

## DOCKETED

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**Sierra Club Comments on 15-IEPR-07**

*Additional submitted attachment is included below.*



**In the matter of,** ) **Docket No. 15-IEP-07: Southern California**  
**2015 Integrated Energy Policy Report** ) **Electricity Infrastructure Assessment**

**Comments submitted to:** [http://www.energy.ca.gov/2015\\_energypolicy/](http://www.energy.ca.gov/2015_energypolicy/) **via Submission of e-comment.**

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**Submitted: 8/31/15**

### **Comments of Sierra Club California**

Sierra Club California respectfully submits these comments in response to the 2015 IEPR Report; Workshop on Southern California Electricity Infrastructure Assessment on 8/17/15.

With the permanent shutdown of SONGS, the state's energy agencies working with utilities came together quickly and collaboratively to create a plan to maintain reliability for Southern California. Since the plan was created much has been accomplished including the deployment and planning for new transmission, synchronous condensers and generation projects. The California Public Utilities Commission (CPUC) has authorized procurement of new capacity to meet local capacity needs in Southern California through 2022. In making this need determination, the CPUC significantly discounted benefits from transmission upgrades, energy storage and rooftop solar. Meeting the LCR needs of the SoCal grid over the past two years has also benefited from transmission upgrades, increased renewable generation, from load reduction from energy efficiency and distributed generation and stability from storage and demand response.

### **The Local Capacity Annual Assessment Tool (LCAAT) Study**

Sierra Club California has significant concerns that the LCAAT Study is both unnecessary and subverts the purpose of the Long Term Procurement Plan (LTPP) proceeding at the CPUC. LTPP is the proper forum to assess resource needs and benefits from a public and robust evidentiary process. The Joint Reliability Plan issued two years ago and its proposed 50/50 preferred resource, conventional generation procurement split cast an air of prejudgment over the outcome of the LTPP Track 4 decision that determined replacement for the retirement of SONGS. Analyses of future resource need should be left to the CPUC in the LTPP, not other mechanisms where the public is denied procedural tools such as data requests, the opportunity to submit expert testimony, and cross-examination, that are critical to a robust determination of future resource needs. Inter-agency studies on resource need should be discontinued.

To the extent the LCAAT study proceeds, while this year's planning study did include many updates to its assumptions we recommend the following be included as well:

1. **Increased RPS** - In Executive Order (EO) B-30-15, Governor Brown directs the state to achieve a 40% reduction in GHG emissions by 2030 when compared to 1990 levels. In order to accomplish this, the electricity sector must make its contribution. In this EO, it states *“In his inaugural address earlier this year, Governor Brown announced that within the next 15 years, California will increase from one-third to 50 percent our electricity derived from renewable sources; reduce today's petroleum use in cars and trucks by up to 50 percent; double the efficiency savings from existing buildings and make heating fuels cleaner; reduce the release of methane, black carbon and other potent pollutants across industries; and manage farm and rangelands, forests and wetlands so they can store carbon.* **Therefore, we recommend that this study assume that a 50% RPS would be required by 2030 and a pro-rata RPS for the currently used planning horizon through 2024 would be a 40% RPS. We recommend that the CEC and CPUC send a joint request to CAISO to conduct its Transmission Planning Process (TPP) and scenario planning based on this new 50% RPS by 2030 directive.** Implementation of this new higher RPS target may result in additional generation in place to meet any deficits that otherwise may occur in 2021 and beyond.
2. **Increased Transportation Electrification.** In his EO mentioned above, it states ”... , Governor Brown announced that within the next 15 years, California will... **reduce today's petroleum use in cars and trucks by up to 50 percent; ...”**
  - a. We agree with Workshop attendee, Barry Wallerstein, Executive Officer for the South Coast Air Quality Management District, that this EO in addition to Federal Air Quality requirements by 2023 and 2032, will require a significant transition to alternative fuel vehicles and that many of these will require electricity. Further he stated that additional electrification of port operations will be needed to achieve Federal and State targets and wants to avoid the state being ready to implement more electric vehicles but not having sufficient electricity generation to fuel them. **We recommend that the plan be updated to include a forecast of the increased electricity requirements of new plug in trucks, transit buses and port operational facilities.**
  - b. In March, 2012 Governor Brown issued **Executive Order B-16-2012** that calls for the State to achieve a target of over 1.5 million zero emission vehicles (ZEVs) on the roads. **We recommend that the EV assumption portion of ZEVs for light duty vehicles should be updated from 1 million by 2025 to the new target of 1.5 million.**
3. **Increased Storage** – In the baseline scenario in this study, less than the required storage under CPUC D.13-10-040 was included. **We recommend that the baseline scenario assumption should include the full requirement under this decision. Further, a sensitivity assumption should be performed assuming much higher storage than required in the decision.** As storage continues its rapid cost decline, continues to prove its value in commercial application and demonstrates its cost effectiveness in many applications, even without the required capacity of the decision, both utilities and their commercial and residential customers will increasingly implement storage solutions. These solutions will help lower peak demand, reduce transmission congestion allowing more capacity of energy transfer along existing physical transmission facilities, mitigate overgeneration and provide other valuable grid services.

4. **Increased energy efficiency** –In light of the Governors energy efficiency (EE) goal mentioned in the EO above to:” double the efficiency savings from existing buildings”, in this year’s IEPR workshops the CEC has been discussing translating this goal into a target of doubling the current level of AAEE. While Mike Jaske’s cautionary comments on insuring that forecast AAEE must be verified and real are appropriate, we agree with Commissioner McAllister’s recommendation to include a sensitivity for the Mid-case AAEE. Further, as the commission works through ways to implement programs that seek to double AAEE in the future, **we recommend that this effort should result in higher AAEE forecasts which should then be incorporated in the LCAAT study.**
5. **Heating Fuel Switching** – In his EO, the Governor calls to “**make heating fuels cleaner**” which in significant part can be met by switching the fuel for space and water heating from natural gas to electricity. Implementing new hybrid electric water heaters and both air-source and geothermal HVAC units into the field in the future will increase electricity load but also have the potential to offer very effective and reliable demand response resources to help stabilize the grid and at the local level. **We recommend that the CEC alter its load forecasts to take into account the impacts that these changes will have on load and incorporate these forecasts in the LCATT.**

### **Mitigating Potential Deficits in 2021 and Beyond**

Some of our recommendations above will increase forecast load however many of these also offer significant load shifting potential, can be excellent demand response resources and their use can be incented by TOU rates. So while they may increase total energy use, they will have a proportionately lower impact on peak demand and also can offer grid stability benefits especially in integrating renewables, in mitigating over-generation and managing potential ramp issues. Other recommendations above including a higher RPS and more EE will lessen any potential net deficits. It is likely that incorporating these changes into a new LCAAT study would move the “bookend” scenarios in a more positive direction with reduced risk of deficits. But we will have to await the results of such a study.

The planning process has never been impacted by so many new variables which in total create increased uncertainty. The CEC presented two mitigation paths against possible deficits which were to defer OTC compliance dates for short term forecast deficits or new conventional generation for longer term deficits. We believe that a mitigation plan involving more conventional generation is contraindicated on economic, public health and GHG emission grounds.

Under the umbrella of the LTPP, we recommend that the agencies, utilities and stakeholders collaborate to put together a plan to address potential possible projected deficits of LCR for SoCal. This process should develop and implement a least regrets strategy governed by a set of guiding principles.

These guiding principles should include;

- In light of the Governors' EO for a 40% GHG reduction by 2030 and 80% by 2050, essentially all new generation and flexible resource projects should utilize zero emission preferred resources.
- Preference should be given to local DER projects both singly and in portfolios of integrated resources offered by aggregators or individual customers.
- With a higher RPS target now needed, consider accelerating RPS projects to come on line sooner than required to meet new higher RPS requirements. The IOUs are largely contracted to meet the 33% RPS 2020 goal (SDG&E is achieving that goal this year.) and have greatly reduced procurements. If so encouraged, they could re-start the RPS pipeline to exceed the 33% RPS by 2020 in a targeted way for projects that could help the Southern California basin. Where there are transmission line constraints, transmission sited storage projects could be implemented to maximize imports from these additional generation resources.

In developing this plan consideration should be given to:

- a. Utilize this as an opportunity to further accelerate many promising programs, technologies and commercial interest in meeting LCR needs using DERs sited to meet SoCal LCR needs.
- b. Consider SolarCity's DER Loading Order Proposal. ([http://www.solarcity.com/sites/default/files/SolarCity%20White%20Paper%20-%20Integrated%20Distribution%20Planning\\_final.pdf](http://www.solarcity.com/sites/default/files/SolarCity%20White%20Paper%20-%20Integrated%20Distribution%20Planning_final.pdf) ). This proposal contains recommendations on how to prioritize DERs in grid planning and specific recommendations on how to make the planning, procurement and implementation process more streamlined.
- c. CPUC Commissioner Florio's Proposed Decision (<http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M153/K740/153740896.PDF> ) in the Integrated Demand Side Resources Programs Proceeding, if approved would potentially allow individual customers or aggregators to offer portfolios of integrated DERs which could provide both more local energy and simultaneously increase grid reliability and resiliency. Some DERs can offer an advantage of quicker implementation than new conventional generation resources reducing the risk of deficits.
- d. Leverage and support the enormous commercial interest in DER implementation partnerships and strategies and support these with policies and financial incentives.
  1. Solar and Storage partnerships - There have been many partnerships recently announced between Solar developers and storage firms including: SolarCity with Tesla; SunEdison and Green Charge Networks; Kyocera and Stem and others all forecasting growing adoption of solar PV + battery storage projects. By requiring smart inverters for new solar PV projects as is soon planned under the Rule 21 proceeding, providing incentives for storage with solar and identifying those locations which can provide the most benefits, LCR needs can best be met.

2. DER aggregators – Many commercial businesses are forming even broader partnerships to provide an array of integrated DER services. Some of these have been doing this for years while others are awaiting favorable policy support and monetization of benefits in order to grow. Examples include: Sunrun with Tesla and Nest; SolarCity with Tesla and Nest. Supportive tariffs under the ISDR proceeding could enable these types of DER programs to contribute to mitigating potential deficits by 2021 and beyond.
- e. Since the priority needs are for LCR capacity enhancements in the LA Basin, prioritize actions that can be taken most quickly, most confidently, and with lowest risk while supporting longer term goals. In addition to action described above, other examples here could include:
- i. Following SCE's lead in working with the Clean Coalition in mapping potential commercial DG sites and solar PV capacity in Orange County, expand this program throughout the affected LA Basin and San Diego areas. Then incentivize projects to implement projects on the highest priority sites.
  - ii. Provide pilot project funding and grants to install air-source heat pump hybrid electric water heaters with smart thermostats in new home projects and provide rebates to help homeowners in existing homes to migrate from gas water heaters to electric hybrid. ((SMUD's Obadiah Bartholomy made a promising presentation ([http://docketpublic.energy.ca.gov/PublicDocuments/15-IEPR-05/TN205235-2\\_20150703T140726\\_Getting\\_to\\_NetZeroCarbon\\_Heating\\_CostEffectively\\_With\\_Today's\\_T.pdf](http://docketpublic.energy.ca.gov/PublicDocuments/15-IEPR-05/TN205235-2_20150703T140726_Getting_to_NetZeroCarbon_Heating_CostEffectively_With_Today's_T.pdf)) on the GHG emission reduction potential of these water heaters and cost effectiveness at the CEC Workshop on 7/6/15. A similar approach could be taken on the new highly efficient air-source heat pump HVAC units now available. These could be pilots for both fuel switching for water and space heating and could also pilot their use as demand response resources. Broader market adoption could follow these successful pilots.

Respectfully submitted,

/s/Ray Pingle

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