

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking  
Regarding Policies, Procedures and  
Rules for the California Solar  
Initiative, the Self-Generation  
Incentive Program and Other  
Distributed Generation Issues.

Rulemaking 12-11-005  
(Filed November 8, 2012)

CLEAN COALITION OPENING COMMENTS ON ASSIGNED COMMISSIONER'S  
RULING REGARDING THE TRANSFER OF RESPONSIBILITY FOR COLLECTING  
SOLAR STATISTICS FROM THE CALIFORNIA SOLAR INITIATIVE TO THE  
NET ENERGY METERING INTERCONNECTION PROCESS

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SOLAR STATISTICS FROM THE CALIFORNIA SOLAR INITIATIVE TO THE  
NET ENERGY METERING INTERCONNECTION PROCESS

The Clean Coalition respectfully submits the following comments on the Assigned Commissioner's Ruling (ACR) dated August 22, 2013.

**Introduction**

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 resilience. To achieve this mission, the Clean Coalition promotes proven best practices, including the vigorous expansion of Wholesale Distributed Generation (WDG) connected to the distribution grid and serving local load.

The Clean Coalition drives policy innovation to remove major barriers to the procurement, interconnection, and financing of WDG projects and supports complementary Intelligent Grid (IG) market solutions such as demand response, energy storage, forecasting, and communications. The Clean Coalition is active in numerous proceedings before the California Public Utilities Commission and other state and federal agencies throughout the United States, and works on the design and implementation of WDG and IG programs for local utilities and governments.

**Comments**

**Summary**

Clean Coalition not only supports the continuation of CSI data collection and the

transfer of responsibility to the interconnection process, but also recommends the following:

1. Consistency (where applicable) in data collection for all interconnections,
2. Merging all collected data into a consolidated single resource for information regarding pending and installed DG systems (NEM and wholesale),
3. Ensuring that these data sets are fully available to both government agencies and the public to the fullest extent possible in the public interest, consistent with demonstrated needs for confidentiality.

## **Discussion**

The Clean Coalition recognizes the value of data collected under the California Solar Initiative (CSI) application process, supports the continued collection of this information and the transfer of data collection to the interconnection process under Rule 21. We agree that the data collected for California Solar Statistics provide invaluable information to the Commission, the Program Administrators, market participants, researchers, and the general public, related to the system characteristics, cost and expected performance of customer-sited PV systems. Among other benefits, the data help utility planners understand the grid and resource impacts of these distributed generation fleets.

Likewise, the Clean Coalition strongly support the Commission's efforts to collect and make available information necessary to effectively monitor, evaluate, and further improve the efficiency and predictability of the interconnection process in California. These are the goals of the Rule 21 Settlement and the current phase of that proceeding (R.11-09-011). The continued collection of data gathered under CSI goes hand in hand with the data reporting goals related to interconnection and deployment in addition to the current uses for CSI data, and harmonizing the data reporting and collection

processes into a common system for all DG enhances the value and reduces the costs related to disparate and incompatible data sets.

All generation connecting to California's electrical system applies for interconnection, and this process already collects important information. Many of the State's utilities, including the three largest investor-owned utilities, have already adopted on-line interconnection applications, easing the process of data reporting for both the customer and utility. As the ACR notes, transferring data collection to the interconnection process will not only ensure continued availability of the data collected under CSI, but will ensure more complete and consistent collection applied to all projects, not just those participating in the CSI program. Collecting data through the interconnection process also provides clear information regarding the timeline, commitment, and progress of planned installations.

Beyond this, the Clean Coalition argues that there is also very substantial additional benefit that can be realized in combining the data collected under CSI with the data currently collected under wholesale interconnection tariffs and related data improvements currently under consideration by the Rule 21 Working Group<sup>1</sup>. This combined data set would collect all retail and wholesale interconnection and other data into a single repository. This unified approach has many advantages, but the primary advantage is the simplicity of a single data repository.

Knowing "what can go where" with little or no modification to the existing grid early in the decision making process helps customers establish realistic expectations regarding interconnection at their property, or choose between locations to site new generation, and to submit appropriate designs. Best practices focus on making relevant information accessible to applicants, including defining low cost areas and criteria for

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<sup>1</sup> An example of data currently collected in the wholesale interconnection process can be found at: <https://www.sce.com/wps/portal/home/regulatory/open-access-information/> or directly at: [www.sce.com/nrc/aboutsce/regulatory/openaccess/wdat/wdat\\_queue.xls](http://www.sce.com/nrc/aboutsce/regulatory/openaccess/wdat/wdat_queue.xls) The Rule 21 Data Working Group is currently considering additions and modifications to this reporting, and the Clean Coalition's recommendations are included as an appendix to these comments.

interconnection. This will elicit well-sited and scaled proposals, leading to both a high proportion proceeding to successful development and toward optimization of available grid capacities. Poorly informed applications result in revisions or withdrawn submissions that can significantly burden staff and frustrate customers. This is not possible unless the data is collected and available in accessible forms for all stakeholders.

Under the CSI application, information is collected including certain location data, when the system was installed, whether systems are leased or owned, the cost of systems and their components, make, model and capacity of the PV systems and inverters, whether output is monitored, whether tracking hardware is present, and the orientation of fixed-axis PV panels. This information is valuable and should be published for all DG systems.

In addition, we recommend collection of information on upgrades to the electrical system required by the interconnection of systems, the cost of those upgrades, and the allocation of those costs. It is invaluable to applicants, ratepayers, and policy makers to gain insight into the circumstances that drive variable interconnection costs in order to improve predictability and address concerns regarding cost allocation.

There are multiple efforts currently underway in California that would benefit from both the continued collection of CSI data and the inclusion of the three additional data points recommended above. For example, the California Energy Commission (CEC) is actively engaged in evaluating differential siting costs related to the 2013 Integrated Energy Policy Report (IEPR)<sup>2</sup> in relation to broader efforts to guide and support siting DG in preferred locations. The forthcoming study commissioned by the CEC builds upon work by Southern California Edison (SCE) indicating likely savings of over \$2 Billion in interconnection costs in their service territory if new projects are shifted toward more favorable locations, and understanding what is currently deployed on

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<sup>2</sup> CEC IEPR Workshop on Distributed Generation: Electricity Infrastructure Costs, August 22<sup>nd</sup> 2013, Docket number 13-IEP-1H

each circuit is important for evaluating the cost of additional DG.

At the same time the California Public Utilities Commission (CPUC) is engaged in evaluating location-dependent value, SDG&E is actively working to study the costs and benefits of net-metered (NEM) installations to the utility, and the California Independent System Operator (CAISO) is very interested in gaining better understanding of the DG fleet in order to better predict how this generation will impact its operational dispatch and reserve requirements.

Both the state energy regulatory bodies and the major investor-owned utilities are also pursuing the application of Advanced Inverters in future DG installations in order to allow localized grid voltage support, greater control, and communication. As many manufacturers design and build for multiple markets and in anticipation of future demand for equipment functionality, systems will commonly be installed with equipment that exceeds current minimum requirements. Information collected under the CSI, such as the make and model of the inverters used, will allow system operators and policy makers to understand what capabilities are actually deployed in the field and how many of the systems have functionality that meets standards that may not have been required until well after the systems were installed.

Predictability in interconnection costs is extremely important to all DG applicants. Current estimates, and even the requirements for developing estimates, are based on the rated capacity of the proposed system in relation to predicted local load. Information collected under CSI such as panel orientation and tracking capability would make a significant difference in predicting how local generation will match loads; however, this data is not currently available for interconnection studies. Information on factors that impact the outcome of interconnection requests is important in order to assess the relative significance of those factors and their potential value in screening criteria or pre-application data access for project siting and location specific project design. This supports optimized use of existing infrastructure, speeds up interconnection processing and reduces study and upgrade costs, improving queue

management and deployment outcomes.

Likewise, the same information is valuable to CAISO in predicting future flexible ramping capacity needs and tracking the success of programs aimed at influencing DG installations to mitigate such needs.

For each of these reasons, the Clean Coalition not only supports the continuation of CSI data collection and the transfer of responsibility to the interconnection process, but also recommends:

1. Consistency (where applicable) in data collection for all interconnections,
2. Merging all collected data into a consolidated single resource for information regarding pending and installed DG systems (NEM and wholesale),
3. Ensuring that these data sets are fully available to both government agencies and the public to the fullest extent possible in the public interest, consistent with demonstrated needs for confidentiality.

## **Conclusion.**

The Clean Coalition appreciates the ongoing work of all parties to this proceeding and the opportunity to offer our comments on this ruling as summarized above.

Respectfully submitted,

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## Appendix

### Clean Coalition recommended list of wholesale interconnection data for ongoing collection:

1. Utility review deadlines and status of such review
2. Point of interconnection
3. Prime mover
4. Project seasonal peak capacities
5. Substation name (distribution and transmission)
6. Updated in-service date (if different than requested)
7. Actual in-service date (if project is completed)
8. Estimated cost of interconnection (separated by interconnection, distribution and network upgrades)
9. Actual cost of interconnection (if completed)
10. POI approximate distance from substation
11. Circuit and line section penetration level
12. Connection to a Main feeder or branch line
13. Limiting conductor rating
14. Ampacity of circuit at POI
15. Known interconnection constraints on the circuit/line section at issue
16. Utility staff time (hours) required for interconnection studies
17. Whether the project is located in a “preferred” interconnection zone, as identified by utility interconnection maps or other defined criteria
18. Notes for any additional items

### *Explanations*

1 is designed to give policymakers and stakeholders more information about the interconnection process for each project

2 is designed to give more transparency into project development and grid implications

3 is designed to give more insight into the particular technologies being developed

- 4 is designed to give more insight into grid reliability issues and peak supplies
- 5 is designed to give more transparency into project development and grid implications
- 6-7 are designed to update the proposed COD information that is already supplied but is very often changed
- 8 is designed to track cost data as it is provided to applicants
- 9 is designed to true up estimates with actual costs
- 10 is designed to allow comparisons of distance to substation with costs of interconnection
- 11 is designed to allow comparisons between penetration level and cost of interconnection
- 12 is designed to allow comparisons between feeder/branch and cost of interconnection
- 13. is designed to allow comparisons between conductor rating and cost of interconnection
- 14 is designed to allow fine-tuning with respect to expedited interconnection by learning more about ampacity and cost of interconnection
- 15 is designed to allow stakeholders to know about constraints on the circuit/line section
- 16 is designed to allow comparisons between actual utility costs of studies and the deposit amounts
- 17 supports tracking in relation to development and effect of efforts to guide projects to designated areas
- 18 is a catchall

#### Commercial-size NEM comparison to wholesale interconnection

Because NEM interconnection procedures have been very successful, comparison between commercial NEM and non-NEM applications of comparably sized (>50 kW) may be very useful, and will involve only a very small subset of NEM projects. We do not necessarily advocate for the same degree of project tracking for the much more numerous residential sized installations .