Statewide Energy Storage Calculation Straw Proposal

Public Engagement Meeting

MPSC Staff
Energy Resources Division

June 12, 2024

MPSC
MICHIGAN PUBLIC SERVICE COMMISSION

Disclaimer

- This meeting is being recorded, and the recording will be posted on the Commission's Statewide Energy Storage Target website.
- Please mute your lines when not speaking.
- There is a time reserved for an open discussion period. During this time, please use the raised hand function or type questions in the chat feature. Staff will announce your name when it is time to speak.
- Staff will be accepting informal feedback on its proposal. Written feedback should be sent to Karsten Szajner at Szajnerk@michigan.gov by June 26, 2024.
- Anyone who would like to can submit written comments for the Commission on the e-dockets page for Case No. U-21571 by 5:00 p. m on August 1, 2024.

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Agenda

9:30-9:35	Welcome Remarks	Naomi Simpson, Manager, Resource Optimization & Certification
9:35-10:00	Overview of Staff's Straw Proposal	Jon DeCooman, Engineer, Resource Optimization & Certification
10:00-10:15	Review of Peak Load Data and AES Reporting	Roger Doherty, Manager, Resource Adequacy & Forecasting
10:15-11:15	Open Discussion/Public Feedback	
11:15-11:25	Update on LDES Study	Jon DeCooman, Engineer, Resource Optimization & Certification
11:25-11:30	Closing	Naomi Simpson, Manager, Resource Optimization & Certification

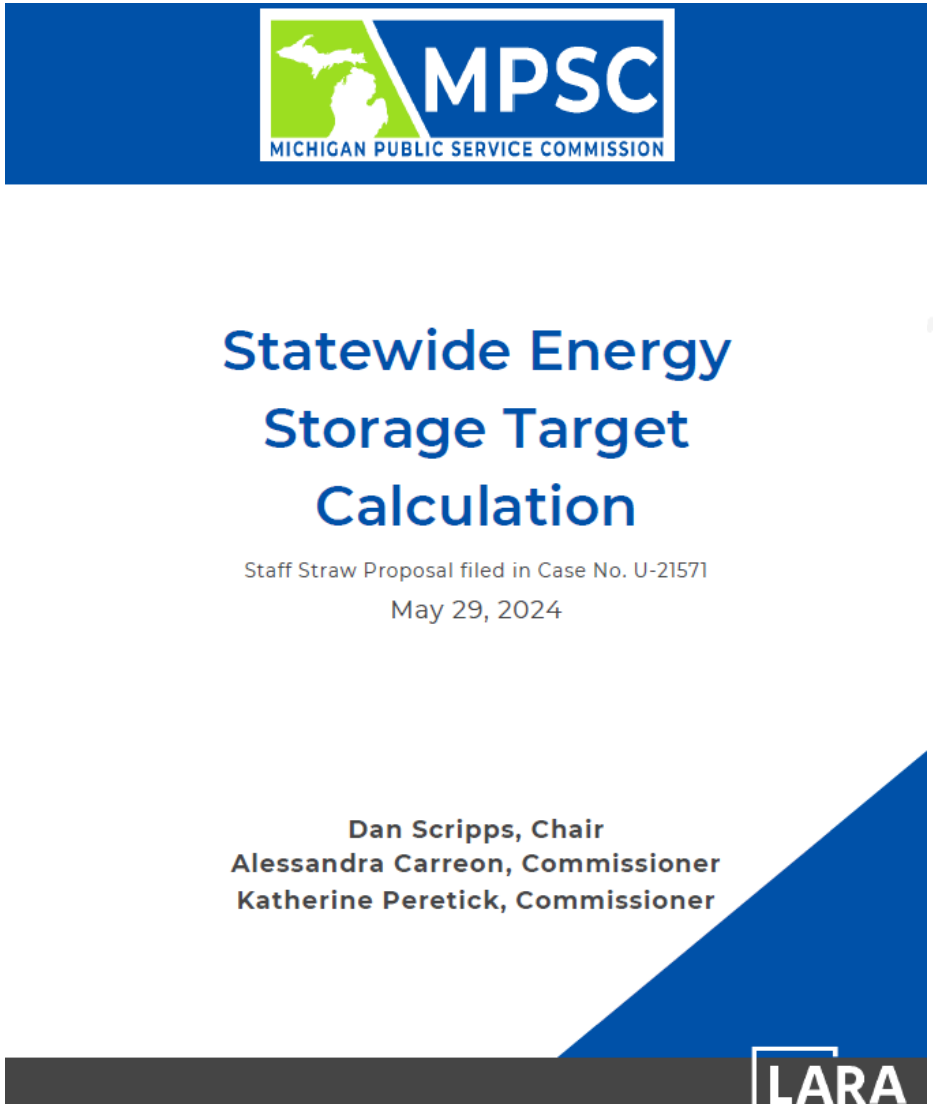
PA 235 of 2023

Section 101(1) and (2):

- (1) By **December 31, 2029**, each electric provider whose rates are regulated by the commission shall petition the commission for any necessary approvals, and each alternative electric supplier shall submit a plan to the commission, to construct or acquire eligible energy storage systems or enter into eligible energy storage contracts to **meet its share** of a **statewide energy storage target of a combined capacity of at least 2,500 megawatts.** An electric provider's share of the statewide energy storage target shall be apportioned based on the electric provider's annual average contribution to in-state retail electric peak load for the 5-year period immediately preceding the filing of the electric provider's plan under this subsection.

- (2) An electric provider whose rates are regulated by the commission shall **demonstrate compliance** with its plan under subsection (1) as part of the electric provider's **integrated resource plan** filed under section 6t of 1939 PA 3, MCL 460.6t. An alternative electric supplier shall demonstrate compliance with its plan under subsection (1) in the demonstration required under section **6w(8)(b) of 1939 PA 3, MCL 460.6w**.

Staff's Straw Proposal



Staff filed its straw proposal calculation methodology on May 29, 2024, on the docket for Case No. U-21571.

Calculates proportional share of statewide target for all LSEs, but only utilities and AESs subject to requirements of Section 101(1).

Proposed Calculation

$$Storage\ Target_{util} = Storage\ Target_{state} * (\frac{PLC\ Avg_{util}}{PLC\ Avg_{state}})$$

Where:

- $Storage\ Target_{util}$ is the utility's proportional share of the statewide minimum energy storage target;
- $Storage\ Target_{state}$ is the statewide minimum energy storage target of 2500 MW_{AC} in nameplate capacity, with a minimum duration of 4 hours**;
- $PLC\ Avg_{util}$ is the average of the utility's previous 5-years of annual in-state retail electric peak load contributions, based on the utility's summer peak load, as filed in its demonstration filings under MCL 460.6w; and
- $PLC\ Avg_{state}$ is the annual average of the combined in-state retail electric peak load contributions for all Michigan load serving entities for the 5-years preceding the utility's filing.

Waivers for duration requirements to be considered by the Comm. on a case-by-case basis

Calculation Parameters

- Frequency:
  - Staff will perform this calculation for each 5-year period up to the compliance deadline.
  - Staff will file this calculation within 30 days of the filing of the last LSE's capacity demonstration on the docket for Case No. U-21571.
  - Staff will identify and make adjustments as necessary to account for any changes to AESs or the load they serve.

- Qualifying Storage Facilities:
  - Located within the same local resource zone or local deliverability area as the utility or AES relying on its capacity.

Implementation

- IOUs:
  - Demonstrate compliance with Section 101(1) through IRPs.
  - Details included in upcoming updated IRP Filing Requirements.
- AESs:
  - File plans as part of capacity demonstration filings.
  - Deadline of 2029 capacity demonstration filing (Demonstrating for PY 32/33).

Enforcement

- IOUs:
  - Verification of an IOU's storage plan after it's filed in an IRP will happen through annual reports required under Section 103.
  - Identify current and future storage capacity, with approval for contracts sought through ex parte filings.
- AESs:
  - AES shall submit contracts for energy storage alongside other contracts necessary under its demonstration filing, in the amounts and timing identified in its plan.
  - Any variation to the plans require it to be resubmitted within 60 days of the demonstration filing which included this variance.

Sample Calculation

LSE	5-year avg PLC, PY 2023-2027 (ZRC)	Storage Target (MW)
Utility	18909.75	2053.68
Co-op	877.01	95.25
AES	1550.99	168.44
Muni	1681.57	182.63
TOTAL	23019.32	2500.00

Determining Peak Load

- Section 101(1): LSE's share of target based on the LSE's annual average contribution to in-state retail electric peak load for the 5-year period immediately preceding the filing of the LSE's plan.

- Need
  - Five years history of in-state peak load.
  - Each LSE's contribution to that peak.

MISO's Seasonal Construct

- Proposing to average 5-years of PLCs for each LSE from their capacity demonstration filings and to use the sum of those PLCs as the in-state peak for each individual year:
  - For MISO LSEs, use Summer season.
  - For PJM LSEs, use annual capacity obligation.
- Strengths
  - Availability of data.
  - Aligns process with capacity demonstration requirements.
- Potential Weaknesses
  - Confidentiality concerns.
  - Assumptions.

AES Reporting

- Storage plan vs. contracts for storage
  - Required to file plan to meet share of target by end of 2029.
  - Contracts for storage not required unless capacity used in demonstration year.
  - Once plan approved, expectation that contracts for storage capacity identified in the demonstration year be provided.

Public Comment Period

- Outstanding questions:
  - Data confidentiality concerns – any issues of confidentiality if peak load data from demonstrations used?
  - Qualifying storage facilities – In-state or in-zone?
  - Variability of AES data – What to do if less than 5 years of peak load data or if load served changes LSEs?

- Please type questions into the chat function or use the “raise hand” function during this time. We will open it up to those on the phone after those using the chat function.

Study on LDES/MDES

- Comm. required to file report on long-duration and multi-day storage with the legislature by February 27, 2025.
- Staff receiving assistance from DOE labs to define scope and technical details of report.
- Focus of report is to deliver usable information on:
  - Sources of cost and technical specs for LDES/MDES;
  - Modeling tools and best practices for LDES/MDES;
  - Replacement analysis for existing fossil fleet.

Study on LDES/MDES

II. History of Modeling
- Selection of energy storage in IRPs
- DOE best practices for energy storage modeling

III. A National Perspective
- Approved Projects
- Announcements and Pilots

IV. Costs and Specifications

V. Modeling LDES and MDES
- Data Collection and Input
- Advanced Simulation Techniques
- Accurate Representation of Technologies
- Integration with Capacity Expansion Models
- Economic Valuation and Market Participation
- Policy and Regulatory Considerations

VI. Capacity Replacement Analysis
- Generation Operating Profiles
- Resource Operating Characteristics
- Technology Specific Modeling Considerations
- Additional Parameters of Analysis
- Analysis Methodology
- Sample Analysis

VII. Grid Impacts and Considerations
- Siting Impacts of Energy Storage
- Storage as a Transmission Asset
- Other Grid Impacts

VIII. Environment and Community Impacts
- Resource siting impacts
- EJ Community Mapping
- Example EJ Mapping
- Additional Community Impacts

Informal Feedback Request

Staff requests feedback from workgroup members on the following:

- ❑ Are there data confidentiality concerns with using peak load data from capacity demonstrations?
- ❑ Should a qualifying storage facility have to be in state? In MISO Zone? Something else?
- ❑ How should Staff perform the calculation if less than 5 years of peak load data is available or if load served changes LSEs?
- ❑ Where(in what docket) should Staff file its calculation annually?
- ❑ Any other details Staff should consider?

Closing

- Thank you for your participation in this public meeting.
- Please provide informal feedback to Karsten Szajner at Szajnerk@michigan.gov by June 26, 2024.
- Anyone who would like to submit written comments for the Commission's review in the e-dockets page for Case No. U-21571 by 5:00 p. m on August 1, 2024.
- A video recording of this meeting will be posted and linked on the workgroup page.
- Further updates will be sent through the listserv for this workgroup, which can be signed up for on the workgroup page: https://www.michigan.gov/mpsc/commission/workgroups/2023-energy-legislation/statewide-energy-storage-target

Thank You!