BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

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

COMMENTS OF THE OFFICE OF RATEPAYER ADVOCATES TO ADMINISTRATIVE LAW JUDGE'S RULING SETTING SCHEDULE FOR COMMENTS ON STAFF REPORTS AND SCHEDULING PREHEARING CONFERNCE

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I. INTRODUCTION

Pursuant to the *Administrative Law Judge's Ruling Setting Schedule for Comments on Staff Reports and Scheduling Prehearing Conference* (Ruling) filed on July 29, 2014, the Office of Ratepayer Advocates (ORA) herein submits comments on the staff reports.

II. BACKGROUND

The Commission opened Rulemaking (R.) 11-09-011 on September 22, 2011 to review and revise the rules and regulations governing interconnecting generation and storage resources to the electric distribution systems of Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE) and San Diego Gas & Electric Company (SDG&E). Decision (D.) 12-09-018, issued on September 20, 2012 adopted a settlement agreement that included revisions to Tariff Rule 21. Tariff Rule 21 contains the utilities' rules and regulations pertaining to the interconnection of generation. Tariff Rule 21 also sets forth the protective functions and equipment requirements for connection to the utilities' distribution networks. The settlement agreement required each utility to revise its Tariff Rule 21 to assign all interconnection requests to either the "Fast Track" – a streamlined review process designed for easy to connect generating facilities – or the Detailed Study, reserved for more complicated generating facilities. On July 29, 2014 the Administrative Law Judge issued the Ruling

to continue the process of modifying Rule 21 to provide cost certainty for the interconnection process and to handle energy storage interconnection.

III. DISCUSSION

The Ruling included two staff reports: (1) Cost Certainty for the Interconnection Process, and (2) Issues, Priorities and Recommendations for Energy Storage Interconnection as Attachments A and B, respectively. These two reports are the "starting point for the evidentiary record on these two topics."[1] The questions posed in the staff reports and ORA's responses or comments are addressed below.

The reports effectively frame the most important issues that will be addressed in the next phase of this proceeding. The following summarizes ORA's recommendations:

- Any cost certainty approach that is adopted by the Commission must not result in costs shifting from the utility and/or the applicant to ratepayers;
- Safety is a top priority and ORA agrees with the proposed safety scheme that calls for the applicants to submit to utilities a safety plan containing contingency plans and mitigation techniques and for the utilities to coordinate with the Safety Enforcement Division biannually to review the plans;
- Results of utility and applicant consultations should be subject to review and input from all the stakeholders so as to guarantee a fair and accurate interconnection process;
- Energy storage should be defined based on input of electricity as a source to store energy and output of the stored electricity;
- Technologies that can expedite interconnection review or study processes should be implemented at reasonable costs, to be paid by the utilities and the applicants;
- Study results should include possible high, mid and low distribution costs and corresponding storage use restrictions to enable the applicant make an informed decision whether to proceed with the interconnection or not;

[1] Order Instituting Rulemaking on the Commission's Own Motion to improve distribution level interconnection rules and regulations for certain classes of electric generators and electric storage resources, R.11-09-011, *Administrative Law Jude's Ruling Setting Schedule for Comments on Staff Reports and Scheduling Prehearing Conference* (Ruling), p. 1, July 29, 2014.

- There should be a single standard application across all three major utilities to make the interconnection process more transparent; and
- The Commission should continue to waive the interconnection process rules for Electric Vehicles (EV) so as to encourage EV adoption.

A. Cost Certainty for the Interconnection Process

Several cost certainty proposals were articulated in the staff report: the utilities proposed a Fast Track process where an applicant would have the option to pre-purchase a fixed distribution grid upgrade cost estimate that would not change provided the applicant chose to interconnect in a "low impact area" on the electrical grid, provided site and project information upfront and paid an additional fee; the Interstate Renewable Energy Council (IREC) proposed a "pre-determined, fixed per-kW [kilowatt] fee for generator interconnection occurring in lower cost locations on the distribution system based on historical data"[2] and an alternative model based on the cost certainty methodology of the State of Massachusetts; and the Clean Coalition proposed a "per configuration cost guide" developed on configurations representative of common distribution grid upgrades.[3]

Based on the principle that "simple projects with little or no impacts should be afforded a streamlined application and review, while more complex projects require a somewhat more complex approach"[4] the staff recommends a Fast Track process based on the utilities' recommendation with additional modifications by the staff, and a Non-Fast Track process based on the Massachusetts model with modifications. In the Massachusetts model the utilities provide a cost estimate to customers following the interconnection studies. The customer is not held responsible for grid upgrade costs exceeding the estimate by more than 10%. The staff proposed modifications to the

[2] Ruling, Attachment A, Cost Certainty for the Interconnection Process Staff Report, p. 9.

[3] *Id.* at p. 11.

[4] *Id.* at p. 12.

Massachusetts model to make the process run more smoothly.[5] ORA agrees in principle that the implementation of cost certainty in the interconnection process will enhance the efficiency of the interconnection process. However, any cost certainty approach that is adopted by the Commission must not result in costs shifting from the utility and/or the applicant to ratepayers. ORA reserves the right to provide additional comments on this issue later in this proceeding.

B. Issues, Priorities and Recommendations for Energy Storage

1. Safety Planning

Please provide comments on this proposed safety scheme meant to ensure safety for the people and environment of the State of California in a changing electrical environment. What elements should be part of the safety plan?

The Report recognizes that safety is a top priority for the Commission and calls for the applicants to submit to utilities a safety plan containing contingency plans and mitigation techniques and for the utilities to coordinate with the Safety Enforcement Division (SED) biannually to review the plans. ORA agrees with the proposed safety scheme. The plans should address safety with respect to the public, utility and storage facility employees, storage facility owners and the distribution/transmission system. The Commission should consider whether the utilities' existing safety practices are sufficient. Energy storage facility owners and the general public should be aware of safety issues related to energy storage interconnection and energy storage facility operation. At minimum, the Commission should require the utilities to document and implement safety best practices. Specifically, to protect the distribution system and the equipment interconnected to the system, acceptable performance requirements should be developed, and corresponding testing and monitoring systems should be installed to ensure that all the distribution components, including the energy storage facilities, perform to acceptable safety performance requirements.

[5] *Id.* at p. 14.

2. Pre-Interconnection Consultation Process

In comments, please delineate the expected services to be provided by this consultation process, the timeframe and format for the delivery of results, and any other recommendations on this collaborative process.

The utilities should provide an unbiased consultation for prospective interconnection projects since they have the expertise in the rules, tariffs, and rates that are applicable to interconnections. The results of these consultations should be subject to review and input from all the stakeholders so as to guarantee a fair and accurate process until such time that the process has been proven successful in easing the interconnection process.

3. Define Storage Interconnection Terms and Concepts in the Definitions Section of Rule 21

In comments, please list the terms or concepts that require definition to be added to the Rule 21 Definitions section. Please also attempt to provide a working definition of the term or concept.

Energy storage definitions should be similar to that of other generating distributed energy resources, except that storage can also act as a "load" while other generating energy resources generally do not. Application (A.)14-02-006 is already dealing with the subject of how to define energy storage, and this outcome should be referenced in Rule 21. In A. 14-02-006, Energy Division provided a discussion paper for a workshop, which included a narrow definition (man-made process) and a broad definition (man-made or natural process).[6] A narrower definition was also included where energy storage was defined as "storing specifically electrical energy generated via a man-made mechanism connected to the electric grid." ORA recommends using a narrower definition at this time. Storage should be defined based on input of electricity as a source to store energy and output of the stored electricity.[7] This definition can be subject to refinements in the

[6] California Public Utilities Commission Energy Division Staff Discussion Paper, June 2, 2014 Workshop, p. 7. www.cpuc.ca.gov/NR/.../0/StaffDiscussionPaper_0601214.pdf

[7] The exception is thermal storage as specifically required by Assembly Bill 2514 (Pub. Util. Code § 2836 et seq.).

future as actual experience is gained with energy storage resources. For a more thorough discussion, see ORA's Response to the Administrative Law Judge's Scoping Memo in A. 14-02-006.[8]

4. Identify the Fast Track Threshold for Storage Projects and the Fast Track Study Screens for Storage Projects

Please comment on the threshold parameters for a storage facility to access the Fast Track Process. Please also discuss the aspects of the storage facility that should be studied in a standardized way for Fast Track Study Screen development.

ORA is currently not aware of any technical reasons why thresholds for energy storage should differ from other generating distributed energy resources. The exception could be that some energy storage facilities can be sized smaller than other generating distributed energy resources and this may allow them to access the Fast Track process. ORA is not aware of any reasons why smaller energy storage facilities cannot be treated under the Fast Track process. ORA may provide additional input on this issue later in this proceeding.

Please comment on the special case of "non-exporting" storage: What parameters and requirements should be considered to determine whether or not a storage device is "non-exporting"? What type of proof should be available to prove "non-exporting"? Should non-exporting storage devices be allowed to bypass the interconnection process entirely? Should some other process be required? If so, what?

"Non-exporting" energy storage devices should be treated similarly to other non-exporting generating distributed energy resources. If the existing agreements do not include language on "non-exporting" generating units, then language should be added to the agreements specific to energy storage. Non-exporting energy storage facilities should not be allowed to bypass the interconnection process entirely, but should be allowed a Fast Track interconnection process to guarantee safety and their non-exporting status.

[8] Available at http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M094/K270/94270624.PDF

Please comment on the practicalities of reducing interconnection study times by standardizing study data and system characteristic into algorithms made accessible through a visual platform. Please describe the potential benefits and expected costs of instituting such technology advancement in utility interconnection departments.

ORA is not aware of the technologies that can expedite the interconnection review or study processes. Such technologies, if available, should be implemented at reasonable costs, to be paid by the utilities and the applicants. This would make the interconnection process faster and encourage applicants to continue with the process and not drop out mid-way through the process because of delays. Any such technology must be evaluated and tested against the current methods in order to determine their efficacy and reliability.

5. Update the Interconnection Agreement to Account for Storage Attributes

Please comment on how might the utility and applicant best consult to determine the optimal storage facility settings and prevent an extended Interconnection Agreement negotiation phase when a variety of distribution grid upgrades and storage facility working parameters are discussed as possibilities.

ORA reserves the right to comment on this later in this proceeding.

How best can the utility provide information to the applicant, and what type of information would be required at the conclusion of the study phase that would be most helpful to all parties in order to move smoothly into the Interconnection Agreement signing phase? Should study results reflect the possible high, mid and low level distribution upgrade costs and corresponding storage use restrictions or some other method?

The Commission should establish a reasonable time frame during which the utility must provide all relevant interconnection criteria to the applicant after the conclusion of the study phase. The study results should include possible high, mid and low distribution costs and corresponding storage use restrictions to enable the applicant to make an informed decision whether to proceed with the interconnection or not.

What type of penalties might accrue for operations outside of agreed-to use restrictions?

ORA reserves the right to comment on this later in this proceeding.

6. Update the Interconnection Application to Accommodate Storage Attributes

Please comment on the potential for utilizing the internet as the only submission channel for interconnection information, detail what information should be delivered to a utility on an interconnection request for a storage facility, provide any other recommendations for utilizing the interconnection application to maximizing the efficiency of the interconnection process. Should there be a single standard application?

The internet, in addition to other means of accelerating the interconnection process, should be further explored by all stakeholders. At a minimum, the applicant should provide the utility the size, type of storage technology, whether generating or non-generating, and the proposed location for the interconnection, to enable the utility to evaluate the potential impact of the storage facility on the distribution system and to estimate the interconnection cost for the facility. There should be a single standard application across all three major utilities. A single standard application will make the process more transparent and will make it easier for applicants to apply for interconnection in different areas.

7. Utility Consideration of Alternative Interconnection Metering and Protection Schemes

Please discuss how an Applicant might trigger a "New Technology/ New Schema" Testing Process, what that process should be, the information that should be submitted to it, and how we might involve standard writing bodies to respond to changing needs in the energy industry. How can utility test labs be leveraged? Discuss how Applicants should present proof-of-concept evidence, including what type of evidence is necessary, when making a request that any party consider altering best practices.

These issues are complex and should be discussed and resolved through workshops. A collaborative process with all the stakeholders, including experts in these

areas, to discuss advances in technology and their impacts on the distribution system, would be an efficient way of addressing and resolving these questions.

8. Electric Vehicle Interconnection Issues

The Commission should continue to waive the interconnection process rules for Electric Vehicles (EV) to promote development of the EV market. Public Utilities Code Sections 2835-2839 do not include non-storage electricity resources such as demand response and energy efficiency. Uni-directional power flow or V1G (i.e., from the grid to the vehicle) is an example which would qualify under demand response, but not energy storage. Bi-directional power flow (vehicle to the grid) would qualify as energy storage. Therefore, the applicability and suitability of the interconnection protocols adopted for the energy storage facilities in this proceeding should be evaluated as EV bidirectional technology matures.

IV. CONCLUSION

ORA respectfully requests the Commission adopt its recommendations discussed above including ensuring: interconnection cost shifting from the utility and/or the applicant to ratepayers does not occur; safety of the public and all parties is addressed; a transparent and easy interconnection process is developed; and an increase in EV adoption is supported.

Respectfully submitted,

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