BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking on the Commission's own motion to improve distribution level interconnection rules and regulations for certain classes or electric generators and electric storage resources.	Rulemaking 11-09-011 (Filed September 22, 2011)

CLEAN COALITION MOTION TO TAKE OFFICIAL NOTICE OF DISCOVERY REQUESTS AND RESPONSES

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April 25, 2013

CLEAN COALITION MOTION TO TAKE OFFICIAL NOTICE OF DISCOVERY REQUESTS AND RESPONSES

The Clean Coalition respectfully submits this motion, pursuant to Rule 11 of the *Rules of Practice and Procedure* (motions), for the Commission to take official notice in this proceeding of the Joint Parties discovery requests and the responses from the utilities.

The Clean Coalition is a California-based nonprofit organization whose mission is to accelerate the transition to local energy systems through innovative policies and programs that deliver cost-effective renewable energy, strengthen local economies, foster environmental sustainability, and enhance energy security.

To achieve this mission, the Clean Coalition promotes the vigorous expansion of Wholesale Distributed Generation (WDG) — a market segment defined by renewable energy generation that connects to the distribution grid and serves local load. The Clean Coalition drives policy change to remove major barriers to the procurement, interconnection, and financing of WDG projects. Furthermore, to enable higher penetration of clean local energy generation, the Clean Coalition drives policy innovations that support the deployment of Intelligent Grid (IG) market solutions — such as demand response, energy storage, and advanced forecasting.

I. Background

The Commission opened this proceeding on Sept. 22, 2011, subsequent to a Rule 21 reform process initiated by Southern California Edison. Once the Commission opened this proceeding, SCE suspended its own reform process.

From the outset of this proceeding, and even before, starting with our work in the RPS proceeding (R.11-05-005, and its predecessor, R.08-08-009), the Clean Coalition has called for a more data-driven approach to policymaking. By this phrase, we mean that policies

should rely more explicitly on comprehensive data about the topics at issue, rather than taking a more qualitative approach. As part of our effort to spur a more data-driven approach to policymaking, the Clean Coalition and a number of other parties (Vote Solar, IREC, Sustainable Conservation, Sierra Club and Absolutely Solar) submitted discovery requests to each of the IOUs in November of 2012. We submitted follow up requests in January and April of 2013, as follows:

- Joint Party discovery requests to SCE, PG&E and SDG&E (individually), November 14, 2012
- Joint Party follow up discovery requests to SCE and PG&E, Jan. 7, 2013
- Clean Coalition follow up discovery request to SCE and PG&E, April 24, 2013

The IOUs have submitted a number of responses to our requests, with a number of meet and confers interspersed throughout, as follows:

- PG&E response to Nov. 14, 2012, discovery request on Dec. 14, 2012
- SDG&E response to Nov. 14, 2012, discovery request on Dec. 14, 2012
- SCE response to Nov. 14, 2012, discovery request on Dec. 17, 2012
- SCE follow up response (after Jan. 4, 2013, meet and confer) on Jan. 21, 2013
- PG&E follow up response (after Jan. 4, 2013, meet and confer) on Jan. 22, 2013
- SCE follow up response with detailed data on 10 projects, Feb. 1, 2013
- PG&E follow up response, with detailed data on 40 projects, Feb. 28, 2013
- SCE follow up response, with detailed data on 30 projects, March 12, 2013

These documents are attached as attachments to this motion (either embedded, in the case of the discovery requests, or as separate attachments in the case of the responses) and can, at the request of the Commission, also be emailed separately in order to maintain the separate nature of the files.

II. Motion

The Clean Coalition hereby requests that the Commission take official notice of these documents in this proceeding. These data have already been used by parties in submitting comments on the Distribution Group Study Procedures proposals from the IOUs, in making presentations at the March 5, 2013, workshop on cost certainty proposals, and will be used further in post-workshop comments on these proposals. It is also our hope that Commission staff will aggressively make use of the data produced.

Respectfully submitted,

TAM HUNT

Attorney for:
Clean Coalition
2 Palo Alto Square
3000 El Camino Real, Suite 500
Palo Alto, CA 94306
(805) 705-1352

Dated: April 25, 2013

Attachment A: Joint party discovery requests, Nov. 14, 2012

Rule 21 Reform **(R.11-09-011)**

JOINT PARTIES DISCOVERY REQUEST
TO SOUTHERN CALIFORNIA EDISON

Prepared by: Tam Hunt,
Attorney for the
Clean Coalition

Date: 11/14/12

The September 26, 2012 Scoping Memo requests "proposals for the publication of additional data not available [within existing publications] that would enhance predictability of the costs and process of interconnection", and seeks methods of "Improving the predictability of the interconnection process through mechanisms to increase cost certainty and the use of cost-effective alternatives", "Developing new cost arrangements among developers of Distributed Generation", and "Consideration of proposals for ratepayer support of distribution system upgrades triggered by the interconnection of distributed generation."

In order for the parties to identify and evaluate the potential effectiveness of proposals it is essential for the parties to have concrete information regarding the frequency and magnitude of factors directly associated with the costs, timing, and certainty actually experienced by developers and utilities pursuant to recent interconnection practices.

Pursuant to Article 10 of the Rules of Practice and Procedure the following data requested is directly relevant to the subject matter involved in Phase II of this proceeding and the burden, expense, or intrusiveness of discovery does not outweigh the likelihood that the information sought will lead to the discovery of admissible evidence. Information on the costs incurred and timeframes involved in interconnection, broken down into relevant categories, will enable the parties to evaluate what proposals will most effectively improve cost allocation and cost certainty, the key issues scoped for Phase II.

Moreover, the data requested should be available in existing records, and in many cases has already been gathered in response to the Commission's previous data requests and ongoing technical review of the costs and benefits of distributed generation – but not yet provided to parties. More generally, the information requested will, in our view, be essential to an effective Phase II process in this proceeding.

Please send the following data, within 30 calendar days.

Question 1: Number of Applications

a) The number of interconnection applications <u>received</u> since 2009 (January 1st). Provide separate totals for each category as follows:
   - WDAT Fast Track
   - WDAT ISP
   - WDAT Cluster
   - Rule 21 Fast Track
   - Rule 21 ISP
   - Rule 21 Cluster

b) The number of applications withdrawn from the above lists of 'applications received since 2009' (January 1st). Provide separate totals for each category as follows:
   - WDAT Fast Track
   - WDAT ISP
   - WDAT Cluster
   - Rule 21 Fast Track
   - Rule 21 ISP

- Rule 21 Cluster

c) The number of applications received since 2009 that concluded with a signed Interconnection Agreement (IA). Provide separate totals for each category as follows:
    - WDAT Fast Track
    - WDAT ISP
    - WDAT Cluster
    - Rule 21 Fast Track
    - Rule 21 ISP
    - Rule 21 Cluster

    Note: previous data supplied by the utility, in response to the Clean Coalition's motion in Phase I, included a category of "successfully processed" projects defined by the utility to incorporate projects withdrawn from the queue at any point as well as those that obtain an Interconnection Agreement. The current request seeks to disaggregate projects that withdraw from those that obtain an Interconnection Agreement, in addition to seeking more complete and current information.

Question 2: Processing Time (Calendar Days)

- The number of calendar days (from the date the application is deemed complete and applicable fee submitted to the date the study was completed) for completion of the following types of studies since January 1st, 2009 (maximum, minimum, average, median and standard deviation):
    - WDAT System Impact Studies
    - WDAT Facilities Studies
    - WDAT Fast Track initial review
    - WDAT Fast Track supplemental review
    - Rule 21 System Impact Studies
    - Rule 21 Facilities Studies
    - Rule 21 combined System Impact Studies and Facilities Studies
    - Rule 21 Fast Track initial review
    - Rule 21 Fast Track supplemental review

  Note: SCE previously provided the cost of earlier studies and the hourly rate, allowing us to calculate the number of hours spent on average for those studies. However, we are seeking the calendar time spent to complete studies. If the recipient is not aware of these figures and requires individual review of large numbers of prior applications to answer this question, a random sampling may be used to reduce the research burden; in such cases the sample size shall not be less than 25 per category.

Question 3: Processing Time (Staff Hours)

- Hours spent on <u>supplemental reviews</u> for WDAT Fast Track since January 1st, 2009 (Maximum, minimum, average, median and standard deviation)

Note: SCE previously provided data on hours spent on SIS and FS, but not for supplemental reviews. We are also seeking more recent data than was previously provided by the utilities since the previous data did not include the most recent 18 months. Since the rules have changed recently this more recent data will provide a better understanding of the current practices.

Question 4: Staffing Levels

- The number of utility full-time equivalent (FTE) staff devoted to interconnection studies; FTE added in 2009, 2010, and 2011; Planned FTE additions in 2012 and 2013 devoted to interconnection issues.

Note: the joint IOU response to the Clean Coalition's previous request for this data, in our Dec. 21, 2011, motion, was: "These data requests reflect the type of data typically available in the IOUs' GRC filings, and accordingly these requests are duplicative and unnecessary. ... Staffing levels, and changes to staffing levels, are outside the scope of this proceeding and the appropriate proceeding to address these concerns is in the IOUs' respective GRC proceedings." However, this information is not readily available in the GRC, our request is fully within the scope of this proceeding, and producing this data should not be considered overly burdensome.

Question 5: Equipment Costs

a) Equipment cost data as follows, as described in executed IAs:
- For all WDAT projects since 2009:
  - Minimum, maximum, average, median and standard deviation for interconnection facilities
  - Minimum, maximum, average, median and standard deviation for distribution grid upgrades
  - Minimum, maximum, average, median and standard deviation for network upgrades
- For all Rule 21 (wholesale only) projects since 2009
  - Minimum, maximum, average, median and standard deviation for interconnection facilities
  - Minimum, maximum, average, median and standard deviation for distribution grid upgrades
  - Minimum, maximum, average, median and standard deviation for network upgrades
- Sample size (n) for each category above

b) Interconnection Agreement Cost Estimate Accuracy:
- For all WDAT projects since 2009:
  - How often and when has the utility sought payment for additional upgrade costs after the interconnection agreement was signed for projects reviewed under a) Fast Track without Supplemental Review,

b) Fast Track with Supplemental Review, and c) Detailed Study
        - number and percentage of IAs under which this occurred for each category and the minimum, maximum, average, median and standard deviation for the time elapsed between signing of the IA and additional payment for upgrades being sought
    - By how much has the amount sought exceeded the estimate provided by the utility during the study process, for projects reviewed under a) Fast Track without Supplemental Review, b) Fast Track with Supplemental Review, and c) Detailed Study
        - the minimum, maximum, average, median and standard deviation of costs incurred for IAs under which this occurred for each category
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        - the minimum, maximum, average, median and standard deviation of costs incurred for IAs under which this occurred for each category
- Sample size (n) for each category above

Question 6: Interconnection Queue Data

- Provide a sortable Excel spreadsheet with the following additional information to the published Interconnection queues, with each project anonymized through use of a unique ID and by rounding individual project sizes into general categories (5 kW and under; 5.1-9.9 kW; 10-25 kW; 25.1-99.9 kW; 100-499 kW; 500-999 kW; 1-1.49 MW; 1.5-1.99 MW; 2-2.99 MW; 3-4.99 MW; 5-9.99 MW; 10-14.99 MW; 15-20 MW):
    - All WDAT projects since 2009
        - For each project, include the following information (as available from existing project applications, reviews, or completed studies):
            - interconnection voltage level
            - interconnection facility cost
            - distribution grid upgrade cost
            - network upgrade cost
            - costs billed relative to IA estimate

- county facility is located (may be anonymized by ID)
- type of interconnection process (Fast Track, Supplemental Review, ISP or cluster)
- aggregate line section penetration level (as percent of minimum load or peak load if minimum load data is not available)
- whether the project is located in a "preferred" interconnection zone, as identified by utility interconnection maps or other defined criteria
- technology type (solar, wind, etc.)
- approximate circuit distance from substation to Point of Interconnection
- number of protective devices and number of voltage regulating devices between the proposed site and the substation/area.
- whether the Point of Interconnection is a main circuit line or lateral (branch) line
- whether or not three-phase power was available from proposed Point of Interconnection.
- limiting conductor rating from proposed Point of Interconnection to distribution substation.
- ampacity of circuit at Point of Interconnection
- the presence of known constraints specified in initial review (such as, but not limited to, electrical dependencies at that location, short circuit interrupting capacity issues, power quality or stability issues on the circuit, capacity constraints, or secondary networks).

- All Rule 21 (wholesale only) projects since 2009
  - For each project, include the following information (as available from existing project applications, reviews, or completed studies):
    - interconnection voltage level
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Note: The format we have requested is necessary to sort and correlate costs with readily identifiable characteristics of interconnection applications, which is necessary in order to develop and evaluate the efficacy of proposals in achieving specific goals of this proceeding as identified in the Amended Scoping Memo. These goals include proposals and methods for:

- "the publication of additional data … that would enhance predictability of the costs and process of interconnection"
- "Improving the predictability of the interconnection process through mechanisms to increase cost certainty and the use of cost-effective alternatives"
- "Developing new cost arrangements among developers of Distributed Generation"
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Rule 21 Reform **(R.11-09-011)**

JOINT PARTIES DISCOVERY REQUEST
TO PACIFIC GAS & ELECTRIC

Prepared by: Tam Hunt,
Attorney for the
Clean Coalition

Date: 11/14/12

The September 26, 2012 Scoping Memo requests "proposals for the publication of additional data not available [within existing publications] that would enhance predictability of the costs and process of interconnection", and seeks methods of "Improving the predictability of the interconnection process through mechanisms to increase cost certainty and the use of cost-effective alternatives", "Developing new cost arrangements among developers of Distributed Generation", and "Consideration of proposals for ratepayer support of distribution system upgrades triggered by the interconnection of distributed generation."

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Please send the following data, within 30 calendar days.

Question 1: Number of Applications

d) The number of interconnection applications <u>received</u> since 2009 (January 1st). Provide separate totals for each category as follows:
   - WDAT Fast Track
   - WDAT ISP
   - WDAT Cluster
   - Rule 21 Fast Track
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e) The number of applications withdrawn from the above lists of 'applications received since 2009' (January 1st). Provide separate totals for each category as follows:
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  Note: PG&E previously provided the cost of earlier studies and the hourly rate, allowing us to calculate the number of hours spent on average for those studies. However, we are seeking the calendar time spent to complete studies. If PG&E is not aware of these figures and requires individual review of large numbers of prior applications to answer this question, a random sampling may be used to reduce the research burden; in such cases the sample size should not be less than 25 per category.

Question 3: Processing Time (Staff Hours)

- Hours spent on Phase I and Phase II studies, Fast Track and supplemental reviews for WDAT Fast Track since January 1st, 2009 (Maximum, minimum, average, median and

standard deviation), providing separate totals for each category; equivalent data for Rule 21 wholesale projects.

Note: PG&E previously provided only data on supplemental reviews for 2011. We are seeking more recent data than was previously provided Since the rules have changed recently this more recent data will provide a better understanding of the current practices.

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- For all Rule 21 (wholesale only) projects since 2009
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- technology type (solar, wind, etc.)
- approximate circuit distance from substation to Point of Interconnection
- number of protective devices and number of voltage regulating devices between the proposed site and the substation/area.
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Rule 21 Reform **(R.11-09-011)**

JOINT PARTIES DISCOVERY REQUEST
TO SAN DIEGO GAS & ELECTRIC

Prepared by: Tam Hunt,
Attorney for the
Clean Coalition

Date: 11/14/12

The September 26, 2012 Scoping Memo requests "proposals for the publication of additional data not available [within existing publications] that would enhance predictability of the costs and process of interconnection", and seeks methods of "Improving the predictability of the interconnection process through mechanisms to increase cost certainty and the use of cost-effective alternatives", "Developing new cost arrangements among developers of Distributed Generation", and "Consideration of proposals for ratepayer support of distribution system upgrades triggered by the interconnection of distributed generation."

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i) The number of applications received since 2009 that concluded with a signed Interconnection Agreement (IA). Provide separate totals for each category as follows:
    - WDAT Fast Track
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    - Rule 21 Fast Track
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Question 2: Processing Time (Calendar Days)

- The number of calendar days (from the date the application is deemed complete and applicable fee submitted to the date the study was completed) for completion of the following types of studies since January 1st, 2009 (maximum, minimum, average, median and standard deviation):
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    - Rule 21 combined System Impact Studies and Facilities Studies
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  Note: If SDG&E is not aware of these figures and requires individual review of large numbers of prior applications to answer this question, a random sampling may be used to reduce the research burden; in such cases the sample size should not be less than 25 per category.

Question 3: Processing Time (Staff Hours)

- Hours spent by utility staff on WDAT Phase I and Phase II studies, Fast Track and supplemental reviews for Fast Track since January 1st, 2009 (Maximum, minimum, average, median and standard deviation), providing separate totals for each category; equivalent data for Rule 21 wholesale projects.

Question 4: Staffing Levels

- The number of utility full-time equivalent (FTE) staff devoted to interconnection studies; FTE added in 2009, 2010, and 2011; Planned FTE additions in 2012 and 2013 devoted to interconnection issues.

Note: the joint IOU response to the Clean Coalition's previous request for this data, in our Dec. 21, 2011, motion, was: "These data requests reflect the type of data typically available in the IOUs' GRC filings, and accordingly these requests are duplicative and unnecessary. ... Staffing levels, and changes to staffing levels, are outside the scope of this proceeding and the appropriate proceeding to address these concerns is in the IOUs' respective GRC proceedings." However, this information is not readily available in the GRC, our request is fully within the scope of this proceeding, and producing this data should not be considered overly burdensome.

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  - Minimum, maximum, average, median and standard deviation for interconnection facilities
  - Minimum, maximum, average, median and standard deviation for distribution grid upgrades
  - Minimum, maximum, average, median and standard deviation for network upgrades
- Sample size (n) for each category above

b) Interconnection Agreement Cost Estimate Accuracy:
- For all WDAT projects since 2009:
  - How often and when has the utility sought payment for additional upgrade costs after the interconnection agreement was signed for projects reviewed under a) Fast Track without Supplemental Review, b) Fast Track with Supplemental Review, and c) Detailed Study
    - number and percentage of IAs under which this occurred for each category and the minimum, maximum, average, median and standard deviation for the time elapsed between signing of the IA and additional payment for upgrades being sought
  - By how much has the amount sought exceeded the estimate provided by the utility during the study process, for projects reviewed under a) Fast Track without Supplemental Review, b) Fast Track with Supplemental Review, and c) Detailed Study
    - the minimum, maximum, average, median and standard deviation of costs incurred for IAs under which this occurred for each category
- For all Rule 21 (wholesale only) projects since 2009

        - How often and when has the utility sought payment for additional upgrade costs after the interconnection agreement was signed for projects reviewed under a) Fast Track without Supplemental Review, b) Fast Track with Supplemental Review, and c) Detailed Study
            - number and percentage of IAs under which this occurred for each category and the minimum, maximum, average, median and standard deviation for the time elapsed between signing of the IA and additional payment for upgrades being sought
        - By how much has the amount sought exceeded the estimate provided by the utility during the study process, for projects reviewed under a) Fast Track without Supplemental Review, b) Fast Track with Supplemental Review, and c) Detailed Study
            - the minimum, maximum, average, median and standard deviation of costs incurred for IAs under which this occurred for each category
    - Sample size (n) for each category above

Question 6: Interconnection Queue Data

- Provide a sortable Excel spreadsheet with the following additional information to the published Interconnection queues, with each project anonymized through use of a unique ID and by rounding individual project sizes into general categories (5 kW and under; 5.1-9.9 kW; 10-25 kW; 25.1-99.9 kW; 100-499 kW; 500-999 kW; 1-1.49 MW; 1.5-1.99 MW; 2-2.99 MW; 3-4.99 MW; 5-9.99 MW; 10-14.99 MW; 15-20 MW):
    - All WDAT projects since 2009
        - For each project, include the following information (as available from existing project applications, reviews, or completed studies):
            - interconnection voltage level
            - interconnection facility cost
            - distribution grid upgrade cost
            - network upgrade cost
            - costs billed relative to IA estimate
            - county facility is located (may be anonymized by ID)
            - type of interconnection process (Fast Track, Supplemental Review, ISP or cluster)
            - aggregate line section penetration level (as percent of minimum load or peak load if minimum load data is not available)
            - whether the project is located in a "preferred" interconnection zone, as identified by utility interconnection maps or other defined criteria
            - technology type (solar, wind, etc.)
            - approximate circuit distance from substation to Point of Interconnection
            - number of protective devices and number of voltage regulating

devices between the proposed site and the substation/area.
- whether the Point of Interconnection is a main circuit line or lateral (branch) line
- whether or not three-phase power was available from proposed Point of Interconnection.
- limiting conductor rating from proposed Point of Interconnection to distribution substation.
- ampacity of circuit at Point of Interconnection
- the presence of known constraints specified in initial review (such as, but not limited to, electrical dependencies at that location, short circuit interrupting capacity issues, power quality or stability issues on the circuit, capacity constraints, or secondary networks).

- All Rule 21 (wholesale only) projects since 2009
  - For each project, include the following information (as available from existing project applications, reviews, or completed studies):
    - interconnection voltage level
    - interconnection facility cost
    - distribution grid upgrade cost
    - network upgrade cost
    - costs billed relative to IA estimate
    - county facility is located (may be anonymized by ID)
    - type of interconnection process (Fast Track, Supplemental Review, ISP or cluster)
    - aggregate line section penetration level (as percent of minimum load or peak load if minimum load data is not available)
    - whether the project is located in a "preferred" interconnection zone, as identified by utility interconnection maps or other defined criteria
    - technology type (solar, wind, etc.)
    - approximate circuit distance from substation to Point of Interconnection
    - number of protective devices and number of voltage regulating devices between the proposed site and the substation/area.
    - whether the Point of Interconnection is a main circuit line or lateral (branch) line
    - whether or not three-phase power was available from proposed Point of Interconnection.
    - limiting conductor rating from proposed Point of Interconnection to distribution substation.
    - ampacity of circuit at Point of Interconnection
    - the presence of known constraints specified in initial review (such as, but not limited to, electrical dependencies at that location, short circuit interrupting capacity issues, power

quality or stability issues on the circuit, capacity constraints, or secondary networks).

Note: The format we have requested is necessary to sort and correlate costs with readily identifiable characteristics of interconnection applications, which is necessary in order to develop and evaluate the efficacy of proposals in achieving specific goals of this proceeding as identified in the Amended Scoping Memo. These goals include proposals and methods for:

- "the publication of additional data … that would enhance predictability of the costs and process of interconnection"
- "Improving the predictability of the interconnection process through mechanisms to increase cost certainty and the use of cost-effective alternatives"
- "Developing new cost arrangements among developers of Distributed Generation"
- "Consideration of proposals for ratepayer support of distribution system upgrades triggered by the interconnection of distributed generation".

Attachment B: Joint Party follow up discovery requests to SCE and PG&E, Jan. 7, 2013

Rule 21 Reform **(R.11-09-011)**

JOINT PARTIES DISCOVERY REQUEST
TO SOUTHERN CALIFORNIA EDISON

Prepared by: Tam Hunt,
Attorney for the
Clean Coalition

Date: 1/8/2013

This memo is a follow-up to SCE's discovery request production and the Jan. 4, 2013, meet and confer.

As discussed, SCE has agreed to:

- Provide the size (MW) for each project listed in SCE's previous response to Question 6 (for both WDAT and Rule 21). We request that this additional data be provided by Jan. 11 at the latest.
- Provide the sample size (n) for each answer to Question 2.
- Include the definition of "preferred" circuits or zones, (stated on the call to be those circuits with at least 450 amps load and [aggregate existing or queued] distributed generation below 15% of peak load)
- Distinguish, in its data already produced for Question 6, between entries for which no costs are listed whether this is due to the burden of providing data or whether the costs of interconnection were actually zero (as is the case for many projects for the other IOUs), and provide a written statement regarding whether the projects for which data was provided are a representative sample and are categorically comparable to those for which data was not provided, and the basis for this assertion.
- Confirm statements indicating that withdrawn projects were not included in the cost data, and provide SCE reasoning regarding the relevance of data from completed studies on these projects and the decision not to include this data in the initial response.

So that parties may confer on acceptable relief, remedies or alternatives, where SCE believes provision of data represents an excessive burden in complying with this discovery request we also request that SCE provide more information on the work required to fully comply with the data request, Question 6, in particular, in terms of hours and expense required.

Specifically, what is the work/cost required to produce the following, as requested:

- Network upgrade costs
- Distance from substation
- Line section and/or circuit penetration level
- Main feeder or branch line
- Limiting conductor rating
- Known constraints

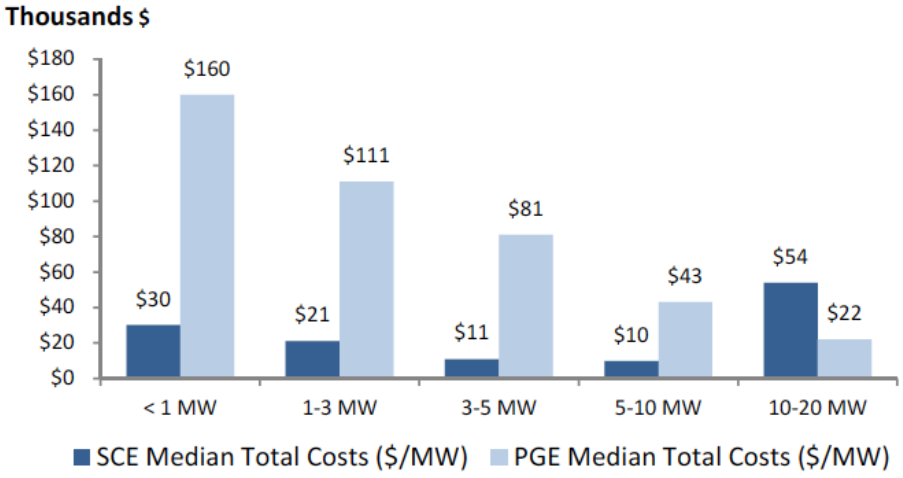
If SCE continues to maintain that producing this data is overly burdensome for all projects, we request that SCE produce the requested data for a representative sample of 40 projects, 20 from WDAT and 20 from Rule 21, selected by the Joint Parties from data already produced by SCE, which represent both outliers and non-outliers in terms of the total cost of interconnection, as shown in the attached spreadsheet (highlighted in yellow).

As the purpose of the discovery request is to assist parties in accessing the potential for standardized interconnection pricing, it is essential to identify the factor(s) contributing to atypical interconnection costs and compare these against typical cases.

To ensure parties to the proceeding have a common understanding and common reference for the typical cost contribution of components included in interconnection costs and that may or may not be affected by interconnecting at a preferred location, we also request that SCE provide a single illustrative example of the breakdown of costs for an approximately 1.5 MW installation at both a preferred and non-preferred location.

Last, we ask that SCE examine the Q3 2011 RPS report distribution interconnection cost data and explain why there seems to be such a large discrepancy (up to a factor of ten) between the RPS report data, which is IOU data, and the recent discovery request data. For example, the following chart shows cost/MW to interconnection for SCE from $11-54k, whereas the recently produced data seems to average as much as ten times this amount.

Figure 4. Levelized Median Total Upgrade Costs for Different Solar PV Project Size Categories (Thousands $/MW)[14]



Source: California Public Utilities Commission, 3rd Quarter 2011

Rule 21 Reform **(R.11-09-011)**

JOINT PARTIES DISCOVERY REQUEST TO PG&E

Prepared by: Tam Hunt,
Attorney for the
Clean Coalition

Date: 1/8/2013

This memo is a follow-up to PG&E's discovery request production and the Jan. 4, 2013, meet and confer.

As discussed, PG&E has agreed to: provide the sample size (n) for each answer to Question 2.

So that parties may confer on acceptable relief, remedies or alternatives, where PG&E believes provision of data represents an excessive burden we also request that PG&E provide more information on the work required to fully comply with the data request, Question 6, in particular, in terms of hours and expense required.

Specifically, what is the work/cost required to produce the following, as requested:

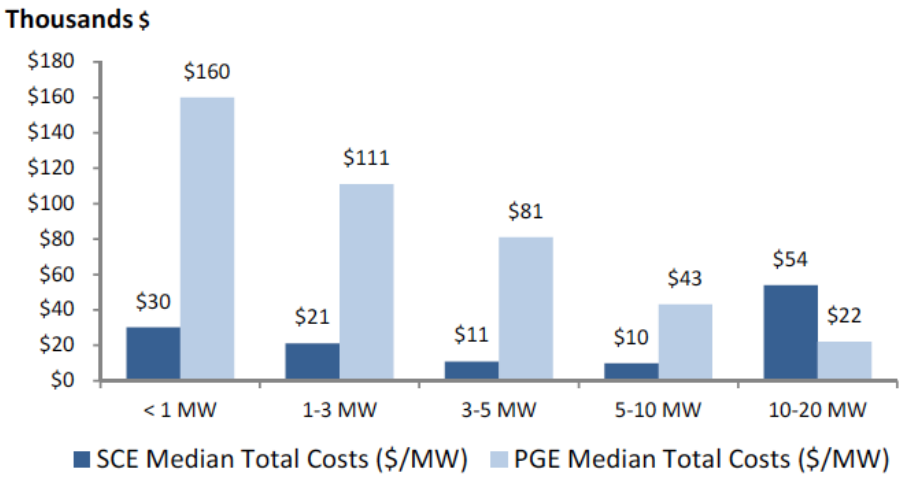
- Distance from substation
- Line section and/or circuit penetration level
- Main feeder or branch line
- Limiting conductor rating
- Known constraints

If PG&E continues to maintain that producing this data is overly burdensome for all projects, we request that PG&E produce the requested data for a representative sample of 40 projects, selected by the Joint Parties from data already produced by PG&E, as shown in the attached spreadsheet (highlighted in yellow).

To ensure parties to the proceeding have a common understanding and common reference for the typical cost contribution of components included in interconnection costs and that may or may not be affected by interconnecting at a preferred location, we also request that PG&E provide a single illustrative example of the breakdown of costs for an approximately 1.5 MW installation at both a preferred and non-preferred location.

Last, we ask that PG&E examine the Q3 2011 RPS report distribution interconnection cost data and explain why there seems to be such a large discrepancy between the RPS report data, which is IOU data, and the recent discovery request data. For example, the following chart shows cost/MW to interconnection for PG&E from $22-160k, whereas the recently produced data seems to average many times this amount.

Figure 4. Levelized Median Total Upgrade Costs for Different Solar PV Project Size Categories (Thousands $/MW)[14]



Source: California Public Utilities Commission, 3rd Quarter 2011

Attachment C: Clean Coalition follow up discovery requests to SCE and PG&E, April 24, 2013

***Rule 21 Reform* (R.11-09-011)**

CLEAN COALITION DISCOVERY REQUEST TO SOUTHERN CALIFORNIA EDISON

Prepared by: Tam Hunt,
Attorney for the
Clean Coalition

Date: 4/24/2013

This discovery request is a follow up to the Joint Parties' requests from November 14, 2012. This final request consists of just one question, as follows:

- For each project, of the 40 projects for which SCE has produced detailed data, that has a total interconnection cost (estimated or actual, as the case may be) that exceeds $250,000 per megawatt, please identify and list the specific engineering and upgrade requirements that led to exceeding this price level.

Rule 21 Reform **(R.11-09-011)**

CLEAN COALITION DISCOVERY REQUEST
TO PACIFIC GAS & ELECTRIC

Prepared by: Tam Hunt,
Attorney for the
Clean Coalition

Date: 4/24/2013

This discovery request is a follow up to the Joint Parties' requests from November 14, 2012. This final request consists of just one question, as follows:

- For each project, of the 40 projects for which PG&E has produced detailed data, that has a total interconnection cost (estimated or actual, as the case may be) that exceeds $500,000 per megawatt, please identify and list the specific engineering and upgrade requirements that led to exceeding this price level.

Attachment D: PG&E response to Nov. 14, 2012, discovery request on Dec. 14, 2012
Attached separately as pdf.

Attachment E: SDG&E response to Nov. 14, 2012, discovery request on Dec. 14, 2012
Attached separately as pdf.

Attachment F: SCE response to Nov. 14, 2012, discovery request on Dec. 17, 2012
Attached separately as pdf.

Attachment G: SCE follow up response (after Jan. 4, 2013, meet and confer) on Jan. 21, 2013
Attached separately as pdf.

Attachment H: PG&E follow up response (after Jan. 4, 2013, meet and confer) on Jan. 22, 2013
Attached separately as pdf.

Attachment I: SCE follow up response with detailed data on 10 projects, Feb. 1, 2013
Attached separately as pdf.

Attachment J: PG&E follow up response, with detailed data on 40 projects, Feb. 28, 2013
Attached separately as pdf.

Attachment K: SCE follow up response, with detailed data on 30 projects, March 12, 2013
Attached separately as pdf.