DOCKETED

Docket Number:	13-AFC-01
Project Title:	Alamitos Energy Center
TN #:	214145
Document Title:	Appendices A-D to Testimony of Southern California Edison on Results of its 2013 Local Capacity Requirements, et al.
Description:	PUBLIC Appendices A-D to SCE-1 Testimony
Filer:	ELIZABETH LAMBE
Organization:	Los Cerritos Wetlands Land Trust
Submitter Role:	Intervenor
Submission Date:	10/21/2016 4:16:16 PM
Docketed Date:	10/21/2016

Application No.:	A.14-11-xxx
Exhibit No.:	SCE-2
Witnesses:	J. Bryson
	G. Chinn
	C. Cushnie
	P. Hunt
	E. Little
	R. Singh
	D. Snow
	R. Thomas

SOUTHERN CALIFORNIA EDISON®

An *EDISON INTERNATIONAL*® Company

(U 338-E)

APPENDICES A-D TO TESTIMONY OF SOUTHERN CALIFORNIA EDISON COMPANY ON THE RESULTS OF ITS 2013 LOCAL CAPACITY REQUIREMENTS REQUEST FOR OFFERS (LCR RFO) FOR THE WESTERN LOS ANGELES BASIN

PUBLIC VERSION

Before the

Public Utilities Commission of the State of California

Rosemead, California
November 21, 2014

SCE-2: APPENDICES A-D TO TESTIMONY OF SOUTHERN CALIFORNIA EDISON COMPANY ON THE RESULTS OF ITS 2013 LOCAL CAPACITY REQUIREMENTS REQUEST FOR OFFERS (LCR RFO) FOR THE WESTERN LOS ANGELES BASIN

Table Of Contents

Appendix A

Witness Qualifications and Confidentiality Declarations

SOUTHERN CALIFORNIA EDISON COMPANY

QUALIFICATIONS AND PREPARED TESTIMONY

OF JESSE BRYSON

Q. Please state your name and business address for the record.

A. My name is Jesse Bryson, and my business address is 2244 Walnut Grove Ave., Rosemead, CA 91770.

Q. Briefly describe your present responsibilities at the Southern California Edison Company.

A. I am the Principal Manager of Contract Origination in the Power Supply organization. My present responsibilities as Principal Manager of Contract Origination include running competitive solicitations for conventional and renewable power products, combined heat and power, energy storage, transmission, emissions products, resource adequacy, and financial hedging products. I am also responsible for negotiating all bilateral contracts as well as master agreements that establish trading relationships between SCE and our counterparties.

Q. Briefly describe your educational and professional background.

A. I have a Bachelors of Science degree in Biology from Pacific University in Forest Grove, Oregon. I joined SCE in 2002 in a power scheduling role before I moved to the energy contracts group. Since 2003, I have held various roles in energy contracts, including originator, senior originator and manager. I was promoted to my current role as Principal Manager in 2008. Prior to joining SCE, I worked at Enron North America from 1999 through 2001, where I held several roles including retail energy specialist, real time trader, manager of real time, and co-lead of the renewable power desk.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony in this proceeding is to sponsor portions of Exhibit SCE-1, entitled *Testimony of Southern California Edison Company on the Results of its 2013 Local Capacity Requirements Request for Offers (LCR RFO) for the Western Los Angeles Basin* as identified in the Table of Contents thereto.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best judgment?

A. Yes, it does.

Q. Does this conclude your qualifications and prepared testimony?

A. Yes, it does.

DECLARATION OF JESSE BRYSON REGARDING THE CONFIDENTIALITY OF CERTAIN DATA

I, Jesse Bryson, declare and state:

1. I am a Principal Manager of Contract Origination in the Power Supply organization at Southern California Edison Company ("SCE"). I was responsible for overseeing SCE's 2013 Local Capacity Requirement ("LCR") Request for Offers ("RFO"). As such, I have reviewed SCE's Application seeking California Public Utilities Commission ("Commission" or "CPUC") approval of the results of its 2013 LCR RFO for the Western Los Angeles Basin, supporting Testimony and Appendices. I make this declaration in accordance with Decisions ("D.") 06-06-066 and D.08-04-023, issued in Rulemaking 05-06-040. I have personal knowledge of the facts and representations herein and, if called upon to testify, could and would do so, except for those facts expressly stated to be based upon information and belief, and as to those matters, I believe them to be true.

2. Listed below are the data in the Application, supporting Testimony and Appendices for which SCE is seeking confidential protection and the categories of the Matrix of Allowed Confidential Treatment Investor Owned Utility Data ("Matrix") appended to D.06-06-066 to which these data correspond.

Data	Page	Matrix Category	Period of Confidentiality
Testimony of Southern California Edison Company on the Results of Its 2013 Local Capacity Requirements Request for Offers (LCR RFO) for the Western Los Angeles Basin	Chapter IV, Section E.4 (page 17, lines 12-17 & FN 23)	VII.B Contracts and power purchase agreements between utilities and non-affiliated third parties (except RPS)	Contracts confidential for three years, or until one year following expiration, whichever comes first.
	Chapter V, Section A.1, (page 35, line 8, Table V-9 & FN 56)	VIII.A Bid Information	For bid information, total number of projects and megawatts bid by resource type public after final contracts submitted to CPUC for approval.

	Chapter V, Section A.3, Table V-10 (page 37, lines 7-8, page 38, lines 1-4)	VIII.A Bid Information	For bid information, total number of projects and megawatts bid by resource type public after final contracts submitted to CPUC for approval.
	Chapter V, Section A.4, Table V-11 (page 39)	VIII.A Bid Information	For bid information, total number of projects and megawatts bid by resource type public after final contracts submitted to CPUC for approval.
	Chapter VII, Section B.1.a (page 66, lines 1-2)	VIII.A Bid Information	For bid information, total number of projects and megawatts bid by resource type public after final contracts submitted to CPUC for approval.
	Chapter VII, Section B.1.a.1 (page 68, lines 4-7); Section B.1.a.2 (page 68, lines 10-11); Section B.1.a.3. (page 68, lines 14-16, 18-19, 22-23); Section B.1.a.4 (page 68, line 27)	VIII.A Bid Information VII.B Contracts and power purchase agreements between utilities and non-affiliated third parties (except RPS)	For bid information, total number of projects and megawatts bid by resource type public after final contracts submitted to CPUC for approval. Contracts confidential for three years, or until one year following expiration, whichever comes first.
	Chapter VII, Section B.1.b.1 (page 70, lines 2-4); Section B.1.b.2 (page 70, lines 7-8)	VIII.A Bid Information	For bid information, total number of projects and megawatts bid by resource type public after final contracts submitted to CPUC for

			approval.
		VII.B Contracts and power purchase agreements between utilities and non-affiliated third parties (except RPS)	Contracts confidential for three years, or until one year following expiration, whichever comes first.
	Chapter VII, Section B.1.c (page 70, lines 13-15); Section B.1.c.1 (page 71, lines 7, 10-12)	VII.B Contracts and power purchase agreements between utilities and non-affiliated third parties (except RPS)	Contracts confidential for three years, or until one year following expiration, whichever comes first.
	Chapter VII, Section B.1.d (page 72, line 24; page 73, lines 1-2)	VII.B Contracts and power purchase agreements between utilities and non-affiliated third parties (except RPS)	Contracts confidential for three years, or until one year following expiration, whichever comes first.
	Chapter VII, Section B.1.d.2 (page 75, lines 14-20); Section B.1.d.3. (page 76, lines 9-18); Section B.1.d.4 (page 76, lines 23-25; page 77, lines 1-2)	VII.B Contracts and power purchase agreements between utilities and non-affiliated third parties (except RPS) VIII.A Bid Information	Contracts confidential for three years, or until one year following expiration, whichever comes first. For bid information, total number of projects and megawatts bid by resource type public after final contracts submitted to CPUC for approval.
	Chapter VII, Section C (page 81, lines 8, 13, 16, 18, 21)	VII.B Contracts and power purchase agreements between utilities and non-affiliated third parties (except RPS)	Contracts confidential for three years, or until one year following expiration, whichever comes first.

LCR RFO Contracts (Western LA Basin)	Confidential Appendix B	VII.B Contracts and power purchase agreements between utilities and non-affiliated third parties (except RPS)	Contracts confidential for three years, or until one year following expiration, whichever comes first.
LCR RFO Summary of Selected Offers (Western LA Basin)	Confidential Appendix C	VII.B Contracts and power purchase agreements between utilities and non-affiliated third parties (except RPS)	Contracts confidential for three years, or until one year following expiration, whichever comes first.
Independent Evaluator Report	Confidential Appendix B of Independent Evaluator Report (Confidential / Public Appendix D of Application)	VII.B Contracts and power purchase agreements between utilities and non-affiliated third parties (except RPS) VIII.A Bid Information VIII.B Specific quantitative analysis involved in the scoring and evaluation of participating bids	Contracts confidential for three years, or until one year following expiration, whichever comes first. For bid information, total number of projects and megawatts bid by resource type public after final contracts submitted to CPUC for approval. Specific quantitative analysis involved in the scoring and evaluation of participating bids confidential for three years after winning bidders selected.

3. SCE is complying with the limitations on confidentiality specified in the Matrix that pertain to the data listed in the table above.

4. I am informed and believe and thereon allege that the data in the table in paragraph 2 above cannot be aggregated, redacted, summarized, masked or otherwise protected in a manner that would allow partial disclosure of the data while still protecting confidential information.

5. I am informed and believe and thereon allege that most of the data in the table in paragraph 2 above has never been made publicly available.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on November 21, 2014, at Rosemead, California.

/s/ Jesse Bryson
Jesse Bryson

SOUTHERN CALIFORNIA EDISON COMPANY

QUALIFICATIONS AND PREPARED TESTIMONY

OF COLIN E. CUSHNIE

Q. Please state your name and business address for the record.

A. My name is Colin E. Cushnie, and my business address is 2244 Walnut Grove Avenue, Rosemead, California 91770.

Q. Briefly describe your present responsibilities at the Southern California Edison Company.

A. I am the Vice President of the Energy Procurement & Management department in SCE's Power Supply & Operational Services organization. My department's responsibilities include power and natural gas contracting, energy contract administration, energy trading, asset optimization, and managing SCE's power scheduling and dispatch activities.

Q. Briefly describe your educational and professional background.

A. I earned a Bachelor of Arts Degree in both Economics and Business Administration from Whittier College in 1986. I was hired by SCE in January 1987 and held various positions related to the procurement of material, equipment, and services until October 1993. Since October 1993, I have held positions of increased responsibility related to SCE's natural gas and electrical energy planning, procurement, and regulatory advocacy and support. In my current position, I manage a staff of approximately one hundred energy professionals.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony in this proceeding is to sponsor portions of Exhibit SCE-1, entitled *Testimony of Southern California Edison Company on the Results of its 2013 Local Capacity Requirements Request for Offers (LCR RFO) for the Western Los Angeles Basin* as identified in the Table of Contents thereto.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best judgment?

A. Yes, it does.

Q. Does this conclude your qualifications and prepared testimony?

A. Yes, it does.

SOUTHERN CALIFORNIA EDISON COMPANY

QUALIFICATIONS AND PREPARED TESTIMONY

OF GARRY L. CHINN

Q. Please state your name and business address for the record.

A. My name is Garry L. Chinn, and my business address is 3 Innovation Way, Pomona, California 91768.

Q. Briefly describe your present responsibilities at the Southern California Edison Company.

A. I am a Manager of the Transmission & Interconnection Planning Group within Transmission and Distribution (T&D). In this position, I am responsible for managing a group of power system engineers in assessing the electric system and developing transmission facilities to ensure the performance of SCE's bulk power system is in compliance with NERC Reliability Standards.

Q. Briefly describe your educational and professional background.

A. In 1991, I received a Bachelor of Science degree in electrical & electronic engineering from California State University, Sacramento. I also earned a Master of Science degree in electrical engineering from the University of Southern California in 1994. I became a registered professional electrical engineer with the State of California in 1995. Since 1991, I have held positions related to the planning of the transmission system with the Los Angeles Department of Water & Power, Metropolitan Water District of Southern California and SCE. I have over ten years of service with SCE, all with the Transmission & Interconnection Planning Group.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony in this proceeding is to sponsor portions of Exhibit SCE-1, entitled *Testimony of Southern California Edison Company on the Results of its 2013 Local Capacity Requirements Request for Offers (LCR RFO) for the Western Los Angeles Basin* as identified in the Table of Contents thereto.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best judgment?

A. Yes, it does.

Q. Does this conclude your qualifications and prepared testimony?

A. Yes, it does.

SOUTHERN CALIFORNIA EDISON COMPANY

QUALIFICATIONS AND PREPARED TESTIMONY

OF PAUL T. HUNT, JR.

Q. Please state your name and business address for the record.

A. My name is Paul T. Hunt, Jr., and my business address is 2244 Walnut Grove Avenue, Rosemead, California 91770.

Q. Briefly describe your present responsibilities at the Southern California Edison Company.

A. I am the Director of Regulatory Finance, Economics, and Risk Operations, supervising the Regulatory Finance Division of the Treasurer's Department. My present responsibility is to apply economic, financial, and statistical analysis to regulatory issues and for internal corporate purposes.

Q. Briefly describe your educational and professional background.

A. I received a Bachelor of Arts degree in Economics from Pomona College in 1975, a Master of Arts degree in Economics from Stanford University in 1976, and a Doctor of Philosophy degree from Stanford University in 1981. I joined the Southern California Edison Company as an Associate Economist in the Treasurer's Department in July 1980. I was promoted to Economist in 1982 and Senior Economist in 1984. In 1989, I transferred to the Regulatory Policy and Affairs Department as a Regulatory Economics Consultant. I returned to the Treasurer's Department in 1996 as a Senior Economist. In 1997, I was promoted to Project Manager. In 2000, I was promoted to Manager of Regulatory Finance and Economics. I was promoted to my present position in 2010.

I have testified before the California Public Utilities Commission and the Federal Energy Regulatory Commission.

In late 2009, I was invited to write, with a co-author, a book chapter on cost of capital in regulated industries. The book chapter is titled "Cost of Capital in Regulated Industries," and it appears in *Cost of Capital in Litigation: Applications and Examples*, published by John Wiley & Sons, Inc., in November 2010. (ISBN: 978-0-470-88094-4.) A revised version of that book

chapter appears in *The Lawyer's Guide to Cost of Capital: Understanding Risk and Return for Valuing Businesses and Other Investments*, published by ABA (American Bar Association) Publishing in July 2014. (ISBN: 978-1-62722-723-0.)

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony in this proceeding is to sponsor portions of Exhibit SCE-1, entitled *Testimony of Southern California Edison Company on the Results of its 2013 Local Capacity Requirements Request for Offers (LCR RFO) for the Western Los Angeles Basin* as identified in the Table of Contents thereto.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best judgment?

A. Yes, it does.

Q. Does this conclude your qualifications and prepared testimony?

A. Yes, it does.

SOUTHERN CALIFORNIA EDISON COMPANY

QUALIFICATIONS AND PREPARED TESTIMONY

OF ERIC LITTLE

Q. Please state your name and business address for the record.

A. My name is Eric Little, and my business address is 2244 Walnut Grove Avenue, Rosemead, California 91770.

Q. Briefly describe your present responsibilities at the Southern California Edison Company.

A. I am the Manager of CAISO and GHG Markets within Regulatory Affairs at Southern California Edison. My transition to this position came about through a re-organization of responsibilities on November 3, 2014. Immediately prior to taking my current position, I was the Manager of Procurement and Resource Planning Policy within Regulatory Affairs for Southern California Edison. Within the prior position, I was responsible for developing policy positions associated with the procurement of generating resources to serve both bundled load needs as well as to meet system and local reliability needs. I held this position from January 23, 2012 through November 2, 2014.

Q. Briefly describe your educational and professional background.

A. I hold a Bachelor of Arts in Economics from California State University, Long Beach and a Masters in Economics from the University of California, Santa Barbara. Prior to my current position, I have had a variety of responsibilities associated with Southern California Edison's Power Procurement organization. These have included development and support of Long-term Procurement Plan Proceedings, Resource Adequacy Proceedings, and development of California Independent System Operator market designs including the Market Redesign and Technology Update. Within these roles, among other responsibilities, I have been responsible for policy development of rules for all Load Serving Entities that provide for equal treatment of all customers.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony in this proceeding is to sponsor portions of Exhibit SCE-1, entitled *Testimony of Southern California Edison Company on the Results of its 2013 Local Capacity Requirements Request for Offers (LCR RFO) for the Western Los Angeles Basin* as identified in the Table of Contents thereto.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best judgment?

A. Yes, it does.

Q. Does this conclude your qualifications and prepared testimony?

A. Yes, it does.

SOUTHERN CALIFORNIA EDISON COMPANY

QUALIFICATIONS AND PREPARED TESTIMONY

OF RANBIR SINGH

Q. Please state your name and business address for the record.

A. My name is Ranbir Singh, and my business address is 2244 Walnut Grove Avenue, Rosemead, California 91770.

Q. Briefly describe your present responsibilities at the Southern California Edison Company.

A. I am the Manager of Portfolio Development & Valuation in the Portfolio Planning & Analysis department of Southern California Edison's (SCE's) Power Supply organization.

Q. Briefly describe your educational and professional background.

A. I graduated from Queen Mary College, University of London in May of 1998 with a Bachelors of Science Degree in Mathematics and Computing with First Class Honors. Prior to joining SCE I worked briefly for ABN Amro in their corporate finance department and for nine years as a Management Consultant for PA Consulting Group. During my time with PA I reached the rank of Principal Consultant and was responsible for managing teams of consultants on various consulting projects. Six of my nine years with PA was spent working with global energy sector clients on engagements ranging from Energy Transaction and Risk Management (ETRM) systems implementation to Business Process and Quantitative Model development. I joined SCE as Manager of Portfolio Planning & Management in August 2007 responsible for monthly risk and resource adequacy reporting to CPUC in addition to analytical model development. I am currently responsible for managing all valuation processes related to renewable, alternative and conventional procurement and developing analytical models to support SCEs hedging program. I have previously testified before the commission.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony in this proceeding is to sponsor portions of Exhibit SCE-1, entitled *Testimony of Southern California Edison Company on the Results of its 2013 Local Capacity*

Requirements Request for Offers (LCR RFO) for the Western Los Angeles Basin as identified in the Table of Contents thereto.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best judgment?

A. Yes, it does.

Q. Does this conclude your qualifications and prepared testimony?

A. Yes, it does.

DECLARATION OF RANBIR SINGH REGARDING THE CONFIDENTIALITY OF CERTAIN DATA

I, Ranbir Singh, declare and state:

1. I am the Principal Manager of Portfolio Development & Valuation in Portfolio Planning & Analysis in the Power Supply organization at Southern California Edison Company ("SCE"). I was responsible for managing the valuation process for SCE's 2013 Local Capacity Requirement ("LCR") Request for Offers ("RFO"). As such, I have reviewed SCE's Application seeking California Public Utilities Commission ("Commission" or "CPUC") approval of the results of its 2013 LCR RFO for the Western Los Angeles Basin, supporting Testimony and Appendices. I make this declaration in accordance with Decisions ("D.") 06-06-066 and D.08-04-023, issued in Rulemaking 05-06-040. I have personal knowledge of the facts and representations herein and, if called upon to testify, could and would do so, except for those facts expressly stated to be based upon information and belief, and as to those matters, I believe them to be true.

2. Listed below are the data in the Application, supporting Testimony and Appendices for which SCE is seeking confidential protection and the categories of the Matrix of Allowed Confidential Treatment Investor Owned Utility Data ("Matrix") appended to D.06-06-066 to which these data correspond.

Data	Page	Matrix Category	Period of Confidentiality
Testimony of Southern California Edison Company on the Results of Its 2013 Local Capacity Requirements Request for Offers (LCR RFO) for the Western Los Angeles Basin	Chapter VI, Section A (page 40, lines 13-20; page 41, lines 7-9)	VIII.B Specific quantitative analysis involved in the scoring and evaluation of participating bids –	Specific quantitative analysis involved in the scoring and evaluation of participating bids confidential for three years after winning bidders selected.
	Chapter VI, Section B.2.a.1. (page 42, line	VIII.B Specific quantitative analysis involved in the	Specific quantitative analysis involved in the scoring and evaluation

	16); Section B.2.a.2 (page 43, line 1);Section B.2.a.4 (page 44, lines 4-6)	scoring and evaluation of participating bids	of participating bids confidential for three years after winning bidders selected.
	Chapter VI, Section B.3.f (page 48, lines 1-5)	VIII.B Specific quantitative analysis involved in the scoring and evaluation of participating bids	Specific quantitative analysis involved in the scoring and evaluation of participating bids confidential for three years after winning bidders selected.
		VIII.A Bid Information	For bid information, total number of projects and megawatts bid by resource type public after final contracts submitted to CPUC for approval.
	Chapter VI, Section B.3.g (page 48, lines 9, 11 & FN 65)	VIII.A Bid Information	For bid information, total number of projects and megawatts bid by resource type public after final contracts submitted to CPUC for approval.
		VIII.B Specific quantitative analysis involved in the scoring and evaluation of participating bids	Specific quantitative analysis involved in the scoring and evaluation of participating bids confidential for three years after winning bidders selected.
	Chapter VI, Section C.1 (page 50, lines 10, 12-16, 19-24 & FN 66; page 51, line 1 & Table VI-13)	VIII.A Bid Information	For bid information, total number of projects and megawatts bid by resource type public after final contracts submitted to CPUC for approval.

		VIII.B Specific quantitative analysis involved in the scoring and evaluation of participating bids	Specific quantitative analysis involved in the scoring and evaluation of participating bids confidential for three years after winning bidders selected.
	Chapter VI, Section C.2 (page 52, lines 7-9; Table VI-14; FN 71)	VIII.B Specific quantitative analysis involved in the scoring and evaluation of participating bids	Specific quantitative analysis involved in the scoring and evaluation of participating bids confidential for three years after winning bidders selected.
		VIII.A Bid Information	For bid information, total number of projects and megawatts bid by resource type public after final contracts submitted to CPUC for approval.
	Chapter VI, Section C.3 (page 55, Figure VI-6)	VIII.B Specific quantitative analysis involved in the scoring and evaluation of participating bids	Specific quantitative analysis involved in the scoring and evaluation of participating bids confidential for three years after winning bidders selected.
	Chapter VI, Section C.3.a (page 57, lines 9-14; page 58, lines 19-20; page 59, lines 6-7, 11-12, 14-18; page 60, lines 4-9, 14-15; page 61, lines 4-5, 13-19 & FN 80; page 62, lines 1-3, 8-9 & Table VI-18)	VIII.A Bid Information	For bid information, total number of projects and megawatts bid by resource type public after final contracts submitted to CPUC for approval.
		VIII.B Specific quantitative analysis involved in the scoring and evaluation of participating bids	Specific quantitative analysis involved in the scoring and evaluation of participating bids confidential for three years after winning bidders selected.

3. SCE is complying with the limitations on confidentiality specified in the Matrix that pertain to the data listed in the table above.

4. I am informed and believe and thereon allege that the data in the table in paragraph 2 above cannot be aggregated, redacted, summarized, masked or otherwise protected in a manner that would allow partial disclosure of the data while still protecting confidential information.

5. I am informed and believe and thereon allege that most of the data in the table in paragraph 2 above has never been made publicly available.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on November 21, 2014, at Rosemead, California.

/s/ Ranbir Singh
Ranbir Singh

SOUTHERN CALIFORNIA EDISON COMPANY

QUALIFICATIONS AND PREPARED TESTIMONY

OF DOUGLAS A. SNOW

Q. Please state your name and business address for the record.

A. My name is Douglas A. Snow, and my business address is 8631 Rush Street, Rosemead, California 91770.

Q. Briefly describe your present responsibilities at the Southern California Edison Company (SCE).

A. I am the Director of CPUC Revenue Requirements and Tariffs in SCE's State Regulatory Operations Department. As such, I am responsible for the recovery of SCE's authorized revenue requirements and oversee the operation of various balancing and memorandum accounts, including the recovery of the balances in those accounts, and I am responsible for managing the implementation of SCE's tariffs and advice letters.

Q. Briefly describe your educational and professional background.

A. I graduated from Texas A&M University in May of 1982 with a Bachelor of Science Degree in Industrial Engineering. In June of 1982, I went to work for Southwestern Public Service Company (SPS) in west Texas. While there, I was a supervisory engineer, responsible for revenue requirement calculations and rate design for both retail and resale customers. I filed testimony on behalf of SPS before the Texas Public Utility Commission and the Federal Energy Regulatory Commission. In November of 1993, I began to work for the Southern California Edison Company as a financial analyst in the FERC Pricing section in the RP&A Department. While working in the FERC section, I was responsible for the rate design for SCE's requirements sales for resale, Wheeling Access Charges, and wholesale Distribution Access Charges. In March 1998, I became a supervisor in the Revenue Requirements division of RP&A, responsible for supervising a group of analysts that oversee the forecasting and recording entries associated with all CPUC regulatory mechanisms. In December 2001, I was promoted to the position of manager in the Revenue Requirements division of RP&A. In August 2006, I was promoted to Manager of CPUC Revenue Requirements, and in March 2013, I became the Director of CPUC

Revenue Requirements and Tariffs taking on the additional responsibilities for managing SCE's tariffs. I have previously testified before the California Public Utilities Commission.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony in this proceeding is to sponsor Exhibit SCE-1, entitled *Testimony of Southern California Edison Company on the Results of its 2013 Local Capacity Requirements Request for Offers (LCR RFO) for the Western Los Angeles Basin* as identified in the Table of Contents thereto.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best judgment?

A. Yes, it does.

Q. Does this conclude your qualifications and prepared testimony?

A. Yes, it does.

SOUTHERN CALIFORNIA EDISON COMPANY

QUALIFICATIONS AND PREPARED TESTIMONY

OF ROBERT THOMAS

Q. Please state your name and business address for the record.

A. My name is Robert Thomas, and my business address is 2244 Walnut Grove Avenue, Rosemead, California 91770.

Q. Briefly describe your present responsibilities at the Southern California Edison Company.

A. I am the Manager of the Rate Design Group in the Regulatory Affairs Department at Southern California Edison Company. In this position, I am responsible for development of SCE's rate designs, marginal cost determination, and rate class level sales forecasting. I have held this position since November 20, 2006.

Q. Briefly describe your educational and professional background.

A. I hold a Bachelor's of Science and Engineering from the University of Arizona, a Masters in Business Administration from California State Polytechnic University, Pomona and a Professional Engineering License in Mechanical Engineering. Prior to my present position, my responsibilities have included Manager of the Analysis and Program Support Group, within SCE's Business Customer Division, where I was responsible for providing complex customer specific rate and financial analyses involving self-generation, load growth, contract rates, and hourly pricing options. Prior to this position, I was the SCE's Program Manager for the Self Generation Incentive Program. In this position, I was responsible for all aspects of the program to include dispute resolution, processing applications, program promotion and was SCE's lead representative on the Working Group.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony in this proceeding is to sponsor Exhibit SCE-1, entitled *Testimony of Southern California Edison Company on the Results of its 2013 Local Capacity Requirements Request for Offers (LCR RFO) for the Western Los Angeles Basin* as identified in the Table of Contents thereto.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best judgment?

A. Yes, it does.

Q. Does this conclude your qualifications and prepared testimony?

A. Yes, it does.

Confidential Appendix B

LCR RFO Contracts

Available via Disk

Confidential Appendix C

LCR RFO Summary of Selected Offers

This Appendix was removed, please see the CONFIDENTIAL version.

Appendix D

Independent Evaluator Report

Sedway Consulting, Inc.

INDEPENDENT EVALUATION REPORT FOR SOUTHERN CALIFORNIA EDISON'S 2013 LOCAL CAPACITY REQUIREMENT SOLICITATION FOR NEW RESOURCES

Western Los Angeles Basin Reliability Subarea

Submitted by:

Alan S. Taylor
Sedway Consulting, Inc.
Boulder, Colorado

November 20, 2014

TABLE OF CONTENTS

Introduction and Background

On September 12, 2013, Southern California Edison (SCE) launched its 2013 Local Capacity Requirements (LCR) Request for Offers (RFO) for capacity and energy to satisfy the state's projected incremental resource needs with new resources in the Western Los Angeles (LA) Basin and Moorpark reliability subareas of the utility's southern California electricity market area. While the LCR RFO was conducted for both reliability areas simultaneously, the needs were distinct and all submitted offers had to be separately applicable to one or the other reliability area (but not both). This report addresses that portion of the LCR RFO that had to do with the Western LA Basin reliability subarea. However, much of the discussion in this report applies to the design and administration of the overall LCR RFO and thus applies equally to the outcome of the solicitation in either subarea.

The California Public Utilities Commission (CPUC) conducts biennial Long Term Procurement Plan (LTPP) proceedings to determine the state's expected resource needs. In the most recent LTPP process, the CPUC issued D.13-02-015 (known as the Track 1 decision) that required SCE to solicit new resources to meet LCR needs of 1,400 MW to 1,800 MW in the Western LA Basin reliability subarea and 215 MW to 290 MW in the Moorpark reliability subarea. Resources had to commence deliveries no later than January 1, 2021 and, at a minimum, had to have delivery periods that spanned calendar year 2021. These LCR needs and their timing is driven largely by the expected retirement of old, coastal generation facilities that use once-through-cooling (OTC) systems that have been the focus of recent environmental regulations. By 2021, these OTC plants must either retire or undertake expensive retrofits to their cooling systems. Most plants are expected to retire.

The CPUC directed SCE to conduct an all-source solicitation for these LCR needs, whereby all of the following resource types would be eligible to participate:

- Energy Efficiency (EE)
- Demand Response (DR)
- Renewable Generation
- Distributed Generation (DG)
- Combined Heat and Power (CHP)
- Energy Storage (ES)
- Gas-Fired Generation (GFG)
- Resource Adequacy (RA) from any eligible product type.

In the Moorpark subarea, all such resource types would compete on a head-to-head basis. In the Western LA Basin subarea, the CPUC established minimum and maximum MW limits for various product categories.

In June 2013, SCE decided that it would retire units 2 and 3 of its San Onofre Nuclear Generating Station (SONGS), amounting to 2,200 MW of capacity. In response to this development, the CPUC issued D.14-03-004 (known as the Track 4 decision) on March 13, 2014, adding another 500 MW to 700 MW to SCE's Track 1 LCR capacity authorization for the Western LA Basin, thus bringing that total subarea requirement to a range of 1,900 MW to 2,500 MW. The product category limits within this range included 550 MW to 1,450 MW for preferred resources (namely, the first four resource types in the above list), 50 MW to 750 MW for ES resources, and 1,000 MW to 1,500 MW for GFG/CHP resources.

The CPUC has issued several decisions that require California's investor-owned utilities to retain an Independent Evaluator (IE) in resource solicitations.[1] In June 2013, in compliance with these CPUC decisions, SCE retained Sedway Consulting, Inc. (Sedway Consulting) as the IE to monitor SCE's 2013 LCR RFO, provide an independent evaluation of SCE's process and the offers it may receive, and help the CPUC and SCE's Cost Allocation Mechanism (CAM) group by providing them with information and assessments to ensure that the solicitation was conducted fairly and that the best combination of offered products were acquired. This IE report provides an assessment of SCE's LCR RFO solicitation from the initial phase of the solicitation (i.e., development of the LCR RFO documents) through the selection and execution of final contracts.

The remainder of this report follows the template that was issued by the CPUC as part of R.06-02-013 (Attachment A: CPUC Independent Evaluator Template [Long Form]) to organize and structure IE reports regarding solicitations for long-term power supplies undertaken by California utilities. That template includes eight question/topic areas that are depicted in boxes in this report.

[1] D.04-12-048 (Findings of Fact 94-95, Ordering Paragraph 28) and D.06-05-039 (Finding of Fact 20, Conclusion of Law 3, Ordering Paragraph 8).

A. Role of the Independent Evaluator

1. Describe key IE roles.

2. Describe IE oversight activities and reporting/consultation with CPUC, PRG, and others.

3. Any other relevant information not asked above but that may serve to make future RFOs more transparent to parties.

Sedway Consulting reviewed SCE's LCR RFO document, outreach efforts, evaluation processes, modeling methodologies, communications with bidders, negotiations with bidders, and evaluation results. Specifically, members of the IE team:

- reviewed and made suggested improvements to the LCR RFO materials prior to their issuance,
- reviewed SCE's outreach activities,
- attended SCE's Bidders' Conference on October 16, 2013,
- reviewed SCE's evaluation methodologies,
- commented on evaluation methods and processes,
- participated in the opening of offers (and retained Sedway Consulting's own copy of each offer for its own evaluation),
- discussed offer clarification requirements with SCE,
- participated in the decisions to disqualify offers that failed to comply with the LCR RFO requirements,
- performed an independent evaluation of all qualified indicative and final offers,
- compared Sedway Consulting's evaluation results to SCE's results,
- participated in discussions regarding offer shortlisting,
- joined in many of SCE's LCR RFO planning and evaluation meetings,
- participated in executive-level energy procurement Risk Management Committee (epRMC) meetings in which offer disqualification, shortlisting, and selection decisions were made,
- participated in debriefing calls and/or meetings with bidders whose projects were not shortlisted or selected,
- monitored email communications with all bidders,
- participated in clarification calls with shortlisted bidders to ensure that they were properly filling out revised bid spreadsheets for final offer submission,
- monitored negotiation calls with shortlisted bidders,

- participated in weekly internal product subteam calls to discuss negotiation progress and ensure consistency of positions,
- participated in calls and meetings with the CPUC's Energy Division,
- participated in discussions with the California Independent System Operator (CAISO) regarding two-hour resources, and
- participated in all CAM meetings in which the LCR RFO offers, evaluation, and selection results were discussed.

Sedway Consulting was provided access to all necessary materials and meetings and was able to parallel SCE's process with its own evaluation of the offers, as documented in this IE report. In the CAM meetings, the IE was available (either in person or by telephone) to confirm and supplement SCE's statements regarding offer rankings and negotiation updates, affirm the fairness of the process' design and administration, and answer CAM member questions as necessary. Sedway Consulting's activities are described in more detail in relevant sections of this report and in this report's Confidential Appendix B.

Sedway Consulting has no recommendations regarding ways to make SCE's solicitation process more transparent, believing that the IOU struck an appropriate balance in providing the bidding community sufficient evaluation process information without divulging too much information that could introduce the potential for bidders to game the process.

B. Was the IOU's methodology for bid evaluation and selection designed fairly?

1. Identify the principles you used to evaluate the IOU's bid evaluation methodology, including (at a minimum):
   a. The IOU bid evaluation should be based on those criteria specified in the bid documents. In cases where bid evaluation goes beyond the criteria specified in the bid documents, the IE should note the criteria and comment on the evaluation process. The IOU bid documents should clearly define the type and characteristics of products desired.
   b. The methodology should identify how qualitative and quantitative measures were considered and were consistent with an overall metric.
   c. As applicable, there should be no differences in the evaluation method for different technologies that cannot be explained in a technology-neutral manner.
   d. Was the bid evaluation methodology consistent with CPUC direction?

2. Describe the IOU Least Cost Best Fit (LCBF) methodology (or include the IOU's own description.)

Description of SCE's LCBF Evaluation Process

SCE designed its LCR RFO evaluation process to involve a combination of quantitative and qualitative assessments that could be consistently applied to the offers it might receive. The quantitative analysis focused on net market value – namely, the value of a resource's energy, ancillary services, and capacity benefits (based on SCE's forecast of future power and fuel prices) minus fixed and variable offer-related costs. Fundamentally, this was the same across all resource types. Although different models were used to evaluate the different products, the models performed the same basic cost-benefit process. The following provides a summary for each product type.

1. **EE.** Bidders were required to provide a typical year's hourly profile of projected energy savings associated with the installation of proposed EE measures, along with an expected completion date for the installation of such measures and the commencement of savings, the expected useful life of the EE measures, and the compensation that they wanted for achieving the project benefits. The contract costs would be paid to the counterparty over several years, allowing SCE to adjust payments based on periodic inspections and the resulting determination of the persistence of the savings. Members of SCE's Customer Service Department who manage SCE's own EE programs reviewed each EE offer's hourly profile and expected useful life for reasonableness. Once approved, SCE's modeling team valued the hourly savings based on forward energy prices (adjusted/increased for beneficial reductions in distribution system losses associated with EE) and the capacity savings based on summer weekday afternoon savings and forward capacity prices (again, adjusted/ increased for beneficial reductions in distribution system losses as well as an additional 115% multiplier to account for reserve margin benefits). These benefits were netted with the proposed payment schedule, including the costs of debt equivalence impacts.

2. **Renewables.** Similar to EE, renewable bidders provided a typical year of hourly projected generation that SCE valued in much the same way – using forward energy prices to develop energy benefits and forward capacity prices to value the implied/calculated RA benefits associated with the generation profile. If the renewable resource was behind-the-meter, it received the same distribution loss and reserve margin benefits and multipliers as EE. Contract $/MWh pricing was translated into monthly and annual payments based on SCE's (Renewables Portfolio Standard) RPS time-of-delivery (TOD) factors. The renewable

resource's benefits were netted with these contract payments and debt equivalence costs.

3. **DR.** Bidders were required to provide monthly projected capacity reductions, associated $/kW-month pricing for such reductions, energy rates/prices for the MWhs of savings associated with a DR event, and any constraints that would apply to their offer (e.g., maximum number of DR events that could be called per day, per month, per year). SCE used its database of stochastic results to forecast the intrinsic and extrinsic value of having a DR resource as a call option with a strike price that was equal to the proposed energy rate. The monthly proposed capacity was valued based on forward capacity prices in the same fashion as with EE resources. Each DR offer's capacity and energy benefits were netted with the proposed capacity payments and debt equivalence costs to arrive at a net market value.

4. **ES.** SCE developed an ES evaluation model that co-optimized the off-peak/on-peak energy arbitrage and ancillary service benefits of an ES resource, while accounting for the proposed variable O&M costs for discharged energy, the round-trip efficiency impacts (i.e., charging-discharging energy losses), and effects of proposed constraints (e.g., maximum cycling per day, maximum discharging MWh per year) on such energy and ancillary services benefits. This model was still under development when SCE received indicative offers; thus, ES indicative offers were only valued by SCE from a capacity price and value standpoint. Sedway Consulting has its own ES model and used that to estimate energy benefits in the indicative offer evaluation. Both SCE and Sedway Consulting had the requisite modeling in place for the full evaluation of the energy and ancillary services benefits of final offers. In both instances, capacity benefits were calculated using the forward prices for capacity and the ES resource's calculated RA capacity (plus a Locational Effectiveness Factor [LEF] adjustment described in Appendices A and B). All benefits were netted with the proposed contract capacity payments, debt equivalence costs, and (in the case of final offers) transmission costs that were based on each offer's transmission cost cap.

5. **GFG.** SCE has an evaluation modeling system for conventional dispatchable (and DG and CHP) gas-fired resources that is based on valuing the energy and ancillary services benefits of such resources based on their likely hourly operation, given the resources' variable generation costs (i.e., proposed heat rates multiplied by forward gas prices, variable O&M charges, start charges, etc.) and operating constraints. These benefits are valued over a range of varying power and gas price scenarios to yield a distribution and expect value. All benefits were netted with the proposed contract capacity payments, debt equivalence costs, and

(in the case of final offers) transmission costs that were based on each offer's transmission cost cap.

6. **RA.** The RA product evaluation was very straight-forward. Provided that the underlying resource was eligible for providing certified RA, the evaluation entailed the simple calculation of the proposed capacity payments plus debt equivalence costs minus the capacity benefits that were based on the forward capacity price curve.

The same forward energy prices, capacity prices, and, if applicable, ancillary services prices, gas prices,[2] and greenhouse gas (GHG) costs were used consistently in the evaluation of all product types.

SCE's qualitative analysis included assessments of a counterparty's qualifications and project viability. A full description of SCE's LCBF evaluation process is provided in Appendix A and is excerpted directly from SCE's LCR RFO Transmittal Letter that was issued on September 12, 2013. Prior to the receipt of indicative offers, Sedway Consulting reviewed SCE's evaluation materials/presentations, participated in planning meetings with SCE's evaluation personnel to learn how SCE's evaluation process would be performed, and confirmed that the evaluation methodology would match that which was described in the LCR RFO document. Sedway Consulting concluded that SCE's bid evaluation and selection processes were designed fairly across all resource types and bidders.

SCE followed the evaluation and selection methodology described in its LCR RFO document – a document that clearly defined the types and characteristics of products desired while at the same time leaving open the possibility that new innovative product types may be offered that would require flexibility in the evaluation process.

Assessment of Fairness of Evaluation Process Design

Sedway Consulting concluded that SCE's evaluation design was rigorous and fair. In evaluating the fairness of SCE's process, Sedway Consulting employed the following principles:

1. Did the design inappropriately favor one technology or product type over another?

2. Was the design inappropriately biased in favor of one type of bidder versus another?

[2] GFG locational differences led to slightly different gas supply prices to account for gas transportation tariff and/or local tax differences.

3. Were the selection criteria flexible enough or structured in a way to facilitate SCE acquiring sufficient capacity to meet its long-term procurement plan goals?

4. Were all components of an offer's quantified metric calculated consistently so as to avoid introducing discontinuities that might distort the results and lead to incorrect project selection?

Sedway Consulting found no differences in the evaluation methodology for different technologies or product types that could not be explained in a technology-neutral manner.

To the best of Sedway Consulting's understanding, SCE's bid evaluation methodologies were consistent with CPUC direction. In most respects, they were similar to the methodologies employed in SCE's 2006 long-term New Gen RFO, recent annual All Source RFOs for addressing near-term capacity needs, and the utility's recent annual RPS solicitations (all of which have been reviewed by the CPUC in the IOU's Application or Advice Letters at the conclusion of those solicitations). SCE's methodologies were designed to facilitate a broad comparison of resources that could include EE, DR, ES, GFG, DG, CHP, RA, and renewable resources.

3. Using the principles in #1, evaluate the strengths and weaknesses of the IOU's LCBF methodology:
   a. How did the IOU methodology compare to other methodologies used in other solicitations, to the extent that the IE can make such comparisons?
   b. Did the methodology have a bias against any technology, operating characteristic, location, etc.?
   c. Discuss the role of "portfolio fit" in LCBF in this solicitation's methodology.
   d. Discuss any issues of transmission-related cost (or benefit) impacts and estimates. What procedures did the utility have in place for acquiring all appropriate transmission information, subject to constraints imposed by [the Federal Energy Regulatory Commission] FERC's Standards of Conduct?
   e. How were the evaluation criteria weighted, and was the weighting appropriate?
   f. What future LCBF improvements would you recommend?

Strengths and Weaknesses of SCE's LCBF Methodology

Sedway Consulting believes that SCE's LCBF methodology was fair and rigorous. It was consistent with evaluation approaches that Sedway Consulting has seen applied in other utilities' solicitations. Although the fine details may differ from solicitation to solicitation, most utilities employ a combination of quantitative and qualitative assessments similar to those developed by SCE for its LCR RFO evaluation process. Quantitative assessments usually involve market/utility simulation (e.g., production cost) models or option models to determine the economic costs and benefits of different resources. The qualitative assessments performed by these other utilities have focused on the same issues as SCE analyzed. SCE addressed portfolio fit issues in the quantitative assessment phase through the use of an optimization model that determined the best portfolio of proposed resources/contracts that fit with the CPUC's Track 1 and Track 4 Decisions.

In the evaluation of indicative offers, no transmission cost estimates were developed or used. At that stage, such analysis was not warranted. SCE intended to cast a fairly wide net for shortlisting purposes, and transmission costs, if they could be reliably determined at all at the time, were not expected to significantly affect the indicative offer rankings. Once the short list was developed and negotiations commenced, the remaining GFG and ES bidders were encouraged to develop transmission cost estimates and translate these into transmission cost caps in the contracts and final offers. These transmission cost caps represented the limit for reimbursable network upgrade costs that a counterparty might encounter in the interconnection process. If the final study's network upgrade costs ended up higher than the cap, SCE had the right to terminate the contract. Thus, bidders did not want to set this cap too low. However, the cap represented the potential maximum liability for grid customers; thus, SCE (and Sedway Consulting) used the cap to calculate transmission cost adders in the evaluation of the final offers.

Subsequent to shortlisting, SCE and Sedway Consulting updated their respective quantitative analyses to reflect current market conditions and offer revisions. Also, continued due diligence during the negotiation phase helped to clarify the relative viability of different shortlisted offers.

Sedway Consulting concluded that SCE's evaluation and selection processes were designed to treat all technologies and types of bidders fairly, employing a consistent methodology that did not favor or disadvantage any offer product, technology, or bidder – while obviously recognizing justifiable offer-specific differences (e.g., project location).

4. Describe how the IOU sought brownfield/repowering development opportunities.

5. Did the IOU consider contract viability?

6. Any other information relevant to bid evaluation and selection not requested above but important in evaluation of the IOU's methodology.

Although brownfield/repowering offers were defined as an eligible category of bids in SCE's LCR RFO document, the utility had to be careful to ensure that any capacity associated with these projects was truly incremental. If the existing resources that were the subject of repowering offers were assumed to continue to operate in the CAISO studies that were the foundation of the LTPP analyses, then any proposed retirement of such capacity and replacement with new equipment could not be viewed as incremental. Thus, it was recognized that repowered projects may only provide a portion of their final total capacity as a contribution to SCE's LCR capacity needs. Thus, Sedway Consulting and SCE agreed that it was appropriate to only count the incremental capacity from a repowering offer as the capacity that could address SCE's LTPP needs.

Again, Sedway Consulting believes that SCE's methodology for bid evaluation and selection was designed fairly and without bias for or against any technology or counterparty.

C. Was the LCBF evaluation process fairly administered?

1. Identify the principles you used to assess the fairness of the LCBF evaluation process, including the following (at a minimum):

   a. What qualitative and quantitative factors were used to evaluate bids?

   b. If applicable, were affiliate bids treated the same as non-affiliate bids?

   c. Were bidder questions answered fairly and consistently and the answers made available to all?

d. Did the utility ask for "clarifications" from bidders, and what was the effect, if any, of these clarifications?

e. Were economic evaluations consistent across bids?

f. Was there a reasonable justification for any fixed parameters that enter into the methodology (e.g. RMR values, GHG metrics, etc.)?

Sedway Consulting believes that SCE conducted a fair evaluation process. This assessment is based on an application of many of the principles described earlier in this report – namely, that no product, bidder, or technology was inappropriately favored, all bidders were provided consistent information, and evaluation techniques were applied consistently.

Concurrent with the issuance of the LCR RFO Transmittal Letter, SCE established a website process for fielding questions from potential bidders. By posting responses on this website, SCE was able to ensure that bidders' questions were answered fairly and consistently and that the answers were made available to all. After the receipt of the indicative offers, the initial stage of SCE's process entailed screening all offers for compliance with and responsiveness to the LCR RFO document. SCE and Sedway Consulting conferred and compared notes regarding each offer's LCR RFO compliance and sufficiency and clarity of information. SCE emailed bidders if their offers required clarification or supplemental information to become compliant. In most cases, bidders provided sufficient additional information to warrant further consideration of their offers and allow for reasonable assessments of the quantitative and qualitative aspects of their projects. In a few instances, as described in Confidential Appendix B, the screening and clarification process resulted in the ultimate disqualification of several offers.

No SCE affiliates bid into this solicitation,[3] nor were there any utility ownership offers contemplated. Sedway Consulting reviewed all offers, performed an independent evaluation, and ensured that there was no bias (for or against) any of the offers.

The following were the primary quantitative factors assessed in the evaluation of offers in each of the product categories:

- **EE:** hourly profile of expected savings, project completion date, expected useful life of the measures, and total project cost.

[3] Among the indicative offers, there was a bid from a firm that had been an affiliate in the recent past but, to Sedway Consulting's knowledge, had been sold and was no longer an SCE affiliate. Regardless, that firm's offer was not shortlisted.

- **Renewables:** delivery period, hourly profile of expected generation, and $/MWh contract price.

- **DR:** delivery period, expected monthly capacity, capacity pricing, energy price/rate, and constraints on DR calls.

- **ES:** delivery period, expected charging and discharging capacity, storage quantity, guaranteed efficiency factor (a min-max range, outside of which a counterparty would experience penalties or bonuses), capacity pricing, variable O&M pricing, constraints on charging/discharging cycles and/or maximum discharged energy, ancillary services capabilities, LEF of Western LA Basin interconnection, and expected transmission network upgrade costs.

- **GFG/CHP:** delivery period, expected capacity, capacity pricing, heat rates, variable O&M charges, start-up charges, start-up fuel requirements, operating constraints, ancillary services capabilities, GHG emission rates, and expected transmission network upgrade costs.

- **RA:** delivery period, expected capacity, and capacity pricing.

As described earlier, all of these factors were modeled by SCE and Sedway Consulting to derive an estimate of an offer's net market value. The qualitative analysis included assessments of a bidder's qualifications and project viability. The quantitative and qualitative factors are discussed in more detail in Appendix A.

The evaluation included many fixed parameters (e.g., electricity market prices, natural gas prices, capacity valuation metrics, discount rates) that were consistently applied across all offers to ensure that the evaluation was performed fairly and with a common framework of market assumptions.

Overall, Sedway Consulting believes that SCE did a very good job of administering an RFO that was tremendously complicated and involved coordinating a significant number of internal SCE departments – some of whom had not been involved in energy procurement and contracting activities before. That said, a number of complications surfaced during the administration of the RFO, and the following discussion provides an overview of how the RFO proceeded from launch to final contract execution and the various challenges that arose along the way. Many of the "course corrections" were fairly minor or could be expected to occur in such a complex undertaking; others were more significant and difficult to anticipate. The following discussion takes more or less a chronological perspective, with digressions into specific subject areas.

Pre-RFO Launch

As the mid-September 2013 launch date for the RFO approached, SCE undertook numerous activities to prepare for a first-of-its-kind broad-based solicitation. This required the development of several new contract forms that SCE had not previously created or negotiated: third-party agreements for EE, DR, and ES resources, and perhaps a variety of behind-the-meter (BTM) products that were hard to anticipate. SCE wanted to encourage the bidding community to be innovative and stressed in its communications that it was "open for business." Given this desire for flexibility and the wide-open nature of the solicitation, SCE recognized that the initial agreements would invariably change (perhaps substantially so) over the course of the RFO to accommodate new issues, new product types, or better negotiation positions that had not been foreseen at the outset.

With this in mind, Sedway Consulting reviewed the initial contracts, but without sufficient time or effort to provide a thorough assessment. Again, though, it was recognized that input from the bidding community was going to be needed to refine these agreements anyway – and there would be plenty of time to do that during the post-shortlisting negotiation phase.

Preferred Resource Issues and Indicative Offer Submission/Analysis

After the launch of the RFO, Sedway Consulting did raise a concern regarding the EE contract, noting that the payment provisions required a bidder to meet or exceed its proposed savings targets, with no compensation if the targets were missed by even the smallest of margins. This was inconsistent with the other agreements (e.g., GFG and DR) where a 1% shortfall in capacity resulted in reduced capacity payments but not reduced to zero. SCE agreed that this needed to be addressed but wanted to wait for reactions from the EE bidding community on this and other contract terms before making a change. Thus, the consideration of a more appropriate payment structure was deferred until after indicative offers were received. Later in the negotiation process, SCE indeed incorporated a graduated payment provision into its EE contract – actually giving counterparties the option to either accept a graduated payment process for not reaching 100% of their targeted savings or a cure period for the counterparty to install more EE measures to reach its targets. A counterparty could select one or the other provision, but not both. Sedway Consulting worked with SCE in fashioning this approach and approved of the utility's revisions to its EE contract to place the agreement on a more comparable foundation with the other product agreements.

There were some revisions to the offer spreadsheets prior to the deadline for submitting indicative offers. For example, the original EE offer spreadsheet had pricing expressed in $/kW-month. It was subsequently decided that total dollar costs for the proposed EE measures and associated savings was a better contract term to request. A revised spreadsheet was posted to SCE's LCR RFO website in early November, 2013. As

another example, the originally posted DR spreadsheet only allowed for an offer of five years duration or less. Sedway Consulting noted that an offer starting in January of 2016 or earlier would not have any entry space in the spreadsheet for displaying 2021 proposal capacity or pricing (which of course was required for an offer to be deemed compliant). Thus, a revised spreadsheet was developed that allowed for a duration of seven years.

On December 16, 2013 (the indicative offer submission deadline), Sedway Consulting was on-site at SCE's headquarters to conduct the bid opening, where all bidders had been required to submit their proposal materials on flash-drives. Over 800 Western LA Basin offers from more than 60 bidders were received. It was quite a robust response and included bids from all resource categories – as well as some new products that were not easy to categorize or which needed the development of a new product category, contract, and/or revised evaluation approach. Such was the case ultimately for behind-the-meter (BTM) ES and permanent load shift products. Sedway Consulting recommended numbering all of the received offer spreadsheets (at the start of the filename) with a five-digit code as the submission packages were opened and reviewed. This would help with tracking specific issues, clarifications, cures, linkages or evaluation results with specific offers. SCE agreed with this approach and adopted Sedway Consulting's numbering convention where the first three digits were a counterparty identification number and the last two represented an offer number. SCE and Sedway Consulting erroneously assumed that no bidders would submit more than 99 offers. Indeed, some did. A work-around was implemented for the indicative offer analysis, but later in the solicitation, when final offers were locked down, a new six-digit bid code system was established for the final offer files.

Through late December and early January, SCE and Sedway Consulting held daily or near daily change control and update calls to discuss deficiencies in indicative offers and requests to bidders to correct or supplement their submitted information. As an example, as noted above, the EE bid spreadsheet had been revised in early November, 2013. Unfortunately, some EE bidders used the old spreadsheet that they had originally downloaded from the SCE website and new versions had to be submitted and/or some work-arounds were implemented to correctly interpret each bidder's intended bid pricing. Also, there were DR bidders who wanted to provide offers for longer than the seven-year duration in the revised DR spreadsheet; they submitted multiple files for different periods of time that initially looked non-compliant (as some of the spreadsheets did not contain information for the 2021 calendar year). Once the bidders' intentions were understood, SCE and Sedway Consulting were able to appropriately combine the bid information in the evaluation models. The DR offer spreadsheet was later modified for the final offer submission process to allow for long-term DR offers. Also, some merged cell formatting in the DR offer spreadsheet had caused some data importing problems in the evaluation of a few indicative offers (which were caught through the dual, parallel Sedway Consulting/SCE evaluation process). Because of this, merged cell formatting was eliminated from the final offer spreadsheets to ensure proper importing of offer pricing

into the evaluation models. Also, in reviewing the $/kWh energy rate that was provided in bidders' DR offer spreadsheets, Sedway Consulting became concerned that some bidders may have incorrectly interpreted the pricing entry as $/MWh. During clarification calls, DR bidders were asked to review their entries and make sure that they were in $/kWh; in several cases, they were not, and the bidders submitted revised DR offer spreadsheets.

A more significant issue on the EE front was the recognition that all of the EE offers needed to be valued relative to a consistent base for determining proposed savings. During calls with EE bidders, SCE emphasized that the bid spreadsheets had a specific profile of hourly savings (a third of three profiles that were included in the spreadsheet) that had to represent the expected hourly savings of their EE measures relative to current building energy efficiency codes (i.e., Title 24). Several bidders objected, stating that they intended to target customers who would not otherwise be bringing their facilities or homes up to code. These bidders felt that their savings should be estimated relative to the facilities' current energy usage. SCE was adamant that the EE savings had to be incremental to the Title 24 standards and consistently applied across all EE bidders. Some bidders noted that even those standards were in flux, with new requirements coming into effect on July 1, 2014, and asked whether they were to be held to the current or future Title 24 standards. There was some internal discussion between Sedway Consulting and members of the SCE LCR team regarding this issue. Given that the RFO schedule called for the execution of contracts in June of 2014 and the EE contract made it clear that the counterparty's estimates of savings had to be calculated relative to current codes and standards at the time of contract execution, it was decided and communicated to the EE bidders in follow-up phone calls that the current Title 24 codes (i.e., pre-July 2014, originally enacted in 2008) would form the basis of the hourly savings calculations in the offer spreadsheets. In later discussions with the CPUC's Energy Division, it was recognized that the July 2014 codes would be a more appropriate base, given that they were enacted in 2013 (and are referred to as the "2013 Title 24 codes and standards") and were known and knowable to the EE bidding community. Also, various delays to the RFO schedule ultimately pushed the execution dates for all EE contracts well past July 1, 2014. Thus, shortlisted EE bidders were required to update their energy savings profiles to be relative to the new 2013 Title 24 codes and standards.

Following shortlisting, Sedway Consulting encouraged SCE to better define the savings guarantees in the EE contract. Clearly, the 8,760 hourly savings profile was too much data to require as a contractual guarantee and having a clear-cut LCR MW expected capacity savings value in the contract was essential. Sedway Consulting worked with SCE to develop a methodology for establishing four clear guaranteed savings values for the EE contracts:

- expected capacity savings,
- summer on-peak expected energy savings,

- summer off-peak expected energy savings, and
- winter on-peak expected energy savings.

These parameters then became the contractual targets for each contract's monitoring and verification (M&V) protocols.

Additional Post-Shortlisting Issues and RFO Delays

Following the shortlisting of offers in SCE's LCR solicitation, CAISO issued revised LEFs that would influence the valuation of capacity of LCR offers based on their location in the Western LA Basin. This was expected and it had been noted in SCE's LCR Transmittal Letter that the CAISO's latest LEFs would be used in the utility's final offer evaluation and selection. What was not expected was the dramatic shift in LEF values, given the retirement of SONGS, that rendered locations in much of the Western LA Basin as rather ineffective in satisfying the LCR need. Only resources that would interconnect to eight A-bank substations in the southwestern LA Basin were considered to be effective. On a MW basis, this rendered more than half of the shortlisted GFG projects ineffective in meeting the LCR need. After reviewing the CAISO results, SCE proposed to modify its GFG short list, dropping all offers that were not in the southwestern LA Basin area (and thus completely eliminating three shortlisted GFG counterparties from further participation in the Western LA Basin portion of the RFO) and adding back one previously-non-shortlisted GFG counterparty to maintain adequate competition. Sedway Consulting concurred with SCE's decisions. To have continued to consider ineffective GFG resources for selection could have resulted in the execution of GFG contracts that would not have reduced SCE's LCR needs and thus would have required subsequent procurements of additional capacity to maintain reliability in the Western LA Basin.

Around the same time that these CAISO LEF developments were occurring, the CPUC issued its Track 4 decision and increased SCE's minimum preferred resource procurement requirement in the Western LA Basin subarea by 400 MW (from 150 MW to a revised minimum of 550 MW). This caused SCE to rethink its short list and propose adding back a previously-non-shortlisted EE counterparty. Sedway Consulting agreed with this proposal. That EE counterparty ultimately submitted final offers that were selected for contract execution.

During this post-shortlisting period, SCE and Sedway had on-going discussions with the CPUC's Energy Division regarding the determination of each EE and DR offer's "incrementality." The CPUC's LTPP decision had stated that any preferred resources acquired through SCE's LCR RFO had to be incremental to the utility's current EE and DR programs. Administering this requirement was complicated. On the one hand, SCE's current programs are only offered through 2015, so one could argue that any EE or DR LCR contracts with delivery terms that commence after 2015 are not overlapping

with any specific SCE program. However, it is anticipated that most or all of the current SCE EE and DR programs will be continued beyond 2015; the costs and characteristics though of such future programs are unknown. Given this, SCE developed and proposed a four tranche methodology for gauging whether or not an EE or DR offer was considered to be incremental. The first tranche included those offers that were proposing new measures or markets not currently tapped by SCE's existing EE and DR programs. The second tranche included offers that were proposing to pursue measures that were similar to SCE's current programs but with new targeted markets or innovative delivery methods. The third and fourth tranches included offers that were similar to SCE's existing programs. The average cost of a relevant set of SCE's current programs was used to separate offers into those that appeared to be more cost-effective than SCE's programs (Tranche 3) or less cost-effective (Tranche 4). SCE considered all offers in Tranches 1 through 3 to be incremental. A final determination was made once all of the final offers had been submitted and the Tranche 3 versus Tranche 4 analysis could be finalized. SCE intended to set aside all Tranche 4 offers from any further consideration for selection. Sedway Consulting agreed with this determination. However, Sedway Consulting had some concerns about the cost threshold that was used to separate Tranches 3 and 4 and argued for the inclusion of one marginal Tranche 4 offer in the potential selection set. The economics of this offer appeared to be compelling for the offer to be considered. Indeed, in the final offer analysis, it was a top-ranked offer and SCE agreed to include it in its final selection process. In SCE's analysis, the offer was also economically attractive (e.g., better in evaluation metric terms that any GFG bid) and the utility decided to include it in its final set of executed contracts.

As the RFO neared its originally-scheduled deadline for locking-down the shortlisted offers' commercial terms and parameters (May 7, 2014), it became clear that the Title 24, LEF, and EE/DR incrementality issues had introduced additional complexity and new counterparties to the process and that adhering to the original schedule was not going to yield the best results. SCE recognized that some of the negotiations were not proceeding as quickly as hoped and that closing the RFO on its original schedule would probably eliminate consideration of some counterparties, particularly in the preferred resource category that was a new area for all concerned. SCE opted to delay the remaining RFO deadlines – pushing commercial lock-down from May 7, 2014 to June 24, 2014, final offer submission from May 29, 2014 to July 1, 2014, and final contract notification from June 26, 2014 to July 29, 2014. Sedway Consulting agreed with this decision. All counterparties were notified of the revised schedule on May 2, 2014.

Accounting Complications

Probably the most significant issue that arose during the RFO and that caused a series of further RFO delays was the recognition that executed LCR contracts could have a dramatic impact on SCE's balance sheet and credit rating if they were found to be capital leases and/or triggered the inclusion of 100% debt equivalents in SCE's credit rating

assessments. Certainly, if SCE's credit rating or financial health was damaged by undesirable debt equivalents impacts from the utility's LCR contracts, this would have negative and costly ramifications for the utility's customers (i.e., could trigger higher debt and equity costs in the utility's cost of capital that are recovered through customer rates, etc.). Sedway Consulting participated in many of the internal SCE meetings where the accounting issues and possible solutions were discussed. Ultimately, this issue led to three delays to the RFO schedule which were announced to the LCR counterparties via emails on June 19, 2014,[4] July 30, 2014,[5] and October 14, 2014.[6] These delays were associated with a reconfiguration of the GFG and ES contracts[7] to be RA contracts where the Seller would have full control and responsibility for bidding/scheduling the resource's energy and ancillary services capabilities into the CAISO markets, while having a put option in the contract where the Seller could put the dispatch/scheduling rights to SCE for a pre-set $/kW-month increment to the contract's capacity price (i.e., the put option's annual strike price – which would be established by SCE at contract execution). The Seller's election would occur annually for each calendar year of the contract and would need to be made no later than December 31st of the year that was two years preceding the calendar year at issue. The fact that SCE may or may not have the resource's dispatch rights was determined by SCE to reduce the debt equivalency of these contracts to acceptable levels, while contracts where SCE retained full control of the resource's dispatch rights would not.

On the down-side, the incorporation of the put option into SCE's GFG and ES LCR contracts watered down the potential energy and ancillary services benefits that would normally flow to benefitting customers. The two-year advance notice requirement helped counter that by taking short-term market fluctuations out of the Seller's election decision. However, any general market trends that cause market prices to deviate away from SCE's 2014 evaluation parameters (e.g., the level of prevailing inflation) could make the long-term put strike prices always look decidedly favorable or unfavorable, causing the Seller to always retain the dispatch rights – if long-term market prices move higher than expected – or always put the dispatch rights to SCE – if long-term market prices trend lower than expected. The accounting determination will occur in the near term and is based on the fact that these outcomes are unknown and equally probable. Sedway

[4] This notification pushed the deadline for concluding negotiations from June 24, 2014 to July 8, 2014, final offer submission from July 1, 2014 to July 15, 2014, and final contract notification from July 29, 2014 to August 12, 2014.

[5] This notification pushed the deadline for concluding negotiations from July 8, 2014 to August 29, 2014, final offer submission from July 15, 2014 to September 4, 2014, and final contract notification from August 12, 2014 to October 16, 2014.

[6] This notification pushed the deadline for final contract notification from October 16, 2014 to October 24, 2014, which was further delayed for Moorpark counterparties to October 27, 2014.

[7] And some minor adjustments to some preferred resource contracts.

Consulting encouraged SCE to consider indexing the put strike prices in the contract to general inflation but was told that this would not reduce the debt equivalency to acceptable levels. Sedway Consulting is concerned that this long-term trend issue could place SCE and the benefitting customers in a "heads you win, tails I lose" position, where SCE fails to get a facility's energy and ancillary services benefits when they are valuable but has to accept them at a higher-than-necessary $/kW-month strike price if they are not valuable. In short, SCE loses the full hedging benefits of a traditional tolling agreement, but that is the nature of a put option.

On the plus side, securing the development of new resources in the LCR reliability areas is the penultimate reason for the LCR RFO; and new resources will help southern California avoid capacity shortages and allow all customers to benefit from lower and less volatile market prices.

In the end, Sedway Consulting recognized the debt equivalency problem that SCE faced but had no better recommendation on a path forward and believes that SCE diligently pursued the best option available within the time frame of the LCR RFO. That said, Sedway Consulting recommends that SCE continue to explore other avenues toward addressing its debt equivalence concerns in an effort to procure future products where it could retain the full hedging benefits that it has enjoyed with previous tolling agreements.

Final Offer Analysis

Sedway Consulting analyzed all of the final offers that were received in SCE's LCR RFO. There were three issues SCE and Sedway Consulting worked through in developing a final set of recommended contracts for LCR execution:

1. **Limited in-front-of-meter (IFOM) ES procurement.** In reviewing the final offer results, Sedway Consulting became concerned that the energy and ancillary services benefits that were generated by its and SCE's ES models for IFOM ES resources[8] might be overstated because of unrealistic input assumptions. Also, there are many unknowns regarding the charging costs and limitations that may be influenced by interconnection factors. In SCE's optimization results, the considerable energy and ancillary services value of ES resources tended to cause excessive ES resource procurement to crowd out preferred resource selection. Given this, SCE and Sedway Consulting agreed that it would be prudent to examine selection portfolios that met the 50 MW ES procurement minimum but did not go too far beyond that. Ultimately, the best selection quantity settled on a 100 MW project that was proposed to be interconnected at a transmission voltage

[8] These benefits are only applicable to IFOM ES resources; BTM ES resources cannot participate in these CAISO markets under current rules and therefore were not evaluated in the SCE and Sedway Consulting ES models.

level at a good location (and thus, was less likely to be adversely impacted by interconnection or congestion/charging issues).

2. **2-hour versus 4-hour ES and DR resources.** During the post-shortlisting period, SCE worked with the CAISO to explore whether or not shorter duration products could satisfy some portion of SCE's LCR need. Although CPUC RA capacity rules require that a resource be able to provide four hours of capacity over three consecutive days to qualify as an RA resource, it was recognized that shorter duration products would probably be less expensive and might still be able to provide significant local reliability benefits. Sedway Consulting commends SCE for pursuing potential cost savings for its customers. Sedway Consulting participated in some of the SCE calls with the CAISO to explore this. However, although the CAISO conducted some studies that suggested that a limited amount of 2-hour resources in the Western LA Basin and Moorpark subareas could address a portion of those subarea's LCR needs, the CAISO never warmed to the idea of supporting this conclusion in SCE's LCR procurement process. Ultimately, SCE concluded that the savings associated with selecting 2-hour final offers was not substantial enough and the regulatory hurdles of selecting resources that were not compliant with current RA rules were great enough that it was best to stay with the selection of 4-hour products. After all, that was the RFO requirement; all bidders of applicable products (ES and DR) were required to provide 4-hour bids to be deemed compliant with the RFO instructions but had been given the option to provide 2-hour offers (should SCE desire to pursue that shorter-duration concept).

3. **RA-only contracts.** During the review of the final selected contracts, SCE became concerned that the low number of expected run-hours for the selected GFG CT peaking projects defeated the purpose of the put option and, therefore, did not address the debt equivalence issue. The contracts had to be converted to RA-only contracts where the resource's dispatch rights and associated energy and ancillary services would stay with the Seller. There would be no put option where SCE might end up with the dispatch rights. They simply would be RA-only contracts where the Seller would receive capacity payments based on the facility's RA capacity and a flat, fixed $/kW-month price. SCE approached the bidders associated with these selected CT contracts (who did not yet know they had been selected) and requested flat (i.e., non-escalating), RA-only pricing. As was to be expected, the contract capacity prices for these projects decreased (because of the more limited product that SCE was procuring). Sedway Consulting reviewed the new pricing and concurred with SCE's decision to execute these RA-only contracts. As was noted earlier, Sedway Consulting recommends that SCE continue to explore other avenues toward addressing its debt equivalence concerns in an effort to procure future products where it could retain the full hedging benefits that it has enjoyed with previous tolling agreements.

2. Describe the IE methodology used to evaluate administration of IOU LCBF process.

Prior to the receipt of indicative offers and then again prior to the receipt of final offers, Sedway Consulting incorporated SCE's latest market assumptions into Sedway Consulting's proprietary bid evaluation models: the Response Surface Model (RSM) for dispatchable generation resources and Resource Adequacy (RA) products, the Renewable Bid Evaluation Model, the Energy Storage Evaluation Model, the Energy Efficiency Evaluation Model, and the Demand Response Evaluation Model. This allowed Sedway Consulting to perform an entirely independent and parallel evaluation of all solicited resource types, using its own models to determine each offer's expected energy benefits without any further input from SCE. Procedures for calculating capacity benefits and energy payments were anchored prior to bid opening so that both SCE's and Sedway Consulting's evaluation teams were following consistent methodologies and Sedway Consulting's independent results could be used to cross-check SCE's results.

Sedway Consulting requested that SCE provide as much information as possible prior to the receipt of offers. This, in essence, allowed Sedway Consulting to lock down and archive the basic evaluation parameters for the process. Such information included regional market forecasts for electricity and natural gas prices; energy, ancillary services, and capacity valuation assumptions; cost of capital components; and discount rate assumptions. These assumptions were incorporated into Sedway Consulting's own evaluation models and formed the basis for independently assessing the benefits and costs of proposed resources that were bid into SCE's solicitation.

Response Surface Model

Sedway Consulting's RSM is a power supply evaluation tool that uses the following information, where applicable, for each GFG, CHP, or RA offer:

- Capacity (summer and winter)
- Commencement and expiration dates for power deliveries
- Capacity pricing
- Fuel pricing and locational adders
- Heat rates
- Variable O&M pricing
- Start-up costs, fuel requirements, and electrical requirements
- Forced outage rates
- Planned maintenance hours
- Attributable transmission capital costs.

All of the above information (if applicable) can be specified for any number of operating modes for any offer (e.g., base combined-cycle, duct-fired, power augmentation, etc.).

The RSM is a spreadsheet-based tool that was calibrated to approximate the economic costs and benefits of each capacity-related offer, based on the assumptions and representation of the southern California electricity and natural gas markets in SCE's evaluation model. The RSM calculated each offer's monthly fixed costs and net energy and ancillary services (A/S) revenues (if applicable), and developed a net levelized cost of each option, expressed in $/kW-month. This net cost represented an offer's premium above the forecasted costs of acquiring the same capacity, energy, and ancillary services from the short-term markets.

An offer's net cost was a combination of fixed and variable cost factors. On the fixed side, the RSM calculated annual fixed costs associated with capacity payments, debt equivalents costs, and transmission cost adders. In addition, the RSM calculated each offer's value of capacity by multiplying a forecast of RA value by an offer's RA capacity. This yielded a capacity benefit that was netted against an offer's other fixed costs. These fixed costs and benefits were aggregated for each year into annual totals and discounted and converted into an equivalent levelized fixed price, expressed in $/kW-month. This was done by taking the present value of the stream of costs and dividing it by the present value of the kW-months of capacity associated with the offer.

On the variable cost side, the RSM developed estimates of the monthly net energy and A/S revenues that SCE would be expected to realize if it acquired and scheduled a project's generation. The net energy and A/S revenues are the difference between the revenues received from selling a project's power into the market and the variable costs of generating that power. For a fully dispatchable project, it is expected that a resource would be scheduled to generate in all hours that the market price of electricity exceeded the resource's $/MWh variable cost of generation. Thus, the net energy and A/S revenues for a proposed project represent the gains that would be realized from market sales after paying for a project's fuel costs, variable O&M charges, and start-up costs. The RSM estimated SCE's net energy and A/S revenues for each month and each offer by interpolating between net energy revenue estimates and net A/S revenue estimates that were extracted from a set of calibration runs from SCE's detailed evaluation model. These runs were structured by Sedway Consulting and executed prior to the receipt of the LCR offers.

The RSM then converted these annual net energy and A/S revenues into a levelized $/kW-month value, using the same arithmetic process that was performed with the annual fixed costs. This conversion normalized the net energy and A/S revenues (i.e., accounted for the different amounts of capacity provided by each offer) and yielded a value that could be netted with the levelized fixed price in calculating each offer's levelized net

cost. The offers were ranked on this levelized net cost, from lowest to highest. The top-ranked offers had the lowest net costs or premiums, representing those options with the lowest fixed costs, or the greatest net energy and/or A/S revenues, or a good combination of both.

This levelized net cost is similar to SCE's $/kW-month net cost metric except that SCE does not levelize the total dollar net costs but instead divides them by the sum of the of the kW-months of capacity associated with each offer. This yields a metric that is smaller (i.e., closer to zero, whether it is positive or negative) and, if positive, appropriately reflects the benefits of deferred deliveries. Sedway Consulting's metric sets the timing issue aside (for consideration later in a portfolio fit context) and allows for an easier side-by-side comparison of the components (i.e., capacity price, energy benefits, transmission adders, etc.) of all offers' net costs.

No transmission costs were included in the indicative offer evaluation. However, in the final offer evaluation, each offer's network transmission cost cap was incorporated into the RSM's modeling.

Renewable Bid Evaluation Model

Sedway Consulting's Renewable Bid Evaluation Model (RBEM) is a spreadsheet-based evaluation tool that uses the following information for each renewable offer:

- 8760-hour expected generation profile
- Commencement and expiration dates for power deliveries
- Energy pricing.

The RBEM was calibrated with SCE's forward energy and capacity price curves. The model calculated each offer's expected annual energy benefits as the product of the 8760-hour profile and SCE's hourly energy prices. Monthly RA capacity values were calculated from the 8760-hour profile and multiplied by the forward capacity prices to determine capacity benefits. For BTM renewable resources, the energy and capacity benefits were adjusted upward to account for the line loss savings of a BTM load reducing resource; additionally, the capacity benefits were further increased to account for reserve margin effects. The contract payments were based on the 8760-profile, the bidder's energy pricing, and the contractual time-of-delivery (TOD) factors. The net present value of the energy and capacity benefits were subtracted from the net present value of the contract payments and debt equivalence costs to yield a net cost. This net cost was levelized in the same fashion as was described with the RSM, resulting in a comparable $/kW-month evaluation metric.

Energy Storage Bid Evaluation Model

Sedway Consulting's Energy Storage Bid Evaluation Model (ESBEM) is a spreadsheet-based evaluation tool that uses the following information for each IFOM ES offer:

- Contract capacity
- Inverter capacity
- Storage quantity
- Guaranteed efficiency factors – minimum and maximum
- Delivery commencement and expiration dates
- Capacity pricing
- Variable O&M pricing
- Cycling and generation constraints.

The ESBEM was calibrated with SCE's forward energy, A/S, and capacity price curves. It used the hourly energy prices to determine the best charging and discharging schedule to maximize the benefits of energy arbitrage between off-peak and on-peak prices, subject to the resource's operating constraints. In each hour, the ESEM also targeted the most profitable A/S market for the resource to be bid into. The model calculated each offer's resulting energy and A/S benefits. Monthly RA capacity values were calculated using current CPUC RA rules and multiplied by the forward capacity prices to determine capacity benefits. The contract payments are the product of the offer's contract capacity and capacity pricing. The net present value of the net energy, A/S, and capacity benefits were subtracted from the net present value of the contract payments, debt equivalence costs, and transmission costs to yield a net cost. This net cost was levelized in the same fashion as was described with the RSM, resulting in a comparable $/kW-month evaluation metric.

Energy Efficiency Bid Evaluation Model

Sedway Consulting's Energy Efficiency Bid Evaluation Model (EEBEM) is a spreadsheet-based evaluation tool that uses the following information for each EE offer:

- 8760-hour expected savings profile and additional contract savings information
- Project completion date
- Expected useful life of measures
- Total project cost.

The EEBEM was calibrated with SCE's forward energy and capacity price curves. The model calculated each offer's expected annual energy benefits as the product of the 8760-hour profile and SCE's hourly energy prices. Monthly RA capacity values were calculated from the profile information and multiplied by the forward capacity prices to

determine capacity benefits. The energy and capacity benefits were adjusted upward to account for the line loss savings of a BTM load reducing resource; additionally, the capacity benefits were further increased to account for reserve margin effects. The annual contract payments were based on the product of the offer's project cost and the contract pay-out schedule percentages. The net present value of the energy and capacity benefits were subtracted from the net present value of the contract payments and debt equivalence costs to yield a net cost. This net cost was levelized in the same fashion as was described with the RSM, resulting in a comparable $/kW-month evaluation metric.

Demand Response Bid Evaluation Model

Sedway Consulting's Demand Response Evaluation Model (DRBEM) is a spreadsheet-based evaluation tool that uses the following information for each DR offer:

- Delivery commencement and expiration dates
- Monthly contract capacity
- Monthly capacity price
- Dispatch constraints.

The DRBEM was calibrated with SCE's forward energy and capacity price curves and additional information from modeling runs where SCE evaluated (prior to the receipt of final offers) a set of energy call options that Sedway Consulting specified. This call option modeling allowed Sedway Consulting to capture the extrinsic value of DR offers, even if they had high energy rates/strike prices. The model calculated each offer's expected energy benefits from the difference between the hourly energy market prices and the offer's energy rate during DR events, supplemented with benefits from the extrinsic value calculations. Monthly contract capacity values were multiplied by the forward capacity prices to determine capacity benefits. The energy and capacity benefits were adjusted upward to account for the line loss savings of a BTM load reducing resource; additionally, the capacity benefits were further increased to account for reserve margin effects. The annual contract payments were based on the product of the offer's monthly capacity prices and monthly contract capacity. The net present value of the energy and capacity benefits were subtracted from the net present value of the contract payments and debt equivalence costs to yield a net cost. This net cost was levelized in the same fashion as was described with the RSM, resulting in a comparable $/kW-month evaluation metric.

Evaluation Approaches

SCE and Sedway Consulting agreed that the shortlisting rankings should include the best offer from each counterparty and by product category. If a counterparty's product offer made it on the short list, all of the counterparty's offers in that product category would be shortlisted. For example, if a counterparty submitted numerous EE and DR bids, their

best EE bid and best DR bid would be in the short list ranking and eligible for selection. If the best EE bid was shortlisted but the best DR bid was not, all of the counterparty's EE bids would continue on in the RFO but none of the DR bids.

In addition, Sedway Consulting considered the qualitative aspects of offers, ranking indicative offers on their net cost metric (as calculated in Sedway Consulting's models), and then reviewing the qualitative aspects of to see:

1) if any upper-ranked offers had negative qualitative issues that suggested that they should not be selected, or

2) if any lower-ranked offers had positive qualitative issues that suggested that they may warrant selection.

Details concerning the qualitative issues that affected whether counterparties were included or excluded from the short list are discussed in Confidential Appendix B.

During the shortlisting process, Sedway Consulting focused on the middle of the ranking where offers were on the cusp of being included or excluded from the selection. Sedway Consulting reviewed SCE's results, compared rankings, and found that the two rankings supported virtually the same selection of counterparties for shortlisting. In one particular instance, SCE agreed to err on the side of inclusiveness and shortlist a mid-ranked counterparty that was below the cut-off in SCE's ranking but slightly above it in Sedway Consulting results. Sedway Consulting found SCE's shortlisting process to be rigorous and fair.

As noted above, Sedway Consulting paralleled SCE's economic evaluation of the final offers submitted after the conclusion of the negotiation phase. Prior to the locking down of commercial terms and parameters of all final offers, Sedway Consulting's analysis was updated with SCE's current estimates of future market conditions and the RSM proxy calibration runs. This information was combined with additional knowledge about project status and viability that was gained through the negotiation phase, allowing Sedway Consulting to ensure that appropriate contracts were selected for final execution.

Once the final offers were received (by September 4, 2014), Sedway Consulting performed an independent, parallel evaluation of the offers and developed rankings of the offers by product class. Sedway Consulting participated in numerous on-site evaluation and selection meetings at SCE's headquarters, compared SCE's optimization results with the offer rankings from Sedway Consulting's modeling efforts, and made suggestions about quantitative and qualitative issues that might improve the optimization results. As described more fully in Confidential Appendix B, Sedway Consulting concurred with the final set of selected LCR contracts.

Sedway Consulting concluded that SCE administered its shortlisting and final offer evaluation and selection processes fairly and procured the best resources/contracts for addressing its LCR needs. In its assessment, Sedway Consulting employed the same general principles as were described in the design fairness discussion; in addition, the fact that Sedway Consulting performed a fully separate, independent evaluation allowed it to develop its own ranking and confirm that SCE was fairly and appropriately evaluating all offers and employing an appropriate and fair selection process.

3. How did the IOU identify non-conforming bids? Did the utility identify the terms that deviated from the utility RFO for each bid, and was a quantitative and qualitative assessment of the cost or value of those deviations performed? Were non-conforming bids treated fairly and consistently? Were there pre-established, consistently applied criteria to determine what issues of conformance would result in rejection and which were subject to negotiation?

As noted above, SCE and Sedway Consulting conferred about non-conforming bids. In instances where the non-conformance could be addressed and corrected, the bidder was notified and given an opportunity to rectify the non-conformance. As described in Confidential Appendix B, a number of offers were ultimately disqualified. In some cases, they were part of a multiple set of offers from a bidder where other compliant options for the bidder's proposed resource remained under consideration.

No quantitative or qualitative assessments of the cost or value of the LCR RFO compliance deviations were performed. Also, there were no criteria that were pre-established prior to the receipt of offers to dictate whether some of the LCR RFO conformance requirements were negotiable. Ultimately, the issues that resulted in the small number of offer disqualifications were fairly clear-cut, intractable, and difficult if not impossible to negotiate away.

Sedway Consulting concurred with SCE's disqualification decisions and believes that all non-conforming bids were treated fairly and consistently.

4. For those parts of the process conducted by the utility, how were the parameters and inputs used and were they reasonable? What quality controls were in place?

5. For those parts of the process outsourced to either the IE or a third party, what information/data did the utility communicate to that party and what controls did the utility exercise over the quality or specifics of the outsourced analysis?

6. Did the utility follow its transmission analysis procedures and include in its evaluation and selection process all appropriate transmission information that it could reasonably develop or acquire, subject to the constraints imposed by FERC's Standards of Conduct?

7. Beyond any quantitative analysis, describe all additional criteria or analysis used in creating its short list (e.g., did the IOU take into consideration supplier concentration risk?).

As noted above, Sedway Consulting performed an independent, parallel evaluation and reviewed but did not rely on any offer assessment done by SCE. That said, Sedway Consulting relied on SCE's forecasts of expected future market conditions and how those conditions might affect the energy value of a proposed resource. However, for the shortlisting analysis, that information was locked down prior to the receipt of offers. Sedway Consulting also reviewed the market information and initial proxy bid modeling results for reasonableness. Sedway Consulting conducted a testing process by having SCE execute two dozen runs of its detailed model, evaluating proxy bid parameters that were developed by Sedway Consulting to test the model's reaction to changes in various bid characteristics.

No parts of SCE's process were outsourced to Sedway Consulting. SCE did outsource some of its need for legal support during the negotiation stage to the law firm of Munger Tolles & Olson LLP. Sedway Consulting was included in virtually all negotiation calls with counterparties, as well as many internal negotiation preparation discussions, and was therefore in a position to monitor the consistency of negotiation positions – whether SCE's own attorneys were on the call or SCE's outside counsel.

SCE followed its transmission cost process – using for the final offer analysis the transmission cost cap that was provided by counterparties in their final offer submissions. Sedway Consulting was copied on the emails for all final offer submissions and was able to confirm that appropriate transmission costs were used for each bid.

As noted earlier, SCE took seller concentration risk (or more specifically, sufficient number/diversity of sellers) into consideration in modifying its short list, ensuring that its short list had adequate competition in all product categories.

8. Results analysis

    a. Describe the IE, PRG [or CAM], Energy Division and IOU discussion regarding the LCBF evaluation process. Please note any areas of disagreement between the IE and the IOU, if applicable.

        i. Discuss any problems and solutions.

        ii. Identify specific bids if appropriate.

        iii. Did the IOU make reasonable and justifiable decisions to exclude, shortlist and/or execute contracts with projects? If the IE conducted a separate bid ranking and selection process and it differed from the IOU's outcome, include all relevant information here.

        iv. What actions were taken by the IOU to rectify any deficiencies associated with rejected bids?

    b. Was the overall evaluation fairly administered?

    c. Based on the IE's prior experience, how does this solicitation compare to other solicitations (to the extent the IE can describe these solicitations subject to confidentiality agreements)?

        i. If applicable, how did this solicitation compare to others by the same IOU?

        ii. How did the process and the results compare to that of other IOUs in different jurisdictions?

9. Any other information relevant to the fair administration of the LCBF evaluation not asked above but important to the IOU's methodology.

PRG/CAM discussions are confidential. However, there were no lasting areas of disagreement between SCE and Sedway Consulting in the shortlisting, negotiation, or

final selection processes. As described in Confidential Appendix B, in virtually all instances where Sedway Consulting expressed concerns about any of the analysis or results, SCE revised its proposed actions to address Sedway Consulting's concerns. For example, SCE shortlisted additional offers beyond its initially-proposed set, based on input from Sedway Consulting. In other specific instances (as discussed in more detail in Confidential Appendix B), Sedway Consulting chose to adopt different evaluation approaches or assumptions than those that were used by SCE. However, the different approaches led to the same selection decisions, thereby underscoring the appropriateness of the selection of the final executed contracts.

Sedway Consulting believes that SCE's evaluation process complied with appropriate LCBF criteria and was fairly designed and administered such that all counterparties and product types were treated consistently and fairly and had equal opportunity to make it onto SCE's short list, and of those who were shortlisted, to make it through the negotiation process and have their contracts selected in the final offer evaluation. The evaluation methodology for GFG resources was similar to that which was employed by SCE in its 2006 New Generation (New Gen) RFO (in which Sedway Consulting was also the Independent Evaluator). Likewise, the evaluation methodology for renewable resources was similar to that which has been employed by SCE in its RPS solicitations in recent years (in many of which Sedway Consulting has also been the Independent Evaluator). The evaluation models for ES, EE and DR were new to SCE's energy procurement process. The latter two were fairly straight-forward in valuing energy and capacity benefits (and neither EE nor DR could provide ancillary service benefits, thereby simplifying the modeling process); SCE was able to reformulate other existing modeling tools to evaluate resources in these new categories (e.g., the EE 8,760 hourly energy savings profiles were similar to the 8,760 hourly energy generation profiles that SCE has evaluated in its renewable model, and the DR resources were analogous to energy call options that SCE has evaluated in its annual near-term RA All Source solicitations in the past). The major new modeling effort for SCE in the LCR solicitation was the ES model.

At the start of the LCR RFO project, Sedway Consulting was included in planning meetings to discuss and understand what changes were being made to SCE's models and evaluation process. Sedway Consulting concurred with the changes and, as noted above, conducted dozens of test runs of the GFG modeling system to be sure that it was ready for use in SCE's solicitation. The ES modeling development effort was still underway when indicative offers were due. Thus, SCE performed a partial analysis of the ES bids (focusing on capacity price, debt equivalence costs, and capacity value, but did not include any estimation of energy or ancillary service benefits). Sedway Consulting used its proprietary ES model to estimate the energy benefits of the ES indicative offers and confirmed SCE's shortlisting decisions. Following shortlisting, Sedway Consulting continued to participate in SCE's planning and modeling discussions regarding its ES model, compared its own and SCE's modeling results (down to an hourly detail at times)

to corroborate and understand SCE's ES model, and believes that the model is sound. At a very minor level, it may slightly over-estimate the energy and ancillary services value of ES resources, but much is dependent on the input assumptions for future energy and ancillary services prices and CAISO operations of ES resources – which are much more significant unknowns. Additionally, the interconnection and charging energy issues noted earlier add even more uncertainty. Thus, Sedway Consulting believes that SCE's ES model was robust and well-developed, but the modeling inputs may have been over-optimistic.

For all of the standard products (e.g., GFG), SCE's solicitation process was quite similar to what Sedway Consulting has seen in other utility solicitations around the country. Of course, California is on the leading edge of ES procurement, so there is no direct point of comparison for SCE's undertaking in this area.

D. How did the IOU conduct outreach to bidders, and was the solicitation robust?

1. Describe the IOU outreach to potential bidders (e.g. sufficient publicity, emails to expected interested firms).
2. Identify principles used to determine adequate robustness of solicitation (e.g. number of offers submitted, number of MWhs associated with submitted offers).
3. Did the IOU do adequate outreach? If not, explain in what ways it was deficient.
4. Was solicitation adequately robust?
5. Did the IOU seek feedback about the bidding/bid evaluation process from bidders after the solicitation was complete?
6. Did the bids received meet the needs the solicitation was intending to fill?
7. Any other information relevant to outreach to bidders and robust solicitation not asked above but important to the IOU's process.

Sedway Consulting believes that SCE pursued reasonable and adequate procedures for notifying potential interested parties. Specifically, SCE dedicated a section of its company website to the solicitation, providing a means for interested parties to download the LCR RFO document and related materials, ask questions, and read posted responses.

On the LCR RFO launch date of September 12, 2013, SCE issued a press release and emailed over 3,400 industry contacts (compiled from previous power supply solicitations, regulatory service lists, etc.) that the LCR RFO had been released and invited them to participate. SCE also notified all CAM members of the LCR RFO's launch.

Several weeks later, on October 16, 2013, SCE held a bidders' conference to provide an overview of the LCR RFO solicitation. The conference provided interested parties an opportunity to learn more about the solicitation, hear presentations, and ask questions. Sedway Consulting attended the conference. On November 15, 2013, SCE conducted two additional teleconference bidders' workshops to delve into more detail for the EE and ES products. Sedway Consulting participated in those teleconferences.

Sedway Consulting concluded that SCE did a good job of publicizing the 2013 LCR RFO solicitation, and that the solicitation was quite robust, as evidenced by the substantial response that it received from the bidding community. The solicitation response was very strong, with over 1,100 indicative offers and almost 2,000 final offers received, representing many times SCE's capacity needs.

As SCE's LCR RFO solicitation just wrapped up with the execution of final contracts in early November, 2014, the IOU has not yet sought feedback from bidders about the bidding/bid evaluation process.

With the contracts submitted as the subject of this Application, SCE's minimum LCR capacity need for GFG and ES resources under the Track 1 and Track 4 decisions have been fulfilled. SCE has procured most but not all of the minimum 550 MW of preferred resources. As discussed below, the selected contracts amount to a total of 1,882.6 MW from the following categories:

- 1,382 MW of GFG capacity (thus falling within the 1,000 MW – 1,500 MW revised authorized need),
- 100 MW of ES capacity (thus meeting the 50 MW minimum need), and
- 400.6 MW of EE, traditional DR, DR BTM ES, and renewable resources.

E. Discussion of project-specific negotiations

1. Identify the methodology the IE used to evaluate negotiations.

2. Using the above principles, evaluate the project-specific negotiations. Highlight any issues of interest/concern including unique terms and conditions.

3. Was similar information/options made available to other bidders when appropriate, (i.e. if a bidder was told to get its price down to $X, was the same information made available to others?)

4. Any other information relevant to negotiations not asked above but important to understanding the IOU's process.

Sedway Consulting team members closely monitored project-specific negotiations, primarily by teleconference. Hundreds of such meetings or calls were monitored by Sedway Consulting, supplemented by the review of thousands of email communications (frequently with the transmittal of redlined contracts) between SCE and shortlisted counterparties. If during a negotiation session an SCE contract manager took a position that seemed inconsistent with what Sedway Consulting had been hearing in other similar negotiations, Sedway Consulting would call the contract manager after the negotiating session to discuss the issue and let the contract manager know of the policies or positions that were being adopted in the other negotiations.

In addition, at the outset of the negotiation phase of the RFO, SCE's contract origination group established an excellent process that helped facilitate consistent negotiation approaches. SCE organized subteams for each major product category – GFG, ES, EE, and DR. These subteams included all of the contract managers who were negotiating the subteam's product agreement with a counterparty. These subteams met weekly to discuss the status of their negotiations, compare notes, ask questions, report problems, raise issues for resolution, and stay apprised of revisions to the pro forma agreement. There was also a "subteam leads" meeting/call each week where the leaders from each subteam convened to discuss overarching issues or negotiation positions that might have applicability across two or more products. Sedway Consulting participated in virtually all of these weekly calls throughout the RFO and found them to be quite valuable. SCE did a commendable job in establishing this subteam process and facilitating consistency across its negotiations with a wide variety of counterparties.

Negotiations were concluded with virtually all shortlisted counterparties. Those who did not make it to a mutually-agreeable contract (and the reasons why) are described in this report's Confidential Appendix B, where additional confidential negotiation issues are addressed.

At times during the negotiation process, many counterparties requested guidance from SCE as to any preferences the utility may have among the counterparty's multiple offers, technologies, or sites. SCE and Sedway Consulting discussed whether or not this guidance should be provided, particularly following the shortlisting process – where all of a counterparty's offers in a product category were automatically shortlisted if the counterparty's best offer made it onto the short list. It was recognized that such guidance could allow counterparty's to focus their development dollars on their best opportunities. However, SCE and Sedway Consulting ultimately concluded that it would be unwise to provide such guidance for a number of reasons. First, the final offer evaluation was going to be more sophisticated and would include updated market information (e.g., power and gas prices, LEFs), so there was the possibility that providing guidance from the shortlisting analysis might cause a counterparty to shift away from offers that would be more attractive and perhaps superior in the final evaluation. Thus, such guidance might result in a counterparty losing at the end of the RFO when it otherwise would have won, thereby disadvantaging the bidder and losing value for California's electricity customers. Second, there was the possibility that a counterparty might use the guidance to raise its final offer prices on its best offer(s). Lastly, portfolio fit and other qualitative factors (e.g., geographic and technology diversification) were going to influence the final offer analysis; so communicating a preference from the shortlisting information might, for example, lead GFG developers to focus only on their CC or CT bids at the expense of the other and reduce the diversity of offers in the final analysis.

In instances where SCE chose to provide guidance, it did so consistently among all applicable bidders. For example, Sedway Consulting noticed in its ES indicative offer evaluation results that some shortlisted offers had low capacity prices and high variable O&M charges and expressed the concern to SCE that such bids might look attractive from a capacity price standpoint but provided little or no energy or A/S benefits and were not expected to operate. Selecting such an offer might be problematic for two reasons. First, it would secure a resource that would probably be called on only for system emergencies and would lose the benefits of ES operations that might be available with lower variable O&M pricing. Second, it might be the case that the bidder is counting on a variable O&M revenue stream to offset the lower capacity price, and without any operations, such variable O&M revenue stream would not occur – something that invariably would come to light during financing and could lead to project failure. Sedway Consulting encouraged SCE to provide some guidance to ES bidders regarding acceptable variable O&M pricing. Sedway Consulting and SCE reviewed the latest modeling information and agreed that variable O&M charges in excess of $9/MWh (first

year) significantly reduced the use and value of an ES resource and that a value less than $5/MWh was preferred. On June 4, 2014 (prior to the pending deadline for locking down such commercial terms), SCE emailed all ES counterparties the following notice:

> Storage LCR RFO Counterparties,
>
> SCE is looking for cost effective energy storage offers in the LCR RFO that can be utilized in the CAISO market. Accordingly, SCE will not accept energy storage offers that have a first contract year Variable O&M Charge of more than $9/MWh. In fact, it would be preferable if the first contract year Variable O&M Charge was less than $5/MWh. Obviously, all else equal, the lower, the better. Please ensure that the Energy Storage Excel Appendices provided at commercial lockdown on Monday, June 9 are consistent with this direction. If you have any questions, please reach out to your assigned contract manager.

As another example of consistent communication, all counterparties were emailed a reminder of the then-current RFO deadlines on April 2, 2104, along with a message that Sedway Consulting had encouraged SCE to broadcast. The RFO's targeted need was for 2021, with allowable delivery start dates in 2018 (or earlier if at preferred substations). In monitoring negotiations and reviewing indicative offers, Sedway Consulting became concerned that some bidders might be interpreting the delivery start date and preferred substation discussions to mean that they had to begin deliveries as soon as possible. This could put their final offers in a disadvantageous position from a net present value standpoint. To make sure that all counterparties had the same understanding of the RFO's requirements, Sedway Consulting and SCE drafted the following language for inclusion in the April 2, 2014 email that was sent to all shortlisted LCR counterparties:

> Also, note that the RFO's earliest start date parameters are not necessarily an indication of any significant capacity need on SCE's part; they are simply the earliest dates that SCE is willing to consider for an Offer to be deemed conforming. The RFO's primary targeted need is for 2021. Shortlisted participants are encouraged to propose start dates that allow them to comfortably address their obligations in their Agreement. In addition, shortlisted participants may provide multiple start dates for any specific proposed project so as to give SCE selection flexibility in fitting potential projects into its LCR portfolio.

Overall, Sedway Consulting affirms that SCE provided consistent information throughout the outreach and negotiation process. Also, based on its extensive monitoring of negotiations and its comparisons of final agreements against the pro forma(s), Sedway Consulting affirms that SCE applied consistent "pressure" on all shortlisted bidders to conform as closely as possible to SCE's pro forma contract positions. Sedway Consulting believes that SCE conducted all negotiations in a fair and appropriate manner. Again, details of the negotiation process are addressed in the Confidential Appendix B to this report.

F. Affiliate Bids and UOG Ownership Proposals (if applicable)

1. Describe the design and implementation of any Code of Conduct used by the IOU to prevent sharing of sensitive information between staff working with developers who submitted UOG bids and staff who created the bid evaluation criteria and select winning bids, including any violation(s) of that code.

2. Describe other safeguards and methodologies implemented by the IOU, including those stipulated in Commission decisions D.04-12-048 and D.07-12-052 for head-to-head competition between utility ownership and independent ownership bids, to ensure that affiliate and UOG bids were analyzed and considered on as comparable a basis as possible to other bids, that any negotiations with such bids' proponents were conducted as comparably as possible to negotiations with other proponents, and that the utility's final selections in such cases did not favor an affiliate or UOG bid.

3. Describe compliance with the safeguards.

4. If a utility selected a bid from an affiliate or a bid that would result in utility asset ownerships, explain and analyze whether the IOU's selection of such bid(s) was appropriate.

There were no affiliate bids,[9] nor were there any Utility-Owned Generation (UOG) bids or selected contracts where SCE would acquire ultimate ownership in any facilities. Therefore, there was no need for SCE to establish a Code of Conduct to control the flow of information within the evaluation team.

[9] Among the indicative offers, there was a bid from a firm that had been an affiliate in the recent past but, to Sedway Consulting's knowledge, had been sold and was no longer an SCE affiliate. Regardless, that firm's offer was not shortlisted.

G. Code of Conduct

1. Describe the design and implementation of the required Code of Conduct used by the IOU to prevent sharing of sensitive information between staff working with developers who submitted UOG bids and staff who create the bid evaluation criteria and select winning bids.

2. Describe any violation(s) of that code.

3. Alternatively, provide an explanation of why this requirement is not applicable to this RFO.

As noted above, there were no affiliate, UOG, or ultimate-SCE-ownership bids submitted. All offers were for facilities or services that would be under direct ownership of the counterparty. Therefore, SCE's evaluation team was free to share information internally to ensure a rigorous and complete evaluation of all offers.

H. Does the contract merit CPUC approval? Is the contract reasonably priced and needed and does it reflect a functioning market?

1. Provide discussion and observations for each category:
    a. Contract Price, including cost adders (transmission, credit, etc.)
    b. Portfolio Fit
    c. Project Viability
        i. Technology
        ii. Bidder Experience (financing, construction, operation)
        iii. Credit and collateral
        iv. Permitting, site control and other site-related matters
        v. Fuel status
        vi. Transmission upgrades
    d. Any other relevant factors

2. Do you agree with the IOU that the contract merits CPUC approval? Explain.

3. Based on the complete bid process should some component be changed to ensure future RFOs are fairer or provide a more efficient, lower cost result?

4. Any other relevant information.

On or about November 3, 2014, SCE executed 63 contracts for its Western LA Basin LCR need. These contracts entailed the following:

1. **Onsite Energy Corporation: 11 MW of EE** expected capacity savings through 11 EE contracts, targeting load reductions at commercial and industrial customers in the end-use areas of lighting, chilled water central plant optimization, compressed air projects, and pumping system optimizations (among others). The expected start of these contracts' delivery periods varies from July 1, 2016 to July 1, 2020.

2. **Sterling Analytics LLC: 16.7 MW of EE** expected capacity savings through seven EE contracts, targeting load reductions at three large campus-like facilities (federal buildings and a medical center) involving lighting retrofits and advanced controls. The expected start of these contracts' delivery periods varies from May 1, 2016 to July 1, 2018.

3. **NRG Energy Efficiency-P LLC** and **NRG Energy Efficiency-L LLC: 96.4 MW of EE** expected capacity savings through eight EE contracts, targeting load reductions at commercial and industrial sites where the Seller will install intelligent HVAC software products that optimize the chilled water and air handling unit systems simultaneously. The expected start of these contracts' delivery periods varies from May 1, 2016 to June 1, 2020.

4. **Solar Star California XXXV-XXXVIII, LLC: 37.9 MW of Renewable DG** expected capacity savings through four renewable DG contracts that will deliver savings through the installation of rooftop solar photovoltaic panels at customer sites where the customer's demand must exceed the panels' output. The expected start of these contracts' delivery periods varies from October 1, 2016 and January 1, 2018.

5. **NRG Curtailment Solutions LLC** and **NRG Distributed Generation PR LLC: 75 MW of DR** expected capacity savings through seven DR contracts associated with load reductions at commercial and industrial sites. The expected start of these contracts' delivery periods varies from January 1, 2017 to June 1, 2020.

6. **Hybrid Electric Building Technologies (Irvine and West Los Angeles subsidiaries) LLC: 50 MW of DR** expected capacity savings through four DR ES contracts associated with distributed behind-the-meter battery storage facilities at customer sites where the battery's output must not exceed the customer's demand. The expected start of these contracts' delivery periods varies from January 1, 2017 to January 1, 2018.

7. **Stem Energy Southern California, LLC: 85 MW of DR** expected capacity savings through two DR ES contracts associated with distributed behind-the-meter battery storage facilities at customer sites where the battery's output must not exceed the customer's demand. The delivery periods for these contracts are expected to start October 1, 2016 and January 1, 2018.

8. **Ice Bear SPV #1, LLC: 28.6 MW of behind-the-meter thermal energy storage systems** providing expected capacity savings from 16 contracts involving a permanent load shift technology associated with offloading daytime air-conditioning compressor loads by using ice that was created during off-peak hours. The expected start of these contracts' delivery periods varies from July 1, 2016 to October 1, 2019.

9. **AES ES Alamitos, LLC: 100 MW of ES** expected capacity from a single contract for a battery facility in Long Beach, California capable of providing its Contract Capacity for a 4-hour period. The expected initial delivery date is January 1, 2021.

10. **AES Alamitos Energy, LLC: 640 MW of GFG** expected capacity from a single contract for a new 2x1 7FA combined-cycle facility in Long Beach, California. The expected initial delivery date is June 1, 2020.

11. **AES Huntington Beach Energy, LLC: 644 MW of GFG** expected capacity from a single contract for a new 2x1 7FA combined-cycle facility in Huntington Beach, California. The expected initial delivery date is May 1, 2020.

12. **Stanton Energy Reliability Center, LLC (Wellhead): 98 MW of GFG RA** expected capacity from a single contract for two new LM6000 peaking resources in Stanton, California. The expected initial delivery date is July 1, 2020.

These contracts are expected to provide 400.6 MW of EE, traditional DR, DR BTM ES, and renewable capacity, 100.0 MW of IFOM ES capacity, and 1,382.0 MW of GFG capacity, for a total of 1,882.6 MW.

Sedway Consulting concludes that all of the above contracts merit CPUC approval because the contracts' economics and their general terms and conditions represented the best resources available from a competitive solicitation. Sedway Consulting's parallel evaluation yielded results that confirmed the appropriateness of the selection of these contracts. Pricing information, project viability issues, and other confidential terms and conditions of the contracts are discussed in the Confidential Appendix B to this IE report.

Except as noted above regarding the capital lease accounting challenge, Sedway Consulting does not view any major RFO component as needing to be changed to ensure that future solicitations are fairer or provide more efficient, lower cost results. Sedway Consulting believes that SCE has conducted a fair and rigorous solicitation for resources/contracts that will help it meet its LTPP authorized capacity needs and concurs with SCE's request for the CPUC's approval of the above contracts.

Appendix A
SCE LCR RFO Evaluation Process
(Excerpted from Section E of SCE's 9/12/13 LCR RFO Transmittal Letter)

E. EVALUATION OF OFFERS

E.1. *Initial Screen*

Once Offers are received, SCE begins an initial review for completeness and conformity. The review includes an initial screen for required submission criteria such as a conforming delivery point, minimum project size, and the submission of completed submittal package elements. Sellers lacking any of these items are allowed a reasonable cure period to remedy any deficiencies. SCE works directly with sellers to resolve any issues and ensure the data is ready for evaluation.

E.2. *Least-Cost, Best-Fit*

SCE has forecasts for RA capacity, electrical energy, ancillary services, natural gas and GHG compliance market prices (i.e. the market price forecast). These market price forecasts may serve as the price benchmark to determine the cost-effectiveness for LCR resources. Specifically, SCE will calculate the forecasted quantity of RA capacity, electrical energy, and ancillary services that each resource will provide, and multiply these quantities by their respective market price forecasts. The sum of these benefits represent the market value that the resource is forecasted to receive. SCE will then compare the contract costs required to extract this market value, such as capacity payments and fuel costs to generate electrical energy, to determine the cost-effectiveness of the resource. The most cost-effective resources will have the lowest contract costs as compared to their forecasted market value benchmark.

The benchmark for determining cost-effectiveness (i.e. the resource's market value forecast) minus the costs required to receive these benefits, plus any other value that can be attributed to the resource, discounted, is exactly equal to the calculated Net Present Value (NPV) of the offer, as described in detail below. This NPV, after adjusting the offer's RA MW and resulting RA value component for relative effectiveness factors (i.e. the RA capacity multiplied by one minus the difference between the maximum locational effectiveness factor and the effectiveness factor for the resource), is the metric that SCE will use in the selection process.

SCE will also develop shadow cost curves for some of the product types submitted into its New LCR RFO where it is feasible to do so. As part of SCE's evaluation process, SCE may use these shadow curves as an additional price benchmark for some of the products being solicited. The shadow cost curves will represent a forecast of total costs required to develop the respective product. SCE may utilize its own forecasts as well as independent consultant forecasts to develop these shadow cost curves. The shadow cost curves will be included in the final application if they are used during the selection process. Consideration of these additional price benchmarks, namely the shadow cost curves, yields several benefits. First, the shadow cost curves provide a safeguard against an uncompetitive solicitation. For instance, if the shadow cost curves indicate that solicitation offers are priced in excess of a reasonable assessment of the associated cost of the offer, SCE may elect to forgo the procurement. Second, the shadow cost curves enable a mechanism for deferring purchasing contracts to a later time. Finally, the shadow cost curves allow for comparison against alternatives that may not have explicitly bid into the New LCR RFO.

E.3. *Evaluation Methodology*

As discussed above, SCE employs an NPV analysis when it evaluates offers. This methodology is consistent with evaluations performed by SCE in other solicitations such as SCE's CHP RFOs and All Source RFOs for energy and RA. The quantitative component of the evaluation entails forecasting (1) the value of contract benefits, (2) the value of contract costs, and (3) the net value of both (1) and (2). Once all of the valuation elements are calculated, they are discounted to a present value using an annual discount rate. SCE then subtracts the present value of expected costs from the present value of expected benefits to determine the expected NPV of the offer.

In addition to quantitative benefits, contracts may also have qualitative benefits that are evaluated separately. The elements used in the quantitative valuation are described below.

E.3.1. Contract Benefits

- Energy and Ancillary Service Benefits

For dispatchable resources, SCE utilizes a fundamental production-cost model (ProSym), along with a stochastic price process via a Monte Carlo simulation, to value the energy and ancillary service benefits of a generating unit. Inputs to the fundamental model include unit characteristics such as capacity, heat rate curve, ramp rate, start fuel and start cost, minimum and maximum run-time, variable operation and maintenance (O&M) cost, GHG cost, congestion and losses, fuel cost, and emission constraints, among others. SCE uses the economic dispatch principle, wherein a unit is dispatched if its forecasted benefits exceed its costs, i.e., if it is "in the money." ProSym compares the forecasted cost of running a unit against energy and ancillary services price forecasts to determine whether a unit is in the money.

SCE creates an expansive lookup library of dispatch results to avoid the need to perform multiple runs for each analysis. SCE then deploys a stochastic Monte Carlo simulation process to generate a large number of gas price and implied market heat rate pairs, using blended power and gas price curves derived from market and fundamental models as the expected case, and by applying a volatility process on top of the blended price forecasts to create a distribution of price outcomes. The volatility process estimates correlation, volatility, mean reversion, stochastic volatility and seasonal parameters. The simulated price pairs are used to look up the forecasted gross energy benefits and costs. SCE defines the expected energy and ancillary service benefits as the average of the simulated cases. This process allows SCE to value both the intrinsic and extrinsic (optionality) value of the resource.

For must-take and baseload resources, SCE calculates the energy benefits of an offer based on the estimated market value of energy and the offer's expected generation delivery profile. Since SCE does not have dispatch rights to these types of resources, ProSym modeling and Monte Carlo simulation is not necessary.

SCE utilizes a blended approach to forecasting power, gas, and GHG allowance prices. SCE's blending combines forward market price and fundamental model prices to bridge SCE's use of forward prices for the valuation of products that deliver in the near-term and SCE's use of fundamental model prices for the valuation of products that deliver over a longer term. Forward power prices are also adjusted for location in the final valuation.

- Resource Adequacy (RA) Capacity Benefits

RA capacity benefits are derived by first developing a forecast of expected forward RA prices and then applying this forecast to the total RA capacity provided by the contract. SCE typically builds its RA price forecast from data collected from its most recent All Source RFOs and bilateral contracts.

The implementation of the Standard Capacity Product (SCP) tariff by the CAISO has changed the RA market dynamics, especially for local dispatchable resources. The SCP rules require scheduling coordinators for resources on forced outage to replace those resources with like or better resources or face an SCP replacement charge. For example, if an LA Basin dispatchable resource goes on forced outage it must be replaced with a LA Basin dispatchable resource. Conversely if a non-dispatchable resource goes on outage it can be replaced by any resource interconnected to the CAISO grid. The cost of not replacing RA capacity on forced outage is set to equal the backstop CAISO Capacity Procurement Mechanism (CPM) price (currently $5.62/kW-month). In addition, the CAISO has recently implemented a Planned Outage Replacement tariff (POR), which requires LSEs to replace RA resources on planned outage before the beginning of the compliance month or face potential backstop costs based on a minimum 30-day backstop at the CPM price. The replacement rules for the POR, however, are slightly more relaxed and allow system RA to replace local RA. Both of these changes have resulted in cost increases for RA products, which SCE's RA price forecast will seek to account for.

E.3.2. Contract Costs

- Dispatch and Energy Costs

For dispatchable resources, dispatch costs include unit start costs, variable O&M costs (VOM), GHG cost, and fuel costs. Start costs include the fixed cost of starting a unit, and are differentiated by hot and cold starts, depending on how long the unit has been offline. VOM costs are costs which are directly proportional to the output of the unit, measured in $/MWh. GHG cost is the California Cap & Trade compliance cost of obtaining the allowances for a unit emitting GHG. Fuel costs include the variable cost of generating power and the fixed cost of the required fuel amount used to start up a unit. These costs components are accounted for in the ProSym production cost modeling and used to make the economic dispatch decisions.

For must-take and baseload resources, energy costs can include fuel costs (as indicated by a heat rate), VOM, and GHG compliance costs, or simply an all-in energy price in dollars per Megawatt-hour (MWh). Since SCE does not have dispatch rights to these types of resources, ProSym modeling is not necessary to calculate the resource's forecast cost.

- Capacity Payments

Capacity payments represent the total fixed contract payments SCE is expected to make under the contract for delivery of the energy and capacity benefits.

- Debt Equivalence

Debt equivalence is the term used by credit rating agencies to describe the fixed financial obligation resulting from long-term purchased power contracts. Pursuant to D.04-12-048, the Commission permitted the utilities to recognize costs associated with the effect debt equivalence has on the utilities' credit quality and cost of borrowing in their valuation process. D.08-11-008

was issued in November 2008, and, authorized the Investor Owned Utilities (IOUs) to continue recognizing the balance sheet impact of debt equivalence when valuing PPAs. Given the confirmation of the use of debt equivalence for valuation purposes, SCE considers debt equivalence in its valuation process.

- Transmission Cost

For projects that do not have an existing interconnection to the electric system, or have an existing interconnection but not for a proposed expansion of an existing facility, system transmission upgrade costs are based on a Phase 1 Interconnection Study (as defined in the CAISO Tariff) (or equivalent study), or later study for generator interconnection procedures (GIP) applications. For projects with no interconnection study, but with an offer providing SCE the right to terminate if system transmission upgrade costs exceed a specified amount, system transmission upgrade costs are based on the specified transmission upgrade amount.

- Greenhouse Gas (GHG) Cost

For any offer passing through all or some of the GHG compliance cost, SCE will assess a GHG cost to the offer based on SCE's forecast of GHG prices and the offer's forecasted amount of GHG emissions.

E.3.3. Other Quantitative Considerations

There are other considerations that can alter the benefits and/or costs of an offer. For example, congestion costs, which affect the project's energy benefits, can change from location to location throughout the system. SCE forecasts the cost of congestion that each offer is expected to incur, and correspondingly adjusts the calculated energy benefits. Additionally, if a resource will connect to the distribution system, then distribution loss factors will be applied to the expected generation, affecting the amount of energy benefits, and possibly costs, accrued to the offer, to normalize the offer relative to offers which deliver to the transmission system.

Counterparties may seek to negotiate credit and collateral requirements that are different from SCE's pro forma requirements. In doing so, there is no longer a "level playing field" in terms of default exposure amounts across the offers. In these cases, SCE will calculate a cost to the offer based on the incremental exposure created by the negotiated terms.

Additionally, if SCE can reasonably calculate estimates of other costs and/or benefits that are directly attributable to an offer, then these estimates will be included in the quantitative valuation, and ultimately, in the offer's NPV. For example, LCR procurement is required to ensure that there is sufficient resources in certain sub-areas of the Big Creek/Ventura and LA Basin local reliability areas. Also, within these specific areas there are locations where additional generation would not only satisfy the LCR needs, but also enhance the reliability of the distribution system. In these instances, the benefits of new generation are twofold: 1) LCR procurement, and 2) distribution system benefits that reduce, eliminate or defer the need for other reliability upgrades. When offers provide this additional benefit of eliminating, reducing or deferring costs that would otherwise be incurred, SCE will estimate and ascribe the resulting avoided cost as a benefit to the offer.

E.3.4. Demand Side Management (DSM)

DSM NPVs will equal the present value of RA and energy benefits (i.e. avoided supply costs) minus contract/program costs. This is basically equivalent to the Program Administrator Cost

Test NPV calculation. In the case of third-party LCR procurement, DSM costs will be directly specified by the counterparties in their offers. Energy benefits will be based on the validated energy reduction estimates contained in the offer (i.e. avoided energy costs). DSM capacity will be calculated using existing RA counting rules. EE programs will require engineering assessments to determine their expected peak load reduction amounts, in MW. Following current RA counting practice, EE and DR will receive LA Basin and system RA quantities equal to 100% and 115% of their peak load reduction amounts, respectively. Furthermore, since EE and DR programs will likely be spread throughout an entire local area, and area-wide effectiveness ratings have not been provided, SCE will use the highest CAISO-provided LEF ratings for the relevant local area in recognition that DSM resources are the highest priority.

E.3.5. Qualitative Assessment

In addition to the benefits and costs quantified during the evaluation, SCE assesses non-quantifiable characteristics of each offer by conducting an analysis of each project's qualitative attributes. SCE considers qualitative characteristics in determining the short list and final selection. These characteristics may include:

- Permitting and interconnection
    - Environmental & permitting status
    - Electrical interconnection
    - Fuel interconnection & source
    - Water interconnection & source
- Pre-development milestones
    - Project financing status
    - Project development experience
    - Thermal host (CHP Only)
    - FERC & California (CA) qualifying facility standards (CHP Only)
    - Emissions performance standards
- Development milestones
    - Site control
    - Large equipment status
    - Reasonableness of commercial operation date
- Transmission area
- Modifications to pro forma documents
- GHG contributions towards the CHP Settlement Agreement target
- Contributions towards SCE's RPS targets

- Congestion, negative price, and curtailment considerations not captured in the quantitative valuation
- Portfolio fit of energy, capacity, & term
- Offeror concentration
- Technology Concentration
- Dispatchability & curtailability
- Offer price in excess of public or independent data (i.e., in excess of shadow cost curves)
- LCR effectiveness factor of interconnection

E.3.6. LCR and Resource Adequacy (RA) Counting

- RA Counting

SCE will use existing RA counting conventions to determine the amount of capacity each resource/program would count towards meeting or reducing the LCR need. However, SCE will solicit certain types of ES products that do not have specified counting rules in the current RA program.

SCE will establish the amount of RA capacity (including system, local and potentially flexible) attributed to each resource under the guidance of the current NQC counting rules of the CPUC's Qualifying Capacity Methodology Manual (Manual). If a resource's operational capabilities generally fall under a category described in the guide, the rules will be applied directly. For example, dispatchable generation resources receive NQC values based on their available capacity. SCE calculates the wind and solar NQCs values based on the exceedance approach, all subject to deliverability. The Effective Load Carrying Capacity (ELCC) methodology, when implemented, will replace the exceedance methodology, again subject to deliverability. EE, non-dispatchable DR, and most types of DG are typically considered load adjustments rather than supply-side resources. SCE uses program/technology specific studies to estimate the impact of EE/DG on peak load, resulting in a corresponding load reduction. SCE will consider this load reduction as equivalent to RA capacity for valuation and selection purposes.

SCE will estimate NQC values for those resource types not directly described in the Manual by using a similar, existing category. For instance, SCE can estimate the NQC of a directly connected dispatchable ES resource using dispatchable resources rules (as currently used for hydro pump storage). SCE can estimate the NQC of a behind the meter dispatchable ES resource using DR rules. However, estimating the NQC using the DR rules assumes that the resource satisfactorily completes some form of certification, registration, or actual testing of its performance characteristics, and is available for the minimum established number of hours and days (current rules require resources to be available for events at a minimum of four hours per event and three days in a row in order to count as RA resources). When no reasonable estimate can be made using the existing Manual categories, SCE will consider the resource's contribution to meeting or reducing peak demand requirements in ascribing and proposing a counting convention.

- LCR Counting and Locational Effectiveness Factors

LCR procurement is designed to address the CAISO identified local area reliability concern. The Decision requires SCE to use existing RA program rules for the counting of capacity. To ensure that LCR procurement addresses the CAISO identified local area reliability concern, SCE will calculate forecasted RA values (a component of the NPV) by adjusting the RA MW quantities by the difference between the CAISO-identified maximum LEF in a sub-area and the assessed effectiveness factor of each offer. For example, assume there is an offer with 100 MW of contract capacity, 60 MW of countable RA capacity, interconnecting at a location with an LEF of 30%, and based on the most up-to-date effectiveness ratings, is in a local area with a maximum LEF of 50%. In this example, the contract payments will be based on 100 MW, LCR counting MW benefits will be based on 60 MW, and the RA value component of the offer's NPV will be calculated assuming 48 MW (60 MW x (1-(50% - 30%)). Adjusting the RA MWs that receive RA value in the NPV calculation by the LEFs will direct procurement towards projects that more effectively address the CAISO-identified reliability concern.

Because LEFs are calculated on a constraint-specific basis, and LEFs can vary significantly depending on the studied constraint, SCE may utilize aggregated or geographically dispersed LEFs for its valuation analysis. SCE will provide sufficient documentation of its utilized LEFs in its LCR procurement application(s).

In addition, SCE will count capacity procured to meet the LCR target based on the calculated August NQC for each resource as defined by existing Local RA program rules. An August NQC is appropriate because the CAISO's LCR studies were based on peak demand conditions.

- Constraints And The Selection

SCE will perform a least-cost, best-fit selection by parsing net benefits into valuation and selection constraint elements. SCE will then select the set of contracts that satisfies the constraints while providing the most favorable valuation. In this section, we describe the benefits that may influence the selection by a constraint mechanism.

The constraints may be fixed or moving. An example of a fixed constraint is setting a minimum gas-fired capacity procurement target at a pre-specified MW level. A single selection set would then satisfy the minimum. An example of a moving constraint would be to establish a series of selection sets by incrementally increasing the minimum target. SCE would then choose from among the series of selections using informed management discretion. The use of moving constraints allows SCE to consider the value proposition of different procurement targets. SCE anticipates setting both fixed and moving constraints for the LCR RFO selection process to yield a portfolio of resources for Commission review and approval.

Characteristics for which SCE may set constraints include the following:

- Capacity of GFG
- Capacity of ES
- Capacity of Preferred Resources
    - Solar
    - Wind
    - DR

    - EE
- Flexible Capacity Requirements
- Others

In setting constraints, SCE will consider regulatory mandates as well as internal forecasts of need.

Confidential Exhibit B to

Appendix D

This Appendix was removed, please see the CONFIDENTIAL version.