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BEFORE THE CALIFORNIA ENERGY COMMISSION
OF THE STATE OF CALIFORNIA

In the matter of, 2013 Integrated Energy Policy Report (2013 IEPR)	Docket No. 13-IEP-1D WORKSHOP Re: Electricity Infrastructure Planning/Reliability

JOINT COMMENTS OF THE CALIFORNIA ENVIRONMENTAL JUSTICE ALLIANCE AND SIERRA CLUB CALIFORNIA

The California Environmental Justice Alliance (CEJA) and Sierra Club California respectfully submit these comments in response to the joint California Energy Commission's and the California Public Utility Commission's July 15, 2013 workshop related to the announced retirement of the San Onofre Nuclear Generating Station (CEC/CPUC Workshop).

CEJA is an alliance of six grass roots environmental justice organizations throughout the State advocating for environmental justice and clean energy futures for low-income communities and communities of color.[1] CEJA represents thousands of members and approximately 15,000 members that live, work, or engage with environmental justice issues in urban communities throughout the State. CEJA is "pushing for policies at the federal, state, regional and local levels that protect public health and the environment."[2] CEJA is also "working to ensure that California enacts statewide climate change policies that protect low-income communities and communities of color."[3] CEJA participates in energy proceedings to urge the State to meet and exceed its renewable and environmental goals and to assure that its policies do not disproportionately adversely impact environmental justice communities.

[1] The organizational members of CEJA are: Asian Pacific Environmental Network, The Center for Community Action and Environmental Justice, Center on Race, Poverty & the Environment, Communities for a Better Environment, Environmental Health Coalition, and People Organizing to Demand Environmental and Economic Justice.
[2] California Environmental Justice Alliance, http://caleja.org/about-us/
[3] California Environmental Justice Alliance, http://caleja.org/climate-justice/

Sierra Club California is the state regulatory and legislative advocacy arm of Sierra Club, a non-profit public benefit corporation with over 600,000 members nationwide, and more than 140,000 members living in California. Our mission includes promotion of the responsible use of the earth's ecosystems and resources, and education of the public about the need to protect and restore the quality of the natural and human environment. Sierra Club advocates on behalf of its members for clean, renewable energy to reduce air pollution, water pollution, and the effects of climate disruption resulting from fossil fuel extraction and combustion. Sierra Club works to pass laws and develop regulations needed to decarbonize California's economy and achieve and strengthen the State's environmental and energy objectives.

INTRODUCTION

Over the past decade, California set goals to transition its electrical generation from an old conventional-grid that relied primarily on fossil fuel generation to a grid that significantly increases renewable energy and reduces air emissions. To facilitate this transition, California instituted the renewable portfolio standards, greenhouse gas requirements, and the loading order, which requires that priority be given to preferred resources. Despite these requirements, utilities often still view fossil fuel as the primary means to meet unmet needs.[4] If this reliance on the old, dirty model of electricity generation continues, the results could be disastrous with higher levels of harmful air pollution including more greenhouse gases, higher electricity rates and the crowding out of preferred resources due to construction of expensive, polluting fossil-fuel power plants.

The retirement of San Onofre Nuclear Generating Station (SONGS)[5] presents the State with a crucial opportunity to ensure that the State meets its energy and environmental laws, goals and policies. California law recognizes that "[g]lobal warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California."[6] California is one of the largest greenhouse gas (GHG) emitters in the world and a leader in climate policy, making its GHG mitigation efforts

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[4] *See* CPUC Decision 12-01-033 at p. 20 (discussing utilities application of the loading order).

[5] SONGS contributed very little to the State's greenhouse gas emissions.

[6] Cal. Health & Safety Code § 38501(a).

important both nationally and globally.[7] California has committed to mitigating the impacts of climate change by reducing greenhouse gas emissions to 1990 levels by 2020,[8] and by reducing GHG emissions by 80 percent below 1990 levels by 2050.[9] Making the right decision related to SONGS will be critical for meeting these GHG goals as well as protecting the communities that already breathe unhealthy air.

1) Decisions Related to Replacement Resources for SONGS Should Be Made in a Public Process.

During the CEC/CPUC workshop on July 15, 2013, several efforts to evaluate the long-term resource needs to respond to SONGS, which are not part of the CPUC's transparent public process, were discussed. In particular, several speakers mentioned a task force that has been formed at the direction of the Governor to examine issues related to SONGS.[10] Although the agencies that are part of this task force were identified,[11] the members of this task force, the times that they are meeting, and the substance of their discussions have not been disclosed to CEJA's and Sierra Club's knowledge.[12] There was also a discussion of a group examining the impacts related to AB 1318 relying on various models.[13] The inputs and the methodology for these studies have not been vetted in a public process. The lack of transparency for both of these efforts seriously impacts the reliability of the results and duplicates a transparent, public process that is already underway.

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[7] *See* J. Williams, et. al, *The Technology Path to Deep Greenhouse Gas Emissions Cuts by 2050: The Pivotal Role of Electricity*, SCIENCE, Vol. 335, no. 6064 at p. 53 (January 2012).
[8] California Assembly Bill 32, the Global Warming Solutions Act of 2006, Chapter 488 (2006).
[9] California Executive Order S-3-05.
[10] *See, e.g.*, Mark Nelson, SCE Reliability Considerations, CEC/CPUC Workshop, Slide 5 (July 15, 2013) (stating "[r]ecent Governor's Task Force activity. . . ").
[11] *Id.*
[12] *See* Comments by Shana Lazerow, Communities for a Better Environment and California Environmental Justice Alliance, CEC/CPUC Workshop (highlighting the lack of transparency in the Task Force).
[13] *See, e.g.*, Dennis Peters, California Independent System Operator, CEC/CPUC Workshop, AB 1318 ISO Analyses of Local Capacity and Renewable Integration Needs, Slide 9 (July 15, 2013).

The California Public Utilities Commission is examining the long-term impacts of the SONGS retirement as part of its 2012 Long Term Procurement Proceeding (LTPP).[14] The CPUC is appropriately examining these impacts in the context of the LTPP pursuant to its statutory authority. In particular, Section 454.5 of the Public Utilities Code directs the CPUC to examine long-term planning for the investor owned utilities. Senate Bill (SB) 1488 further requires the CPUC to ensure that its practices pursuant to Section 454.5 of the Public Utilities Code provide for "meaningful public participation and open decision-making."[15] Consistent with this requirement, the CPUC has explicitly and repeatedly favored transparency in energy procurement procedures.[16] Decisions about replacement resources in light of the SONGS retirement should be made in the CPUC's LTPP, consistent with these authorities.

In the LTPP, many entities including CAISO, Southern California Edison, San Diego Gas & Electric, consumer and environmental stakeholders, such as CEJA and Sierra Club, will have an opportunity to present testimony discussing the impact and proposed actions in response to SONGS retirement. CAISO testimony is expected the beginning of August, and other parties are required to submit testimony shortly after that.

There is no need to rush or override the CPUC process. The state already has sufficient reserve margins to ensure reliability in the near-term and many of the issues raised by the closure of SONGS have already been addressed by CAISO. For example, the addition of synchronous condensers at Huntington Beach Units 3 & 4, reconfiguring 230 kV Barre-Ellis transmission lines, and addition of shunt capacitors at three other southern Orange County substations has addressed the voltage support needs created by

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[14] *See* CPUC Rulemaking 12-03-014, May 21, 2013 Scoping Ruling (describing Track 4 of the proceeding).

[15] 2004 Cal. Stats., Ch. 690, § 1 (Sept. 22, 2004).

[16] *See, e.g.*, CPUC Decision.06-06-066, at p. 2 ("This decision implements Senate Bill (SB) No. 1448 … (which) expresses a preference for open decision making, a policy directive we embrace."); CPUC Decision. 07-12-052, at p. 155 ("The evaluation criteria used in competitive solicitations must be clear, transparent, and available to potential bidders").

the loss of SONGS.[17] In addition, significant new generating and transmission capacity has come on-line in Southern California this past year.

2) A Public Process Has Shown that Results of Studies Similar to the Ones Presented Are Unreliable and Unreasonable.

A transparent public process like the CPUC's LTPP proceeding is essential to make a thoughtful, well-reasoned decision. The public processes to date have demonstrated the critical importance of a public process.

For example, in Track 1 of the LTPP, CAISO presented long-term modeling results from its 2011-2012 Transmission Planning Process (TPP) that assumed all of the following occurred at the same time: (i) two major transmission lines that have not failed in the last ten years both fail at the same time; (ii) it is the hottest day in ten years; (iii) no demand response is available; (iv) no uncommitted energy efficiency has been realized; (v) no energy storage has been developed between now and 2021; (vi) no incremental combined heat and power is available; (vii) all natural gas once through cooling power plants have retired; (viii) SCE did not meet its distributed generation goals; (ix) CAISO did not exercise any of its load drop ability; and (x) no additional transmission projects are planned and completed in the intervening years.[18]

The CAISO's Track 1 assumptions, thus, raised serious questions as to whether billions of dollars should be expended to mitigate a scenario that is highly unlikely to ever occur. Notably, there is no regulatory requirement for utilities and CAISO to hold

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[17] Phil Pettingill, CAISO, CEC/CPUC Workshop, ISO 2013 Transmission Plan Nuclear Generation Backup Plan Studies, Slides 6 and 7 (July 15, 2013). CAISO mentions in its slides other non-generation alternatives such as gaining over 1,000 MVAR SVC support using existing SONGS and San Luis Rey/Talega facilities.

[18] *See* CPUC LTPP, Track 1 Evidentiary Hearing Transcript 120 (Sparks, CAISO) (describing how the two lines assumed out of service for the Western LA Basin have not had any outages in the last ten years of service); Id. at Transcript 173 (Sparks, CAISO) (discussing transmission not considered); Id. at Transcript 129 (discussing CHP not considered) CPUC LTPP CEJA Cross Exhibit 1 (CAISO Data Requests Responses) (describing preferred resource assumptions); CEJA Testimony of Julia May and Bill Powers in Track 1 of the LTPP.

enough capacity for a 1-in-10, double contingency, worst-case scenario day like the kind that CAISO predicted on a ten-year, look-ahead basis.[19]

After examining the evidence in Track 1, the CPUC found that – relative to CAISO's scenario - more energy efficiency, demand response, and combined heat and power should have been considered in the analysis.[20] The final CPUC decision thus reflected a reduction of over 1,000 MW from what CAISO initially requested, which in turn saved the environment from millions of tons of GHGs and other air pollutants and saved ratepayers from billions of dollars of unnecessary expenditures.[21] Although CEJA and Sierra Club believed that no new natural gas power plant capacity needed to be procured, the transparent process let to a more reasonable result.

The CAISO results highlighted at the CEC meeting suffer similar issues that should be vetted through a public process. Some of the specific issues are highlighted below.

3) The Studies Referenced in the Slides Are Based on Unreasonable Assumptions and Should Not Be Relied Upon Until They Have Been Vetted Through the CPUC's Public Process.

In the presentations at the CEC/CPUC workshop, two different long-term study results were summarized – CAISO's results from its recent TPP study and CAISO's and other agencies' analysis of issues related to AB 1318. Both of these studies likely have significant flaws and rely on unreasonable assumptions. These studies should not be relied upon to make decisions until they have been vetted through the CPUC's public process.

A. CAISO's Transmission Planning Process (TPP) Analysis

CAISO conducted an analysis of the SONGS outage in its 2012-2013 TPP.[22] This analysis, much like the analysis that CAISO conducted for Track 1 of the CPUC's Long

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[19] *See* CPUC Decision 06-06-064 at pp. 16-20 (summarizing requirements); CAISO 2013-2015 Local Capacity Technical Analysis at pp. 8-11 (summarizing CAISO's interpretation of LCR requirements).
[20] CPUC Decision 13-02-015 at pp. 47-52, 58-59, Conclusions of Law 6-8.
[21] CPUC Decision 13-02-015 at pp. 1-5 (summarizing decision).
[22] *See* CAISO 2012-13 Transmission Plan, Chapter 3.

Term Procurement Proceeding, has significant flaws and relies on unreasonable assumptions.

Initially, it is important to remember that CAISO's study relies on a scenario that assumes two major components of the system are forced out of service on the hottest day in ten years.[23] Although this type of modeling has been historically relied on for the year-ahead Resource Adequacy proceeding, it has not been relied upon for long-term procurement except for in Track 1 of the 2012 LTPP.[24] The scenario that this type of long-term modeling relies on is very improbable and leads to unnecessary procurement.[25] CAISO is not required to have back-up capacity for the unlikely 1-in-10 year event with two outages scenario.[26] These improbable assumptions significantly impact the results. The difference between the 1-in-10 year forecast and the 1-in-2 year forecast is over 2,300 MW in 2022 for the LA Basin and San Diego area in the CEC's most recent draft forecast.[27]

Another issue with CAISO's analysis is its reliance on a demand forecast from 2012 that has been significantly revised in 2013 by the California Energy Commission. The CEC's most recent 2022 forecast for the LA Basin reduced the need by 1745 MW, and the 2022 forecast for the SDG&E area reduced the need by 150 MW.[28] This results in a 1,895 MW reduction of CAISO's results for the LA Basin and San Diego area. In fact, there is no evidence for the forecasts of rising peak demand, as shown by the CEC's projection in the workshop.[29]

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[23] *See* CAISO 2012-13 Transmission Plan, Section 3.3.2 ("[t]he contingencies that produce the more severe system results and impacts have been selected to assess the Central California transmission system performance. . . ").
[24] *See* CPUC Decision 06-06-064, CPUC Decision 13-02-015.
[25] CEJA's expert calculated that the probability of CAISO's contingencies occurring on the hottest day in ten years was on the order of a couple of minutes in the ten year period. *See* Testimony of J. Firooz, CPUC Application 11-05-023.
[26] CPUC Decision 06-06-064 at 23, 28.
[27] See CEC 2013 IEPR Load Forecast, 2022, Statewide Forms 1.5b and 1.5d, Revised California Energy Demand Forecast 2012-2022.
[28] *Compare* CEC 2013 IEPR, Preliminary, Demand Forecast with CEC 2012 IEPR, Demand Forecast for LA Basin and San Diego.
[29] The CEC projection presented in the workshop for SCE territory shows the actual peak demand has been declining since 2009Michael Jaske, CEC, CEC/CPUC Workshop, Slide 4 (July 15, 2013).

In addition to relying on a highly unlikely scenario and a demand forecast that is too high, CAISO does not include reasonable assumptions. CAISO has likely not included uncommitted energy efficiency in its analysis.[30] The CEC has stated that "conservation reasonably expected to occur includes *both* committed and uncommitted programs, [even though] only the effects of committed programs are included in the demand forecast."[31] The CEC further stated that "demand forecasts [should] seek to account for all conservation that is reasonably expected to occur."[32] Given that the CEC believes both uncommitted and committed are "reasonably expected to occur," both should be counted. For the LA Basin and the San Diego local areas, CEJA has estimated that uncommitted energy efficiency is over 2,000 MW of additional MW for 2021.[33] In its Track 1 LTPP decision and a related SDG&E decision, the CPUC found that uncommitted energy efficiency in the Western LA Basin (approximately half of the LA Basin) and the SDG&E local area was over 1,300 MW.[34] In addition, the CEC's slides from the workshop show that between 1,200 and 2,100 of incremental energy efficiency can be expected in 2022 in the LA Basin and SDG&E areas.[35] This significant resource, would drastically lower any purported procurement need in CAISO's TPP analysis.

CAISO's TPP also does not include demand response resources.[36] Recent estimates of demand response available in the San Diego and the LA Basin area show that many hundreds of MW of demand response is available and is projected to continue to be available into the future.[37] The CPUC in its Track 1 decision and the related San

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[30] CAISO's TPP only generally includes embedded energy efficiency, which has been called "committed" energy efficiency. CAISO has not clearly stated what level of energy efficiency was included in its last TPP, but it is likely that no uncommitted EE is included consistent with CAISO's past TPPs.
[31] CEC, California Energy Demand 2010 – 2020 Adopted Forecast at p. 28.
[32] CEC, California Energy Demand 2010 – 2020 Adopted Forecast at p. 28.
[33] *See* CEJA Testimony of Julia May and Bill Powers in CPUC R.12-03-014; CEJA Testimony of Bill Powers in CPUC A.11-05-023.
[34] *See* CPUC Decision 13-02-015 at 47-49; CPUC Decision 13-03-029 at pp. 9-10.
[35] M. Jaske, CEC, CEC/CPUC Workshop, Overview, Slide 5 (July 15, 2013).
[36] CAISO has stated that demand response programs could be a potential resource for meeting need. *See, e.g.,* See Phil Pettingill, CAISO, CEC/CPUC Workshop, ISO 2013 Transmission Plan Nuclear Generation Backup Plan Studies, Slide 9 (July 15, 2013).
[37] CEJA's experts estimated that over 2,000 MW of DR would be available in the LA Basin and the San Diego local area in 2020.

Diego decision found that over 400 MW of demand response resources were not considered for the Western LA Basin and the San Diego local area.[38] CAISO's TPP also has historically undercounted combined heat and power resources.[39]

CAISO does not clearly define which renewable portfolio it is relying on in 2012-2013 TPP, but its past TPPs have demonstrated that it drastically undercounts the expected distributed generation resources. For example, the 2011-2012 CAISO TPP only projected 31 MW NQC of distributed generation (DG) resources available in the SDG&E area in 2020.[40] However, a recent SDG&E presentation states that SDG&E estimates 600 MW of DG available in 2020.[41]

In addition, CAISO's TPP does not assume that even the procurement authorized in Track 1 of the LTPP and in the related SDG&E decision occurs.[42] Over 2,000 MW of procurement was authorized in these decisions. For example, CAISO's assumptions do not include the 50 MW of energy storage authorized by the CPUC.[43] CAISO also does not include estimates of the hundreds of MW of energy storage resources that are expected to come on-line in the next several years.[44]

Consideration of all of these resources is likely to show that any potential need is either zero or significantly reduced. Before considering procurement of new resources, these issues need to be vetted in the CPUC's public process to ensure that procurement decisions are based on reasonable inputs and robust data.

B. CAISO's 1318 Studies

CAISO's slides from the CEC/CPUC workshop state that the base model for the 1318 case in the "2010 CPUC LTPP Trajectory-High Load" case.[45] CAISO is relying on

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[38] *See* CPUC Decision 13-02-015; CPUC Decision 13-03-029.
[39] *See, e.g.,* CPUC Decision 13-02-015 (discussing CHP); CPUC Decision 13-03-029 (discussing CHP); CEJA Testimony of Julia May in R.12-03-014 (detailing how CAISO undercounted expected DG resources).
[40] *See* CAISO 2011-12 TPP, Table 3.3-42, http://www.caiso.com/Documents/Board-approvedISO2011-2012-TransmissionPlan.pdf.
[41] *See* June 27, 2013 SDG&E Slides to SANDAG Working Group, Slide 7.
[42] In CPUC Decision 13-02-015 and CPUC Decision 13-03-029, the CPUC authorized procurement of over 2,000 MW.
[43] This was confirmed in a recent data request response by CAISO in R.12-03-014.
[44] *See* generally CPUC Rulemaking 10-12-007 (detailing
[45] *See* Dennis Peters, CAISO, CEC/CPUC Workshop, Slide 9 (July 15, 2013).

the modeling work that it completed for the CPUC's 2010 LTPP. In that proceeding, CAISO modeled four different scenarios, as requested by the CPUC, and its own high trajectory scenario. The four primary scenarios that it modeled at request showed that there was no need for additional generation, only CAISO's high trajectory scenario, which included a higher demand assumption, showed any need.[46] Based on these results, CAISO, the utilities, and many other parties signed a settlement agreeing that further analysis was needed before any need determination was made based on CAISO's 2010 LTPP modeling.[47] The CPUC found that the scenarios showing there was no need were more credible than the other scenarios, stating:

> the scenarios under which there is no need for additional generation are the Commission-mandated scenarios, which were developed in a public, collaborative, and iterative process led by Energy Division staff. This would tend to give them more credibility than the alternative assumptions.[48]

Based on this, the CPUC relied on the other scenarios to find that "[t]here is clear evidence on the record that additional generation is not needed by 2020" and that "the record similarly does not support a finding of need for additional generation beyond 2020."[49]

CAISO's reliance on this outlier scenario as the basis for its 1318 study should be rejected as unreasonable. The other study results relied upon by the CPUC in the 2010 LTPP showed no need, which is 4,600 MW different than CAISO's high trajectory case. In addition, the 2010 LTPP scenario relies on stale data from 2009. Forecasts of demand and resources have significantly changed since 2009. No decision should be made on a study that uses stale data as its basis when better, more recent data exists.

4. Failing to Thoughtfully Consider Alternatives in a Public Process Could Destroy California's Ability to Meet Its Environmental Requirements.

California must significantly reduce its greenhouse gas emissions from existing level to meet the emission reduction targets set forth under AB 32 and Executive Order S-3-05. Because SONGS provided carbon-free energy, replacing SONGS with fossil fuel

[46] D.12-04-046 at p. 7.
[47] D.12-04-046 at pp. 7-8.
[48] D.12-04-046 at p. 9.
[49] CPUC Decision 12-04-046 at p. 10, n. 9.

generation will both undermine achievement of California's GHG goals and exacerbate harmful pollution in an area that already suffers from unhealthy air quality. The long-term nature of conventional power plants means that approval of new fossil fuel generation will likely affect GHG emissions for 40 years into the future. These impacts cannot be viewed in a vacuum; they should be compared and added to the total of all current and future direct emissions. Recent values from a natural gas plant demonstrate that new conventional generation will emit significant amounts of GHGs and other pollutants including nitrous oxide and PM 2.5.[50] Since many current and proposed natural gas power plants are located near disadvantaged communities, this also raises environmental justice issues. In contrast, preferred resources generally emit little to no GHGs or other pollutants.[51]

The decision related to SONGS will have significant repercussions on California's ability to meet its GHG goals. For instance, in CAISO's analysis of Southern California Edison's local capacity needs for Track 1 of the LTPP, it forecasted that 4.25 million tons of CO_2 emissions would be added per year in the SCE area as a result of the added conventional generation it was recommending.[52] CAISO has recommended more conventional generation as a result of the SONGS retirement than it did in Track 1. The addition of this many tons of GHGs would likely assure than California would not meet its GHG goals.

Several well-respected scientists recently published a roadmap that identifies where GHG reductions need to occur to meet the State's 2050 goal.[53] Two of the

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[50] Marsh Landing Generating Station: Commission Decisions, California Energy Commission, at pp. 35, 37, 47 (Aug. 2010) http://www.energy.ca.gov/2010publications/CEC-800-2010-017/CEC-800-2010-017-CMF.PDF. The CEC found that Marsh Landing can be expected to produce a maximum of 756,981 MTCO2E annually. The CEC also found that NOx, VOC, and PM10 and 2.5 emissions would contribute to existing violations of state and federal air quality standards.

[51] *See, e.g.,* CPUC Track 1 Tr. 633: 18-21 (Cushnie, SCE) ("Clearly that's one of the benefits of preferred resources is that they don't have a GHG emissions profile.")

[52] Track I, CEJA Ex. 3 (J. May Opening Testimony) at p. 3 (citing CAISO's data request response).

[53] *See* J. Williams, et. al, The Technology Path to Deep Greenhouse Gas Emissions Cuts by 2050: The Pivotal Role of Electricity, Science, Vol. 335, no. 6064 at p. 53 (January 2012).

primary measures necessary to meet the 2050 goal are directly related to energy usage. Specifically, the study found that "energy efficiency had to improve by at least 1.3% per year over 40 years" and that "electricity supply had to be nearly decarbonized, with 2050 emissions intensity less than 0.025 kg CO2e/kWh."[54]

To further reduce GHG emissions from 1990 levels in 2020 to 80 percent below 1990 levels in 2050, significant action is necessary. Even though reductions may occur, it is also crucial to remember CO_2 emissions continue to accumulate in the atmosphere every year, constantly increasing the atmospheric burden, and worsening impacts. CO_2 has a variable, but very long atmospheric lifetime, and a portion lasts for millennia.[55] Consequently, it is essential that California not replace SONGS with polluting sources.

5. To the Extent Replacement Capacity for SONGS is Needed, the CPUC Should Evaluate Low-Carbon Solutions.

The CAISO's and utilities' discussion at the CEC/CPUC workshop appeared to focus on more expensive, polluting, GHG gas emitting conventional generation even though low carbon solutions are available and should be relied upon. Low carbon solutions to meeting renewable integration needs are technically and economically available today. The real challenge is focus, investment and implementation. The IOUs should use this opportunity to focus on accomplishing higher levels of low-carbon integration capability to support higher levels of renewables. This could include a combination of a variety of solutions including installing new DG PV with battery storage, "retro-fitting" existing solar and wind energy with storage, implementing new smart inverter standards, and creating financial incentives and programs to support these efforts. Investments that would otherwise be spent on new gas fired plants can be re-directed to be invested in storage and renewables moving the State closer to its long term goals on GHG reductions.

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[54] J. Williams, et. al, *The Technology Path to Deep Greenhouse Gas Emissions Cuts by 2050: The Pivotal Role of Electricity*, SCIENCE, Vol. 335, no. 6064 at p. 53-59 (January 2012).

[55] D. Archer, University of Chicago, *Carbon is Forever, Nature Reports, Climate Change*, Vol 2, December 2008, www.nature.com/reports/climatechange "The lifetime of fossil fuel CO2 in the atmosphere is a few centuries, plus 25% that lasts essentially forever."

Increasing the rate and volume of rooftop DG combined with storage could meet a very large portion of the LCR needs, reduce local pollution, reduce or eliminate the need for expensive and difficult to build new transmission facilities, while improving the reliability of the local grids. Similarly, a more focused effort and investments in energy efficiency and demand response could help lower load growth. It will take the IOUs leadership to accelerate demand response implementation.

Rather than acquiesce to plans to develop polluting fossil fuel generation, in the LTPP, the CPUC should require the IOUs and CAISO to develop focused alternate low carbon plans to meet any future need resulting from SONGS closure.

CONCLUSION

For all the reasons discussed above, CEJA and Sierra Club recommend that any decision about how to replace SONGS is made in the CPUC's Track 4 LTPP transparent public process, and that the CPUC ensure that the proceeding fully identifies how preferred resources can be used to provide any identified needed capacity.

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Respectfully submitted,

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