

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to  
Consider Distributed Energy  
Resource Program Cost-Effectiveness  
Issues, Data Access and Use, and  
Equipment Performance Standards.

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**ORDER INSTITUTING RULEMAKING TO CONSIDER DISTRIBUTED ENERGY  
RESOURCE PROGRAM COST-EFFECTIVENESS ISSUES, DATA USE AND  
ACCESS, AND EQUIPMENT PERFORMANCE STANDARDS**

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## **ORDER INSTITUTING RULEMAKING TO CONSIDER DISTRIBUTED ENERGY RESOURCE PROGRAM COST-EFFECTIVENESS ISSUES, DATA USE AND ACCESS, AND EQUIPMENT PERFORMANCE STANDARDS**

### **Summary**

We open this rulemaking as a successor proceeding to Rulemaking (R.) 14-10-003 to achieve consistency of cost effectiveness assessments, improve data collection and use, and consider equipment performance standards for distributed energy resource (DER) customer programs.<sup>1</sup> This proceeding will continue and expand efforts around cost effectiveness assessments and focus on improving the use of DER customer program data with the aim of supporting the customer experience – especially for customers living in Environmental and Social Justice communities – and advancing California’s climate goals. This proceeding will not limit the ability of any resource proceeding to determine the particular policies or procedures needed to achieve proceeding goals.

This rulemaking serves as a procedural framework for advancing the vision articulated in the customer programs track of the DER Action Plan recently adopted by the California Public Utilities Commission, which states:

The DER Action Plan’s Customer Programs Track focuses on improving coordination, planning and developing consistent

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<sup>1</sup> DER customer programs are programs offered to ratepayers by utilities, or other load-serving entities, that enable participants to manage their energy use by purchasing energy efficient or electric generation technologies, behavioral changes, or other activities that occur on the customer’s premises (often called “behind-the-meter”). They are sometimes referred to as “demand-side management” programs because they allow customers to manage their own demand for electricity or natural gas. They are also referred to as “distributed energy resource” programs since the technologies used are small, modular devices that can be distributed throughout the electric grid or natural gas system, rather than centrally-stationed like most utility-scale generation (*e.g.*, power plants). This proceeding will use the terms DER or customer programs to refer only to behind-the-meter activities. The term “distributed energy resources” as used elsewhere often includes small, distributed utility-scale generation.

metrics across DER proceedings related to customer programs to maximize their contributions to [greenhouse gas] (GHG) reductions and other state energy goals. The goal is to enable all customers to effectively manage their energy usage in a manner that ensures equitable participation and distribution of benefits, alignment with evolving rate design and load flexibility, alignment with distribution planning objectives, and alignment with integrated resource planning objectives<sup>2</sup>.

This rulemaking will have at least two phases. Phase 1 will focus on continuing the cost-effectiveness work begun in R.14-10-003 and improving access to and use of data to benefit customer programs. Phase 2 will consider enacting equipment performance standards and will address issues identified or not completed during Phase 1.

## **1. General Background**

### **1.1. Overview**

The customer programs funded by ratepayers and authorized by the California Public Utilities Commission (Commission) are offered in accordance with California's energy policy directives, and enable participants to save energy, reduce greenhouse gas (GHG) emissions, and lower their energy bills.<sup>3</sup> These programs have traditionally focused on procuring all available cost-effective demand reduction and energy efficiency resources before procuring traditional supply-side generation resources, and on procuring renewable energy resources before procuring fossil fuel resources.

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<sup>2</sup> <https://www.cpuc.ca.gov/about-cpuc/divisions/energy-division/der-action-plan>.

<sup>3</sup> California's energy policies are directed by state law, such as Senate Bill (SB) 350, the Clean Energy and Pollution Reduction Act, which established clean energy, clean air, and greenhouse gas reduction goals. A good overview of California's energy policies can be found in the California Energy Commission's Integrated Energy Policy Report (IEPR). Highlights of the 2021 IEPR are available at [file:///C:/Users/jym/AppData/Local/Temp/MicrosoftEdgeDownloads/fb02428c-d7e1-4c5d-985b-becb6b0123c2/TN242559\\_20220405T105019\\_2021%20IEPR%20Highlights.pdf](file:///C:/Users/jym/AppData/Local/Temp/MicrosoftEdgeDownloads/fb02428c-d7e1-4c5d-985b-becb6b0123c2/TN242559_20220405T105019_2021%20IEPR%20Highlights.pdf).

Public Utilities (Pub. Util.) Code Section 701.1(a) directs the Commission “to minimize the cost to society of the reliable energy services that are provided by natural gas and electricity, and to improve the environment and to encourage the diversity of energy sources through improvements in energy efficiency and renewable energy resources.”<sup>4</sup> To fulfill these mandates, the Commission has, since the 1980s, directed the regulated electric and gas utilities to develop energy efficiency programs. In the last two decades, program offerings have expanded to include many different distributed energy resources (DER), including demand response, customer-sited generation and storage, smart grid technologies, and water-energy savings measures, and innovative rate design.

Rulemaking (R.) 14-10-003 was initiated in response to the increasing complexity resulting from this plethora of programs. R.14-10-003 focused on enabling DER providers to integrate their resources into utility procurement mechanisms and developing a framework that values DER technologies more consistently across resources.

In 2016, the Commission established an Integrated Resource Planning (IRP) process in R.16-02-007. The IRP process is designed to guide electric utility planning, using capacity expansion and production cost modeling, to determine the least-cost path to achieving electric sector GHG reduction goals, while ensuring reliability. As of yet, DERs are not completely incorporated into IRP modeling as candidate resources.<sup>5</sup> Accomplishing this will require increasing coordination amongst the various DER resource proceedings and programs and

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<sup>4</sup> Hereafter, all references to code are to the Public Utilities Code unless otherwise indicated.

<sup>5</sup> Energy efficiency, residential photovoltaics (PV), certain demand response resources, and other DERs are included in the IRP via the demand forecast process. Also, some DERs are incorporated in IRP modeling as “candidate resources” that can be selected to meet future grid needs.

the IRP proceeding. A September 2022 ruling issued in the IRP proceeding includes a Staff Options Paper describing options for an IRP procurement program.<sup>6</sup>

The need to reduce GHG emissions is a leading driver of California's energy policies. But other state policy objectives – such as increased grid reliability, safety, wildfire mitigation, benefits to disadvantaged communities, minimizing generation costs, and the need to limit rate increases, especially for low-income Californians – also play a significant role in shaping DER policies and programs. Recent state policy efforts include promoting the decarbonization of the building and transportation sectors, adding further complexity to the DER landscape.

## **1.2. Legislative Background**

Legislation and statute grants the Commission broad authority over public utilities that provide electric and gas service in California. Pub. Util. Code Section 701 states that:

The [Commission] may supervise and regulate every public utility in the State and may do all things, whether specifically designated in this part or in addition thereto, which are necessary and convenient in the exercise of such power and jurisdiction.

Pub. Util Code Section 701.1 states that:

(a) The Legislature finds and declares that, in addition to other ratepayer protection objectives, a principal goal of electric and natural gas utilities' resource planning and investment shall be to minimize the cost to society of the reliable energy services that are provided by natural gas and electricity, and to improve the environment and to encourage the diversity of

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<sup>6</sup> See "Reliable and Clean Power Procurement Program Staff Options Paper," September 2022, <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M496/K684/496684997.PDF>.

energy sources through improvements in [energy efficiency] and development of renewable energy resources, such as wind, solar, biomass, and geothermal energy.

(b) The Legislature further finds and declares that, in addition to any appropriate investments in energy production, electrical and natural gas utilities should seek to exploit all practicable and cost-effective conservation and improvements in the efficiency of energy use and distribution that offer equivalent or better system reliability, and which are not being exploited by any other entity.

SB 32 (Pavley, 2016) updated Assembly Bill (AB) 32 by requiring that the state achieve a GHG emissions level 40 percent below the 1990 level by 2030 and required that we meet these goals in such a way that benefits the state's most disadvantaged communities.

SB 350 (de Leon, 2015) implemented several new policies and goals, including a doubling of energy efficiency savings in electricity and natural gas end uses by 2030, a requirement that large electric utilities develop and submit IRPs, requirements to support widespread transportation electrification, and a requirement that state agencies assess the barriers and make recommendations to increase access to energy efficiency, weatherization, and zero-emission technologies for low-income and disadvantaged communities. SB 100 (de Leon, 2018) sets a goal of meeting all retail electricity needs with renewable and zero-carbon resources by 2045 and updated the Renewables Portfolio Standard to require that at least 60 percent of retail sales of electricity come from renewable sources by 2030.

The California Legislature has also addressed building and transportation decarbonization efforts. SB 375 (Steinberg, 2008) sets regional emissions reduction targets for passenger vehicles. SB 1477 (Stern, 2018) provides incentives for reducing GHG emissions in residential buildings and is designed

to implement a market transition to clean technologies such as heat pumps. AB 3232 (Friedman, 2018) requires the state to assess the options for reducing GHG emissions from buildings by 2030, to 40 percent lower than 1990 levels.

Finally, Pub. Util Code Section 454.5 (b)(9)(C) directs electrical corporations to first fulfill their unmet resource needs with energy efficiency and demand reduction programs. Section 454.5 (b)(9)(C) states:

The electrical corporation shall first meet its unmet resource needs through all available energy efficiency and demand reduction resources that are cost effective, reliable, and feasible.

### **1.3. Prior Commission Actions**

The Commission's efforts to coordinate customer programs started in 2005, when Decision (D.) 05-09-043 adopted a process to ensure expanded use of integrated programs and tracking of program implementation. D.05-09-043 approved utility proposals to include strategies to integrate energy efficiency with demand response and distributed generation to "determine the best combination of resources to meet the particular customer's needs," increase cost effectiveness, and avoid confusion to customers.<sup>7</sup>

In 2008, the Commission adopted the Long-Term Energy Efficiency Strategic Plan (Strategic Plan), which included a chapter dedicated to Integrated Demand Side Management (IDSMD) goals and objectives for the utilities to reference during energy efficiency program planning.<sup>8</sup> The Strategic Plan led

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<sup>7</sup> D.05-09-043 at 28, 71.

<sup>8</sup> California Public Utilities Commission (2008). California Long-Term Energy Efficiency Strategic Plan. Available at: <http://www.cpuc.ca.gov/NR/rdonlyres/D4321448-208C-48F9-9F62-1BBB14A8D717/0/EEStrategicPlan.pdf>.



subsequently to the initiation of a statewide utility IDSM Taskforce to advance statewide strategies for promoting IDSM through utility programs.

The Commission subsequently issued D.09-09-047, which established a statewide IDSM program and stated that this was “pivotal in promoting and achieving clearly defined goals and objectives for integrating demand-side technologies and program offerings across the utility portfolios.” D.09-09-047 identified eight tasks the utilities should accomplish in the 2010–2012 program cycle. In 2012, Commission Staff oversaw a third-party evaluation of the statewide IDSM program, which found that the program had limited success.

In 2014, the Commission established R.14-10-003 to continue to advance IDSM work and to focus on integrating existing and emerging demand-side policies and activities.<sup>9</sup> In 2015, the Commission altered the scope of R.14-10-003 to focus on the procurement of DERs that could potentially avoid costly distribution system upgrades and the goal of improving the integration of DER resources into procurement processes. The Commission changed the name of the proceeding in 2015 to “Integrated Distributed Energy Resources,” or “IDER.”

R.14-10-003 had two separate IDER tracks. A cost-effectiveness track focused on a four-phase plan to improve DER cost-effectiveness methods,<sup>10</sup> while a procurement track focused on developing a competitive solicitation framework for DER pilot projects, project evaluation, and development of a standard contract and tariffs. The Commission subsequently relocated the DER

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<sup>9</sup> R.14-10-003 *Rulemaking to Create a Consistent Regulatory Framework for the Guidance, Planning and Evaluation of Integrated Demand Side Resources*. Available at <https://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=116116537>

<sup>10</sup> A summary of the cost-effectiveness plan is included in an October 9, 2015 ruling in the IDER proceeding. Available at <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M155/K042/155042870.PDF>.

procurement issues into the *Rulemaking to Modernize the Electric Grid for a High Distributed Energy Resources Future* (High DER Future) (R.21-06-017).

Work in the cost-effectiveness track of R.14-10-003 led to several decisions that represent significant improvements in the DER cost-effectiveness process:

- D.16-06-007 requires the Commission's Energy Division to perform annual updates of the Avoided Cost Calculator (ACC), a modeling tool that is used to determine the benefits of DER programs. D.16-06-007 also requires the Commission's Energy Division to carry out a cost-effectiveness research project to assist with ACC updates, perform research on potential additional costs and benefits associated with DERs, and examine other research topics.
- D.19-05-019 refines the annual ACC update process by ordering minor updates to the ACC in odd-numbered years and major updates in even-numbered years. D.19-05-019 determined that the Total Resource Cost test should be the primary test of DER cost-effectiveness, but that the Program Administrator Cost test and the Ratepayer Impact Measure test should also be required in cost-effectiveness analyses, and that all three tests should be considered as part of any decision-making process that include cost-effectiveness analysis. D.19-05-019 adopted a Societal Cost Test framework, to be tested in the IRP proceeding, and then re-examined after the testing period.
- D.20-04-010 adopted a Staff Proposal to align the ACC with the IRP proceeding (R.16-02-007 and R.20-05-003) and the Distributed Resource Planning (DRP) proceeding (R.14-08-013). Outputs from IRP modeling, as well as information from the DRP proceeding, are now used as inputs to the ACC. In addition, D.20-04-010 adopted a new avoided cost for high global warming potential gases.
- D.22-05-002 adopted additional changes to the ACC by adopting a new avoided gas infrastructure cost and an interim natural gas GHG adder. D.22-05-022 adopted

guiding principles for the ACC and eliminated the minor ACC updates, moving to a biennial update process. D.22-05-002 reinforced the link between the ACC and IRP, rejecting party proposals to use data inputs for the ACC that vary from those used in IRP modeling, and provided for improved transparency and increased stakeholder input of modeling results.<sup>11</sup>

In February 2019, the Commission adopted an Environmental and Social Justice Action Plan (ESJ Action Plan).<sup>12</sup> The ESJ Action Plan envisions improved Commission consideration of ratepayers residing in “Environmental and Social Justice communities (ESJ communities).”<sup>13</sup>

#### **1.4. Interagency Cooperation**

As the state of California undertakes work guided by SB 100 and related climate policies, the need for coordination and common direction among state agencies and California tribes is clear. For this reason, the Commission seeks participation from the California Energy Commission (CEC), the California Air Resources Board (CARB), and California’s Tribal governments towards the goals of this rulemaking.

The work contemplated here aligns with activities underway at both the CEC and the CARB. The Commission is already working with the CEC on several data projects, as we discuss below. Collaboration with the CEC

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<sup>11</sup> The ACC work is led by a Commission consultant. This proceeding will also consider the need to authorize additional funding for this work.

<sup>12</sup> <https://www.cpuc.ca.gov/esjactionplan/>

<sup>13</sup> The ESJ Action Plan defines “ESJ communities” as those where residents are:

- Predominantly communities of color or low-income;
- Underrepresented in the policy setting or decision-making process;
- Subject to a disproportionate impact from one or more environmental hazards; and
- Likely to experience disparate implementation of environmental regulations and socioeconomic investments in their communities

throughout the course of the proceeding is anticipated to be particularly important for data-related issues discussed in Track 2. In addition, we look forward to continued work with the CEC on issues related to DER potential, valuation, and program management.

We also anticipate continued collaboration with CARB on Track 1 issues related to air pollution and cost-effectiveness. In coordination with Commission Staff, CEC and CARB reports may be circulated to the proceeding service list, and CEC and CARB Staff may present at proceeding workshops. Work related to this proceeding may include review of existing Memoranda of Understanding and non-disclosure agreements between these agencies in order to further streamline data sharing and analysis.

## **2. Data Use and Access**

An area that requires our attention in this proceeding is updating how the Commission, utilities and other program implementers and contractors access and use data from Smart Meters and other “smart” devices to implement customer programs and benefit customers. In addition to Smart Meters, there are many customer devices, such as battery storage, thermostats, solar inverters, grid-connected heat pump hot water heaters, and electric vehicle chargers that could provide data and help improve ratepayer programs and grid planning and operations. There is also a wealth of other data that is collected by utilities, government agencies and other sources.

While the Commission collects a significant amount of data from regulated entities, these data come in a variety of units and formats. This makes it challenging to cross-compare and analyze program impacts, share data with stakeholders, and ultimately measure and track progress on our programs. In addition, the amount and type of data collected varies across programs. This

problem is especially acute for our equity programs, where the needed data can be harder to identify or collect, thus making it difficult to determine program benefits in ESJ communities.

Consistent, accessible data requirements and reporting tools, clear guidelines for data access, and updated requirements for customer privacy could substantially expand the use of data to increase participation rates in customer programs. For instance, a January 2020 American Council for an Energy Efficiency Economy (ACEEE) study found that most utilities are not optimizing use of Smart Meters for saving energy. The study authors recommend that utilities “actively engage their customers and offer them a range of services to support their energy saving investments and actions.”<sup>14</sup>

Advanced methods of data science and analytics support complex analyses of large datasets to support electric grid planning, operations, procurement, and investment as well as DER integration onto the grid. Commission proceedings and the Staff and consultants that support them are increasingly handling large datasets to support and advance innovative policy and rate-setting. The pace of innovation in data access and analytics, including machine learning and cloud-based technologies, is dramatically increasing. This in turn requires that the Commission stays current with industry practices to ensure that our Staff can leverage big data analytics to advance state energy and climate goals. For example, in the High DER Future rulemaking, Commission staff, utilities, and consultants are analyzing terabytes of Advanced Meter Infrastructure (AMI) and other grid data to support a new method of estimating

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<sup>14</sup> See Rachel Gold and Dan York, “Leveraging Advanced Metering Infrastructure to Save Energy” (2020). Available as of June 30, 2022 at: <https://www.aceee.org/research-report/u2001>

the scope and scale of infrastructure needed to enable a rapid rise in transportation and building electrification. This type of work necessitates Commission Staff having regular and ongoing access to utility grid data on a frequency and scale greater than before.

General goals for this proceeding to improve access to and use of data include the following:

1. Customer privacy:

- a. Customer privacy is protected with appropriate security and in compliance with relevant customer data privacy laws, and requirements and protocols are standardized across regulated entities.
- b. Aggregation and anonymization protocols are regularly updated and maintained by appropriate testing procedures.
- c. Clear cybersecurity requirements are regularly updated and are enforced for any entity having access to confidential data, including third parties.
- d. Customer privacy protocols are not needlessly restrictive such that they limit access to data unnecessarily.

2. Data Sharing, Access and Use:

- a. Program participants, administrators, third parties, and regulated entities are required to share their data for public interest research and other designated purposes.
- b. Public facing data portals are easy to use and accessible so that in the future customers can interact with their real-time energy use on user-friendly devices such as smartphones, enabling customers to participate in real-time pricing.
- c. Public facing data portals are frequently and autonomously updated and facilitate high-speed download of complete datasets.

- d. Export of non-public data (where allowed) is streamlined and expedited for customers seeking energy information about their own facilities (*e.g.*, building managers) and regional and local agency access to grid and customer data for their service areas and/or jurisdictional areas (*e.g.*, Renewable Energy Networks, Community Choice Aggregators, and local governments).
3. Databases, Models, and Analytics:
- a. Databases and models are based on a broad range of data sources including utility, state government, federal government, and industry sources.
  - b. Databases and models include a broad range of geographically-specific data to inform equity-related questions, such as customer energy usage, utility infrastructure metering, energy program information, grid capacity, environmental, urban planning, vehicle ownership, wildfire risk, demographic, and census data.
  - c. Database, models, and tools are, to the extent possible, designed to be consistent with those developed by other state agencies, such as CalEnviroScreen, CEC building energy code software, CEC demand forecast and meter data, CARB GHG emissions modeling, Department of Motor Vehicles vehicle data, and Office of Energy Infrastructure Safety electric grid geospatial data.
  - d. Capabilities are improved to allow for high-speed analytics involving of wide range of datasets, including large datasets (*e.g.*, hourly and 15-minute AMI data).
4. Data Collection and Reporting Tools:
- a. Data collection and reporting tools are consistent across utilities, programs, and proceedings, especially for programs with similar goals.
  - b. Data collection and reporting tools are standardized to ensure consistency and usability across programs,

proceedings, and utility service territories, and with all authorized entities.

- c. Data collection and reporting tools enhance equity customers' access to and participation in DER programs.
- d. Suitable methods to collect data from customer smart devices or device operators, and related reporting tools, are established and are consistent across utilities to improve programs, grid planning and operations.
- e. Data related to transmission and distribution system costs, new and emerging technologies, program impacts, and other relevant quantities are available for planning and program design purposes consistently across proceedings.

To accomplish these goals, work in this proceeding will be coordinated with work with other proceedings on existing or planned data projects. This proceeding will not limit the ability of any resource proceeding to determine the particular policies or procedures needed to achieve proceeding goals. We describe some of the related proceedings' efforts here.

In R.08-12-009, *Rulemaking to Consider Smart Grid Technologies Pursuant to Federal Legislation and on the Commission's own Motion to Actively Guide Policy in California's Development of a Smart Grid System* (Smart Grid proceeding), the Commission in D.14-05-051 adopted guidelines for use of Smart Meter data. These guidelines, especially the "use cases" for data access, require updating and refinement.

In the energy efficiency rulemaking (R.13-11-005), the Commission, parties and program implementers have advanced use of normalized metered energy consumption (NMEC) data to calculate savings and implementer payments. In addition, the pending statewide deployment of an energy efficiency database tool and website to be referred to as California's Analysis Tool for Locational



Energy Assessment (CATALENA) will enable users to view and download aggregated electric and gas energy use profiles of customers, including residential, commercial, public, industrial, and agricultural customers. The CATALENA database is expected to be designed to cross-link with other information systems to produce energy use profiles that support targeted, effective energy efficiency strategies and programs, track performance over time, and allow for reliable analysis and reporting.

The Commission and the CEC are currently coordinating on two large scale data gathering projects. The first is a CEC-led project focused on customer AMI time-series data and energy billing data.<sup>15</sup> The second is a Commission-led project focused on a wider range of energy data, including customer time-series, power flow, geospatial grid infrastructure; energy efficiency, and demand response, to support the High DER Future proceeding (R.21-06-017).

The Commission and parties have worked in recent years to improve data use in the California Alternate Rates for Energy (CARE) and Energy Savings Assistance (ESA) program proceedings. Past studies have created individual CARE customer reports that illustrate disaggregated household usage by end use over time. Work has also segmented CARE customers into groups that would benefit from Critical Peak Pricing (CPP), Time of Use (TOU) rates, load shifting or demand response program enrollment. Pacific Gas and Electric Company (PG&E) has proposed to use the results of this project to enhance use of load profiles with CARE and ESA customers to test whether doing so impacts

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<sup>15</sup> The CEC collects statewide, electric and gas meter data pursuant to California Code of Regulations, Title 20, Section 1353, "Disaggregated Demand Data," which mandates energy consumption and associated billing and geographic data collection to fulfill legislative requirements for new and expanded analytic work.

customer energy savings, the selection of residential rates, participation in other programs, or customer behavioral changes.<sup>16</sup>

The “Click-Through” mechanism is an online process that enables a customer to easily provide consent to their electric utility for release of customer data to a third-party demand response provider.<sup>17</sup> This proceeding could consider expansion of the Click-Through mechanism to other DERs to support delivery of accurate, timely customer data to third-parties.

California Distributed Generation Statistics is a website that hosts publicly-available data on behind-the-meter interconnections in utility service territories and data on customer generation and storage programs (e.g. the Self-Generation Incentive Program (SGIP), Solar on Multifamily Affordable Housing, Single-family Affordable Solar Homes, etc.). Since its creation in 2006, the website has continued to expand and is used by a wide range of stakeholders including government, academia, industry, and journalists.<sup>18</sup>

Efforts are underway in the *Rulemaking to Advance Demand Flexibility through Electric Rates* (R.22-07-005) to provide public access to the current electricity price through a statewide internet-based price portal. Work in this area will coordinate with the CEC’s adoption of amendments to their Load Management Standards. This includes CEC updates to the time dependent rates in the CEC’s Market Informed Demand Automation Server (MIDAS) database and implementing a standardized statewide method to provide automation service providers with access to customers’ rate information.

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<sup>16</sup> PG&E Testimony, A.19-11-03 *et al.*, November 4, 2019.

<sup>17</sup> See Application (A.) 18-11-015 *et al.*

<sup>18</sup> See <https://www.californiadgstats.ca.gov/>.

### **3. Preliminary Scoping Memo**

This rulemaking will be conducted in accordance with Article 6 of the Commission's Rules of Practice and Procedure (Rules). As required by Rule 7.3, this order includes a preliminary scoping memo as set forth below.

The work of this proceeding will occur in more than one phase and will incorporate the ongoing work of R.14-10-003. Phase 1 will take place during 2023 and 2024 and will focus on two areas:

- Track 1: Cost-Effectiveness
- Track 2: Data Use and Access

Phase 2 will commence at the conclusion of one or both Phase 1 tracks. Phase 2 will consider enacting equipment performance standards and may address issues identified in the course of Phase 1 or areas of work not completed.

#### **3.1. Phase 1:**

##### **3.1.1. Track 1: Cost- Effectiveness**

The goal of Track 1 is to continue and expand efforts to achieve consistency of cost-effectiveness assessments across customer DER programs by carrying out the remaining tasks in the cost-effectiveness plan adopted in R.14-10-003 and building on research funded by D.16-06-007. Specifically, Track 1 will:

- **Continue Regular Updates to the ACC:** Considerable progress was made in R.14-10-003 to develop an ACC that uses data from and coordinates with modeling efforts such as integrated resource and distribution system planning. R.14-10-003 also determined a process, most recently in D.22-05-002, to perform regular updates to the ACC, and required that all DER programs use the same version of the ACC. Track 1 will continue performing biennial updates to the ACC, and will take on all ACC-related activities such as undertaking a study of transmission and distribution avoided costs and developing guiding principles for the

ACC. Because the ongoing ACC work is led by consultant to the Commission, this proceeding will consider the need to authorize additional funding for this work.

- **Determine Whether to Adopt a Societal Cost Test:**  
D.19-05-019 adopted, for testing purposes, a Societal Cost Test proposed by Staff. The testing process was performed in the IRP proceeding, which issued a *Societal Cost Test Impact Evaluation*.<sup>19</sup> Track 1 will determine, as required by D.19-05-019, whether to adopt the Societal Cost Test and, if adopted, how to best apply the results of the Societal Cost Test into the DER cost-effectiveness framework.
- **Determine How to Best Apply Air Quality Research Results:** As part of ongoing cost-effectiveness research, the research report *Quantifying the Air Quality Impacts of Decarbonization and Distributed Energy Programs in California*<sup>20</sup> was released in January 2022. This report estimates the value to Californians of improved air quality resulting from decreased use of fossil fuels in buildings, for electric power generation, and in vehicles. The primary purpose of this research was to provide values for use in testing the Societal Cost Test, but the results may also have implications for future DER evaluation and cost-effectiveness. Track 1 will examine this research and determine whether and if so how it should be incorporated into ongoing cost-effectiveness improvements.

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<sup>19</sup> Societal Cost Test Impact Evaluation; Commission Staff Report on the Impact of a Societal Cost Test on Resource Procurement (January 2022), available as of May 31, 2022 at [https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/integrated-resource-plan-and-long-term-procurement-plan-irp-ltpp/2019-2020-irp-events-and-materials/societal\\_cost\\_test\\_impact\\_evaluation.pdf](https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/integrated-resource-plan-and-long-term-procurement-plan-irp-ltpp/2019-2020-irp-events-and-materials/societal_cost_test_impact_evaluation.pdf).

<sup>20</sup> Energy+Environmental Economics; Advanced Power & Energy Program, University of California Irvine, *Quantifying the Air Quality Impacts of Decarbonization and Distributed Energy Programs in California: A sector-specific study of the potential air quality benefits of vehicle electrification, building electrification, energy efficiency, and other clean energy resources* (January 2022), available as of May 31, 2022 at <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/integrated-resource-plan-and-long-term-procurement-plan-irp-ltpp/2019-2020-irp-events-and-materials/quantifying-air-quality-impacts.pdf>

- **Continue to Improve the DER Cost-effectiveness Process:**

Track 1 will continue the efforts of R.14-10-003 to make the use and application of cost-effectiveness tests more accurate and consistent across DERs.

- **Improve Coordination with other Proceedings:** Track 1 will coordinate with Track 2 work and other proceedings to ensure that data on DER costs and implementation needed for IRP modeling are consistent across resources and take into account interactive effects.

Track 1 will include the release of two or more Staff proposals.

#### **3.1.1.1. Track 1 Questions**

Potential parties to this proceeding are requested to file comments on this order that respond to the following questions related to Track 1:

1. R.14-10-003 focused on making cost-effectiveness methods more consistent across DERs. To accomplish this, D.16-06-007 adopted a universal ACC which is updated annually and required for use by all DER proceedings. What other aspects of cost-effectiveness should also be made more consistent across DERs, and which of those are priorities?
2. Should the Commission develop cost-effectiveness methods for emerging and bundled technologies? Which technologies, or combinations of technologies, should we prioritize, and what are the most important considerations?
3. How important is it to fully incorporate DERs into the IRP process? What kinds of tools, data, models, or processes would we need? How can the resource proceedings best provide data to the IRP process, and how can they best use IRP output data?
4. Should the Commission authorize the allocation of additional ratepayer funds for consultant support to continue the ACC work?
5. Please comment on any additions or changes needed to the preliminary Track 2 schedule provided in section 4 below.

### **3.1.2. Track 2: Expanding Data Use and Access**

Track 2 will focus on improving the reporting, availability, privacy protections, and use of data, especially data from Smart Meters and other “smart” devices. It will also focus on collecting data on equity customers to improve customer program design, operation, and adoption.

To support work in this area we propose to create a Data Working Group consisting of Commission, CEC and CARB Staff, as well as utilities, and interested stakeholders. Activities that the Data Working Group could undertake include:

1. Recommending goals and objectives for expanded use of available data, building on or refining those outlined in this order.
2. Developing consensus and non-consensus recommendations regarding:
  - a. Customer privacy
  - b. Data sharing, access, and use
  - c. Databases and models
  - d. Data collection and reporting tools
3. Developing additional recommendations regarding:
  - a. Best data management practices for increased customer adoption
  - b. Data collection to support equity programs

To develop this work, Commission Staff may lead one or more workshops to develop a Work Plan for the Data Working Group. Potential priorities and questions that could be discussed at these workshops include:

- a. In coordination with CEC, should the Commission update existing rules and requirements, following from D.14-05-016, for the release of Smart Meter data, and best

practices for use of these data to improve customer adoption of DERs?

- b. Should the Commission consider whether smart devices, which are sometimes sold by companies that consider their data to be proprietary, should be subject to requirements for the release of data to receive incentives from ratepayer funds?
- c. Should the Commission coordinate with existing efforts to determine whether and how to use the real-time pricing portal under consideration in R.22-07-005 to support the integration of real-time price signals into a broader range and number of customer programs?
- d. Should the Commission investigate the potential for integrating Commission-supported databases and tools with larger statewide initiatives, such as creation of a data “dictionary” to standardize the terms and units used in energy-related databases?<sup>21</sup> and,
- e. Should the Commission develop standardized data collection and reporting across DER programs that prioritize the participation of ESJ communities?

#### **3.1.2.1. Track 2 Questions**

Potential parties to this rulemaking are requested to file comments on this order responding to the following questions:

- 1. Should the Commission create a Data Working Group consisting of Commission, CEC and CARB Staff, as well as utilities, and interested stakeholders? If so, what should be the scope and timeline for the working group?
- 2. Referring to the preliminary Track 2 schedule provided in section 4, do you suggest any changes? What workshops or other activities, if any, are needed to advance work in Track 2?

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<sup>21</sup> See, for instance, <https://data.ca.gov/>.

3. How can the Commission, utilities, DER providers, and customers better use Smart Meter data? How can Smart Meter data help individual ratepayers, developers, and contractors determine which DER programs are likely to provide the most benefits?
4. What barriers (legal, regulatory, technological capacity, etc.) exist for load-serving entities and DER providers that prevent the greater use of energy consumption data to increase customer awareness and adoption of DERs?
5. To what extent should data collected by program administrators, or available from smart devices (including Smart Meters) be available to researchers for analytical purposes, such as evaluation, measurement, and verification?
6. To what extent should data collected by program administrators, or available from smart devices (including Smart Meters) be available to utilities, non-utility DER providers, and other energy providers or program administrators, for marketing, education, or outreach purposes?
7. Should smart devices, such as thermostats, solar and/or storage inverters, energy storage devices, grid-connected heat pump hot water heaters, and electric vehicle chargers, that are supported by ratepayer-funded incentive programs, be required to provide data for research purposes?
8. How can existing data reporting and data collection processes be improved to make them more consistent across resources and more accessible by users?
9. What types of quantitative and qualitative data do we need to support equity customers' awareness of and participation in DER programs? Should the Commission collect data to measure the impact on and the benefits of DER programs for ESJ communities? Is the Commission currently collecting this data? If not, what additional mechanisms do we need to do so?



10. When the Commission contracts with third party consultants to provide analytic and program evaluation services, should the data collected by the contractors be always required to be shared with the Commission?

### **3.2. Phase 2**

Phase 2 will consider enacting equipment performance standards and requirements. Phase 2 will also address issues identified in the course of Phase 1 or areas of work not completed.

#### **3.2.1. Equipment Performance Standards**

Work in Phase 2 will consider whether equipment performance standards can support the development and deployment of technologies in ways that ensure that the technologies meet grid needs. Absent such guidelines, ratepayer funds could be used to provide incentives for, or otherwise support, devices with limited or inferior capabilities, unreasonable restrictions on data use, proprietary software, limited access to communications, or other attributes that could limit their usefulness. Work in this area will enhance, not replace, the work of specific DER proceedings and programs in this area.

Work during Phase 2 may consider a device performance standard for grid interaction. A device performance standard for grid interaction could help ensure that devices like thermostats and heat pump water heaters (HPWH) are capable of reducing demand during peak hours in response to dynamic prices or a dispatch signal from the grid operator. Work in Phase 2 may consider other device performance standards, for instance, one that sets a minimum target for the amount of peak hour load reduction recommended in return for access to a ratepayer-funded incentive. Work in Phase 2 in this area may consider the need for a Commission requirement that contracts executed between customers and equipment providers have specific data access requirements. Such a requirement

could help protect customer privacy and ensure that data are available for evaluation purposes.

Some questions that we may consider in Phase 2 include:

1. What kind of performance standards and requirements should the Commission consider for equipment that receives ratepayer funding?
2. Should the Commission require recipients of devices that are ratepayer-funded to make their data available for research purposes?
3. Should the Commission allow use of ratepayer funding to reduce the costs to customers of devices that require exclusive contracts between the participant and a third party?
4. What type of performance standards should the Commission consider, if any, for technologies such as inverters, heat pumps, or other devices, to enable participants to fully manage their load?

#### **4. Preliminary Schedule**

The preliminary schedule for this proceeding is below. A schedule for each Track of this proceeding will be set forth in the Scoping Memo.

<b>Event</b>	<b>Date</b>
Comments on the order	45 days from issuance
Pre-hearing Conference	Q1 2023
Scoping Memo	Approximately 45 days after pre-hearing conference

<b>Track 1: Cost-Effectiveness</b>	
Ruling requesting comments on Societal Cost Test and air quality research <sup>22</sup>	Concurrent with issuance of Scoping Memo
Workshops as needed	TBD
Proposed Decision on Societal Cost Test and air quality research.	Q4 2023
2024 ACC update process: <sup>23</sup>	
Issuance of Staff ACC Proposal	July 2023
Workshop	August 2023
Discovery completed	September 2023
Opening Testimony	October 2023
Reply Testimony	November 2023
Evidentiary Hearing (if needed)	January 2024
Opening briefs	February 2024
Reply briefs	March 2024
Release of data from IRP proceeding	60 days after adoption of a preferred system plan
Proposed decision issued	≤ 90 days (after submission of briefs)
Issuance of draft calculator	Six weeks prior to issuance of draft resolution
Workshop	Approximately two weeks later
Informal comments	Approximately two weeks later

<sup>22</sup> These documents were released previously in R.14-10-003. *See* footnotes 28 and 29 above.

<sup>23</sup> *See* D.22-05-002 for greater detail on biannual ACC schedules.

Issuance of draft resolution adopting updated ACC	Approximately two weeks later
<b>Track 2: Expanding Data Use and Access</b>	
Workshops to develop Data Working Group Work Plan	Q1 2023
Ruling establishing Data Working Group to produce recommendations in targeted areas	Q1 2023
Data Working Group recommendations issued via Ruling for Party Comment	Q4 2023
Workshops to discuss Data Working Group recommendations	TBD
Proposed Decision(s) addressing Data Working Group recommendations	Q1 2024

## 5. Category of Proceeding and Need for Hearing

The Commission's Rules require that an Order Instituting Rulemaking (OIR) preliminarily determine the category of the proceeding and the need for hearing.<sup>24</sup> As a preliminary matter, we determine that this proceeding is categorized as ratesetting, because Phase 1 of this proceeding will consider ACC values that may directly impact ratepayer costs and rates. Later phases of this

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<sup>24</sup> Rule 7.1(a).

proceeding may be appropriately considered as quasi-legislative as they would establish policy or rules affecting a class of regulated utilities, primarily the electric utilities. The assigned Commissioner will consider the need to recategorize this proceeding upon commencement of later phases.

We are also required to preliminarily determine if hearings are necessary. We preliminarily determine that hearings may be necessary on issues related to the ACC.

Any person who objects to the preliminary categorization of this Rulemaking or to the preliminary hearing determination shall state their objections in comments on the OIR. After considering the comments, the assigned commissioner will issue a scoping memo making a final category determination; this final category determination is subject to appeal as specified in Rule 7.6.

## **6. *Ex Parte* Communications**

This proceeding is preliminarily characterized as ratesetting. Accordingly, *ex parte* communications are restricted and must be reported pursuant to Article 8 of the Commission's Rules.

## **7. Respondents**

The electric utilities that offer DER programs are made respondents and, thereby, parties to this rulemaking (*See* Rule 1.4(d).) The following Commission-jurisdictional large electric utilities shall be the primary respondents to this proceeding: Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company. We include Southern California Gas Company as a respondent to this rulemaking as it implements a number of DER programs, including the ESA/CARE programs and SGIP.

Within 15 days of mailing of this Rulemaking, each respondent shall inform the Commission's Process Office of the contact information for a single representative.

## **8. Service List or Subscription Service**

This OIR will be served on respondents and on the service lists indicated below. Service of the OIR does not confer party status or place any person who has received such service on the official service list for this proceeding, other than respondents. Persons who file responsive comments become parties to the proceeding and will be added to the "Parties" category of the official service list upon such filing.<sup>25</sup>

This OIR will be served on the Official Service Lists for the following proceedings:

- Integrated Distributed Energy Resources (R.14-10-003)
- Transportation Electrification (R.18-12-006)
- Demand Response (Application [A.] 22-05-002 *et. al.*)
- Net Energy Metering (R.14-07-002 and R.20-08-020)
- Green Access Programs (A.22-05-022 *et. al.*)
- Self-Generation Incentive Program (R.20-05-012)
- Energy Savings Assistance Program Budget Application (A.19-11-003 *et. al.*)
- Energy Savings Assistance Program Budget Small and Multi-Jurisdictional Utilities' Application (A.20-03-014 *et. al.*)
- Affordability (R.18-07-006)
- San Joaquin Valley (R.15-03-010)
- Energy Efficiency (R.13-11-005)

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<sup>25</sup> Rule 1.4(a)(2).

- Energy Efficiency Business Plan Applications (A.22-02-005, *et. al.*)
- Building Decarbonization (R.19-01-011)
- Integrated Resource Planning (R.16-02-007)
- High DER Future (R.21-06-17)
- Demand Flexibility (R.22-07-005)
- Microgrids (R.19-09-009)
- Clean Energy Financing (R.20-08-022)
- Renewable Natural Gas (R.13-02-008)
- Long-term Gas Infrastructure (R.20-01-007)
- Demand Response Click-Through Mechanism Application (A.18-11-015 *et. al.*)
- Rulemaking to Examine Electric Utility De-Energization of Power Lines in Dangerous Conditions (R.18-12-005)

Additionally, this OIR shall be made available to the CEC and the CARB.

To assure service of comments and other documents and correspondence in advance of obtaining party status, persons should promptly request addition to the “Information Only” category as described below; they will be removed from that category upon obtaining party status. Any person will be added to the “Information Only” category of the official service list upon request, for electronic service of all documents in the proceeding, and should request to do so promptly in order to ensure timely service of comments and other documents and correspondence in the proceeding.<sup>26</sup> The request must be sent to the Process Office by e-mail ([process\\_office@cpuc.ca.gov](mailto:process_office@cpuc.ca.gov)) or letter (Process Office, California Public Utilities Commission, 505 Van Ness Avenue, San Francisco,

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<sup>26</sup> Rule 1.9(f).

California 94102). Please include the Docket Number of this rulemaking in the request.

With respect to subscription service, persons may monitor the proceeding by subscribing to receive electronic copies of documents in this proceeding that are published on the Commission's website. There is no need to be on the official service list in order to use the subscription service. Instructions for enrolling in the subscription service are available on the Commission's website at <http://subscribecpuc.cpuc.ca.gov/>.

Commission Rule 11.13(a) requires the filing of hard copies of documents. Due to ongoing COVID-19 restrictions, Commission Rule 11.13(a) is waived for this proceeding. All documents shall be filed electronically.

## **9. Public Advisor**

Any person or entity interested in participating in this rulemaking who is unfamiliar with the Commission's procedures should contact the Commission's Public Advisor in San Francisco at (415) 703-2074 or 1-(866) 849-8390 or e-mail [public.advisor@cpuc.ca.gov](mailto:public.advisor@cpuc.ca.gov). The TTY number is 1-(866) 836-7825.

## **10. Intervenor Compensation**

Intervenor Compensation is permitted in this proceeding. Any party that expects to claim intervenor compensation for its participation in this Rulemaking must file its notice of intent to claim intervenor compensation within 30 days of the filing of reply comments, except that notice may be filed within 30 days of a prehearing conference in the event that one is held. (*See* Rule 17.1(a)(2).)

Intervenor compensation rules are governed by Section 1801 et seq. of the Public Utilities Code. Parties new to participating in Commission proceedings may contact the Commission's Public Advisor.



## **O R D E R**

### **IT IS ORDERED** that:

1. This Order Instituting Rulemaking is adopted pursuant to Rule 6.1 of the Commission's Rules of Practice and Procedure and Public Utilities Code Sections 963(b)(3), 961(b)(1), 750, 321.1(a), and 451 with the goal of to achieving consistency of cost effectiveness assessments, improving data collection and use, and considering equipment performance standards for distributed energy resource customer programs.
2. The preliminary categorization is ratesetting.
3. The preliminary determination is that a hearing may be needed.
4. The preliminary scope of issues is as stated above in Section 3.
5. Comments on the Order Instituting Rulemaking as requested in Sections 3.1.1.1 and 3.1.2.1 are due 45 days from issuance of this Order Instituting Rulemaking. The schedule for the remainder of the proceeding will be adopted in the Assigned Commissioner's Scoping Memo.
6. Pacific Gas and Electric Company, Southern California Edison Company, San Diego Gas & Electric Company, and Southern California Gas Company are named as respondents to this Order Instituting Rulemaking.
7. Pacific Gas and Electric Company, Southern California Edison Company, San Diego Gas & Electric Company, and Southern California Gas Company shall, and any other person may, file comments responding to this Order Instituting Rulemaking no later than 45 days from its issuance.
8. The Executive Director will cause this Order Instituting Rulemaking to be served on all respondents, on the California Energy Commission and the California Air Resources Board, and on the service lists for the following Commission proceedings: Rulemaking (R.) 14-10-003, R.18-12-006,

Application (A.) 22-05-002 et. al., R.14-07-002, R.20-08-020, R.20-05-012, A.19-11-003 et. al., A.15-02-001 et. al., R.18-07-006, R.15-03-010, A.20-03-014 et. al., R.13-11-005, R.19-01-011, R.16-02-007, R.21-06-017, R.19-09-009, R.20-08-022, R.13-02-008, R.20-01-007, R.22-07-005, R.18-12-005, A.22-05-022 et. al., and A.18-11-015 et. al.

9. Any party that expects to claim intervenor compensation for its participation in this Rulemaking must file its notice of intent to claim intervenor compensation within 30 days of the prehearing conference (*See* Rule 17.1(a)(2).)

10. Commission Rule 11.13(a) is waived for this proceeding; all documents shall be filed electronically.

This order is effective today.

Dated November 17, 2022, at San Francisco, California.

ALICE REYNOLDS  
President  
CLIFFORD RECHTSCHAFFEN  
GENEVIEVE SHIROMA  
DARCIE L. HOUCK  
JOHN REYNOLDS  
Commissioners