IN THE COURT OF APPEAL OF THE STATE OF CALIFORNIA

SECOND DISTRICT - DIVISION _____

No. _____

POWERS ENGINEERING and LOS CERRITOS WETLANDS LAND TRUST, *Petitioners,* v. PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA, *Respondent.*	Public Utilities Commission Decision No. 15-11-041, as modified by Decision No. 16-05-053

Petition for Writ of Review; Memorandum of Points & Authorities (Supporting Exhibits Filed Under Separate Cover)

Orly Degani (SBN # 177741)
Degani & Galston LLP
12400 Wilshire Blvd., Suite 400
Los Angeles, CA 90025
(424) 270-1900
fax: (424) 270-1903
orly@deganigalston.com

Attorney for Petitioners

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No. _____

CERTIFICATE OF INTERESTED ENTITIES OR PERSONS

This is the initial certificate of interested entities or persons submitted on behalf of Petitioners Powers Engineering, Los Cerritos Wetlands Land Trust in the case number listed above.

The undersigned certifies that there are no interested entities or persons that must be listed in this Certificate under California Rules of Court, rule 8.208.

Dated: July 1, 2016

By: Orly Degani
Orly Degani

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PETITION FOR WRIT OF REVIEW

INTRODUCTION

California is "at the forefront of national and international efforts to reduce emissions of greenhouse gases." (Health & Saf. Code, § 38501.) The State has enacted some of the world's most aggressive laws aimed at curbing environmental damage from greenhouse gas emissions.

The Public Utilities Commission ("PUC" or "Commission") plays a major role in the State's enforcement efforts. It is responsible for regulating utility service providers to ensure they procure energy consistently with state law, which requires prioritizing clean and renewable "preferred resources" over conventional gas-fired generation. The PUC's "Loading Order," adopted pursuant to its state mandate, implements state law by requiring utilities to meet their energy needs *first* with preferred and renewable resources and, only when those resources are unavailable, infeasible or not cost-effective, then with fossil fuels.

The PUC must balance the State's environmental goals with its other statutory obligations to ensure the availability of adequate power supplies to serve customer demand, at just and reasonable rates. Those duties require the PUC to ensure that utilities acquire enough power to keep the electric system functioning, including under emergency conditions, but not more power than necessary, which would lead to unjust and unreasonable rate increases.

In this case, however, the PUC approved contracts proposed by Southern California Edison Company ("SCE") for the

construction and operation of three new gas-power plants in the Los Angeles Basin, which will emit billions of tons of greenhouse gases for the 20-year duration of the contracts, at a cost of billions of dollars to SCE's ratepayers.

SCE sought contract approval pursuant to procurement authority the PUC previously granted. When the PUC authorized power procurement for SCE, the PUC stressed that any new resources must be purchased in strict compliance with the Loading Order, and if circumstances changed to reduce SCE's power needs, SCE's procurement would be limited to the low end of the authorized range.

In reviewing the proposed contracts, however, the PUC refused to consider that circumstances have, in fact, changed substantially. Since the procurement was authorized several years ago, California has intensified its pollution and climate-control efforts, setting a goal of increasing the energy derived from clean and renewable sources from 33% in 2020 to 50% by 2030, with a target of reducing greenhouse gas pollution to 40% below 1990 levels by 2030, and 80% by 2050. (§ 399.15, subd. (b)(2)(B); 4PE 11:786; 7PE 28:1716.)[1]

At the same time, peak-hour demand for power has steadily decreased, and new transmission projects have been developed and approved, all of which will dramatically reduce overall power needs in the L.A. Basin for the next decade and beyond.

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[1] References to "PE" are to the concurrently-filed exhibits in support of this Petition ("Petition Exhibits"). Each citation to "PE" is preceded by volume number and followed by exhibit number separated by a colon from the page reference.

Despite these significant developments, the PUC approved SCE's proposed contracts, which *maximized* the gas-fired generation the PUC previously authorized. The PUC held the contracts are reasonable, *regardless* of changed circumstances, because the California Independent System Operator ("CAISO")—a private corporation that manages the State's grid system—considers them necessary. The PUC failed to follow its prior determinations that CAISO's role differs from the PUC's. CAISO's sole responsibility is maintaining grid reliability. Unlike the PUC, CAISO has no duty to consider ratepayer costs or environmental concerns. CAISO consistently overestimates power needs and favors excessive procurement, particularly of gas-fired generation, which CAISO considers most reliable. The PUC regularly discounts CAISO's estimates of future power needs to account for the availability of preferred resources that CAISO ignores. The PUC has recognized that it *cannot* fulfill its own statutory obligations by simply deferring to CAISO's need assessments without independent investigation, because doing so would be an unlawful delegation of the PUC's power.

Yet, that is *precisely* what the PUC did in this case. It accepted CAISO's opinion about need for the proposed gas plants without even considering the relevant changed circumstances. It refused to make an independent determination about whether procuring gas-fired generation near the high end of the PUC's previous authorization is reasonable under present-day conditions. It just rubber-stamped CAISO's conclusion, directly violating its responsibilities under state law, its own Loading Order, and the very decisions in which it previously authorized the procurement.

Worse, the PUC approved the contracts despite uncontradicted evidence that more cost-effective preferred resources are available—alternatives which SCE unjustifiably *excluded* from consideration in its contract selection process. Effectively, the PUC turned state law and the Loading Order on their heads. Instead of ensuring SCE procured all available, feasible and cost-effective preferred resources *first*, before resorting to gas-fired generation, the PUC allowed SCE to favor costly fossil-fuel resources over more cost-effective clean-energy options.

The PUC also failed to consider that the vast majority of the power supplied by SCE's proposed gas plants will come from high-usage, high-polluting combined-cycle gas turbines that will *triple* greenhouse-gas emissions in the L.A. Basin for the next 20 years, when California is aggressively seeking to reduce greenhouse-gas emissions to unprecedented lows. The PUC heard no evidence justifying SCE's failure to, at least, select a less harmful, available gas-burning technology.

The PUC's decision is contrary to law and an abuse of discretion. The Court should grant review and annul the decision.

PETITION

Powers Engineering and Los Cerritos Wetlands Land Trust ("LCWLT") petition for a writ of review of Decision ("D.")

15–11-041 issued by respondent PUC on November 24, 2015, as modified on June 1, 2016, by D.16–05-053 (collectively, the "L.A. Basin decision").[2]

A. Beneficial Interest of Petitioners; Capacities of Respondent and Real Parties in Interest

1. Powers Engineering is an energy and environmental engineering consulting company headquartered in San Diego. Bill Powers, P.E., is one of the country's most recognized engineers in the field of energy resource management. (See 3PE 7:635, 10:675–691.) He regularly appears as an expert witness before respondent PUC. (3PE 7:635.) Powers Engineering was a party and presented testimony in the *L.A. Basin* proceeding.

2. LCWLT is a California non-profit corporation headquartered in Long Beach. (7PE 27:1694–1695.) With over 1,000 members, LCWLT seeks to save and restore the Los Cerritos Wetlands. (7PE 27:1694.) LCWLT was a party to the *L.A. Basin* proceeding. The *L.A. Basin* decision authorizes a contract for a gas-fired power plant on Wetlands property. (7PE 27:1695.)

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[2] *L.A. Basin*, D.15–11-041 (Pub.Util.Com. Nov. 24, 2015); D.16–05-053 (Pub.Util.Com. June 1, 2016). Citations to PUC decisions are to the official pdf versions, which are available on the PUC's website (http://docs.cpuc.ca.gov/DecisionsSearchForm.aspx.)

Appendix A provides a key to acronyms used in this brief and the record

3. Respondent PUC is the agency responsible for regulating for-profit utilities in California. (Cal. Const., art. XII, § 6; § 701.)[3]

4. Real-party-in-interest SCE is a PUC-regulated, for-profit utility, providing electrical services in Central and Southern California, including the L.A. Basin. (1PE 1:13.)

B. Jurisdiction, Venue, and Timeliness of Petition

5. This Court has original jurisdiction under section 1756(a), which provides that a writ of review to an appellate court is the only means of obtaining review of a PUC decision. Section 1756(a) authorizes any party aggrieved by a PUC decision to petition for a writ of review.

6. Respondent PUC issued D.15–11-041 on November 24, 2015. (8PE 34:1856 [D.15–11-041, *supra*, p.1].) Petitioners filed timely applications for rehearing. (8PE 35:1907–1937, 37:1954–1957; §1731(b).) On June 1, 2016, respondent PUC issued D.16–05-053, modifying D.15–11-041 and denying rehearing. (8PE 39:1997, 2020 [D.16–05-053, *supra*, pp.17, 23].) This Petition is timely under section 1756(a).

7. Venue is proper in this Court because Petitioner LCWLT's principal place of business is in Los Angeles County. (See §1756(d).)

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[3] Unless otherwise indicated, further statutory references are to the Public Utilities Code.

C. Authenticity of Exhibits

8. The supporting Petition Exhibits, filed under separate cover, are true and correct copies of original documents filed with respondent PUC in the *L.A. Basin* proceeding. They are incorporated herein by reference, paginated consecutively from pages 1 through 2020, and referenced by that consecutive pagination.

D. Factual Background and Chronology of Events

1. By statute, the PUC must ensure adequate electric service at reasonable rates, and protect the environment by reducing pollution from gas-fired generation.

9. The PUC has jurisdiction over investor-owned utilities, including SCE, to ensure adequate electricity supplies for all their customers. (§ 451; D.13–02-015 (Pub.Util.Com. Feb. 13, 2013), pp.34–35.)

10. Statutory mandates require the PUC to keep utility rates "just and reasonable" (§§451, 454), which means ensuring utilities procure no more power than needed. (D.13–02-015, *supra*, pp.124, 127; D.14–03-004 (Pub.Util.Com. Mar. 13, 2014), p.67.)

11. The PUC also must ensure utilities acquire their electricity resources consistently with statewide environmental policy. By statutory mandate, the PUC regulates to reduce greenhouse gas ("GHG") emissions by prioritizing energy sources such as energy

efficiency, demand response and renewables, over conventional gas-fired generation ("GFG").[4] (E.g., §§399.11–399.31, 454.5; D.13–02-015, *supra*, pp.10–11, 35–36, 78–79, 127; D.14–03-004, *supra*, pp.12–14.)

12. Pursuant to its statutory mandate, the PUC has adopted a "Loading Order," compelling utilities to procure: "[F]irst, energy efficiency and demand-side resources," including demand response, "followed by renewable sources of power and distributed generation," and—only when these "preferred resources" "are unable to satisfy increasing energy and capacity needs"—then "clean and efficient fossil-fired generation."[5] (D.13–02-015, *supra*, pp.10, 127; D.14–03-004, *supra*, pp.4, 6 fn.2, 135.)

2. The PUC determines utilities' energy needs in procurement authorization proceedings.

13. In the L.A. Basin, SCE is required by federal and state law to meet a local capacity requirement ("LCR"). (D.13–02-015, *supra*, p.6.) LCR is the amount of local generation needed to reliably serve demand under both normal and exceptional

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[4] Energy efficiency is reduction in demand achieved through use of energy-efficient lightbulbs, appliances, etc. Demand response refers to programs to incentivize customers to use less electricity, and technology allowing utilities to unilaterally reduce customer load during peak demand. (*Ames v. Pub.Util.Com.* (2011) 197 Cal.App.4th 1411, 1413–1414.) Renewable resources include wind and solar power.

[5] Distributed generation refers to small-scale electric generators installed at or near customers' premises.

circumstances. Exceptional circumstances are critical contingencies occurring under peak-load conditions—i.e., a power plant or transmission line breakdown due to emergency, such as equipment malfunction, fire or earthquake, on a day so hot it likely will occur only once in ten years. (D.13–02-015, *supra*, p.14; D.14–03-004, *supra*, p.24].)

14. The PUC currently accepts the opinion of CAISO—a private, nonprofit corporation responsible for managing the State's electrical transmission grid (§§337, 345, 345.5; 3PE 7:655)—that the appropriate critical contingency to plan for is the loss of two major transmission import lines (an "N-1–1" event). (D.13–02-015, *supra*, pp.14, 39–40; D.14–03-004, *supra*, pp.24, 36–37, 121].) The federal reliability standard is not as strict as CAISO advocates. (3PE 7:660.)

15. The PUC recognizes the chance of a double transmission-line outage occurring on a peak-load day is as low as once in 21 to 928 years (D.14–03-004, *supra*, pp.43, 45, 49]), and that these "rare and unusual circumstances...may never occur" (D.13–02-015, *supra*, p.40). (See also *id.,* p.43 [citing evidence that "the probability of an N-1–1 contingency occurring at the peak hour of a 1-in-10 load forecast is...about 1 in a billion"].) Determining whether additional procurement to meet this rare contingency is reasonable requires a cost-benefit analysis. (D.14–03-004, *supra*, pp.40–45; D.06–06-064 (Pub.Util.Com. June 29, 2006), p.19 [analysis involves weighing "quantitative information...regarding the probabilities" of the critical contingency against "the ratepayer and societal costs of service interruptions"].)

16. The PUC analyzes utilities' local-capacity needs in biennial long-term planning proceedings. Utilities submit plans estimating their available resources and the additional resources they need, if any. (D.13–03-029, *supra*, pp.2, 9, 35; § 454.5.) The PUC conducts hearings, considers evidence on the utilities' estimates, and determines what amount and type of resources each utility may procure over the next ten years. (§ 454.5, subds. (b)-(c).)

17. Then, the utilities apply in separate proceedings for PUC approval of contracts for power purchases consistent with the PUC's authorization. (§ 454.5, subd. (c)(3).) The utilities bear the burden to demonstrate the proposed contracts are reasonable and comply with applicable laws and the PUC's procurement authorization decision, including the requirement of acquiring preferred resources ahead of fossil fuels.[6]

3. In *Track 1*, the PUC authorized SCE to buy 1,400–1,800 MW of power.

18. In the 2012 long-term planning proceeding, the PUC considered SCE's local-capacity needs in separate "tracks." (D.13–02-015, *supra*, p.5; D.14–03-004, *supra*, pp.6–9.)

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[6] D.00–02-046, (Pub.Util.Com. Feb. 17, 2000) p.36, ["the burden rests heavily upon a utility to prove it is entitled to [the relief requested] and not upon…any interested party or protestant...to prove the contrary]; D.04–03-034 (Pub.Util.Com. Mar. 16, 2004) p.7. ["[T]he ultimate burden of proof of reasonableness…never shifts from the utility which is seeking to pass its costs of operations onto ratepayers on the basis of the reasonableness of those costs"].)

19. *Track 1* focused on local-capacity needs resulting from the expected retirement of power plants using once-through-cooling ("OTC") technology, pursuant to State Water Resources Control Board ("SWRCB") policy.[7] (D.13–02-015, *supra*, pp.2, 6, 41–42.)

20. CAISO offered its opinion in *Track 1* that a local-capacity need of 1,870–3,896 megawatts ("MW") will exist in the L.A. Basin by 2021 due to once-through-cooling plant retirements. (D.13.02.015, *supra*, pp.15–16.) Several parties challenged CAISO's opinion because CAISO failed to account for demand-response resources, testifying it "does not believe that demand response can be relied upon to address local capacity needs, unless the demand response can provide equivalent characteristics to that of a dispatchable [gas-fired] generator." (*Id.*, pp.16–17, 25–34, 39–62.) They also challenged CAISO's failure to consider in-development transmission projects that could reduce the forecasted need. (D.13–02-105, *supra*, pp.42–44.)

21. Even SCE acknowledged concerns about CAISO's assumptions, agreeing that if demand proves to be lower, or various resources more available, than CAISO presumed, the need CAISO projected would be reduced or eliminated. (D.13–02-015, *supra*, pp.23–24, 62.)

22. In *Track 1*, the PUC recognized there is "[a] significant difference between [CA]ISO's reliability mission and the Commission's." (D.13–02-015, *supra*, pp.37, 126.) While CAISO's

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[7] "Once-through cooling' is a method to dispose of waste heat produced by a power plant." (D.13–02-015, *supra*, p.8.) "[T]he result is considered as water pollution…." (*Ibid.*) SWRCB requires that, by 2021, OTC plants either change cooling method, reduce water usage by 93%, or retire. (*Id.,* pp.8–9 & fn.4.)

objective is to "keep the lights on at all times," "the Commission must balance its reliability mandate with other statutory and policy considerations"— "reasonableness of rates and a commitment to a clean environment." (*Id.*, pp.14, 37, 127.)

23. The PUC rejected CAISO's position that "deliberately conservative forecasts must be employed in the assessment of reliability requirements," because "[a] marginal shortage...puts public safety and the economy in jeopardy, whereas a marginal surplus has only a marginal cost implication." (D.13–02-015, *supra*, pp.22, 37.) Disagreeing that under-procurement is worse than over-procurement, the PUC cited evidence that "power plants cost billions of dollars to construct and operate" and also have "significant environmental detriments." (*Id.,* pp.37–*38*.)

24. The PUC substantially discounted the 1,870–3,896 MW need CAISO projected with "conservative" estimates of resources like demand response and energy efficiency that are reasonably likely or certain to be available but which CAISO ignored. (D.13–02-015, *supra*, pp.49, 51, 55–56, 65, 66, 78, 118, 124, 128.) Ultimately, the PUC determined once-through-cooling plant retirements will create a 1,400–1,800 MW shortfall in the L.A. Basin by 2021, and the PUC authorized SCE to procure new resources to fill that need. (*Id*., pp.2, 73, 128, 130.) The high end of the PUC's 1,400–1,800 MW procurement authorization was below the low end of the 1,870–3,896 MW CAISO recommended; comparing the ranges' high ends, the PUC authorized only 46% of what CAISO advocated.

25. Although the PUC declined at the time to further adjust CAISO's estimate to account for transmission projects under development, the PUC acknowledged "[i]t is possible or even

likely that...certain transmission upgrades which were not fully considered by [CA]ISO...may become feasible." (D.13–02-015, *supra*, p.44.) The PUC stated that "in SCE's procurement application, we may be able to incorporate new information about transmission upgrades and new transmission capacity." (*Id.*, p.44.)

26. Similarly, the PUC recognized it may be possible to extend some once-through-cooling plants' compliance deadlines if needed to bridge a gap between the need for and availability of resources. (D.13–02-015, *supra*, p.40–42.) "[CA]ISO witness Sparks testified that [CA]ISO participates in a SWRCB committee" in which CAISO "would seek to adjust the [OTC retirement] schedule' if it determines that reliability cannot be met within the schedule," and "[i]f the retirement schedule is delayed for one or more plants past 2020, there could be a reduction in the local reliability need for the LA basin local area." (*Id.*, p.43.) The PUC found that "[i]f any extensions to the OTC closure deadlines occur, this can be taken into account...in a review of a procurement application by SCE." (*Id.*, p.130.)

27. The PUC explained, "[o]ne benefit of a long planning horizon is the opportunity to adjust to the inevitable changes in circumstances," and "reconsider circumstances in the future." (*Id.*, pp.40.)

4. In *Track 4*, the PUC authorized SCE to buy an additional 500–700 MW.

28. The *Track 1* decision issued in February 2013. (D.13–02-015, *supra*, p.1.) In March 2013, the PUC opened *Track*

4 to consider additional local needs stemming from the closure of the San Onofre Nuclear Generating Station ("SONGS"), which supplied GHG-free power to the L.A. Basin and San Diego. (D.14–03-004, *supra*, pp.2, 8–9, 22 87, 89, 123.)

29. In *Track 4*, CAISO testified its study of SONGS' closure indicated the L.A. Basin would experience an additional need of 1,222–1,922 MW, beyond the *Track 1* need. (D.14–03-004, *supra*, pp.25–26.) But CAISO initially recommended the PUC *not* authorize new procurement. (*Id.*, at p.25.) Rather, CAISO advised the PUC wait for the results of CAISO's 2013–2014 Transmission Planning Process ("TPP"), where CAISO was considering "transmission solutions [that] may impact future LCR needs (by lowering local procurement requirements)"—including SCE's proposed Mesa-Loop-In project.[8] (*Id.*, pp.9, 11, 38, 49.)

30. After initially testifying it would be premature to authorize new procurement, CAISO subsequently supported SCE's request to procure 500 MW over the *Track 1* authorized amount. (D.14–03-004, *supra*, pp.26–27.) Other parties urged the PUC to follow CAISO's initial recommendation and wait for the TPP results. (*Id.*, p.10.)

31. In its March 2014 *Track 4* decision, the PUC declined to wait for CAISO's 2013–2014 TPP results. (D.14–03-004, *supra*, pp.33–34.) Instead, the PUC accepted CAISO's study as a

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[8] The Mesa Loop-In project involves rebuilding and upgrading the existing Mesa 230 kV substation in the L.A. Basin to 500 kV, to increase the ability to import power from outside the L.A. Basin and reduce procurement costs. (D.14–03-004, *supra*, pp.49–50, 127.)

starting point for identifying local-capacity need in the L.A. Basin, but modified CAISO's estimates because CAISO failed to consider all reasonably available resources. (*Id.*, pp.28, 36–47.)

32. The PUC found that, although federal guidelines permit use of controlled load shedding to mitigate an N-1–1 critical event in SCE's territory, CAISO failed to factor in load shedding, because CAISO believes load shedding "should not be used as a transmission planning tool."[9] (D.14–03-004, *supra*, pp.36–38, 41, 44.)

33. The PUC reaffirmed that, while CAISO's sole responsibility is to maintain service reliability, the PUC also must ensure reasonable rates, and it has "rejected the notion of 'reliability at any cost.'" (D.14–03-004, *supra*, pp.12–13, 44.) The PUC has "indicat[ed] instead that 'measures that are proposed to promote greater grid reliability should be evaluated by weighing their expected costs against the value of their expected contribution to reliability....'" (*Ibid.*)

34. The PUC found that CAISO conducted no studies "to compare the cost or risk of relying on [load shedding] versus the costs of [procuring] other resources to mitigate the critical contingency." (*Id.,* p.41.) Other evidence showed procurement to avoid load shedding would not be cost-effective, particularly because CAISO's conservative critical contingency is extremely unlikely to happen. (*Id.,* pp.41–43.) The PUC concluded, "it is not reasonable...to authorize utilities to procure—and ratepayers to

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[9] Load shedding means "controlled, but immediate, blackouts of one or more 500 MW blocks…in a defined area, in response to specific critical failures of generation and/or transmission resources." (D.14–03-004, *supra*, p.36, fn.51.)

pay the cost of—the additional resources required to fully mitigate the identified N-1–1 contingency without [load shedding]." (*Id.,* p.45.)

35. In the end, the PUC determined SONGS' closure will create a need in the L.A. Basin of 500–700 MW, beyond the *Track 1* authorized amount, and the PUC authorized SCE to procure new resources to fill this need. (D.14–03-004, *supra*, pp.2, 85.) The PUC's 500–700 MW procurement authorization was over 60% less than the 1,222–1,922 MW CAISO's study projected.

36. The PUC emphasized that authorizing a procurement range protects against the risks of both over- and under-procurement caused by "uncertainties about supply and demand conditions," because it provides "the ability to process new information during the procurement process." (*Id.,* p.83; see D.13–02-015, *supra*, p.124.) For example, the PUC acknowledged that if CAISO approved new transmission projects, they would reduce need in the L.A. Basin. (D.14–03-004, *supra*, pp.53, 127–128.) The PUC noted SCE's proposed Mesa Loop-In project, specifically, would reduce need for new gas-fired generation in the L.A. Basin by 1,200 MW. (*Id.,* pp.38, 46, 49–50, 127.) In that event, the PUC stated, "some combination of the following would occur: a) procurement at or near the minimum levels authorized in this decision; b) less procurement or no procurement authorized in future LTPP proceedings; and c) less of a need to delay retirements of OTC plants." (*Id.*, pp.116–117; see also *id.*, pp.50–51, 52–53, 128.)

5. The PUC required SCE to obtain up to 60% of the total 1,900–2,500 MW authorized in *Track 1* and *Track 4* from preferred resources or energy storage.

37. Together, *Track 1* and *Track 4* authorized SCE to procure 1,900–2,500 MW of new resources in the L.A. Basin. (D.14–03-004, *supra*, pp.2, 141–142.)

38. In both *Track 1* and *Track 4*, the PUC reiterated that its "statutory mandate to implement procurement-related policies that protect the environment," and its Loading Order, require it to ensure utilities "first meet their 'unmet resource needs through all available energy efficiency and demand reduction resources that are cost-effective, reliable and feasible,'" before resorting to fossil fuels. (D.13–02-015, *supra*, pp.10–11, 36, 78–79, 127; D.14–03-004, *supra*, pp.12–14, quoting § 454.5, subd. (b)(9)(C).)

39. The PUC acknowledged CAISO's position that "the most certain technology which can meet LCR needs...is gas-fired generation." (D.13–02-015, *supra*, p.81; D.14–03-004, *supra*, pp.90–91, 130, 133].) Based on CAISO's opinion, the PUC found it "necessary that a significant amount of [the authorized] procurement level be met through conventional gas-fired resources." (D.13–02-015, *supra*, p.125.) But the PUC warned that, while "[g]as-fired resources are appropriate resources to procure for their technical reliability characteristics[,]...that procurement should be consistent with the Loading Order...." (D.13–02-015, *supra*, p.65.)

40. The PUC required SCE to procure the 1,900–2,500 MW in identified resource "buckets":

- At least 1,000 MW, but no more than 1,500 MW, from conventional gas-fired generation resources;
- At least 50 MW from energy storage resources;[10]
- At least 550 MW from preferred resources or energy storage; and
- At least 300 MW, but no more than 500 MW, from any resource.

(D.14–03-004, *supra*, pp.2, 94–95, 142].)

41. Subject to the 2,500-MW cap, the PUC required that any additional capacity come from preferred resources or energy storage. (D.14–03-004, *supra*, pp.94, 142.) Thus, the PUC ordered SCE to procure up to 1,500 MW (60%) of the maximum 2,500 MW, and no less than 600 MW (32%) from preferred resources or energy storage. (*Id.*, pp.95, 140.)

42. The PUC emphasized SCE's obligation to procure resources according to the Loading Order is "ongoing," meaning that "[o]nce procurement targets are achieved for preferred resources, [SCE is] not relieved of [its] duty to follow the Loading Order." (D.13–02-015, *supra*, pp.10–11; D.14–03-004, *supra*, p.14.) "Instead of procuring a fixed amount of preferred resources and then procuring fossil-fuel resources, [SCE is] required to continue to procure the preferred resources to the extent that they are feasibly available and cost effective." (D. 13–02-015, *supra*, p.11; D.14–03-004, *supra*, p.15.) While recognizing that "procuring additional preferred resources is more difficult than

[10] Energy storage is technology capable of absorbing energy, storing it, and dispatching it. The PUC recognizes energy storage is a valued, "enabling" technology, and equated it with preferred resources for the *Track 1* and *Track 4* decisions. (D.14–03-004, *supra*, pp.6–7 fn.3.)

'just signing up for more conventional fossil fuel generation,' " the PUC made clear that "consistency with the Loading Order and advancing California's policy of fossil fuel reduction demand strict compliance with the loading order." (D.13–02-015, *supra*, p.11; D.14–03-004, *supra*, pp.14–15.)

43. In both *Track 1* and *Track 4*, the PUC required that SCE's subsequent application for procurement contract approval include "[a] demonstration of technological neutrality," showing "no resource was arbitrarily or unfairly prevented from bidding in SCE's...solicitation process." (D.13–02-015, *supra*, p.94; D.14–03-004, *supra*, p.146.)

44. The PUC also affirmed that "[i]n addition to meeting reliability criteria and consistency with the Loading Order, LCR procurement by SCE must be at least cost to ratepayers." (D.13–02-015, *supra*, p.79, 93–94.) But the PUC emphasized "the Loading Order calls for prioritization of cost-effective preferred resources, in some cases even if they are more expensive than other resources." (D.14–03-004, *supra*, p.95.)

45. Finally, the PUC reiterated that "[i]f there is additional information about the viability of preferred resources and/or transmission alternatives in the...when SCE files its Application for approval of contracts, that information should be considered at that time." (D.13–02-015, *supra*, p.129.) The PUC directed SCE to "continue to assess and implement all ways to include cost-effective and viable preferred resources to reduce LCR needs." (D.13–02-015, *supra*, p.87.) "As more preferred demand side resources are available to meet these needs," the PUC stated, "SCE's LCR needs will be reduced toward the minimum authorized procurement level." (*Id.*, p.89.) The PUC explained

that, "[w]ithin th[e] range [of authorized procurement levels], SCE will need to consider a variety of issues," including (but not limited to) "changes in load forecasts" and "potential cost-effective transmission upgrades," and SCE will then have to justify its choices in an application for approval of its procurement contracts. (*Id.*, p.90.)

6. SCE's bid analysis showed preferred and energy storage resources are available and most cost-effective, but SCE rejected them by imposing discriminatory post-bidding conditions.

46. In September 2013, SCE launched a Request for Offers ("RFO") for resources, as authorized in *Track 1* and *Track 4*. (1PE 1:9; D.14–03-004, *supra*, p.4.)

47. SCE received over 1,000 "indicative" offers and 2,000 final offers, representing all resource types solicited. (1PE 2:45, 68 7PE 26:1685 & fn.47.]) About half the offers were for energy storage. (1PE 2:68.)

48. To identify the best and most cost-effective mix, SCE developed an "optimization tool," which demonstrated that 400–900 MW of In-Front-of-Meter ("IFOM") energy storage would be the most cost-effective acquisition. (1PE 2:89–90; 2PE5:288–290; 7PE 25:1645–1646.) However, SCE discounted this result and did not select that much energy storage, contravening the procurement authorization decisions' directive to do "everything it could to obtain…cost-effective preferred resources and energy storage resources to meet LCR needs." (D.13–02-015, *supra*, pp.78.)

49. SCE expressed "concern" about contracting for the energy storage amounts its own model advocated, claiming it may have overvalued energy storage, because energy storage is an "emerging technology with unknowns as to how these projects will operate and participate in markets." (1PE 2:49–50, 86, 90; 7PE 25:1646, 1648.)

50. SCE claimed it did not know "at the time of the selection analysis" whether CAISO would impose grid interconnection constraints or charging/discharging tariffs on energy storage. (7PE 25:1646, 1648; see also 1PE 2:49–50; 2PE 5:273, 288.) But as SCE acknowledged, *before* it filed its PUC application, CAISO clarified there would *not* be interconnection constraints or tariffs. (2PE 5:273–275, 288–290, 294–298; 5PE 16:1036; 7PE 25:1648, fn.10.)

51. SCE also said energy storage contracts might be considered debt equivalents by rating agencies, negatively impacting SCE's credit. (1PE 2:64–67, 80, 94; 2PE 5:282–284; 7PE 25:1648.) Although SCE included contract provisions to mitigate the risk of debt equivalence treatment, SCE remained "concerned" the contracts still might be treated as debt equivalents based on "unanticipated uncertainties." (1PE 2:64–67, 80, 94; 2PE5:284–288; 7PE 25:1648.)

52. Based on these "concerns," SCE made a "judgment call" to impose a 100-MW cap on IFOM energy storage. (1PE 2:90–91, 108; 2PE 5:280.) SCE did not analyze whether caps above 100 MW would sufficiently address its "concerns," because it claimed that was too complicated. (2PE 5:280–281; 7PE 25:1649.)

53. SCE made a similar "judgment call" regarding demand-response resources. The PUC has not established minimum

performance characteristics for preferred resources; those standards are at issue in other PUC proceedings. (D.14–03-004, *supra*, p.90.) In its RFO solicitation, SCE decided to restrict the maximum response time for demand-response resources to one hour. (3PE 6:544, 546.) Later, in private consultations with CAISO, "SCE learned that CAISO is seeking a 20-minute response condition for demand response resources." (8PE: 39:50–59 [D.16–05-053, *supra*, p.1950]; 1PE 2:50–51, 60; 3PE 6:516–521, 544–545, 547–548.) Based on its "collaboration" with CAISO, SCE decided, unilaterally, months *after* bids were submitted, to reduce the maximum response time for demand-response resources to 20 minutes. (1PE 2:50–51; 3PE 6:519–520, 544–547.) This decision, which SCE admitted is not supported by any *PUC* authority, disqualified an undisclosed number of demand-response offers. (1PE2:50–51, 60; 3PE 6:520–521, 523.)

7. SCE sought PUC approval for procurement contracts that maximized gas-fired generation but failed to meet minimum preferred-resource and energy-storage requirements.

54. On November 21, 2014, SCE applied for approval of 63 contracts it selected through its RFO. (1PE 1:10, 23, 34.) The contracts totaled approximately 1,883 MW (17 MW below the 1,900-MW minimum required by *Track 1* and *Track 4*). (1PE 1:10.)

55. Despite the PUC's direction in both *Track 1* and *Track 4* to prioritize preferred resources and energy storage, 1,382 MW of the total 1,883 MW (or 73%) came from three contracts for traditional gas-fired generation. (1PE 1:10.)

56. Two of the gas-plant contracts, totaling 1,284 MW, were for new combined-cycle gas turbine ("CCGT") plants to be constructed at sites of existing once-through-cooling plants in Huntington Beach and Alamitos (Long Beach). (1PE 2:111.)

57. The third gas-plant contract was for two simple-cycle combustion turbine ("CT") peaker units, totaling 98 MW ("Stanton plant" or "Stanton"). (1PE 1:10, 2:40–41, 91, 110–112.) SCE acknowledged it selected the Stanton plant as a result of its 100-MW cap on energy storage, and admitted Stanton is more costly than available energy-storage alternatives. (2PE 5:336–337.)

58. The remaining 60 proposed contracts totaled 500 MW. (1PE 1:10.) Of this amount, 264 MW was energy storage; SCE asserted the remaining 237 MW qualified as preferred resources. (1PE 1:10.)

59. While SCE's application maximized gas-fired procurement (the 1,382 MW gas-fired capacity exceeded the 1,000-MW minimum fossil-fuel power requirement), SCE admitted it failed to meet the 600-MW minimum requirement for preferred resources and energy storage. (1PE 2:37.) Products that SCE labeled as energy efficiency and demand response—the resources highest in the Loading Order—combined for only 10% of SCE's proposed procurement. (1PE 2:36–39; 6PE 22:1219; 8PE 34:1875 & fn. 21.)

60. While SCE described its RFO response as "very robust"—over 1,000 offers for all resources, many from counterparties who were new to SCE's procurement programs—SCE awarded the vast majority of the proposed 1,883-MW contract capacity to two entrenched incumbents. (1PE 2:35.)

61. When the *Track 1* decision issued in February 2013, the L.A. Basin had four existing once-through-cooling plants: AES Huntington Beach, AES Alamitos, AES Redondo Beach, and NRG El Segundo. (7PE 26:1685, citing D.13–02-015, *supra*, p.19.) Of the total 1,883 MW for which SCE sought approval, 1,555 MW (or 82%) went to either AES (1,384 MW) or NRG (171 MW). (1PE 1:10; 1PE 2:68, 100; 7PE 26:1685.)

62. Although SCE received approximately 200 final offers for energy storage (3PE 6:570–571), SCE awarded more than half the selected energy storage (150 MW out of 264 MW) to incumbent AES and to wholly-owned subsidiaries of another well-connected company, Advanced Microgrid Solutions, Inc. ("AMS"). (1PE 2:107–109.) AMS was formed by former PUC commissioner Susan Kennedy two months *after* SCE issued its RFO in September 2013. (3PE 9:670–672.) SCE characterized the four offers by the AMS affiliates as "among the best offers that we received," even though AMS had no operating history, no specific designated storage technology, no creditor collateral, and no site control. (3PE 6:571, 573–576; 7PE 26:1685–1686.)

8. Petitioners opposed SCE's application because it violated the law and failed to comply with PUC directive.

63. Numerous parties opposed SCE's application, arguing. They argued:

1. SCE's proposed demand response contracts did not, in fact, qualify as demand response;
2. SCE unreasonably limited energy storage by arbitrarily imposing the 100-MW cap;
3. SCE unfairly disqualified demand-response resources by imposing the 20-minute condition only on those resources and only after bids were submitted;
4. SCE selected the Stanton gas plant, although Stanton is more costly and will provide fewer reliability benefits than energy storage or demand-response resources; and
5. The mix of contracts SCE selected demonstrated its RFO process favored gas-fired resources and disadvantaged preferred resources, directly contrary to state law, the Loading Order, and the *Track 1* and *Track 4* directives.

(7PE 26:1663, 1683–1690; 7PE 28:1718–1738; 8PE 31:1819–1826; 8PE 32:1839--1848.)

64. Parties also argued changed circumstances since *Track 1* and *Track 4* eliminated or at least substantially reduced the identified need—particularly for new gas-fired generation—so SCE's fossil-fuel procurement should be limited to the minimum 1,000 MW. (5PE 16:1032; 7PE 1672–1673; 8PE 30:1798–1799, 1809.) The changed circumstances included: (1) CAISO's approval

of the Mesa Loop-In Project, operational by 2020, and (2) a steady decline in peak load in the L.A. Basin projected to continue through 2022 and beyond. (7PE 26:1674–1677, 1680–1682.)

65. Even without these changed circumstances, parties argued, SCE did not and could not justify acquiring the vast majority of fossil resources from high-usage combined-cycle gas plants, which will increase greenhouse-gas emissions compared to the low-usage once-through-cooling plants they will replace, and certainly compared to GHG-free SONGS. (7PE 26:1673–1674; 8PE 30:1799, 1802, 1806–1809; 8PE 31:1824–1826.)

9. The PUC perfunctorily approved SCE's proposed contracts, though SCE was over 30% short of the *minimum* preferred resource and energy storage requirement.

66. The PUC approved 57 of SCE's 63 proposed contracts. (8PE 34:1876 [D.15–11-041, *supra*, p.10].)

67. The PUC rejected six contracts totaling 70 MW that SCE characterized as demand response, "because the[] [contracts] rel[ied] on natural gas-fired [] generation to reduce the amount of energy served by the grid." (8PE 34:1878–1883, 1903 [D.15–11-041, *supra*, pp.12–17, 37].)

68. The PUC approved a seventh 5-MW contract that SCE also characterized as demand response, but only on condition that it be amended to specifically exclude use of fossil fuel. (8PE 34:1879–1880, 1883, 1903 [D.15–11-041, *supra*, pp.13–14, 17, 37].)

69. The PUC's treatment of the seven purported "demand-response" contracts meant that of the 1,883 MW of capacity for which SCE sought approval, *none* was demand response and less than 7% (124 MW) was energy efficiency (1PE 1:10), even though those resources are highest in the Loading Order.

70. Without the rejected contracts, SCE was 99 MW short of the 1,900-MW minimum procurement required by *Track 1* and *Track 4*, and was 169 MW short of the minimum 600 MW required from preferred resources and energy storage. (8PE 39:2015 [D.16–05-053, *supra*, p.18].)

71. Although SCE missed the minimum requirement for preferred resources and energy storage by over 30% and failed to select any demand response at all, the PUC found that SCE "substantially satisfied" its procurement requirements and its proposed contracts were a reasonable means of filling the identified need. (8 PE 34:1876, 1900 [D.15–11-041, *supra*, pp.10, 34.])

72. The PUC also "relieved" SCE from procuring more preferred resources or energy storage, finding "reasonable SCE's suggestion that it take into consideration updated CAISO analyses in determining whether to procure the remaining authorized MW." (8PE 34:1876–1877, 1883 [D.15–11-041, *supra*, pp.10–11, 17].)

73. But the PUC ignored that changed circumstances since the *Track 1* and *Track 4* decisions issued have reduced or eliminated SCE's need, rendering at least some of its fossil-fuel contracts unnecessary and unreasonable. Instead, the PUC "agree[d] with SCE" that "[r]egardless of whether circumstances have changed[,]...SCE acted reasonably in…contracting for the

proposed amount of GFG." (8PE 34:1894–1895, 1904 [D.15–11-041, *supra*, pp.28–29, 38].) The PUC justified this conclusion because "CAISO's 2014–2015 Transmission Plan identifies that the total amount of this [gas-fired] procurement is required." (8PE 34:1894, 1899 [D.15–11-041, *supra*, pp.28, 33].)

74. The PUC further found SCE's conduct of the RFO was reasonable, even if "not perfect." (8PE 34:1877 [D.15–11-041, *supra*], p.11.) Although the PUC noted "the operational requirements for Demand Response changed considerably well after bids were submitted[,]" the PUC merely concluded there is "room for improvement in the all-source RFO process." (8PE 34:187801879 [D.15–11-041*, supra*, pp.12–13].)

75. Without analysis, the PUC summarily determined that "SCE acted reasonably at the time in adopting a 100 MW cap for IFOM Energy Storage, based on the fact that this RFO was unique, issued on a tight timeline, and needed to be performed in the absence of key information." (8PE 34:1889 [D.15–11-041, *supra*, p.23].)

76. Also without analysis, the PUC summarily concluded that "under the circumstances as they existed at the time SCE made its selections[,] [the Stanton] contract was a reasonable means of meeting the Commission's procurement directive." (8PE 34:1892 [D.15–11-041, *supra*, p.26].)

10. The PUC denied rehearing, slightly modifying its decision.

77. Several parties, including Petitioners, sought rehearing. (8PE 35:1907–1953, 36:1938–1953, 37:1954–1957, 38:1958–1996.)

They contended the PUC failed to proceed as required by law and abused its discretion, because it made no findings or conclusions of law on many of the issues these parties raised, and the findings and conclusions of law the PUC did make either were not supported by substantial evidence, and/or violated the PUC's statutory duties to maintain reasonable rates and protect the environment, as well as the Loading Order and the *Track 1* and *Track 4* decisions. (8PE 35:1919, 1922, 36:1950, 37:1957, 38:1965, 1967.)

78. The PUC denied rehearing but slightly modified its decision to "remove discussion and findings regarding SCE's substantial compliance with the procurement directives in *Track 1* and *Track 4* to purchase the minimum preferred resources," and, instead, to "*require* SCE to procure an additional 169.4 MW of preferred resources and energy storage." (8PE 39:1998–2011, 2014, 2017, 2018, 2019–2020 [D.16–05-053, *supra*, pp.2–4, 17–18, 20, 21, 22–23], emphasis added.)

79. However, the PUC insisted it is "reasonable" for SCE "to consider CAISO updated LCR studies to account for planned transmission upgrades and load forecast[] update[s] when procuring the remaining minimum preferred resources or energy storage." (8PE 39:2015 [D.16–05-053, *supra*, p.18].)

80. Otherwise, the PUC left the *L.A. Basin* decision substantively unchanged, although the PUC agreed the decision "would benefit from additional discussion…on some issues," and added the points it deemed appropriate. (8PE 39:2000 [D.16–05-053, *supra*, p.3].) The additions are discussed, where pertinent, in the attached memorandum of points of authorities.

E. Basis for Relief

81. Section 1757(a) governs this Court's examination of cases on petition for writ of review from a PUC decision involving "ratesetting." (§ 1757, subd. (a).) The *L.A. Basin* proceeding was a ratesetting case. (8PE 35:1917; § 1701.1, subds. (a) & (c)(3).)

82. This court reviews a PUC decision involving ratesetting to determine, as pertinent here, whether "on the basis of the entire record which shall be certified by the commission": (1) "[t]he commission has not proceeded in the manner required by law," (2) "[t]he findings in the decision…are not supported by substantial evidence...[,]" or (3) "[t]he...decision…was an abuse of discretion." (§ 1757, subd. (a).)

83. The Public Utilities Code is the primary authority governing PUC action, determining whether the PUC has "proceeded in the manner required by law." (See *PG&E Corp. v. Pub.Util.Com.* (2004) 118 Cal.App.4th 1174, 1199 [PUC may not "disregard...express legislative directions to it, or restrictions upon its power"].) The PUC's failure to follow its own rules constitutes a failure to proceed in the manner required by law and an abuse of discretion. (*S. California Edison Co. v. Pub.Util.Com.* (2006) 140 Cal.App.4th 1085, 1091–1092.) A finding not supported by substantial evidence also constitutes an abuse of discretion. (*Save Our Peninsula Comm. v. Monterey Cnty. Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 116–117.) Section 1757 requires a court reviewing a PUC decision for substantial evidence "to evaluate the findings in the [PUC's] decision 'in light of the whole record,'" and "consider all the record evidence, even if it was not specifically cited by the Commission,"

which necessarily involves "some weighing of the evidence." (*Util. Reform Network* (2014) 223 Cal.App.4th 945, 963, quoting § 1757, subd. (a)(4).)

84. Petitioners request issuance of a writ of mandate on the following grounds:

- The PUC failed to proceed in the manner required by law and abused its discretion because, in violation of section 1705, it refused to decide the material issue whether changed circumstances since the *Track 1* and *Track 4* decisions issued have reduced the need for gas-fired procurement in the L.A. Basin.
- The PUC failed to proceed in the manner required by law and abused its discretion because—in violation of its statutory obligations to maintain reasonable rates and protect the environment, its Loading Order, and its own directives in the *Track 1* and *Track 4* decisions:

  The PUC approved SCE's fossil-fuel contracts without accounting for changed circumstances that have reduced the need for gas-fired resources.

  The PUC impermissibly delegated its authority by deferring entirely to CAISO's opinions about the need for gas-fired resources and the performance requirements for demand response resources.

  The PUC sanctioned an RFO process in which discrimination against demand-response and energy-storage resources resulted in the selection of costlier gas-fired generation.

  The PUC failed to hold SCE to the burden of proving the reasonableness of filling the bulk of its gas-fired

procurement authorization with high-usage combined-cycle plants which will triple GHG emissions in the L.A. Basin for 20 years.

F. Absence of Other Remedies

85. This Petition is the only available way to obtain appellate review of the PUC's *L.A. Basin* decision. (See § 1759, subd. (a).) A petition for writ of review is the "sole means provided by law for judicial review of a commission decision." (*Consumers Lobby Against Monopolies v. Pub.Util.Com.* (1979) 25 Cal.3d 891, 901.)

Unless this Court grants this petition, three new gas plants will be constructed in the L.A. Basin, at a cost of billions of dollars to SCE's ratepayers, and will emit millions of tons of GHG every year for the next 20 years, even though they are not needed and contrary to California law and policy. (7PE 26:1763–1764; D.14–03-004, *supra*, p.40.) Both SCE's customers and the environment will pay a steep price.

Degani & Galston LLP

Respectfully submitted,

Dated: July 1, 2016

By: Orly Degani

Orly Degani

Attorney for Petitioner, Petitioner

PRAYER

WHEREFORE, Petitioners pray that this Court:

1. Issue a writ of review to inquire into and determine the lawfulness of respondent PUC's *L.A. Basin* decision;

2. Direct respondent PUC to certify its record in the subject proceeding to this Court;

3. After review, set aside and annul the PUC's *L.A. Basin* decision;

4. Award Petitioners their costs of suit pursuant to California Rules of Court, rule 8.493; and

5. Grant such other relief as the Court may deem just and proper.

Degani & Galston LLP

Respectfully submitted,

Dated: July 1, 2016

By: Orly Degani

Orly Degani

Attorney for Petitioner,
Petitioner

VERIFICATION

I, Bill Powers, declare:

1. I am the principal of Powers Engineering. I was actively involved in the proceedings before respondent PUC that led to the issuance of D.15-11-041 on November 24, 2015, and its modification on May 26, 2016, by D.16-05-053.

2. I have read the foregoing petition for writ of review and know its contents. The facts alleged in the petition are within my personal knowledge and I know these facts to be true.

3. I also am familiar with the exhibits submitted in support of this petition, and I know them to be true and correct copies of documents on file with respondent PUC.

I declare under penalty of perjury that the foregoing is true and correct under the laws of the State of California and that this verification was executed on June 30, 2016, in San Diego, California.

Bill Powers

Bill Powers

MEMORANDUM OF POINTS AND AUTHORITIES

I. THIS COURT SHOULD GRANT THIS MERITORIOUS PETITION AND REVIEW THE PUC'S DECISION.

Because writ petitions are the only means of obtaining review of PUC decisions, they "'serve [ ] in effect the office of an appeal," so "unlike prerogative writs such as prohibition or mandate, they are not to be summarily denied 'on policy grounds unrelated to their procedural or substantive merits.'" (*Pac. Bell v. Pub.Util.Com.* (2000) 79 Cal.App.4th 269, 282, fn.8.)

The court need not be convinced a petition is meritorious; writ review is required if the petition merely presents an argument that *appears* meritorious. "'[A] court ordinarily has *no discretion* to deny a timely-filed petition for writ of review [of a PUC decision] if it *appears* that the petition *may* be meritorious.'" (*S. California Edison Co. v. Pub.Util.Com.*, *supra*, 140 Cal.App.4th at pp. 1095–1096, emphasis added.)

This Petition was timely filed and not only appears meritorious, it *is* meritorious, presenting a "convincing argument for annulment" of the PUC's *L.A. Basin* decision. (*Util. Reform Network*, *supra*, 223 Cal.App.4th at p. 958.) Accordingly, writ review is necessary and proper.

Moreover, the Petition raises significant issues of broad public importance to SCE's ratepayers, and to all concerned about environmental pollution in California. This Court should grant review and annul the PUC's decision.

II. THE PUC FAILED TO PROCEED AS REQUIRED BY LAW AND ABUSED ITS DISCRETION IN APPROVING SCE'S PROPOSED GAS-PLANT CONTRACTS.

A. The PUC Violated Section 1705 By Failing To Decide The Material Issue Whether Changed Circumstances Have Reduced The Need For Gas-Fired Generation.

On rehearing, Petitioners argued the PUC committed legal error in failing to consider a variety of changed circumstances since the 2013 *Track 1* and 2014 *Track 4* decisions issued. Those changed circumstances have eliminated the need for additional gas-fired generation in the L.A. Basin, just as the PUC anticipated might happen, rendering SCE's proposed gas-plant contracts unnecessary and unreasonable. (8PE 35:1919–1922.) The changed circumstances include (1) approval of the Mesa Loop-In transmission Project, with a 2020 online date, and (2) a steady decline in peak load. (*Id.*, pp.9–10.)

In denying rehearing, the PUC did not dispute it failed to consider these changed circumstances. Instead, the PUC defended its failure by asserting that it is "not required to address every single issue presented by a party in a proceeding." (8PE 39:2012 [D.16–05-053, *supra*, p. 15].)

The PUC is mistaken. Section 1705 requires the PUC to include in its decisions "separately stated, findings of fact and conclusions of law...on all [material] issues." (§ 1705.) According to the Supreme Court, "[e]very issue that must be resolved to reach th[e] ultimate finding is material to the order or decision." (*S. Pac. Co. v. Pub.Util.Com.* (1968) 68 Cal.2d 243, 244.)

Applying this definition, the changed circumstances the PUC admittedly failed to consider were material to whether SCE's proposed contracts will lead to unnecessary over-procurement that will unjustly and unreasonably increase electricity rates or harm the environment. (8PE 34:1872 [D.15–11-041, *supra*, p.6].) This ultimate question could not be resolved without determining whether changed circumstances have reduced local-capacity need in the L.A. Basin, as the PUC anticipated in *Track 1* and *Track 4*.

In both *Track 1* and *Track 4*, the PUC repeatedly stated that, when SCE applies for approval of contracts to fill the authorized procurement, the PUC would consider whether changed circumstances have reduced the L.A. Basin's local-capacity need. (D.13–02-015, *supra*, pp.44, 124, 89–90, 129–130; D.14–03-004, *supra*, pp.83, 50–51, 116–117, 128–129.) The PUC expressly authorized a procurement range—both a total range and a range for each resource type—to allow for "process[ing] new information during the procurement process," and the PUC provided that any decline in need would justify limiting SCE's procurement to "at or near the minimum levels" authorized. (D.13–02-015, *supra*, pp.89–90; D.14–03-004, *supra*, pp.116–117.) Among the factors the PUC stated it would consider were changes in load forecasts and transmission upgrades (D.13–02-015, *supra*, pp.89, 129)—the very same factors Petitioners urged the PUC to consider in the *L.A. Basin* proceeding, but which the PUC refused to consider.

"Concomitant with the discretion conferred on the [PUC] is the duty to consider all [material] facts that might bear on exercise of that discretion." (*United States Steel Corp. v. Pub.Util.Com.* (1981) 29 Cal.3d 603, 608.) The changed circumstances Petitioners raised in opposition to SCE's application were facts

material to the PUC's decision whether to approve SCE's proposed contracts as reasonable. By failing to consider those facts and make specific findings and conclusions about them, the PUC violated section 1705. This failure alone requires annulling the PUC's *L.A. Basin* decision.

B. The PUC Violated Its Statutory Mandates To Ensure Reasonable Utility Rates And Protect The Environment, Its Own Loading Order, and Its Track 1 and Track 4 Decisions In Approving SCE's Proposed Gas Plant Contracts.

The PUC has a continuing duty to comply with the statutorily-mandated preferred resources Loading Order and to protect ratepayers from unjust and unreasonable rate increases caused by utilities constructing and operating unneeded plants. In the years between the PUC's issuance of the *Track 1* and *Track 4* decisions (in 2013 and early 2014) and its *L.A. Basin* decision (in late 2015) and denial of rehearing of that decision (in 2016), state energy policy, grid and demand conditions, and the availability of preferred resources experienced rapid change throughout California and in the L.A. Basin.

Where materially relevant circumstances have changed since the PUC authorized procurement, the PUC must take such changes into consideration in ruling on applications for power-purchase agreements. The PUC does not approve power-purchase contracts in a vacuum. Regardless of past decisions, the PUC must consider the actual relevant conditions at the time it rules, not past conditions which are no longer relevant. If it fails to do

so, and the present conditions call for less procurement or more preferred resources, the PUC fails to proceed in the matter required by law and abuses its discretion by approving unjust and unreasonable procurement not in compliance with the preferred-resources mandate.

1. The PUC failed to account for changed circumstances which require limiting SCE's procurement of gas-fired resources to the minimum 1,000 MW allowed by Track 1 and Track 4.

The PUC's *Track 1* and *Track 4* direction that it would consider changed circumstances in evaluating SCE's procurement application was consistent with its statutory mandates.

In its actual review, however, the PUC reneged on its promises, disregarded its own requirements, and flouted its obligations. In approving virtually all of SCE's proposed contracts the PUC by its own admission failed to analyze the changed circumstances raised during the *L.A. Basin* proceeding. (8PE 39:2012 [D.16–05-053, *supra*, p.15]) In a single dismissive sentence, the PUC stated: "*Regardless* of whether circumstances have changed,…SCE acted reasonably in…contracting for the proposed amount of GFG." (8PE 34:1894–1895, 1904 [D.15–11-041, *supra*, pp.28–29, 38, emphasis added].)

This holding was error. Under governing state law, the Loading Order, and the *Track 1* and *Track 4* decisions, the PUC was *required* to consider the following changed circumstances in deciding whether SCE's proposed fossil-fuel contracts are reasonable.

i. The PUC improperly ignored the Mesa Loop-In transmission upgrade.

In *Track 1* and *Track 4*, the PUC specified the changed circumstances that it would consider in evaluating SCE's application, including "transmission upgrades and new transmission capacity." (D.13–02-015, *supra*, p.44.) The PUC expressly recognized that new transmission projects would reduce the L.A. Basin's local-capacity need if approved to be operational by 2022. (D.14–03-004, *supra*, pp.53, 127–128.) In particular, the PUC found that "the Mesa Loop-In [project] would reduce the amount of gas-fired generation that would need to be sited in the LA Basin by approximately 1,200 MW." (*Id.,* pp.38, 46, 49–50, 127.) The PUC stated that approval of the timely completion of the Mesa Loop-In project would make it appropriate to limit SCE's gas-fired procurement to "at or near the minimum level[]" authorized" for gas-fired generation, or 1,000 MW. (*Id.,* pp.116–117.)

The Mesa Loop-In project was approved with an in-service date by 2020 before the *L.A. Basin* proceeding commenced. (7PE: 23:1594.) Yet, the PUC found reasonable SCE's contracts for 1,384 MW of gas-fired capacity—384 MW above the 1,000-MW authorized in *Track 1* and *Track 4*—without mentioning this significant changed circumstance. In failing to follow its own direction, the PUC violated state law prohibiting procurement of unnecessary gas-fired resources, its Loading Order implementing state law, and its decisions in *Track 1* and *Track 4*.

ii. The PUC failed to incorporate the impact of peak load decline.

Another factor the PUC listed in *Track 1* and *Track 4* as a relevant consideration in assessing SCE's application included "changes in load forecasts." (D.13–02-015, *supra*, p.88.) The PUC explained that it authorized a procurement range to account for "uncertainties about supply and demand conditions." (D.14–03-004, *supra*, p.83.) Changes in those conditions, the PUC stated, would bear on the reasonableness of SCE's proposed level of procurement "[w]ithin this range." (D.13–02,015, *supra*, p.88.)

The PUC's consideration of changes in load forecasts in assessing the reasonableness of a utility's proposed procurement contract is not novel. In 2010, the PUC considered contracts proposed to fill an 800–1200 MW need that the PUC previously determined would arise by 2015, based on a 2007 demand forecast. (D.10–07-045 (Pub.Util.Com. Jul.29, 2010) p.5.) Before the contract approval proceeding, the California Energy Commission ("CEC") released its new energy demand forecast predicting significantly lower demand than previously expected. (*Ibid.*) The PUC permitted the parties to "use the revised CEC data and other new and/or relevant information to support their position about what the appropriate level of MW is for [the utility] to procure, within the previously specified range." (*Id.,* pp.6–7.)

Similarly, the local-capacity need identified in *Track 1* was based on the CEC's 2009 demand forecast. (D.13–02-015, *supra*, pp. 15, 32; 3PE 7:636.) In *Track 4*, the need determination was

based on the CEC's 2011 demand forecast. (D.14–03-004, *supra*, p.34; 3PE 7:636, 639.) Both the 2009 and 2011 CEC forecasts assumed a constantly increasing peak demand. (3PE 7:636, 639.)

The PUC found in *Track 4* that demand is actually declining, so that "updates to the demand forecast are reasonably likely to lower LCR needs." (D.14–03-004, *supra*, p.36.)

The evidence in the *L.A. Basin* proceeding proved just that: Actual peak demand has declined in the L.A. Basin, and updated CEC forecasts show it will continue declining through at least 2020, or at least will remain flat. (3PE 7637, 639–642; 3PE 10:706–708, 711–728.) According to the CEC's 2013 forecast, peak demand in the L.A. Basin in 2020 will be 1,107 MW lower than the CEC projected in 20o9. (3PE 7:640.) If the L.A. Basin's expected local capacity need in 2020 were calculated using a forecast calibrated to actual peak demand in 2014, the projected peak demand in 2020 would be 3,696 MW lower than in the CEC's 2013 forecast. (3PE 7:642.)

Using the CEC's updated 2013 forecast of peak demand for 2020, actual local-capacity need will be at least 1,107 MW lower in 2022 than the 1,900–2,400 MW found in *Track 1* and *Track 4*. (3PE 7:640.) Based on actual peak load in 2014, local-capacity need in the L.A. Basin will be at least 3,696 MW lower in 2022 (3PE 7:642)—meaning there will not be any need at all, but, rather, an *excess* of capacity of 1,200–1,800 MW.

Despite this undisputed evidence, the PUC did not consider declining actual and forecasted peak load in assessing the reasonableness of 1,382 MW of new fossil-fuel contracts. No party presented evidence that 1,382 MW of the 1,000–1,500 MW of gas-fired procurement authorized in *Track 1* and *Track 4* will be

needed by 2022, even though peak demand is likely to be at least 1,107–3,696 MW lower than assumed in those decisions based on now-outdated demand forecasts from 2009 and 2011. The evidence of declining peak demand required the PUC to limit SCE's fossil-fuel procurement to the low end of the authorized range, or 1,000 MW, as the *Track 1* and *Track 4* decisions anticipated. The PUC's failure to do so, or to even consider doing so, violated state law and the Loading Order, which require the PUC to prevent unnecessary over-procurement of fossil-fuel resources, and was inconsistent with the PUC's decisions in *Track 1* and *Track 4*.

2. The PUC unlawfully delegated its authority by deferring entirely to CAISO's opinion that all 1,382 MW of SCE's proposed gas-fired procurement is needed.

The sole justification the PUC offered in the *L.A. Basin* decision for approving SCE's proposed gas-plant contracts despite significant changed circumstances was that "CAISO's 2014–2015 Transmission Plan identifies that the total amount [of SCE's proposed procurement] is required…." (8PE34:1894–1895, 1899, 1904 [D.15–11-041, *supra*, pp.28–29, 33, 38].)

In seeking rehearing, Petitioners argued the PUC's complete deference to CAISO's judgment was legal error, because "[u]nlike the Commission, CAISO has no statutory (or other) obligation to consider consumer and environmental interests in reaching its conclusions." (8PE 35:1921.) Rather "CAISO's mandate to 'keep the lights on' no matter what is inimical to many of the

Commission's statutory obligations," including maintaining just and reasonable electricity rates and preventing unwarranted harm to the environment from polluting fossil-fuel resources. (*Ibid.*)

In denying rehearing, the PUC ignored its prior decisions addressing the difference between its role and CAISO's in assessing local-capacity need, instead just repeating: "CAISO determined that the full amount of procurement selected by SCE through the RFO is necessary to meet LCR.…This supports our determination that SCE acted reasonably in contracting for the proposed amount of gas-fired generation." (8PE 39:2012 [D.16–05-053, *supra*, p.15].)

In *Track 1* and *Track 4,* the PUC accepted that it *cannot*, consistent with its obligation to balance reliability concerns with reasonableness of rates and commitment to a clean environment, entirely defer to CAISO's judgment about local-capacity need. (D.13–02-015, *supra*, p.35.) In both *Track 1* and *Track 4*, the PUC discounted CAISO's determination of LCR need for the L.A. Basin by well over 50%. (See Petition, ¶¶24, 35.)

Previously, in D.02–12-066 (Pub.Util.Com Mar. 23, 2001), the PUC considered whether a particular transmission project proposed by a utility and supported by CAISO was needed for reliability purposes. (*Id.,* p.2.) Although CAISO determined the project was needed, the PUC disagreed. (*Id.*, pp.10, 75–76.) The PUC found the project's estimated costs exceeded the projected benefits, therefore the project was not justified on economic grounds, so the PUC denied the application for approval of the project. (*Id.*, pp.77–78.)

Both the utility and CAISO sought rehearing, asserting the PUC erred in not accepting CAISO's determination that the project was necessary. (D.03–05-038 (Pub.Util.Com. May 8, 2003) p.9.) Denying rehearing, the PUC stated: "[W]hile we give deference to…[CA]ISO's determination of need based on reliability,….deference does not mean…not perform[ing] an independent need assessment….Deference means weighing…[CA]ISO's reliability need determination along with other record evidence, such as costs and alternatives, in the determination of need….[I]f the weight of the evidence indicates that there is no need…, then we have the…statutory duty to make a finding of no need." (D.03–05-038, *supra*, p.9; see also *id.,* p.12 ["adopting…[CA]ISO's need assessment without conducting an independent review cannot substitute for our mandate to consider need"].)

Indeed, the PUC noted, the reason it conducts "trial type proceeding[s]" in making need determinations is "to reach an unbiased decision." (D.03–05-038, *supra*, p.12.) Accepting CAISO's assessment of need without independent evaluation would have been "particularly inappropriate, given the strong advocacy role played by…[CA]ISO in the Project proceeding." (*Ibid.*) Also, CAISO's "process for determining need…was based on an incomplete record and [did] not take into account new information developed in [the PUC] proceeding." (*Ibid.*)

"[T]he deference that…[CA]ISO and [the utility] urge[d]….would [have] amount[ed] to rubber-stamping…[CA]ISO's determination" (D.03–05-038, *supra*, p.12.) "This level of deference," the PUC recognized, "would constitute an unlawful delegation of [PUC] authority, giving…[CA]ISO

power that the Legislature has not bestowed on it." (*Ibid.*; see also D.01–05-059 (Pub.Util.Com. May 14, 2001) pp. 19–20 ["We do not believe…that we should defer entirely to the decision of…[CA]ISO that the project is needed….[W]e have an independent statutory duty…to ensure that projects of this magnitude are necessary. The ratepayers likely will bear most of the cost of the project. Before requiring ratepayers to bear such costs, we must determine that the costs are reasonable."].)

Yet, here, the PUC engaged in *precisely* the type of "unlawful delegation of power" to CAISO that it eschewed in its prior decisions. (D.03–05-038, *supra*, p.12.) Instead of considering evidence that changed circumstances have reduced the L.A. Basin's projected local-capacity need, the PUC simply accepted CAISO's conclusion from its 2014–2015 Transmission Plan that the total amount of fossil-fuel procurement for which SCE sought approval is needed. The PUC ignored that CAISO played a "strong advocacy role" in the proceeding, and did not "take into account new information developed in [the *L.A. Basin*] proceeding."[11] (*Ibid.*) In so doing, the PUC unlawfully delegated its authority to determine need to CAISO.

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[11] The PUC found it relevant that the assumptions behind CAISO's 2014–2015 Transmission Plan were published as part of the 2014 long-term procurement proceeding. [8PE: 34:1894 [D.15–11-014, *supra*, p.28], 39:2012 [D.16–05-053, *supra*, p.15].). But the PUC did not adopt or embrace CAISO's conclusions in that proceeding. The PUC closed the 2014 long-term procurement proceeding without making any findings of fact or conclusions of law about the 2014–2015 Transmission Plan, and transferred remaining questions to a future proceeding. (D.16–06-042 (Pub.Util.Com. June 23, 2016), pp.2, 4–5).

"[T]he powers conferred upon [the PUC] are in the nature of [a] public trust and cannot be surrendered or delegated to [others]" (*Southern California Edison Company v. Pub.Util.Com.*, *supra*, 227 Cal.App.4th at p.195; *Ventura Cnty. Waterworks v. Pub.Util.Com.* (1964) 61 Cal.2d 462, 465 [same].) By completely deferring to CAISO's opinion about future local-capacity need in the L.A. Basin to avoid any analysis of how changed circumstances since *Track 1* and *Track 4* have affected the need determinations made in those decisions, the PUC, by its own admission, unlawfully delegated its authority to CAISO. (D.03–05-038, *supra*, p.12.) The result was approval of 1,382 MW of new fossil-fuel generation that is not needed, in violation of state law, the PUC's Loading Order, and the *Track 1* and *Track 4* decisions.

3. The PUC sanctioned an RFO process which discriminated against demand-response and energy-storage resources, resulting in selection of costlier gas-fired generation.

The PUC directed in *Track 1* that "SCE's procurement process should have *no provisions* specifically or implicitly excluding any resource…due to technology," and "*must* have provisions designed to be consistent with the Loading Order." (D.13–02-015, *supra*, p.129, emphasis added.) The PUC required SCE to "show in a subsequent application for approval of procurement contracts that it has done *everything it could* to obtain cost-effective demand-side resources which can reduce the local-capacity need, and cost-effective preferred resources and energy storage

resources to meet LCR needs." (D.13–002-015, *supra*, pp.78, emphasis added.) The PUC added, and repeated in *Track 4*, that SCE's application should include "[a] demonstration of technological neutrality, so that no resource was arbitrarily or unfairly prevented from bidding in SCE's...solicitation process." (D.13–02-015, *supra*, p.94; D.14–03-004, *supra*, p.146.) A "significant aspect" of its review of SCE's application, the PUC stated, would be "to ensure consistency with the Loading Order." (*Id.*, p.6.)

In reviewing SCE's application, the PUC concluded SCE's RFO process was fair and reasonable, and consistent with the *Track 1* and *Track 4* decisions and with the Loading Order, even though SCE could not demonstrate "technological neutrality." (D.13–02-015, *supra*, p.94; D.14–03-004, *supra*, p.146.) SCE imposed conditions on certain preferred resource technologies—the 20-minute requirement on demand response and the 100-MW cap on energy storage—that effectively excluded one resource (demand response) and prevented the other (energy storage) from fully participating in the process. SCE's restrictive conditions have never been adopted by the PUC and contravened the direction given in the controlling authorization decisions. The direct result of SCE's discrimination against demand response and energy storage was selection of the costlier Stanton gas plant, in violation of state law, the Loading Order, and the *Track 1* and *Track 4* directives.

i. SCE's 20-minute condition on demand response resources was arbitrary and unreasonable.

The PUC concluded that SCE's RFO process was fair and reasonable even though "the operational requirements for Demand Response changed considerably well after bids were submitted[,]" disqualifying an unknown number of demand-response offers, and ultimately resulting in the selection of *zero* demand-response resources, despite the position of demand response at the top of the Loading Order. (8PE 34:1877–1878 [D.15–11-041, *supra*, pp.11–12].) The PUC gave no explanation for its conclusion.

In denying rehearing, the PUC conceded its decision "would have benefitted" from some additional discussion of the 20-minute demand-response condition. (8PE 39:2004, 2015, 2019 [D.16–05-053, *supra*, pp.7, 18, 22].) Pointing to language in *Track 1* and *Track 4* directing SCE to "consult" with CAISO on performance characteristics for preferred resources, the PUC maintained it had impliedly authorized SCE to impose "necessary" performance requirements in the RFO. (8PE 39:2016 [D.16–05-053, *supra*, p.19].) After "SCE learned that CAISO was seeking a 20-minute response time condition for demand response resources," the PUC determined, "it was reasonable for SCE to take a conservative approach by including the CAISO condition," even though "the RFO process was [then] underway and the response requirement may have reduced the amount of qualifying demand response bids." (8PE 39:2016 [D.16–05-053,

supra, p.19.) Moreover, the PUC added, "SCE communicated this change during RFO negotiations." (8PE 39:2019 [D.16–05-053, *supra*, p.22].)

But SCE "communicated" the newly-imposed 20-minute response condition *after* initial bids were due and had been submitted. (3PE 6:546–547; 8PE 34:2016.) No evidence was presented that demand-response providers were given an opportunity to modify their proposals, or that it would have been reasonably possible for them to do so within the time remaining in the RFO schedule. The PUC recently addressed this very question whether it would be fair and reasonable to impose a new 20-minute condition on demand-response programs without providing them time to adjust, and concluded it would not. (D.15–06-063 (Pub.Util.Com. June 25, 2015) p.35.)

It is the PUC's job, not CAISO's, to determine what conditions are reasonable for qualifying resources to meet local-capacity need. By approving SCE's 20-minute requirement for demand response, the PUC in effect unlawfully delegated its authority to CAISO. (See discussion at §II.B.2, above.)

CAISO's dismissal of demand response resources is at odds with the PUC's prior determinations. CAISO "does not believe that demand response can be relied upon to address local capacity needs, unless the demand response can provide equivalent characteristics and response to that of a dispatchable generator," and CAISO believes "demand response does not have these characteristics at this time." (D.13–02-015, *supra*, pp.16–17, pp.51–56; 3PE 7:658–659.) The PUC has repeatedly rejected CAISO's opinion. In *Track 1*, when CAISO gave *no* consideration to demand response resources, the PUC concluded

instead that a "conservative" estimate of 200 MW of demand response "*will* be available in the LA Basin to reduce LCR needs by 2020." (*Id.,* p.56, emphasis added.) Moreover, the PUC recognized that, "[s]ince there appears to be at least 100 MW of demand response in the most effective locations now in the LA Basin (and 549 MW of total demand response resources now in that area), by 2020 it is likely that the actual amount available to reduce LCR needs in the LA Basin will be significantly higher [than 200 MW]—perhaps closer to…estimates of around 1000 MW." (*Ibid.*)

Despite recognizing the likely availability of as much as 1,000 MW of demand response to reduce local-capacity need in the L.A. Basin, the PUC permitted CAISO to dictate conditions for demand-response resources that the PUC has not accepted (and even CAISO has not officially adopted), and that had the concrete effect of eliminating all demand response from SCE's final selection.

CAISO asserted the 20-minute response condition is necessary because federal standards call for the electric system to be repositioned within 30 minutes after occurrence of the first n-1–1 contingency (the first transmission line failure). (2PE 23:1521; 8PE31:1819.) But the federal requirement CAISO referenced is generic, not directed solely at demand-response resources. (8PE 31:1819.) SCE imposed its 20-minute response condition *only* on demand response. There was no evidence presented that other resources, particularly the combined-cycle gas-turbine units which comprise 1,284 MW of the 1,382 MW of fossil energy SCE selected, can be dispatched within 20 minutes. No party provided

any evidence those units would even be running reliably whenever a critical contingency might strike. SCE projected one of them will only be online about half the time. (1PE 2:91.)

Unlike combined-cycle plants, the fundamental purpose of demand response is to reduce load on the grid at times of peak demand. (3PE 7:667; 8PE 31:1819.) All demand response resources are intended to be deployed on very hot days. Very hot, high-demand days are forecast a day or two in advance, and CAISO issues Flex Alerts when the forecast indicates that demand may be sufficiently high to strain the grid the following day. (3PE 7:667; 8PE 31:1819.) Thus, a scenario where all available demand response resources would not be scheduled for deployment 24-hours in advance of a forecast 1-in-10 year peak-demand condition is virtually impossible to imagine. (8PE 31:1819.) If it happened, it would be a massive dereliction of CAISO's duty to manage the grid, not a sign of any deficiency of demand response.

All of this evidence and argument was presented to the PUC, and, yet, astonishingly, the PUC concluded that "[n]o persuasive evidence was presented by parties in this proceeding to demonstrate that it was unreasonable for SCE to include a 20-minute response condition for demand response resources in this RFO." (8PE 39:2018 [D.16–05-053, *supra*, p.21].) This conclusion is belied by the record.

Section 1757 requires this Court "to evaluate the findings in the [PUC's] decision 'in light of the whole record,'" and "therefore consider all the record evidence, even if it was not specifically cited by the Commission." (*Util. Reform Network*, *supra*, 223 Cal.App.4th at p. 963, quoting § 1757, subd. (a)(4).) "SCE has the

burden of affirmatively establishing the reasonableness of all aspects of its application. [Petitioners] do not have the burden of proving the unreasonableness of SCE's showing." (D.06–05-016 (Pub.Util.Com. May 17, 2006), p.7.) And, particularly "given the strong advocacy role played by…[CA]ISO in the…proceeding," "rubber-stamping…[CA]ISO's determination…constitute[s] an unlawful delegation of [PUC] authority." (D.03–05-038, *supra*, p.9.)

By approving SCE's RFO process in spite of the record evidence, based solely on CAISO's opinion about the appropriate characteristics to require for demand response, the PUC unlawfully relieved SCE of the burden of proving *to the PUC* that the 20-minute demand response condition is reasonable.

ii. SCE's 100-MW cap on energy storage was arbitrary and unreasonable.

The PUC's *L.A. Basin* decision summarized the parties' competing arguments about the 100-MW cap SCE imposed on energy storage, declared that "[t]he arguments presented on both sides of this issue are strong ones," but then concluded without any analysis that "SCE acted reasonably at the time in adopting [the] 100 MW cap…based on the fact this this RFO was unique, issued on a tight timeline, and needed to be performed in the absence of key information." (8PE 34:1884–1889 [D.15–11-041, *supra*, pp. 18–23].)

In denying rehearing, the PUC conceded that "some clarification is warranted" regarding its conclusion about the reasonableness of the 100-MW cap. (8PE 39:2008 [D.16–05-053,

supra, p.11.) So the PUC added: "When SCE issued the RFO, energy storage was a relatively new resource for which SCE did not have meaningful market operations and reliability effectiveness experience....The lack of key information increased the risk associated with energy storage….It was reasonable at the time for SCE to mitigate risks by implementing the 100-MW cap on energy storage. Moreover, the cap does not appear to have limited energy storage procurement, as SCE procured over five times the minimum energy storage we required." (8PE 39:2017 [D.16–05-053, *supra*, p.20].)

First, the cap very clearly *did* limit energy storage procurement, as SCE admitted. (2PE 5:290 ["The hundred megawatt cap does limit in-front-of-meter energy storage, correct."].) SCE's own optimization tool determined that procuring 400–900 MW of energy storage would be the most economical option. (1PE 2:89–90; 2PE 5:288–290; 7PE 25:1645–1646.) Because of the 100-MW cap, SCE selected only 263 MW of energy storage contracts. (1PE 2:36, 86.) Although the PUC *required* SCE to procure only 50 MW of energy storage *as a minimum*, the PUC *allowed* up to 600 MW of SCE's total procurement to come from energy storage. (D.14.03–004, *supra*, p.7; 1PE 2:90; 8PE 39:2001 [D.16–05-053, *supra*, p.4].) SCE procured less than half the allowed amount, even though at least 400–900 MW of energy storage was available at the most competitive price. The PUC's finding that "the [100-MW] cap does not appear to have limited energy storage procurement" is not supported by *any* evidence, much less substantial evidence, in this record. (8PE 39:2017 [D.16–05-053, *supra*, p.20].)

Second, the "risks" SCE attributed to energy storage were illusory. SCE admitted on cross-examination that potential interconnection constraints and transmission charges were built into its valuation of the energy storage resources (2PE 5:268–273.) SCE also admitted that *before* it submitted its application for PUC approval, CAISO clarified there would *not* be any interconnection restrictions or charging tariffs imposed on energy storage. (2PE 5:273–275, 288–290, 294–298.) CAISO had signaled this result *months earlier*, before the RFO launch. (2PE 5:298–300.)

Further, SCE admitted it accounted for the "risk" of debt equivalence treatment with added provisions to the energy storage contracts. (1PE 2:64–67, 80, 94; 2PE 5:284–288; 7PE 25:1648.) The only remaining "risk" SCE identified involved "unanticipated uncertainties." (1PE 2:64–67, 80, 94; 7PE 25:1648.) Based on this nebulous "risk," SCE arbitrarily imposed the 100-MW cap on energy storage, without bothering to check whether a higher cap might work, and despite the *Track 1* and *Track 4* directives to do "everything it could" to maximize procurement of cost-effective energy storage. (2PE 5:280–281; 7PE 25:1649; D.13–02-015, *supra*, p.78.)

Third, the RFO was "on a tight timeline, and needed to be performed in the absence of key information" (8PE 34:1884–1889 [D.15–11-041, *supra*, pp. 18–23]) only because of SCE's "concern" about "GFG's long development cycle" and the "immediate need to procure GFG to meet the Commission's 2021 deadline." (1PE 2:110; 3PE 6:550.) SCE acknowledged that other resources, including energy storage, require not nearly as much time to develop as gas-fired generation, and plenty of time remains to

acquire them for 2021, perhaps even more cost-effectively. (1PE 2:94–95; 3PE 6:562–564; 7PE 25:1667.) SCE imposed an arbitrary 100-MW cap on energy storage—a resource SCE was obligated to do "everything it could" to acquire—because of an unquantified *chance* that by waiting to clarify "uncertainties" related to that resource, the opportunity to procure more than "the lower-end of the GFG-allowed authorization" might be lost. (1PE 2:110; 2PE 5:280; 3PE 6:563–564.)

It very well might. In the same breath that SCE justified limiting energy storage based on a purported need to rush through gas-plant procurement exceeding the minimum fossil-fuel requirement by more than 300 MW, SCE also wanted a "pass" on meeting the minimum requirement for preferred resources and energy storage. (8PE 34:1876 [D.15–11-041, *supra*, p.10].) SCE reasoned that "updated CAISO analyses" may indicate additional procurement is no longer necessary. (8PE 34:1876 [D.15–11-041, *supra*, p.10].) If so, and if CAISO's opinion could substitute for the PUC's, then consistent with state law, the Loading Order and the *Track 1* and *Track 4* decisions, the appropriate "pass" would be on meeting the minimum gas-generation requirement, not energy storage. The PUC approved as reasonable an RFO process that deliberately discriminated against energy storage in order to maximize gas-fired procurement, in direct contravention of state law, its own Loading Order, and its *Track 1* and *Track 4* decisions.

iii. SCE's selection of the Stanton gas plant over more cost-effective energy storage was unreasonable.

The PUC acknowledged the parties opposing the Stanton plant "raise[d] strong arguments." (8PE 34:1892 [D.15–11-041, *supra*, p.26].) But, as with Energy storage, the PUC perfunctorily concluded without analyzing their evidence that "under the circumstances as they existed at the time SCE made its selections[,] [the Stanton] contract was a reasonable means of meeting the Commission's procurement directive." (8PE 34:1892 [D.15–11-041, *supra*, p.26],)

On rehearing the PUC recognized that, because SCE's cap on energy storage directly led to selection of the Stanton plant, which SCE admitted is not as cost-effective, the PUC's decision "would benefit from additional discussion of the reasonableness of the Stanton contract[]." (8PE 39:2007–2008 [D.16–05-053, *supra*, pp.10, 11.) Thus, the PUC added: "Stanton will be interconnected to the Barre Substation,…which CASIO identified as having the highest locational effectiveness factor ("LEF")….," meaning that….[g]eneration sited at Barre will be most effective at relieving the critical N-1–1 contingency….Because of the long lead times to procure GFG resources and the lack of guarantee that other cost-effective resources would be available in the same local area[] with the same effectiveness, it was reasonable for SCE to enter into the Stanton contract…." (8PE 39:2017–2018 [D.16–05-053, *supra*, pp.20–21].)

In fact, Stanton's location does not justify SCE's departure from the Loading Order. As SCE acknowledged at hearings, the

"effectiveness factor is neutral as to what the technology is," so energy storage or other resources could be sited at Barre with the same result. (3PE 6:534.) As SCE also admitted, generation sited at other substations in the L.A. Basin has essentially the same effectiveness as generation sited at Barre. (3PE 6:534–535.)

The PUC also denied the Stanton contract violates either the Loading Order or the procurement requirements set forth in the *Track 1* and *Track 4* decisions. (8PE 39:2006–2008 [D.16–05-053, *supra*, pp.7–10, 20–21].) The PUC reasoned that "the Loading Order requirements must be balanced with the State's reliability and economic needs," and "reliability is paramount." (8PE 39:2006, 2009 [D.16–05-053, *supra*, pp.9, 12].) "[B]oth *Track 1* and *Track 4* found that…a significant amount of required procurement [must] be met through conventional gas-fired resources," and the combined capacity of the three gas plants SCE selected will be 1,382 MW, which is within the 1,000–1,500 MW range authorized in *Track 1* and *Track 4*. (8PE 39:2009–2010 [D.16–05-053, *supra*, p.12–13].) "Moreover, while there may have been preferred resources (other than IFOM energy storage) that SCE could have procured in lieu of the Stanton plant, SCE reasonably determined that more cost effective options could be secured later….Thus, Stanton was not procured in lieu of other cost-effective, viable preferred resources." (8PE 39:2008–2009. D.16–05-053, *supra*, p.11–12)

The Stanton plant should not have been procured instead of more economic, available energy storage because the artificial and arbitrary limit on energy storage was unreasonable and contrary to state law. Even if limiting energy storage could be conceived as reasonable, the Stanton plant should not have been

procured ahead of more cost-effective preferred-resource options that can be secured later. SCE made no showing that the Huntington Beach and Alamitos plants would provide insufficient gas-generation capacity for reliability purposes, making it necessary to procure Stanton *now,* instead of waiting for more cost-effective preferred resources that SCE admitted there is time to obtain. Combined, the two plants total 1,284 MW, well over the minimum requirement for gas-fired resources. Consistency with state law, the Loading Order, and the *Track 1* and *Track 4* decisions required the PUC to force SCE to do "everything it could" to procure preferred resources and energy storage "first." (D.13–02-015, *supra*, pp. 10, 78; D.14–03-004, *supra*, p.135.) The PUC failed to proceed in the manner required by law and abused its discretion in approving Stanton.

4. The PUC failed to require SCE to justify acquiring gas-fired capacity primarily from high-usage combined-cycle gas turbines, which will triple greenhouse-gas emissions for decades.

The *Track 1* and *Track 4* decisions permitted SCE to procure 1,000–1,500 MW of the total 1,900–2,500 MW from gas-fired resources, but did not specify that any amount had to come from any particular type of gas-fired technology. (D.13–02-015, *supra*, p.4; D.14–03-004, *supra*, p.3.) SCE sought approval not only to procure 73% of its total contract capacity (1,382 MW of 1,883 MW) from gas-fired resources, but also to acquire over 93% of the gas-fired capacity (1,284 MW of 1,382 MW) from combined-cycle

gas turbines (the Huntington Beach and Alamitos plants), rather than simple-cycle combustion-turbine peaker units (like Stanton). (1PE 2:36, 94.)

SCE sought to justify its inordinate reliance on combined-cycle plants by asserting that they are the most cost-effective option. (7PE 26:1669.) But as Petitioners explained, SCE determined the proposed plants are cost-effective only by assuming high capacity factors for them, meaning that they will run a lot—up to 6,600 run hours per year at Huntington Beach and 4,600 run hours per year at Alamitos (out of 8,760 hours in each year) according to SCE. (1PE 2:41; 7PE 26:1673; 8PE 31:1825.)

To meet local need, a gas-fired resource does not have to run a lot; it only needs to be available in the event of an emergency—the loss of two major transmission import lines in the midst of a 1-day-in-10-years heatwave—which by definition will rarely if ever happen. (D.13–02-015, *supra*, pp.15–16.) In other words, a plant intended to meet a 1-hour-in-10-years local-capacity need rarely has to run at all.

Combined-cycle plants running at the rates SEC assumed to achieve cost-effectiveness will produce an enormous quantity of greenhouse gases. (7PE 26:1673.) The combined annual greenhouse-gas emissions of the proposed Huntington Beach and Alamitos plants will be more than 3 million tons per year based on the usage rates SCE assumed.[12] (7PE26:1673–1674; 8PE 1825, 1830–1831.)

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[12] In addition, the natural gas serving these high-usage plants will come in part from wells stimulated by hydraulic fracking, a controversial practice using large amounts of water, when California is in a severe drought. (8PE 31:1825.)

These plants will displace existing low-usage, low-emitting once-through-cooling plants, and will replace the former GHG-free power from SONGS, causing a major increase in emissions in the L.A. Basin, from less than 1 million to more than 3 million tons per year. [13] (7PE 26:1674.) The effect will be a *tripling* of pollution emissions in the L.A. Basin compared to a 2014 baseline, for the 20-year duration of the proposed contracts. (5PE 17:1033–1034; 7PE26:1674; 8PE 1825, 1830–1831.)

In contrast to combined-cycle gas turbines, "fast-starting" combustion-turbine peaker units are designed to be low-use and thus emit significantly less greenhouse gas. (7PE 24:1636; 8PE 35:1926–1928.) Combined-cycle technology provides no operational benefits over peaker technology in meeting local-capacity need. (8PE 35:1926–1928.) A peaker running very little of the time is just as effective as a combined-cycle plant running a lot at responding to a critical contingency that is so unlikely it may never happen. (8PE: 35:1926–1928.)

Despite this uncontroverted testimony that peaker plants are equally effective as the proposed combined-cycle plants in meeting emergency need, the PUC did not require SCE to make any showing at all to justify its choice to obtain 93% of its proposed gas-fired capacity from high-usage, high-polluting combined-cycle plants—let alone require the "substantial

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[13] Some testimony indicated that, because the proposed combined-cycle plants will displace less efficient gas plants, they will *reduce* pollution. (7PE 24:1634–1637.) This ignores that combined-cycle plants were selected based on assumed high usage, to replace existing gas plants that, while less efficient, operate only rarely to meet demand in extreme conditions.

affirmative showing" necessary to satisfy SCE's burden of proof. (*Re Southern California Edison Company* (1983) 11 CPUC 2d 474, 475.)

SCE's only response to the argument that it could and should have obtained the gas-fired component of its authorized procurement from low-usage combustion-turbine peaker units rather than combined-cycle plants was that "[t]his recommendation is untimely and unrealistic. SCE is not in a position to go back and select offers that include CT units. Those offers are no longer available and SCE's selection process is complete." (7PE 25:1658.)

By this circular reasoning, SCE would be excused from the obligation imposed on it by the *Track 1* and *Track 4* decisions to select the least polluting resources available, by virtue of the fact that it failed to comply with that obligation in the first place. The PUC sanctioned this absurd result without even addressing the issue, effectively relieving SCE of its "ultimate burden of proof of reasonableness." (D.04–03-034 (Pub.Util.Com. Mar. 16, 2004), p.7.) The decision is inconsistent with the PUC's prior decisions directing resource procurement toward alternatives that reduce or eliminate greenhouse-gas pollution. And the decision flies in the face of state law and policy requiring the reduction of greenhouse gas emissions.

CONCLUSION

For the foregoing reasons, Petitioners respectfully request that this Court grant writ relief as prayed for in this petition.

Respectfully submitted,

Dated: July 1, 2016

By: Orly Degani
Bill Powers

APPENDIX A

ACRONYM KEY

CAISO

California Independent System Operator

CCGT

Combined Cycle Gas Turbine

CT

Combustion Turbine

GFG

Gas-fired generation

GHG

Green House Gas

IFOM

In-Front-of-Meter

LCR

Local Capacity Requirement

LCWLT

Los Cerritos Wetlands Land Trust

MW

Megawatt

OTC

Once Through Cooling

PE

Petition Exhibits

PUC

California Public Utilities Commission

RFO

Request for Offers.

SCE

Southern California Edison Company

SONGS

San Onofre Nuclear Generating Station

SWRCB

State Water Resources Control Board

TPP

Transmission Planning Process

Respectfully submitted,

Dated: July 1, 2016

By: Orly Degani

Orly Degani

CERTIFICATE OF COMPLIANCE

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The undersigned certifies that this brief complies with the form requirements set by California Rules of Court, rule 8.204(b) and contains fewer words than permitted by rule or by Order of this Court.

Degani & Galston LLP

Dated: July 1, 2016

By: Orly Degani

Orly Degani

Attorney for Petitioner,
Petitioner

State of California)
County of Los Angeles)
)

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I, Stephen Moore , declare that I am not a party to the action, am over 18 years of age and my business address is: 631 S Olive Street, Suite 600, Los Angeles, California 90014.

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Arocles Aguilar, General Counsel (SBN 94753)
Timothy Sullivan, Executive Director
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, California 94102
Telephone No. (415) 703-4573
Counsel for Respondent,
California Public Utilities Commission

Copies FedEx USPS

Electronically Served via Email:

Tristan Reyes Close (SBN 235136)
Southern California Edison
tristan.reyesclose@sce.com
Telephone No. (626) 302-2883
Counsel for Real Party in Interest,
Southern California Edison

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