

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

Application of SAN DIEGO GAS & ELECTRIC COMPANY (U902M) for Approval of its Energy Storage Procurement Framework and Program As Required by Decision 13-10-040.

Application 14-02-006
(Filed February 28, 2014)

Application of Pacific Gas and Electric Company (U39E) for Authorization to Procure Energy Storage Systems during the 2014 Biennial Procurement Period Pursuant to Decision 13-10-040.

Application 14-02-007
(Filed February 28, 2014)

Application of Southern California Edison Company (U338E) for Approval of It's 2014 Energy Storage Procurement Plan.

Application 14-02-009
(Filed February 28, 2014)

**PROTEST OF SIERRA CLUB IN CONSOLIDATED 2014 ENERGY STORAGE
PROCUREMENT PLAN APPLICATION PROCEEDINGS**

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PROCEDURAL HISTORY

On February 28, 2014, San Diego Gas and Electric Company (“SDG&E”), Pacific Gas and Electric (“PG&E”) and Southern California Edison (“SCE”) (collectively “IOUs”) filed applications for approval of their 2014 Energy Storage Procurement Plan. On March 26, 2014, Administrative Law Judge Colette Kersten (“ALJ”) consolidated the actions into one proceeding. In the same ruling, the deadline for filing protests/responses to the applications was extended to April 7, 2014. Pursuant to Rule 2.6 of the Commission’s Rule of Practice and Procedure, Sierra Club submits this protest/response to the IOUs’ 2014 Energy Storage Procurement Plan Applications. This protest is timely filed.

I. Grounds for Protest

This Protest addresses issues raised in the Applications. Sierra Club is currently in the preliminary stage of its investigation. Based on this initial review, Sierra Club’s grounds for protest are described below.

A. The Consistent Evaluation Protocol Inadequately Addresses the Benefits of Energy Storage.

The Consistent Evaluation Protocol (“CEP”) must be improved by increasing the level of detail of qualitative information used to evaluate offers, and, where possible, quantifying them. Considering that it is a policy and stakeholder informing tool, the CEP should incorporate metrics that gauge California's progress towards achieving its renewable energy and climate goals. The proposed CEP suggests that the only relevant quantifiable information in this proceeding has a market value attached to it. This is exactly the approach that has created barriers to the adoption of energy storage and necessitated the Commission adopting energy storage mandates to transform the California market. The CEP should be designed to analyze and capture an evaluation of the costs as well as the wide range of benefits that can be provided by energy storage.

A greater effort can be made to quantify the ‘qualitative’ properties of offers described in the IOUs’ proposed CEP. Currently, the quantitative component of the CEP focuses exclusively on Net Market Value (“NMV”). While a comparison of NMV helps inform the CPUC and stakeholders of an offer's value in the market, it ignores the assessment of an offer’s grid, environmental, and societal value by delegating it to a simple qualitative end-use categorization. Although some offers’ properties may be difficult to quantify in terms of market value, they can be technically quantified and as a result, provide a more accurate comparison of all offers through the RFO. For example, both project developers and IOUs can estimate how much renewable energy generation capacity (either wind and solar, in megawatts) an offer will help facilitate and integrate (qualitative items 8 and 9). An evaluation method for this should be created to provide more critical and pertinent information. The deferral value or capacity value of distribution peak capacity support (15) could also be quantified. This quantification does not necessarily need to incorporate market values, but could include standard calculations and metrics to be agreed upon. Similarly, the reliability benefits of meeting a local capacity need should be assessed either through a quantitative metric or an agreed-upon qualitative measure, and the benefit of GHG reductions can be included quantitatively as well. In general, each benefit of energy storage should be reviewed and efforts should be made to create agreed-upon quantitative metrics where possible, or qualitative measures that provides a clearer pathway for assessment.

Since the CEP is a new tool for evaluating the effectiveness of the energy storage procurement, it should be vetted through at least one additional Energy Division stakeholder workshop. Decision 13-10-1040 finds that “that the EPRI and DNV KEMA models should not be required by the Commission as the sole methodologies for assessing cost effectiveness at this point”,¹ and as such, the workshop should allow stakeholders to address other methodologies which better gauge the effectiveness of energy storage offers (such as integration of renewable capacity or peak capacity support). As it is currently proposed, the CEP is not detailed enough to

¹ D.13-10-1040, p. 63.

allow a full assessment of an offer's effectiveness. In addition, the Decision finds that "the IOUs shall assess the full range of benefits and costs identified in the use-case framework and the EPRI and DNV KEMA reports submitted in this proceeding;"² the current treatment of benefits under the 'qualitative' component of the proposed CEP falls short of providing the information necessary to evaluate the energy storage procurement. By focusing on a limited set of quantitative metrics for energy storage benefits and relegating all other benefits to qualitative descriptions, the CEP is in effect ignoring highly important benefits of energy storage that actually led the legislature to pass AB 2514 and formed the policy basis of the energy storage decision.

B. The IOUs' Proprietary Evaluation Models Should Be Required To Consider Avoided System Costs.

As they are currently proposed, SDG&E's and SCE's proprietary offer evaluation methodologies are too narrowly defined and should be broadened to include valid system benefits, which have been evidenced in the course of the energy storage proceeding and are recognized by another regulated IOU in this proceeding. Neither SDG&E's nor SCE's evaluation protocols sufficiently consider avoided system costs, which should be a factor in making decisions for energy storage. PG&E has proposed both a NMV and a Portfolio Adjusted Value ("PAV") approach to evaluating RFO offers. PG&E's inclusion of a PAV approach is a step in the right direction, and is an example that other IOUs in this proceeding should follow. The PAV approach recognizes certain benefits overlooked by SDG&E and SCE, including Transmission Investment Deferral Value and Renewables Curtailment Support.³

PG&E's recognition of these avoided costs and willingness to quantify them in a standardized evaluation approach, should be followed by other IOUs in the proceeding. Some or all of these benefits have also been recognized by studies presented before the Commission in

² *Id.*, p. 63

³ Pacific Gas & Electric Company ("PG&E"). (March 14, 2014). "Evaluation of Storage Offers," presented by Jan Grygier at the CPUC IOU Energy Storage Applications Workshop.

this proceeding.⁴ Further, all IOU evaluation methodologies should also include additional benefits of storage that are currently only included qualitatively in the CEP.

C. SDG&E Should Only Consider Offers that Meet the Requirement for System or Local Resource Adequacy Credit; and the Same Standard Should Apply to SCE.

Energy storage that only counts towards flexible capacity requirement should not count towards SDG&E's compliance with the storage mandate. SDG&E reports that with regard to local and flexible capacity requirements ("LFCR"), SDG&E will seek "energy storage that will qualify as counting towards SDG&E's local capacity requirements" but that SDG&E will also "consider offers that may not meet the requirements for system or local RA credit, but would qualify to count toward flexible capacity requirements."⁵ This proposal to count flexible capacity requirements offers SDG&E too much latitude in procurement. The retirement of the San Onofre Nuclear Generating Station and planned retirement of once-through-cooling facilities have resulted in local capacity needs in the San Diego Local Capacity Area. Because local capacity needs are driving procurement of new generation in SDG&E service territory, SDG&E should not be permitted to procure energy storage that meets flexible, but not local capacity needs.

A battery that can meet flexible capacity RA requirements may not significantly contribute to meeting system/local capacity needs. Under the PUC's current resource adequacy proposal, an energy resource can qualify for flexible resource adequacy by providing three hours of sustained ramping capability. Because energy storage charging is included in the ramping calculation, a one and a half hour battery can meet this requirement. However, local/system capacity requires four hours of continuous discharge. A four hour battery, which is well suited to meet local/system RA requirements, also meets flexible capacity RA requirements. A four

⁴ See Draft Energy Storage Cost-effectiveness Methodology and Preliminary Results. Public Interest Energy Research (PIER) Program; EPRI. (Jun. 2013); Cost-Effectiveness of Energy Storage in California: Application of the EPRI Energy Storage Valuation Tool to Inform the California Public Utility Commission Proceeding R.10-12-007. 300200162; Eyer, J. & Corey, G. Energy storage for the electricity grid: Benefits and market potential assessment guide. Sandia National Laboratories (2010); Abrams, A., Fioravanti, R., Harrison, J., Katzenstein, W., Kleinberg, M., Lahiri, S., Vartanian, C. (DNV KEMA Energy & Sustainability). (Jun. 21, 2013).

⁵ Prepared Direct Testimony of Lee S. Krevat on behalf of San Diego Gas & Electric Company, pp. LSK-15, LSK-16. (Feb. 28, 2014).

hour battery will also serve to avoid new fossil fuel generation on a 1:1 MW basis. Given SDG&E's acute need for local capacity combined with the ability of storage meeting local capacity requirements to also meet flexible capacity requirements, SDG&E should not be permitted to procure energy storage that only meets flexible capacity requirements. Since SCE has similar local capacity needs, SCE should also not be allowed to meet the energy storage mandate with batteries that only meet flexible capacity requirements.

D. PG&E Requests to Include Power Generated from Farm Operations as Compliance with its Storage Mandate Should be Denied.

PG&E is attempting to expand the definition of qualified energy storage projects beyond reasonable bounds. PG&E requests that "2.52 MWs of capacity connected at the distribution level that burn dairy gas" should be counted towards its energy storage compliance.⁶ Counting biomethane technologies toward energy storage requirements, as PG&E proposes, is not in line with the intent of the energy storage decision to create market transformation. PG&E argues that biomethane is similar to molten salt storage,⁷ but this analogy fails to withstand scrutiny. The biomethane digesters are a one-way conversion of methane into electricity and simply produce electricity from a fuel. Under this scenario, all bio-mass put in storage containers would improperly count as energy storage. Taken to its logical conclusion, putting fossil fuels in a storage tank could also count towards the mandate. To count as electric energy storage, the storage system needs to be able integrate into the grid in both directions for discharge and recharge. The biomethane digesters cannot recharge with electrical or thermal power. Biomethane fuel does not recharge and should not count towards meeting the energy storage targets. Adopting PG&E's approach would erode a major value of electric energy storage.

Furthermore, biogas projects already benefit from other programs. For example, PG&E runs a program called Net Energy Metering for Biogas Digester Generators ("NEMBIO").⁸ NEMBIO offers biogas digester operators the opportunity to receive credit for the electricity they

⁶ PG&E 2014 Energy Storage Procurement Application Prepared Testimony, p. 2-3. (Feb. 28, 2014).

⁷ *Id.*, p. 3-4.

⁸ PG&E. "Net Energy Metering for Biogas Digester Generators."

<http://www.pge.com/mybusiness/customerservice/nonpgeutility/generateownpower/netenergymetering/biogasnem/>

generate. Biogas also qualifies for financial incentives under the Self-Generation Incentive Program.⁹ Since biomethane technologies receive these benefits, they would have an unfair advantage relative to other energy storage technologies vying to be procured, which would hinder progress toward market transformation. In effect, PG&E would get undeserved extra credit for these products.

The Commission should adopt a bright-line rule that energy generated from biogas, either from a farm or a landfill, should not count towards the energy storage procurement target.

II. The Schedule Should Include at Least One Workshop on the Consistent Evaluation Protocol and its Relationship to Utilities Evaluation Protocol with an Opportunity for the Parties to Present Evidence.

The CEP will be an important source of data for evaluating the efficacy of the energy storage programs; however, the IOUs plan to use different evaluation criteria for the selection of the energy storage projects. The proceeding would benefit from a workshop that explored the differences between the CEP and the IOUs evaluation protocols.

A month after the workshop, the Parties should also have an opportunity to present testimony or materials for the record regarding the evaluation protocols, as well as any other issues in the proceeding. After this, the Parties should have the opportunity to brief the relevant issues in the proceeding.

III. Communication of Service

For the purpose of receipt of all correspondence, pleadings, orders and notices in this proceeding, the following counsel for Sierra Club should be placed on the service list as a “party”:

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Additionally, the following representatives of Sierra Club should be placed on the service list as “information only”:

⁹ PG&E. “Self-Generation Incentive Program (SGIP).” <http://www.pge.com/en/mybusiness/save/solar/sgip.page>

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CONCLUSION

Sierra Club looks forward to participating in this proceeding to ensure an accurate evaluation of the IOUs’ procurement plans and evaluation tools. Sierra Club’s goal is to ensure that the plans and tools in this proceeding reflect the requirements and values of D.13-10-1040 and provide sufficient information to the Parties and public.

Dated: April 7, 2014

Respectfully submitted,

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