Comments of the

California Energy Storage Alliance (CESA) on the

ESDER 4 Workshop on March 18, 2019

Introduction:

Submitted by	Organization	Date Submitted
Alex J. Morris amorris@storagealliance.org	California Energy Storage Alliance (CESA)	April 1, 2019

CESA offers these comments on the Energy Storage and Distributed Energy Resources 4 (ESDER 4) scoping workshop hosted on March 18, 2019 at the CAISO. CESA appreciates the opportunity to comments and looks forward to working with the CAISO on these important issues.

CESA provides up-front general comments and also brief responses to the CAISO comments template points below.

CESA General Comments:

CESA believes a proper scope for ESDER 4, given the feedback from stakeholders, the CAISO, and discussion at the workshop should include:

- Non-Generator Resource (NGR) enhancements (per the scoping document) for in-front-of-the-meter (IFOM) energy storage resources and for storage as transmission resources.
    - This should include the sub-NGR enhancements shared by CESA in its previous ESDER 4 scoping comments[1], as well as the enhancement to just use a Participating Generator Agreement for NGRs, rather than two agreements.
- FERC Order 841 Compliance updates to avoid double-payment of transmission fees by behind-the-meter storage.
- Removing the 24x7 requirement for the Distributed Energy Resource Provider (DERP) model to support multiple-use application uses of DERP.
- A pathway for behind-the-meter resources to provide regulation.

[1] CESA Comments on ESDER 4 Issue Paper, February 26, 2019, pg. 1-2. http://www.caiso.com/Documents/CESAComments-EnergyStorage-DistributedEnergyResourcesPhase4-IssuePaper.pdf

  - This path may be through both Proxy-Demand Resource (PDR) modifications and or through enhancements to the DERP model to render it more viable for use by Distributed Energy Resources (DERs) in multi-use configurations, e.g. removing the 24x7 participation requirement.
- Modifications to the PDR and NGR model to remove Customer ID related limitations to support market participation from capacity differentiated Base-Interruptible Program (BIP) customers for an amount differentiated from the 'drop to' capacity range.
- A workshop on Market-Power Mitigation (MPM) for Non-Generator Resources in which stakeholders discuss key penetration thresholds, practices from other RTOs/ISOs, and potential mitigation models to include in a future 'ESDER 5'. While MPM is important, key data should be evaluated prior to prioritizing this matter in ESDER 4, and the level of complexity regarding MPM suggests to CESA that a 'two-step' approach is optimal, in which ESDER 4 provides opportunities for educating stakeholders while ESDER 5 is used to cement designs and implementation structures. CESA supports MPM where appropriate and welcome appropriate controls on market power risks.
- Other scoped items as planned, including evaluation of potential CAISO actions to effectuate multi-use application (MUA) report findings.

As the above recommended scope will be substantive, CESA no longer suggests consideration of default Resource Adequacy counting criteria in ESDER 4. Instead, CESA suggests a 2-hour discussion or stakeholder call regarding consideration of how export energy from behind-the-meter resources may be unvalued.

Comments to CAISO Template:

1. **Non-Generator Resource (NGR) model**
    a. SOC management

       CESA Comments: this is very important set of enhancements to consider in ESDER 4.

    b. Multi-interval optimization

       CESA Comments: this is very important set of enhancements to consider in ESDER 4. CESA understands how real-time dispatches may reflect future (non-binding) dispatch plans and anticipated settlements. CESA understands that non-mitigated resources can reflect these price risks in their bids, although some bid structures may be simple. CESA supports discussion of this topic in order to ensure dispatches are optimal and feasible, including how they consider real-power limitations of resources at the extreme end ranges of their state of charge, in line with CESA's comments.[2]

[2] *Ibid*

2. **Bidding requirements for energy storage resources**

   CESA Comments: Per CESA's above comments, CESA supports consideration of Market-Power Mitigation (MPM) when market power risks are realistic. CESA supports a workshop on storage and NGR related mitigation needs and strategies with a goal of defining 'need thresholds' for when MPM should be developed and implemented. This workshop should also be used to educate and build stakeholders input regarding potential MPM approaches. CESA believes the approach shared in the workshop which presumed an operation profile and sought to develop a mitigated bid around this optimized dispatch plan, while laudable, may not necessarily reflect the risks and profit plans of more dynamically bid storage resources. Further discussion will be helpful. CESA looks forward to working with the CAISO, the DMM, and others on this important topic.[3]

3. **Demand Response resources**

   a. CESA Response: no comment at this time. These topics are not high priority topics for CESA.

4. **Discussion on BTM Resources**

   a. Potentially removing 24x7 settlement requirement for non-resource adequacy resources utilizing the DERA/NGR participation model.

      CESA Comments: this is very important set of enhancements to consider in ESDER 4. Stakeholders highlighted how non-RA providers may especially seeks this ability, in part to provide regulation. Pathways to provide regulation should be included in ESDER 4, but the removal of the24x7 DERP requirement is important to address.

   b. Providing a forum for industry stakeholders to discuss potential QC methodologies for multi-tech type DERs for LRA consideration.

      CESA Comments: this is very important set of enhancements to consider in ESDER 4. CESA appreciates the CAISO's role as convener and thought-leader in some of these areas. CESA believes barriers still exist for many resources, and better, fairer, and more flexible market access seems like an appropriate goal for the non-discriminatory market being built by the CAISO. These topics should address issues raised in CESA's comments.[4]

About CESA:

[3] *Ibid*
[4] *Ibid*

CESA is an industry advocacy association focused on grid-connected energy storage. CESA's mission is to make energy storage a mainstream resource that accelerates the adoption of renewable energy and promotes a cleaner, more efficient, reliable, affordable, and secure electric power system. The CAISO's ESDER initiative specifically addressed market participation pathways for energy storage in select applications and is a core priority of CESA's.
CESA is a 501(c)(6) non-profit that represents over 70 member-companies and leaders in the energy storage industry.[5] www.storagealliance.org.

[5] 8minutenergy Renewables, Able Grid Energy Solutions, Advanced Microgrid Solutions, AltaGas Services, Amber Kinetics, American Honda Motor Company, Inc., Axiom Exergy, Brenmiller Energy, Bright Energy Storage Technologies, Brookfield Renewables, Carbon Solutions Group, Centrica Business Solutions, Consolidated Edison Development, Inc., Customized Energy Solutions, Dimension Renewable Energy, Doosan GridTech, Eagle Crest Energy Company, East Penn Manufacturing Company, Ecoult, EDF Renewable Energy, ElectrIQ Power, eMotorWerks, Inc., Enel, Energport, ENGIE, E.ON Climate & Renewables North America, esVolta, Fluence Energy, GAF, General Electric Company, Greensmith Energy, Ingersoll Rand, Innovation Core SEI, Inc. (A Sumitomo Electric Company), Iteros, Johnson Controls, Lendlease Energy Development, LG Chem Power, Inc., Lockheed Martin Advanced Energy Storage LLC, LS Power Development, LLC, Magnum CAES, Mercedes-Benz Energy, NantEnergy, National Grid, NEC Energy Solutions, Inc., NextEra Energy Resources, NEXTracker, NGK Insulators, Ltd., NRG Energy, Inc., Parker Hannifin Corporation, Pintail Power, Primus Power, Range Energy Storage Systems, Recurrent Energy, Renewable Energy Systems (RES), Sempra Renewables, Sharp Electronics Corporation, SNC Lavalin, Southwest Generation, Sovereign Energy, Stem, STOREME, Inc., Sunrun, Swell Energy, True North Venture Partners, Viridity Energy, VRB Energy,Wellhead Electric, and Younicos. The views expressed in these Comments are those of CESA, and do not necessarily reflect the views of all of the individual CESA member companies. (http://storagealliance.org).