

Stakeholder Comments Template

| Submitted by | Company | Date Submitted |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------|
| Kenneth Sahm White Director, Economic & Policy Analysis Clean Coalition (831) 425 5866 sahm@clean-coalition.org www.clean-coalition.org | Clean Coalition | August 20, 2014 |

Please use this template to provide your comments on the presentation and discussion from the stakeholder meeting held on August 13, 2014.

Submit comments to EnergyStorage@caiso.com

[Comments are due August 20, 2014 by 5:00pm](#)

The presentation discussed during the August 13, 2014 stakeholder meeting may be found at:

<http://www.caiso.com/Documents/AgendaPresentation-EnergyStorageInterconnection.pdf>

Please provide your comments in each of the topic areas listed below.

[Comments are provided by the Clean Coalition on the following two topics only: The need for changes in the GIDAP, and the unbundling of flexible and generic RA market participation for storage resources]

The Clean Coalition is a California-based nonprofit organization whose mission is to accelerate the transition to renewable energy and a modern grid through technical, policy, and project development expertise. The Clean Coalition drives policy innovation to remove barriers to procurement, interconnection, and realizing the full potential of integrated distributed energy resources, such as distributed generation, advanced inverters, demand response, and energy storage. The Clean Coalition also works with utilities to develop community microgrid projects that demonstrate that local renewables can provide at least 25% of the total electric energy consumed within the distribution grid, while maintaining or improving grid reliability. The Clean Coalition

participates in numerous proceedings in California agencies and before other state and Federal agencies throughout the United States.

Are changes to the GIDAP needed?

Given the framework developed under existing GIDAP rules for accommodating energy storage interconnection requests (i.e., without requiring modification to the GIDAP tariff), the ISO invites stakeholders to comment on whether changes to the GIDAP tariff are still needed. Stakeholders are asked to be specific and describe any changes they believe are needed despite this framework and explain why they are needed. (see slide 9)

Comments:

While no changes to the GIDAP tariff appear currently necessary to accommodate most storage interconnections at this time, some refinement in the study processes and Fast Track eligibility should be considered as soon as practical to ensure full and non-discriminatory access of all storage configurations. In particular, this includes identifying the Fast Track Threshold for combined storage configurations and the Fast Track Study Screens for associated alternative interconnection protection schemes.

The total facility output capacity to the grid system must be considered when determining grid impact and Fast Track review eligibility; however, the application of devices and operational settings limiting the maximum total export to the grid should be allowed when determining Fast Track review eligibility and in grid impact studies. This should included the use of advanced inverter functionality and application¹ currently being developed in the CPUC Rule 21 proceeding R. 11-09-011, and specifically the related May 13, 2014 Scoping Memo and Ruling issued by Comm. Picker, and subsequent Advice Letters currently before the Commission².

Ultimately it is the maximum impact of the total facility as measured at the point of common coupling (PCC) with the grid system that should be considered, rather than the additive impact of each component of the facility. For example, if generation and storage are co-located at a single PCC, with or without onsite load, but controlled by equipment settings that limit the maximum export from the aggregated facilities, it is

¹ CEC/CPUC Candidate DER Capabilities: Recommendations for Updating Technical Requirements in Rule 21, dated January 2014

² Joint Motion of Pacific Gas and Electric Company, Southern California Edison Company, San Diego Gas and Electric Company dated July 18, 2014, regarding interconnection tariff modifications for the implementation of smart converter functionalities.

this limited export capacity that should be utilized in determining study requirements, Fast Track review eligibility, and system impact. Facility export limitations may include both absolute limits such as physical protection devices and/or by variable limits established by programmed schedule (time of day), by remote signaling from the ISO, or by autonomous monitoring of grid conditions.

Resource Adequacy

The ISO invites stakeholders to comment on whether they favor “unbundling” flexible capacity from system/local capacity as a means of facilitating energy storage in California and explain why or why not. (see slides 22-30)

Comments:

In meeting future flexible capacity needs it is clearly important to ensure maximum recognition and use of all available resources in order to avoid the development and procurement of excess capacity or the economic stranding of existing resources, ultimately at ratepayer expense. Likewise, where procurement is called for, the ISO has a vital interest in ensuring full market access for preferred resources in order to support their continued development and the state’s transition to secure and affordable resources.

We appreciate and strongly support the ISOs efforts to incorporate use-limited resources and responsiveness to stakeholder input. There is now broad understanding and acknowledgement both that all resources have some kind of use limitations, and that flexibility needs are multi-dimensional, addressing more than one ramp per day over multiple hours, both scheduled and on demand, with increased quantities of regulation. Likewise, it is recognized that much of the flexible capacity required is only needed during limited periods of the year or limited hours of the day. Matching the availability of use-limited resources to the actual needs successfully avoided excluding the capacity of nearly half the resources that can be contributed from hydro. It is likewise important to move forward in recognizing the ways and circumstances under which each other use-limited resource can be leveraged to meet the actual flexibility needs.

The capacity of use-limited resources, including those available for less than a three hour continuous ramp, can offer a significant contribution to the ISOs flexibility needs as

well as savings when included in economic dispatch. This is particularly true when such use-limited resources can be sequentially dispatched over the course of a ramping period or applied to mitigate the upper or lower bounds of the total ramp. As previously noted, the actual need is for ramp mitigation, which may include proactive measures including load shifting and dispatchable load control that is economically and environmentally preferable to addressing an unmitigated ramp need through conventional resources.

PG&E, SDG&E, EnerNOC and others have recommended in prior CPUC filings on Resource Adequacy changing the bundling of generic and flexible capacity, at least in application to supply-side demand response resources. For example, supply side Demand Response does not match the characteristics of generic generation for resource adequacy for bundled offers, and can be targeted much more efficiently than if conforming as a category 1 flexible resource product.

Unbundling is a step in addressing the inefficiencies of attempting to structure procurement within operational profiles associated with conventional generation which fail to account for the unique attributes and opportunities presented by each resource. Unnecessarily restricting the qualifying attributes may exclude very substantial portions of available and potential storage from the flexible market – storage shares significant attributes with Demand Response, and a more flexible market response can achieve greater efficiencies at lower cost.

The Clean Coalition supports reconsideration of bundling, while noting that unintended market impacts should be considered in the process. Significant concerns were raised in the FRACMOO discussions regarding the separation of generic RA and Flexible Capacity markets for conventional generators, however limited exceptions to bundling requirements for storage and other unique resources will have limited impact on the larger RA market, and would provide real world testing of any such impacts while maximizing access and contribution of these resources.