

**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

REPLY BRIEF OF CITY OF REDONDO BEACH ON TRACK 4

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I. INTRODUCTION

Pursuant to Rule 13.11 of the California Public Utilities Commission's (Commission or CPUC) Rules of Practice and Procedure, the City of Redondo Beach (City) hereby submits its Reply Brief on Track 4 of the 2012 Long Term Procurement Plan (LTPP) proceeding.

The City recommends that the Commission authorize Southern California Edison (SCE) to promptly procure 1200 Megawatts (MW) of preferred resources in addition to what was authorized in Track 1. The combination of 1000 MW to 1200 MW of Gas Fired Generation (GFG) and the 600 MW to 800 MW of preferred resources, including storage, from Track 1 would provide a flexible approach to meeting the dependable capacity need in the Western Los Angeles Basin LCR sub-area (LA Basin). This approach follows the state's energy action plan and reduces the ability of generation owners to exercise market power while minimizing stranded investment risks. The City views this approach as a "least regrets" solution.

The City has determined that 757 MW of new generation in the San Diego LCR area, in addition to San Diego Gas & Electric's (SDG&E) Track 1 authorization, should meet the requirement. It is the City's belief, however, that this number should be adjusted to optimize the best combination of preferred resources and gas-fired generation (GFG); in order to achieve the same flexible approach described above for the LA Basin LCR sub-area. Therefore, the City does not recommend any additional authorization for SDG&E until further analysis is done to determine the best solution, combining preferred resources and GFG, with attributes similar to the solution described above for SCE.

The City bases its recommendations on transmission power flow studies that have employed the California Independent System Operator's (CAISO) starting-point power flow base cases and assumptions, which reflect CAISO's stringent reliability standards.

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The City agrees with SCE that the Commission should allow SCE to combine procurement of 1200 MW of preferred resources with SCE's current Track 1 procurement authorization (1800 MW) in this docket to improve the effectiveness of SCE's solicitation efforts.

II. CITY'S REPLY TO SOUTHERN CALIFORNIA EDISON'S OPENING BRIEF

A. SCE's Opening Brief Suggests They Do Not Take Preferred Resources Seriously.

Although SCE professes its support and commitment to developing preferred resources in the LA Basin, it is apparent from their opening brief that they are not counting on these resources to meet the area's need. For example, Figure II-1¹ ("*Need In the LA Basin*") shows the 1200 MW of authorized Track 1 GFG, but fails to show the 600 MW of preferred resources already authorized. This suggests that SCE does not take these resources seriously.

Another example of SCE's partiality to GFG over preferred resources is the difference in which they seek to treat those resources set aside for GFG-only and those for all source procurement. Specifically,

"SCE recommends combining the requested 500 MW of new LCR all source procurement with Track 1's 200 MW of new LCR all source procurement authorized in D.12-02-015.37. This combination will both improve the competitiveness of all source bidding, allow for a more optimal selection of resources, and reduce administrative costs to ratepayers of issuing two separate all source solicitations."²

While SCE has asked for the 500 MW of Track 4 new LCR authorization and 200 MW of Track 1 authorization be combined into a single "all source procurement," so all sources can compete, SCE does not request the same treatment of the 1000 MW of Track 1 authorization set aside for GFG-only procurement. This again shows its preference for GFG over preferred resources.

¹ See Opening Brief of SCE, p. 6.

² *Id.* at 10-11 (footnote omitted).

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B. There Will Be A Need For Additional Dependable Capacity In The LA Basin In 2021.

SCE is mistaken regarding the likelihood that LCR needs will remain static from the years 2020 to 2022. SCE claims,

“The California Energy Commission (CEC) Demand Forecast identified by the Commission in the Revised Scoping Memo and used by ISO and SCE shows limited load growth between 2020 and 2022. So, it is likely that the LCR need for 2020 is very similar to the LCR need for 2022.”³

This statement is incorrect and misleading. As shown on Table 1 (“*Western LA LCR and Resources Without SONGS (MW)*”) of the City’s testimony, the need for additional dependable capacity in Los Angeles will arise in 2021 due to the planned retirement of over 3800 MW of OTC units.⁴ These planned retirements have nothing to do with load increases, or lack thereof, in the years after 2020. Therefore, the need for additional generation will arise in 2021, not in 2020, as the result of planned generation retirements, not load growth.

The City agrees that it is beneficial to allow SCE to secure dependable capacity through all source procurement for all of the reasons provided in SCE’s opening brief.⁵ For those same reasons, SCE should be authorized to move forward with all source procurement for the 1000 MW of GFG authorized in Track 1. The City recommends, however, that procurement authorization of the remaining 2000 MW be for only preferred resources, including energy storage. This should provide a good basis for preferred resource developers and related industries to secure the necessary financing for technology and project development.

C. The Redondo Beach Study Is Complete And Its Conclusions Are Valid

SCE claims that the City’s study is incomplete and unreliable because the City failed to analyze a critical N-1-1 contingency.⁶ As discussed in detail below SCE’s conclusions regarding the Redondo Beach Study are invalid.

³ Opening Brief of SCE, p. 8.

⁴ That is the planned retirement of generating units in Alamitos, Huntington Beach and Redondo Beach.

⁵ See Opening Brief of SCE, Section IIC, pp. 10-15.

⁶ See Opening Brief of SCE, p. 20.

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First, SCE states the Redondo Beach study is incomplete because “Redondo Beach’s study was focused on the LA Basin. As a result, it failed to analyze the most critical N-1-1 contingency in the studies conducted by ISO, SCE, and SDG&E which was located in SDG&E’s service area. So, the study is incomplete.”⁷ SCE is incorrect. The City’s solution, which includes the addition of generation in both Los Angeles and San Diego, resolves the worst N-1-1 contingencies establishing the Los Angeles and San Diego area LCRs.⁸ The City’s analysis proves the efficacy of its solution. Additionally, the effectiveness of the City’s solution is evident from SCE’s own statements and description of how power flows in the area.

As noted in the City’s brief, although the worst N-1-1 contingency for the San Onofre Nuclear Generating Station (SONGS) areas is the outage of transmission lines east of San Diego, if the problem in the San Diego area is resolved—by adding 1100 MW of additional generation in that area, as proposed in the City’s solution and also modeled in the CAISO base case—then the SONGS reliability problem would be limited to the LA Basin area.⁹ Subsequently, the worst reliability problem in the LA Basin can be solved, independent of San Diego, by adding generation in the basin to solve for its worst N-1-1 contingency. This is true even though the amount of generation added in the San Diego area affects the amount of generation needed in the LA Basin area. This fact is reflected in SCE’s own brief; which states, “So, whether load shedding or the addition of more generation in SDG&E’s service area is chosen as a mitigation strategy, the impact to the LA Basin is neutral.”¹⁰

Therefore, contrary to SCE’s statement, the City’s proposal solves the SONGS area LCR problem. The City’s solution involves two steps: 1) add enough generation in the San Diego area, as recommended by CAISO in its 2012-2013 transmission plan, to remedy the worst contingency there¹¹ and 2) separately add enough generation in the LA Basin area to mitigate the worst contingency for that area, which is different than in San Diego. The combination of the two solutions is a viable solution for the combined SONGS area.

⁷ *Id.* (footnote omitted).

⁸ These contingencies include both outage of the Serrano-Lewis #1 230 kV line followed by the outage of the Serrano-Villa Park #2 230 kV line and outage of the Imperial Valley-Suncrest 500 kV line followed by the loss of ECO-Miguel 500 kV line.

⁹ See Opening Brief of City of Redondo Beach, pp. 7; 10, n. 28.

¹⁰ Opening Brief of SCE, p. 18.

¹¹ The “worst contingency” in the San Diego area is the overlapping outages of the Sunrise Powerlink and the Southwest Powerlink.

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The City's solution is robust and includes enough generation added in both the San Diego and the LA Basin areas to solve the worst N-1-1 contingency for either area and for the entire SONGS area. SCE's own brief explains how power flows in the area and why once SDG&E's reliability needs are met the remaining reliability problem can be solved independently for the LA Basin area—by adding enough generation in the basin to solve its worst contingency.¹² SCE states:

“As Exhibit SCE-2 states, the best location for placing generation to resolve the N-1-1 contingency in SDG&E's service area is in SDG&E's service area. The loss of the Sunrise Powerlink followed by manual system adjustments, and then the loss of the Southwest Powerlink “causes all of SDG&E's imported power to re-route north through SCE's service area. Power from generation placed in SCE's service area would need to be transmitted to SDG&E's service area via SCE's 230 kV lines.”¹³

Therefore, the City's solution works for the San Diego area, LA Basin area and a combination of both areas (the SONGS area). The City has confirmed this through additional power flow analysis.

SCE also claims that the City's study examined only the worst-case contingency when assessing the need for new LCR in the LA Basin and therefore is unreliable. Again SCE is mistaken. Specifically, SCE claims,

“The Redondo Beach study appears to only examine this contingency and no others when assessing the need for new LCR resources in the LA Basin local capacity area. A complete study examines a comprehensive set of contingencies to identify all violations. Any viable mitigation must address all contingencies with violations. Redondo Beach wrongly relied on a worse case contingency identified in another study and declared a proposed mitigation sufficient because it addresses the one contingency. This simplistic method can lead to false conclusions.”¹⁴

Here, SCE fails to objectively assess the completeness of the City's evaluation and the depth of its analysis. Evidently, SCE has failed to spend the time necessary to investigate and

¹² The worst contingency for the LA Basin area is the outage of the Serrano-Lewis #1 230 kV line followed by the outage of the Serrano-Villa Park #2 230 kV line.

¹³ Opening Brief of SCE, p. 19 (quoting Exhibit, SCE-2, p. 45, lines 12-14).

¹⁴ Opening Brief of SCE, p. 20-21.

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understand the City's proposal. Had SCE examined the evidence proffered by the City and utilized data requests to ask the City probative questions, it would have realized that the City did not simply rely on the worst-case contingency from another study and did in fact study various scenarios and contingencies.

The depth of the study performed by the City is apparent from the testimony and attached reports. Once the City determined the worst-case contingency and the associated LCR, it then concentrated on finding the best solution. Had the City found a worst-case contingency that differed from the one found by SCE and CAISO, then the City would have explained how it came to that conclusion. Since the City's conclusion was supported by CAISO and other utilities, however, the City concentrated its testimony on describing the resource mix and location that meets the requirements determined for that contingency.

Moreover, the City's descriptions of the contingencies evaluated in the study are substantively no different than those provided by the other parties in this proceeding, including CAISO, SCE, and SDG&E. None of the parties described the details of their respective power flow analysis, including specifics as to how each party identified the worst-case contingency that established LCRs. Additionally, no party enumerated the exact number of contingencies they evaluated, the name of each contingency, or the specific generation dispatch assumptions used in the power flow analysis. Certainly, SCE cannot be suggesting that none of the studies are viable.

Lastly, SCE concludes,

“The City of Redondo Beach's study is unreliable because “[t]here are numerous other combinations of contingencies in the area that could overload a significant number of 230 kV lines in this sub-area/area and have slightly less LCR need. As such, anyone of them (combination of contingencies) could become binding for any given set of procured resources.”¹⁵

As the City explained in its opening brief, various scenarios and contingencies were examined:

“Several dozen power flow runs were performed to confirm the assumed mix of conventional and preferred resources satisfied identified LCRs. The power flow runs

¹⁵ Opening Brief of SCE, p. 20.

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also examined different contingencies under different scenarios (*e.g.*, removing all generation at the existing Redondo Beach facility and removing the Redondo Beach substation and removing the transmission lines connecting the Redondo Beach substation to the remainder of the grid) to make sure that the proposed solution is stable and does not result in unacceptable thermal overloads or voltage deviations. The set of contingencies examined were selected based on engineering judgment and knowledge of the weak/stressed areas of the transmission system under study.”¹⁶

Additionally, the City’s opening testimony discussed some of the iterative process, scenarios evaluated, and contingency categories that were studied:

“A. The result of this iterative process for the without SONGS scenario, is that the addition of two conventional generating units at Huntington Beach (940 MW of dependable capacity) coupled with a reduction in the aggregate amount of EE, non-CHP distributed generation, new CHP and dispatchable demand response distributed across the Western LA Basin sub-area (the reduction is from an initial amount of about 2500 MW as estimated by the CPUC and CEC to less than 2000 MW as determined by the instant analysis) will satisfy the Western LA Basin LCR.”¹⁷”

“A. The proposed reconfiguration of the transmission lines at La Fresa substation, the removal of the Redondo Beach substation and removal of the transmission lines connecting Redondo Beach substation to the electric network, were studied in the power flow program under without SONGS scenarios with all-lines-in-service and contingency conditions assuming high load conditions.¹⁸ Specifically, NERC Category A (all lines in-service), Category B (one line out) and Category C (two lines out) conditions in the La Fresa substation area were tested. No overload was observed for the any of the outages studied.”¹⁹

D. SCE’s Conclusions Regarding Which Solution Results In The Lowest GHG Emissions Is Incorrect.

¹⁶ Opening Brief of the City of Redondo Beach, p. 11.

¹⁷ Opening Testimony of the City of Redondo Beach, p. 11

¹⁸ CAISO’s no-SONGS reliability case for year 2022 was used for this purpose.

¹⁹ Opening Testimony of the City of Redondo Beach, p. 13.

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SCE's conclusion that the LA Basin Generation scenario results in the lowest GHG emission is not true.²⁰ The LA Basin Generation scenario may be lower than other fossil fueled generation options, but it is not the lowest among all solutions proposed in this proceeding. The City's proposal, which meets a large portion of the capacity need (about 2/3) with preferred resources, has lower GHG emissions. Additionally, by virtue of being close to the load, preferred resources have the added benefit of reducing losses on both the distribution and transmission system. Preferred resources also mitigate market power because they do not concentrate generation ownership among a limited number of developers.

The City supports the preferred resource pilot program described by SCE on pages 24-26 of their opening brief. The City believes that such programs, along with specific authorization for procurement of additional preferred resources, is a promising approach for promoting the development of more preferred resources; an approach, it appears, everyone supports.

III. CITY'S REPLY TO CAISO'S OPENING BRIEF

Although the City's Opening Brief already address many of the assertions made by CAISO in its Opening Brief, in the interest of clarity, the City will address several of these assertions again here.

A. The CAISO 2013-2014 Transmission Plan Should Not Be Considered In These Proceedings.

CAISO's 2013-2014 transmission plan has not been vetted and should not be considered in these proceedings. CAISO states,

"The ISO will release its draft transmission solution recommendations in late January 2014, with Board of Governor approval in March 2014. These results should be considered in the upcoming LTPP proceeding, with a decision about additional procurement needs issued in 2014 so that SDG&E and SCE can undertake all-source

²⁰ See Opening Brief of AES Southland, p. 22 ("As such, while the LA Basin Generation scenario is the least expensive and results in the lowest GHG emissions, SCE does not consider it to be the recommended approach.").

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procurement initiatives as quickly as possible in advance of upcoming OTC retirement dates.”²¹

CAISO’s 2013-2014 transmission plan has not been vetted in the Track 4 proceeding. Absent such vetting, it is prejudicial and inappropriate for CAISO to speculate here, that its 2013-2014 transmission plan will result in “additional procurement needs.” There is simply no evidence that the Commission can rely on in this proceeding to reach any conclusions as to what CAISO’s 2013-2014 transmission plan may indicate as to “additional procurement needs.”

B. CAISO Should Consider A Complete Range Of Feasible Solutions; Including Increased Levels Of Preferred Resources And The Possibility Of Controlled Load Drop On An Interim Basis.

The City and Ms. Firooz understand the applicable NERC reliability standards and reiterate that CAISO should consider a complete range of feasible solutions. Although the City’s proposal does not advocate the use of load drop as a principal mitigation measure for N-1-1 contingency conditions, CAISO should consider a range of solutions including possibly using controlled load drop on an interim basis.

CAISO states,

“Although other parties argued that the SONGS area residual local resource needs would be reduced if the Commission authorized load shedding in response to the N-1-1 limiting contingency, Sierra Club (Bill Powers), CEJA (Julia May), POC (David Peffer) and Redondo Beach (Jaleh Firooz) presented extensive technical testimony on this point, most of which contains misunderstandings and misinterpretations of the applicable NERC reliability standards.”²²

It is inappropriate and misleading for CAISO to lump the City’s proposal and Ms. Firooz’s testimony in with those that advocate for the use of load drop in determining dependable capacity needs for N-1-1 contingency conditions and CAISO offers no evidence to support this statement. The City has never advocated that load drop be used as a principal mitigation measure for this contingency condition. This shows that either CAISO misunderstands the City’s proposal or has given it only cursory review.

²¹ Opening Brief of CAISO, p. 3.

²² Opening Brief of CAISO, p. 19.

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Additionally, the City has never suggested that CAISO change its *methodology* for determining LCRs. In fact, the City's solution is similar to CAISO's solution. The City understands that CAISO is obligated by NERC reliability standards to test N-1, N-1-1 and G-1/N-1 contingency conditions and to identify mitigation solutions where reliability standard violations are found. The City believes, however, that CAISO should consider a complete range of feasible wires and non-wires *solutions*; including increased levels of preferred resources and the possibility of controlled load drop on an interim basis. Indeed, CAISO's own tariff requires CAISO to consider non-wires solutions.

The City's solution meets the reliability needs under the N-1-1 contingency condition without the use of controlled load drop and includes other conservative assumptions such as 2.5% higher load. Without the use of controlled load drop the N-1-1 analysis would result in a higher LCR for the area. To meet this higher LCR, the City proposed the use of GFG and gradually developing preferred resources. If the development of preferred resources turns out slower than anticipated, only then does the City recommend the use of controlled load drop as a stopgap measure. This is a subtle but important point. In determining LCRs, the City has not assumed nor is recommending the use of controlled load drop.

Had the City implemented load drop in its power flow analysis, the amount of preferred or GFG resources proposed by the City would have been lower by an amount approximating the amount of controlled load drop. For example, the City proposed a total need of about 3000 MW of additional dependable capacity in the LA Basin LCR sub-area without resorting to load drop, and proposed that this amount be met by about 1000 MW of GFG and 2000 MW of preferred resources. Only in the event of slow preferred resource development would the City propose the use of controlled load drop (i.e., as a backstop).

CAISO fails to provide any examples to support its statements that the City and Ms. Firooz "misunderstand and misinterpret" the applicable NERC reliability standards. The only mention of Ms. Firooz's testimony in this section of CAISO's brief states, "Ms. Firooz again provided testimony on the probability that the N-1-1 contingency will occur under 1-in-10 peak load conditions, a matter thoroughly addressed in Track 1 and resolved with the approval of the ISO's study methodology."²³ CAISO is incorrect. Just because the Commission approved a

²³ Opening Brief of CAISO, p. 22.

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portion of CAISO's and SDG&E's request for PPA authorization does not mean the Commission therefore implicitly addressed every issue brought up in that proceeding.

CAISO's LCR "study methodology" identifies the *amount* of dependable capacity within a local area that needs to be available to mitigate identified reliability standard violations, where this amount reflects CAISO's conservative load and resource assumptions. Once the requirement is determined under CAISO's reliability methodology (without load drop), the choice of mitigation solution—new conventional generation, transmission upgrades, additional preferred resources, controlled load drop as stopgap measure—is a separate determination. So far as the City knows the Commission has never specifically "approved" CAISO's "position" that controlled load drop may not be relied on as mitigation for N-1-1 contingency events.

C. For Mitigating The Specific Contingency Conditions Giving Rise To LCRs, Controlled Load Drop Is More Reliable Than Conventional Generation Solutions.

Any solution that is chosen to mitigate the specific contingency condition giving rise to LCRs is going to be complex. It was Ms. Firooz's testimony that controlled load drop is more reliable than conventional generation solutions. CAISO's characterizations of Ms. Firooz's testimony on the subject of load dropping are incorrect.

First, Ms. Firooz never implied that the cost-benefit analysis of load shedding was a "simple exercise," as suggested by CAISO:

"Ms. Firooz opined that controlled load drop is more reliable than bringing up additional generation. These witnesses, through their testimony, gave the impression that a cost benefit analysis of the SDG&E load shedding scheme would be a relatively simply exercise to conduct, and that controlled load shedding has relatively minor impacts on customers.²⁴"

Ms. Firooz never claimed that controlled load drop is 100% reliable. All electric systems, including controlled load drop, are subject to possible failures. Ms. Firooz's point was that for mitigating the specific contingency condition giving rise to LCRs, controlled load drop is more reliable than conventional generation solutions. Conventional generation facilities have

²⁴ Opening Brief of CAISO, p. 22-23 (footnote omitted).

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many moving parts, including fuel and other physical inputs, as well as complex control and communication systems. Conventional generating facilities may also be off line for planned outages or due to economics at the time of system stress, as was the case during the widespread outage in Southern California on September 8, 2011. On the other hand, controlled load drop has virtually no moving parts—no fuel or other physical inputs—would rarely be unavailable because of planned outages and would never be out of service for economic reasons. For those reasons, the City sees controlled-load drop as a more reliable option under the specific system conditions used to establish LCRs.

The City does not see the cost-benefit analysis of load shedding as being a “simple exercise.” But the City does believe that a cost-benefit analysis, however complex, is appropriate when potential commitments for large amounts of consumer money are at issue. The City recognizes that such analyses may involve assumptions that have wide ranges of uncertainty and the Commission should give such assumptions their due weight.

Additionally, the City notes that if consumers are willing to forgo the use of their air conditioning during the hottest days and hours of the year in exchange for a small amount of money (*e.g.*, SDG&E’s summer saver program), it would appear there is a verifiable price for consumer inconvenience. Similarly, the City believes that as long as critical or sensitive loads are excluded, given the choice, many consumers would take the tiny risk of an outage in return for saving hundreds of millions of dollars in generation and transmission infrastructure additions.

Next, CAISO stated,

“In response to Ms. Firooz’s statement that load shedding is less complicated than bringing up generation, Mr. Sparks noted that Ms. Firooz ignores the complexities of dropping load, and the very real possibility that an armed load-tripping SPS could be inadvertently triggered and shed load when the system is not under stressed conditions. This risk is proportional to the amount of time that the load needs to be armed. She also did not consider the complexities of communication and sensing equipment associated with load shedding.²⁵”

²⁵ Opening Brief of CAISO, pp. 24-25 (footnote omitted).

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CAISO's assertion that Ms. Firooz "ignores the complexity" of controlled load drop and considered "only one contingency condition" is simply incorrect. As indicated above, Ms. Firooz has never claimed that controlled load drop is 100% reliable. Ms. Firooz's point was that for mitigating the specific contingency condition giving rise to LCRs, controlled load drop is more reliable than conventional generation solutions. CAISO implies that unlike controlled load drop SPS conventional generation solutions do not have "the complexities of communications and sensing equipment." This is wrong. Conventional generating units have very complex communication and sensing equipment, both for internal operating purposes as well as for dispatch control by CAISO.

Finally, the City agrees with CAISO's observation that the "magnitude of the risk is proportional to the amount of time that the scheme needs to be armed." In this regard, the City notes that because one-year-in-ten peak load weather conditions are infrequent and generally predictable, a controlled load-drop scheme that reduces LCRs would need to be armed only on an infrequent basis.

IV. CITY'S REPLY TO AES'S OPENING BRIEF

A. The Mesa Loop-In Project Will Not Increase System Need.

In their opening brief AES contends that "SCE has not conducted studies to determine how the Mesa Loop-In might increase system need while reducing LA Basin need."²⁶ This statement, however, is based on the false premise that adding transmission will "increase system need." That is simply not the case. Furthermore, it distracts from what is really important to these proceedings—determining what portion of the system need must be procured locally.

"System need" is a function of load and planning reserve margin. The same "system need" exists in all of the scenarios discussed by AES. While SCE's modeling did include new generation outside the LA Basin LCR sub-area, this does not mean that the system need increased as a result of the Mesa Loop-In project. In fact, system need could be met from purchases of dependable capacity from existing or new generation anywhere inside or outside the CAISO balancing authority.

²⁶ Opening Brief of AES Southland, p. 7.

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Paramount to these proceedings is the portion of the system need that must be procured *locally*. Here, SCE's studies indicate that the addition of the Mesa Loop-In project could actually reduce the LA Basin sub-area LCR by 734 MW. Those savings could be substantial considering dependable capacity outside LCR areas is subject to competitive forces and is likely more economical than dependable capacity inside LCR areas. Furthermore, the savings may be more than sufficient to justify the cost of the Mesa Loop-In project.

Additionally, contrary to AES's assertions, the Mesa Loop-In project does not require construction outside the substation footprint. In their opening brief AES states, "through SCE asserts that the 'majority of the work will be at Mesa Substation,' the work would also involve additional transmission line construction outside the substation footprint."²⁷ This statement ignores the City's proposal. The City's proposed solution would accommodate the shut down and removal of the existing Redondo Beach power plant and, unlike SCE's Mesa Loop-In project, permit the removal of transmission lines between the Redondo Beach and La Fresa substations.²⁸ Although minor transmission line reconfiguration at the La Fresa substation will be needed, it would be entirely within the substation footprint.

B. Reliance Upon Los Angeles Basin Generation Will Result In Higher Greenhouse Gas Emissions Than Reliance Upon Preferred Resources.

Contrary to AES's assertions, reliance upon LA Basin generation does not have the lowest greenhouse gas (GHG) emissions of any scenario examined in this proceeding. In fact, a mix of preferred resources and new GFG will result in lower GHG emissions than scenarios that do not include preferred resources.

AES notes, "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 AES uses this fact to support their theory that "[r]eliance upon the LA Basin generation has the lowest GHG emissions of any of the scenarios."³⁰ This statement is false; relying on Los Angeles Basin generation does not have the lowest GHG emissions of all the scenarios examined in this proceeding.

²⁷ Opening Brief of AES Southland, p. 6.

²⁸ See City's Opening Testimony, p. 13.

²⁹ Opening Brief of AES Southland, p. 7.

³⁰ Opening Brief of AES Southland, p. 7.

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In a vacuum, it is true that replacing older GFG with new GFG would reduce GHG emissions. In reality, however, replacing OTC with additional amounts of preferred resources, as suggested by the City, would reduce GHG emissions more than scenarios which do not rely on additional amounts of preferred resources. The City believes the need dealt with in Track 4 can be met by preferred resources in conjunction with new GFG at AES's Huntington Beach facility. This solution will result in lower GHG emissions than solutions, such as that advanced by AES, which do not include preferred resources.

Lastly, AES makes the ridiculous assertion that “[r]eliance on preferred resources to meet some of the in-basin LCR need could actually increase GHG emissions, as reliance on those resources would have to be balanced with reliance on some additional gas-fired generation located outside the LA Basin.”³¹

It is not credible to believe that the addition of preferred resources, which emit no GHG, would “actually increase GHG emissions” as a result of intra-hour balancing requirements. First, intra-hour balancing is not provided entirely by GFG; dispatchable hydro resources provide significant amounts of intra-hour balancing. Furthermore, the geographic diversity of wind and solar resources means that the variability of any one resource is, to a large degree, offset in the opposite direction by the variability of the other resource. The net result is that the GHG emissions associated with the dispatchable GFG needed to accommodate the additional roof top solar portion of preferred resources will be far less than the reduction in GFG that results when additional preferred resources are added to the system.

Assuming arguendo, if reliance on preferred resources actually does increase GHG emissions compared to solutions which rely on GFG, then the state of California has gone wildly off course.

V. CONCLUSION

The City believes that it has offered a flexible and workable solution to the Commission for meeting the reliability need in the Southern California. The City's solution is backed by extensive technical and power flow analysis and contrary to the counterproductive mud throwing tactics of CAISO and SCE, which appear designed to distract the focus of the process, the City

³¹ See Opening Brief of AES Southland, p. 14.

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has stayed on course. The City believes that the real issue in front of the Commission in determining how much procurement to authorize for the two utilities boils down to answering the following four questions:

1. How much dependable capacity from preferred resources, including storage, can Southern California realistically be expected to develop between now and 2021?
2. How can this development be measured and supported?
3. How can preferred resources be backstopped by other feasible measures, such as interim automatic load drop, if the expected preferred resources do not materialize in a timely manner?
4. Given the expected preferred resources, what is the minimum amount of GFG that must be procured to maintain the required reliability by year 2022?

The City believes that its proposed solution has addressed the above four questions appropriately. CAISO and the SCE, however, appear to have tried to answer these questions in reverse order. By assuming some minimum amount of preferred resources, they have concentrated their efforts and analysis in determining an answer only to question number 4. By determining how much new GFG and/or transmission is needed given very conservative assumptions, their analyses seems to be designed to secure enough procurement authorization that no matter what happens (*e.g.*, no preferred resource development, which they do not seem to want to count on) they could still meet the reliability need. This approach, although it seems safe, is not balanced and misses three of the Commission's other important objectives—promoting preferred resource development, reducing exercise of market power by power producers, and reducing the risk of stranded investment.

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Respectfully Submitted,

_____/s/_____
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