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Docket Number:	22-OII-01
Project Title:	Order Instituting Informational Proceeding on Distributed Energy Resources in California's Energy Future
TN #:	243598
Document Title:	SCE Comments - on Order Instituting Informational Proceeding
Description:	N/A
Filer:	System
Organization:	SCE
Submitter Role:	Public
Submission Date:	6/17/2022 5:07:45 PM
Docketed Date:	6/17/2022

*Comment Received From: SCE
Submitted On: 6/17/2022
Docket Number: 22-OII-01*

on Order Instituting Informational Proceeding

Additional submitted attachment is included below.

June 17, 2022

California Energy Commission
Docket Office, MS-4
Re: Docket No. 22-OII-01
1516 Ninth Street
Sacramento, CA 95814-5512
docket@energy.ca.gov

Re: Southern California Edison Company's Comments on the California Energy Commission's Order Instituting Informational Proceeding on Distributed Energy Resources in California's Energy Future (Docket No. 22-OII-01)

Dear Commissioners:

SCE appreciates the opportunity to provide comments on the California Energy Commission's (CEC) Order Instituting Informational Proceeding (OIIP) on Distributed Energy Resources (DERs) in California's Energy Future and June 1 workshop. SCE supports the OIIP's premise that "DERs are essential for achieving state goals for decarbonization, reliability, resilience and energy justice." Indeed, As we noted in a recent presentation in the California Public Utilities Commission's (CPUC) High DER Proceeding, SCE strongly believes that DERs and associated foundational technologies are essential for the future grid and is already investing accordingly.¹ Indeed, as we noted in a recent presentation in the California Public Utilities Commission's (CPUC) High DER Proceeding, SCE strongly believes that DERs and associated foundational technologies are essential for the future grid and is already investing accordingly.²

In this letter, SCE provides recommendations for the scope of the proceeding. SCE notes that the topics discussed in the CEC and stakeholder presentations cover a broad array of topics and thus it is important to focus and prioritize the proceeding on the highest value topics. Additionally, SCE notes that almost all of the discussed topics have touch points, if not outright overlaps, with topics currently in scope in active CPUC proceedings. SCE appreciates that the CPUC participated in the workshop and that both CEC and CPUC staff committed to a coordinated approach. However, to avoid duplication of effort and

¹ R.21-06-017. SCE Presentation at Track 2 DSO Workshop, May 3, 2022.

² R.21-06-017. SCE Presentation at Track 2 DSO Workshop, May 3, 2022.

potential for re-litigation of settled matters, it is vital to clearly articulate and delineate the work in this proceeding from related CPUC activities.

In the remainder of this letter, SCE provides comments on many of the potential scope topics raised in workshop presentations and provides recommendations for how they may be addressed in this proceeding to greatest effect and value.

Recommendations for the Scope of the DER OIIP

To provide scope recommendations, SCE has assessed many of the scope topics raised in workshops (as well as some additional related topics), and categorized them into the following groups:

- Group 1: High priority opportunities to address a clear knowledge gap and leverage the extensive experience of the CEC.
- Group 2: Topics that are potentially in scope at CPUC. Additional analysis is worthwhile, but clear coordination and scope delineation is required to avoid duplicated efforts.
- Group 3: Topics that overlap in part or in whole with scope in active CPUC proceeding(s). These topics should be excluded from the OIIP absent a clear rationale to explain why these topics should be discussed in the OIIP and not in the relevant CPUC proceeding.

SCE recommends the bulk of the time and effort of the OIIP be focused on topics within the first two groups, with limited or no attention to topics in Group 3. Below, SCE identifies the topics in each group.

Group 1: High priority opportunities to address a clear knowledge gap and leverage the extensive experience of the CEC.

- *DER potential and DER growth scenarios.* Of all the topics discussed in the OIIP, forecast scenarios are uniquely under CEC jurisdiction. Utilities require reasonable forecasts – including load growth resulting from new policies expected to be adopted – in order to effectively plan the grid and ensure the grid is ready for customer adoption. SCE strongly supports the development of new DER growth scenarios, especially scenarios based on California’s policy goals and expected future policy action. Additionally, because utilities are expected to use only adopted Integrated Energy Policy Report (IEPR) scenarios in their annual grid planning process, and IEPR scenarios are also used in CPUC’s Integrated Resource Planning (IRP) and in CAISO’s Transmission Planning Process, SCE strongly encourages the CEC to develop these new DER

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growth scenarios with the explicit intention and expectation that they will be adopted in the IEPR proceeding.

- *Strategies to improve community engagement.* Multiple stakeholders throughout the workshop discussed community engagement and identified many opportunities for improvement, including the engagement process, the type of content provided, the target audiences for engagement, etc. The OIIP could serve as a forum to discuss and document these ideas to create best practices for engagement for various objectives/scenarios.
- *Funding opportunities and grants to support community engagement.* Stakeholders noted the need for funding to support community engagement. The OIIP could explore additional funding opportunities (beyond the compensation mechanisms available at the CPUC).
- *Augmenting the AB 3232 Building Decarbonization study.* This study provided foundational knowledge by describing various decarbonization scenarios. The DER OIIP should build upon these results to set concrete electric heat pump and other appliance targets and recommendations to achieve 2030 and 2050 decarbonization goals. Such targets and recommendations would provide more specific information to inform and guide various related policy proceedings at the CPUC.
- *Market Assessment of Customer Electric Infrastructure, including Electric Panels.* Stakeholders at the workshop mentioned electric panel upgrades and other customer electrical infrastructure upgrades as a barrier to building electrification and adoption of other DERs such as electric vehicle chargers. SCE agrees that customer electrical infrastructure upgrades represent a significant barrier for many customers. However, lack of substantial information about the status of customer electric infrastructure hinders efforts to develop efficient, effective solutions to this problem. SCE recommends the OIIP consider a research effort to document the current state of customer electrical infrastructure (including market information on panel sizes, geographic data, upgrade frequency, upgrade reasoning, impact of home energy management systems like smart breakers/panels on demand, inspectors and electrician awareness and procedures), to fully understand the scope and magnitude of this barrier, and therefore better inform policies, including proposing changes to the California Electrical Code methods for sizing panels in existing buildings, to address this barrier.
- *Studies to track penetration and adoption of Building Electrification.* While the adoption of incentivized technologies can be tracked through existing programs, there is a significant gap in tracking BE penetration, therefore creating a challenge to design appropriate policy mechanisms to support BE. SCE recommends that the OIIP explore opportunities for more comprehensive

- tracking of BE technology sales and penetration to better understand barriers to BE adoption and to support and inform BE policy and program design.

- *Customer awareness of understanding of induction cooktops, both residential and commercial.*

While cooktops represent a much smaller energy load compared to HVAC and water heating, transitioning to induction cooktops remains a critical component of building decarbonization and one that also has significant health co-benefits. Mainstream news articles occasionally feature stories of people who have converted to induction after appreciating the benefits despite previously favoring gas. Unfortunately, mainstream news articles also present misguided stories, such as the recent LA Times article suggesting an entire cuisine of restaurants may disappear if gas is phased out.³ There is a clear need to provide greater consumer awareness of the benefits of induction cooking, including for commercial and restaurant kitchens. For the commercial segment (restaurants), induction has made advancements beyond the cooktops, including commercial woks, griddles, braising pans and holding (dry) wells. However, the commercial segment is generally either unaware of these advancements or, due to misguided info about phasing out gas, not optimistic about electric cooking options. A pilot or incentive program for these advancements, that would include both the infrastructure upgrade cost and unit, will help move this segment towards decarbonization. These induction woks and holding wells not only reduce carbon but also save water. For the residential segment, there also needs to be a clearer differentiation between drop-in cooktops versus ranges that include ovens. Since many people prefer electric ovens for their features and precision, induction ranges with electric ovens provide benefits that go beyond the cooktop.

- *Market research into commercial-scale heat pump water heaters.* The market for heat pump water heaters have consistently lagged that of heat pump HVAC systems, and this is especially true for commercial heat pump water heaters. While residential heat pump water heaters are starting to reach widespread commercial availability, the market for commercial units is much more nascent. SCE recommends the OIIP discuss additional market research opportunities in the commercial heat pump water heater space to understand commercial availability, characterize unique adoption barriers such as impacts to electrical infrastructure, installation and operations expertise, and uniform policies to solve these challenges.

³ Harris, Jenn. "The end of Korean BBQ in L.A.? What the gas stove ban means for your fave restaurants." *Los Angeles Times*, June 2, 2022. Available at <https://www.latimes.com/food/story/2022-06-02/gas-stove-ban-chinese-korean-bbq-electric-new-buildings-restaurants-future>. Accessed June 14, 2022.

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Group 2: Topics that are potentially in scope at CPUC. Additional analysis is worthwhile, but clear coordination and scope delineation are needed to avoid duplicated efforts.

- *Natural Gas and renewable natural gas price forecasting under various policy scenarios.*

Natural gas will continue to be consumed in some quantity for many years, and renewable natural gas or other decarbonized fuels may potentially become a solution to achieve decarbonization goals in hard-to-electrify applications. It is therefore important to have reasonable forecasts for future natural gas costs to inform policies related to fuel substitution across various sectors and indeed climate policy more broadly. While forecasts of future natural gas prices are in scope in the Natural Gas Order Instituting Rulemaking proceeding at the CPUC, that proceeding would benefit from price forecasts based on energy portfolio scenarios achieving state decarbonization goals. SCE recommends the CEC explore future gas cost estimates to help support and inform CPUC proceedings.

- *Vehicle to grid integration (VGI) technology and configuration assessment.* Current CPUC proceedings that address utility programs around vehicle to grid integration include the Development of Rates and Infrastructure for Vehicle Electrification Rulemaking (R.)18-12-006 and specifically Decision (D.)20-12-029, which directed the Investor Owned Utilities (IOUs)⁴ to among other things, file an advice letter requesting approval for a VGI Transportation Electrification Emerging Technology program.⁵ The CEC's VGI assessment should focus on gaps or assessments that will complement VGI outcomes from R.18-12-006. For example, there are now multiple manufacturers offering (or planning to offer) electric vehicles with V2X capability (i.e., vehicle-to-building/-grid/-load). However, there is currently no standard technology configuration for such vehicles. The lack of standardized configurations may represent a significant barrier to V2X adoption as vehicle manufactures, other equipment manufacturers (e.g., of charging equipment, stationary storage, inverters, etc.), local electricians, permitting agencies, and utilities must all understand the technology configuration at each vehicle and charging site. SCE recommends the OIIP consider current technology configurations being implemented or proposed and identify opportunities for standardization or at least characterizing and cataloging different configurations.

⁴ IOUs include SCE, San Diego Gas & Electric Company, and Pacific Gas and Electric Company.

⁵ In response to Ordering Paragraph 11 of D.20-12-029, the IOUs submitted a joint advice letter (SCE Advice Letter 4610-E) submitted on October 13, 2021. AL 4610-E is pending Commission disposition.

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- “*DER Today*” scope topics related to *DER deployment and customer behavior*.⁶ The CEC presentation identified these topics as in scope for the OIIP. SCE recognizes that additional research and insights into these topics will be beneficial to guide policy, especially as related to customers and communities that have historically not participated in DER programs and opportunities. SCE notes that various CPUC proceedings and other research projects have addressed these topics in various levels of detail.⁷ Therefore, SCE recommends that the CEC start by documenting existing sources and reports, prior to seeking out new research and information.

Group 3: Topics that overlap in part or in whole with scope in active CPUC proceeding(s). These topics should be excluded from (or deprioritized in) the OIIP absent a clearly identified need as to why these topics should be discussed in the OIIP and not in the relevant CPUC proceeding.

- “*DER today*” topics related to *capabilities, value, etc.*⁸ This topic has been extensively and comprehensively addressed in CPUC proceedings. For example, within the CPUC Microgrids OIR, a Staff Report provided a comprehensive assessment of current DER services and compensation opportunities.⁹ This topic should primarily be limited to review of previous analyses; any new research should be limited to specific identified gaps.
- “*Future*” *Grid Services*.¹⁰ There is a high risk that this topic will duplicate work in the CPUC High DER proceeding. Specifically, Track 3 of that proceeding currently includes a working group focused on enabling grid services from smart inverters, and Track 2 of that proceeding will specifically consider future grid services and a future grid vision.¹¹ Therefore, to the extent this

⁶ CEC presentation on “Proposed Structure of Proceeding” at slide 3

⁷ For example, in the CPUC Building Decarbonization Rulemaking (R.)19-01-011, the Commission directed utilities Decision (D.)21-11-002 to collect customer data to implement various building decarbonization programs and pilots. Additionally, the CPUC’s Decision Concerning Implementation of Senate Bill 676 and Vehicle Grid Integration Strategies D.20-12-029 in Rulemaking 18-12-006, requires in Ordering Paragraph 1 that the IOUs annually report on VGI participation in demand response programs, along with Automated Load Management deployment within their service territories, in the context of existing and future transportation electrification programs, rules and tariffs to the extent practical.

⁸ CEC presentation on “Proposed Structure of Proceeding” at slide 3

⁹ R. 19-09-009, Microgrids and Resiliency Staff Concept Paper, July 22, 2020. See Chapter 6, Microgrid Value Propositions. While the discussion is centered on microgrids, the use cases and revenue opportunities are applicable to a variety of DERs. See especially section 6.2 Grid Services and section 6.4 Resource Adequacy.

¹⁰ CEC presentation on “Proposed Structure of Proceeding” at slide 4

¹¹ CPUC Rulemaking (R.) 26-06-017, Assigned Commissioners Scoping Memo and Ruling, at page 6. Also see Gridworks (consultant to Energy Division) “Evaluating Alternative Distribution System Operator Models for California”

topic remains in scope for the OIIP, SCE recommends the CEC and CPUC clarify exactly how this topic will coordinate with the High DER proceeding, specifying the topics that will be discussed in the OIIP compared to the topics that will be discussed in the High DER proceeding.

- *Analysis of Benefits /cost-effectiveness (including Non-Energy Benefits)*¹². This perennially contentious topic has been extensively litigated at the CPUC in various proceedings. Indeed, the CPUC has established an ongoing, annual process to update the Avoided Cost Calculator (ACC), with a process to consider “Major” updates every two years.¹³ It is not clear why the current CPUC process is insufficient to address this topic. Addressing this topic in the CEC OIIP creates the risk of relitigating issues in recent CPUC decisions and future CPUC ACC proceedings. To the extent this topic remains in scope, CPUC and CEC should clarify exactly how such duplication will be avoided.
- “*Market structures.*”¹⁴ Similar to the grid services topic above, market structures are expressly in scope for Track 2 of the High DER proceeding.¹⁵ To the extent this topic remains in scope in the CEC OIIP, it should be limited to exploration of *specific* compensation mechanisms that could support *specific* grid services. Any generalized discussion of market structures, distribution markets, transactive etc., would almost certainly duplicate discussions that will take place in High DER Track 2.
- *All topics related to Distribution System Operator models / future grid vision / distribution market design / transactive energy / etc.*¹⁶ These topics are expressly in scope for Track 2 of the High DER proceeding, and therefore should be excluded from (or deprioritized in) this proceeding to avoid duplication.
- *All topics related to performance-based ratemaking / utility incentives.*¹⁷ As with the above, these topics are also expressly included in High DER Track 2.

¹² See: CEC, Order Instituting Informational Proceeding on Distributed Energy Resources in California’s Energy Future, at page 3. Also, see Center for Biological Diversity presentation at slide 5

¹³ See CPUC Decision (D. 22-05-002) *Decision Adopting Changes to Avoided Cost Calculator* at page 4, summarizing the Avoided Cost Calculator update process.

¹⁴ CEC presentation on “Proposed Structure of Proceeding” at slide 4

¹⁵ CPUC Rulemaking (R.) 26-06-017, Assigned Commissioners Scoping Memo and Ruling, at page 6. Also see Gridworks (consultant to Energy Division) “Evaluating Alternative Distribution System Operator Models for California”

¹⁶ Reimagine Power/Microgrid Resources Coalition presentation at slide 3

¹⁷ Ibid

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- *Anything specific to microgrids other than technical issues or R&D.* The CPUC Microgrids proceeding has an established scope covering a comprehensive set of policy matters.¹⁸ To the extent the OIIP considers microgrids specifically, the topic should be limited to technical matters that are beyond the scope of the CPUC Microgrids proceeding.

Conclusion

SCE thanks the CEC for consideration of the above comments. We look forward to working with the CEC and other stakeholders on this important matter. Please do not hesitate to contact me at (626) 302-0905 or Dawn.Anaiscourt@sce.com with any questions or concerns you may have. I am available to discuss these matters further at your convenience.

Very truly yours,

/s/

Dawn Anaiscourt

¹⁸ See: CPUC Rulemaking (R.) 19-09-009, *Assigned Commissioners Amended Scoping Memo and Ruling Resetting Track 4*, December 17, 2020.