

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

**ENERGY DIVISION**

**RESOLUTION E-5035**

**March 4, 2021**

**R E S O L U T I O N**

Resolution E-5035. Adopts modifications to Electric Rule 21, Generating Facility Interconnections, Pursuant to Decision 19-03-013.

**PROPOSED OUTCOME:**

- Approves, with modifications, Southern California Edison Company (SCE) Advice Letters (ALs) 4009-E and E-A, San Diego Gas & Electric Company (SDG&E) ALs 3381-E and E-A, and Pacific Gas and Electric Company (PG&E) AL 5553-E to incorporate Decision (D.) 19-03-013 in Electric Rule 21, Generating Facility Interconnections.
- Approves, with modifications, the interim standard form template for Type II modifications to existing generating facilities, as proposed by SDG&E AL 3401-E, SCE AL 4033-E and PG&E AL 5583-E.

**SAFETY CONSIDERATIONS:**

- There are no safety considerations associated with this resolution.

**ESTIMATED COST:**

- There are no costs associated with this resolution.

By Advice Letters (ALs) SCE 4009-E, SDG&E 3381-E, and PG&E 5553-E, Filed on June 4, 2019; SCE AL 4009-E-A, Filed August 1, 2019; SDG&E AL 3381-E-A, Filed August 6, 2019; and Advice Letters SCE 4033-E, SDG&E 3401-E, and PG&E 5583-E, Filed on July 5, 2019.

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## **SUMMARY**

Pacific Gas and Electric (PG&E), Southern California Edison (SCE), and San Diego Gas & Electric (SDG&E) request approval of modifications to Electric Rule 21 Tariff (Rule 21) that incorporate the orders of Decision (D.)19-03-013. These modifications (1) update and streamline the application of Screen Q, which assesses the need for projects to undergo transmission cluster studies; (2) allow for specific types of modifications to interconnection applications under Fast Track;<sup>1</sup> (3) adopt specific process options for identified categories of modifications to existing generating facilities; (4) allow customer ownership of some behind-the-meter telemetry equipment; and (5) allow customers to replace existing inverters with inverters of equal or greater ability and require that any replacement inverter with greater abilities than the original shall be set with all the most current required functionalities, unless the interconnection applicant can demonstrate that safety or operational needs necessitate otherwise. Subject to the modifications herein, this Resolution finds the proposed tariff revisions of the Utilities to be compliant with D.19-03-013.

This Resolution delays the effective date of the modifications and orders (1) PG&E, SCE, and SDG&E (jointly, the Utilities) to standardize the Electric Rule 21 language describing the allowed types of modifications to interconnection applications under Fast Track; (2) PG&E to amend Rule 21 to clarify that utilities have the discretion to allow more than one material modification to a Fast Track interconnection application, even when utility action has not necessitated the modification, and to correct the error in the footnotes in Table Ee.3; (3) the Utilities to update Rule 21 to reflect the appropriate process options for Use Case 3 material modifications; and (4) PG&E and SCE to align their Rule 21 Section G.3.a language expanding the Screen Q exemption with that proposed by SDG&E.

The Utilities also request approval of the interim standard form template for Type II modifications to existing generating facilities, as ordered by D.19-03-013.

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<sup>1</sup> The Fast Track interconnection process is a streamlined review process, eligibility for which is determined based on multiple evaluation screens, that is intended for generating facilities that will not require distribution system upgrades in order to interconnect.

PG&E 5553-E and 5583-E; SCE 4009-E, 4009-E-A, and 4033-E; and SDG&E 3381-E, 3381-E-A, and 3401-E/SME

Subject to the modifications herein, this Resolution approves this template. This Resolution modifies the proposed template by ordering the Utilities to (1) update the document to reflect the appropriate process options for Use Case 3 material modifications and (2) update Section 4.1 to reflect that verified equipment may be listed on one of multiple equipment lists.

## **BACKGROUND**

### **A. Rulemaking 17-07-007 and Decision 19-03-013**

The CPUC adopted the Order Instituting Rulemaking (R.) 17-07-007 on July 13, 2017 to consider a variety of refinements to the interconnection of distributed energy resources under Electric Tariff Rule 21 of Pacific Gas and Electric Company (PG&E), San Diego Gas & Electric Company (SDG&E), and Southern California Edison Company (SCE) (jointly, the Utilities) and the equivalent tariff rules of the small and multi-jurisdictional electric utilities.<sup>2</sup>

The October 2, 2017 *Scoping Memo of Assigned Commissioner and Administrative Law Judge* (Scoping Memo) set forth the scope and schedule of the proceeding. The Scoping Memo also established a working group process in the proceeding whereby the scoped issues would be resolved. The first set of issues was assigned to Working Group One and the Smart Inverter Working Group<sup>3</sup>:

1. Screen Q modifications
2. Complex Metering clarification
3. Material modifications
4. Telemetry modifications
5. Retroactive Smart Inverter Activations

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

<sup>3</sup> The Smart Inverter Working Group grew out of a collaboration between the CPUC and the California Energy Commission in early 2013. The collaboration identified the development of advanced inverter functionality as an important strategy to mitigate the impact of high penetrations of distributed energy resources.

PG&E 5553-E and 5583-E; SCE 4009-E, 4009-E-A, and 4033-E; and SDG&E 3381-E, 3381-E-A, and 3401-E/SME

6. Smart Inverter Aggregator Forms and Agreements<sup>4</sup>
7. Income Tax Component of Contribution (ITCC) treatment.

Working Group One and the Smart Inverter Working Group began meeting on October 16, 2017. Working Group One, with input on Issue 5 from the Smart Inverter Working Group, filed a *Working Group One Final Report* on March 15, 2018 (March Report).

As part of Issue 3, Material Modifications, Working Group One considered both material modifications to interconnection applications and modifications to existing generating facilities. The March Report defines seven use cases for modifications to existing facilities:

1. Replacing equipment with exact same equipment type or performing upgrades to inverter firmware that do not affect grid interactions;
2. Replacing equipment "like-for-like," where system output does not exceed what is listed in the original interconnection agreement and operating mode is not adjusted;
3. Replacing equipment that may increase the nameplate capacity of the system, but which employ inverter power controls that limit the real power output to the inverter listed size in the original agreement;
4. Adding storage capacity to an existing storage facility without changing inverter;
5. Adding or replacing equipment such that system capacity increases and no inverter power controls are employed to limit the real power output to the inverter listed size in the original agreement;
6. Adding storage to an existing generating facility that does not have storage;
7. Changing inverter operating characteristics.

Additionally, the March Report defines four process options which may be required for material modifications to existing facilities:

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<sup>4</sup> In response to a January 25, 2018 motion filed by the California Solar Energy Industries Association, the Administrative Law Judge issued a ruling on February 14, 2018 that reassigned Issue 6 from the Smart Inverter Working Group to Working Group Two.

1. No notification is required;
2. Notification is required but the customer can proceed without waiting for utility approval;
3. Abridged/streamlined interconnection request is required and customer must wait for utility approval to turn on the system (engineering review not required); and
4. Interconnection request is required, and the customer must wait for utility approval to turn on the system (engineering review required).

The March Report underscores that Process Options 2 and 3 are not currently available; the utility interconnection portals would likely need to be modified to support these two options.

On April 5, 2019, the CPUC issued Decision (D.)19-03-013, *Decision Adopting Proposals from March 15, 2018 Working Group One Report*. D.19-03-013 addressed Issue 3, as well as the five other scoped issues. For each of the modification use cases presented in the March Report, D.19-03-013 adopted the process option deemed most appropriate.

Adopted Process Option, by Use Case, for Modifications to Existing Facilities		
Use Case	Description	Adopted Process Option
1	Replacing equipment with exact same equipment type or performing upgrades to inverter firmware that do not affect grid interactions	1
2	Replacing equipment "like-for-like," where system output does not exceed what is listed in the original interconnection agreement and operating mode is not adjusted	2
3	Replacing equipment that may increase the nameplate capacity of the system, but which employ inverter power controls that limit the real power	2 or 4, depending on system size

	output to the inverter listed size in the original agreement	
4	Adding storage capacity to an existing storage facility without changing inverter	2 or 4, depending on the outcomes of R.17-07-007 Working Group Two
5	Adding or replacing equipment such that system capacity increases and no inverter power controls are employed to limit the real power output to the inverter listed size in the original agreement	4
6	Adding storage to an existing generating facility that does not have storage	4
7	Changing inverter operating characteristics	4

D.19-03-013 Ordering Paragraph (OP) 14 requires the Utilities to submit Tier 2 ALs by June 4, 2019, modifying Rule 21 to be consistent with D.19-03-013’s requirements. The specific requirements are discussed in the subsequent section, which summarizes the resultant ALs and protests.

In addition, acknowledging that no implementation of Process Option 2 currently exists, D.19-03-013 OP 8 orders the Utilities to (1) develop a standard form template for customers to provide notification of material modifications to existing generating facilities and (2) propose this template via Tier 2 AL by July 4, 2019. D.19-03-013 designates this standard form template as the interim method by which utilities shall accept notification of material modifications that qualify for a notification-only process.

**B. Advice Letters 4009-E, 3381-E, and 5553-E**

Pursuant to D.19-03-013 OP 14, SCE filed AL 4009-E, SDG&E filed AL 3381-E, and PG&E filed AL 5553-E on June 4, 2019.

ALs 4009-E, 3381-E, and 5553-E propose modifications to Rule 21 in compliance with D.19-03-013. Specifically, the ALs propose to do the following:

PG&E 5553-E and 5583-E; SCE 4009-E, 4009-E-A, and 4033-E; and SDG&E 3381-E, 3381-E-A, and 3401-E/SME

- Expand the existing Screen Q exemption to all net energy metering (NEM) and inverter-based projects with 1 megavolt ampere (MVA) or below nameplate capacity;
- Modify Rule 21 to allow for specific types of modifications to interconnection applications under Fast Track;
- Adopt specific process options for identified categories of modifications to existing generating facilities;
- Allow customer ownership of some behind-the-meter telemetry equipment;
- Allow customers to replace existing inverters with inverters of equal or greater ability and require that any replacement inverter with greater abilities than the original shall be set with all the most current required functionalities, unless the interconnection applicant can demonstrate that safety or operational needs necessitate otherwise.

On August 1, 2019, SCE filed AL 4009-E-A, which supplements AL 4009-E. AL 4009-E-A clarifies the proposed language expanding the existing Screen Q exemption to all net energy metering (NEM) and inverter-based projects with 1 megavolt ampere (MVA) or below nameplate capacity and restores the option of certain non-material modifications to Interconnection Facilities under the Cost Envelope Option provisions.

On August 6, 2019, SDG&E filed AL 3381-E-A, which supplements AL 3381-E. AL 3381-E-A clarifies the proposed language expanding the existing Screen Q exemption to all net energy metering (NEM) and inverter-based projects with 1 megavolt ampere (MVA) or below nameplate capacity and removes a note, proposed by AL 3381-E, stating that modifications to Fast Track interconnection applications not specifically listed in section Rule 21 Table F.1 are not allowed.

PG&E did not file a supplement to AL 5553-E.

### **C. Advice Letters 5583-E, 4033-E, and 3401-E**

Pursuant to D.19-03-013 OP 8, the utilities filed PG&E AL 5583-E, SCE AL 4033-E, and SDG&E AL 3401-E ("Joint AL") on July 5, 2019. The Joint AL proposes a

PG&E 5553-E and 5583-E; SCE 4009-E, 4009-E-A, and 4033-E; and SDG&E 3381-E, 3381-E-A, and 3401-E/SME

standard form template by which utilities may be notified of material modifications that qualify for a notification-only process.

## **NOTICE**

Notice of ALs 5553-E, 4009-E, 4009-E-A, 3381-E, 3381-E-A, and the Joint AL was made by publication in the Commission's Daily Calendar. PG&E, SCE, and SDG&E state that copies of the Advice Letters were mailed and distributed in accordance with Section 4 of General Order 96-B.

## **PROTESTS**

On June 24, 2019, PG&E's AL 5553-E was timely protested by the California Solar & Storage Association (CALSSA), SCE's AL 4009-E was timely protested by CALSSA, and SDG&E's AL 3381-E was timely protested by CALSSA and the Commission's Public Advocates Office (CalPA).

On July 1, 2019, SDG&E responded to the protests of AL 3381-E filed by CALSSA and CalPA, PG&E responded to CALSSA's protest of AL 5553-E, and SCE responded to CALSSA's protest of AL 4009-E.

On July 25, 2019, the Joint AL was timely protested by CALSSA.

On August 1, 2019, PG&E and SDG&E responded to CALSSA's protest of the Joint AL.

We address parties' protests and the Utilities' responses to party protests in the Discussion Section below.

## **DISCUSSION**

We treat the protested issues, by issue, in the section below. First, however, we consider an issue of noncompliance with past Commission Decisions addressing Rule 21.

## **Issue 1: Consistency of Tariff Language across Utilities**

### Protests and Utility Responses to Protests

The consistency of tariff language across the Utilities was neither raised in party protests nor addressed in Utility responses to protests.

### Supplemental Advice Letters

The consistency of tariff language across the Utilities was not addressed by either SCE AL 4009-E-A or SDG&E AL 3381-E-A.

### Discussion

In reviewing ALs 4009-E, 3381-E, and 5553-E and the subsequent protests, Energy Division staff noted significant discrepancies between the proposed tariff changes filed by each PG&E, SCE, and SDG&E.

As established in D.00-12-037 and reasserted in D.12-09-018 and D.14-04-003,<sup>5</sup> it is the policy of the CPUC that, to the extent that it is practicable, the Utilities should maintain consistent tariffs in order to promote transparency and efficiency. We reassert that policy here. Except as necessitated by the differences between utility electric systems or operating protocols, the Utilities should maintain standardized Rule 21 language.

We find that the standardization of specific language implementing proposals adopted by D.19-03-013 will promote regulatory simplicity. Where such issue-by-issue adjustments are necessary, we have specifically addressed them in the discussion sections below.

### Conclusion

This Resolution finds that consistent tariff language promotes transparency and efficiency. This Resolution orders the Utilities to maintain standardized Rule 21 language, except as necessitated by the differences between their electric systems or operating protocols.

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<sup>5</sup> D.00-12-037 at 9; D.12-09-018 at 33; D.14-04-003 at 31.

## **Issue 2: Allowance of Modifications to Fast Track Interconnection Applications Beyond Those Specifically Listed**

### Protests and Utility Responses to Protests

CALSSA objects to language proposed by both SCE AL 4009-E and SDG&E AL 3381-E. Both of these ALs propose changes to Rule 21 to allow for specific types of modifications to interconnection applications under Fast Track and to state that modifications not specifically listed are not allowed. CALSSA argues that, consistent with the language of D.19-03-013, the language should be modified to allow additional changes at the discretion of the utility.

In response to CALSSA's protest of AL 4009-E, SCE notes that Working Group One recommended that, "Additional changes outside of the modification types identified here shall not be accepted within Fast Track..."<sup>6</sup>, a recommendation found reasonable by D.19-03-013.<sup>7</sup> SCE argues that its proposed tariff changes are therefore consistent with D.19-03-013 and should be approved.

### Supplemental Advice Letters

SDG&E's supplemental AL 3381-E-A, filed August 6, 2019, removes a note, proposed by AL 3381-E, stating that modifications to Fast Track interconnection applications not specifically listed in section Rule 21 Table F.1 are not allowed. SCE's supplemental AL 4009-E-A, filed August 1, 2019, restores certain non-material modifications to Interconnection Facilities under the Cost Envelope Option provisions.

### Discussion

CALSSA's protests of SCE AL 4009-E and SDG&E AL 3381-E argue that D.19-03-013 specifies types of changes to interconnection applications that are allowed without stating that these are the only types of changes that should be allowed. However, D.19-03-013 explicitly finds reasonable the Working Group One recommendation that additional material modifications outside of the

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<sup>6</sup> March Report at 48.

<sup>7</sup> D.19-03-013 at 25.

PG&E 5553-E and 5583-E; SCE 4009-E, 4009-E-A, and 4033-E; and SDG&E 3381-E, 3381-E-A, and 3401-E/SME

identified types should not be accepted within Fast Track. Hence, we find that the language proposed by SCE AL 4009-E and SDG&E AL 3381-E is consistent with D.19-03-013. The modifications made by supplemental ALs 4009-E-A to the tariff language proposed by SCE AL 4009-E do not substantively alter the implementation of D.19-03-013, instead serving to promote clarity in the tariff. As such, we find that these proposed changes are likewise consistent with D.19-03-013. However, SDG&E AL 3381-E-A proposes to remove language clarifying that additional material modifications outside of the identified types will not be accepted within Fast Track. As discussed above, we find that the limitation on additional material modifications, as put forth in SDG&E AL 3381-E, is consistent with D.19-03-013. As such, we reject SDG&E AL 3381-E-A's proposed elimination of language limiting allowed material modifications to the identified types.

The Utilities diverge significantly in their proposed modifications to Rule 21 to allow for specific types of modifications to interconnection applications under Fast Track.<sup>8</sup> For example, SCE proposes the addition of a Rule 21 Section F.2.f while PG&E and SDG&E incorporate the same information into Rule 21 Section F.2.a. Similarly, SCE defines the term "like-for-like" explicitly, while PG&E and SDG&E fail to provide a definition. Consistent with our conclusion on Issue 1, above, the Utilities should standardize their tariff language describing the allowed types of modifications to interconnection applications under Fast Track.<sup>9</sup> Specifically, all three Utilities should explicitly define "like-for-like" in accordance with definition provided by D.19-03-013 footnote 42. Consistent with the determination above, all three Utilities should state explicitly that additional material modifications outside of the identified types will not be accepted within Fast Track. In addition, SCE should align its Section F.2 structure with that proposed by PG&E and SDG&E. Where the appropriate standardization is unclear, the Utilities should consult with Energy Division staff.

## Conclusion

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<sup>8</sup> The proposed changes are primarily housed in Rule 21 Sections C and F.

<sup>9</sup> This will require modifications to each Utility's proposed tariff changes within Rule 21 Sections C and F.

PG&E 5553-E and 5583-E; SCE 4009-E, 4009-E-A, and 4033-E; and SDG&E 3381-E, 3381-E-A, and 3401-E/SME

This Resolution finds that the language proposed by SCE AL 4009-E and AL 4009-E-A and SDG&E AL 3381-E limiting material modifications to Fast Track Interconnection Applications to those specifically listed is consistent with D.19-03-013 and should be adopted. The removal of language limiting material modifications to Fast Track Interconnection Applications to those specifically listed, as proposed by SDG&E AL 3381-E-A, should be rejected.

This Resolution orders the Utilities to standardize their Rule 21 language describing the allowed types of modifications to interconnection applications under Fast Track.

### **Issue 3: Number of Material Modifications Allowed to Fast Track Interconnection Applications**

#### Protests and Utility Responses to Protests

CALSSA argues that PG&E AL 5553-E is inconsistent with D.19-03-013's determination that the utilities have the discretion to allow more than one material modification to a Fast Track interconnection application. CALSSA also notes that the footnotes in PG&E's Rule 21 Table Ee.3 are reversed.

In response to CALSSA's protest of AL 5553-E, PG&E indicates willingness to modify its tariff language to 1) clarify that, consistent with the language of D.19-03-013, utilities have the discretion to allow more than one material modification to a Fast Track interconnection application, even when utility action has not necessitated the modification and 2) correct the error in the footnotes in Table Ee.3.

#### Supplemental Advice Letters

The number of material modifications allowed to Fast Track interconnection applications was not addressed by either SCE AL 4009-E-A or SDG&E AL 3381-E-A.

#### Discussion

The modifications to the proposed tariff language put forth by PG&E in its Response to CALSSA's protest of AL 5553-E address the concerns raised by

PG&E 5553-E and 5583-E; SCE 4009-E, 4009-E-A, and 4033-E; and SDG&E 3381-E, 3381-E-A, and 3401-E/SME

CALSSA and are compliant with D.19-03-013. Hence, PG&E shall amend Rule 21 Tables F.1 and Ee.3 as proposed in its Response to CALSSA's protest of AL 5553-E.

### Conclusion

This Resolution finds that the tariff language proposed by PG&E in its Response to CALSSA's protest of AL 5553-E addresses the concerns raised by CALSSA and is compliant with D.19-03-013. This Resolution orders PG&E to amend Rule 21 Tables F.1 and Ee.3 as proposed in its Response to CALSSA's protest of AL 5553-E.

## **Issue 4: Process by Which Generating Facilities May Replace Inverters**

### Protests and Utility Responses to Protests

CALSSA takes issue with the manner in which inverter replacement processes are implemented by SCE AL 4009-E. CALSSA notes that D.19-03-013 adopts a hybrid approach for inverter replacements where the replacement equipment could increase system output but uses advanced controls to limit output to the previously approved amount (Use Case 3). Specifically, for systems up to 100 kW and for all systems utilizing equipment that would increase system size by less than 10 percent if they were not limited with advanced controls, D.19-03-013 approves a notification-only process (Process Option 2). For systems larger than 100 kW that would increase system size by more than 10 percent if they were not limited with advanced controls, on the other hand, D.19-03-013 requires a full interconnection request (Process Option 4). CALSSA states that, while AL 4009-E specifies the processes for systems up to 100 kW and for systems larger than 100 kW that would increase system size by more than 10 percent if they were not limited with advanced controls, it fails to specify a process for projects larger than 100 kW that would increase their capacity by less than 10% without controls. CALSSA requests that the Commission direct SCE to correct this omission.

In response to CALSSA's protest of AL 4009-E, SCE states that D.19-03-013's adopted approach for Use Case 3 is inconsistent in its approach to projects greater than 100 kW that are requesting to increase their inverter capacity to within 110 percent of their original generating capacity. SCE argues that its

PG&E 5553-E and 5583-E; SCE 4009-E, 4009-E-A, and 4033-E; and SDG&E 3381-E, 3381-E-A, and 3401-E/SME

proposed tariff language resolves this inconsistency by specifying that, in such a case, Process Option 4 would be required.

CALSSA identifies a closely related item in its protest of the Joint AL, which proposes a standard form template by which utilities may be notified of material modifications that qualify for a Process Option 2. The proposed standard form indicates that all Use Case 3 generating facilities larger than 100 kW must follow Process Option 4 and submit a new interconnection request, regardless of whether the replacement inverter is within 110% of the nameplate capacity of the original inverter. CALSSA argues that, pursuant to D.19-03-013, projects of any size may follow Process Option 2 if the replacement inverter is within 110% of the nameplate capacity of the original inverter and uses advanced controls to limit output to the previously approved amount.

In reply to CALSSA's protest of the Joint AL, PG&E and SDG&E jointly request clarification of the Use Case 3 requirements established by D.19-03-013. They note that OP 6 applies the 110% threshold to "projects of any size," which includes projects over 100 kW, as argued by CALSSA. However, they point to contradictory language in Conclusion of Law 16. PG&E and SDG&E request clarification on the process option required by D.19-03-013 for each of the following project categories:

- $\leq 100$  kW and  $\leq 110\%$  of original capacity
- $\leq 100$  kW and  $> 110\%$  of original capacity
- $> 100$  kW and  $\leq 110\%$  of original capacity
- $> 100$  kW and  $> 110\%$  of original capacity

In addition, PG&E and SDG&E request that the CPUC clarify, for each of the four scenarios identified, whether the generating facility is required to use control systems to limit the output to the original capacity.

#### Supplemental Advice Letters

The process by which generating facilities may replace inverters was not addressed by either SCE AL 4009-E-A or SDG&E AL 3381-E-A.

### Discussion

For Use Case 3, replacement of equipment that may increase the nameplate capacity of the system, but which employ inverter power controls to limit the real power output to the size approved in the original agreement, D.19-03-013 finds that a hybrid approach is necessary to address the differences between projects above versus those at or below 100 kW. Noting that Net Energy Metering (NEM) grandfathering language allows systems to increase to 110 percent of their original generating facility capacity as identified in its original permission to operate letter, D.19-03-013 adopts a hybrid approach for Use Case 3. Specifically, the dicta of D.19-03-013 states the following:

Accordingly, for projects at or below 100 kW, we find it reasonable to adopt process option 2 pending creation and implementation of certification schemes that proves inverter power controls can limit export. For projects above 100 kW, we find it reasonable to adopt process Option 4. For projects increasing capacity within 110 percent of original generating facility capacity as identified in its original permission to operate letter and maintaining the original permission to operate real power output via inverter power controls, we find it reasonable to adopt process option 2 to be in alignment with the NEM tariff grandfathering rules.<sup>10</sup>

Conclusion of Law 16 states the following<sup>11</sup>:

For use case 3, the Commission should adopt process option 2 for projects increasing capacity to below 100 kW, following the creation of certification schemes to limit export to the original generating facility's nameplate capacity, and process option 4 for projects increasing capacity to at or

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<sup>10</sup> D.19-03-013 at 30.

<sup>11</sup> D.19-03-013 Conclusion of Law 16 contained a typographical error that was corrected via D.20-07-040 on July 17, 2020, pursuant to Rule 16.5. The version quoted here reflects version corrected pursuant to D.20-07-040 Ordering Paragraph 1.

above 100 kW and more than 110 percent of the original generating facility's nameplate capacity.<sup>12</sup>

Conclusion of Law 17 aligns with the dicta by creating an exception for larger projects that increase their inverter nameplate to 110% of the original while limiting export to the original nameplate capacity.

For use case 3, the Commission should adopt process option 2 for projects increasing capacity to at or above 100 kW and below 110 percent of the original generating facility's nameplate capacity, following the creation of certification schemes to limit export to the project's original nameplate capacity.<sup>13</sup>

OP 6 incorporates both Conclusions of Law by ordering the following:

For Use Case 3, process option 2 shall be used for projects increasing capacity to less than 100 kilowatt (kW), pending the creation of certification schemes for inverter power controls (software/firmware) to limit export, and process option 4 shall be used for projects increasing capacity to at or greater than 100 kW. For projects of any size that are requesting an increase in capacity within 110 percent of their original generating capacity, process option 2 shall be used.<sup>14</sup>

We first consider SCE's assertion that D.19-03-013's adopted approach for Use Case 3 is inconsistent in its approach to projects greater than 100 kW that are requesting to increase their inverter capacity to within 110 percent of their original generating capacity. OP 6 states that, "For projects of any size that are requesting an increase in capacity within 110 percent of their original generating capacity, process option 2 shall be used." This language clearly establishes that all projects, whether below or above 100 kW, that utilize a replacement inverter that

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<sup>12</sup> D.19-03-013 at 48, as corrected by D.20-07-040.

<sup>13</sup> D.19-03-013 at 48.

<sup>14</sup> *Id.* at 50.

is within 110 percent of the original generating capacity and employ advanced controls to limit output to the previously approved amount are eligible for Process Option 2.

Next, we provide the clarification requested by PG&E and SDG&E in their reply to CALSSA's protest of the Joint AL. We first note that the typographical error in Conclusion of Law 16, which PG&E and SDG&E point to as a source of confusion around the implementation of Use Case 3, was corrected via D.20-07-040 on July 17, 2020, pursuant to Rule 16.5. Second, consistent with OP 6 and as discussed above, we specify the process option required by D.19-03-013 for Use Case 3 material modifications in each of the following project categories.

**Table 1: Process Option Designations for Use Case 3 Material Modifications**

Modified Generating Facility Capacity	Process Option
$\leq 100$ kW and $\leq 110\%$ of original capacity	2
$\leq 100$ kW and $> 110\%$ of original capacity	2
$> 100$ kW and $\leq 110\%$ of original capacity	2
$> 100$ kW and $> 110\%$ of original capacity	4

Finally, we address PG&E and SDG&E's request for clarification of whether, for each of the four scenarios, the generating facility is required to use control systems to limit the output to the original capacity. Use Case 3 is defined as, "Replacing equipment that may increase the nameplate capacity of the system, but which employ inverter power controls that limit the real power output to the inverter listed size in the original agreement."<sup>15</sup> Hence, the replacement of existing equipment with equipment that increases the nameplate capacity of a system may only be considered a Use Case 3 material modification if control systems are used to limit the output to the original capacity, regardless of system size.

### Conclusion

This Resolution finds that, pursuant to D.19-03-013, all projects (regardless of system size) that utilize a replacement inverter with a nameplate capacity that is

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<sup>15</sup> *Id.* at 24.

PG&E 5553-E and 5583-E; SCE 4009-E, 4009-E-A, and 4033-E; and SDG&E 3381-E, 3381-E-A, and 3401-E/SME

within 110 percent of the original generating capacity and employ advanced controls to limit output to the amount approved by the original interconnection agreement are eligible for Process Option 2. This Resolution orders the Utilities to update their Rule 21 tariff language to reflect the appropriate process options Use Case 3 material modifications as designated by Table 1, above. This Resolution likewise orders the Utilities to update the standard form template to reflect the appropriate process options Use Case 3 material modifications as designated by Table 1, above.

This Resolution reaffirms that, regardless of system size, a system may only be considered a Use Case 3 material modification if control systems are used to limit system output to the original capacity.

#### **Issue 5: Requirement for Equipment Verification on Standard Form Template for Notification of Material Modifications to Generating Facility**

##### Protests and Utility Responses to Protests

In its protest of the Joint AL, CALSSA notes that Section 4.A, Equipment Verification, of the proposed standard form for Notification of Material Modifications to Generating Facility asks customers to verify that all equipment is on an approved equipment list maintained by the California Energy Commission (CEC). CALSSA requests that this section be modified to note that the CEC's Approved Inverter List is specific to solar PV inverters and clarify that the verification requirement does not include energy storage devices or systems.

In response to CALSSA's protest of the Joint AL, PG&E and SDG&E jointly argue that, in order to remain in compliance with NEM consumer protection requirements, they must verify equipment warranties of interconnecting equipment. They propose the addition of an energy storage specific check box to Section 4.A in order to address CALSSA's concerns.

##### Supplemental Advice Letters

The Joint AL was not supplemented.

PG&E 5553-E and 5583-E; SCE 4009-E, 4009-E-A, and 4033-E; and SDG&E 3381-E, 3381-E-A, and 3401-E/SME

### Discussion

Before considering this specific instance, we note that the Utilities have the ultimate responsibility for verifying that compliant equipment is used by interconnecting facilities, an outcome that they may achieve via a variety of measures, including reference to verified equipment lists maintained by organizations other than the CEC. Given that the Utilities propose to utilize the CEC equipment lists for equipment verification on the standard form template, however, we limit our consideration within this Resolution to CEC-maintained lists.

Since the protest of the Joint AL, the CEC has significantly expanded its energy storage system listing efforts. The CEC's Grid Support Inverter List now explicitly includes energy storage inverters. In addition, the CEC maintains an Energy Storage System List. In order to fully leverage these efforts, which take into account both technical and consumer protection requirements, Section 4.A of the proposed standard form should be updated to reflect that equipment may be listed on one of multiple lists maintained by the CEC. Specifically, the Equipment Verification requirement should mandate that equipment is on "a" verified list maintained by the CEC, rather than "the" verified list maintained by the CEC.

### Conclusion

This Resolution finds that the expansion of the CEC's equipment listing efforts necessitates edits to the proposed Section 4.A language of the standard form for Notification of Material Modifications to Generating Facility, proposed by the Joint AL. This Resolution orders the Utilities to update Section 4.1 of the standard form template to reflect that verified equipment may be listed on any of multiple CEC equipment lists.

## **Issue 6: Implementation of Expanded Screen Q Exemption**

### Protests and Utility Responses to Protests

In its protest of SDG&E AL 3381-E, CalPA requests that SDG&E bring its implementation of the expansion of the Screen Q exemption into line with that of SCE and PG&E by adopting tariff language.

PG&E 5553-E and 5583-E; SCE 4009-E, 4009-E-A, and 4033-E; and SDG&E 3381-E, 3381-E-A, and 3401-E/SME

In response to CalPA's protest of AL 3381-E, SDG&E notes that, while AL 3381-E indicated that the expansion of the Screen Q exemption would be accomplished via website updates, it proposed accompanying tariff updates. SDG&E agrees that the expansion of the Screen Q exemption should be accomplished via tariff updates, consistent with the implementation effectuated by PG&E and SCE.

### Supplemental Advice Letters

SCE's supplemental AL 4009-E-A, filed August 1, 2019, and SDG&E's supplemental AL 3381-E-A, filed August 6, 2019, both clarify their previously proposed language expanding the existing Screen Q exemption to all net energy metering (NEM) and inverter-based projects with 1 megavolt ampere (MVA) or below nameplate capacity.

### Discussion

SDG&E supplemental AL 3381-E-A clarifies its previously proposed language expanding the existing Screen Q exemption to specifically include all net energy metering (NEM) and inverter-based projects with 1 megavolt ampere (MVA) or below nameplate capacity. This clarification addresses the concerns raised by CalPA in its protest of AL 3381-E. However, each Utility phrases the Screen Q exemption differently.<sup>16</sup> Consistent with our conclusion on Issue 1, above, the Utilities should standardize their tariff language describing the set of projects that are exempt from Screen Q. Moreover, in reviewing the proposed language from each Utility, we find that SDG&E's amended proposed tariff language is the clearest, in that it specifies that, "All NEM Generating Facilities and all inverter-based Generating Facilities with a nameplate capacity less than or equal to 1 MVA..." are exempt,<sup>17</sup> and should be adopted by PG&E and SCE.

### Conclusion

This Resolution finds that the Screen Q exemption language proposed in SDG&E AL 3381-E-A provides the clearest implementation of the Screen Q exemption expansion ordered by D.19-03-013. This Resolution orders PG&E and SCE to

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<sup>16</sup> The Screen Q exemption language can be found in each Utility's Rule 21 Section G.3.a.

<sup>17</sup> SDG&E AL 3381-E-A at 4.

PG&E 5553-E and 5583-E; SCE 4009-E, 4009-E-A, and 4033-E; and SDG&E 3381-E, 3381-E-A, and 3401-E/SME

modify their Rule 21 language expanding the Screen Q exemption with that proposed by SDG&E AL 3381-E-A.

## **COMMENTS**

Public Utilities Code section 311(g)(1) provides that a resolution must be served on all parties and subject to at least 30 days public review. Section 311(g)(2) provides that this 30-day review period and 20-day comment period may be reduced or waived upon the stipulation of all parties in the proceeding.

The 30-day review and 20-day comment period for the draft of this resolution was neither waived nor reduced. Accordingly, this draft resolution was mailed to parties for comments on January 15, 2021.

Comments on the draft Resolution were timely filed on February 4, 2021 by the Green Power Institute (GPI). In their comments on the draft resolution, GPI (1) agrees with the resolution's order to maintain consistent tariff language between the Utilities, (2) states support for the resolution's grant of discretion to PG&E to allow more than one material modification and recommends that SCE and SDG&E also be required to modify their advice letters in the same manner, and (3) states support for the Screen Q expansion implemented by this resolution.

In response to GPI's comments, we note that the tariff language proposed by SCE AL 4009-E and SDG&E AL 3381-E allows for additional material modifications to Fast Track interconnection applications at the utility's discretion. However, we agree with GPI's assertion that all three Utilities should adopt consistent language allowing additional material modifications at the utility's discretion; the adoption of standardized Rule 21 language is consistent with the determination of Issue 1 and the Findings of this resolution.

## **FINDINGS**

1. On April 5, 2019, the CPUC issued Decision (D.)19-03-013, *Decision Adopting Proposals from March 15, 2018 Working Group One Report*.

PG&E 5553-E and 5583-E; SCE 4009-E, 4009-E-A, and 4033-E; and SDG&E 3381-E, 3381-E-A, and 3401-E/SME

2. D.19-03-013 Ordering Paragraph (OP) 14 directed PG&E, SCE, and SDG&E to submit Tier 2 Advice Letters (ALs) by June 4, 2019, modifying Rule 21 to be consistent with D.19-03-013's requirements.
3. D.19-03-013 OP 8 directed PG&E, SCE, and SDG&E to develop a standard form template for customers to provide notification of material modifications to existing generating facilities and to propose this template via Tier 2 AL by July 4, 2019.
4. On June 4, 2019, SCE filed AL 4009-E, SDG&E filed AL 3381-E, and PG&E filed AL 5553-E, which proposed modifications to Electric Rule 21 in compliance with D.19-03-013.
5. On June 24, 2019, the California Solar & Storage Association (CALSSA) filed timely protests of ALs 4009-E, 3381-E, and 5553-E.
6. On June 24, 2019, the Public Advocates Office at the California Public Utilities Commission filed a timely protest of AL 3381-E.
7. On July 5, 2019, PG&E, SCE, and SDG&E proposed a standard form template for customers to provide notification of material modifications to existing generating facilities in a joint AL numbered, respectively, 5583-E, 4033-E, and 3401-E ("Joint AL").
8. On July 25, 2019, the Joint AL was timely protested by CALSSA.
9. On August 1, 2019, SCE filed AL 4009-E-A, supplementing AL 4009-E.
10. On August 6, 2019, SDG&E filed AL 3381-E-A, supplementing AL 3381-E.
11. Consistent tariff language promotes transparency and efficiency.
12. It is appropriate and consistent with CPUC policy for PG&E, SCE, and SDG&E to maintain standardized Electric Rule 21 language, except as necessitated by the differences between their electric systems or operating protocols.
13. The language proposed by SCE AL 4009-E and AL 4009-E-A and SDG&E AL 3381-E and limiting material modifications to Fast Track Interconnection Applications to those specifically listed is consistent with D.19-03-013 and should be adopted. The removal of language limiting material modifications to Fast Track Interconnection Applications to those specifically listed, as proposed by SDG&E AL 3381-E-A, should be rejected.
14. The tariff language proposed by PG&E in its Response to CALSSA's Protest of AL 5553-E addresses the concerns raised by CALSSA and is compliant with D.19-03-013.

PG&E 5553-E and 5583-E; SCE 4009-E, 4009-E-A, and 4033-E; and SDG&E 3381-E, 3381-E-A, and 3401-E/SME

15. Pursuant to D.19-03-013, all projects (regardless of system size) that (1) utilize a replacement inverter with a nameplate capacity that is within 110 percent of the original generating capacity and (2) employ advanced controls to limit output to the amount approved by the original interconnection agreement are eligible for Process Option 2.
16. Regardless of system size, a system may only be considered a Use Case 3 material modification if control systems are used to limit system output to the original capacity.
17. The expansion of the California Energy Commission's equipment listing efforts necessitates edits to the proposed Section 4.A language of the standard form for Notification of Material Modifications to Generating Facility, proposed by the Joint AL.
18. The Screen Q exemption language proposed in SDG&E AL 3381-E-A provides the clearest implementation of the Screen Q exemption expansion ordered by D.19-03-013.

**THEREFORE IT IS ORDERED THAT:**

1. Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) shall standardize the Electric Rule 21 Tariff (Rule 21) language describing the allowed types of modifications to interconnection applications under Fast Track. Specifically, all three Utilities should explicitly define "like-for-like" in accordance with definition provided by D.19-03-013 footnote 42. All three Utilities should state explicitly that additional material modifications outside of the identified types will not be accepted within Fast Track. In addition, SCE should align its Section F.2 structure with that proposed by PG&E and SDG&E.
2. PG&E shall amend Rule 21 Tables F.1 and Ee.3 as proposed in its Response to the California Solar & Storage Association's (CALSSA's) protest of AL 5553-E.
3. PG&E, SCE, and SDG&E shall update Rule 21 to reflect the appropriate process options for Use Case 3 material modifications, consistent with the designations in Table 1 of this Resolution.
4. PG&E, SCE, and SDG&E shall update the interim standard form template for Type II modifications to existing generating facilities, proposed by SDG&E AL 3401-E, SCE AL 4033-E and PG&E AL 5583-E, to reflect the appropriate

PG&E 5553-E and 5583-E; SCE 4009-E, 4009-E-A, and 4033-E; and SDG&E 3381-E, 3381-E-A, and 3401-E/SME

process options for Use Case 3 material modifications, consistent with the designations in Table 1 of this Resolution.

5. PG&E, SCE, and SDG&E shall update Section 4.1 of the interim standard form template for Type II modifications to existing generating facilities, proposed by SDG&E AL 3401-E, SCE AL 4033-E and PG&E AL 5583-E, to reflect that verified equipment may be listed on any of multiple CEC equipment lists.
6. PG&E and SCE shall modify their Rule 21 Section G.3.a language expanding the Screen Q exemption with the language proposed by SDG&E AL 3381-E-A.
7. SCE ALs 4009-E and E-A, SDG&E ALs 3381-E and E-A, and PG&E AL 5553-E, which incorporate Decision (D.)19-03-013 into Rule 21, Generating Facility Interconnections, are approved as modified above, and shall be effective following the approval of the Tier 1 advice letters ordered by Ordering Paragraph 8.
8. PG&E, SCE, and SDG&E shall update their respective Rule 21 Tariffs in compliance with the above Ordering Paragraphs by submitting Tier 1 advice letters within 30 days of the issuance of this Resolution.
9. PG&E, SCE, and SDG&E shall update the proposed interim standard form template for Type II modifications to existing generating facilities, consistent with the above Ordering Paragraphs, by submitting a Tier 1 advice letter, the effective date of which shall be consistent with that requested by the Tier 1 Advice Letters ordered by Ordering Paragraph 8, within 30 days of the issuance of this Resolution.

This Resolution is effective today.

I certify that the foregoing resolution was duly introduced, passed and adopted at a conference of the Public Utilities Commission of the State of California held on March 4, 2021; the following Commissioners voting favorably thereon:

/s/ Rachel Peterson

RACHEL PETERSON

Executive Director

MARYBEL BATJER

President

MARTHA GUZMAN ACEVES

CLIFFORD RECHTSCHAFFEN

GENEVIEVE SHIROMA

DARCIE HOUCK

Commissioners