October 6, 2017

Ms. Kavita Kale
Executive Secretary
Michigan Public Service Commission
P.O. Box 30221
Lansing, MI 48909

RE: Comments on Staff IRP Strawman for Case No. U-18418

Dear Ms. Kale:


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 150 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 is pleased to have the opportunity to provide these comments on resource planning methodologies and sensitivities and looks forward to continuing to work with the Commission on implementing these important revisions to the State of Michigan’s resource planning process.

Respectfully,

Nitzan Goldberger
State Policy Director
Energy Storage Association
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter, on the Commission’s own motion to implement the provisions of Section 6t(1) of 2016 PA 341

Case No. U-18418

COMMENTS OF THE ENERGY STORAGE ASSOCIATION

The Energy Storage Association (“ESA”) respectfully submits these comments to the Michigan Public Service Commission (“Commission”) on the Draft Integrated Resource Planning Parameters (“Strawman Proposal”). ESA applauds the Commission for raising the important issue of resource planning and appreciates the opportunity to provide input on the proposal. With significant cost declines in energy storage and other unconventional resources continuing, the Commission can best serve Michigan ratepayers by developing a planning process that ensures an affordable, flexible and reliable electric system.

ESA’s comments focus on improvements to integrated resource planning to consider the widest range of resources, including storage, and thus ensure the lowest cost and best fit capacity solutions for Michigan ratepayers. Specifically, ESA recommends that the Commission include front-of-meter, distribution- and transmission-connected energy storage to the Emerging Technologies scenario and suggests that considerations of alternatives to traditional transmission and distribution investments include energy storage.
I. ABOUT THE ENERGY STORAGE ASSOCIATION

ESA was established 27 years ago to foster development and commercialization of energy storage technologies. Since then, its mission has been the promotion, development and commercialization of competitive and reliable energy storage delivery systems for use by electricity suppliers and their customers. ESA’s office is located in the District of Columbia. ESA members represent a diverse group of entities, including electric utilities, energy service companies, independent power producers, technology developers -- of advanced batteries, flywheels, thermal and compressed air energy storage, pumped hydro, and supercapacitors -- and component suppliers.

II. GUIDING PRINCIPLES FOR INTEGRATED RESOURCE PLANNING

Ratepayers are best protected when utilities examine a wide range of feasible options for investment in new capacity. While not common as recently as several years ago, today advanced energy storage technologies, particularly batteries, are deployed as a cost-effective resource providing capacity and other services across the country. Owing to rapid cost reductions in advanced storage technologies, utilities in states as diverse as Arizona\(^1\), Hawaii\(^2\), and North Carolina\(^3\) have selected storage as an economic resource in their long-term resource plans filed over the past year, and still more utilities in states like Oregon\(^4\) and New Mexico\(^5\) have included storage in their integrated resource planning (“IRP”) models in innovative ways. At the same time, state regulators have made revisions to the utilities’ planning processes to ensure explicit consideration of storage. For example, in August 2017 the New

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Mexico Public Regulation Commission issued an order amending its Integrated Resource Planning rules to include energy storage resources, and the Washington State Utilities and Transportation Commission released a draft policy statement in March 2017 underscoring similar policy guidelines that should animate resource planning on the bulk system and distribution level.

In Michigan, effective IRP modeling will ensure that energy storage is fairly evaluated and procured alongside other resources at the system level. ESA commends the Commission for taking an initial step in that direction by reviewing the current resource planning processes and methodology. ESA respectfully recommends that the Commission consider the following guiding principles:

- Any prudence determination for new resource acquisition should be incumbent upon consideration of the full range of alternatives, including energy storage.
- IRPs should institute sub-hourly modeling to increase the granularity of analysis and better inform optimal portfolio selection, particularly as the need for grid flexibility increases.
- IRPs should consider the net cost of capacity additions—that is, the capital costs adjusted by the operational and other system benefits that a given resource can provide.
- IRPs should be transparent with cost information and assumptions, as well as use up-to-date cost inputs, to ensure that utilities are selecting the most-competitively priced resources.

III. COMMENTS ON STRAWMAN PROPOSAL

In addition to the general recommendations included above in the guiding principles, ESA offers the following comments on the Strawman Proposal and proposes revisions where appropriate:

- ESA recommends that the Commission include energy storage as a transmission-connected asset in the Emerging Technologies scenario in the Strawman Proposal. ESA notes that throughout the

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document, energy storage appears to be considered only as a customer-sited distributed energy resource ("DER"). Focusing exclusively on incorporating energy storage as a DER misses the critical contribution that energy storage can provide to the system and ratepayers as a transmission-connected asset. Advanced storage technologies are transmission connected in the U.S. at scales of up to 30 MW today and are being chosen as cost-effective and viable alternatives to traditional capacity solutions.

- In addition to including front of meter (distribution and transmission connected) energy storage in the Emerging Technology, ESA recommends also including a cost curve decline sensitivity for energy storage in the Emerging Technologies section.
- The Commission’s inclusion of assumptions that battery technologies will continue to experience a declining cost curve is an important assumption.
- ESA recommends that in addition to requiring utilities to model sensitivities that include rapidly declining cost curve, the Commission require that utilities use the most current publicly available cost data for energy storage. For additional recommendations on sources, please refer to ESA’s 2016 primer on including energy storage in utility IRPs.\(^8\)
- As noted earlier, energy storage serves a wide variety of applications and services beyond its use behind-the-meter as a distributed generation asset. ESA notes that all the scenarios and sensitivities should be contemplating the use of alternatives to traditional investment, including energy storage.

Finally, while the Strawman Proposal certainly provides a clear framework of scenarios for the utilities to model, it appears that there is an opportunity to provide greater guidance for the utilities around modeling practices. For example, as was noted earlier in comments, sub-hourly modeling is critical to make a more effective determination of what resources fit system needs. ESA respectfully suggests that

the Commission provide that guidance to utilities as part of this reform. Finally, ESA reiterates the need for including a value on flexibility, which could also be added in this guidance to utilities. One approach that we highlight in these comments is the net cost of capacity. In addition to that approach, there are several innovative approaches that utilities and regulators are considering across the U.S. that serve the same purpose of capturing the value of flexible capacity.

**IV. CONCLUSION**

IRPs offer a unique opportunity for utilities to evaluate all potential resources for a given electric grid need, and these efforts can ultimately inform procurement decisions. ESA strongly believes that utilities should be required to reasonably consider a range of alternatives for new resource acquisitions as a regular part of business for Michigan ratepayers to receive cost-effective, reliable electric service. ESA appreciates the opportunity to comment on Staff’s Straw Proposal and looks forward to working with the Commission and other stakeholders in refining these procedures and methodologies.

RESPECTFULLY SUBMITTED this 6th day of October 2017.

By ______________________________

Nitzan Goldberger
State Policy Director
Energy Storage Association