

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

Order Instituting Rulemaking Regarding Policies, Procedures and Rules for Development of Distribution Resources Plans Pursuant to Public Utilities Code Section 769.	Rulemaking 14-08-013
And Related Matters.	Application 15-07-002 Application 15-07-003 Application 15-07-006
(NOT CONSOLIDATED)	
In the Matter of the Application of PacifiCorp (U901E) Setting Forth its Distribution Resource Plan Pursuant to Public Utilities Code Section 769.	Application 15-07-005
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**COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE
ON THE PROPOSED DECISION ON TRACK 3 POLICY ISSUES, SUB-TRACK 2
(GRID MODERNIZATION)**

Alex J. Morris
Sr. Director, Policy & Regulatory Affairs

Jin Noh
Policy Manager

CALIFORNIA ENERGY STORAGE ALLIANCE
2150 Allston Way, Suite 210
Berkeley, California 94704
Telephone: (310) 617-3441
Email: amorris@storagealliance.org

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In accordance with Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the California Energy Storage Alliance (“CESA”) hereby submits these comments on the *Proposed Decision on Track 3 Policy Issues, Sub-Track 2 (Grid Modernization)* (“Proposed Decision”), issued by President Michael Picker on February 20, 2018.

I. INTRODUCTION.

CESA¹ appreciates the Commission's efforts to add greater transparency to the distribution grid planning process through the adoption of an annual Grid Needs Assessment ("GNA") and a Distribution Investment Deferral Framework ("DIDF") with the issuance of Decision ("D.") 18-02-004. This decision adopted new processes and outputs that better ensure the consideration of distributed energy resource ("DER") alternatives and created new opportunities for market participants to provide information to the Commission and the investor-owned utilities ("IOUs") through the Distribution Planning Advisory Group ("DPAG") on the capabilities that DERs can provide in meeting distribution deferral needs. Without such transparency and opportunities to get involved in the distribution grid planning process, DER alternatives to traditional distribution grid investments could face some barriers in being sufficiently considered for distribution grid needs.

Similarly, the Grid Modernization Framework represents another important and interrelated framework to guide distribution grid planning decisions. As proposed, however, the Proposed Decision may allow for sub-optimal grid modernization investments outcomes insofar as it appears to provide the IOUs with too much discretion to propose modernization investments

¹ 8minutenergy Renewables, Able Grid Energy Solutions, Adara Power, Advanced Microgrid Solutions, AltaGas Services, Amber Kinetics, American Honda Motor Company, Inc., Brenmiller Energy, Bright Energy Storage Technologies, BrightSource Energy, Brookfield Renewables, Consolidated Edison Development, Inc., Customized Energy Solutions, Demand Energy, Doosan GridTech, Eagle Crest Energy Company, East Penn Manufacturing Company, Ecoult, EDF Renewable Energy, ElectriQ Power, eMotorWerks, Inc., Energport, Energy Storage Systems Inc., Engie, Fluence Energy, GAF, Geli, Greensmith Energy, Gridscape Solutions, Gridtential Energy, Inc., IE Softworks, 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, National Grid, NEC Energy Solutions, Inc., NextEra Energy Resources, NEXTracker, NGK Insulators, Ltd., NICE America Research, NRG Energy, Inc., Ormat Technologies, Parker Hannifin Corporation, Pintail Power, Qnovo, Range Energy Storage Systems, Recurrent Energy, Renewable Energy Systems (RES), Sempra Renewables, Sharp Electronics Corporation, SNC Lavalin, Southwest Generation, Sovereign Energy, STOREME, Inc., Sunrun, Swell Energy, True North Venture Partners, Viridity 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>).

without an adequate consideration of whether the investments represent the best alternatives to meet program goals, such as better enabling DER integration. Thus, in these comments, CESA recommends the following:

- Grid modernization investments should focus on those that are *primarily* driven by DER integration challenges.
- Grid Modernization Plans should explicitly require an assessment of energy storage and DER alternatives where applicable.
- Review and evaluation of Grid Modernization Plans should involve some informal review in the Distributed Resources Plan (“DRP”) proceeding (R.14-08-013).

II. GRID MODERNIZATION INVESTMENTS SHOULD FOCUS ON THOSE THAT ARE PRIMARILY DRIVEN BY DISTRIBUTED ENERGY RESOURCE INTEGRATION CHALLENGES.

The *Staff White Paper on Grid Modernization* (“Staff White Paper”) grappled with many of the challenges with defining grid modernization investments, as well as the use cases, processes, prioritization, and measurement of net ratepayers benefits.² Understandably, grid modernization investments can be challenging to uniformly define and categorize, as the Proposed Decision notes, due to the multiple purposes that these investments serve – *i.e.*, not only to enable DER integration but also to ensure or potentially enhance safety and reliability.³ It is hard to make the distinction between investments for DER integration versus safety/reliability purposes and to quantify the impacts on DER integration, and thus it would seem reasonable to adopt the Staff White Paper’s definition of focusing the Grid Modernization Framework on investments that are *primarily* driven by the need to accommodate high penetration of DERs.⁴

² *Assigned Commissioner’s Ruling Requesting Answers to Stakeholder Questions Set Forth in the Energy Division Staff White Paper on Grid Modernization, Attachment A: Staff White Paper on Grid Modernization*, issued on May 16, 2017.

³ Proposed Decision, p. 5.

⁴ Staff White Paper, p. 10.

However, the Proposed Decision adopts a more inclusive and holistic definition that encompasses grid modernization investments with *any* relation to DER integration, even including those investments that are driven by safety and reliability needs. While CESA agrees with the Proposed Decision that safety and reliability impacts should factor into the evaluation of all grid modernization investments, as these impacts likely factor into all grid investment and DER deployment decisions, CESA is concerned about defining the scope of the guidance for the Grid Modernization Framework as inclusive of all investments with any relation to DER integration, and even those that only impact safety and reliability. CESA believes that this all-encompassing language may open the door for all types of grid modernization investments that are insubstantially related to DER integration. Rather, CESA favors the definition proposed in the Staff White Paper that requires some showing that the proposed grid modernization investment demonstrate as being needed primarily for DER integration for the purposes of the Grid Modernization Framework. Some of those concerns may not materialize due to the IOUs needing to identify the primary driver of the grid need and the fact that these grid modernization investments will be scrutinized in the General Rate Case (“GRC”) process, but CESA remains concerned about the focus of grid modernization investments based on the proposed all-encompassing definition.

III. GRID MODERNIZATION PLANS SHOULD EXPLICITLY REQUIRE AN ASSESSMENT OF ENERGY STORAGE AND DISTRIBUTED ENERGY RESOURCE ALTERNATIVES WHERE APPLICABLE.

In addition to these broader concerns, CESA is pleased to see that the Proposed Decision acknowledges that the DER integration challenges may be resolved in part by energy storage and smart inverters and that the Grid Modernization Plans should not prejudice against any particular solution. Indeed, many of the grid issues highlighted in Appendix D of the Staff White Paper (*e.g.*,

voltage violations, voltage fluctuations, thermal overloads) can be addressed by energy storage systems and smart inverter settings.

CESA is concerned about there not being any ‘teeth’ to the consideration of all cost-effective alternatives to mitigating DER integration challenges. There is only language in the Proposed Decision to not discriminate against such DER alternative solutions, but there is no language to broadly consider potentially cost-effective alternatives that could meet that same identified grid need. As a result, the IOUs may favor proposing grid modernization investments involving load tap changers, voltage regulators, or capacitors to address a sustained voltage violation without actually considering and modeling energy storage solutions to meet that same need. Even though the IOUs are not discriminating against energy storage solutions *per se* in this case by not proposing it, there is no opportunity to compare the DER alternatives without having some requirement to ensure that they have considered and identified the most cost-effective option. A requirement to select DERs, if they are the least-cost best-fit option, ensures utilities consistently prioritize ratepayer interests for grid mod projects.

Similarly, the California Independent System Operator (“CAISO”) must consider non-wires alternatives in their transmission planning process, a similar type of requirement to at least consider DER alternatives should be required for the Grid Modernization Framework. This is an especially important issue considering that the IOUs’ Grid Modernization Plans are not subject to stakeholder review unless those stakeholders are involved in the intensive GRC process (see the next section of CESA’s comments). Granted, not all grid modernization investments should be subject to this requirement, as certain needs (*e.g.*, cybersecurity, circuit modeling, sensing equipment) are not needs that can be met by energy storage, smart electric vehicle (“EV”) charging, smart inverters, or other DER alternatives. However, to ensure best outcomes for

ratepayers, CESA recommends that the Grid Modernization Framework should identify the types of grid modernization investments where DER alternatives could meet some or all of the identified grid need and set a requirement for consideration of these alternative solutions in assessing and comparing to traditional grid modernization investments.

Furthermore, the Proposed Decision requires the IOUs to use the tools developed in the DRP proceeding to support the identification and prioritization of grid needs, but declines to prescribe the use of these tools to prioritize locations for grid modernization investments.⁵ CESA supports the use of the locational net benefits analysis (“LNBA”) and integrated capacity analysis (“ICA”) as they may identify areas where DER alternatives such as energy storage systems and smart EV charging can be deployed in lieu of a grid modernization investment. For example, energy storage or smart EV charging may be targeted in areas where there is low hosting capacity but high projected DER growth, which would obviate the need for certain grid modernization investments if that ICA information is reflected in the GNA, potentially enacted or signaled through LNBA values, and compensated through some new program, tariff, or alternative sourcing mechanism.⁶ As a result, rather than authorizing a grid modernization investment, directed DERs would be deployed to meet that grid need, which supports customer adoption of DERs, advances the state’s greenhouse gas (“GHG”) emission goals, enables DER integration, and potentially allows more DERs to interconnect at that location.

⁵ Proposed Decision, pp. 15, 19.

⁶ Alternative sourcing mechanisms other than competitive solicitations are being teed up for discussion and development in the Integrated Distributed Energy Resources (“IDER”) proceeding (R.14-10-003).

IV. REVIEW AND EVALUATION OF GRID MODERNIZATION PLANS SHOULD INVOLVE SOME INFORMAL REVIEW IN THE DISTRIBUTED RESOURCES PLAN PROCEEDING.

The Staff White Paper laid out three options for Commission review of Grid Modernization Plans and weighed the pros and cons of each approach.⁷ Generally, CESA favors an approach where the stakeholders in the DRP proceeding (ideally the DPAG) have a chance to review the proposed Grid Modernization Plans whether in a formal, more intensive process or in an informal, advisory capacity, even though the GRC review is appropriate for more extensive review to approve and authorize investments, especially given the subjective nature of categorizing grid modernization investments. CESA also understands that the IOUs are tasked with a ‘heavy lift’ in producing GNAs every year and do not want to unnecessarily delay critical grid investments if needed to maintain safety and reliability. At the same time, CESA believes that the technical expertise available in the DRP proceeding will be critical to the review of the Grid Modernization Plans, as the stakeholders in that proceeding have developed the LNBA and ICA tools, will become familiar with the GNA and DDOR filings, and bring industry expertise on potential DER alternatives to meet identified DER integration needs.

However, the Proposed Decision adopts “Option 1” from the Staff White Proposal where the Grid Modernization Plans are submitted directly to the GRC for review and evaluation.⁸ As noted in the Proposed Decision, while it is time- and resource-intensive to participate in the GRC process, the GRCs are identified as being most appropriate to minimize redundancy and ensure an even threshold of review for grid modernization investments as compared to safety or reliability only investments.⁹ As noted before, CESA recommends that the DPAG or another group within

⁷ Staff White Paper, pp. 26-28.

⁸ Proposed Decision, p. 20.

⁹ *Ibid*, pp. 24-26.

the DRP proceeding be tasked with, at minimum, providing informal review of Grid Modernization Plans before being submitted into the GRC for full review and evaluation. The DRP proceeding is where the GNAs are reviewed and vetted in detail, which could inform the review of the Grid Modernization Plans that could be submitted as a DPAG report as context for parties in the GRCs. CESA envisions that this level of additional (advisory) regulatory review would not be significantly more time-consuming given the newly established GNA process, and it would afford opportunity for over-stretched parties to provide feedback. Without this additional process, CESA is concerned that GRC stakeholders would not capture valuable insight that would potentially highlight flaws in assumptions used in Grid Modernization Plans or identify the most cost-effective alternative to the identified grid need,

V. CONCLUSION.

CESA appreciates the opportunity to submit these comments on the Proposed Decision and looks forward to working with the Commission, the IOUs and other parties going forward in this proceeding.

Respectfully submitted,



Alex J. Morris
Sr. Director, Policy & Regulatory Affairs
CALIFORNIA ENERGY STORAGE ALLIANCE
2150 Allston Way, Suite 210
Berkeley, California 94704
Telephone: (310) 617-3441
Email: amorris@storagealliance.org

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