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SOUTHERN CALIFORNIA EDISON®

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(U 338-E)

Phase 2 Testimony of Southern California Edison Company (U 338-E) on the Results of its 2013 Local Capacity Requirements Request for Offers (LCR RFO) for the Moorpark Sub-Area

Before the

Public Utilities Commission of the State of California

PUBLIC VERSION

Rosemead, California
September 22, 2016

SCE-11: Phase 2 Testimony of Southern California Edison Company on the Results of its 2013 Local Capacity Requirements Request for Offers (LCR RFO) for the Moorpark Sub-Area

Table Of Contents

Section			Page	Witness
I.	INTRODUCTION AND SUMMARY OF TESTIMONY		1	G. Chinn
II.	BACKGROUND AND PROCEDURAL HISTORY		4	R. Sekhon
	A.	The LTPP Track 1 Decision Ordered SCE to Procure Resources in the Moorpark Sub-Area	4	
	B.	SCE Filed an Application Seeking Approval of the Resources Procured Through Its LCR RFO for the Moorpark Sub-Area	5	
	C.	The Commission Partially Approved SCE's Application, Deferring Consideration of the Ellwood Refurbishment Contract and the Linked IFOM ES Contract	6	
III.	THERE IS AN UNMET RESILIENCY TARGET IN THE SANTA BARBARA/GOLETA AREA		7	G. Chinn
	A.	The Santa Barbara/Goleta Area has Unique System Constraints	7	
	B.	Existing Sub-Transmission Electrical Infrastructure is Incapable of Serving Peak Load in the Santa Barbara/Goleta Area	9	
	C.	Resource Characteristics Needed to Satisfy Part of the Resiliency Target in the Santa Barbara/Goleta Area	10	
IV.	THE BEST WAY TO MEET THE RESILIENCY TARGET IN THE SANTA BARBARA/GOLETA AREA IS THROUGH AN INTEGRATED MITIGATION STRATEGY		12	
	A.	Ellwood is Essential to the Strategy to Address the Resiliency Target in the Santa Barbara/Goleta Area, Thus, the Refurbishment Contract Should be Approved	12	
	B.	The Remaining Resiliency Target in the Santa Barbara/Goleta Area Could Possibly be Met Through A Least Cost – Best Fit Approach	13	

SCE-11: Phase 2 Testimony of Southern California Edison Company on the Results of its 2013 Local Capacity Requirements Request for Offers (LCR RFO) for the Moorpark Sub-Area

Table Of Contents (Continued)

Section		Page	Witness
V.	A SOLICITATION SHOULD BE INITIATED TO IDENTIFY THE ABILITY OF DISTRIBUTED ENERGY RESOURCES TO COST COMPETITIVELY ADDRESS THE RESILIENCY NEED IN THE SANTA BARBARA/GOLETA AREA	14	R. Sekhon
VI.	ELLWOOD SHOULD BE APPROVED AND NOT BE REQUIRED TO PARTICIPATE IN A SUBSEQUENT RFO	15	
Appendix A	Declaration of Ranbir Sekhon Regarding The Confidentiality of Certain Data		

I.

INTRODUCTION AND SUMMARY OF TESTIMONY

Pursuant to the Second Assigned Commissioner's Ruling and Scoping Memo ("Scoping Memo") issued on August 18, 2016, Southern California Edison Company ("SCE") submits this testimony to address questions raised in Decision ("D.") 16-05-050 and reiterated in the Scoping Memo. In D.16-05-050, the California Public Utilities Commission ("Commission" or "CPUC") found that "it is appropriate to consider the Ellwood contract in this proceeding[,]" however, in order "[t]o determine if the Ellwood contract is reasonable, it is necessary to determine if there is a reliability need that it would meet."[1] Based on this finding and to move forward with its consideration of the other Moorpark LCR contracts, the Commission deferred consideration of the Santa Barbara/Goleta "reliability matters" to Phase 2 of this proceeding.[2] SCE's Phase 2 testimony provides the requested additional information on the unique and localized transmission grid issue in the Santa Barbara/Goleta area and how Ellwood will help alleviate that issue, supporting the reasonableness of the 54 megawatt ("MW") Ellwood Refurbishment contract and the linked 0.5 MW in-front-of-the-meter ("IFOM") energy storage ("ES") contract.[3]

In its Opening Testimony in this proceeding, SCE described the unique issue facing the Santa Barbara/Goleta area;[4] an issue distinct from the long-term local capacity needs that will be caused by the retirement of the once-through-cooling ("OTC") units in the Moorpark sub-area.[5] To recap, the Goleta 230/66kV Substation serves the local load in Santa Barbara/Goleta area and is connected to the transmission system by the two Goleta-Santa Clara 230kV transmission lines. These two transmission lines are the only points of connection between the Goleta 230/66 kV

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1 D.16-05-050 at 30.
2 *Id*. at 32.
3 The record in this proceeding includes various arguments related to, and a substantial amount of information on, the reasonableness of the Ellwood Refurbishment contract, and those arguments should not be relitigated in Phase 2. *See* Exhibit SCE-1, SCE's Opening Testimony, at 43, 46-47; Exhibit SCE-2C, Appendix D: Independent Evaluator Report, at D-68 – D-69, D-71; Exhibit SCE-7, SCE's Rebuttal Testimony at 6-9; SCE Opening Brief at 11-13; SCE Reply Brief at 9-12, 18-23.
4 Exhibit SCE-1, SCE's Opening Testimony, at 6-7.
5 D.13-02-015 at 6.

Substation and the transmission grid, and thus, the sole source of transmission service for the Santa Barbara/Goleta area. The two Goleta-Santa Clara 230 kV transmission lines are on the same set of transmission towers, which increases the potential for a common-mode failure of both lines. The concern about losing the Goleta-Santa Clara 230 kV transmission lines[6] is largely due to the towers being located on rugged mountainous terrain where landslides caused by heavy rainfall (*e.g.*, 1997-1998 El Niño conditions) and frequent fires (*e.g.,* 2007 Zaca, 2008 Gap, 2008 Tea and 2009 Jesusita fires) create a heightened risk to the transmission lines and towers.

In the event of a loss of the Goleta-Santa Clara 230 kV transmission lines, a large number of customers in the Santa Barbara/Goleta area would initially lose service. However, power could be re-routed from an adjacent lower voltage electrical system and delivered to the area within one hour. Service disruption could initially affect all customers, including critical services (*e.g.*, hospitals, schools, and street lights), which would then be prioritized to be restored first. Due to the rugged terrain, repair and replacement of transmission lines and transmission towers could take up to several weeks if a natural disaster, such as a landslide or earthquake, occurs.

Notwithstanding the ability to re-route power from a lower voltage electrical system, only a portion of the forecasted 285 MW customer peak load in the Santa Barbara/Goleta area can be supported by the adjacent 66 kV subtransmission system if both Goleta-Santa Clara 230 kV transmission lines are lost. If there is a loss of the 230 kV transmission lines, SCE can import about 100 MW by rerouting power through the SCE 66 kV system. A planned upgrade of the distribution subtransmission system, which is scheduled to be complete in August 2018, will increase this amount from 100 MW to 180 MW. However, even rerouting 180 MW through the

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[6] The loss of the Goleta-Santa Clara 230 kV transmission lines is also referred to as an N-2 contingency. The N-2 of the Goleta-Santa Clara 230 kV lines is compliant with the North American Electric Reliability Corporation ("NERC") Reliability Standard TPL-001-4, which allows customer load to be dropped without a stated timeframe for restoration.

66 kV system would not allow for all of the local area peak load to be met; there would still be a 105 MW shortfall beginning in 2018, which is when the current Ellwood contract expires.[7]

In response, SCE developed a strategy to provide resiliency in the Santa Barbara/Goleta area. In this context, resiliency refers to the ability of the electrical system to respond to an emergency event so that customers maintain service. SCE's strategy to help address the 105 MW shortfall – the resiliency target – in the Santa Barbara/Goleta area involves the following efforts: (1) obtain approval of the Ellwood Refurbishment contract to address both capacity and short circuit duty constraints; (2) pursue cost-competitive Distributed Energy Resources ("DER") in the Santa Barbara/Goleta area; and (3) consider the implementation of any cost-effective traditional electric system upgrades As indicated, cost will be a factor in determining whether the entire 105 MW shortfall is met.

Chapter II of this testimony provides background and procedural history. Chapter III discusses the unmet resiliency target in the Santa Barbara/Goleta area. Chapters IV and V explain SCE's plan to address the unmet resiliency target, and Chapter VI addresses the basis for prompt approval of the Ellwood Refurbishment contract.

[7] SCE is currently under contract with NRG to receive 54 MW of capacity from Ellwood through May 2018. The Commercial Operation Date of the Ellwood Refurbishment contract is June 2018.