

**BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION**

IN THE MATTER OF PROPOSED )  
AMENDMENTS TO THE INTEGRATED )  
RESOURCE PLANNING RULES 17.7.3 ) **CASE NO. 17-00022-UT**  
NMAC TO INCLUDE ENERGY )  
STORAGE RESOURCES )  
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**COMMENTS OF THE ENERGY STORAGE ASSOCIATION**

The Energy Storage Association (“ESA”) appreciates the opportunity to provide comments on the Notice of Proposed Rulemaking (“NOPR”) as requested by the New Mexico Public Regulation Commission (“Commission”) in Case No. 17-00022-UT, issued on February 8, 2017.

Since its inception 27 years ago, ESA has promoted the development and commercialization of safe, competitive, and reliable energy storage delivery systems for use by electricity suppliers and their customers. ESA’s nearly 200 members comprise a diverse group of electric sector stakeholders, including electric utilities, energy service companies, independent power producers, technology developers—of advanced batteries, flywheels, thermal energy storage, compressed air energy storage, supercapacitors, and other technologies—component suppliers, and system integrators.

ESA strongly supports the Commission’s NOPR and expects that its implementation will both ensure prudence of costs to New Mexico ratepayers and increase the feasible resource portfolio options of New Mexico utilities while maintaining system reliability. Inclusion of energy storage in utility integrated resource plan (“IRP”)

requirements will ensure that utilities consider the widest set of viable options to compare and select resource portfolios. Absent this consideration, the Commission cannot be certain that planned portfolios represent truly least-cost solutions. The proposed modifications to Integrated Resource Planning Rules 17.7.3 NMAC are simple and easy for all stakeholders to understand, and ESA supports them.

ESA notes that the Commission’s NOPR would only require utilities to include consideration of storage in their IRPs, leaving methodological decisions to the utilities. Yet, the inclusion of storage in IRPs in itself does not necessarily ensure appropriate consideration, as storage technology is different than generation resources. Energy storage may both inject and withdraw electricity from the grid; it can respond nearly instantaneously to a control signal and can ramp nearly instantaneously up or down to a precise level of service; and it is “always on” and available for service, even when neither charging nor discharging. Such unique characteristics of storage require a different approach to resource modeling if a utility will realize the full value of storage to its system. As outlined in ESA’s 2016 primer on including energy storage in utility IRPs,<sup>1</sup> three basic guidelines will ensure inclusion of storage in IRPs enhances prudent planning:

- 1) Use sub-hourly intervals in modeling to quantify the value of both capacity and flexibility benefits provided by energy storage;
- 2) Use a “net cost” analysis of capacity investment options to more accurately compare energy storage with traditional capacity resources; and
- 3) Use up-to-date storage cost estimates and cost forecasts to better identify near- and long-term prudence of storage.

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<sup>1</sup> Energy Storage Association, *Advanced Energy Storage in Integrated Resource Planning: Cost Inputs and Modeling Approaches*, Version 1.1., Nov 2016, available at <http://energystorage.org/irp>

Additionally, ESA notes that this recommended approach to modeling energy storage can be conducted as a separate “add-on” module in an IRP, should the Commission or utilities wish to continue using traditional IRP modeling methods.<sup>2</sup> As a first step, ESA recommends that 17.7.3.9 NMAC, section F.2., be modified to provide transparency in utility methods for including storage in their IRPs, as follows (changes underlined):

For supply-side and energy storage resource options, the utility shall identify the assumptions actually used for capital costs, fixed and variable operating and maintenance costs, fuel costs forecast by year, and purchased power demand and energy charges forecast by year, fuel type, heat rates, annual capacity factors, availability factors and, to the extent feasible, emission rates (expressed in pounds emitted per kilowatt-hour generated) of criteria pollutants as well as carbon dioxide and mercury. In addition, for energy storage resource options, the utility shall identify its method for comparing energy storage resource options to other supply-side options and its assumptions actually used regarding the services provided by and forecast capital costs of energy storage.

Utilities outside of New Mexico are already considering energy storage in their resource planning, and ESA recommends that the Commission and New Mexico utilities use them as references going forward. For example, Tucson Electric Power’s 2017 IRP found that energy storage was cost-effective capacity and included over 100 MW of storage in the selected resource portfolio.<sup>3</sup> Similarly, the Hawaiian Electric Companies updated their 2016 Power Supply Improvement Plan to capture the flexibility benefits of energy storage, resulting in selection of over 100 MW of additional cost-effective energy storage

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<sup>2</sup> For an example, see Chapter 8 of Portland General Electric’s *2016 Integrated Resource Plan*, available at <https://www.portlandgeneral.com/-/media/public/our-company/energy-strategy/documents/2016-irp.pdf?la=en>

<sup>3</sup> Tucson Electric Power, *2017 Integrated Resource Plan*, 3 April 2017, available at <https://www.tep.com/wp-content/uploads/2016/04/TEP-2017-Integrated-Resource-FINAL-Low-Resolution.pdf>

capacity.<sup>4</sup> Other recent IRP documents from utilities in Oregon<sup>5</sup> and Washington<sup>6</sup> include considerations of energy storage in long-term resource planning. Additionally, ESA recommends that the Commission consider as a reference the Washington Utilities and Transportation Commission's March 6, 2017, policy statement on treatment of energy storage technologies in integrated resource planning and resource acquisition.<sup>7</sup>

Additionally, in response to the Commission's April 19 workshop questions posed in the Order Implementing the Proposed Rulemaking, ESA recommends that the Commission indeed study the costs and benefits of an illustrative system deployment of energy storage resources. Doing so will assist the Commission, utilities, and stakeholders to understand both the overall system benefits of storage and the particular uses of storage in the New Mexico grid that are of highest benefit to ratepayers. ESA recommends that the Commission consider as a reference the September 2016 report commissioned by the Massachusetts Department of Energy Resources, which examined statewide ratepayer benefits and costs of a scenario of wide-scale storage deployment.<sup>8</sup>

ESA commends the Commission for its efforts to ensure that storage is included in the list of economic options examined by utilities to ensure prudent resource planning. ESA

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<sup>4</sup> *Hawaii Electric Companies' PSIPs Update Report: Book 1 of 4*, 23 Dec 2016, available at [https://www.hawaiielectric.com/Documents/about\\_us/our\\_vision/dkt\\_2014\\_0183\\_20161223\\_companies\\_PSIP\\_update\\_report\\_1\\_of\\_4.pdf](https://www.hawaiielectric.com/Documents/about_us/our_vision/dkt_2014_0183_20161223_companies_PSIP_update_report_1_of_4.pdf)

<sup>5</sup> Portland General Electric, *2016 Integrated Resource Plan*, 15 Nov 2016, available at <https://www.portlandgeneral.com/-/media/public/our-company/energy-strategy/documents/2016-irp.pdf?la=en>

<sup>6</sup> See Puget Sound Energy's Feb 3, 2017, presentation to its IRP Advisory Group at [https://www.pse.com/aboutpse/EnergySupply/Documents/01\\_PSE\\_2017\\_IRPAG\\_Feb3\\_FINAL.pdf](https://www.pse.com/aboutpse/EnergySupply/Documents/01_PSE_2017_IRPAG_Feb3_FINAL.pdf)

<sup>7</sup> Washington Utilities and Transportation Commission, *Draft Report and Policy Statement On Treatment Of Energy Storage Technologies in Integrated Resource Planning and Resource Acquisition*, Docket No. U-161024, 6 Mar 2017, available at [https://www.utc.wa.gov/\\_layouts/15/CasesPublicWebsite/GetDocument.ashx?docID=121&year=2016&docketNumber=161024](https://www.utc.wa.gov/_layouts/15/CasesPublicWebsite/GetDocument.ashx?docID=121&year=2016&docketNumber=161024)

<sup>8</sup> See *State of Charge: Massachusetts Energy Storage Initiative Study*, Massachusetts Department of Energy Resources, Sep 2016, available at <http://www.mass.gov/eea/docs/doer/state-of-charge-report.pdf>

supports the Commission's NOPR and encourages its finalization. ESA looks forward to working with the Commission, utilities, and other stakeholders to seek competitive and reliable energy storage as an option for reducing costs to ratepayers while meeting system reliability and New Mexico's energy policy goals.

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Respectfully submitted,

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