

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

Order Instituting Rulemaking to Consider Streamlining Interconnection of Distributed Energy Resources and Improvements to Rule 21.

FILED  
PUBLIC UTILITIES COMMISSION  
JULY XX, 2017  
SAN FRANCISCO, CALIFORNIA  
RULEMAKING 17-XX-XXX

**ORDER INSTITUTING RULEMAKING TO CONSIDER STREAMLINING INTERCONNECTION OF DISTRIBUTED ENERGY RESOURCES AND IMPROVEMENTS TO RULE 21****Summary**

The Commission opens this rulemaking to consider a variety of refinements to the interconnection of distributed energy resources under Electric Tariff Rule 21 (Rule 21) of Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E), and the equivalent tariff rules of the small and multi-jurisdictional electric utilities.<sup>1</sup> In this proceeding, we will consider whether to revise Rule 21 to streamline interconnection of distributed energy resources by incorporating the results of the Integration Capacity Analysis (ICA) under development in Rulemaking (R.) 14-08-013.

This proceeding may also explore other refinements to Rule 21 to address issues related to interconnection of storage devices (particularly exporting storage), further development of standards and operational issues for smart

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<sup>1</sup> Because some of the small and multi-jurisdictional electric utilities may use different rule numbering systems, "Rule 21" as used in this order also refers to any equivalent or related tariff rules.

inverters, transmission cluster study thresholds, design changes to projects already under review, timelines for estimating and constructing grid upgrades, and cost allocation for grid upgrades. This rulemaking may also serve as the procedural forum for other topics related to distribution-level interconnection.

### **1. Summary of Electric Tariff Rule 21**

Rule 21 is a tariff that describes the interconnection, operating and metering requirements for certain generating and storage facilities seeking to connect to the electric distribution<sup>2</sup> system. The tariff provides customers wishing to install generating or storage facilities on their premises with access to the electric grid while protecting the safety and reliability of the distribution and transmission systems at the local and system levels.

Rule 21 governs CPUC-jurisdictional interconnections, which include the interconnection of all net energy metering (NEM) facilities, "Non-Export"<sup>3</sup> facilities, and qualifying facilities intending to sell power at avoided cost to the host utility. Rule 21 does not apply to the interconnection of generating or storage facilities intending to participate in wholesale markets overseen by the Federal Energy Regulatory Commission (FERC). These facilities must typically apply for interconnection under the FERC-jurisdictional "Wholesale Distribution Access Tariff" (when connecting to the distribution system) or "CAISO Tariff" (when connecting to the transmission system).

Each investor owned utility is responsible for administration of Rule 21 in its service territory. Rule 21 contains provisions governing many aspects of

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<sup>2</sup> In rare cases, Rule 21 may also govern interconnection of generating and storage facilities to the transmission system (*see* Rule 21, Section B.1.)

<sup>3</sup> Rule 21 defines "Non-Export Generation Facilities" as those "that do not export to the grid or sell any exports sent to the grid" (Rule 21, Section B.1.)

interconnection, including the procedures and timeframes for reviewing applications, fee schedules to process applications and perform impact studies, *pro forma* application and agreement forms, allocation of interconnection costs, exemptions and provisions specific to NEM facilities, technical operating parameters, certification and testing criteria, technical requirements for inverters, metering and monitoring requirements, and procedures for dispute resolution.

## **2. Procedural Background**

The Commission's first iteration of Rule 21 was adopted in 1982. As initially adopted, Rule 21 was designed to meet the needs of small, non-utility-owned generating facilities, namely qualifying facilities, which included renewable, non-renewable, and cogeneration plants as defined by the Public Utility Regulatory Policies Act.

The Commission revisited Rule 21 in 1999. Working collaboratively with the California Energy Commission, the Commission undertook a redesign of Rule 21 to establish a more standardized and transparent engineering analysis for the interconnection of distributed generation, especially generation that offsets on-site load. Rule 21 adopted an "Initial Review" screening process designed to permit the utility engineer to quickly identify, among other factors, whether a generating facility is configured to remain within certain technical limits, and thus unlikely to cause electrical disruptions on the grid.

The modified Rule 21 successfully facilitated the interconnection of tens of thousands of net energy metered and non-exporting generation facilities between 1999 and 2011. However, generators seeking to export a portion or all of their generation to the utility's distribution system lacked a straightforward means of interconnecting under Rule 21. Gaps in the tariff also existed for the interconnection of new technologies, such as energy storage.

On September 22, 2011, the Commission opened Rulemaking 11-09-011 to “address the key policy and technical issues essential to timely, non-discriminatory, cost-effective and transparent interconnection.”<sup>4</sup> During the course of that proceeding, the Commission adopted three substantive decisions: Decision (D.) 12-09-018, D.14-12-035 and D.16-06-052.

On September 20, 2012, the Commission issued D.12-09-018, which adopted a settlement agreement focused on the interconnection study process. The settlement agreement required that each utility revise its Rule 21 to assign all interconnection requests to either the “Fast Track” – a screen-based, streamlined review process for net energy metering, non-export, and small exporting facilities – or the “Detailed Study” process for more complicated generating facilities.

On December 18, 2014, the Commission issued D.14-12-035, which adopted revisions to Rule 21 to require “smart” inverters for PG&E, SCE, and SDG&E. D.14-12-035 adopted the revisions recommended by the Smart Inverter Working Group (SIWG) in its January 2014 report “Recommendations for Updating the Technical Requirements for Inverters in Distributed Energy Resources.”

On June 23, 2016, the Commission issued D.16-06-052, which enhanced the Rule 21 Pre-Application Report, created a Unit Cost Guide, enhanced the behind-the-meter electric storage interconnection process, and established a pilot program to institute a cost certainty envelope for interconnections triggering a distribution upgrade.

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<sup>4</sup> Order Instituting Rulemaking 11-09-011 at 5.

Despite the significant progress made in R.11-09-011, additional improvements to Rule 21 are needed. Among the principal topics to be considered in this rulemaking is the incorporation into Rule 21 of the utilities' Integration Capacity Analysis (ICA) tools, currently under development in the Distribution Resources Plan (DRP) proceeding (R.14-08-013). The ICA tools use power flow analysis to determine the ability of a circuit to host distributed energy resources. Incorporating the ICA tools into Rule 21 may better inform interconnection siting decisions and further streamline the Fast Track process for certain projects.

### **3. Distributed Energy Resources Action Plan**

On November 10, 2016, the Commission endorsed a "Distributed Energy Resources Action Plan"<sup>5</sup> (DER Action Plan) that articulates a long-term vision for Distributed Energy Resources (DERs) and supporting policies, identifies the action steps needed to meet that vision, and establishes a coordinating framework. The DER Action Plan serves as a guide for decision-makers, staff, and stakeholders to facilitate proactive and forward-thinking DER policy.

To accomplish this purpose, the DER Action Plan sets forth three tracks:

- **Track 1:** Rates and Tariffs;
- **Track 2:** Distribution Grid Infrastructure, Planning, Interconnection and Procurement; and
- **Track 3:** Wholesale DER Market Integration and Interconnection.

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<sup>5</sup> The DER Action Plan can be found on the CPUC website at <http://www.cpuc.ca.gov/picker>.

The DER Action Plan includes vision and action elements in each track. Several vision and action elements in Track 2 (Distribution Grid Infrastructure, Planning, Interconnection and Procurement) pertain directly to interconnection:

- **Vision 2.E.** Interconnection is facilitated by improving DER hosting capacity estimates to minimize the need for interconnection studies, and by ensuring greater cost certainty, streamlining utility application practices, and expediting resolution of disputes.
- **Action 2.3.** Efforts to streamline interconnection of generation and storage facilities, including:
  - 2.3.a. Implementing the cost envelope pilot and other D.16-06-052 directives;
  - 2.3.b. Conducting a formal review of utility administration of Rule 21 to identify areas for process improvement; and
  - 2.3.c. Establishing a binding, 60-day dispute resolution process per Assembly Bill 2861.
- **Action 2.11.** By 2018, the Commission will consider the use of Integration Capacity Analysis to streamline utility interconnection processes to accelerate DER deployment.
- **Action 2.13.** By 2020, fully operationalize advanced (beyond Phase 1) smart inverter functionalities to enhance the integration of DERs into the grid.

Track 3 of the DER Action Plan addresses the wholesale market integration and interconnection of DERs. The following vision and action elements pertain directly to interconnection:

- **Vision 3.C.** Wholesale market rules and interconnection tariffs support behind-the-meter DERs.
- **Vision 3.E.** Non-discriminatory market rules and regulations for mobile electric transportation resources (addressing registration, interconnection, and physical connectivity) are established to support customer mobility.

- **Action 3.6.** By 2018, assess regulatory options to streamline Commission jurisdictional interconnection rules (Rule 21) and FERC interconnection rules such as Wholesale Distribution Access Tariff for behind-the-meter DERs.

The preliminary scope of this rulemaking, outlined in the following section, is intended to be responsive to the interconnection-related vision and action elements identified in the DER Action Plan. In order to help the Commission to align its vision and actions to shape California's distributed energy resources future, the record in this proceeding should include input from parties regarding how the scope of this proceeding addresses the vision and action elements identified in the DER Action Plan, with particular attention to Vision Elements 2.E, 3.C and 3.E, and Action Elements<sup>6</sup> 2.11, 2.13 and 3.6.

#### **4. Preliminary Scoping Memo**

This rulemaking will be conducted in accordance with Article 6 of the Commission's Rules of Practice and Procedure, "Rulemaking."<sup>7</sup> As required by Rule 7.1(d), this order instituting rulemaking includes a preliminary scoping memo as set forth below, and preliminarily determines the category of this proceeding and the need for hearing.

##### **4.1 Scope**

This rulemaking proceeding is broadly scoped to consider revisions to Rule 21 and related and equivalent tariff rules in order to streamline

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<sup>6</sup> Efforts to complete Action Element 2.3 (streamlining interconnection through implementation of D.16-06-052 directives, performance of a formal review of utility administration of Rule 21, and establishment of an expedited dispute resolution process) are already underway outside the forum of this rulemaking and thus are not scoped here.

<sup>7</sup> All references to "Rules" are to the Commission's Rules of Practice and Procedure, which are available on the Commission's website.

interconnection and to implement other improvements to Rule 21 and related and equivalent tariff rules.

## 4.2 Initial Scoping Issues

This proceeding will address some or all of the issues listed below, and other issues related to Rule 21. Due to the number of issues listed below, they are grouped into four tracks.

### *Track 1*

- 1) Modification of Fast Track Screen Q<sup>8</sup> to minimize the number of DER projects subjected to transmission cluster studies;
- 2) Clarification of the definition of “complex metering solutions” for storage facilities;<sup>9</sup>
- 3) Clarification of what constitutes a “material modification” to a project and procedures for processing modifications;<sup>10</sup>
- 4) Requiring replacement of old inverters with “smart” inverters at end of life;

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<sup>8</sup> Screen Q in Rule 21 evaluates whether an interconnection request requires upgrades to the transmission system. If upgrades are found to be necessary, the interconnection request may be studied under the CAISO’s Transmission Cluster Study Process (Rule 21, Sections G.3.a and F.3.d.)

<sup>9</sup> The NEM tariff places a \$600 cap on the cost of an additional meter that is installed to comply with the tariff, but contains a provision that utilities can charge more for “complex metering solutions.” There is some disagreement over utility/customer interpretation of the definition of complex metering solutions, and a more detailed definition is needed.

<sup>10</sup> Rule 21 directs utilities to perform an engineering analysis a second time if there is a “material modification” to an interconnection request. This can put a request back to the beginning of the interconnection application process, often with a new utility representative leading the review. There is some disagreement over interpretation of the definition of “material modification,” and further clarification of the types of design changes allowed to pending applications is needed.



- 5) Activation via upgrade of Phase 1 capabilities in existing inverters with advanced functionality;
- 6) Rules and procedures for adjusting advanced inverter functions via communication controls;
- 7) Technical underpinnings of associated tariff and compensation issues for advanced inverters. This issue may need to be coordinated or jointly scoped with the Integrated Distributed Energy Resource and/or Net Energy Metering successor proceeding;

### *Track 2*

- 8) Incorporation of ICA results into Rule 21 to inform interconnection siting decisions and further streamline the Fast Track process for projects that are proposed below the integration capacity at a particular point on the system;<sup>11</sup>
- 9) Development of curtailment provisions in interconnection applications to allow DER projects to perform within existing hosting capacity constraints and avoid triggering upgrades;

### *Track 3*

- 10) Implementation of decisions made in R.15-03-011 on measurement and metering of storage facilities to enable multi-use applications and track station power consumption;
- 11) Improved efficiency of the interconnection process through coordination between the ICA and each Utility's Rule 21

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<sup>11</sup> The Assigned Commissioner's Ruling on Guidance for Public Utilities Code Section 769 – Distribution Resource Planning (R.14-08-013), issued February 6, 2015, calls for the “dramatic” streamlining and simplifying of distribution interconnection as one of the key purposes of the DRP.

interconnection, Rule 15 main extensions and Rule 16 service connection study processes;<sup>12</sup>

- 12) Improved certainty around timelines for distribution upgrade planning, cost estimation, and construction;
- 13) Development of a process for distribution upgrade cost sharing among developers, and cost allocation issues that arise in connection with new upgrade practices in Distribution Resource Planning;
- 14) Assessment of regulatory options to coordinate CPUC-jurisdictional and FERC-jurisdictional interconnection rules for behind-the-meter DERs, including clarification of the rules for projects that wish to transfer between the Rule 21 and WDAT queues and streamlining the transfer process;
- 15) Telemetry requirements<sup>13</sup>, including whether to allow for certain lower-cost telemetry solutions for projects greater than 1 megawatt, whether to require telemetry for projects below 1 megawatt in light of higher DER penetrations, and how to define the capacity of multiple-DER facilities<sup>14</sup> for purposes of assessing whether a project exceeds the telemetry threshold;

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<sup>12</sup> The *Assigned Commissioner's Ruling on Guidance for Public Utilities Code Section 769 – Distribution Resource Planning* (R.14-08-013), issued February 6, 2015, states one of the goals of the ICA is to “improve the efficiency of the grid interconnection process through coordination between [the ICA] and each Utility’s Rule 21 interconnection, Rule 15 main extensions and Rule 16 service connection study processes.” (Attachment: Guidance for Section 769 – Distribution Resource Planning, page 3)

<sup>13</sup> Under Rule 21, utilities have the discretion to require telemetry at the expense of the project developer in circumstances where the planned generating facility is 1 megawatt or greater (Rule 21, Section J.5.)

<sup>14</sup> E.g. Solar systems paired with storage.

- 16) Itemized billing requirements for distribution upgrades to enable customer comparison between estimated and billed costs and verification of the accuracy of billed costs;
- 17) Standardization of anti-islanding screen parameters when using smart inverters to avoid unnecessary mitigations;<sup>15</sup>
- 18) Interconnection and distribution upgrade issues associated with State Zero Net Energy (ZNE) build codes and policies;<sup>16</sup>
- 19) Issues related to the interconnection of electric vehicles;<sup>17</sup>
- 20) Other revisions to Rule 21 as necessary; and
- 21) Consideration of other issues and related rules necessary to streamline interconnection of DERs,

#### *Track 4*

- 22) Revisions to Rule 21 and equivalent tariffs administered by small and multi-jurisdictional utilities<sup>18</sup> to maintain

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<sup>15</sup> Several screens in Section G of Rule 21 assess the potential for extended run-ons during grid outages (a.k.a. “islands.”) Projects that fail anti-islanding screens often face longer interconnection timelines to allow for IOU design and implementation of grid protection devices (e.g. direct transfer trip, SCADA visibility reclosers.) Recent research on islanding risks when using UL 1741-certified inverters may provide a basis for relaxing anti-islanding screen parameters to avoid unnecessary mitigations.

<sup>16</sup> California is currently considering ZNE policies that would require DER deployment in some or all new buildings. Given the potential scale of deployment and corresponding volume of interconnections, it may be appropriate to develop certain standard configurations of ZNE-hosted DER that will be eligible for expedited Rule 21 review.

<sup>17</sup> The *Assigned Commissioner’s Ruling on Guidance for Public Utilities Code Section 769 – Distribution Resource Planning* (R.14-08-013), issued February 6, 2015, directs utility DRPs to specify recommendations for utilizing the ICA to “support planning and streamlining of Rule 21 for distributed generation and Rule 15 and Rule 16 assessments of EV load grid impacts, with a particular focus on developing new or improved ‘Fast Track’ standards.” (Attachment: Guidance for Section 769 – Distribution Resource Planning at 4)

<sup>18</sup> California’s small and multi-jurisdictional utilities include Bear Valley Electric Services, PacifiCorp, and Liberty Utilities.

consistent statewide standards for distribution-level interconnection.

The assigned Commissioner or Administrative Law Judge (ALJ) (with the assigned Commissioner's concurrence) may modify these groupings of issues, and may add, subtract or move issues.

#### **4.3 Proceeding Category and Need for Hearings**

Pursuant to Rule 7.1(d), we preliminarily determine that (1) the category for this rulemaking proceeding is quasi-legislative as that term is defined in Rule 1.3(d), and (2) there is no need for evidentiary hearings in this proceeding. As permitted by Rule 6.2, parties may address these preliminary determinations in their written comments that are to be filed and served in accordance with the preliminary schedule for this proceeding. The assigned Commissioner will make a final determination regarding the category of this proceeding and the need for hearings in a scoping memo issued pursuant to Rules 7.1(d) and 7.3(a).

#### **4.4 Preliminary Schedule**

For purposes of meeting the preliminary scoping memo requirements and to expedite the proceeding, the following preliminary schedule is established. The assigned Commissioner and/or assigned ALJ will set the schedule for the proceeding beyond the pre-hearing conference.

<b>Event</b>	<b>Date</b>
OIR issued	July 13, 2017
Comments on preliminary scope, grouping of issues by tracks, schedule, categorization, and need for hearings	August 2, 2017
Reply comments on preliminary scope, grouping of issues by tracks, schedule, categorization, and need for hearings	August 14, 2017
Pre-Hearing Conference	September 2017

#### **4.5 Modification Process**

Any person filing comments on this Order Instituting Rulemaking shall state any objections to the preliminary scoping memo regarding the category, need for hearing, issues to be considered or schedule. (Rule 6.2.)

The assigned Commissioner and the assigned ALJ (with the assigned Commissioner's concurrence), may modify the schedule as necessary during the course of the proceeding to promote the efficient and fair resolution of the rulemaking. We anticipate this proceeding will be resolved within 18 months from the issuance of this OIR.

#### **5. Service of this Order Instituting Rulemaking**

The Commission's Executive Director shall cause copies of this order to be served on named respondents to this Order Instituting Rulemaking and the service lists for R.11-09-011, R.14-08-013, R.14-10-003, R.15-02-020, R.12-11-005, R.14-07-002, R.15-03-01, R.13-11-007, and A.17-01-020.

#### **6. Parties, Service List, and Subscription Service**

PG&E, SCE, SDG&E, Bear Valley Electric Services, PacifiCorp, and Liberty Utilities are named as respondents to this rulemaking.

Addition to the official service list is governed by Rule 1.9(f). 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 do so promptly in order to ensure timely service of comments and other documents and correspondence in the proceeding. (See Rule 1.9(f).) 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, California 94102). Please include the Docket Number of this Rulemaking in the request.

Persons who file responsive comments pursuant to the preliminary schedule of this proceeding become parties to the proceeding (*see* Rule 1.4(a)(2)) and will be added to the “Parties” category of the official service list. In order to receive service of comments and other documents and correspondence in advance of obtaining party status, persons may promptly request addition to the “Information Only” category as described above. Requests for party status made independent of the comment process shall be governed by Rule 1.4.

The Commission’s practice is to list only one representative per party in the “Party” category of the official service list. Other representatives for the same party may be placed on the service list in the “State Service” category or the “Information Only” category. The Commission’s Process Office will publish the official service list on the Commission’s website ([www.cpuc.ca.gov](http://www.cpuc.ca.gov)) and will update the list as necessary. Prior to serving any document, each party must ensure that it is using the most up-to-date service list. The list on the Commission's website meets this definition.

## **7. Subscription Service**

Persons may monitor this 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 service list in order to use the subscription service. Instructions for enrolling in the subscription service are available at <http://subscribecpuc.cpuc.ca.gov>.

## **8. Filing and Serving Documents**

This proceeding will utilize the electronic service protocols adopted by the Commission in Rule 1.10 for all documents, whether formally filed or only served. This Rule provides for electronic service of documents, in a searchable format, unless the appearance or state service list member did not provide an

e-mail address. If no e-mail address was provided, service should be made by United States mail. In this proceeding, concurrent e-mail service to all persons on the service list for whom an e-mail address is available will be required, including those listed under “Information Only.” Parties are expected to provide paper copies of served documents upon request. E-mail communication about this OIR proceeding should include, at a minimum, the following information on the subject line of the e-mail: **R.17-XX-XXX** – Rule 21 Rulemaking. In addition, the party sending the e-mail should briefly describe the attached communication; for example, “Comments.” As required by Rule 1.10(e) paper format copies, in addition to electronic copies, shall be served on the assigned ALJ.

Rules 1.9 and 1.10 govern service of documents only and do not change the Rules regarding the tendering of documents for filing. Information about electronic filing of documents is available at [www.cpuc.ca.gov/PUC/efiling](http://www.cpuc.ca.gov/PUC/efiling). All documents formally filed with the Commission’s Docket Office must include the caption approved by the Docket Office.

#### **9. Public Advisor**

Any person interested in participating in this proceeding who is unfamiliar with the Commission’s procedures may obtain more information by visiting the Commission’s website at <http://consumers.cpuc.ca.gov/pao>, by calling the Commission’s Public Advisor at 866-849-8390 or 415-703-2074 or 866-836-7825 (TTY), or by e-mailing the Public Advisor at [public.advisor@cpuc.ca.gov](mailto:public.advisor@cpuc.ca.gov).

#### **10. Intervenor Compensation**

In accordance with Pub. Util. Code § 1804(a)(1) and Rule 17.1, a customer who intends to seek an award of compensation must file and serve a notice of intent to claim compensation no later than 30 days after the date of the

prehearing conference or as otherwise directed by the assigned Commissioner or ALJ.

#### **11. *Ex Parte* Communications**

This proceeding is preliminarily categorized as quasi-legislative. In a quasi-legislative proceeding, *ex parte* communications with the assigned Commissioner, other Commissioners, their advisors, and the ALJ are permitted without restriction or reporting as described in Pub. Util. Code § 1701.4(b) and Article 8 of the Commission's Rules.

Any workshops in this proceeding shall be open to the public and noticed in the Commission's Daily Calendar.

### **O R D E R**

Therefore, **IT IS ORDERED** that:

1. The Commission institutes this Rulemaking on its own motion to revise or otherwise modify Electric Tariff Rule 21 and any related and equivalent tariff rules.
2. All California investor owned electric utilities, including Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company, and the small and multi-jurisdictional electric utilities Bear Valley Electric Services, PacifiCorp, and Liberty Utilities, are named as respondents to this Rulemaking.
3. The preliminary category for this rulemaking proceeding is quasi-legislative as that term is defined in Rule 1.3(d) of the Commission's Rules of Practice and Procedure.
4. It is determined on a preliminary basis that there is no need for evidentiary hearings in this rulemaking proceeding.



5. Any persons objecting to the preliminary categorization or to the preliminary determination on the need for hearings, issues to be considered, or schedule shall state their objections in their opening comments on this Order Instituting Rulemaking. Opening comments are due August 2, 2017, and reply comments are due August 14, 2017.

6. The preliminary schedule for this rulemaking proceeding is set forth in Section 4.4 of this Order. The assigned Commissioner and the assigned Administrative Law Judge (with the assigned Commissioner's concurrence), may modify the schedule as necessary during the course of the proceeding to promote the efficient and fair resolution of the rulemaking.

7. The deadline in this Rulemaking proceeding to file and serve notices of intent to claim intervenor compensation is 30 days after the date of the prehearing conference.

8. The Commission's Executive Director shall cause notice of this Rulemaking (R) to the following service lists: R.11-09-011, R.14-08-013, R.14-10-003, R.15-02-020, R.12-11-005, R.14-07-002, R.15-03-01, R.13-11-007, and A.17-01-020.

9. Parties serving documents in this proceeding must comply with Rule 1.10 of the Commission's Rules of Practice and Procedure regarding electronic mail (e-mail) service. Parties providing e-mail service must also provide a paper copy to the assigned Commissioner and Administrative Law Judge.

This order is effective today.

Dated \_\_\_\_\_, 2017, at San Francisco, California.