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Commissioner	:	Michel Peter Florio
Admin. Law Judge	:	David M. Gamson
DRA Witnesses	:	Robert M. Fagan

DIVISION OF RATEPAYER ADVOCATES
CALIFORNIA PUBLIC UTILITIES COMMISSION

REPLY TESTIMONY

OF

ROBERT M. FAGAN

Order Instituting Rulemaking to Integrate and Refine Procurement Policies and Consider Long-Term Procurement Plans

(R.12-03-014)

San Francisco, California
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585852

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SUMMARY

Q. What is the scope and purpose of this testimony?

A. This testimony is in reply to testimony filed by other parties on June 25, 2012. In particular, it responds to Southern California Edison Company (SCE), AES Southland (AES), EnerNOC, California Environmental Justice Alliance (CEJA), The Utility Reform Network (TURN) and San Diego Gas & Electric Company (SDG&E) filings. In response to those filings, the scope of this testimony includes:

1) analysis of the Western Los Angeles (LA) Basin local capacity requirement (LCR) sub-area need;

2) information on procurement timing and the importance of allowing a flexible approach to any required procurement; and

3) discussion of how significantly-reduced need for fossil-fueled generation capacity at Western LA Basin once-through cooling (OTC) sites, or equivalent Western LA Basin sites (relative to current total fossil-fired capacity at OTC sites in the Western LA Basin LCR sub-area) can improve the bargaining position of the purchaser (e.g., SCE), provide an incentive for greater competition among potential suppliers and thus help to lower overall ratepayer costs for any needed procurement.

Q. Please summarize your key conclusions.

A. Based on examination of June 25, 2012 filed testimony and related additional analysis, I conclude:

- The Western LA Basin does show a need for new resource support, but not at the levels suggested by SCE and AES's testimonies (although notably, SCE seeks authorization only up to the California Independent System Operator's (CAISO's) recommended amounts, and will not buy if

it is not needed).[1] The ultimate level of fossil-fueled resource requirement will depend on how energy efficiency (EE), demand response (DR), combined heat and power (CHP) and distributed generation (DG) are used in the western part of the LA Basin. A simplified analysis of the loads and resources in the Western LA Basin indicate that possibly as much as 169 MW of new peaking resources could be required by 2021, and 278 MW by 2022, with 2020 the first year of need, when including the impact of uncommitted EE, DR and CHP to lower Western LA Basin LCR needs relative to what is indicated in CAISO's analysis.

This amount of resource need could be considerably lower if SCE implements additional Western LA Basin DG, and transmission reinforcement options. Furthermore, it is not clear that authorization for some fraction of this level of resources is required in 2012 to meet a projected 2020 need, since conventional peaking resources located at OTC sites in the West LA Basin could be procured in less than eight years. Thus, exploration of non-fossil resource procurement options (i.e., those further up the State's preferred loading order; and transmission options) can and should continue prior to such authorization.

- While SCE's testimony states that CAISO's analysis of 2021 need for the LA Basin is reasonable,[2] SCE nonetheless provides considerable support in numerous places in its testimony that actual LA Basin LCR need can vary considerably.[3] And while AES Southland accepts CAISO's analysis,[4] CAISO's analysis actually reflects a "worst case" situation,

[1] 2012 Long-Term Procurement Plan Testimony of Southern California Edison Company on Local Capacity Requirements, June 25, 2012 (SCE Testimony) at 2, requesting authority to "procure in the Western LA Basin area for up to 2370 MW [most effective sites] and up to 3,741 MW [less effective sites];". Prepared Testimony of Hala N. Ballouz on behalf of AES Southland (AES Testimony) at 2: "a prompt need for procurement of a minimum of 2,400 MW for the Western Los Angeles Basin…"

[2] SCE Testimony at 4-5.

[3] SCE Testimony, e.g., at 4: 4-6, 5: 9-21, 6: 18-20, 7: 1-15, 8: 19 – 9: 14, 9: 15-16.

[4] AES Testimony at 2.

where little or no additional demand-side, distributed generation, or transmission resources are available for 2021. Thus, based on DRA's analysis and SCE's own testimony, it is more likely that the sub-area Western LA Basin and the overall LA Basin LCR need will be lower than what CAISO indicates, as some portion of these other resources are likely to come to fruition. Subsequently, any level of initial Western LA Basin fossil-based procurement authorization from the CPUC should include the likelihood that non-fossil resources including demand-side, DG, and transmission resources will lower the ultimate 2021 resource need for the Western LA Basin.

- TURN and SCE both reference the importance of flexibility in procurement.[5] TURN furthermore recognizes the potential for market power exercised by those at existing fossil OTC sites, and how both the purchase of only minimum need, along with purchaser flexibility will help to minimize any potential market power exercise, and thus minimize the costs of procuring LCR area resources.[6] SCE states that the Commission should avoid what can be construed as possible stranded generation costs.[7] Taken together with the Western LA Basin minimum need amounts as illustrated in the Western LA Basin load and resource analysis in this testimony, and considering the potential for other resources to significantly lower Western LA Basin need LCR need, the Commission should consider a minimal procurement authorization at this time. I agree that the process for procuring should be flexible, but SCE has requested authorization for more than what is needed under all but the most extreme

[5] Prepared Testimony of Kevin Woodruff on Behalf of the Utility Reform Network Regarding Track 1- Local Reliability, June, 25, 2012,witness Kevin Woodruff (TURN) at 3: 13-16; SCE Testimony at 2:14-16.

[6] TURN Testimony at 3: 5-23.

[7] SCE Testimony at 4: 18-21, "The Commission should avoid making long-term commitments to new generation procurement that could subsequently be rendered significantly less valuable by changed circumstances. The Commission should authorize procurement, up to the range identified by the CAISO, but not require procurement of a specific amount of MWs within a specific timeframe."

conditions. Minimizing the procurement authorization will help to ensure the most cost-effective procurement, to buy only what is needed, and to buy it only when it is clear that it is truly needed.

- SCE states that it would prefer a forward-looking procurement vehicle for capacity needs.[8] It references a CAISO-run centralized market, but does not offer any firm proposal.[9] While SCE seems to link these two issues, they are actually two different topics. DRA does not support this centralized market approach, and the Commission has previously decided against such approach, as discussed in Mr. Spencer's testimony. However, DRA is willing to consider alternatives for resource adequacy reforms in Track 2 or 3 of this proceeding but does not support a CAISO-run centralized market.

REPLY TO AES AND SCE TESTIMONIES - WESTERN LA BASIN ANALYSIS

Q. Did SCE and AES address Western LA Basin resource needs?

A. Yes. In their testimony, they supported a range of procurement authority for resources in the Western LA Basin.[10]

Q. Do you agree with the range of resource need for the Western LA Basin indicated in their testimony?

A. No, because in general, to support a resource need for the Western LA Basin, they relied upon the CAISO analysis which overstates the need. In my Table RF-1-Reply, below, I find a lower potential resource need in the Western LA Basin based on a load and resource analysis of that LCR sub-areA. Row O of Table RF-1-Reply shows a possible 2021 Western LA Basin resource need of 169 MW when directly considering EE, DR and CHP resources. If transmission

[8] SCE Testimony at 1: 17-19.

[9] SCE Testimony at 17: 20-21.

[10] SCE Testimony at 2: 17-19. AES Testimony at 2.

support and additional preferred resources are obtained by or before 2020, the date of key OTC unit retirement, then the resource need could be even lower.

Table RF-1-Reply Load and Resource Balance for the West LA Basin Sub-Area, 2012-2022

Scenario: W LA Basin LCR Sub-Area based on CAISO 2021 peak load, May 30 2012 CEC Load Forecast, SCE DAWG EE and DR, CAISO Transmission Imports to W LA Basin, 2013 LCT supply resources, ICF CHP													
Row	**Item**			**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
A	Gross peak load West LA Basin LCR sub-area, 1 in 10, CAISO 2021 value, and CEC trend for other years, MW			12,113	12,410	12,595	12,769	12,961	13,129	13,301	13,482	13,664	13,842	14,014
B	Uncommitted EE (West LA Basin proportionate share of total LA Basin), MW			3	44	102	189	266	332	380	454	522	582	638
D	Net peak load (gross peak minus uncommitted EE), MW (A - B)			12,109	12,366	12,493	12,580	12,695	12,797	12,921	13,028	13,142	13,260	13,376
E	Transmissionimport, MW (CAISO, W. LA Basin, Env. Case for 2021, and 1000 MW increase in 2015 from L&R			5,278	5,278	5,278	6,278	6,278	6,278	6,278	6,278	6,278	6,278	6,278
F	Gross LCR need before demand response, MW (D - E)			6,831	7,088	7,215	6,302	6,417	6,519	6,643	6,750	6,864	6,982	7,098
G	Demand response reduction (SCE Load Impact Final Report, W LA %)			764	871	937	939	940	940	941	941	942	942	942
H	Net LCR supply need after DR resources (F - G)			6,068	6,217	6,279	5,363	5,477	5,579	5,702	5,808	5,922	6,040	6,156
I	Projected 2013 NQC supply (CAISO 2013 LCT study, CAISO 2011-12 Tx plan load flow data)			9,574	9,574	9,574	9,574	9,574	9,574	9,574	9,574	9,574	9,574	9,574
	Retirement path: Alamitos	2,010	MW									(2,010)	(2,010)	(2,010)
	Retirement path: Huntington Beach	904	MW		(452)	(452)	(452)	(452)	(452)	(452)	(452)	(904)	(904)	(904)
	Retirement path: El Segundo	670	MW		(335)		(670)	(670)	(670)	(670)	(670)	(670)	(670)	(670)
	Retirement path: Redondo Beach	1,356	MW									(1,356)	(1,356)	(1,356)
J	OTC Total Retirements (Siao, implemention plans)	4,940	MW	-	(787)	(452)	(1,122)	(1,122)	(1,122)	(1,122)	(1,122)	(4,940)	(4,940)	(4,940)
	El Segundo repower (unit 3 credits 2013, unit 4 credits 2017)				280	280	280	280	560	560	560	560	560	560
	Walnut Creek (Huntington Beach credits, assume 2018 COD)									500	500	500	500	500
K	Total estimated Approved / Under Construction Fossil Resources W LA			-	280	280	280	280	560	1,060	1,060	1,060	1,060	1,060
L	New RPS in W LA Basin													
M	New CHP in W LA Basin (SCE Base, proport to W LA, Yakov/ICF report			27	41	55	68	89	109	130	151	171	178	184
N	Total net supply (I + J + K + L + M)			9,601	9,108	9,457	8,800	8,821	9,121	9,642	9,663	5,865	5,872	5,878
O	**Balance: Base Need (+ is surplus, - is deficiency) (N - H)**			**3,534**	**2,891**	**3,178**	**3,437**	**3,344**	**3,543**	**3,940**	**3,854**	**(57)**	**(169)**	**(278)**

Q. Please explain the information in Table RF-1-Reply.

A. Table RF-1-Reply is analogous to the load and resource balance table I presented in my initial testimony for the overall LA Basin and the Big Creek / Ventura LCR areas, but this table is for a smaller LCR sub-areA. Row A contains the 1-in-10 peak load forecast values. I use the 2021 Western LA Basin peak load (plus losses) value that CAISO uses for its LCR analysis, 13,842 MW.[11] The rest of the years of Row A peak load are derived from this 2021 value, based on the year-to-year percentage changes in 1-in-10 peak load seen in the California Energy Commission's (CEC) May 30, 2012 final forecast of peak load by balancing authority,[12] which contains a breakout for the LA Basin LCR areA. I assume that year-to-year changes in peak load in the Western LA Basin sub-area are proportionate to year-to-year changes in peak load for the overall LA Basin LCR areA. Row B contains an estimate of Western LA Basin uncommitted energy efficiency based on SCE's estimates as provided at the June 18, 2012 Demand Analysis Working Group (DAWG) meeting, as noted in my Initial Testimony, and it presumes that such EE in the Western LA Basin sub-area is proportional (by peak load) to the overall LA Basin uncommitted EE resource. Row D computes a net peak load in the Western LA Basin sub-area by subtracting Row B from Row A.

[11] Attachment A. CAISO response to DRA third set of discovery requests, question 1d.

[12] Attachment B. CEC Form 1.5d - Statewide Final California Energy Demand Forecast, 2012 - 2022 1 in 10 Net Electricity Peak Demand by Agency and Balancing Authority (MW), May 30, 2012.

Row E is the assumed transmission import into the Western LA Basin sub-area, based on the CAISO LCR and (Load + Losses) values used in their LCR sub-area analysis. The transmission import value I assume is simply the residual between CAISO's local generation requirement, and the peak load (plus losses) in the sub-area, following from first principles. Table RF-2-Reply below shows the import value for the four different renewable portfolio standards (RPS) portfolios. I use the environmentally-constrained portfolio to demonstrate the load and resource balance. This value, 6,278 MW, is for 2021; CAISO indicates that the Western LA Basin import amount will increase by 1,000 MW in 2015 due to Tehachapi upgrades, thus I use lower import values for years prior to 2015.

Table RF-2-Reply. Western LA Basin Assumed Transmission Imports, 2021

West LA Basin LCR sub-area, MW	Traj.	Env Constr.	ISO Base	Time Const.
Load + Losses (CAISO response to DRA discovery 3rd set, Quest. 1d.)	13,842	13,842	13,842	13,842
LCR (Sparks Testimony Table 1)	7,797	7,564	7,517	7,397
Implied Transmission Import into local area, ((load+losses) - LCR)	6,045	6,278	6,325	6,445

Row F then represents a gross LCR need, prior to subtracting out the effect of demand response resources. Row G contains the estimate of DR resources, and Row H subtracts the DR resources from the gross LCR need to determine a "net" LCR need for the Western LA Basin.

Row I contains the Western LA Basin supply resources from the 2013 Local Capacity Technical Analysis, 9,574 MW.[13] Row J lists the retiring OTC resources, and Row K lists the additional El Segundo and Walnut Creek resources. I conservatively assume no additional RPS resources (Row L = 0 for all years). Row M contains uncommitted CHP resources that are not accounted for in the load forecast. Row N is the total net supply, and Row O shows the balance, or resource need or surplus by year.

Q. Is the need in the Western LA Basin a peaking need?

A. In general, yes, the need can be met by resources such as DR, EE, DG, CHP, storage resources, or conventional peaking generation units that will lower peak demands. Increased transmission support into the sub-area can also meet some of the need. For example, Mr. Powers of CEJA noted that in 2007, most of the OTC units (excluding the nuclear facilities) ran less than 10 percent of the time.[14] More recent data from the CEC based on output data for the 2020-2008 period, confirms that in general, the fossil-fired OTC units have been utilized much less frequently in recent years.[15]

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[13] Attachment C. This value (9,574 MW) plus the additional two resources (Walnut Creek and El Segundo repower) sums to 10,628 MW and is the aggregate Western LA Basin supply resources that are present in CAISO's Environmental Case load flow run.

[14] Prepared Testimony of Bill Powers on Behalf of CEJA Regarding Track 1- Local Reliability, June 25, 2012 (CEJA (Powers)) at 30.

[15] Attachment D. David Vidaver, Mike Ringer, Michael Nyberg, Darryl Metz, Connie Leni. *The Role of Aging and Once-through-Cooled Power Plants in California – An Update*. California Energy Commission. CEC-200-2009-018 (2009). Table B-2: Aging and Once-Through Cooled Power Plant Annual Capacity Factor (Percent), at B-3.

REPLY TO SCE TESTIMONY AND ASSIGNED COMMISSIONER RULING - VARIOUS ISSUES

Q. What key issues did SCE raise? Please discuss.

A. SCE's testimony addresses numerous major issues of concern listed below. In general, I agree with much of SCE's testimony, although I disagree with SCE's conclusion that a procurement authority based on CAISO's resource need values is appropriate. The following points identify and discuss each of these areas.

- **Transmission alternatives**. SCE states that transmission alternatives can lower LCRs and should be analyzed.[16] I strongly agree, and recommend that the Commission prioritize this type of analysis. I also note that SCE states that it takes 7 to 10 years to plan, engineer, license, and build new transmission.[17] Generally, I agree that it may take seven to ten years, or more, to plan, permit, and construct a new high voltage transmission line utilizing a new right-of-way. However, a wide range of transmission upgrades such as system reinforcement alternatives, reconfiguration options, and improved coordination (between operators) mechanisms can improve the overall performance and transfer capacity of the transmission system without requiring the particularly-long lead time generally associated with new major high-voltage transmission lines. These transmission system upgrade options include but are not limited to: (i) reinforcement of existing overhead transmission lines without requiring any new right-of-ways or even new towers (e.g., reconductoring); (ii) additions of equipment to existing substations, such as but not limited to, new transformers, and replacement of certain existing equipment that limits performance (such as disconnect switches or wave traps) with higher-rated equipment; (iii) additional reactive support equipment, either static or dynamic, at strategic locations across the system; (iv) reinforcement of lower-voltage transmission systems to mitigate

[16] SCE Testimony at 8: 19 to 9: 18.

[17] SCE Testimony at 15: 9-11.

against contingency effects from loss of elements on the higher-voltage transmission system; (v) improved coordination of in-Basin operations, especially between CAISO and LADWP if operational efficiency improvement opportunities exist, and also between CAISO and the Imperial Irrigation District; and (vi) underground transmission additions or reinforcements of existing underground circuits.

DRA recognizes that CAISO, SCE and other transmission stakeholders are familiar with these alternatives.[18] Given the State's OTC plant retirement and 33% RPS policy initiatives that would greatly benefit from increased transmission capabilities, DRA recommends that the Commission immediately focus on these issues and consider the rigorous analysis employed by CAISO, SCE and other transmission stakeholders to ensure that maximum utilization of transmission resources is achieved in the LA Basin.

- **Input Assumptions**. SCE states that input assumptions to CAISO's LCR modeling approach can change and lower LCR, especially demand-side assumptions for EE, DR, CHP, and DG.[19] While SCE indicates that the LCR need can move up or down, I assert that, in general, reasonable changes to the CAISO's assumptions will lead to lower LCR or resource needs, since CAISO's assumptions are already conservative (i.e., CAISO assumes no transmission reinforcement beyond what is planned now, and no uncommitted EE/DR/CHP).[20] I note that CAISO is also conservative on supply-side resource assumptions, as for example, additional DG could be in place in the Western LA Basin by 2021.

[18] For example, Attachment F contains parts of section 5.5 from the CAISO 2010/2011 Transmission Plan that address Western LA Basin transmission mitigation options.

[19] SCE Testimony at 5-8.

[20] SCE Testimony at 8: 15-17.

- **Timing**. The timing of purchase is important, since changing conditions can give rise to different needs.[21] I agree with SCE in this regard; flexibility in procurement is important because of changing needs over time. I also think, however, that there is relatively low risk in waiting to procure lower-priority fossil resources until it is clear they are needed. An eight-year window before need arises suggests that the issue of concern is financial, not reliability. I see the following risks when considering procurement timing:
    - There is very little, if not zero reliability risk, of waiting to procure at this point in time because the need is eight years away.
    - While in theory there may be a risk of paying too much if procurement waits until the last "just-in-time" window of opportunity, it seems clear that there is at least time to wait until the 2014 LTPP cycle to consider procuring peaking resources that may be required for 2020.
    - There is a likelihood of reduced costs of overall procurement if preferred resources[22] are given a chance to be procured first, relative to the lower-priority fossil resource option.
- **Market power concerns**. Minimizing advanced procurement quantities can help to mitigate concerns of market power at the few fossil-fueled OTC sites that are owned by just a few participants. Greater competitive outcomes can be seen if the quantity procured is relatively lower than the current infrastructure supports. The current OTC plant infrastructure at the four fossil-fueled OTC sites in the Western LA Basin (El Segundo, Redondo Beach, Huntington Beach, Alamitos) is roughly 5,000 MW.

[21] SCE Testimony at 9: 15 to 10: 11.

[22] Cal. Pub. Util. Code Section 454.5(c)(9)(C) lists the preferred resources, specifically "all available energy efficiency and demand reduction resources that are cost effective, reliable, and feasible."

- **Appropriate level of advanced procurement**. SCE notes that it thinks it is reasonable to allow procurement of up to 3,741 MW in the Western LA Basin. DRA strongly disagrees that this is the maximum level of procurement authority that should be authorized. Allowing this level of procurement authority would set a relatively high bar, and potential suppliers would have greater bargaining position at this quantity benchmark. For many of the reasons SCE sets forth[23] – transmission mitigation potential, demand-side resource alternatives, CHP and DG options – better consumer outcomes are likely if procurement authority is kept to a minimum now.

- **Big Creek / Ventura LCR AreA.** SCE supports addressing the Big Creek/ Ventura LCR area needs in the next LTPP cycle.[24] DRA agrees.

Q. Does SCE address procurement methods in its filing? Please comment.

A. Yes. SCE states that procurement methods should include AB 1576[25] cost-of-service contracts, though they also state that there is no need to establish the form of such contracts at this time.[26] SCE also states that they prefer a competitive solicitation approach, but they are concerned that circumstances could make a fully competitive procurement structure difficult.

Q. Does DRA have a response to the questions posed in the Assigned Commissioner's July 13, 2012 Ruling?

A. DRA has not finalized its position on the best means to conduct competitive solicitations, or other solicitation mechanisms, under a long-term contracting framework. DRA offers some initial thoughts in response to the Assigned Commissioner's Ruling[27] and in response to SCE's initial testimony sections on

[23] SCE Testimony at 21-22.

[24] SCE Testimony at 10-11.

[25] Assem. Bill No. 1576 (2005-2006 Reg. Sess.) approved by Governor, Sept 25, 2005.

[26] SCE Testimony at 21: 15-23.

[27] Assigned Commissioner's Ruling, July 13, R.12-03-014.

contracting mechanisms for consideration in this Track I of the 2012 LTPP proceeding. These positions could evolve as we review responding testimony in these areas. The following questions and answers address these issues.

Q. Could cost-of-service contracting under AB 1576 work in tandem with competitive solicitation mechanisms?

A. Yes. SCE could procure needed capacity resources under a competitive framework that could encompass a number of alternative or even complementary mechanisms, such as use of Requests for Proposals (RFPs) and/or use of bilateral negotiations. The notion of a competitive procurement structure does not necessary imply a rigid, structured RFP as the sole vehicle to obtain resources, for example; nor does it imply a process limited solely to direct negotiations with fossil OTC site owners.

SCE could enter into negotiations with both Western LA Basin fossil OTC site owners (AES and NRG), while simultaneously issuing a more generic RFP from competitors to the OTC site owners. Exposing OTC site owners to such competitive pressures would serve as a critical check on potential market power exercise. Thus, SCE could be in a position to use its bargaining power to ensure the lowest cost option – or at minimum a "least cost / best fit" option – to obtain the best results for ratepayers for any capacity requirements that may be needed. Allowing SCE a significant, but not unlimited, degree of flexibility to structure such mechanisms could help to minimize costs for ratepayers.

DRA understands that once such contracting structures are in place, and Commission-approved procurement options are exercised, the AB 1576 mechanism could then be used to recover the costs for any fossil OTC site repowering contract in SCE rates as approved by the Commission. For other contracts, the AB 1576 mechanism could not be used for cost recovery purposes (as AB 1576 is limited to OTC sites that are repowered). Alternative cost allocation mechanisms must then be used for those contracts.

Q. Do you agree with SCE's construct for considering procurement, and their suggested approach? How should the Commission direct any authorized procurement? Please comment.

A. DRA agrees in general with the need to maximize competitive solicitation vehicles, to the extent that that form of procurement is workable. While there may be just two owners of fossil OTC plant sites in the Western LA Basin, there are other locations in the Western LA Basin – or even in the proximate overall LA Basin - where smaller capacity resources (e.g., but not limited to, storage or CHP resources or PV that reduces peak load) can and should be able to compete with the conventional fossil OTC sites for long-term contracts. In general, distributed-scale sources of net qualifying capacity can be just as valuable for reliability purposes as non-distributed-scale (i.e., conventional tens or multi-hundreds of MW size) sources located at the fossil OTC plant sites. While there is legitimate concern about the electrical locations of resources, and it is true that OTC sites are currently preferentially located with respect to the Western LA Basin transmission grid,[28] solicitations for competing capacity resources over long-term contracting term horizons should nonetheless allow for as wide an array of potential supply market participants as is possible, to maximize the ability of competitive pressures to minimize costs for consumers. The Commission should not prematurely give undue weight to existing fossil OTC sites that have greater electrical effectiveness in mitigating against current transmission constraints. Constraints can change, and supply and demand resource configurations can change.[29] As I noted in my initial testimony,[30] the results from using power flow simulation tools are at best imprecise for longer-term planning periods, including 2021 and periods beyond.

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[28] SCE Testimony, at 21: 21-22.

[29] E.g., TURN Testimony at 8. While this section of Mr. Woodruff's testimony was addressing the potential elimination of the LA Basin local area, and the Western LA Basin would become the new local area, it illustrates that LCR boundaries and the constraints that define them change over time. This is particularly true for a 20-year contract period, e.g., as may be contemplated in any new long-term resource procurement structure under consideration in this 2012 LTPP docket or other venues.

[30] Fagan initial Testimony at 9: 9-10.

Q. The Assigned Commissioner's Ruling referenced whether barriers exist to ensuring effective all-source Request for Offers (RFOs), and whether the Commission needs to be specific about resource characteristics when considering procurement for local reliability needs.[31] If the Commission allowed for a wide array of potential participants in any competitive solicitation for new capacity resources for local areas, wouldn't that make the definition of the particular capacity product more difficult, given that different resources have different characteristics and abilities to help with LCR area reliability concerns?

A. Potentially, yes. There are, however, some core attributes that would be required that could be readily prescribed, independent of the specific type of resource. In general as long as the resource could demonstrate summer peak period load reduction or supply injection capability during summer peak times, subject to some form of availability performance, it would meet minimum thresholds for viability as a local area capacity resource. The current definition for what can be considered a net qualifying capacity (NQC)[32] resource is a likely starting point. The Commission should be specific about the characteristics of the resources that can participate in procurement processes, up to the level at which the Commission grants flexibility to SCE in any procurement approach. Essentially, DRA believes that the Commission should provide *ex ante* guidance to SCE that at a minimum will clearly indicate minimum thresholds of resource performance (e.g., including but not limited to availability during summer peak hours) if a resource is to participate in any solicitation process.

[31] Assigned Commissioner's Ruling, topic area 3 at 2.

[32] Net Qualifying Capacity is defined as "The amount of a resource's capacity that can actually be counted for RA compliance filings. This represents the qualifying capacity using the Commission's counting rules adjusted for deliverability." California Public Utilities Commission AB 57, AB 38 and SB1078 Procurement Policy Manual 2-1-2.

OTHER STAKEHOLDER EVIDENCE

Q. What other evidence of note is presented, and how does it affect procurement decisions?

A. Several other parties present testimony supporting the conclusion that minimal procurement of resources is needed in the LA Basin, and that no procurement is required in the Big Creek/Ventura area until at least 2014. EnerNOC addresses demand response.

Ms. Tierney-Lloyd of Enernoc states in her testimony that by excluding all but the use of Emergency DR in its analysis, CAISO does not give due consideration to DR resources for supporting local reliability needs. She states that in addition to being available for emergencies, DR resources can be available in instances of high temperatures, high prices, local or system transmission or distribution outages, heat rate triggers, or at the discretion of the utility.[33] She also states that CAISO did not consider the integration of retail DR resources, nor did it consider dispatchable demand response. Ms. Lloyd states that CAISO does have the information to incorporate these forms of DR into its determination of LCR, using the approved investor owned utility (IOU) budgets for implementation of DR and Smart Grid Deployment Plans.[34] She states that by choosing not to incorporate additional DR resources in its analysis of local capacity need, CAISO has overstated the need for thermal resources.[35]

Mr. Hoffman of EnerNoc provides evidence from other jurisdictions that DR resources can and do provide reliability services beyond those contemplated in CAISO's analysis. He states that various markets in AESO, PJM, ERCOT, the United Kingdom, and New Zealand have implemented fast response demand-side resources with dispatch requirements of 10 minutes or less,[36] which supply

[33] Prepared Testimony of Mona Tierney-Lloyd on Behalf of EnerNOC, Inc. Regarding Local Reliability Track 1, June 25, 2012, (EnerNOC testimony (Tierney-Lloyd)) at II-6.

[34] EnerNOC Testimony (Tierney-Lloyd) at II-7 to II-8.

[35] EnerNOC Testimony (Tierney-Lloyd) at II-9.

[36] Prepared Testimony of Andrew Hoffman on Behalf of EnerNOC, Inc. Regarding Local Reliability Track 1, June 25, 2012, (EnerNOC testimony (Hoffman)) at II-1.

non-spinning reserves, spinning reserves, and under-frequency response, and have some penetration of load following and regulation services, which is well beyond the emergency and peak-shaving currently used in CaliforniA.[37]

Q. Do you agree with the EnerNOC characterization of CAISO's failure to properly consider DR resources when analyzing resource needs?

A. Yes, in general. I agree that DR resources can help to reduce the need for other resources, in particular fossil-fired peaking resources, to help meet LCR needs. I note that CAISO does acknowledge that DR resources "…could be used to reduce the replacement OTC needs if the demand response is in electrically equivalent locations and if they materialize and are determined to be feasible for mitigation".[38] My analysis of resource need directly includes the effect that DR resources can have on the need for new fossil-fired capacity. I also note that while Mr. Hoffman references the ability of "fast" DR resources to provide an ancillary service akin to spinning reserve, for the purpose of procurement concerns, the ability of DR to reduce peak load is sufficient, regardless of whether or not it is a fast-acting form of DR that can provide spinning reserves.

Q. Please briefly characterize key evidence from CEJA.

A. Mr. Powers of CEJA testifies that CAISO's analysis fails to consider whether preferred resources under California's loading order could be used to meet LCR needs.[39] He states that at a minimum, CAISO should have used the same assumptions regarding the availability of uncommitted EE (2,648 MW), DR (2,842 MW), and CHP (322 MW in SCE territory and 360 MW of incremental demand-side CHP) in the SCE territory that were used in the 2010 LTPP.[40] Mr. Powers says that CAISO also should have modeled higher levels of

[37] EnerNOC Testimony (Hoffman) at III-1.

[38] Sparks Testimony at 15: 28-30.

[39] CEJA (Powers) at 30, 32.

[40] CEJA (Powers) at 2-13, 26-27.

distributed photovoltaics (PV) and energy storage.[41] He concludes that reliance on CAISO's modeling assumptions will lead to over-procurement of fossil-fuel resources and will crowd out preferred resources from the market, in violation of California's loading order. Reading Mr. Powers' revised assumptions regarding preferred resources together with the calculations of LCR need for the overall LA Basin provided by Ms. May, also testifying on behalf of CEJA, shows that there is no longer a need for any LCR procurement in the overall LA Basin.[42] CEJA also notes that additional transmission upgrade options should be evaluated, including a reference to CPUC staff comments on the Draft 2012-13 CAISO Transmission Plan[43] in which CPUC staff recommend additional transmission analysis to assess transmission options to help reduce LCR need in sub-areas (such as the Western LA Basin).

Q. Do you agree with CEJA's characterization of CAISO's failure to consider these referenced resources when assessing resource need for the LCR areas?

A. Yes, in general I agree. I note that CEJA witness Ms. May does not directly address the Western LA Basin sub-area in her recommended modifications of CAISO's LCR analysis, on page 2 of her testimony. I include an assessment of Western LA Basin sub-area needs in this Reply Testimony.

[41] CEJA (Powers) at 2-13, 14-25

[42] Prepared Testimony of Julia May on Behalf of CEJA Regarding Track 1- Local Reliability, June 25, 2012 (CEJA (May)) at 2.

[43] Attachment E. Comments of the Staff of the California Public Utilities Commission on the Draft Study Plan (February 21 Document and February 28 Meeting), March 14, 2012.

Q. SDG&E suggests that only resources with a "high degree of certainty" be considered in developing local reliability need.[44] Do you agree?

A. No. As noted in my initial testimony, for planning purposes it is appropriate to use demand-side resources that currently are characterized as "uncommitted" EE, DR and CHP when conducting procurement analyses for longer-term periods such as 2021. I also note that such resources will help advance the goals of the California Global Warming Solutions Act of 2006, AB 32, by producing lower Green House Gas (GHG) emissions than fossil-fueled resources.

There is an opportunity cost to either premature procurement or over-procurement of the least-preferred resource in the state's loading order - fossil-fueled conventional resources. Dedicating resources to such procurement can hinder the achievement of the state's preferred resource procurement goal, the specific "uncommitted" resources to which SDG&E refers. It could reduce the amount of funding made available to procure EE and DR. Procuring too much fossil-fueled resource capacity, or procuring it too soon, will diminish the avoided-capacity-cost benefits that accrue to demand-side resources such as DR and EE. The Commission approves the procurement of these resources in large part because of the benefit that accrues in the displacement of conventional fossil-fueled capacity and energy resources. Uncommitted EE, DR and DG are reliable, commercially mature resources that are labeled as "uncommitted" only in the structure of the IOU procurement process. DRA believes that it is not enough to support the preferred resources in concept only. Planning processes must recognize their effect on avoiding procurement and/or construction of conventional resources.

Q. Please briefly characterize some of the key points of the testimony of Mr. Woodruff of TURN.

A. In his testimony on behalf of TURN, Mr. Woodruff recommends a flexible approach to procurement, recognition of market power considerations in the procurement process, and the need to seek the most competitive replacements for

[44] SDG&E testimony at 5-8.

OTC resources.[45] Mr. Woodruff emphasizes that flexibility is important when conducting procurement and it would allow SCE to meet moving LCR targets, to consider non-fossil alternatives, and to mitigate market power concerns. Mr. Woodruff recommends setting minimum and maximum procurement targets to ensure that needed, but not excessive, capacity is procured and to provide purchasers flexibility when negotiating with bidders. Procurement of lower amounts of capacity should be allowed if prices of one or more bids greatly exceed a reasonable cost. Mr. Woodruff also recommends the use of requests for procurement (RFPs) that include both conventional and non-fossil alternatives to select the most competitive replacements for OTC resources and to ensure that all potential resource options are considered.

Q. Do you agree with Mr. Woodruff's recommendations?

A. In general, yes. I note that there are important synergies between the procurement process considered by the CPUC, the level of LCR need in the Western LA Basin sub-area, and any flexibility to the process of procurement that the CPUC may grant to SCE. Lower LCR sub-area need, flexible procurement timing, and allowing for competitive processes to procure at least cost will help to ensure a minimum cost to consumers for any required need.

RECOMMENDATIONS

Q. Please summarize your recommendations.

A. DRA recommends the following:

[45] TURN Testimony at 3, 7-8, 22.

1. The CPUC should request that CAISO and SCE conduct a comprehensive, detailed analysis, as soon as possible, on the realistic and reasonable transmission reinforcement alternatives (inclusive of both real power and reactive power options) within the LA Basin that can be completed by or prior to OTC retirement dates at the end of calendar year 2020, or in the near vicinity of those dates. This study should be completed prior to or by the commencement of the next LTPP process (2014 LTPP), to allow its conclusions to be considered as part of long-term planning. A major thrust of this analysis should be examining options available to reduce or eliminate constraints between the Western LA Basin sub-area, and the overall LA Basin LCR areA.[46]

2. After determining the ability of transmission support alternatives to reduce Western LA Basin LCR needs, the Commission should then authorize -- if warranted after assuming ongoing, aggressive loading order resource implementation -- a minimum level of fossil-based peaking plant procurement authority, at existing OTC sites or similarly effective (electrically) sites.

    a. Independent of the outcome of such transmission reinforcement studies, if the CPUC still wishes to authorize procurement of Western LA Basin fossil-fired peaking during Track I of this 2012 LTPP, it should consider a West LA Basin need that is capped at roughly 169 MW in 2021 or 278 MW by 2022, based on the load and resource analysis contained in this testimony. Given the ability to secure peaking-like resources in less than eight years, the Commission should consider authorizing only a fraction of this 169-to-278 MW benchmark value. While numerous procurement process options are available, the CPUC could authorize SCE to undertake this very limited competitive procurement of peaking resource at this time.

[46] This analysis should be an update to, and an expansion of, the work conducted as part of the CAISO 2010/2011 Transmission Plan (May 18, 2011), Section 5.5.1 "Mitigations for Western LA Basin Overloads and Voltage Concerns", starting at p. 274 of that document. See Attachment F.

3. The CPUC should consider a forward market procurement vehicle in either a Track 2 or 3 of this proceeding. The Commission should avoid consideration of a centrally-cleared capacity market construct. In accordance with historical practices, the Commission should continue with bilateral-based, longer-horizon and longer-term-period capacity obligation constructs.

Q. Does this conclude your testimony?

A. Yes.

WITNESS QUALIFICATIONS

Q. Please state your name, position and business address.

A. My name is Robert M. Fagan. I am a Senior Associate with Synapse Energy Economics, Inc., 485 Massachusetts Ave., Cambridge, MA 02139. I have been employed in that position since 2005.

Q. Are you the same Robert M. Fagan who testified in the initial filing of June 25, 2012?

A. Yes.

ATTACHMENTS

A. CAISO data responses to DRA third set.

B. Pages from May 31, 2012 CEC Final Forecast by Balancing Authority, Form 1.5d, 1 in 10 peak load.

C. 2013 Local Capacity Technical Analysis, Section 8, LA Basin Area, containing resource listing and sub-area indication.

D. Pages from CEC report Vidaver, David, Mike Ringer, Michael Nybertg, Darryl Metz, Connie Leni. 2009. *The Role of Aging and Once-through-Cooled Power Plants in California – An Update*. California Energy Commission. CEC-200-2009-018. Table B-2: Aging and Once-Through Cooled Power Plant Annual Capacity Factor (Percent), p. B-3.

E. CPUC Staff Comments 2012-13 Transmission Plan.