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Application of Southern California Edison Company (U338E) for Approval of the Results of Its 2013 Local Capacity Requirements Request for Offers for the Moorpark Sub-Area.	Application 14-11-016

TESTIMONY OF ROBERT SPARKS
ON BEHALF OF THE
CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of Southern California Edison Company (U338E) for Approval of the Results of Its 2013 Local Capacity Requirements Request for Offers for the Moorpark Sub-Area.	Application 14-11-016

TESTIMONY OF ROBERT SPARKS ON BEHALF OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

Q. What is your name and by whom are you employed?

A. My name is Robert Sparks. I am employed by the California Independent System Operator Corporation (CAISO), 250 Outcropping Way, Folsom, California as Manager, Regional Transmission.

Q. Please describe your educational and professional background.

A. I am a licensed Professional Electrical Engineer in the State of California. I hold a Master of Science degree in Electrical Engineering from Purdue University, and a Bachelor of Science degree in Electrical Engineering from California State University, Sacramento. I have over 25 years of Transmission Planning and Operations Engineering experience in California.

Q. What are your job responsibilities?

A. I manage a group of engineers responsible for planning the CAISO controlled transmission system in southern California to ensure compliance with NERC, WECC, and CAISO Transmission Planning Standards in the most cost effective manner.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to provide an overview of how Southern California Edison Company's (SCE) 2013 request for offers (RFO) meets the local capacity

requirement needs for the Moorpark sub-area as identified in Commission Decision (D.) 13-02-015 (Track 1 Decision). Specifically, my testimony details the results of the CAISO's 2014-2015 transmission plan and the effect of the RFO-selected resources on local capacity requirements for the Moorpark sub-area.

An overview of SCE's RFO-selected resources for the Moorpark sub-area are provided in Table 1, below.

Table 1 – Summary of SCE's Submitted RFO Selection

Product Category	Counterparty	Total Number of Contracts	Max Quantity (LCR MW)
Gas Fired Generation (GFG)	• NRG Energy Center Oxnard, LLC • NRG California South, LP	2	262.00
Energy Efficiency (EE)	• Onsite Energy Corporation	6	6.00
Renewable Distributed Generation (DG)	• Solar Star California XXXIV, LLC • Solar Star California XXXIX, LLC	2	5.66
Energy Storage (ES) In Front of Meter (IFOM)	• NRG California South, LP	1	0.50
Total		**11**	**274.16**

Q. How did the CAISO study the impact of SCE's RFO-selected resources on system reliability?

A. The CAISO used the SCE RFO results in its local capacity requirement analysis conducted as a part of the 2014-2015 transmission planning process. The results of

the Moorpark sub-area analysis can be found in the CAISO's 2014-2015 transmission plan, Appendix E.[1] The relevant portions of Appendix E are included as Exhibit 1 to my testimony.

Q. Please explain the results of the CAISO's 2014-2015 transmission plan local capacity requirement analysis for the Moorpark sub-area.

A. The CAISO identified the most critical contingency in the Moorpark sub-area as the loss of the Moorpark-Pardee 230 kV #3 line followed by the loss of the Moorpark-Pardee 230 kV #1 and #2 lines, which would cause voltage collapse. The local capacity requirement analysis conducted in the 2014-2015 transmission plan indicates that the selected RFO resources meet this identified reliability constraint and are sufficient to meet the local reliability needs in the Moorpark sub-area through 2024, based on the assumptions in the transmission plan.[2]

Most notably, the 2014-2015 transmission plan assumes that 87 MW of additional achievable energy efficiency will materialize in the Moorpark sub-area by 2024, in addition to the 6 MW of energy efficiency included in the present Application

Q. Based on the results of the CAISO's analysis, will the resources selected in SCE's 2013 RFO enhance the reliability of SCE's electrical service?

A. Yes, the resources selected in SCE's 2013 RFO will enhance the reliability of SCE's electrical service starting in 2021 time frame. However, as discussed above, the resources for which SCE requests approval in this proceeding are only a portion of

[1] http://www.caiso.com/Documents/AppendixEBoardApproved2014-2015TransmissionPlan.pdf.
[2] In Track 1 of the 2012 long-term procurement plan the CAISO identified a total need in the Moorpark sub-area of 430 MW. In the most recent CAISO analysis, the new resources in SCE's application combined with an assumed incremental additional achievable energy efficiency total 361 MW, but are sufficient to meet long-term reliability needs in the Moorpark sub-area. The reduction in identified long-term need is primarily due to updates in the SCE system modeling that result in better representation of switching and utilization of existing static reactive support in the Moorpark sub-area and the surrounding area between the transient and post-transient time frame.

those necessary to meet reliability needs in the Moorpark sub-area. To ensure reliability, the Commission must continue to monitor the development and implementation of other local resources including additional achievable energy efficiency.

Q. Please summarize your testimony.

A. The results of SCE's 2013 Moorpark RFO are consistent with the CAISO's planning assumptions in the 2014-2015 transmission plan. The resources selected in the RFO meet the minimum procurement requirements set forth in the Commission's Track 1 long-term procurement plan decisions, and they are effective and necessary to meet long-term reliability needs as demonstrated by the CAISO's analyses. Overall, if approved by the Commission and implemented in a timely manner, the RFO resources will enhance the reliability of SCE's electrical service.

Q. Does this conclude your testimony?

A. Yes, it does.

EXHIBIT 1

APPENDIX E: 2024 Local Capacity Technical Analysis

24309	B CRK2-2	4	24
24310	B CRK2-3	5	24
24310	B CRK2-3	6	24
24315	B CRK 8	81	24
24315	B CRK 8	82	24
24323	PORTAL	1	24
24311	B CRK3-1	1	23
24311	B CRK3-1	2	23
24312	B CRK3-2	3	23
24312	B CRK3-2	4	23
24313	B CRK3-3	5	23
24317	MAMOTH1G	1	23
24318	MAMOTH2G	2	23
24314	B CRK 4	41	22
24314	B CRK 4	42	22

Santa Clara Sub-area:

The most critical contingency is the loss of the Pardee - Santa Clara 230 kV line followed by the loss of Moorpark - Santa Clara 230 kV #1 and #2 lines, which would cause voltage collapse. This limiting contingency establishes a local capacity need of 277 MW (includes 68 MW QF generation as well as 30 MW of deficiency) as the minimum capacity necessary for reliable load serving capability within this sub-area.

Due to upcoming OTC compliance dates the use of 29 MW of AAEE and LTPP EE assumed in this study is critical, without it the LCR need will be higher by about the same amount.

Effectiveness factors:

All units within this area have the same effectiveness factor.

Moorpark Sub-area:

The most critical contingency is the loss of the Moorpark - Pardee 230 kV #3 line followed by the loss of the Moorpark - Pardee 230 kV #1 and #2 lines, which will cause voltage collapse. This limiting contingency establishes a local capacity need of 512 MW (includes 97 MW QF generation as well as 230 MW of deficiency) as the minimum capacity necessary for reliable load serving capability within this sub-area.

Due to upcoming OTC compliance dates the use of 93 MW of AAEE and LTPP EE assumed in this study is critical, without it the LCR need will be higher by about the same amount.

Effectiveness factors:

All units within this area have the same effectiveness factor.

Big Creek/Ventura overall:

The most critical contingency is the loss of the Lugo - Victorville 500 kV line followed by loss of one of the Sylmar - Pardee 230 kV line, which would thermally overload the remaining Sylmar - Pardee 230 kV line. This limiting contingency establishes a local capacity need of 2,783 MW (includes 769 MW of QF and 392 MW of MUNI generation) as the minimum capacity necessary for reliable load serving capability within this area.

The single most critical contingency is the loss of Sylmar - Pardee #1 (or # 2) line with Pastoria power plant (CCGT) out of service, which could thermally overload the remaining Sylmar - Pardee #1 or #2 230 kV line. This limiting contingency establishes a Local Capacity Need of 2,603 MW (includes 769 MW of QF and 392 MW of MUNI generation).

Due to upcoming OTC compliance dates the use of 317 MW of AAEE and LTPP EE assumed in this study is critical, without it the LCR need will be higher by about the same amount.

Effectiveness factors:

The following table has effectiveness factors to the most critical contingency.

Gen Bus	Gen Name	Ck	Eff Factor (%)
24108	ORMOND2G	1	40
24010	APPGEN2G	1	39
24148	TENNGEN1	1	39

24149	TENNGEN2	1	39
24009	APPGEN1G	1	38
24107	ORMOND1G	1	38
24118	PITCHGEN	1	38
24361	APPGEN3G	1	38
25651	WARNE1	1	37
25652	WARNE2	1	37
24089	MANDLY1G	1	36
24090	MANDLY2G	1	36
24127	S.CLARA	1	36
29004	ELLWOOD	1	36
24110	OXGEN	1	36
24119	PROCGEN	1	36
24159	WILLAMET	1	36
24340	CHARMIN	1	36
29952	CAMGEN	1	36
24362	EXGEN2	1	36
24326	EXGEN1	1	36
24362	EXGEN2	1	36
24222	MANDLY3G	1	35
25614	OSO A P	1	35
25614	OSO A P	1	35
25615	OSO B P	1	35
25615	OSO B P	1	35
29306	MCGPKGEN	1	35
29055	PSTRIAS2	1	34
29054	PSTRIAG3	1	34
29053	PSTRIAS1	1	34
29052	PSTRIAG2	1	34
29051	PSTRIAG1	1	34
25605	EDMON1AP	1	34
25606	EDMON2AP	1	34
25607	EDMON3AP	1	34
25607	EDMON3AP	1	34
25608	EDMON4AP	1	34
25608	EDMON4AP	1	34
25609	EDMON5AP	1	34
25609	EDMON5AP	1	34
25610	EDMON6AP	1	34
25610	EDMON6AP	1	34
25611	EDMON7AP	1	34
25611	EDMON7AP	1	34
25612	EDMON8AP	1	34

25612	EDMON8AP	1	34
25653	ALAMO SC	1	34
24370	KAWGEN	1	32
24113	PANDOL	1	31
24113	PANDOL	1	31
29008	LAKEGEN	1	31
24150	ULTRAGEN	1	31
24152	VESTAL	1	31
24307	B CRK1-2	1	31
24307	B CRK1-2	1	31
24308	B CRK2-1	1	31
24308	B CRK2-1	1	31
24309	B CRK2-2	1	31
24309	B CRK2-2	1	31
24310	B CRK2-3	1	31
24310	B CRK2-3	1	31
24311	B CRK3-1	1	31
24311	B CRK3-1	1	31
24312	B CRK3-2	1	31
24312	B CRK3-2	1	31
24313	B CRK3-3	1	31
24314	B CRK 4	1	31
24314	B CRK 4	1	31
24315	B CRK 8	1	31
24315	B CRK 8	1	31
24317	MAMOTH1G	1	31
24318	MAMOTH2G	1	31
24372	KR 3-1	1	31
24373	KR 3-2	1	31
24102	OMAR 1G	1	30
24103	OMAR 2G	1	30
24104	OMAR 3G	1	30
24105	OMAR 4G	1	30
24143	SYCCYN1G	1	30
24144	SYCCYN2G	1	30
24145	SYCCYN3G	1	30
24146	SYCCYN4G	1	30
24319	EASTWOOD	1	30
24306	B CRK1-1	1	30
24306	B CRK1-1	1	30
24136	SEAWEST	1	9
24437	KERNRVR	1	8

Changes compared to the 2019 results:

The load forecast went up by 108 MW and the LCR need has increased by 164 MW. The AAEE and LTPP EE remain critical for the Santa Clara and Moorpark sub-areas.

Big Creek/Ventura Overall Requirements:

2024 LTPP Assumptions	LTPP EE (MW)	Solar PV (MW)	Storage 4h (MW)	Conventional resources (MW)	LTPP Total Capacity (MW)
SCE-submitted procurement selection	6	6	1	262	275

2024	QF (MW)	Muni (MW)	Market (MW)	New DG (MW)	Max. Qualifying Capacity (MW)
Available generation	769	392	2258	248	3667

2024	Total MW Requirement	Existing Resource Need (MW)	Deficiency without LTPP T1 & T4 (MW)	Total SCE Selected Procurement for LTPP Tracks 1 & 4 (MW)
Category B (Single)[33]	2,603	2,603	0	275
Category C (Multiple)[34]	2,783	2,553	230	275

10. San Diego-Imperial Valley Area

Area Definition

The transmission tie lines forming a boundary around the San Diego-Imperial Valley area include:

1) Imperial Valley – North Gila 500 kV Line
2) Otay Mesa – Tijuana 230 kV Line
3) San Onofre - San Luis Rey #1 230 kV Line
4) San Onofre - San Luis Rey #2 230 kV Line

[33] A single contingency means that the system will be able the survive the loss of a single element, however the operators will not have any means (other than load drop) in order to bring the system within a safe operating zone and get prepared for the next contingency as required by NERC transmission operations standards.

[34] Multiple contingencies means that the system will be able the survive the loss of a single element, and the operators will have enough generation (other operating procedures) in order to bring the system within a safe operating zone and get prepared for the next contingency as required by NERC transmission operations standards.