRR allocations after the first year of MRTU, CAISO will not verify LSEs' actual use of resources.

[2] The amount of CRRs an LSE may be allocated is limited by its adjusted load metric. The adjusted load metric is a measure established by the CAISO to represent the LSEs' load at peak hours.

[3] In Tier 3, an LSE may nominate a Sub-LAP, which is a weighted average for a limited area's LMP, as the source for a CRR. These nominations may not be renewed in the Priority Nomination Process (PNP) the following year.

can be verified as a source used by the LSE to procure power in 2006. These CRRs have a one-year term.[4] After the first two tiers, the CAISO will hold Tier LT,[5] in which LSEs may nominate the CRRs they received in the first two tiers for conversion into LTCRRs, preserving them for a period of up to 10 years.[6] Following Tier LT, the CAISO will conduct Tier Three, in which LSEs may nominate CRRs from any source. Following Tier Three, the CAISO will auction remaining CRRs. CRRs that are auctioned need not use a LAP as a sink.

SCE has authorization to obtain FTRs pursuant to its existing AB 57 Procurement Plan, which permits SCE to obtain "transmission products" with a term less than five years without Commission approval of specific transactions. Because CRRs are the transmission product that will replace FTRs, SCE claims that its Procurement Plan allows it to obtain CRRs of duration of less than five years without Commission approval. [7]

In Resolution E-4122, the Commission granted SCE authorization to procure LTCRRs.

Under CAISO rules, only CRRs obtained in Tier One or Tier Two may be converted into LTCRRs. SCE stated that it would be unable to identify to the Commission which CRRs it intends to nominate for conversion into LTCRRs and obtain formal Commission approval through the application process because there is very limited time between the date when the CAISO will release the results of the Tier Two CRR allocation and the date that LTCRR nominations must be submitted to the CAISO. Accordingly, SCE requested that the Commission modify its AB 57 Procurement Plan and pending 2006 Procurement

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[4] In later years, Tier 1 and Tier 2 will not be limited to verified sources. However, prior to Tier 1 and Tier 2, LSEs will be able to re-nominate a limited share of the CRRs they were allocated in previous years. This supplemental re-nomination opportunity is known as the Priority Nomination Process (PNP).

[5]CAISO MRTU Tariff § 36.8.3.1.3.1.

[6] While LTCRRs are a 10 year entitlement, a LTCRR may have a shorter term because it is expected to become partially or completely infeasible during the life of the LTCRR.

[7] Commission Decision (D.) 04-12-048 *Opinion Adopting Pacific Gas And Electric Company, Southern California Edison Company And San Diego Gas & Electric Company's Long-Term Procurement Plans*, (LTPP Decision) issued December 16, 2004 in Rulemaking (R.) 04-04-003 at Ordering Paragraph 14.

Plan to grant it the authority to procure LTCRRs outside of the formal application process.

The Commission determined that SCE was correct in its assessment that there will not be enough time for a formal approval of SCE's LTCRR nominations following the release of Tier One and Tier Two CRR awards by the CAISO.[8] Therefore, in this instance, the Commission approved SCE's request for authorization to procure LTCRRs before the CAISO's nomination deadline (see Resolution E-4122 for specific authorization).

SCE requests approval of an amendment to its AB 57 Procurement Plan to establish upfront and achievable standards for procurement of CRRs.

In AL 2141-E, SCE requests approval of an update to its Commission-approved AB 57 Procurement Plan[9] and its pending 2006 Long-Term Procurement Plan (LTPP) in order to establish upfront and achievable standards and criteria applicable in procuring CRRs, including LTCRRs. These standards and criteria include the requirement that CRRs only be obtained to hedge expected grid use, as was required for LTCRR procurement in Resolution E-4122.

NOTICE

In accordance with Section Four of General Order (GO) Number 96-B, SCE stated that it has served copies of the advice letter filing to interested parties on the

[8] Under normal circumstances, SCE would be required to file a formal application seeking authority to procure products with duration of 5 years or greater. (LTPP Decision at p. 108.)

[9] SCE filed its 2004 Short-Term Procurement Plan (2004 STPP) on May 15, 2003, and it was approved by the Commission in D.03-12-062. SCE's 2004 STPP has been updated via the Commission-approved Advice Letter 2464-E (submitted January 20, 2004, to update certain tables in SCE's 2004 STPP and provide a list identifying the brokerages and exchanges). In D.04-12-048, the Commission approved SCE's 2004 Long-Term Procurement Plan. Subsequently, pursuant to D.04-12-048, SCE filed an updated STPP via Advice Letter 2615-E, which was approved by the Commission and made effective January 28, 2005. The collective set of SCE's 2004 STPP, including subsequent modifications and updates, and SCE's 2004 LTPP constitute SCE's current AB 57 Procurement Plan. SCE's 2006 LTPP is currently pending in Rulemaking (R.) 06-02-013.

service list of GO 96-B and R.06-02-013. Notice of SCE AL 2141-E was also made by publication in the Commission's Daily Calendar.

PROTESTS

There was one protest of AL 2141-E. The Western Power Trading Forum (WPTF) protested AL 2141-E on the grounds that SCE may be able to exercise market power in the MRTU market due to the ways in which the CRR auction functions, and suggested that limits on SCE's participation in the CRR auction would resolve this issue.

WPTF claimed that SCE will be an "unconstrained bidder" in the CRR auction for two reasons. First, WPTF claims that the auction revenue will return to LSEs, so SCE will not absorb costs for procuring CRRs. Second, WPTF claims that SCE's ability to pass costs to ratepayers insulates SCE and its shareholders from the prices of CRRs.

WPTF proposes two remedies: reasonableness reviews and position limits. WPTF argues that reasonableness reviews are necessary to establish checks on SCE's decisions related to CRR procurement. WPTF also argues that while there are sufficient limits on CRR procurement through the allocation process, the lack of position limits in the CRR auctions allow SCE too much power in the CRR auction market. WPTF suggests that SCE's CRR procurement (auction plus allocation) be limited to 90% of load after annual auctions, and 115% of load after monthly auctions. WPTF derives these numbers from the Resource Adequacy (RA) requirements for SCE.

SCE replied to WPTF's protest, arguing that WPTF's proposed limitations were unnecessary for the protection of generators, and overly burdensome for SCE. SCE provided a variety of reasons why WPTF's suggestions should not be implemented. Among these, SCE noted that WPTF did not accurately describe the CRR auction, noting that there is not a guarantee that auction revenues will flow to LSEs. SCE also noted that while shareholders are not exposed to CRR costs, they also cannot benefit from CRRs. Lastly, SCE explained that Reasonableness Reviews, as requested by WPTF, are not permitted under AB 57,

SUSPENSIONS

Advice Letter 2141-E was suspended on August 22, 2007.

DISCUSSION

While CRRs are allocated without cost to LSEs, over the course of time CRRs may cause the CAISO to impose costs on the LSE and ultimately its ratepayers when the source has a higher price than the sink.

CRRs are obligations, meaning that if they have a positive value, SCE will receive a payment; but if they become negatively valued due to changes in grid dynamics, SCE will be required to make a payment. The CRRs result in payments to the owner when the source has a lower price than the sink, and charges to the owner when the source has a higher price than the sink. In this way, while CRRs may be obtained without a payment through the CRR allocation, they are not without potential costs to SCE and its ratepayers.

SCE will use CRRs as hedges against congestion costs and not for speculation.

If SCE uses CRRs to hedge against congestion costs from its sources of power to its load, the CRR payments will tend to counteract the congestion charges. This will be true even if the price of energy at the source exceeds the price of energy at the sink, because while the CRR will be a requirement for SCE to pay, the congestion charge will be a payment to SCE.

As the Commission has stated in numerous filings related to the development of the MRTU program, the Commission's support of the CAISO's MRTU market was conditioned upon the CAISO's allocation of CRRs to LSEs so that those LSEs could obtain an adequate hedge against unpredictable transmission costs in the MRTU LMP paradigm.[10] The Commission believes that allowing LSEs to hedge

[10]See e.g., *Motion For Leave To File Comments Out Of Time And Comments of the California Public Utilities Commission Regarding the California Independent System Operator's January 29th Compliance Filing*, filed on February 21, 2006 in FERC Docket No. RM06-08-000 at pp. 2-3; *Notice of Intervention, Limited Protest, and Comments of the California Public Utilities Commission on the California ISO's MRTU Tariff*, filed on April 6, 2006 in FERC Docket No. ER06-615-000 at p. 3.

their procurement portfolio with CRRs representing their actual expected use of the grid will help minimize congestion charges that would otherwise be passed on to ratepayers.

The Commission is concerned, however, with the potential for LSEs' acquisition of CRRs that do not reflect their actual expected grid use or a reasonably physically correlated CRR.[11] While valuable CRRs that do not reflect the LSE's actual grid use may supply a stream of income to the LSE that would ultimately accrue to the benefit of ratepayers, such CRRs may also become negatively valued over time, leaving ratepayers at a loss. Thus, CRRs that are not reasonably related to actual grid use will not result in a reduction of risk to ratepayers, and would in fact create risk to ratepayers. Further, an LSE that obtains CRRs that do not represent its actual grid use may deprive another LSE of an accurate hedge. For these reasons, the Commission here approves only the acquisition of CRRs that closely resemble the LSE's expected grid usage both in the choice of source/sink combinations and in the duration of the CRR with respect to the length of the LSE's energy supply contracts.

The Commission approves SCE's acquisition of CRRs for the purpose of managing congestion cost risk, and opposes the use of CRRs as tools for financial speculation in the congestion market. SCE shall use CRRs in accordance with Commission expectation that CRRs be used for hedging purposes only. In AL 2141-E, SCE claims that it will use CRRs as hedges for its actual expected energy transmission costs and not as a tool for speculation. Therefore, the Commission directs that SCE obtain CRRs that are valuable as hedges against congestion costs SCE may face, subject to risk assessment regarding the specific source/sink combinations.[12] SCE should not obtain CRRs that are unrelated to SCE's sources of power.

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[11] The Commission has argued and continues to believe that CRRs should be used for hedging, not for financial speculation. E.g. *Reply Comments of the California Public Utilities Commission on the California ISO's MRTU Tariff*, filed on May 16, 2006 in FERC Docket No, ER06-615-000 at pp. 18-20.

[12] Public Utilities Code, section 454.5 requires that each LSE define in its AB 57 Procurement Plan the "electricity-related products" it intends to procure (§ 454.5, subd. (b)(1)); describe the duration, timing and range of quantities of each product to be procured (§ 454.5, subd. (b)(4); analyze price risk arising from its particular portfolio of electricity-related products (§ 454.5, subd. (b)(1)); and describe its "risk management policy, strategy, and practices" (§ 454.5, subd. (b)(9)(C)(10)). The Commission directs SCE to prepare this same type of information for Energy Division and the Procurement Review Group for the less formal review established here.

The volume of CRRs procured by SCE will be limited by CAISO rules and SCE's expected grid use.

Currently, SCE has no maximum (or minimum) volume limits for procurement of transmission service or FTRs. SCE argues that overall or total CRR volume limits are unnecessary for the CAISO's allocation process. The CAISO tariff establishes volume limits for SCE as an LSE based on SCE's Adjusted Load Metric (ALM, the measurement the CAISO will use to compare LSE loads). Specifically, SCE cannot obtain CRRs exceeding 75% of its ALM in the annual CRR allocation process, and more than 100% cumulatively of its adjusted load metric through the monthly CRR allocation process.

The CAISO will permit SCE to exceed these limits through CRR auctions. The Commission does not believe it is necessary to establish specific volume limits at an exact percentage of SCE's load. Rather, the Commission believes that the directive to hedge expected grid use is a sufficient limit on SCE's procurement of CRRs. When specific CRR selection is limited to hedging expected grid use for energy, SCE will consequently be limited to hedging no more than its total expected grid use.

The Commission rejects the limitations proposed by WPTF. The Commission believes that the Commission's directive for the utilities to hedge actual use will remedy the concerns raised by WPTF.

WPTF argues that SCE is an unconstrained bidder because the auction revenues will flow back to SCE. The Commission rejects this argument because WPTF makes incorrect assumptions about the CRR auction. Revenue raised in the auction of a particular CRR does not flow back to any particular bidder. Rather, revenue raised from auction bids flows to the CRR Balancing Account, which is used to pay CRR holders if congestion charges are insufficient to fund CRRs. If there is excess revenue remaining in the balancing account, it is distributed to LSEs by load-share, which would result in SCE receiving some, though not all, of any such revenue. In addition, WPTF's analysis fails to consider SCE's opportunity cost. If SCE did not purchase a CRR, SCE may ultimately receive a share of revenue raised by the auction of that CRR. As a result, the only difference between SCE and any other bidder is that, if SCE impacts the clearing price, then SCE will receive a share of the difference between the clearing price and what the clearing price would have been if SCE had not bid. The

Commission believes this potential entitlement to auction revenue is insufficient to incent SCE to act as an unconstrained bidder.

WPTF also argues that SCE can act as an unconstrained bidder because shareholders do not face any potential loss arising from CRR costs. The Commission also considers this argument insufficient to warrant WPTF's proposed suggestions. WPTF's claim that ratepayers, not shareholders, will pay for CRRs ignores the fact that ratepayers, not shareholders, will also see the benefits of CRRs. While it is possible that some actions with CRRs might allow SCE to gain an advantage in an area that benefits shareholders, WPTF has failed to show that this is a relatively likely risk given the overall cash flow structure of the CAISO's CRR Balancing Account and the flow of CRR gains and losses to ratepayers.

The reasonableness reviews suggested by WPTF are not permitted under AB 57 rules. AB 57 enables the IOUs to establish upfront and achievable energy procurement standards. If an IOU follows its procurement plan then it is permitted to pass all resulting procurement costs to ratepayers. Under this rule, the Commission may disallow costs if and only if SCE deviates from its approved procurement plan. WPTF does not explain how the Commission could legally deviate from this method. As a result, the Commission does not grant WPTF's request for after the fact reasonableness review. Rather, in accordance with established procedures, the Commission will review SCE's procurement activities for compliance with its procurement plan.

The Commission does not find WPTF's protest to be sufficient to justify any overall position limit. The Commission does not wish to establish an overall position limit that may at some date prevent SCE from obtaining hedges for its use of the grid. Rather, the Commission believes the requirement that SCE procure only CRRs that hedge expected grid use will provide a sufficient limitation on SCE's CRR acquisition activities. As a result of this requirement, SCE will have a de-facto volume limit for CRRs based on its expected grid use.

SCE will record the revenues and costs related to congestion charges and CRRs into its Energy Resource Recovery Account (ERRA) balancing account.

SCE claims CRR charges and payments will be debited from or credited to its corresponding ERRA balancing account. SCE is currently authorized to record the congestion costs associated with the purchasing of FTRs in its corresponding

ERRA balancing account. SCE claims that in dealing with the allocated CRRs, the allocation of costs and revenues does not differ from the accounting for costs and revenues from the previous Firm Transmission Right system. However, the attributes of CRRs and the process for making congestion rights available to the market differs from the FTR process. CRRs are financial instruments and do not convey any right to scheduling priority. Therefore, the Commission determines that it is necessary to track the revenues and costs related to congestion charges in a separate ERRA balancing account, in a line-item distinct from FTRs. We direct SCE to modify its ERRA Preliminary Statement, Part ZZ, to include the recording of congestion revenues and costs related to CRRs separately from FTRs.

SCE is directed to record a credit or debit entry equal to any expense associated with its CRR procurement transactions. SCE is directed to file updated tariff sheets by advice letter within 30 days of the date of this Resolution. The updated tariff sheets shall modify SCE's Preliminary Statement, Part ZZ, of ERRA and incorporate a new tracking account to record revenues and costs associated with CRR transactions only.

CRR entries that are recorded into the ERRA balancing account are subject to review at the Commission.

All entries recorded into SCE's ERRA balancing account, including CRR entries, are examined by the Commission in its review of SCE's Quarterly Compliance Reports and annually in a review of the ERRA balancing account. Using the Quarterly Compliance Report and the ERRA review process, the Commission will determine whether SCE has complied with the upfront and achievable standards contained in its Commission-approved AB 57 Procurement Plan.

SCE's AB 57 Procurement Plan and pending 2006 Procurement Plan shall be amended to reflect the additional procurement authority granted by this Resolution.

The Commission conditionally authorizes amendments to SCE's AB 57 Procurement Plan and pending 2006 Procurement Plan to allow SCE to procure CRRs from the CAISO. Within 30 days of the date of this Resolution SCE is directed to file updates to its Commission-approved AB 57 Procurement Plan to reflect the additional procurement authority granted by this Resolution. These updates will include a product definition of the CRR products SCE seeks to procure, and any other information necessary to comply with the upfront standards required by this resolution.

We note that SCE's AB 57 Procurement Plan is filed with the Commission bi-annually. As part of the current Long Term Procurement Plan (LTPP) proceeding (R.06-02-013), the potential impacts of MRTU upon Investor Owned Utility procurement are being examined. It is anticipated that subsequent LTPP proceedings will examine in more detail potential impacts of MRTU, including CRRs, on Investor Owned Utility procurement activities.

SCE shall consult with Energy Division and the PRG regarding its CRR nominations prior to submitting those nominations, and report the transactions in its Quarterly Compliance Report (QCR).

The Commission directs that SCE shall consult with the PRG regarding its proposed CRR nominations, of which the Commission's Energy Division is an *ex officio* member. SCE shall also report all CRR transactions in its Quarterly Compliance Report (QCR). The Commission expects that the QCRs will contain, at a minimum, for each CRR, source, sink, MW quantity, term, expected value, past performance (if applicable), bid price (for CRR auctions or secondary market transactions), and a description the underlying energy supply arrangement that the CRR will hedge.

Prior to executing transactions longer than one calendar quarter in delivery duration, SCE is required by its Procurement Plan to consult with its PRG. As a result of this requirement, SCE has reviewed with its PRG its proposed bidding strategy for each annual FTR auction in advance of the auction, including discussing the maximum total volume of FTRs that SCE might acquire.

The Commission directs SCE to continue to consult with its PRG prior to transacting for any CRR having a term greater than one calendar quarter, which in practice applies to LTCRRs In addition, the Commission directs SCE to consult with the PRG prior to making CRR nominations for any of the tiers in the annual allocation process, even though CRRs awarded in the annual CAISO allocation/auction process only have a term of one calendar quarter. The Commission also directs SCE to consult with its PRG prior to participating in the annual CRR auction.

The Commission directs SCE to provide the PRG participants, prior to the PRG meeting, a list of proposed annual and long term CRR nominations for allocation and auction, showing source, sink, MW quantity, term, expected value, past performance (if applicable), bid price, and a description the underlying arrangement that the CRR will hedge.

The Commission does not direct SCE to consult with the PRG prior to each monthly CRR allocation/auction process. Rather, the Commission directs SCE to review its CRR position with the PRG in its periodic position update discussions, including the review of quarterly compliance reports. In addition, the Commission directs SCE to provide the PRG participants, prior to monthly CRR nominations, a listing of proposed monthly CRR nominations for allocation and auction, showing source, sink, MW quantity, term, expected value, past performance (if applicable), bid price and a description the underlying arrangement that the CRR will hedge.

The Commission directs SCE to consult with the PRG and report proposed transactions of CRRs through secondary markets as SCE would be required to report and consult for the same CRR if it were acquired directly from the CAISO. In practice, this required SCE to consult the PRG and provide required information prior to secondary market transactions involving quarterly CRRs. For secondary market transactions to buy or sell monthly CRRs, SCE must provide required information prior to the transaction, and must review the transactions with the PRG at the next appropriate meeting.

Presently, the CAISO does not permit LSEs to sell LTCRRs for the duration of the CRR. Rather, they may only sell the current annual segment of the LTCRR. As a result, the Commission directs SCE to report any secondary market transactions for a one year segment of a LTCRR in the same manner as they would report a secondary market transaction for an annual CRR. If CAISO establishes new procedures that enable the selling of segments of LTCRRs greater than one year in length, the Commission directs SCE to file a new advice letter to resolve the requirements for such transactions.

Supplying information to the PRG is a requirement for SCE to procure CRRs, but is not sufficient to establish that SCE has complied with the directive to hedge and not speculate in the CRR market. The reporting requirements are a method of oversight, and compliance with oversight does not necessarily indicate compliance with upfront and achievable standards.

SCE should establish valuation estimates for use in CRR selection.

Prior to participating in the annual and monthly CRR allocation/auction process, SCE should identify candidate CRRs for consideration based on the location and magnitude of its resources and loads (existing and potential), and may also identify additional candidate CRRs that are potentially positively correlated in value with other CRRs of interest, so long as the correlation is a reflection of the physical realities of the grid. SCE will limit candidate CRRs to those CRRs with a source at which SCE reasonably expects to procure power.

For the overall portfolio and for each of the candidate CRRs, SCE should estimate the expected value for the relevant time period by using various methods, such as:

1) Running a model of the transmission network simulating the dispatch of generation to serve load and forecasting Marginal Congestion Costs ("MCCs") or Locational Marginal Prices ("LMPs") at CAISO nodes and hubs;
2) Obtaining a forecast of MCCs or LMPs from one or more expert consulting firms;
3) Obtaining market price quotations (where available) at trading hubs;
4) Analyzing historical MCC and LMP data for trends, relationships, and correlations and using this data and observed trends and relationships to forecast future MCCs or LMPs; or,
5) Averaging (or weight-averaging) forecasts of MCCs and LMPs that were developed using two or more of the methodologies described above.

These methods for calculating expected value should not be considered exhaustive, nor will all of these methods necessarily be used, and SCE should make further enhancements over time to its ability to estimate value. The methodologies used for valuation will be reviewed with the PRG.

Similarly, prior to participating in the annual and monthly CRR allocation/auction process, or prior to converting awarded CRRs to LT-CRRs, SCE should evaluate the risks of obtaining CRRs or not obtaining CRRs for the candidate CRR paths. Risk can be created by a number of factors, including: a large congestion cost differential between a SCE source and sink;[13] variability in the dollar amounts paid or received by holding a CRR; potential generation or transmission outages; higher or lower loads than normal; and future changes to the transmission grid, including the interconnection of new generation. One of the risks of not having a CRR is that SCE may pay a high congestion cost to flow energy from its source to its sink. In contrast, one of the risks of having a CRR is that SCE may have to pay a high congestion cost if congestion counter-flows to the direction of that CRR.[14] For a particular path, SCE's risk is also impacted by the character of its resource(s) using that path. That is, risk is potentially much higher if the resource is must-take and non-dispatchable, meaning that SCE must take delivery of energy regardless of the congestion cost from the source to the sink. Another risk SCE may face is the impact of having to post high amounts of collateral to CAISO to secure its CRR holdings in a stress case scenario.

SCE may employ several different metrics to quantify its risk assessment, including, but not limited, to:

1) Simulating random variables, such as load, hydro, gas prices, and outages, creating a distribution of congestion costs or CRR values for a period of time, and calculating metrics based on that distribution;
2) Creating a marginal cost of congestion duration curve indicating the number of hours (or percent of the time) that congestion exceeds a particular value and calculating metrics based on that duration curve;
3) Creating a distribution of the hourly dollar amounts received or paid for holding a CRR and calculating metrics based on that distribution;
4) Running various scenarios (or stress cases), such as for high or low loads, high or low gas prices, high or low generation/transmission outages, determining the expected congestion cost or CRR value for these scenarios over a period of time, and calculating the change in cost/value compared to the base case scenario;

[13] Such congestion can vary in magnitude considerably over time, can occur in both directions at different times, and is unbounded in MRTU. Congestion is created when the energy delivered to a node exceeds the capacity of the transmission network to flow energy from that point.

[14] This payment may be offset by SCE receiving a payment for flowing energy from its source to its sink counter-flow to the direction of congestion. However, if SCE's source is not available (for example, due to an outage), SCE would not receive a payment for counter-flowing energy.

5) Forecasting how congestion costs paid might vary depending on whether the resource at the CRR source location is must-take or dispatchable;
6) Estimating the risk mitigation achieved by the addition of candidate CRRs to the overall portfolio; or,
7) Forecasting the potential amounts paid for holding a CRR during periods of counter-flow.

SCE will review its CRR valuation and risk analysis with its PRG (prospectively for the annual CRR auction/allocation process). Because MRTU is new to California and there is no history on CRRs, MCCs, or LMPs, and because models, assumptions, methodologies, and technologies continue to improve over time, the Commission does not mandate that SCE use any particular method or model to value or assess the risk of congestion.

SCE is authorized to participate in the CRR Auction.

Because the CRR auction is competitive and likely will involve a number of market participants, the Commission anticipates that the resulting auction prices may resemble an accurate assessment of the value of CRRs obtained. Bids in the CRR auction may include negative bids, which require the CAISO to pay the LSE for holding the CRR. The Commission permits SCE to submit such bids, if and only if those bids are made in accordance with aforementioned standards. Accordingly, the Commission approves SCE's participation in the CRR auction process and establishes that all SCE auction awards that are in compliance with upfront standards therefore are *per se* reasonable. The Commission has previously approved SCE's participation in existing CAISO markets, including the FTR market, and has established that SCE's transactions in these markets affected in compliance with upfront standards are per se reasonable.

SCE is authorized to transact for CRRs in the secondary market.

The CRR product is similar to a locational spread, which SCE is currently authorized to transact under its Procurement Plan. In a locational spread, SCE sells energy at one point of the grid and buys energy at another point of the grid. The financial result is the same as if SCE were to pay to flow energy from the point of the energy sale to the point of the energy purchase.

Because of the similarity between CRRs and energy transactions, such as locational spreads, SCE may use the same transaction processes that its

Procurement Plan authorizes SCE to use for energy transactions – *e.g.*, transact using brokers or exchanges, bilaterally subject to providing a "strong showing" in the Quarterly Procurement Plan Compliance filing, through an RFO (if feasible), etc. Among valid, competing offers for the same CRR, SCE will select based on the better price (all else being equal). Particular locational spreads may also be purchased if related CRRs are not available.

The Commission authorizes SCE to pursue both sales and purchases in the CRR secondary market. The Commission directs SCE to provide consult and inform PRG participants, as directed in the previous section regarding PRG consultation.

COMMENTS

Public Utilities Code section 311, subdivision (g) (1) provides that this resolution must be served on all parties and subject to at least 30 days public review and comment prior to a vote of the Commission. It will be placed on the Commission's agenda on December 6, 2007, 30 days from the date it was mailed.

This draft resolution was mailed to interested parties for review on November 5, 2007 and comments are due on November 26, 2007. Reply comments will be due 7 days later, on December 3, 2007.

FINDINGS

1. CAISO's MRTU program will establish LMP pricing, which results in the potential that LSEs such as SCE may face volatile transmission congestion charges.
2. MRTU establishes CRRs as hedges against congestion costs, including LTCRRs with a term of up to ten years.
3. CRR allocations are obtained free of charge, but holding CRRs may result in substantial costs on an LSE and its ratepayers if the price at the source exceeds the price at the sink.
4. SCE's CRR allocation nominations are limited in amount and location by CAISO rules.
5. Allowing SCE to hedge a significant portion of its procurement portfolio will help to minimize congestion charges that would otherwise be passed on to ratepayers.
6. SCE is presently permitted to purchase CRRs in the CRR auction.

7. Unlike FTRs, CRRs from the CRR auction may have a purchase price that may be negative, and like all allocated CRRs, may impose costs on the CRR holder.
8. SCE is currently authorized by the Commission to record the congestion costs associated with FTRs in its ERRA balancing account, including payments to purchase FTRs in the FTR auction.
9. The attributes of CRRs and the process for making congestion rights available to the market differs from the previous FTR system that CRRs will replace.
10. It is necessary to track the revenues and costs related to CRRs separately from the congestion costs associated with FTRs and to update SCE's Preliminary Statement, Part ZZ, of ERRA.
11. All entries recorded into SCE's ERRA balancing account, including CRR entries, must be reviewed by the Commission for Procurement Plan compliance on an annual basis.
12. It is reasonable for SCE to record revenues and costs related to congestion charges and CRRs into its ERRA balancing account.
13. It is necessary for SCE to consult with the Procurement Review Group on annual CRR nominations prior to such nominations and to include the transactions in its Quarterly Compliance Report.
14. SCE is not required to hold PRG meetings to discuss monthly CRR allocations and auctions, but SCE is required to provide PRG participants with information regarding these CRR transactions.
15. Advice Letter 2141-E was protested and it was suspended on August 22, 2007.
16. It is expected that the formal processes for Commission approval of CRR acquisition will be further addressed in the LTPP proceeding.

THEREFORE IT IS ORDERED THAT:

1. SCE is granted authority to procure CRRs in accordance with upfront and achievable standards.
2. SCE's AB 57 Procurement Plan and pending 2006 Procurement Plan shall be amended by AL 2141-E subject to the implementation guidelines established in this resolution.
3. SCE shall use CRR nominations to hedge costs of transmission of power and it shall not use CRRs as a method of financial speculation in congestion markets.

4. SCE shall consult with the PRG prior to annual nominations for allocations and auctions, and shall include the transactions in its Quarterly Compliance Report. SCE need not consult with the PRG prior to monthly CRR allocations and auctions. However, before any CRR transaction, SCE must provide the PRG participants with information regarding the CRR, including but not limited to source, sink, megawatt quantity, term, expected value, past performance (if applicable), price and a description the underlying arrangement that the CRR will hedge (or, in the case of a sale of a CRR, no longer hedge). For transactions in the secondary market, SCE must report and consult with the PRG as they would be required to if they obtained that particular CRR from the CAISO through allocation or auction.
5. LSEs subject to AB 57 Procurement Plan requirements must include in their procurement plans a variety of descriptions of the energy-related products they intend to procure, volume and duration of those products, and risks posed by ownership of such products.
6. SCE shall record the revenues and costs related to CRR transactions into its ERRA balancing account separately from FTRs, modify its Preliminary Statement Part ZZ of ERRA to include the recording of CRR entries separately, and file updated tariff sheets by advice letter filing within 30 days of the date if this Resolution.
7. All Entries recorded into SCE's ERRA balancing account, including entries for CRR transactions, will be reviewed by the Commission. During the ERRA review, the Commission will determine if SCE has complied with its approved Procurement Plan.

This Resolution is effective today.

I certify that the foregoing resolution was duly introduced, passed and adopted at a conference of the Public Utilities Commission of the State of California held on December 6, 2007; the following Commissioners voting favorably thereon:

Paul Clanon
Executive Director