



BEFORE THE PUBLIC UTILITIES COMMISSION OF THE **FILED**

STATE OF CALIFORNIA

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Order Instituting Rulemaking to Consider Smart Grid Technologies Pursuant to Federal its Smart Legislation and on the Commission's own Motion to Actively Guide Policy in California's Development of a Smart Grid System.

Rulemaking 08-12-009  
(Filed December 18, 2008)

**SOUTHERN CALIFORNIA EDISON COMPANY'S (U 338-E) COMMENTS ON  
PROPOSED DECISION ADOPTING METRICS TO MEASURE THE SMART GRID  
DEPLOYMENTS OF PACIFIC GAS AND ELECTRIC COMPANY, SOUTHERN  
CALIFORNIA EDISON COMPANY AND SAN DIEGO GAS & ELECTRIC COMPANY**

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Dated: **April 9, 2012**

## **SUBJECT INDEX**

- SCE generally supports the Proposed Decision’s adoption, with certain modifications, of the nineteen consensus metrics proposed in the “Report on Consensus and Non-Consensus Smart Grid Metrics.”
- SCE’s comments address issues surrounding confidentiality of cyber-security information.
- SCE also recommends that the Commission clarify the Proposed Decision in the following areas:
  - Defining certain metrics to include the full-scope of commercial and industrial customers in a manner consistent with SCE’s Edison SmartConnect™ Program;
  - Modifying Customer/AMI Metric 9 to include the number of customers who have authorized the utility to provide a third party with access to the customer’s energy usage data;
  - Clarifying that energy storage metrics exclusively measure utility-owned or operated energy storage devices; and
  - Revising Grid Operations Metrics 6 and 7 to avoid contradictory definitions of customer-owned or operated distributed generation facilities.
- SCE submits its comments to support the finalization of metrics that are accurate, reportable, and appropriate for public use.

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 DECISION ADOPTING METRICS TO MEASURE THE SMART GRID DEPLOYMENTS OF  
 PACIFIC GAS AND ELECTRIC COMPANY, SOUTHERN CALIFORNIA EDISON  
 COMPANY AND SAN DIEGO GAS & ELECTRIC COMPANY**

**TABLE OF CONTENTS**

<u>Section</u>	<u>Title</u>	<u>Page</u>
I. INTRODUCTION .....		1
II. DISCUSSION .....		3
A.	The Commission Should Not Mandate that the California Utilities Disclose Sensitive Cyber-Security Information and Vulnerabilities To Anyone But the Commission Itself.....	3
B.	Various Metrics Require Clarification Before Adoption.....	5
1.	Certain Metrics Definitions Should Be Modified to Include Commercial & Industrial Customers With Demands Equal to 200 kW.....	5
2.	Customer/AMI Metric 9 Should be Updated to Include the Number of Customers Who Have Authorized the Utility to Provide a Third Party With Access to the Customer's Energy Usage Data.....	5
3.	Energy Storage Metrics Should Be Clarified to Exclusively Measure Utility Owned or Operated Energy Storage Devices .....	7
4.	Grid Operations Metrics 6 and 7 Should Be Revised to Avoid Contradictory Definition of Customer-Owned or Operated Distributed Generation Facilities .....	7
III. CONCLUSION.....		8
APPENDIX A - MISCELLANEOUS CORRECTIONS OR ADDITIONS TO THE PD		

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**I.**

**INTRODUCTION**

Pursuant to Rule 14.3 of the California Public Utilities Commission's (Commission's) Rules of Practice and Procedure, Southern California Edison Company (SCE) respectfully submits these comments on the Proposed Decision Adopting Metrics to Measure the Smart Grid Deployments of Pacific Gas and Electric Company (PG&E), SCE, and San Diego Gas & Electric Company (SDG&E) (Proposed Decision). The Proposed Decision was issued on March 20, 2012.

SCE generally supports the Proposed Decision's adoption, with certain modifications, of the nineteen consensus metrics proposed in the "Report on Consensus and Non-Consensus Smart Grid Metrics."<sup>1</sup> SCE's comments first address issues surrounding confidentiality of cyber-

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<sup>1</sup> That Report was issued on October 22, 2010.

security information. Second, SCE seeks to clarify several items in the Proposed Decision that appear to contain technical errors or ambiguities. SCE recommends that the Commission clarify the Proposed Decision in the following areas:

- Defining certain metrics to include the full-scope of commercial and industrial customers in a manner consistent with SCE's Edison SmartConnect™ Program;
- Modifying Customer/AMI Metric 9 to include the number of customers who have authorized the utility to provide a third party with access to the customer's energy usage data;
- Clarifying that energy storage metrics exclusively measure utility-owned or operated energy storage devices; and
- Revising Grid Operations Metrics 6 and 7 to avoid contradictory definitions of customer-owned or operated distributed generation facilities.

SCE seeks these clarifications to support the finalization of metrics that are accurate, reportable, and appropriate for public use. SCE looks forward to working with the Commission and appropriate stakeholders to define reasonable smart grid goals<sup>2</sup> and to further develop or refine metrics that will measure progress toward achieving those goals.

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<sup>2</sup> The Proposed Decision directs the creation of a Technical Working Group on "broad goals." *See* Proposed Decision, pp. 38-39. SCE respectfully suggests that a deadline of September 1, 2012 may not provide sufficient time for this Technical Working Group to complete its work and submit its report. Also, as SCE noted in detail during the recent multi-day Smart Grid workshops, achievement of smart grid goals will pivot to a significant degree around the actual funding approved for foundational and incremental smart grid projects. All of the best-intended goals and plans may be for naught if funding is not approved to build the smart grid capabilities.

## II. DISCUSSION

### A. The Commission Should Not Mandate that the California Utilities Disclose Sensitive Cyber-Security Information and Vulnerabilities To Anyone But the Commission Itself

As the utilities have developed cyber-security capabilities, and continue to work to seal cyber-security gaps, a hallmark of their relationship with the Commission has been the implementation of rigorous measures to prevent any disclosure of critically sensitive information. Such practices have been employed for the safety and welfare of our customers, and for continued reliable operation of the grid. The power grid has been classified as a national security asset.<sup>3</sup> If a party with nefarious intent were to learn the cyber-security capabilities, systems, defenses and potential vulnerabilities with respect to the utilities' power grid and the customer information in the possession of the utilities, the consequences could be catastrophic.

Accordingly, while the utilities have engaged in ongoing and constructive dialogue with the Commission concerning cyber-security issues and measures, we have never before been asked to disclose such sensitive information to third parties. The Proposed Decision, however, would allow third parties to examine such information through the Technical Working Group. The Proposed Decision directs Commission Staff to "make use of" a list of questions proposed by Granite Key/Aspect Labs (Granite Key).<sup>4</sup> Among those questions are the following:<sup>5</sup>

- What do utilities do when they have determined that Smart Grid components/systems/equipment are vulnerable to security breaches?
- What known security vulnerabilities in the Smart Grid deployment currently remain in a vulnerable state?

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<sup>3</sup> See, e.g., SCE's Response to OIR R.08-12-009 (February 9, 2009), p. 10.

<sup>4</sup> Proposed Decision, p. 35.

<sup>5</sup> Proposed Decision, Attachment B.

- What cryptographic techniques/methods are used by the utilities to protect the systems?
- What automated testing tools/security software are used by the utilities to protect the systems?

In prior comments, SCE has confirmed that we look forward to working with parties through Technical Working Groups, and that cyber-security metrics can be discussed and refined through a Technical Working Group.<sup>6</sup> SCE noted, however, that Granite Key's expansive calls for "an inventory of practices a utility already does in regards to grid and cyber-security" were beyond the scope of the consideration of metrics in this proceeding, and that this proceeding was *not* designed to address the technical issues of cyber-security.<sup>7</sup>

Consistent with that position, while SCE appreciates that Staff can make limited and appropriate use of some parts of the list of questions proposed by Granite Key, SCE asks the Commission to clarify that the Technical Working Groups will not be used to require the utilities to disclose information that could endanger the grid. Such non-disclosure would include the utilities' specific cyber-security gaps and vulnerabilities, their specific cryptographic protective measures, their specific tools and software protective measures, or other similar items that could have widespread negative consequences if the information fell into the wrong hands. It is worth noting the parties that bear the risks and would suffer the consequences if such information is inappropriately shared are the utilities and their customers, not the third parties that might wish to see such sensitive information.

SCE acknowledges that the Proposed Decision requires the parties participating in the Technical Working Group to execute a confidentiality agreement.<sup>8</sup> SCE agrees that no matter what form the Technical Working Group takes, such an agreement is essential. However, no such agreement can truly prevent the disclosure or misuse of ultra-sensitive cyber-security

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<sup>6</sup> SCE's Reply Comments to Administrative Judge's Ruling (filed February 14, 2011), p. 9.

<sup>7</sup> *Id.*

<sup>8</sup> Proposed Decision, p. 35.

information if a given participant is so minded. Also, such information might be disclosed by a participant accidentally or inadvertently. Since revealing such information is not essential for the Technical Working Groups, SCE submits that even a confidentiality agreement would not justify forced disclosure of utilities' vulnerabilities, capabilities, defenses and/or customer information.

**B. Various Metrics Require Clarification Before Adoption**

The Proposed Decision adopts, with minor modification, the nineteen consensus metrics proposed in the "Report on Consensus and Non-Consensus Smart Grid Metrics." The following comments identify technical errors or ambiguities in how certain metrics are defined in Attachment A to the Proposed Decision. SCE recommends that the Commission clarify those issues before adopting finalized metrics in its final decision.

**1. Certain Metrics Definitions Should Be Modified to Include Commercial & Industrial Customers With Demands Equal to 200 kW**

Several metrics define customer classes for SCE as "(1) Residential, (2) C&I < 200 kW, (3) C&I > 200 kW, (4) Agriculture and Pumping."<sup>2</sup> This definition should be modified to account for commercial and industrial customers with demands *equal to* 200 kW. Modifying the definition in this manner would align the metric with the customer class definitions used by SCE. Thus, SCE recommends that Customer/AMI Metrics 2, 4, and 5 as well as Grid Operations Metric 5 be modified to define customer classes for SCE as "(1) Residential, (2) C&I < 200 kW, (3) C&I ≥ 200 kW, (4) Agriculture and Pumping."

**2. Customer/AMI Metric 9 Should be Updated to Include the Number of Customers Who Have Authorized the Utility to Provide a Third Party With Access to the Customer's Energy Usage Data**

The Proposed Decision states that the "[Demand Response Smart Grid Coalition] (DRSG) proposed a revision to Customer/AMI Metric 9 to require an enumeration of the

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<sup>2</sup> See Customer / AMI Metrics 2, 4 and 5. Proposed Decision, Attachment A, pp. 3, 5, 8, and 19.

customers who have authorized third parties to have access to the information. Since access to customer information provided by third parties is as important as access provided by the utilities, this decision modifies this metric as requested.”<sup>10</sup>

Specifically, DRSG proposed that the metric be revised as follows: “Number and percentage of customers with advanced meters using a utility or authorized third-party administered internet or web-based portal to access energy usage information or a utility-authorized internet or web-based portal to enroll in utility energy information programs.”<sup>11</sup>

However, Customer/AMI Metric 9 was not modified to include this additional information. In fact, Customer/AMI Metric 9 is defined to *exclude* “customers accessing energy usage information from non-utility portals or websites,” “usage or other data presented on third-party websites or tools” and “customers accessing usage information through non-utility-authorized portals.”<sup>12</sup> This metric was defined with these exclusions, because the utilities would have no way of tracking the number of customers accessing data from a non-utility website.

However, should the Commission approve SCE’s Application for Approval of Proposal to Enable Automated Access of Customer Usage Data to Authorized Third Parties and Approval of Cost Recovery Mechanism,<sup>13</sup> SCE would be able to report on the number of customers who have authorized SCE to provide a third party with access to their interval usage data. Therefore, SCE recommends that the metric be modified as follows: “Number and percentage of customers using a utility web-based portal to access energy usage information or enroll in utility energy information programs *or who have*

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<sup>10</sup> Proposed Decision, p. 19.

<sup>11</sup> Proposed Decision, p. 16.

<sup>12</sup> Proposed Decision, Attachment A, p. 12-13.

<sup>13</sup> See A.12.03-004.

*authorized the utility to provide a third party with access to the customer's energy usage data.”*

**3. Energy Storage Metrics Should Be Clarified to Exclusively Measure Utility Owned or Operated Energy Storage Devices**

The Proposed Decision establishes one energy storage metric measuring “MW and MWh per year measured at the storage device electricity output terminals of grid connected energy storage interconnected by transmission and distribution level.”<sup>14</sup> The Proposed Decision further notes that “[u]tilities may not have access to information about energy storage systems owned by independent power producers or customer-sited and owned systems.”<sup>15</sup> The Proposed Decision does not provide any recommendation for dealing with this issue.

SCE maintains that it should not be held responsible for reporting out data pertaining to energy storage systems about which it lacks information and over which it has no control. SCE recommends that the metric be revised to exclusively measure *utility-owned or operated* energy storage devices. Any measurement of energy storage capacity and electric deliveries beyond systems that are owned and operated by the utility would require additional funding to support incremental reporting capabilities.

**4. Grid Operations Metrics 6 and 7 Should Be Revised to Avoid Contradictory Definition of Customer-Owned or Operated Distributed Generation Facilities**

Grid Operations Metrics 6 and 7 measure the number, the total nameplate capacity, and the total annual electricity deliveries of customer-owned or operated, grid-connected distributed generation facilities.<sup>16</sup> In clarifying those metrics, the Proposed Decision defines distributed generation (DG) facilities as “[g]enerating systems that are (1) enrolled with a utility in the Self Generation Incentive Program (SGIP) or the

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<sup>14</sup> Proposed Decision, Attachment A, p. 15.

<sup>15</sup> Proposed Decision, Attachment A, p. 15.

<sup>16</sup> Proposed Decision, Attachment A, p. 20.

California Solar Initiative (CSI), (2) part of each utility's respective Solar [Photovoltaic] PV program or, (3) operating under a Feed-in Tariff (FiT)."<sup>17</sup>

However, DG facilities that are part of a utility's respective Solar PV Program are by nature not customer-owned or operated. The Solar PV Program authorizes the utilities to own and operate solar photovoltaic facilities as well as to execute solar PV power purchase agreements with independent power producers (IPPs) through a competitive solicitation process. None of these distributed generation facilities will be customer-owned or operated. Similarly the FiT program is not exclusively customer-owned or operated, because eligibility for the FiT is open to both customers and IPPs.

SCE recommends that the Commission revise the language defining DG facilities so that it exclusively identifies programs specific to customer-owned or operated DG. Should the Commission also find benefit in tracking and reporting the number, total nameplate capacity, and annual electricity deliveries from utility- or IPP-owned DG facilities, it should create a separate metric to do so.

### **III.**

#### **CONCLUSION**

SCE respectfully requests that the Commission take SCE's comments into consideration in the final version of the Proposed Decision. SCE looks forward to engaging further with the Commission and interested parties in the Technical Working Groups, as SCE continues to help advance all parties' efforts to deploy a safe, reliable and affordable smart grid in California.

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<sup>17</sup> Proposed Decision, Attachment A, pp. 20-21.

Respectfully submitted,

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**Appendix A -**

**SUGGESTED CORRECTIONS OR ADDITIONS TO THE PD**

Notes:

1. Additions to the PD are shown in bold and underlined text. Deletions are shown in strikethrough.
2. General change: Where reference is made to commercial and industrial customers with “demands greater than 200 kW,” the language should be changed to “**demands greater than or equal to 200 kW**” to include customers with demand of 200 kW

Location in PD	Original PD Statement	SCE Recommended Revision
PD, p. 35	The Commission therefore directs its Staff to initiate this Technical Working Group, and to make use of the initial list of questions proposed by Granite Key/Aspect Labs and included as Attachment B to this decision as a starting point for discussion.	The Commission therefore directs its Staff to initiate this Technical Working Group, and to make <b><u>careful and appropriate</u></b> use of the initial list of questions proposed by Granite Key/Aspect Labs and included as Attachment B to this decision as a starting point for discussion. <b><u>The utilities will not be required to disclose cybersecurity gaps and vulnerabilities, cryptographic and software protective measures, or other similar items.</u></b>
Attachment A, pp. 3, 5, 8, 19	<i>for SCE:</i> (1) Residential, (2) C&I < 200 kW, (3) C&I > 200 kW, (4) Agriculture and Pumping.	<i>for SCE:</i> (1) Residential, (2) C&I < 200 kW, (3) C&I $\geq$ 200 kW, (4) Agriculture and Pumping.
Attachment A, p. 12	Number and percentage of customers using a utility web-based portal to access energy usage information or to enroll in utility energy information programs	Number and percentage of customers using a utility web-based portal to access energy usage information or to enroll in utility energy information programs <b><u>or who have authorized the utility to provide a third party with access to the customer’s energy usage data.</u></b>
Attachment A, p. 15	MW and MWh per year measured at the storage device electricity output terminals of grid connected energy storage interconnected by transmission and distribution level	MW and MWh per year <del>measured at the storage device electricity output terminals of grid connected</del> <b><u>utility-owned or operated</u></b> energy storage interconnected <del>by</del> <b><u>at the</u></b> transmission <del>and/or</del> distribution level, <b><u>as measured at the storage device electricity output terminals</u></b>

Attachment A, pp. 20-21	Generating systems that are (1) enrolled with a utility in the Self Generation Incentive Program (SGIP) or the California Solar Initiative (CSI) (2) part of each utility's respective Solar PV program or, (3) operating under a Feed In Tariff (FIT).	<b><u>Customer-owned or operated</u></b> generating systems that are <del>(1)</del> enrolled with a utility in the Self Generation Incentive Program (SGIP) or the California Solar Initiative (CSI) <del>(2) part of each utility's respective Solar PV program or, (3)</del> <b><u>otherwise</u></b> operating under a Feed In Tariff (FIT).
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