

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

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

Rulemaking 12-03-014
(filed March 22, 2012)

TRACK 4 OPENING BRIEF OF AES SOUTHLAND LLC

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AES Southland LLC (“AES Southland”) submits the following Track 4 Opening Brief pursuant to the schedule adopted by Administrative Law Judge Gamson on November 1, 2013.

I. Introduction

As many parties have remarked during the course of this proceeding, the retirement of the San Onofre Nuclear Generating Station (“SONGS”) and the looming retirement of generation facilities using once-through cooling (“OTC”) provide the Commission with both significant challenges and opportunities. But the Commission must act promptly to address these challenges. Modern natural gas-fired generation will play a critical role in whatever supply mix the Commission decides to authorize for the SONGS study area. Recent experience in permitting and constructing similar facilities suggests that it could take seven years from Commission authorization to commercial operation for such facilities.¹ It will be less than seven years to the OTC retirement dates when the Commission issues its decision in Track 4.

The Commission must therefore make the right decision now about gas-fired generation needs in the SONGS study area if that generation is to be available when needed. It cannot

¹ See SCE-1 (Cushnie) at 58:20.

experiment with aggressive or uncertain strategies concerning preferred resources or transmission solutions with the hope that in the event such strategies fail, gas -fired generation will be available to meet reliability needs. And while gas -fired generation is not a preferred resource, the evidence submitted during this proceeding shows that replacing OTC generation with modern gas-fired combined cycle generation on existing brownfield sites has the fewest environmental impacts, including fewer impacts than solutions involving transmission or aggressive levels of preferred resources,² and is also the most cost-effective and reliable solution to local capacity needs in Southern California.³ And the development of a modern fleet of gas-fired generation will provide a base from which to integrate increasing amounts of renewable and other preferred resources.

In this Track 4, Southern California Edison (“SCE”) has requested authority to procure 500 MW of additional generation and incorporate it into SCE’s currently pending request for offers (“RFO”) issued pursuant to the authority the Commission granted in Track 1 for 1,400 to 1,800 MW of resources.⁴ SCE’s power flow studies indicate a need of 3,240 MWs if load shedding is not used to address the critical transmission contingency,⁵ but SCE contends that the Mesa Loop-In transmission project and the aggressive deployment of preferred resources may fill the remaining need.⁶ However, SCE’s own testimony in this proceeding shows that those solutions have significantly greater environmental impacts, including increased greenhouse gas (“GHG”) emissions, and are more costly than developing generation within the LA Basin. Further, there is considerable uncertainty as to whether those solutions will actually materialize.

In order to ensure that SCE has sufficient resources to meet long-term local capacity needs

² See, e.g., SCE-1a (Silsbee) at 44, Figure IV-8.

³ See, e.g., SCE-1 (Silsbee) at 42, Figure IV-7.

⁴ SCE-1 (Nelson) at 3:14-20.

⁵ See SCE-1 (Chinn) at 32, Table III-5. Scenario 1S shows a need of 3,240 MWs. Subtracting the maximum Track 1 procurement of 1,800 MWs leaves an incremental need of 1,440 MWs.

⁶ *Id.* (Nelson) at 3:10-12.

in the LA Basin, the Commission should authorize SCE to procure an additional 1,440 MW of new generation through its pending RFO. That amount represents a level of procurement that will ensure long-term reliability in the SONGS study area and allow the retirement of the OTC plants without an extension of compliance dates. An authorization at that level would not impinge upon SCE's efforts to procure additional preferred resources either through its proposed Pilot or by other avenues. However, it will ensure continued reliability in Southern California as those efforts are pursued and meet the long-term reliability needs of the region with the fewest GHG impacts and at the lowest cost.

II. The Commission Should Authorize SCE to Procure an Additional 1,440 MW

The power flow studies conducted by SCE and the California Independent System Operator ("ISO") show a range of local capacity resource ("LCR") need in the LA Basin in 2022. ISO studies showed a range of LCR need in the LA Basin of between 3,022 and 3,722 MW, depending on the percentage of local capacity resources located in SCE's service territory versus San Diego Gas and Electric's ("SDG&E") service territory.⁷ SCE's own studies showed a need of 3,240 MW,⁸ before reliance upon the SDG&E load shed scheme, or 2,802 MW if that load shed scheme is relied upon to mitigate the critical transmission contingency,⁹ contrary to the recommendations of the ISO,¹⁰ SCE¹¹ and SDG&E.¹² AES Southland also sought an independent transmission study from Electric Power Engineers ("EPE"). EPE's study showed an LA Basin LCR need of 3,300 MW, extremely close to SCE's own need calculation of 3,240

⁷ ISO-1 (Sparks) at 23, Table 11 & 24, Table 12.

⁸ SCE-1 (Chinn) at 32, Table III-5 (Scenario 1S).

⁹ *Id.* at 32, Table III-5 (Scenario 1).

¹⁰ ISO-2 (Sparks) at 3:7-20; RT 1417:6 - 1418:12 (ISO (Sparks)).

¹¹ SCE-4 (Chinn) at 13:12 - 15:2.

¹² SDG&E-4 (Jontry) at 1:15-21.

MW.¹³

Subtracting 1,800 MW, the maximum procurement authorized in Track 1 of this proceeding, leaves a residual need of between 1,222 and 1,922 MW, using the ISO’s range, 1,440 MW based upon SCE’s need calculation, absent load shed, and 1,500 MWs using EPE’s need calculation.

	CAISO Track 4 Studies/ Testimony	CAISO Track 4 Studies/ Testimony	SCE Track 4 Studies/ Testimony	SCE Track 4 Studies/ Testimony	EPE - Additional Analysis / Track 4
	(80% SCE, 20% SDG&E) (No SONGS, No Load Shed)	(2/3rd SCE, 1/3rd SDG&E) (No SONGS, No Load Shed)	(No SONGS, With Load Shed)	(No SONGS, No Load Shed)	(No SONGS, No Load Shed)
Western LA Basin MW Need	3,722	3,022	2,802	3,240	3,300
<i>Testimony Reference</i>	<i>ISO-1 at 23</i>	<i>ISO-1 at 24</i>	<i>SCE-1 at 32</i>	<i>SCE-1 at 32</i>	<i>AES-1 at 3</i>
Less Track 1 MW Procurement	1400 to 1800	1400 to 1800	1400 to 1800	1400 to 1800	1400 to 1800
Additional Procurement Need	1,922 to 2,322	1,222 to 1,622	1,002 to 1,402	1,440 to 1,840	1,500 to 1,900

Relying upon the SDG&E load shed would result in a residual need of 1,002 MW, based on SCE’s need calculation.¹⁴ However, AES Southland recommends that the Commission, in determining the appropriate level of procurement authorization for SCE, not assume reliance on load shed to mitigate the critical transmission contingency. As discussed in more detail below, doing so would be contrary to the recommendations of the ISO, SCE and SDG&E and could potentially result in the loss of over 1,000 MW of load in an urban area with high population

¹³ AES-1 (Ballouz) at 3.

¹⁴ SCE-1 (Chinn) at 32 (Table III-5 (Scenario 1)).

density, jeopardizing the health and safety of those impacted and causing significant economic losses.

SCE also studied other scenarios that examined the potential to reduce that need calculation through construction of the Mesa Loop-In project, and the aggressive development of preferred resources near the Santiago and Johanna substations in Orange County. As explained below, SCE's own testimony establishes that both of those options cause greater environmental impacts, and are more costly and less reliable than procuring generation in the LA Basin through SCE's currently pending RFO. AES Southland recommends that the Commission not rely upon these speculative solutions to address long-term need in the LA Basin, and instead make SCE's LA Basin Generation Scenario the preferred alternative, since it has lower environmental impacts, is more cost effective and likely results in higher reliability.

AES Southland therefore recommends that the Commission authorize SCE to procure, through its current RFO, an additional 1,440 MW of generation, based upon SCE's own need calculation, absent load shed, less the Track 1 procurement already authorized. AES Southland recommends that SCE procure that additional amount through its currently pending RFO, and that the Commission not restrict this authorization to any particular generation technology, leaving it to SCE to determine the appropriate mix of preferred resources, gas-fired generation, and storage.

Although AES Southland does not recommend that the Commission rely on any future preferred resources Pilot to meet LCR need, AES Southland's proposal does not seek to exclude preferred resources from the current procurement. However, given the lead time to develop new resources, the Commission and SCE need to ensure that the appropriate resources are procured now, so that they will be in place when needed.

III. The Mesa Loop-In Project Is More Costly, Has a Greater Environmental Impact and Is Less Reliable Than LA Basin Generation

In its testimony, SCE suggests that the Commission assume that the Mesa Loop-In transmission project will be constructed to reduce need in the LA Basin.¹⁵ The project involves expansion of SCE's existing Mesa substation to include 500 kV service.¹⁶ The Vincent-Mira Loma 500 kV, Laguna Bell-Rio Hondo 230 kV, and Goodrich-Laguna Bell 230 kV lines would also be looped into the substation.¹⁷ Though SCE asserts that the "majority of the work will be at Mesa Substation,"¹⁸ the work would also involve additional transmission line construction outside the substation footprint.

SCE further asserts that the Mesa Loop-In project, along with the "aggressive use" of "strategically located" preferred resources, could displace the 1,000 MW of LCR need that SCE calculated in its power flow studies.¹⁹ However, SCE suggests that the Commission authorize an additional 500 MW of procurement to "bridge the gap between the CAISO need assessment and SCE's estimate."²⁰

As illustrated by SCE's Scenario 2S, the Mesa Loop-In project would reduce the need for LA Basin generation "by only 734 MWs," assuming the SDG&E load shed scheme is not relied upon.²¹ Nor does the reduction of the need for LA Basin generation reduce overall generation needed to maintain system reliability; rather it just allows the need to be met by resources located over a larger geographic area.²² As SCE concedes, "new generation resources may be needed in

¹⁵ SCE-1 (Silsbee) at 44:4-7; (Nelson) at 4:16-18.

¹⁶ *Id.* (Chinn) at 35:1-8.

¹⁷ *Id.*

¹⁸ *Id.* at 35:7-8.

¹⁹ *Id.* (Nelson) at 3:9-12.

²⁰ *Id.* at 3:14-16.

²¹ *Id.* (Chinn) at 37:11-12.

²² *Id.* (Nelson) at 8:7 - 9:1.

SCE's service area outside of the LA Basin as a result of successful pursuit of the Mesa Loop-In."²³ In fact, for the LA Basin Transmission Scenario, 600 MW of generation was modeled outside the LA Basin, and 503 MW of that generation was dispatched during modeling.²⁴ However, SCE has not conducted studies to determine how the Mesa Loop-In might increase system need while reducing LA Basin need.²⁵

In calculating an indicative cost for the LA Basin Transmission Scenario, as well as calculating the GHG emissions impacts of that Scenario, SCE assumed 600 MW of additional system generation would be required.²⁶ As a result, the environmental impacts of relying upon the Mesa Loop-In are significantly greater than relying on LA Basin generation.²⁷ Reliance upon LA Basin generation has the lowest GHG emissions of any of the scenarios.²⁸ Replacing OTC generation with modern, highly-efficient, combined cycle natural gas plants reduces California's reliance on less efficient resources, reducing associated GHG emissions.²⁹ Replacing OTC generation with new, air cooled generation would also reduce the impacts of OTC, allowing California to meet its goal of eliminating reliance on OTC. Further, as with the cost estimate, the GHG impact analysis is based upon the assumption that 600 MWs of additional gas-fired generation would be needed outside the LA Basin if the Mesa Loop -In project were constructed.³⁰ However, as no studies of system need have yet been completed,³¹ the system need associated with the Mesa Loop-In project, and the GHG emissions that result, might be greater than

²³ *Id.* at 9:1-3.

²⁴ *Id.* (Silsbee) at 40: 17-18; *Id.* (Nelson) at 8, n. 8; RT 2161:14 - 2162:28 (SCE (Silsbee)).

²⁵ RT 2162:5 - 28 (Silsbee)

²⁶ SCE-1 (Silsbee) at 40, n. 25; RT 2166:5 - 23 (Silsbee); RT 2170:3 - 11 (SCE (Silsbee)).

²⁷ SCE-2 (Silsbee) at 44, Figure IV-8.

²⁸ SCE-2 (Silsbee) at 43:3 - 5.

²⁹ *Id.*

³⁰ RT 2170:3 - 11 (SCE (Silsbee)).

³¹ RT 2162: 5 - 28 (SCE (Silsbee)).

predicted by SCE. Even if only 600 MWs of additional system resources are needed under the LA Basin Transmission scenario, that still results in an additional .43 million metric tons of GHG emissions, as compared to the LA Basin Generation Scenario.³² In fact, the LA Basin Generation Scenario has significantly fewer emissions than the other three scenarios.³³

The siting uncertainty associated with the Mesa Loop -In project may further exacerbate the GHG and other environmental impacts associated with this solution. SCE has yet to file with the Commission for a permit to construct the project. According to SCE, “[a]ssuming minimal public opposition and aggressive scheduling of regulatory agency reviews, SCE *may* be able to accomplish siting, licensing, permitting, and construction by 2020.”³⁴ If SCE does not complete the project by that date, however, extending OTC deadlines may be required to ensure reliability, resulting in increased GHG emissions and other environmental impacts associated with OTC plants.³⁵ There is considerable uncertainty concerning when the Mesa Loop-In might be permitted and construction completed.³⁶

Setting aside the potential delay associated with the transmission project itself, as noted above, the project relies upon the existence of sufficient system resources to meet the LCR needs of the LA Basin. The Mesa Loop-In project may require additional system resources of 600 MW or more.³⁷ SCE is not seeking to procure additional system resources at this time, however.³⁸ Nor is it clear when SCE might seek to procure those resources. Yet such resources would presumably need to be in place by 2020 to allow for the retirement of OTC units. Given that the

³² SCE-2 (Silsbee) at 44, Table IV-8.

³³ *Id.* (Silsbee) at 43: 3- 4; 44, Figure IV-8.

³⁴ SCE-1 (Silsbee) at 47:3 - 5 (emphasis added).

³⁵ RT 2169:12 - 2170:2 (SCE (Silsbee)).

³⁶ AES-1 (Ballouz) at 5-6.

³⁷ SCE-1 (Silsbee) at 40:17-18.

³⁸ *Id.* (Nelson) at 8, n.8; 9:3-4.

typical timeline to permit and construct new generation can be seven years,³⁹ it is unlikely that needed system generation could be procured, permitted, and constructed in time to meet the 2020 deadline. Just as with any delay associated with the Mesa Loop-In project, delays in procuring needed system resources will increase GHG emissions as compared to relying upon in-basin generation. As explained below, permitting for the development of new generation at OTC sites is well under way, and considerably less uncertainty is associated with the permitting and construction of those resources.

Not only does the reliance on the Mesa Loop-In have a greater environmental impact, it also has a much greater cost than relying on LA Basin generation.⁴⁰ As a result of the need to develop both a transmission upgrade and additional greenfield generation projects, relying upon the Mesa Loop-In as part of the solution to LCR needs in the LA Basin has a cost of at least \$300 million more than the LA Basin Generation Scenario, according to SCE's own calculations.⁴¹ In fact, the cost differential might be significantly greater. SCE calculated that the transmission project itself would cost between \$550 million and \$700 million.⁴² The \$300 million differential between the two scenarios assumes that the Mesa Loop-In costs are at the lower end of the range predicted by SCE.⁴³ If the costs are at the upper end of the range, the differential would be half again as much, around \$450 million. Furthermore, if LA Basin generation projects were the most competitive and ultimately selected to meet the system need that would still exist, then the entire Mesa Loop-In project would have been unnecessary. This unfortunate outcome would result in \$550 million to \$700 million in excess costs, and even more if the transmission project ended up

³⁹ SCE-1 (Cushnie) at 58:20.

⁴⁰ *Id.* (Silsbee) at 42, Figure IV-7.

⁴¹ *Id.* (Silsbee) at 46:18-19.

⁴² *Id.* At 46:19-21.

⁴³ RT 2170:12 - 2171:26 (SCE (Silsbee)).

being more expensive than originally estimated.

There is further uncertainty associated with the cost differential between the LA Basin Generation Scenario and the LA Basin Transmission Scenario. First, SCE used Energy Commission estimates of the cost of greenfield generation development to calculate the costs of developing generation in both scenarios.⁴⁴ However, generation development in the LA Basin is likely to occur at brownfield sites where existing OTC generation is currently located. Development at those sites would likely reduce the cost of development below the cost for greenfield development,⁴⁵ further increasing the cost differential between the two scenarios.

There are also uncertainties associated with the cost of the Mesa Loop-In itself. As SCE notes, the cost estimate “is subject to considerable variability.”⁴⁶ Further, no studies have yet been conducted to determine the extent to which the Mesa Loop-In project might exacerbate system needs.⁴⁷ Although SCE added 600 MW of system resources in the LA Basin Transmission Scenario, the need for additional generation beyond that amount will dramatically increase the cost of relying upon the Mesa Loop-In project to meet LA Basin LCR need. As yet, the amount of system need is unknown.

In addition to the increased cost and environmental impacts, there are significant questions concerning how effective the Mesa Loop-In project would be in eliminating the need for LCR generation located within the SONGS study area. SCE notes that the Mesa Loop-In is less effective at mitigating the critical SDG&E C.3 contingency than additional generation located in SDG&E’s service territory would be.⁴⁸ The Mesa Loop-In, while it reduces the need for in-basin

⁴⁴ SCE-3 at 48.

⁴⁵ RT 2166:24 - 2168:8 (SCE (Silsbee)); AES-1 (Ballouz) at 7.

⁴⁶ SCE-1 (Silsbee) at 41:19.

⁴⁷ RT 2162:5 -28 (SCE (Silsbee)).

⁴⁸ SCE 1 (Chinn) at 37:17-22.

generation, also introduces new thermal overloads and exacerbates some other overloads due to the import of generation into the LA Basin local capacity area.⁴⁹ Mesa Loop-In would cause new thermal overloads on the 500 kV Victorville-Lugo line and the 500 kV Eldorado-Lugo line, and would exacerbate thermal overloads on three lines in the Los Angeles Department of Water and Power (“LADWP”) service territory.⁵⁰ Reliance on the Mesa Loop-In to reduce LCR need in the LA Basin, rather than in-basin generation, would also deprive the LA Basin LCR of the voltage support that in-basin generation could provide. Additional studies for voltage collapse would need to be conducted, and could show the need to procure additional voltage support in the LA Basin.⁵¹ Relying upon the Mesa Loop-In to import large amounts of generation, particularly when system demand undergoes sudden changes, will expose the system to voltage collapse conditions.⁵² Thus, not only is the Mesa Loop-In more costly and not only does it have a greater environmental impact than in-basin generation, it is also a less reliable method of addressing LA Basin LCR needs.

SCE contends that there are three benefits to the Mesa Loop-In project: (1) it relieves the loading on the Serrano corridor by delivering power into the LA Basin from the northwest; (2) it fosters competition and could reduce procurement costs by replacing lost OTC and SONGS generation with generation outside the LA Basin; and (3) it reduces the need to build new generation in the basin.⁵³ None of these supposed benefits contain much merit. First, though the Mesa Loop-In project relieves the loading on the Serrano corridor, it causes overloads in other

⁴⁹ AES-1 (Ballouz) at 4-5.

⁵⁰ SCE-x-AES-1 at 2-3.

⁵¹ AES-1 (Ballouz) at 10-11.

⁵² *Id.* at 10.

⁵³ SCE-1 (Chinn) at 35:8 - 36:9

areas.⁵⁴ Second, though it allows for OTC and SONGS replacement generation to be outside the LA Basin, the cost of such greenfield development may in fact be greater than brownfield development within the LA Basin.⁵⁵ Third, while it reduces the need to build generation in the LA Basin, new generation within the LA Basin appears to be the most cost effective solution and has the lowest environmental impact.

SCE also notes that the Mesa Loop-In would “reduce the amount of [gas-fired generation] that would be sited in areas most affected by stringent air emission requirements....”⁵⁶ However, as demonstrated by the testimony of Stephen O’Kane on behalf of AES Southland, the need to obtain air emissions offsets will not inhibit the development of OTC replacement generation in the LA Basin.⁵⁷

IV. Relying upon SCE’s “Living Pilot” Program to Meet LCR Needs is Extremely Risky

SCE also recommends that the Commission rely upon a “Living Pilot” program designed to aggressively pursue preferred resources near the Santiago and Johanna substations in Orange County.⁵⁸ According to SCE, strategically located preferred resources, coupled with the Mesa Loop-In project, could displace the need for LCR resources.⁵⁹ However, like the Mesa Loop-In project, there are some significant challenges with SCE’s proposed strategy of relying upon the Pilot to meet LCR needs.

First, SCE has not yet fully developed the Pilot, nor has it sought funding for whatever the Pilot may eventually entail. SCE has stated that it plans to submit an application to the

⁵⁴ AES-1 (Ballouz) at 4-5; SCE-x-AES-1 at 2-3.

⁵⁵ RT 2166:24 - 2168:8 (SCE (Silsbee)); AES-1 (Ballouz) at 7.

⁵⁶ SCE-1 (Silsbee) at 17:13-15.

⁵⁷ AES-3 (O’Kane) at 4-5.

⁵⁸ SCE-1 (Nelson) at 4:19-20.

⁵⁹ *Id.* (Nelson) at 3:10-12.

Commission at some point in the future “detailing a proposal for the Pilot to initiate” a collaborative process between SCE, the CAISO, the state energy agencies, and interested stakeholders. According to SCE, the details of the Pilot will be developed through that process.⁶⁰ However, at this point, it is “unclear” whether Preferred Resources can contribute to local reliability during major contingencies, and many types of preferred resources, such as demand response, are not currently used to meet LCR need.⁶¹ While pursuing a Pilot to allow SCE, the CAISO and the Commission to better understand the role that preferred resources may play in meeting LCR need in the future is laudable, this future Pilot should not be relied upon now to reduce any calculations of future LCR need. There are simply too many unknowns at this point to warrant such reliance.⁶²

Recognizing the risks associated with relying upon the Pilot to address future LCR need, SCE also proposes to backstop the Pilot with contingent development of sites for new gas-fired generation that could deliver to the Johanna or Santiago substations.⁶³ As with the Pilot, SCE intends to seek authority to pursue contingent site development through a future application.⁶⁴ However, like the Pilot, there are numerous uncertainties associated with SCE’s contingent siting proposal.⁶⁵ Concerns include questions regarding the Energy Commission’s ability to permit a contingent site, potential utility market power, and an apparent lack of need for such a program, given the wealth of independent developers, including AES Southland, developing generation in the LA Basin.⁶⁶

⁶⁰ *Id.* (Silsbee) at 51:2-6.

⁶¹ *Id.* (Silsbee) at 52:3-4; 50:21-22.

⁶² IEP-1 (Monsen) at 49:14-19.

⁶³ SCE-1 (Silsbee) at 50:17-18.

⁶⁴ *Id.*

⁶⁵ IEP-1 (Monsen) at 36:15 - 38:18.

⁶⁶ *Id.*

Reliance on preferred resources would also be significantly more costly, and may also actually increase GHG emissions, as compared to the development of gas-fired generation. According to SCE's indicative studies, the cost of the Preferred Resources Scenario (designed to examine the impacts of SCE's Pilot program) could be approximately 50 percent more than those associated with in-basin generation.⁶⁷ Reliance on preferred resources to meet some of the in-basin LCR need could also actually increase GHG emissions, as the reliance on those resources would have to be balanced with reliance on some additional gas-fired generation located outside the LA Basin. In the Preferred Resources Scenario, SCE modeled an additional 400 MW of generation located outside of the LA Basin.⁶⁸ As with the LA Basin Transmission Scenario, further studies would need to be conducted to determine the effect on system needs. However, as modeled by SCE, the Preferred Resources Scenario resulted in .31 million metric tons of additional GHG emissions, as compared to the LA Basin Generation Scenario.⁶⁹

V. The Commission Should Defer to the CAISO Concerning Grid Operations

In order to reduce the need for new resources, several parties to this proceeding have argued in favor of relying upon shedding up to 1,000 MW of load in urban San Diego to address the critical transmission planning contingency. The ISO, SCE and SDG&E have all concluded that relying upon load shedding to address the critical Category C N-1-1 planning contingency is inappropriate.⁷⁰ The Commission should defer to their recommendations; the ISO is charged with the efficient use and reliable operation of the transmission grid under California law,⁷¹ including

⁶⁷ SCE-1 (Silsbee) at 47:7-9.

⁶⁸ *Id.* (Silsbee) at 41:2-3.

⁶⁹ SCE-2 (Silsbee) at 44, Figure IV-8.

⁷⁰ ISO-2 (Sparks) at 3:7 - 20; RT 1417 - 1418 (ISO (Sparks)); SCE-4 (Chinn) at 13:12 - 15:2; SDG&E-4 (Jontry) at 1:15-21.

⁷¹ Cal. Publ. Util. Code § 345.

those portions of the transmission grid owned by SCE and SDG&E. According to the ISO, “load shedding in the San Diego local area is not a reasonable or prudent long term mitigation solution for the N-1-1 contingency.”⁷² Both SDG&E and SCE concur with this conclusion.

VI. In-Basin Generation Should Be the Preferred Alternative

As discussed above, constructing new generation in the LA Basin is the most cost effective way to address LA Basin’s LCR needs with the pending retirement of the OTC fleet. Replacing current OTC generation with modern air-cooled combined cycle units also provides the lowest GHG emissions of any scenario. Replacement of older OTC units not only reduces GHG emissions, it also allows the state to mitigate other impacts associated with OTC. In addition, if the construction of new generation is done on brownfield sites, there will be fewer environmental impacts than development on greenfield sites, and brownfield sites have less permitting challenges than greenfield sites.⁷³

Further, the development of in-basin generation is a more reliable alternative to transmission solutions or preferred resources. As explained above, and in the testimony of Hala Ballouz, relying upon transmission and generation located outside of the LA Basin is inherently less reliable than relying upon LA Basin generation. The Mesa Loop-In project, while mitigating certain transmission overloads, would exacerbate others, and would not provide the voltage support that in-basin generation could provide.

Furthermore, LA Basin generation has a more secure path forward on permitting than any other alternative. AES Southland has already filed Applications for Certification (“AFC”) with the Energy Commission to redevelop generation at its Huntington Beach and Redondo Beach

⁷² ISO-2 (Sparks) at 5:22 - 6:18.

⁷³ AES-2 (Pendergraft) at 4.

sites, and expects to file an AFC for its Alamitos site shortly.⁷⁴ Decisions on both the Huntington Beach and Redondo Beach AFCs are expected by 2015.⁷⁵ In contrast, SCE has yet to file an application with this Commission for the Mesa Loop-In project. As explained above, additional system resources may be needed in conjunction with the Mesa Loop-In. SCE modeled an additional 600 MW of system resources for the LA Basin Transmission Scenario, and 400 MW of system resources for the Preferred Resources Scenario. Yet the studies haven't even been conducted that would allow the Commission to know how those scenarios might affect system need. In contrast to AES Southland's ongoing permitting process, there has been no determination yet of system need, let alone any commencement of the permitting process to site the needed system generation.

SCE's Preferred Resources Scenario also presents significant additional uncertainty, as the details of SCE's Pilot, and of its contingent siting proposal designed to back up the Pilot, have yet to be fully developed, and would need to be presented to and approved by the Commission.

SCE suggests in its testimony that there is some uncertainty associated with obtaining emissions credits in the LA Basin to allow for the redevelopment of OTC sites. However, as explained in detail in Stephen O'Kane's testimony, Rule 1304 would allow for the development of new generation at AES Southland's sites. Rule 1304 has been used in the past to successfully permit and construct new power plants in the LA Basin, including, most recently, NRG's El Segundo Plant, LADWP's Haynes Steam Plant, and Edison Mission Energy's Walnut Creek Energy Park.⁷⁶ Under Rule 1304, the South Coast Air Quality Management District ("SCAQMD") as the responsibility for surrendering and retiring emissions offsets from its

⁷⁴ *Id.* at 2-3.

⁷⁵ *Id.*

⁷⁶ AES-3 (O'Kane) at 3.

internal bank to satisfy US EPA New Source Review regulations and requirements. SCAQMD has more than enough offsets in its internal bank to support the replacement of all eligible Rule 1304 generation in the LA Basin, while not substantially depleting its internal emissions bank.⁷⁷ Rule 1304 would therefore allow the redevelopment of OTC sites, and that redevelopment would substantially reduce the overall air emissions in the LA Basin.

Nor does relying on gas-fired generation located within the LA Basin foreclose the future development and use of preferred resources. In fact, having modern, flexible gas-fired generation available will allow for an increased reliance on renewable and other preferred resources. Should the Pilot or other efforts to develop preferred resources result in dramatic increases in the availability of preferred resources, they may reduce how often gas-fired units run, further reducing GHG and other emissions. However, if the Commission fail to authorize the procurement of additional gas-fired generation, and SCE's aggressive plans to develop preferred resources are not successful, the impact on reliability could be catastrophic.

VII. The Commission Must Act Now to Ensure the Most Cost Effective and Environmentally Sustainable Solution

Redevelopment of existing OTC sites in the LA Basin offers the most cost effective and environmentally-friendly solution to the LA Basin's LCR needs. However, the option to redevelop these sites will not remain available forever. The passage of time will reduce the Commission's options for two reasons. First, at some point, absent being offered a path forward to redevelop generation at OTC sites, developers will need to pursue other alternatives, including alternatives other than the development of generation. Second, the development of gas-fired generation can take seven years.⁷⁸ SCE's studies in Track 4 focused on the need for resources in

⁷⁷ AES-3 (O'Kane) at 4.

⁷⁸ SCE-1 (Cushnie) at 58:20.

2022, while the ISO's studies focused on 2018 and 2022. However, a critical date for LCR need in the LA Basin will be the 2020 retirement of OTC facilities in the LA Basin. As SCE explains, the LCR need it calculated for 2022 is likely similar to the need for 2020, as the demand forecast used by both the ISO and SCE showed limited demand growth in the period 2020 to 2022.⁷⁹ That leaves less than seven years from the date the Commission currently proposes to issue a decision in this proceeding to the date when new generation will be needed in the LA Basin. Failure to timely authorize the procurement in the LA Basin either will result in the loss of those opportunities entirely, or will delay the permitting and construction of those units. Although OTC compliance deadlines might be extended, the extension of OTC deadlines will continue reliance on older, less efficient plants. This in turn will increase GHG and other emissions, and will continue the impacts associated with OTC.

VIII. Contingent Contracts

SCE states in its testimony that it intends to pursue securing contingent contracts for gas-fired resources to address some of the uncertainties associated with long-term planning, including uncertainties associated with the Mesa Loop-In, the availability of preferred resources, and whether those preferred resources can meet LCR need.⁸⁰ SCE has stated that SCE will consider proposals bid into its Track 1 RFO for these contingent contracts.

Due to the uncertainties associated with the Mesa Loop-In and preferred resources, as well as their greater environmental impact and higher cost, AES Southland has recommended that the Commission not rely on either the Mesa Loop-In project or the Pilot to reduce LCR need. However, if the Commission does not authorize the incremental procurement recommended by AES Southland and believes that some portion of the LCR need determined by ISO and SCE

⁷⁹ SCE-1 (Nelson) at 3:23-25.

⁸⁰ *Id.* (Cushnie) at 58:19-20.

power flow modeling can be met by these resources, AES suggests that the Commission backstop that reliance by authorizing SCE to procure contingent contracts. AES Southland further recommends that if the Commission decides to proceed via that route, the total procurement authorization, and the contingent contract authorization, equal at least 1,440 MW of capacity.

IX. Conclusion

As explained in detail above, AES Southland recommends the following:

- The Commission should authorize SCE to procure an additional 1,440 MW of new generation through its currently ongoing RFO. The procurement authorization should not specify any particular generation technology.
- The Commission should not assume reductions of local capacity needs based upon the Mesa Loop-In project, as it has greater environmental impacts, is more costly, and is less reliable than generation located within the LA Basin.
- The Commission should not rely upon SCE's proposed preferred resource Pilot to reduce local capacity needs, as its Preferred Resource Scenario based upon the Pilot showed that such reliance would have greater environmental impacts and greater costs than LA Basin generation. Whether the Pilot would result in SCE successfully procuring preferred resources that can meet LCR need is also extremely uncertain.
- To the extent that the Commission decides to rely upon either the Mesa Loop-In project or SCE's Pilot to meet a portion of LCR need in the LA Basin, it should backstop that reliance by authorizing SCE to procure contingent contracts for an equivalent amount. The total procurement authorization, including contingent contracts, should equal at least 1,440 MW.

- Any incremental procurement authorized in Track 4 should be incorporated into SCE's current RFO solicitation.

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