PUBLIC UTILITIES COMMISSION
SAN FRANCISCO, CA 94102-3298

November 19, 2013 **Advice Letter 2880-E**

Megan Scott-Kakures
Vice President, Regulatory Operations
Southern California Edison Company
8631 Rush Street
Rosemead, CA 91770

**Subject: Withdrawal of SoCal Edison Advice Letter 2880-E - Request for Amendments to SCE's 2010 AB 57 Bundled Procurement Plan**

Dear Ms. Scott-Kakures:

Advice Letter 2880-E is withdrawn as requested in your letter dated November 18, 2013.

Sincerely,

Edward Randolph

Edward F. Randolph, Director
Energy Division

**ADVICE LETTER (AL) SUSPENSION NOTICE**
ENERGY DIVISION

Utility Name: Southern California Edison
Utility No. /Type: U338 E/ ELC

Date Utility Notified: September 17,2013
E-Mail to:
AdviceTariffManager@sce.com
Darrah.Morgan@sce.com

Advice Letter Nos.: 2880-E
Date AL filed: April 5, 2013
Utility Contact Person: Darrah Morgan
Utility Phone No.: (626) 302-2086

Fax No.:
ED Staff Contact: Megha Lakhchaura
**For Internal Purposes Only**:
Date Calendar Clerk Notified _____/_____/_______
Date Commissioners/Advisors Notified ___/___/___

**[X] INITIAL SUSPENSION (up to 120 DAYS)**

This is to notify that the above-indicated AL is suspended for up to 120 days beginning 5 April,2012 for the following reason(s) below. If the AL requires a Commission resolution and the Commission's deliberation on the resolution prepared by Energy Division extends beyond the expiration of the initial suspension period, the advice letter will be automatically suspended for up to 180 days beyond the initial suspension period.

[ ] Section 455 Hearing is Required - A Commission resolution may be required to address the advice letter.

[] Advice Letter Requests a Commission Order

[X] Advice Letter Requires Staff Review

Expected duration of initial suspension period: 120 days

**[X ] FURTHER SUSPENSION (up to 180 DAYS beyond initial suspension period)**

The AL requires a Commission resolution and the Commission's deliberation on the resolution prepared by Energy Division has extended beyond the expiration of the initial suspension period. The advice letter is suspended for up to 180 days beyond the initial suspension period.

---

If you have any questions regarding this matter, please contact Megha Lakhchaura at mla@cpuc.ca.gov.

cc: Maria Salinas - maria.salinas@cpuc.ca.gov
Jeanie Chang - jeannie.chang@cpuc.ca.gov

Protestor/s

* Note: reference – Decision D.02-02-049, dated February 21, 2002, and Rule 7.5 in appendix A of D.O7-01-024

* Note:  reference – Decision D.02-02-049, dated February 21, 2002, and Rule 7.5 in appendix A of D.O7-01-024

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

**Akbar Jazayeri**
Vice President of Regulatory Operations

April 5, 2013

**ADVICE 2880-E**
**(U 338-E)**

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA
ENERGY DIVISION

**SUBJECT:** Request for Amendments to Southern California Edison Company's 2010 Assembly Bill (AB) 57 Bundled Procurement Plan

## PURPOSE

Pursuant to Decision (D.)07-12-052 and D.12-01-033,[1] Southern California Edison Company (SCE) respectfully submits this advice letter to amend its 2010 Conformed Assembly Bill (AB) 57 Bundled Procurement Plan (AB 57 BPP).[2] Specifically, SCE requests that the California Public Utilities Commission (Commission or CPUC) approve amendments to: (1) add the National Association of Securities Dealers Automated Quotation (NASDAQ OMX[3] or NASDAQ) as an authorized exchange; (2) add tolling agreements as an authorized non-standard product; (3) clarify portfolio risk assessment reporting and credit terms; and (4) implement ministerial corrections.

Included with this advice letter are Attachments A and B, which respectively are: (1) a redlined version of the AB 57 BPP reflecting the aforementioned changes, and (2) a clean version of the replacement sheets incorporating the changes that will be implemented when this advice letter is approved.

---

1 D.07-12-052, at Ordering Paragraph (OP) 26 (allowing updates or modifications to procurement plans proposed between the biennial procurement plan filings via the Advice Letter process); D.12-01-033, at 45, OP 1 (approving same authority).

2 SCE's AB 57 BPP was submitted in Advice 2713-E-B on July 23, 2012, and approved by Resolution E-4542, effective October 11, 2012.

3 The NASDAQ merged with OMX in 2007. The exchange platform is owned by NASDAQ OMX Group, which also owns OMX stock market network.

## JUSTIFICATION

### 1. Adding the NASDAQ as an Authorized Exchange

SCE requests to add the NASDAQ to its approved list of authorized exchanges. The NASDAQ is one of the world's largest electronic exchanges. Currently, SCE is only authorized to buy and sell energy and energy-related products on the following exchanges: the Intercontinental Exchange (ICE), an electronic wholesale energy and metals commodities exchange; the New York Mercantile Exchange (NYMEX), a commodity futures exchange; and the Chicago Climate Futures Exchange (CCFE), which was acquired by and is now operating as ICE.

Like those exchanges, NASDAQ is regulated by the U.S. Commodities Futures Trading Commission (CFTC), as well as other regulators, and its prices are both visible (*i.e.*, price is knowable and available to any interested market participant) and representative (*i.e.*, posted price and quantity are determinative of the final transaction cost).[4] The NASDAQ supports physical transactions in a number of commercial energy product trading hubs, including the Western Electric Coordinating Council (WECC) market for physical day ahead and term contracts.

The addition of NASDAQ to SCE's list of authorized exchanges will thus increase SCE's procurement opportunities for energy-related products, and facilitate SCE's efforts to obtain the lowest-cost hedging options for its customers. Access to a variety of exchanges generally benefits SCE's customers by: (1) enhancing price discovery and competition; (2) reducing credit risk; and (3) increasing the variety of energy products to meet compliance obligations and better hedge customers' exposure to costs associated with providing reliable power.

SCE therefore requests that the Commission approve the addition of the NASDAQ to the list of exchanges authorized under the AB 57 BPP in Appendix E.

### 2. Adding Tolling Agreements as a Non-Standard Product

SCE requests that the Commission approve the addition of tolling agreements to the list of authorized non-standard products. A tolling agreement is an agreement under which the seller provides output of and active control over a generating unit to the buyer of the toll for a specific duration, in return for a monthly charge and natural gas. Tolling agreements thus reduce the buyer's power price risk by providing the buyer access to generation capacity at a guaranteed gas-to-electricity conversion heat rate. Because tolling agreements typically provide the buyer with whatever ancillary services the generating unit is certified to provide, tolling agreements also hedge the price risk associated with meeting ancillary service requirements in the California Independent System Operator market.

---

4 *See* D.03-12-062, at 25; 2010 AB 57 BPP, at Sheet 55.

SCE's AB 57 BPP currently authorizes SCE to enter into tolling agreements under its list of authorized procurement products.[5] Although SCE can enter into tolling agreements for terms of less than five years through its request for offer (RFO) solicitations, SCE is restricted from entering into agreements for any authorized product, including tolls, bilaterally for terms longer than a calendar quarter, unless the product is an authorized non-standard product.[6] This limited term can be an impediment to the execution of a tolling agreement because counterparties are often reluctant to expend the time and resources to implement a complex tolling arrangement that will be in effect for less than a year. Adding tolling agreements to the list of authorized non-standard products will allow SCE to bilaterally enter into tolling agreements for a term of less than five years.[7] If SCE enters into a tolling agreement bilaterally, it will satisfy the AB 57 BPP's strong showing requirement.[8]

Under SCE's AB 57 BPP, "non-standard products" are products that satisfy a particular operational or procurement requirement, but are not liquidly traded through exchanges or brokers.[9] Like the currently authorized non-standard products in SCE's AB 57 BPP,[10] bilaterally-negotiated tolling agreements are often complex and tailored to the specific characteristics of the underlying generating unit, and thus they are not traded through exchanges or brokers like standard products. The ability to enter into such arrangements will better enable SCE to use tolling agreements, along with other products, to reduce the degree to which its customers experience wide fluctuations in the price of power and ancillary services. Tolling agreements therefore satisfy the requirements for non-standard products.

SCE requests that the Commission approve the addition of tolling agreements to the list of non-standard products authorized under the AB 57 BPP in Appendix O.[11]

### 3. Clarification of the Portfolio Risk Assessment and Credit Terms for Structured Transactions

Additionally, SCE requests to clarify the terms governing Portfolio Risk Assessment and Credit and Collateral Requirements in the AB 57 BPP. Specifically, with respect to Portfolio Risk Assessment, in Section III.B.3.c on Sheet 42, SCE requests modifications to clarify how SCE reports Risk Assessment errors.

---

5 2010 AB 57 BPP, Appendix C, at Sheet C-2 and Appendix D, at Sheet D-1.
6 *Id.* at Appendix D, at Sheet D-1.
7 *Id.* at Sheets 61-62, Appendix D, at Sheet D-1.
8 *Id.* at Sheet 61.
9 *Id.*
10 *Id.* at Appendix O.
11 The Commission has already approved such authority for at least one other investor-owned utility. *See* Advice 2362-E and 2362-E-A, San Diego Gas & Electric Company's 2012 Long-Term Procurement Plan, at Sheets 34-35, 50, effective October 11, 2012 per Resolution E-4543.

Similarly, SCE would like to clarify SCE's Credit and Collateral Requirements, which are set forth in Section III.B.5, beginning on Sheet 44 and ending on Sheet 53. The modifications will provide greater detail about the distinction between SCE's credit requirements for energy procurement transactions conducted in the ordinary course of business as compared to those for structured transactions.

### 4. Corrections to the List of Authorized Procurement Products, List of Brokers and Exchanges, and Use of Independent Evaluators

In compliance with OP 14 in D.12-01-033,[12] SCE corrects Appendix C on Sheet C-1 to remove the "Forward Renewable Energy (purchase)" product from the list of authorized procurement products. Also in conformance with D.12-01-033,[13] SCE corrects the definitions of "Long-Term Transaction" and "Mid-Term Transaction" in footnote 55.

In addition, SCE makes corrections to the list of authorized brokers and exchanges in Appendix E on Sheet E-2. First, "Tullet Prebon Americas Corporation" changed its name to "Tullet Prebon Financial Services." Second, the CCFE should be removed from the list of authorized exchanges because it was acquired by and is now operating as ICE, which is already on the list.

Finally, in compliance with D.08-11-008,[14] SCE corrects Sheet 26 and footnote 39 to require the use of an Independent Evaluator for all competitive requests for offers for products with a contract duration of two years or more.

SCE therefore requests that the AB 57 BPP be modified to reflect these changes.

## REQUEST FOR COMMISSION APPROVAL

For the reasons stated above, SCE believes that the amendments and updates reflected in Attachments A and B meet the Commission's criteria for adding entities to authorized list of exchanges, authorizing a non-standard product, clarifying terms, and making ministerial corrections. Accordingly, SCE requests that its AB 57 BPP be revised in the manner requested in this advice letter and as set forth in Attachments A and B.

No cost information is required for this advice filing.

This advice filing will not increase any rate or charge, cause the withdrawal of service, or conflict with any other schedule or rule.

---

[12] OP 14 of D.12-01-033 provided that SCE's proposal to enter into short-term renewable energy transactions is not authorized, but may be addressed in the Renewables Portfolio Standard proceeding, Rulemaking 11-05-005.

[13] D.12-01-033 Finding of Fact 24 and 25, Concl. of Law 21.

[14] *See* D.08-11-008 at p. 27.

**TIER DESIGNATION**

Pursuant to General Order (GO) 96-B, Energy Industry Rule 5.2, this advice letter is submitted with a Tier 2 designation.

**EFFECTIVE DATE**

This advice filing will become effective upon review and approval by the Energy Division.

**NOTICE**

Anyone wishing to protest this advice filing may do so by letter via U.S. Mail, facsimile, or electronically, any of which must be received no later than 20 days after the date of this advice filing. Protests should be mailed to:

CPUC, Energy Division
Attention: Tariff Unit
505 Van Ness Avenue
San Francisco, California 94102
E-mail: EDTariffUnit@cpuc.ca.gov\

Copies should also be mailed to the attention of the Director, Energy Division, Room 4004 (same address above).

In addition, protests and all other correspondence regarding this advice letter should also be sent by letter and transmitted via facsimile or electronically to the attention of:

Akbar Jazayeri
Vice President of Regulatory Operations
Southern California Edison Company
8631 Rush Street
Rosemead, California 91770
Facsimile: (626) 302-4829
E-mail: AdviceTariffManager@sce.com

Leslie E. Starck
Senior Vice President
c/o Karyn Gansecki
Southern California Edison Company
601 Van Ness Avenue, Suite 2030
San Francisco, California 94102
Facsimile: (415) 929-5540
E-mail: Karyn.Gansecki@sce.com

With a copy to:

Rebecca Meiers-DePastino
Attorney
Southern California Edison Company
2244 Walnut Grove Avenue, 3rd Floor
Rosemead, California 91770
Facsimile: (626) 302-6962
E-mail: Rebecca.Meiers-DePastino@sce.com

There are no restrictions on who may file a protest, but the protest shall set forth specifically the grounds upon which it is based and shall be submitted expeditiously.

In accordance with Section 4 of GO 96-B, SCE is serving copies of this advice filing to the interested parties shown on the attached GO 96-B and R.12-03-014 service lists. Address change requests to the GO 96-B service list should be directed by electronic mail to AdviceTariffManager@sce.com or at (626) 302-2930. For changes to all other service lists, please contact the Commission's Process Office at (415) 703-2021 or by electronic mail at Process_Office@cpuc.ca.gov.

Further, in accordance with Public Utilities Code Section 491, notice to the public is hereby given by filing and keeping the advice filing at SCE's corporate headquarters. To view other SCE advice letters filed with the Commission, log on to SCE's web site at http://www.sce.com/AboutSCE/Regulatory/adviceletters.

For questions, please contact Dhaval Dagli at (626) 302-4840 or by electronic mail at: Dhaval.Dagli@sce.com.

**Southern California Edison Company**

Akbar Jazayeri

AJ:dd:sq
Enclosures

# CALIFORNIA PUBLIC UTILITIES COMMISSION

ADVICE LETTER FILING SUMMARY
ENERGY UTILITY

MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No.: Southern California Edison Company (U 338-E)

| Utility type: | Contact Person: Darrah Morgan |
|---|---|
| ☑ ELC ☐ GAS | Phone #: (626) 302-2086 |
| ☐ PLC ☐ HEAT ☐ WATER | E-mail: Darrah.Morgan@sce.com |
| | E-mail Disposition Notice to: AdviceTariffManager@sce.com |

| EXPLANATION OF UTILITY TYPE | | | (Date Filed/ Received Stamp by CPUC) |
|---|---|---|---|
| ELC = Electric | GAS = Gas | | |
| PLC = Pipeline | HEAT = Heat | WATER = Water | |

Advice Letter (AL) #: 2880-E Tier Designation: 2

Subject of AL: Request for Amendments to Southern California Edison Company's 2010 Assembly Bill 57 Bundled Procurement Plan

Keywords (choose from CPUC listing): Procurement

AL filing type: ☐ Monthly ☐ Quarterly ☐ Annual ☑ One-Time ☐ Other

If AL filed in compliance with a Commission order, indicate relevant Decision/Resolution #:

D.07-12-052 and D.12-01-033

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL:

Summarize differences between the AL and the prior withdrawn or rejected AL[1]:

Confidential treatment requested? ☐ Yes ☑ No

If yes, specification of confidential information:
Confidential information will be made available to appropriate parties who execute a nondisclosure agreement.
Name and contact information to request nondisclosure agreement/access to confidential information:

Resolution Required? ☐ Yes ☑ No

Requested effective date: Upon approval No. of tariff sheets: -0-

Estimated system annual revenue effect: (%):

Estimated system average rate effect (%):

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected: None

Service affected and changes proposed[1]:

Pending advice letters that revise the same tariff sheets: N/A

[1] Discuss in AL if more space is needed.

**Protests and all other correspondence regarding this AL are due no later than 20 days after the date of this filing, unless otherwise authorized by the Commission, and shall be sent to:**


CPUC, Energy Division
Attention: Tariff Unit
505 Van Ness Avenue
San Francisco, California 94102
E-mail: EDTariffUnit@cpuc.ca.gov

Akbar Jazayeri
Vice President of Regulatory Operations
Southern California Edison Company
8631 Rush Street
Rosemead, California 91770
Facsimile: (626) 302-4829
E-mail: AdviceTariffManager@sce.com

Leslie E. Starck
Senior Vice President
c/o Karyn Gansecki
Southern California Edison Company
601 Van Ness Avenue, Suite 2030
San Francisco, California 94102
Facsimile: (415) 929-5540
E-mail: Karyn.Gansecki@sce.com


With a copy to:


Rebecca Meiers-DePastino
Attorney
Southern California Edison Company
2244 Walnut Grove Avenue, 3rd Floor
Rosemead, California 91770
Facsimile: (626) 302-6962
E-mail: Rebecca.Meiers-DePastino@sce.com

**Attachment A**

**Redlined Replacement Pages**

characteristics of existing and potential power plants, existing and potential transmission lines, and fuel prices for plants of various technologies. The model dispatches generation resources to meet the regional load forecast taking into consideration operating and transmission constraints. The marginal cost of generation sets the market clearing price, which establishes the hourly fundamental price forecast.

Appendix K, Figure K-3 shows the fundamental power price forecast based upon assumptions outlined by the Scoping Memos. These assumptions include the "Managed Load,"[36] which reflects the 2009 Integrated Energy Policy Report (IEPR) load and the CPUC load-modifying assumptions, the 2009 MPR gas price methodology applied to the trading period data specified in the Scoping Memos, and an RPS-eligible renewable resources buildout scenario that is consistent with the direction provided to SCE by ED.[37] SCE also derives power price volatility for the purpose of calculating customer procurement cost risk.[38] SCE calculates power price volatility analytically based on gas price volatility and the correlation between power and gas prices. Appendix K, Section 5 provides the details of the stochastic methodology.

SCE plans to continue to develop enhancements to its current distribution-based power price forecasting methods, as well as to assess and implement other methods as appropriate. SCE expects all of its power price forecasting tools to evolve and improve over time, and will use new and improved methods with input from the PRG and ED.

### 4. Implementation of the Independent Evaluator Requirement

~~D.07-12-052~~D.08-11-008 requires use of an Independent Evaluator (IE) for all competitive RFOs that seek products lasting ~~more than three months~~two years or more if no affiliate is

36 The Commission refers to the load forecast resulting from its assumptions as the "Managed Load" forecast.

37 *See* Energy Division's email dated Feb. 2, 2011 from Anne G. Mills to the IOUs.

38 SCE may apply alternative methodologies for developing price forecasts and volatility estimates for other purposes, such as for All Source RFO contract evaluation.

(Continued)

participating in the RFO.[39] SCE, in conjunction with its PRG, develops a pre-qualified pool of at least three, but preferably more IEs. SCE, in conjunction with the PRG and ED, develops and periodically adds[40] to its IE pool as follows:

1. SCE develops a list of prospective IEs via industry contacts, literature searches, PRG recommendations, and similar methods. SCE then solicits information from the prospective IEs and circulate the list of candidates and their "resumes" to its PRG and ED staff for feedback;[41]

2. SCE relies on the guidance regarding IE expertise and qualifications provided in D.04-12-048. However, SCE recognizes that these qualifications represent the minimum necessary for an IE to be effective, and SCE and its PRG can include additional relevant information that has been gained through experiences implementing the IE requirements;

3. SCE and its PRG then interview a subset of prospective candidates that SCE, its PRG, and ED staff deem most suitable for the role (SCE arranges for its PRG to conduct interviews with candidate IEs in isolation from SCE if desired);

4. SCE requests the PRG to coordinate the development and submittal to SCE of its recommendations on each prospective candidate (including the general consensus and any opposition to the consensus). SCE then prepares and submits a written list of proposed IEs to ED to add to SCE's pool. The list in part captures the recommendations of the PRG that were submitted to SCE. SCE requests ED to evaluate the proposed IE's competencies based on the

---

39 *See* D.08-11-008~~D.07-12-052~~, p.~~140, OP 9~~ 27. Public versions of IE reports shall be identical to the corresponding confidential versions, except for the visible redaction of confidential material. D.12-04-046, OP 15.

40 SCE will expand its IE pool as needed to maintain a minimum of three IEs and/or to add additional IEs as SCE finds suitable candidates.

41 Candidate names will be kept confidential as part of the PRG process.

(Continued)

evaluate combinations of offers in SCE's All Source RFO (*i.e.*, offer 1 with offer 2, offer 1 with 2 and 3, and so on for thousands of offers concurrently) to find the mathematically optimal outcome for Least Cost-Best Fit. SCE's Gas RFO process also complies with the Commission's Least Cost-Best Fit criteria. For each Gas RFO, SCE identifies the most suitable financial and/or physical natural gas hedging instruments to mitigate price exposure risk and/or secure natural gas supply for its portfolio. When SCE identifies the products that fit the natural gas need of its portfolio, through a ~~completive~~ competitive solicitation (RFO), it will procure least cost products.

Upon completion of the evaluation stage of an RFO, SCE provides its PRG a decision rationale for its proposed selections and seeks its PRG feedback before contracts are executed.[47]

a) Valuation Process

For valuation, SCE employs an NPV analysis to evaluate each offer. This NPV analysis estimates:

1. The value of contract benefits;
2. Contract costs; and
3. The net value of 1 and 2.

SCE uses market indicators, such as power and gas prices and volatilities, when available, to ensure that valuations are consistent with established markets. However, complete market assessments are not always feasible because of insufficient publication of market indicators. Accordingly, SCE's valuation processes use derived inputs in NPV calculations when market information is not available. These derived inputs come from pricing models and processes which may be fundamental, statistical, or a combination of both. Pricing models and processes may use proxy markets, historical information, proxy physical characteristics, or other information. SCE also considers market information from publicly available sources, such as NYMEX, Platt's and

47 D.07-12-052, p.149.

(Continued)

SCE then executes transactions with the governance and oversight specified in the "Risk Management Policy" section above. SCE reviews traded transactions in its weekly hedging operations meetings, monthly with senior Power Supply and Risk Control management (and quarterly with the epRMC and PRG), and executes them within pre-authorized trade floor limitations. Any transactions not classified as "Short-Term"[55] – including longer-term trades, structured transactions, and RFOs – require obtaining appropriate authorization from the epRMC and consultation with the PRG prior to execution.

### 3. Portfolio Risk Assessment

SCE prepares and submits a confidential monthly risk report to the ED indicating the probability that the cost of the SCE portfolio will have a certain value (*i.e.*, SCE will submit a "distribution" of portfolio costs and the probability that it will achieve the distribution point).[56] The elements in the monthly risk report include a portfolio risk assessment, a portfolio cost report, the time periods covered by the portfolio risk assessment, and SCE's methodologies used in developing portfolio cost distributions. Appendix N provides the format of the monthly portfolio risk assessment report. Monthly portfolio risk assessment reports contain cost distributions, both including and excluding the forward transactions conducted during the month, in order to indicate the change in the distribution attributable to the new transactions.

---

55 "Short-Term Transactions" are defined as transactions with delivery terms up to, and including, one quarter in duration and up to one quarter forward. A subset of Short-Term Transactions, "Prompt Month Transactions," are defined as transactions with delivery terms less than or equal to one calendar month, and executed within the time frames that define Prompt Month Electricity and Prompt Month Natural Gas, as applicable. "Long-Term Transactions" refers to transactions with delivery terms equal to or greater than five years in duration. "Mid-Term Transactions" include all transactions with delivery terms ~~equal to or~~ less than five years in duration (*i.e.*, not Long-Term Transactions) that either have delivery terms greater than one quarter or are procured more than one quarter in advance of delivery (*i.e.*, not Short-Term Transactions).

56 SCE submits the confidential monthly report by the 15th day of each month. SCE also provides a copy of the confidential monthly report, for information purposes only, to SCE's PRG participants.

(Continued)

around the last trading week of the month prior to submittal of the report. SCE fixes the portfolio used to calculate the risk metrics on the same date that the stochastic process is set.

While SCE endeavors to issue error free reports, there is a significant level of complexity associated with the preparation of the Risk Assessment report and errors do occasionally occur. SCE will inform the CPUC of reporting errors as follows. If errors are greater than 2% of the assessed risk, but less than 10% and do not alter the risk status with respect to the CRT metric, SCE will identify and enclose the corrections in the next regularly scheduled monthly risk report following the discovery and correction of the error. Alternatively, if the error is 10% or greater, or if the correction causes a change in the status with respect to the CRT metric, SCE will refile the report as soon as the corrections have been made.

### 4. Customer Risk Tolerance

The CRT is a rate in cents/kWh that the Commission adopted as an indicator of customer tolerance to rate increases related to market-sensitive procurement costs as defined in the monthly risk report. The Commission has adopted a periodic update to SCE's CRT as part of SCE's biennial AB 57 Bundled PP filings using a fixed percentage risk tolerance factor multiplied by SCE's then-existing system average rate.[59] Appendix N contains the derivation of SCE's CRT, including the fixed percentage risk tolerance factor utilized in this AB 57 Bundled PP.

SCE calculates its CRT every month using a rolling forward 12-month period.

1. A base load scenario in kWh for the appropriate rolling forward 12-month period is prepared.

---

59 D.12-01-033, p.23. SCE uses its bundled average rate as the equivalent of SCE's system average rate. D.12-01-033, pp.23-24, provides that the calculation of the CRT will be updated every two years in each AB 57 Bundled PP filing. If the AB 57 Bundled PP filing is delayed or not made, SCE will update its CRT two years from the filing of the previous AB 57 Bundled PP via a Tier 1 Advice Letter. If there is no AB 57 Bundled PP filing that is usable for this purpose, then the two years will run from the date of Commission approval of the previous CRT.

(Continued)

2. The total load is then multiplied by the current CRT rate, which is expressed in cents/kWh. This represents the CRT that is compared to the monthly TEVaR calculation.

The main use of the CRT is for monthly risk reporting on SCE's portfolio. SCE consults with its PRG whenever the 95% TEVaR metric exceeds the CRT. In such cases, SCE and the PRG might discuss possible actions that SCE can take within the framework of SCE's AB 57 Bundled PP to reduce 95% TEVaR.

**5. Credit and Collateral Requirements**

a) Creditworthiness

Credit risk is the risk that a counterparty to a ~~procurement~~ transaction may be unable or unwilling to meet its payment or performance obligations under the contract. For example, SCE could enter into a contract to procure electricity at a fixed price, and then find that the price of electricity subsequently rises. If the counterparty fails to supply energy as required under the terms of the contract, SCE may be forced to make up the difference in the spot market or under a new contract at a higher price. Parties attempt to minimize the credit risk they face by maintaining their exposure below a certain limit or by requiring counterparties to post collateral if their exposure exceeds a negotiated limit.

To protect against an economic loss as a result of a counterparty's failure to perform, SCE generally requires counterparties to provide collateral for the benefit of SCE whenever the estimated loss SCE would face for a counterparty's non-performance (*i.e.*, SCE's exposure) exceeds a predetermined amount. ~~The amount of SCE's exposure under a contract is calculated as the dollar value of any product delivered to a counterparty but not yet invoiced, plus accounts receivable, minus accounts payable, plus the net positive mark-to-market (MTM). The MTM is the difference between the current market price of the product and the original contract price~~

(Continued)

~~multiplied by the remaining quantity of product to be delivered under the contract. In instances in which the product is not highly liquid, the MTM is estimated by a formula agreed to by SCE and the counterparty and stated in the contract. The MTM changes as current market prices change; therefore, for purposes of obtaining collateral, SCE recalculates its exposure in accordance with contract terms as indicated in the enabling agreement, or alternatively, as mutually agreed to by SCE and the counterparty.~~

Even if a counterparty has posted or agrees to post collateral, there are still non-performance risks, such as a counterparty declaring bankruptcy. Once a company is in bankruptcy, an automatic stay may prevent the use of pledged collateral absent court approval. In addition, if collateral is received by SCE within a 90-day period prior to the bankruptcy filing, the collateral could be subject to recapture by the bankruptcy court if deemed a preferential transfer.

SCE's Credit Policy and risk mitigation measures described herein in this Section enable SCE to deal flexibly with these types of credit and counterparty risks in the energy procurement market.

b) Credit Limits for ~~Power, Gas, and Financial Trading~~ Energy Procurement and Related Transactions in the Ordinary Course of Business

SCE is authorized to enter into enabling agreements with counterparties in the ordinary course of business subject to the unsecured credit limits not to exceed those allowed by the Commission.[60] Ordinary course of business transactions are Short-Term transactions for liquid products. When two parties decide they would like to transact with each other, they usually negotiate an enabling agreement~~, based upon standard forms provided by the Edison Electric Institute (EEI), the Western Systems Power Pool (WSPP), the North American Energy Standards Board (NAESB), or the International Swaps and Derivatives Association (ISDA)~~. These ~~standard~~

[60] D.04-12-048, pp.171-172.

(Continued)

~~forms~~ agreements are typically modified with contract terms mutually agreed to by both parties to the enabling agreement. These enabling agreements define the general rights and responsibilities of each party. Generally ~~Then~~, as each individual transaction is executed, ~~the parties generate~~ a confirmation is generated outlining the specific details of that particular transaction.

The following are ~~standard~~ enabling agreements that SCE has used or may use to transact ~~in energy products~~under:

- The International Swaps and Derivatives Association Agreement (ISDA): ~~The ISDA agreement f~~Facilitates trading in financial products, including but not limited to, swaps and options.
- The North American Energy Standards Board Agreement (NAESB): ~~The NAESB agreement enables~~Facilitates trading in physical gas ~~transactions~~.
- The Edison Electric Institute Agreement (EEI): ~~The standard EEI contract f~~Facilitates trading in electric power.
- The Western Systems Power Pool Agreement (WSPP): ~~The standard WSPP contract f~~Facilitates trading in electric power and other power-related transactions.
- Stand Alone Agreements: Facilitates transmission and emissions-related transactions.

SCE may also include a physical power and/or a physical gas annex to the ISDA, or a physical gas annex to the EEI, in order for counterparties to trade under a single agreement with a single set of terms and conditions. The credit terms, including unsecured credit limits, if any, are negotiated by the ~~counter~~parties and are included in the enabling agreement. If applicable, enabling agreements may contain a credit rating table, which denotes an unsecured credit line at each rating category. The unsecured credit limit for a given credit rating may generally be the same for both parties to the contract, or as negotiated by SCE and the counterparty. ~~Counterparties will be required to post collateral to SCE for SCE's exposure in excess of the unsecured credit limit~~

(Continued)

~~assigned by SCE to the counterparty. SCE will be required to post collateral for exposure in excess of the unsecured credit limit assigned to SCE by the counterparty.~~

For ordinary course of business transactions, the amount of SCE's exposure under a contract is calculated as the dollar value of any product delivered to a counterparty but not yet invoiced, plus accounts receivable, minus accounts payable, plus the mark-to-market (MTM). The MTM is the difference between the current market price of the product and the contract price multiplied by the remaining quantity of product to be delivered under the contract. For ordinary course of business transactions, counterparties will be required to post collateral to SCE for SCE's exposure in excess of an unsecured credit limit assigned by SCE to the counterparty. SCE will be required to post collateral for exposure in excess of an unsecured credit limit assigned to SCE by the counterparty.

Even though a counterparty will be required to post collateral for exposure above the unsecured credit limit in the enabling agreement, SCE may have additional exposure above the unsecured credit limit. Market prices, and therefore exposure, may change between the time collateral is requested from the counterparty and the time the collateral is received by SCE. This is referred to as "posting risk." Generally, enabling agreements call for collateral to be posted within a ~~three~~predetermined number of business days of a request. The posting risk exists in addition to the unsecured credit lines provided for in the enabling agreement. SCE may also have exposure due to a possible difference between the exposure estimated for collateral purposes and the actual exposure. This may occur after termination of the enabling agreement due to a default and the termination payment, as outlined in the enabling agreement, has been calculated. Additionally, there is a risk that prices will change, unfavorably to SCE between the time the enabling agreement terminates and, the time SCE can replace the volumes of the defaulted position. Moreover, exposure could exceed the unsecured credit limit outlined in the enabling agreement if and when the credit rating of the counterparty is downgraded and the unsecured credit limit available at the

(Continued)

downgraded rating is less than the exposure amount at the date at which downgrade occurs. Appendix M refers to the unsecured credit limits to which SCE shall be allowed to agree, either for itself or for the counterparty, so as to facilitate transaction execution or the execution of enabling agreements.[61]

In some cases, SCE and the counterparty may refrain from stating unsecured credit limits in executed enabling agreements. In such cases, SCE and the counterparty will extend unsecured credit limits to each other on an informal basis (referred to as "internal limits"). As these limits are not codified in an enabling agreement, revocation of this limit may be arbitrary (*i.e.*, these are not contractual obligations and thus not contractually binding on either party).

Application of this "internal limit" method may apply to ~~physical gas markets in which~~ the NAESB ~~enabling agreement is used~~ and ~~in the physical power market in which~~ the WSPP ~~enabling agreement is used~~. When transacting under internal limits, SCE will be in conformance with this Credit Policy by applying term, volume, and/or pricing limits such that potential exposure is less than the internal limit. In determining the unsecured credit limit, SCE will review each ~~company~~counterparty individually. SCE will consider relevant factors which it believes are important in evaluating credit risk and subsequent, potential exposure. Many counterparties are poorly rated or are not rated because they are privately held, are a subsidiary of a larger company, or are a municipality. However, if these counterparties have assets in SCE's service territory or are active in the financial markets or the physical gas, or power markets, it may still be desirable for SCE to trade with them and SCE will consider these factors when determining unsecured credit limits.

61 These credit limits were previously approved in D.04-12-048, pp.171-172.

(Continued)

c) Credit Terms for Structured Transactions

Structured transactions are Mid-Term or Long-Term transactions, typically for non-liquid products. Structured transactions are typically done under enabling agreements or under a stand alone agreement.

The Commission has granted SCE continued autonomy to negotiate individual credit support packages with counterparties in the kinds of structured transactions described below. Such credit support packages would include, but not be limited to, liquid collateral (cash or letters of credit), in tandem with various contractual provisions as described below.

In order to hedge customers' market price risk, potentially improve supply reliability, ~~or~~ operational efficiency, or meet certain statutory or regulatory requirements, SCE may enter into ~~long-term supply contracts~~ Mid-Term or Long-Term transactions through an RFO process. Examples of such ~~contracts~~transactions include, but are not limited to, capacity tolling contracts for existing or new generation facilities, transmission contracts, gas supply contracts, gas transportation or storage contracts, renewable energy contracts, and contracts to comply with resource adequacy or local area reliability requirements. Many of these contracts are tied to specific facilities or projects.

If SCE were to require collateral posting to cover its exposure above an unsecured credit line, if any, under contracts, it might prevent SCE from signing needed long-term contracts at reasonable prices. The MTM (and its corresponding impact on exposure) over the life of a long-term contract may result in significant potential collateral requirements.

In many cases, counterparties may not have the liquidity required to fund such large collateral requirements. In other cases, counterparties have been willing to provide collateral, but at a significantly increased price. Therefore, SCE's Credit Policy allows sufficient operating flexibility to SCE, to allow for the fact that the full collateralization requirement of exposure, if

(Continued)

required of a counterparty by SCE, may not be possible in certain contracts. As a result, SCE's customers may be subject to increased credit risk.

For structured transactions, instead of the full collateralization requirement, SCE will negotiate a credit support package with counterparties, including liquid collateral (cash or letter of credit) and/or other contractual provisions. Generally, SCE has a preference for liquid collateral since this is the most secure form of collateral. Further, as described below, SCE may pursue additional contractual provisions as alternative security designed to reduce risk. While none of these provisions entirely eliminates the risk of a loss due to contract default, each provides some level of protection to SCE by reducing the potential for uncollateralized exposure.

For structured transactions, the MTM is estimated by a formula agreed to by SCE and the counterparty and stated in the contract. The MTM changes as current market prices change; therefore, for purposes of obtaining collateral, SCE recalculates its exposure in accordance with contract terms as indicated in the enabling agreement, or alternatively, as mutually agreed to by SCE and the counterparty. If structured transactions are executed under an enabling agreement, the exposure may be netted with ordinary course of business transactions exposure, depending on the credit terms of the structured transaction.

(1) Lien on the Assets

SCE may secure its rights under a contract by obtaining a first lien on the assets of the seller. Generally, the assets have already been pledged to support the financing of the facility or parent company debt. Where a first lien is not available, SCE may have to obtain a subordinated lien that would be fully and completely subordinated to the first lien holders. The subordinated lien might offer SCE's customers security in the event that a counterparty defaults and fails to cure contractual non-performance, or if the contract is subsequently terminated. In such cases, SCE's customers might enjoy the position of a secured creditor, provided proceeds remain, after all first lien holders have been paid. However, several issues arise when relying on a lien as security,

(Continued)

particularly as it relates to an estimable exit dollar value of a subordinated lien post bankruptcy. Notwithstanding these concerns, a lien could be another tool that provides protection against counterparty default or bankruptcy, under certain circumstances.

(a) Attornment Agreements

An attornment agreement is an agreement between the project lenders and SCE that requires project lenders to honor SCE's contract even as they exercise their rights of foreclosure and resale of a generating project. However, an attornment agreement may not provide benefits to SCE's customers if the project goes into bankruptcy, since the lenders will no longer have control of the project. In that event, the bankruptcy court can reject the contract, irrespective of the existence of an attornment agreement.

(b) Additional Forms of Security

SCE has listed above the forms of security that it typically considers for structured transactions. However, SCE cannot anticipate every situation that might arise. SCE therefore ~~will~~may use additional forms of security that provide protections similar to those listed above.

SCE requires flexibility in negotiating the credit support package because each Mid-Term or Long-Term transaction~~RFO~~ is unique in terms of products, contract terms, and counterparties capable of responding. The credit support package that SCE ultimately negotiates will depend on market conditions such as the amount of competition, SCE's negotiating leverage, and a counterparty's credit support package.

For the above reasons, SCE's credit requirements may vary for each RFO. At the outset or during an RFO process, SCE may set RFO-specific credit requirements or standards that counterparties must meet in order to participate in the RFO. Such RFO-specific requirements would be applied in a non-discriminatory fashion to all counterparties submitting offers. In addition, SCE may apply an offer valuation adjustment, such as a credit risk adder, based on the strength of the credit support package offered or the credit requirements placed upon SCE. SCE

(Continued)

will implement the setting of minimum credit standards. The models and methodologies used to compute offer valuation adjustments will be implemented in consultation with the PRG and with the approval of the epRMC.

The Credit Policy referred to herein and the unsecured credit limits outlined in Appendix M do not eliminate credit risk and exposure may be significant. Nevertheless, this Credit Policy strikes a reasonable balance between credit risk on the one hand, and addressing customer needs and statutory/regulatory minimum requirements on the other.

d) SCE's Energy Procurement Collateral Exposure Limit

As SCE enters additional longer-term transactions for energy procurement (both physical and financial), which reduce future power and gas price uncertainty, there is a subsequent increase in the exposure that SCE may face. Compounding this issue is the fact that SCE's energy needs will change over time. Additionally, any new contracts to meet load growth ~~will~~may also ~~likely~~ include contract terms requiring SCE to post collateral when its unsecured credit limit is exceeded.

In D.07-12-052, the Commission addressed SCE's increasing exposure to collateral requirements by approving SCE's request to increase its Collateral Exposure Limit from $1.4 billion to $2 billion.[62] This Collateral Exposure Limit is maintained at $2 billion in this AB 57 Bundled PP.

e) Credit and Collateral Risk Mitigation Products

SCE will continue to investigate the purchase of credit and collateral risk mitigation products. Examples of credit risk mitigation products include credit derivatives, credit intermediaries, credit insurance, and similar products to transfer credit risk to another entity. Credit derivatives entitle SCE to a payment in the event the counterparty goes bankrupt or defaults on public debt. Credit intermediaries are creditworthy entities that, for a fee, would step in

62 *See* D.07-12-052, p.161.

SOUTHERN CALIFORNIA EDISON COMPANY'S

AB 57 CONFORMED 2010 BUNDLED PROCUREMENT PLAN

APPENDICES

# Appendix C

# Authorized Procurement Products for Energy and Energy-Related Products

(Continued)

SOUTHERN CALIFORNIA EDISON COMPANY'S

AB 57 CONFORMED 2010 BUNDLED PROCUREMENT PLAN

APPENDICES

Sheet C-1

## Authorized Procurement Products

| Transaction | Description | Benefit /Cost |
|---|---|---|
| Forward Spot (Day-Ahead & Hour-ahead (purchase, sale, or exchange) | Purchase pre-scheduled energy or load reductions at either a fixed-price or index-based price | Needed to balance short-term load/resource changes/ Vulnerable to price volatility |
| Real-time (purchase or sale) | Energy imbalance transactions or load reductions | Balances Short-term needs/ Vulnerable to price volatility |
| Forward Energy (purchase or sale) | Contracts entered into in advance of delivery time, includes block/forward products (*e.g.*, fixed amounts of energy over a specified period of time (*e.g.*, 7x24, 6x16, super-peak, and shaped products) Could be fixed price or index-based price | Reduces price risk / Risk that prices will be below contracted rate (for purchases) |
| ~~Forward Renewable Energy (purchase)~~ | ~~Contracts entered into in advance of delivery time for CPUC standard defined RPS eligible energy. Includes block/forward products (*e.g.*, fixed amounts of energy over a specified period of time (*e.g.*, 7x24, 6x16, super peak, and shaped products) or unit contingent. Could be fixed price or index-based price.~~ | ~~Reduces price risk / Risk that prices will be below contracted rate~~ |
| Forward Energy (demand side) | Baseload usage reduction through investments in permanent energy efficiency | Reduces price risk and cost overall |
| Futures Contract | An agreement to make or take delivery of a particular commodity or financial instrument at a pre-determined price in the future. Futures are distinguished from generic forward contracts in that they contain standardized terms, trade on a formal exchange, are regulated by overseeing agencies, and are guaranteed by clearinghouses. Also, in order to ensure that payment will occur, futures have a margin requirement that must be settled daily. | Similar to forwards in that they reduce price risk by locking in a fixed cost of gas on a forward basis. However, there is always a physical delivery component associated with a futures contract which must be closed out prior to contract expiration. |
| Capacity (demand side) | Right to purchase load reductions for capacity payments | Provides dispatchable reliability |

(Continued)

SOUTHERN CALIFORNIA EDISON COMPANY'S

AB 57 CONFORMED 2010 BUNDLED PROCUREMENT PLAN

APPENDICES

# Appendix E

# Authorized Brokers and Exchanges

(Continued)

SOUTHERN CALIFORNIA EDISON COMPANY'S

AB 57 CONFORMED 2010 BUNDLED PROCUREMENT PLAN

APPENDICES



| | | | |
|---|---|---|---|
| Longevous Capital, LLC | Trading Partners: FCStone, LLC and INTL Hanley, LLC Owned by Private Investors | 2010 | 2012 |
| Natsource Transaction Services LLC | Private Investors | 1994 | 2005 |
| Saddleback Energy | Private Investors | 2002 | 2006 |
| Spectron | Private Investors | 1988 | 2006 |
| TFS Energy Futures LLC | TFS Brokers | 1995 | 2005 |
| Tullett Prebon Financial Services~~Americas Corporation (Tullett Liberty Inc. and Prebon Energy merged)~~ | Subsidiary of Tullett Prebon, plc | 2004 | 2005 |
| Valence Energy, LLC | Parent: OTC Global Holdings, L.P., Owned by Private Investors | 2008 | 2009 |
| Walden Energy, LLC | Trading Partner: Hudson Capital Energy, LLC Owned by Private Investors | 2003 | 2012 |

**On-line Auctions**

| Platform | Date Launched | Date Commission Approved |
|---|---|---|
| World Energy Solutions, Inc. | 1999 | 2009 |

**Exchanges**

| Platform | Date Launched | Date Commission Approved |
|---|---|---|
| ~~Chicago Climate Futures Exchange~~ | ~~2003~~ | ~~2005~~ |
| ICE | 2000 | 2007 |
| NASDAQ OMX | 1971 | 2013 |
| NYMEX | 1882 | 2005 |

**Clearing Firms**

| Platform | Date Launched | Date Commission Approved |
|---|---|---|
| Citigroup Global Markets, Inc. | 1892 | 2005 |
| Macquarie Futures USA, Inc. | 2006 | 2010 |
| Newedge USA LLC | 1987 | 2005 |

(Continued)

SOUTHERN CALIFORNIA EDISON COMPANY'S

AB 57 CONFORMED 2010 BUNDLED PROCUREMENT PLAN

APPENDICES

# Appendix O

# Authorized Non-Standard Products

(Continued)

SOUTHERN CALIFORNIA EDISON COMPANY'S

AB 57 CONFORMED 2010 BUNDLED PROCUREMENT PLAN

APPENDICES

Sheet O-1

## Authorized Non-Standard Products

| **Products** |
|---|
| Capacity (demand side) |
| Electricity Transmission Products for non-CAISO transmission |
| Hourly Electricity Products Traded in the Day-Ahead or Beyond Day-Ahead Markets |
| Locational Natural Gas Options |
| Import Counting Rights |
| Natural Gas Basis Options |
| Physical Natural Gas Index Options |
| Sales of Forward Energy from Resources Located Outside the CAISO |
| Resource Adequacy Capacity Only |
| QF fixed for SRAC floating swap |
| Tolling Agreements |

(Continued)

**Attachment B**

**Clean Replacement Pages**

characteristics of existing and potential power plants, existing and potential transmission lines, and fuel prices for plants of various technologies. The model dispatches generation resources to meet the regional load forecast taking into consideration operating and transmission constraints. The marginal cost of generation sets the market clearing price, which establishes the hourly fundamental price forecast.

Appendix K, Figure K-3 shows the fundamental power price forecast based upon assumptions outlined by the Scoping Memos. These assumptions include the "Managed Load,"[36] which reflects the 2009 Integrated Energy Policy Report (IEPR) load and the CPUC load-modifying assumptions, the 2009 MPR gas price methodology applied to the trading period data specified in the Scoping Memos, and an RPS-eligible renewable resources buildout scenario that is consistent with the direction provided to SCE by ED.[37] SCE also derives power price volatility for the purpose of calculating customer procurement cost risk.[38] SCE calculates power price volatility analytically based on gas price volatility and the correlation between power and gas prices. Appendix K, Section 5 provides the details of the stochastic methodology.

SCE plans to continue to develop enhancements to its current distribution-based power price forecasting methods, as well as to assess and implement other methods as appropriate. SCE expects all of its power price forecasting tools to evolve and improve over time, and will use new and improved methods with input from the PRG and ED.

### 4. Implementation of the Independent Evaluator Requirement

D.08-11-008 requires use of an Independent Evaluator (IE) for all competitive RFOs that

---

36 The Commission refers to the load forecast resulting from its assumptions as the "Managed Load" forecast.

37 *See* Energy Division's email dated Feb. 2, 2011 from Anne G. Mills to the IOUs.

38 SCE may apply alternative methodologies for developing price forecasts and volatility estimates for other purposes, such as for All Source RFO contract evaluation.

(Continued)

seek products lasting two years or more if no affiliate is participating in the RFO.[39] SCE, in conjunction with its PRG, develops a pre-qualified pool of at least three, but preferably more IEs. SCE, in conjunction with the PRG and ED, develops and periodically adds[40] to its IE pool as follows:

1. SCE develops a list of prospective IEs via industry contacts, literature searches, PRG recommendations, and similar methods. SCE then solicits information from the prospective IEs and circulate the list of candidates and their "resumes" to its PRG and ED staff for feedback;[41]

2. SCE relies on the guidance regarding IE expertise and qualifications provided in D.04-12-048. However, SCE recognizes that these qualifications represent the minimum necessary for an IE to be effective, and SCE and its PRG can include additional relevant information that has been gained through experiences implementing the IE requirements;

3. SCE and its PRG then interview a subset of prospective candidates that SCE, its PRG, and ED staff deem most suitable for the role (SCE arranges for its PRG to conduct interviews with candidate IEs in isolation from SCE if desired);

4. SCE requests the PRG to coordinate the development and submittal to SCE of its recommendations on each prospective candidate (including the general consensus and any opposition to the consensus). SCE then prepares and submits a written list of proposed IEs to ED to add to SCE's pool. The list in part captures the recommendations of the PRG that were submitted to SCE. SCE

---

39 *See* D.08-11-008, p. 27. Public versions of IE reports shall be identical to the corresponding confidential versions, except for the visible redaction of confidential material. D.12-04-046, OP 15.

40 SCE will expand its IE pool as needed to maintain a minimum of three IEs and/or to add additional IEs as SCE finds suitable candidates.

41 Candidate names will be kept confidential as part of the PRG process.

(Continued)

evaluate combinations of offers in SCE's All Source RFO (*i.e.*, offer 1 with offer 2, offer 1 with 2 and 3, and so on for thousands of offers concurrently) to find the mathematically optimal outcome for Least Cost-Best Fit. SCE's Gas RFO process also complies with the Commission's Least Cost-Best Fit criteria. For each Gas RFO, SCE identifies the most suitable financial and/or physical natural gas hedging instruments to mitigate price exposure risk and/or secure natural gas supply for its portfolio. When SCE identifies the products that fit the natural gas need of its portfolio, through a competitive solicitation (RFO), it will procure least cost products.

Upon completion of the evaluation stage of an RFO, SCE provides its PRG a decision rationale for its proposed selections and seeks its PRG feedback before contracts are executed.[47]

a) Valuation Process

For valuation, SCE employs an NPV analysis to evaluate each offer. This NPV analysis estimates:

1. The value of contract benefits;
2. Contract costs; and
3. The net value of 1 and 2.

SCE uses market indicators, such as power and gas prices and volatilities, when available, to ensure that valuations are consistent with established markets. However, complete market assessments are not always feasible because of insufficient publication of market indicators. Accordingly, SCE's valuation processes use derived inputs in NPV calculations when market information is not available. These derived inputs come from pricing models and processes which may be fundamental, statistical, or a combination of both. Pricing models and processes may use proxy markets, historical information, proxy physical characteristics, or other information. SCE also considers market information from publicly available sources, such as NYMEX, Platt's and

[47] D.07-12-052, p.149.

(Continued)

SCE then executes transactions with the governance and oversight specified in the "Risk Management Policy" section above. SCE reviews traded transactions in its weekly hedging operations meetings, monthly with senior Power Supply and Risk Control management (and quarterly with the epRMC and PRG), and executes them within pre-authorized trade floor limitations. Any transactions not classified as "Short-Term"[55] – including longer-term trades, structured transactions, and RFOs – require obtaining appropriate authorization from the epRMC and consultation with the PRG prior to execution.

### 3. Portfolio Risk Assessment

SCE prepares and submits a confidential monthly risk report to the ED indicating the probability that the cost of the SCE portfolio will have a certain value (*i.e.*, SCE will submit a "distribution" of portfolio costs and the probability that it will achieve the distribution point).[56] The elements in the monthly risk report include a portfolio risk assessment, a portfolio cost report, the time periods covered by the portfolio risk assessment, and SCE's methodologies used in developing portfolio cost distributions. Appendix N provides the format of the monthly portfolio risk assessment report. Monthly portfolio risk assessment reports contain cost distributions, both including and excluding the forward transactions conducted during the month, in order to indicate the change in the distribution attributable to the new transactions.

---

[55] "Short-Term Transactions" are defined as transactions with delivery terms up to, and including, one quarter in duration and up to one quarter forward. A subset of Short-Term Transactions, "Prompt Month Transactions," are defined as transactions with delivery terms less than or equal to one calendar month, and executed within the time frames that define Prompt Month Electricity and Prompt Month Natural Gas, as applicable. "Long-Term Transactions" refers to transactions with delivery terms equal to or greater than five years in duration. "Mid-Term Transactions" include all transactions with delivery terms less than five years in duration (*i.e.*, not Long-Term Transactions) that either have delivery terms greater than one quarter or are procured more than one quarter in advance of delivery (*i.e.*, not Short-Term Transactions).

[56] SCE submits the confidential monthly report by the 15th day of each month. SCE also provides a copy of the confidential monthly report, for information purposes only, to SCE's PRG participants.

(Continued)

around the last trading week of the month prior to submittal of the report. SCE fixes the portfolio used to calculate the risk metrics on the same date that the stochastic process is set.

While SCE endeavors to issue error free reports, there is a significant level of complexity associated with the preparation of the Risk Assessment report and errors do occasionally occur. SCE will inform the CPUC of reporting errors as follows. If errors are greater than 2% of the assessed risk, but less than 10% and do not alter the risk status with respect to the CRT metric, SCE will identify and enclose the corrections in the next regularly scheduled monthly risk report following the discovery and correction of the error. Alternatively, if the error is 10% or greater, or if the correction causes a change in the status with respect to the CRT metric, SCE will refile the report as soon as the corrections have been made.

### 4. Customer Risk Tolerance

The CRT is a rate in cents/kWh that the Commission adopted as an indicator of customer tolerance to rate increases related to market-sensitive procurement costs as defined in the monthly risk report. The Commission has adopted a periodic update to SCE's CRT as part of SCE's biennial AB 57 Bundled PP filings using a fixed percentage risk tolerance factor multiplied by SCE's then-existing system average rate.[59] Appendix N contains the derivation of SCE's CRT, including the fixed percentage risk tolerance factor utilized in this AB 57 Bundled PP.

SCE calculates its CRT every month using a rolling forward 12-month period.

1. A base load scenario in kWh for the appropriate rolling forward 12-month period is prepared.

---

[59] D.12-01-033, p.23. SCE uses its bundled average rate as the equivalent of SCE's system average rate. D.12-01-033, pp.23-24, provides that the calculation of the CRT will be updated every two years in each AB 57 Bundled PP filing. If the AB 57 Bundled PP filing is delayed or not made, SCE will update its CRT two years from the filing of the previous AB 57 Bundled PP via a Tier 1 Advice Letter. If there is no AB 57 Bundled PP filing that is usable for this purpose, then the two years will run from the date of Commission approval of the previous CRT.

(Continued)

2. The total load is then multiplied by the current CRT rate, which is expressed in cents/kWh. This represents the CRT that is compared to the monthly TEVaR calculation.

The main use of the CRT is for monthly risk reporting on SCE's portfolio. SCE consults with its PRG whenever the 95% TEVaR metric exceeds the CRT. In such cases, SCE and the PRG might discuss possible actions that SCE can take within the framework of SCE's AB 57 Bundled PP to reduce 95% TEVaR.

**5. Credit and Collateral Requirements**

a) Creditworthiness

Credit risk is the risk that a counterparty to a transaction may be unable or unwilling to meet its payment or performance obligations under the contract. For example, SCE could enter into a contract to procure electricity at a fixed price, and then find that the price of electricity subsequently rises. If the counterparty fails to supply energy as required under the terms of the contract, SCE may be forced to make up the difference in the spot market or under a new contract at a higher price. Parties attempt to minimize the credit risk they face by maintaining their exposure below a certain limit or by requiring counterparties to post collateral if their exposure exceeds a negotiated limit.

To protect against an economic loss as a result of a counterparty's failure to perform, SCE generally requires counterparties to provide collateral for the benefit of SCE whenever the estimated loss SCE would face for a counterparty's non-performance (*i.e.*, SCE's exposure) exceeds a predetermined amount.

Even if a counterparty has posted or agrees to post collateral, there are still non-performance risks, such as a counterparty declaring bankruptcy. Once a company is in bankruptcy, an automatic stay may prevent the use of pledged collateral absent court approval. In addition, if

(Continued)

collateral is received by SCE within a 90-day period prior to the bankruptcy filing, the collateral could be subject to recapture by the bankruptcy court if deemed a preferential transfer.

SCE's Credit Policy and risk mitigation measures described herein in this Section enable SCE to deal flexibly with these types of credit and counterparty risks in the energy procurement market.

b) Credit Limits for Energy Procurement and Related Transactions in the Ordinary Course of Business

SCE is authorized to enter into enabling agreements with counterparties in the ordinary course of business subject to the unsecured credit limits not to exceed those allowed by the Commission.[60] Ordinary course of business transactions are Short-Term transactions for liquid products. When two parties decide they would like to transact with each other, they usually negotiate an enabling agreement. These agreements are typically modified with contract terms mutually agreed to by both parties to the enabling agreement. These enabling agreements define the general rights and responsibilities of each party. Generally , as each individual transaction is executed, a confirmation is generated outlining the specific details of that particular transaction.

The following are enabling agreements that SCE has used or may use to transact under:

- The International Swaps and Derivatives Association Agreement (ISDA): Facilitates trading in financial products, including but not limited to, swaps and options.
- The North American Energy Standards Board Agreement (NAESB): Facilitates trading in physical gas.
- The Edison Electric Institute Agreement (EEI): Facilitates trading in electric power.

---

60 D.04-12-048, pp.171-172.

- The Western Systems Power Pool Agreement (WSPP): Facilitates trading in electric power and other power-related transactions.Stand Alone Agreements: Facilitates transmission and emissions-related transactions.

SCE may also include a physical power and/or a physical gas annex to the ISDA, or a physical gas annex to the EEI, in order for counterparties to trade under a single agreement with a single set of terms and conditions. The credit terms, including unsecured credit limits, if any, are negotiated by the parties and are included in the enabling agreement. If applicable, enabling agreements may contain a credit rating table, which denotes an unsecured credit line at each rating category. The unsecured credit limit for a given credit rating may generally be the same for both parties to the contract, or as negotiated by SCE and the counterparty.

For ordinary course of business transactions, the amount of SCE's exposure under a contract is calculated as the dollar value of any product delivered to a counterparty but not yet invoiced, plus accounts receivable, minus accounts payable, plus the mark-to-market (MTM). The MTM is the difference between the current market price of the product and the contract price multiplied by the remaining quantity of product to be delivered under the contract. For ordinary course of business transactions, counterparties will be required to post collateral to SCE for SCE's exposure in excess of an unsecured credit limit assigned by SCE to the counterparty. SCE will be required to post collateral for exposure in excess of an unsecured credit limit assigned to SCE by the counterparty.

Even though a counterparty will be required to post collateral for exposure above the unsecured credit limit in the enabling agreement, SCE may have additional exposure above the unsecured credit limit. Market prices, and therefore exposure, may change between the time collateral is requested from the counterparty and the time the collateral is received by SCE. This is referred to as "posting risk." Generally, enabling agreements call for collateral to be posted within a predetermined number of business days of a request. The posting risk exists in addition to the

(Continued)

unsecured credit lines provided for in the enabling agreement. SCE may also have exposure due to a possible difference between the exposure estimated for collateral purposes and the actual exposure. This may occur after termination of the enabling agreement due to a default and the termination payment, as outlined in the enabling agreement, has been calculated. Additionally, there is a risk that prices will change, unfavorably to SCE between the time the enabling agreement terminates and, the time SCE can replace the volumes of the defaulted position. Moreover, exposure could exceed the unsecured credit limit outlined in the enabling agreement if and when the credit rating of the counterparty is downgraded and the unsecured credit limit available at the downgraded rating is less than the exposure amount at the date at which downgrade occurs. Appendix M refers to the unsecured credit limits to which SCE shall be allowed to agree, either for itself or for the counterparty, so as to facilitate transaction execution or the execution of enabling agreements.[61]

In some cases, SCE and the counterparty may refrain from stating unsecured credit limits in executed enabling agreements. In such cases, SCE and the counterparty will extend unsecured credit limits to each other on an informal basis (referred to as "internal limits"). As these limits are not codified in an enabling agreement, revocation of this limit may be arbitrary (*i.e.*, these are not contractual obligations and thus not contractually binding on either party).

Application of this "internal limit" method may apply to the NAESB and the WSPP. When transacting under internal limits, SCE will be in conformance with this Credit Policy by applying term, volume, and/or pricing limits such that potential exposure is less than the internal limit. In determining the unsecured credit limit, SCE will review each counterparty individually. SCE will consider relevant factors which it believes are important in evaluating credit risk and subsequent, potential exposure. Many counterparties are poorly rated or are not rated because they are

---

61 These credit limits were previously approved in D.04-12-048, pp.171-172.

(Continued)

privately held, are a subsidiary of a larger company, or are a municipality. However, if these counterparties have assets in SCE's service territory or are active in the financial markets or the physical gas, or power markets, it may still be desirable for SCE to trade with them and SCE will consider these factors when determining unsecured credit limits.

c) Credit Terms for Structured Transactions

Structured transactions are Mid-Term or Long-Term transactions, typically for non-liquid products. Structured transactions are typically done under enabling agreements or under a stand alone agreement.

The Commission has granted SCE continued autonomy to negotiate individual credit support packages with counterparties in the kinds of structured transactions described below. Such credit support packages would include, but not be limited to, liquid collateral (cash or letters of credit), in tandem with various contractual provisions as described below.

In order to hedge customers' market price risk, potentially improve supply reliability, operational efficiency, or meet certain statutory or regulatory requirements, SCE may enter into Mid-Term or Long-Term transactions through an RFO process. Examples of such transactions include, but are not limited to, capacity tolling contracts for existing or new generation facilities, transmission contracts, gas supply contracts, gas transportation or storage contracts, renewable energy contracts, and contracts to comply with resource adequacy or local area reliability requirements. Many of these contracts are tied to specific facilities or projects.

If SCE were to require collateral posting to cover its exposure above an unsecured credit line, if any, under contracts, it might prevent SCE from signing needed long-term contracts at reasonable prices. The MTM (and its corresponding impact on exposure) over the life of a long-term contract may result in significant potential collateral requirements.

In many cases, counterparties may not have the liquidity required to fund such large collateral requirements. In other cases, counterparties have been willing to provide collateral, but

(Continued)

at a significantly increased price. Therefore, SCE's Credit Policy allows sufficient operating flexibility to SCE, to allow for the fact that the full collateralization requirement of exposure, if required of a counterparty by SCE, may not be possible in certain contracts. As a result, SCE's customers may be subject to increased credit risk.

For structured transactions, instead of the full collateralization requirement, SCE will negotiate a credit support package with counterparties, including liquid collateral (cash or letter of credit) and/or other contractual provisions. Generally, SCE has a preference for liquid collateral since this is the most secure form of collateral. Further, as described below, SCE may pursue additional contractual provisions as alternative security designed to reduce risk. While none of these provisions entirely eliminates the risk of a loss due to contract default, each provides some level of protection to SCE by reducing the potential for uncollateralized exposure.

For structured transactions, the MTM is estimated by a formula agreed to by SCE and the counterparty and stated in the contract. The MTM changes as current market prices change; therefore, for purposes of obtaining collateral, SCE recalculates its exposure in accordance with contract terms as indicated in the enabling agreement, or alternatively, as mutually agreed to by SCE and the counterparty. If structured transactions are executed under an enabling agreement, the exposure may be netted with ordinary course of business transactions exposure, depending on the credit terms of the structured transaction.

(1) Lien on the Assets

SCE may secure its rights under a contract by obtaining a first lien on the assets of the seller. Generally, the assets have already been pledged to support the financing of the facility or parent company debt. Where a first lien is not available, SCE may have to obtain a subordinated lien that would be fully and completely subordinated to the first lien holders. The subordinated lien might offer SCE's customers security in the event that a counterparty defaults and fails to cure contractual non-performance, or if the contract is subsequently terminated. In such cases, SCE's

(Continued)

customers might enjoy the position of a secured creditor, provided proceeds remain, after all first lien holders have been paid. However, several issues arise when relying on a lien as security, particularly as it relates to an estimable exit dollar value of a subordinated lien post bankruptcy. Notwithstanding these concerns, a lien could be another tool that provides protection against counterparty default or bankruptcy, under certain circumstances.

(a) Attornment Agreements

An attornment agreement is an agreement between the project lenders and SCE that requires project lenders to honor SCE's contract even as they exercise their rights of foreclosure and resale of a generating project. However, an attornment agreement may not provide benefits to SCE's customers if the project goes into bankruptcy, since the lenders will no longer have control of the project. In that event, the bankruptcy court can reject the contract, irrespective of the existence of an attornment agreement.

(b) Additional Forms of Security

SCE has listed above the forms of security that it typically considers for structured transactions. However, SCE cannot anticipate every situation that might arise. SCE therefore may use additional forms of security that provide protections similar to those listed above.

SCE requires flexibility in negotiating the credit support package because each Mid-Term or Long-Term transaction is unique in terms of products, contract terms, and counterparties capable of responding. The credit support package that SCE ultimately negotiates will depend on market conditions such as the amount of competition, SCE's negotiating leverage, and a counterparty's credit support package.

For the above reasons, SCE's credit requirements may vary for each RFO. At the outset or during an RFO process, SCE may set RFO-specific credit requirements or standards that counterparties must meet in order to participate in the RFO. Such RFO-specific requirements would be applied in a non-discriminatory fashion to all counterparties submitting offers. In

(Continued)

addition, SCE may apply an offer valuation adjustment, such as a credit risk adder, based on the strength of the credit support package offered or the credit requirements placed upon SCE. SCE will implement the setting of minimum credit standards. The models and methodologies used to compute offer valuation adjustments will be implemented in consultation with the PRG and with the approval of the epRMC.

The Credit Policy referred to herein and the unsecured credit limits outlined in Appendix M do not eliminate credit risk and exposure may be significant. Nevertheless, this Credit Policy strikes a reasonable balance between credit risk on the one hand, and addressing customer needs and statutory/regulatory minimum requirements on the other.

d) SCE's Energy Procurement Collateral Exposure Limit

As SCE enters additional longer-term transactions for energy procurement (both physical and financial), which reduce future power and gas price uncertainty, there is a subsequent increase in the exposure that SCE may face. Compounding this issue is the fact that SCE's energy needs will change over time. Additionally, any new contracts to meet load growth may also include contract terms requiring SCE to post collateral when its unsecured credit limit is exceeded.

In D.07-12-052, the Commission addressed SCE's increasing exposure to collateral requirements by approving SCE's request to increase its Collateral Exposure Limit from $1.4 billion to $2 billion.[62] This Collateral Exposure Limit is maintained at $2 billion in this AB 57 Bundled PP.

e) Credit and Collateral Risk Mitigation Products

SCE will continue to investigate the purchase of credit and collateral risk mitigation products. Examples of credit risk mitigation products include credit derivatives, credit intermediaries, credit insurance, and similar products to transfer credit risk to another entity.

---

62 *See* D.07-12-052, p.161.

(Continued)

SOUTHERN CALIFORNIA EDISON COMPANY'S

AB 57 CONFORMED 2010 BUNDLED PROCUREMENT PLAN

APPENDICES

# Appendix C

# Authorized Procurement Products for Energy and Energy-Related Products

(Continued)

SOUTHERN CALIFORNIA EDISON COMPANY'S

AB 57 CONFORMED 2010 BUNDLED PROCUREMENT PLAN

APPENDICES



## Authorized Procurement Products

| Transaction | Description | Benefit /Cost |
|---|---|---|
| Forward Spot (Day-Ahead & Hour-ahead (purchase, sale, or exchange) | Purchase pre-scheduled energy or load reductions at either a fixed-price or index-based price | Needed to balance short-term load/resource changes/ Vulnerable to price volatility |
| Real-time (purchase or sale) | Energy imbalance transactions or load reductions | Balances Short-term needs/ Vulnerable to price volatility |
| Forward Energy (purchase or sale) | Contracts entered into in advance of delivery time, includes block/forward products (*e.g.*, fixed amounts of energy over a specified period of time (*e.g.*, 7x24, 6x16, super-peak, and shaped products) Could be fixed price or index-based price | Reduces price risk / Risk that prices will be below contracted rate (for purchases) |
| Forward Energy (demand side) | Baseload usage reduction through investments in permanent energy efficiency | Reduces price risk and cost overall |
| Futures Contract | An agreement to make or take delivery of a particular commodity or financial instrument at a pre-determined price in the future. Futures are distinguished from generic forward contracts in that they contain standardized terms, trade on a formal exchange, are regulated by overseeing agencies, and are guaranteed by clearinghouses. Also, in order to ensure that payment will occur, futures have a margin requirement that must be settled daily. | Similar to forwards in that they reduce price risk by locking in a fixed cost of gas on a forward basis. However, there is always a physical delivery component associated with a futures contract which must be closed out prior to contract expiration. |
| Capacity (demand side) | Right to purchase load reductions for capacity payments | Provides dispatchable reliability |
| Resource Adequacy Capacity Only (purchase or sale) | The product is capacity meeting the Commission's Resource Adequacy requirements. Does not convey any energy attributes to the buyer. | Allows trading of capacity to meet RA or local RAR obligations. |
| On-site energy or capacity | Energy or capacity products self-generated on the customer side of the meter | Provides locational reliability and lowers price risk through supply diversity |

(Continued)

SOUTHERN CALIFORNIA EDISON COMPANY'S

AB 57 CONFORMED 2010 BUNDLED PROCUREMENT PLAN

APPENDICES

# Appendix E

# Authorized Brokers and Exchanges

(Continued)

SOUTHERN CALIFORNIA EDISON COMPANY'S Sheet E-2

AB 57 CONFORMED 2010 BUNDLED PROCUREMENT PLAN

APPENDICES

| | | | |
|---|---|---|---|
| Longevous Capital, LLC | Trading Partners: FCStone, LLC and INTL Hanley, LLC Owned by Private Investors | 2010 | 2012 |
| Natsource Transaction Services LLC | Private Investors | 1994 | 2005 |
| Saddleback Energy | Private Investors | 2002 | 2006 |
| Spectron | Private Investors | 1988 | 2006 |
| TFS Energy Futures LLC | TFS Brokers | 1995 | 2005 |
| Tullett Prebon Financial Services | Subsidiary of Tullett Prebon, plc | 2004 | 2005 |
| Valence Energy, LLC | Parent: OTC Global Holdings, L.P., Owned by Private Investors | 2008 | 2009 |
| Walden Energy, LLC | Trading Partner: Hudson Capital Energy, LLC Owned by Private Investors | 2003 | 2012 |

**On-line Auctions**

| Platform | Date Launched | Date Commission Approved |
|---|---|---|
| World Energy Solutions, Inc. | 1999 | 2009 |

**Exchanges**

| Platform | Date Launched | Date Commission Approved |
|---|---|---|
| ICE | 2000 | 2007 |
| NASDAQ OMX | 1971 | 2013 |
| NYMEX | 1882 | 2005 |

**Clearing Firms**

| Platform | Date Launched | Date Commission Approved |
|---|---|---|
| Citigroup Global Markets, Inc. | 1892 | 2005 |
| Macquarie Futures USA, Inc. | 2006 | 2010 |
| Newedge USA LLC | 1987 | 2005 |

(Continued)

SOUTHERN CALIFORNIA EDISON COMPANY'S

AB 57 CONFORMED 2010 BUNDLED PROCUREMENT PLAN

APPENDICES

# Appendix O

# Authorized Non-Standard Products

(Continued)

SOUTHERN CALIFORNIA EDISON COMPANY'S

AB 57 CONFORMED 2010 BUNDLED PROCUREMENT PLAN

APPENDICES

Sheet O-1

## Authorized Non-Standard Products

| **Products** |
|---|
| Capacity (demand side) |
| Electricity Transmission Products for non-CAISO transmission |
| Hourly Electricity Products Traded in the Day-Ahead or Beyond Day-Ahead Markets |
| Locational Natural Gas Options |
| Import Counting Rights |
| Natural Gas Basis Options |
| Physical Natural Gas Index Options |
| Sales of Forward Energy from Resources Located Outside the CAISO |
| Resource Adequacy Capacity Only |
| QF fixed for SRAC floating swap |
| Tolling Agreements |

(Continued)