Capacity Demonstration Results

Planning Year 2026/27

Case No. U-21225

March 24, 2023

MPSC Staff

Contents

Executive Summary

All Michigan load serving entities (LSE) required to file capacity demonstrations with the Michigan Public Service Commission (MPSC) for planning year 2026/27 pursuant to MCL 460.6w and the June 23, 2022 Commission Order in Case No. U-21225 have filed. Staff has audited the filings, contracts, and other materials and finds that all Michigan LSEs have satisfied the capacity demonstration requirements and have procured appropriate levels of resources for planning year 2026/27 except for one. Just Energy Solutions was unable to procure capacity to meet its, less than 1 MW of, capacity obligation for planning year 2026/27. See below for more discussion on this issue.

The Midcontinent Independent System Operator, Inc. (MISO) Local Resource Zone (LRZ) 7, which consists of the lower peninsula of Michigan, excluding Indiana Michigan Power Company's (I&M) service territory in the southwest corner of the state is transitioning from an annual resource adequacy construct to a seasonal resource adequacy construct. The Planning Resource Auction (PRA) for 2023/24 will be the first auction conducted using the seasonal construct. Anticipating this change, in the June 23, 2022 Order in U-21099, the Commission directed Staff to conduct stakeholder activities to examine the existing capacity demonstration process and requirements and to determine what changes, if any, needed to be made to the current capacity demonstration requirements and process should the Federal Energy Regulatory Commission (FERC) approve the seasonal resource adequacy construct. FERC accepted MISOs seasonal resource adequacy proposal on August 31, 2022. [1] These stakeholder activities are ongoing, and Staff will file a report with recommended updates to the capacity demonstration process and requirements on March 24, 2023 in Case No. U-21099.

Due to the limited amount of time available to incorporate the seasonal resource adequacy construct into the capacity demonstration process and the changes to certain information provided by MISO that the previous capacity demonstration relied upon, LSEs were given the option to demonstrate capacity for 2026/27 using the different seasonal obligations at MISO or to assume summer obligations and resource values applied to the entire year. Due to this, Staff only has comprehensive information for the summer season which complicates the already challenging process of projecting the capacity position of future PRAs. The additional unknowns that accompany the first iteration of the seasonal PRA exasperate this issue. That being said, MISO has posted several versions of preliminary data for the 2023/24 PRA on its resource adequacy page, with the most recent being for March 21, 2023.[2] Based off of this preliminary data, which is subject to change (in either direction)[3], it appears likely that MISO will have enough capacity to

[1] August 31, 2022 Order in FERC Docket Nos. ER22-495-000 & ER22-495-001

[2] https://www.misoenergy.org/planning/resource-adequacy/

[3] Another factor that could lead to a smaller margin then the preliminary data indicates and perhaps even a shortfall is the UCAP/ISAC ratio issues that could lead to a delay in the MISO PRA. At the time of this report the effects of this issue were not known.

meet its planning reserve margin requirements for each season and that Michigan local resource zones will have enough capacity to meet each of their local clearing requirements for each season.

Background

On September 15, 2017, in Case No. U-18197, the Commission directed all Michigan LSEs to file capacity demonstrations annually pursuant to MCL 460.6w. This report outlines the results of the capacity demonstrations filed for planning year 2026/27 as directed by the Commission in Case No. U-21225 and represents the sixth annual capacity demonstration report. Prior year capacity demonstration reports can be found in the following dockets:

- 2021/22: Case No. U-18441
- 2022/23: Case No. U-20154
- 2023/24: Case No. U-20590
- 2024/25: Case No. U-20886
- 2025/26: Case No. U-21099
- 2026/27: Case No. U-21225

In Case No. U-21225, the Commission ordered[4] rate regulated electric utilities[5] to submit capacity demonstrations by December 1, 2022 for the 2026/27 planning year and Alternative Electric Suppliers (AES),[6] cooperatives (co-ops),[7] and municipal utilities[8] to submit capacity demonstrations in the same docket for the 2026/27 planning year, on or before February 9, 2023. Due to changes to the MISO capacity construct detailed below, the Commission issued an order on November 18, 2022 which clarified the filing process and requirements for all LSEs and changed the filing date for rate regulated utilities to December 21, 2022.[9]

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[4] Jun3 23, 2022 MPSC Order in Case No. U-21225, accessed 03/6/2023.

[5] Alpena Power Company, Consumers Energy Company, DTE Electric Company, Indiana Michigan Power Company, Northern States Power Company-Wisconsin, Upper Michigan Energy Resources Corporation, Upper Peninsula Power Company, and Wisconsin Electric Power Company.

[6] AEP Energy Inc, BP Energy Retail Company, LLC, Calpine Energy Solutions LLC f/k/a Noble Americas Energy Solutions LLC, CMS ERM Michigan LLC, Constellation NewEnergy Inc, Dillon Power LLC, Direct Energy Services LLC, Eligo Energy MI, LLC, Energy Harbor LLC, Energy International Power Marketing Corporation, Energy Services Providers Inc., ENGIE Power & Gas f/k/a Plymouth Rock Energy LLC, Interstate Gas Supply LLC, Just Energy Solutions Inc, MidAmerican Energy Services LLC, Nordic Energy Services LLC, NRG Energy, Inc., Spartan Renewable Energy, Texas Retail Energy LLC, U.P. Power Marketing LLC, and Wolverine Power Marketing Cooperative Inc.

[7] Bayfield Electric Cooperative, Cloverland Electric Cooperative, Thumb Electric Cooperative, and Wolverine Power Supply Cooperative.

[8] City of Escanaba, City of Stephenson, City of Wakefield, Croswell Light and Power Department, Daggett Electric Department, Michigan Public Power Agency, Michigan South Central Power Agency, Newberry Water and Light Board, and WPPI Energy.

[9] November 18, 2022 MPSC Order in Case No. U-21225, accessed 03/06/2023.

The purpose of these demonstrations is to ensure that each electric utility owns or has contractual rights to capacity sufficient to meet its capacity obligations as set by the MISO, PJM, or the Commission, as required by MCL 460.6w.

Pre-Demonstration Process

As with previous years, Staff offered LSEs the opportunity to meet with Staff to discuss the capacity demonstration requirements and review relevant materials prior to the final filing deadlines. A significant number of LSEs met with Staff remotely and clarified the process before filing reports in the docket. Staff found that the pre-filing consultations were helpful in resolving questions prior to filing. Staff will continue to offer pre-filing consultations each year to resolve potential issues prior to the filing deadlines.

Capacity Demonstration Filings

On or before December 21, 2022, capacity demonstration filings were received from Alpena Power Company, Consumers Energy Company, DTE Electric Company, Indiana Michigan Power Company, Northern States Power Company, Upper Michigan Energy Resources Corporation (UMERC), and Upper Peninsula Power Company (UPPCO). Many LSEs filed confidential information under seal as part of the electric utilities' filings. Staff reviewed this information and met with LSEs as needed.

On or before February 9, 2023, capacity demonstration filings were received from Bayfield Electric, Calpine Energy Solutions, LLC., City of Escanaba, City of Stephenson, City of Wakefield, CMS ERM, Constellation New Energy Inc., Croswell Light and Power, Daggett Electric Department, Direct Energy Business, Energy Harbor, Just Energy Solutions, Michigan Public Power Agency, Michigan South Central Power Agency, Newberry Water and Light Board, Thumb Electric Cooperative, UP Power Marketing, Village of Union City, Wolverine Power Supply Cooperative, and WPPI Energy. Cloverland Electric filed on March 9, 2023.

Leading up to the capacity demonstration filings, Staff had many conversations with several LSEs discussing some of the difficulty procuring capacity for the 2026/2027 demonstration year. In addition to the expected challenges of procuring capacity four years forward in a tightening capacity market, LSEs were finding a reluctance to sell, from entities that usually had excess capacity for sale, due to the unknowns surrounding the transition to a seasonal capacity construct. Ultimately, all LSEs, other than Just Energy Solutions as discussed in the LSE Results section, were able to procure the necessary capacity to demonstrate compliance for the current planning year, although some AESs did lose customers to other AESs because they were unable to procure capacity for them.

Several AESs filed letters in Case No. U-21225 indicating that they are currently not serving customers in Michigan.[10]

Staff conducted an audit for each capacity demonstration filing received and requested additional information from the LSEs when necessary. Staff has reviewed all contracts included in capacity demonstrations from AESs as well as most of the contracts from co-ops, electric utilities, and municipalities. In addition to the required compliance year (PY 2026/27), most demonstrations filed included updates for the 2023/24 planning year through the 2025/26 planning year. These updates are voluntary and were not provided by all LSEs[11].

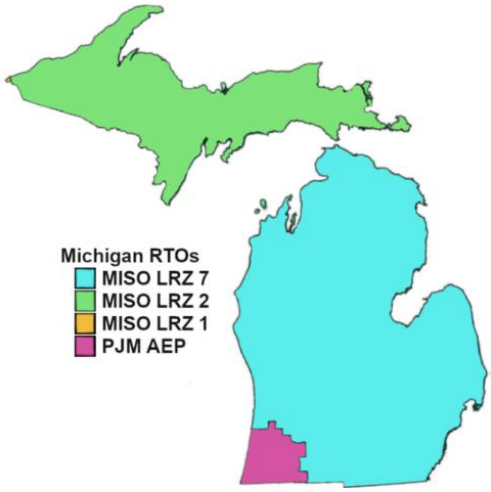
Staff appreciates the efforts made by LSEs to provide updated capacity resource data for the prompt year and interim years, as it allows Staff to update zonal resource adequacy projections for the prompt year, interim years, as well as the compliance year.

Overview of Zonal Adequacy

Michigan contains load that spans two regional transmission operators (RTO): MISO and PJM. The majority of Michigan's load is located within MISO and is split between several LRZs. The exception is the Southwest corner of the Lower Peninsula which is located within the PJM RTO through I&M's service territory. PJM and MISO have different resource adequacy constructs and capacity obligations. The different RTO regions in Michigan are illustrated in Figure 1.

[10] AEP Energy Inc., BP Energy Retail Company, LLC, Dillion Power LLC, Direct Energy Services, Energy International Power Marketing Corporation, Energy Services Providers, Inc., Interstate Gas Supply LLC, ENGIE Power and Gas, MidAmerican Energy Services LLC, Nordic Energy Services LLC, and Texas Retail Energy LLC.
[11] The required demonstrations for planning years 2024/2025 and 2025/26 were made in the 2021 capacity demonstration (Case No. U-20886) and the 2022 capacity demonstration (Case No. U-21099).

Figure 1: RTO Zonal Regions in Michigan



MISO Resource Adequacy

Michigan LSEs serve load in MISO Local Resource Zones 1, 2, and 7. MISO's capacity construct is for the upcoming year (prompt year) only. LSEs must demonstrate sufficient resources to meet its current prompt year requirement four years forward to be in compliance with MCL 460.6w.

MISO establishes capacity obligations for all LSEs based on peak load forecasts and a planning reserve margin percentage necessary to meet the North American Electric Reliability Corporation's (NERC) Loss of Load Expectation (LOLE) standard of 1 day in 10 years. LSEs within MISO can meet their capacity requirements either through a Fixed Resource Adequacy Plan (FRAP) or through the Planning Resource Auction (PRA). The PRA is a residual market for LSEs that choose not to use the FRAP or do not have enough capacity resources, either owned or purchased bilaterally, to satisfy their capacity obligations, and thus need to purchase additional resources.

Within MISOs resource adequacy construct, the Planning Reserve Margin Requirement (PRMR) and the LCR must be satisfied to meet the LOLE. The PRMR is determined through LOLE modeling based on the coincident MISO peak forecast and resources adjusted as necessary to meet the standard. PRMR resources are not location specific, i.e. they can come from outside an LSE's zone. Individual LSEs are responsible for their own share of the zone's PRMR. The ability to use imports to meet PRMR makes it likely all zones will meet this requirement. Failure to meet PRMR would only occur if there were not enough resources available within all of MISO's footprint.

The LCR is the minimum capacity for a zone required to be located within the zone to meet the LOLE standard, while accounting for the LRZ's ability to import. The LCR is for the zone as a whole, as opposed to a requirement for individual LSEs. There is no LCR requirement applicable to individual LSEs in Michigan pursuant to MCL 460.6w at this time. The LCR is determined by performing a LOLE analysis on each zone individually to determine the Local Reliability Requirement (LRR), or the resources a zone would need to meet the loss-of-load standard if it were separated from MISO. Separately, an import study is performed to determine the Zonal Import Ability (ZIA) for each zone. For LRZ 7, the ZIA is currently (and historically) equal to the capacity import limit (CIL) and the terms are often treated synonymously. The ZIA is then subtracted from the LRR to determine the LCR.

If an LRZ doesn't have enough resources to meet its LCR or PRMR, the PRA clearing price would be set at the Cost of New Entry (CONE) for that season. CONE varies from zone to zone and changes from year to year but for reference, for 2023/24 CONE is $105,910 MW-year ($290.16 MW-day) in Zone 7.[12] The PRA clearing price being set at CONE would have economic ramifications and would provide a signal to stakeholders with responsibilities regarding resource adequacy within the zone. However, it is important to note that MISO's resource adequacy construct is based on probabilistic determinations and failure to meet the requirements of the resource adequacy construct would not mean that the LRZ in question will experience a loss of

[12] https://cdn.misoenergy.org/MISO%202022%20Annual%20CONE%20filing626484.pdf

load event. It simply means the probability of such a loss of load event would exceed the generally accepted criteria that govern the resource adequacy planning process.

In November of 2021, MISO submitted a proposal to FERC Docket No. ER22-495-000[13] to revise its Open Access Transmission, Energy and Operating Reserve Markets Tariff, which was approved in August 2022.[14] This tariff revision established a seasonal resource adequacy requirement for each summer, fall, winter and spring season and a seasonal accredited capacity (SAC) methodology for certain resources participating in MISO's PRA to align with real time availability and planned outages. MISO explained that these changes are necessary to ensure future operation reliability due to an increase in system wide maximum generation emergency events outside of the traditional summer peak. Staff reviewed these changes with stakeholders in it's 2022 and 2023 technical conferences as a part of the Commission's June Order in U-21099. For this year, LSES were the option to demonstrate capacity for 2026/27 using the different seasonal obligations at MISO or to assume summer obligations and resource values applied to the entire year. Due to this, Staff only has comprehensive information for the summer season. The information below focuses on summer only.

Commented [DR(1)]: I made some small changes but otherwise took what you had for this. I think the stuff above still applies and is correct.

The compliance year capacity obligations (PY 2026/27) that are demonstrated for in this case are based off an LSE's prompt year (PY 2023/24) requirement. Changes to load, resources, and MISO procedures in the upcoming years can lead to discrepancies between an LRZ having sufficient capacity to meet its four-year forward Michigan requirements and not having enough capacity to meet MISOs requirements when the prompt year arrives.

MISO – Local Resource Zone 7

Figure 2 shows historical annual MISO capacity requirements for LRZ 7. This data is taken from the respective annual MISO LOLE Study Reports.

Figure 2: Annual MISO LOLE Report Data LRZ 7

Planning Year	Source	LRR[15]	CIL[16]	LCR (ZRCs)[17]
2013/14	MISO 2013 LOLE Report	25,305	4,576	20,729
2014/15	MISO 2014 LOLE Report	24,815	3,884	20,931
2015/16	MISO 2015 LOLE Report	24,710	3,813	20,897

[13] MISO Seasonal Construct tariff filing, Markets Tariff filing, FERC Docket ER22-495-000, November 2021.
[14] 180 FERC 61,141, August 2022.
[15] **Local Reliability Requirement**. Representative of the resources required for LRZ 7 to meet the LOLE standard when modeled as an island (no imports). MISO Loss of Load Expectation Study Report, Table 6-1: LRZ Local Reliability Requirements.
[16] **Capacity Import Limit**. Equal to the Zonal Input Limit (ZIA) in LRZ 7. Representative of the ability of an LRZ to import capacity from areas outside of that LRZ. MISO Loss of Load Expectation Study Report, Table 1-1: Initial Planning Resource Auction Deliverables.
[17] **Local Clearing Requirement**. Representative of the minimum resources that must be located within a specific zone for that zone to meet the reliability standard. The difference between the LRR and the CIL.

2016/17	MISO 2016 LOLE Report	24,715	3,813	21,309
2017/18	MISO 2017 LOLE Report	24,654	3,320	21,334
2018/19	MISO 2018 LOLE Report	24,545	3,785	20,760
2019/20	MISO 2019 LOLE Report	24,845	3,211	21,634
2020/21	MISO 2020 LOLE Report	25,370	3,200	22,170
2021/22	MISO 2021 LOLE Report	25,054	4,888	20,166
2022/23	MISO 2022 LOLE Report	24,115	3,749	20,366

In its seasonal construct, MISO includes an LRR, CIL, and PRMR for each zone for each season. The current year MISO requirements are included in Figure 3 below.

Figure 3: Seasonal MISO LOLE Report Data LRZ 7

Planning Year	Season	LRR	CIL	LCR
2023/24	Summer	24,428	5,087	19,341
2023/24	Fall	24,117	4,285	19,832
2023/24	Winter	21,940	4,350	17,590
2023/24	Spring	21,475	4,413	17,062

These numbers typically change slightly between the LOLE Study and the PRA, primarily due to updated load forecasting used in the PRA, but can be used to see how the capacity requirements have changed over time. Changes in these requirements can have economic and reliability impacts and will continue to be monitored.

The difference between a zone's PRMR and its LCR is sometimes referred to as Effective Capacity Import Limit (ECIL). The ECIL is not a MISO defined term and is not representative of a physical import limitation. To meet the loss of load standard and avoid the auction clearing price being set at CONE, a zone must have enough resources located within the zone to meet its LCR even if the LCR exceeds the PRMR.

Figure 4 shows a comparison of LRZ 7 aggregated resources and MISO summer resource adequacy requirement projections for the next 4 years. These numbers represent Staff's current projection based on the capacity demonstration filings and MISO publications at the time of this report although, the information is subject to change for all years, including PY 2023/24. Unless otherwise noted resources and resource requirements in this report are in Unforced Capacity (UCAP) Megawatts (MW), equal to Zonal Resource Credits (ZRCs).

Figure 4: U-21225 Results - LRZ 7 Summer Capacity Position (ZRCs)

Line #		PY 2023/24	PY 2024/25	PY 2025/26	PY 2026/27
1	Planning Reserve Margin Requirements (PRMR)	21,233	21,233	21,233	21,233
2	Local Reliability Requirement (LRR)	24,428	24,428	24,428	24,428
3	Capacity Import Limit (CIL)	5,087	5,087	5,087	5,087
4	Zonal Import Ability (ZIA)	5,087	5,087	5,087	5,087
5	Local Clearing Requirement (LCR) (L1-L4)	19,341	19,341	19,341	19,341
6	Total Owned	16,758	16,889	16,271	16,708
7	Total PPA Contracts	2,106	2,331	2,514	3,090
8	Total ZRC Contracts	663	417	998	1,009
9	Total Qualified Demand Response	1,479	1,576	1,708	1,733
10	Total Resources (sum of L6 through L9)	21,006	21,214	21,490	22,539
11	LCR Demonstrated Position (L10-L5)	16,65	1,873	2,149	3,198
12	PRMR Demonstrated Position (L10-L1)	-227	-19	257	1306
13	Net Undemonstrated Capacity	315	503	0	0
14	Anticipated LCR Position (L11+L13)	1,980	2,376	2,149	3,198
15	Anticipated PRMR Position (L12+L13)	88	484	257	1,306

(1) PY 2023 PRMR from Preliminary PRA Data and projected through PY 2026.

(2) PY 2023 LRR from Preliminary PRA Data and projected through PY 2026.

(3) PY 2022 CIL from the 2020-21 LOLE Study Report, held constant at prompt year value per MISO recommendation.

(4) PY 2022 ZIA from the MISO Preliminary PRA data, held constant at prompt year value per MISO recommendation

(6-10) Zone 7 resources included in capacity demonstrations sorted by resource type.

(12) Net Undemonstrated Zone 7 Capacity is Staff's attempt to reconcile the capacity demonstration resources with the MISO PRA. There are resources located in Zone 7 that Staff anticipates will be in the PRA that were not included in any capacity demonstration as well as known demand response aggregation.

Prompt Year (PY 2023/24) and Compliance Year (PY 2026/27)

For the prompt year (PY 2023/24), based on preliminary PRA data, Staff expects LRZ 7's PRMR to be 21,233 ZRCs and the LCR to be 19,341 ZRCs. The total LRZ 7 resources included in demonstration filings for the prompt year is 21,006 ZRCs, which exceeds the anticipated LCR by 1,665 ZRCs. Staff is also aware of additional capacity resources in Zone 7 that were not included in capacity demonstration filings. These undemonstrated resources include supply and demand side resources that are not owned or under contract by an LSE and include approximately 130 MW of demand response aggregation in LRZ 7. Based on the demonstrated resources and projected undemonstrated resources, Staff anticipates LRZ 7 will exceed its LCR for planning year 2023/24.

Based on the resources included in the capacity demonstration filings for PY 2026/27 (22,539 MW) Staff projects LRZ 7 to have a surplus of resources compared to the projected LCR. It is important to note that these projections are subject to change. A few examples of things that could change include; load forecasts, resource availability and performance, and MISO policies and practices.

MISO has previously provided projections of both PRMR and LRR into the compliance year from the prompt year. These calculations were not available to Staff at the time of its report. In absence of projected PRMR/LRR values, Staff has kept these values constant for the purposes of this demonstration. In addition, this capacity demonstration reviewed only the summer SAC values given by LSEs. The Staff is not making a determination for other, off-peak seasons in this docket, but will do so in all future dockets should the Commission adopt a seasonal demonstration requirement.

Interim Years (PY 2024/25 & PY 2025/26)

Figure 4 also includes data and projections for the interim years, PY 2024/25 & PY 2025/26. This information is derived using the same methodology as described for the compliance year. Comparing those projected requirements to the demonstrated and undemonstrated resources in LRZ 7, results in a capacity surplus for both years compared to the projected LCRs. This information is based on the best information currently available to Staff, but includes several assumptions and, again, is subject to change. Similar to the compliance year, likely changes include; new forecasts, unknown resource additions or subtractions, changes in generator performance, increased or decreased zonal import ability, seasonal variability, and/or changes to MISO requirements.

MISO – Local Resource Zone 2

MISO's LRZ 2 encompasses almost the entire upper peninsula of Michigan as well as northern and eastern Wisconsin. MISO LRZ 2 has a CIL of 2,550 ZRCs[18] for the summer planning season 2023/24, but MISO does not define MW capacity imports or export limits between states within the boundaries of the same MISO LRZ. Considering LRZ 2 includes LSEs from Wisconsin (not subject to MCL 460.6w), the data available to Staff for LRZ 2 from capacity demonstration filings is not comprehensive enough to project a zonal capacity position as Staff did in its analysis of LRZ 7. Never less, all Michigan LSEs serving load within MISO LRZ 2 demonstrated sufficient resources to meet their requirements.

The 2023 MISO Preliminary PRA results indicate an installed capacity surplus in the 2023/24 planning year for LRZ 2.[19] Notwithstanding the localized reliability issues in the upper peninsula, the results of the OMS-MISO Survey indicate that LRZ 2 is projected to have an

[18] MISO LOLE Study Report, Planning Years 2023-2024.
[19] 2023 MISO Seasonal Preliminary PRA Report, March 22, 2023.

adequate supply of capacity resources to meet its PRMR requirements for the upcoming planning years. The UMERC 100 MW solar project projected in its most recent IRP[20] and planned solar capacity addition by UPPCO in its most recent IRP[21], will have a positive impact on the resource adequacy of the region.

MISO – Local Resource Zone 1

A very small fraction of Michigan's upper peninsula load is located in LRZ 1. Northern States Power, Bayfield Electric Cooperative, and the City of Wakefield municipal utility have less than 30 MW combined in MISO LRZ 1. The 2023 MISO Preliminary PRA results indicate a large installed capacity surplus for each season in the 2023 planning year.[22] LRZ 1 is projected to have an adequate supply of capacity resources to meet its PRMR requirements for the 2023/24 planning year.

[20] MPSC Case No. U-21081, Direct Testimony of Richard Stasik, p. 4, October 15, 2021.
[21] MPSC Case No. U-20350, UPPCO Annual IRP Implementation Update, p. 3, August 20, 2021.
[22] 2023 MISO Seasonal Preliminary PRA Report, March 22, 2023.

PJM Resource Adequacy

Few LSEs in Michigan serve load within the PJM RTO. These LSEs are still subject to the requirements of MCL 460.6w requiring sufficient capacity for four years forward in planning year 2026/27. PJM LSEs demonstrate sufficiency simply by providing evidence that the LSE is in compliance with its PJM obligations.

LSEs in the PJM service territory must meet capacity obligations either through participation in PJM's Reliability Pricing Model (RPM) Base Residual Auction (BRA) or through PJM's Fixed Resource Requirement (FRR) plan. The FRR plan is an alternative to the RPM, where an LSE must demonstrate to PJM that it has enough resources to cover its projected load plus an additional reserve requirement. Both the RPM and the FRR resources are subject to monetary penalties if they fail to maintain PJM's reliability standard. PJM's resource adequacy construct is based of annual requirements.

The largest LSE in PJM is Indiana Michigan Power Company (I&M).[23] I&M elects to file an FRR plan each year. I&M's most recent capacity demonstration indicates that the company plans to continue with the PJM FRR plan baring any major FERC-ordered changes. Staff reviewed I&M's filing and finds that they have sufficient resources to meet its obligations at PJM.

In addition to I&M's capacity demonstration, Staff also reviewed information of cooperative and municipal utility obligations in the Michigan portion of PJM's territory for planning year 2026/27. The results are displayed in the table below.

Figure 5: PJM Capacity Demonstration Summary

Item	PY 2022/23	PY 2023/24	PY 2024/25	PY 2025/26
Utility Total Planning Resources, MW	4,109	4,220	4,116	4,122
Other PJM Resources, MW	235	235	350	392
Total PJM Resources, MW	4,344	4,455	4,466	4,514

Staff expects that the LSEs in the Michigan portion of PJM will continue to meet the PJM capacity obligations based on information included in individual capacity demonstrations. If PJM LSEs were to encounter an unanticipated shortfall in the immediate future, Staff expects that it would be accommodated through the procurement of reserve resources by market purchases. As market conditions may change over time, Staff will continue to monitor the resource adequacy of the PJM region and the capacity plans of Michigan LSEs located within the PJM territory. As reaffirmed in

[23] Indiana Michigan Power Company is an electric operating company of American Electric Power Company, Inc. (AEP). I&M is a wholly owned subsidiary of AEP and is operated as a single utility in the American Electric Power System (AEP System).

the Company's most recent IRP, filed in Case No U-21189,[24] Staff does not anticipate I&M to have any issues meeting capacity obligations.

The Commission order in Case No. U-16090 set I&M's customer choice cap amount to zero, and was subsequently reset to ten percent on February 1, 2019, pursuant to the Commission order and MCL 460.10a(1)c. On February 1, 2019, I&M began enrolling customers in its choice program and is now fully subscribed at the cap. Currently I&M is responsible for the capacity of its choice load in its FRR plan under the PJM RAA. If suppliers were to choose to self-supply capacity, then that capacity would also need to be included in I&M's FRR plan. Constellation NewEnergy Inc. is currently the only AES serving load in I&M's service territory.

The North American Electric Reliability Corporations 2022 Long-Term Reliability Assessment projects PJM to have enough electric supply resources to meet demand forecasts under normal and more extreme weather conditions for 2023-2027 and categorizes PJM in the least risky category. [25]

[24] MPSC Case No. U-21189, Direct Testimony of Stephan F. Baker, p. 7, February 28, 2022.
[25] https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_LTRA_2022.pdf

LSE Capacity Demonstration Results (PY 2026/2027)

Staff appreciates the time and effort made by all Michigan LSEs to comply with the provisions of MCL 460.6w, as well as to comply with the questions, audits, contract reviews, and requests for additional information throughout this process. The LSE capacity demonstration results are reported for planning year 2026/2027 because, following the initial capacity demonstration which covered four years, only the fourth year forward is required for compliance. As previously described in its September 15, 2017 order in Case No. U-18197, the Commission requested a table be included in this report that identifies the capacity by type for each individual electric provider without revealing the identity of any specific electric provider. The requested table with a breakdown for each electric provider that filed a capacity demonstration is included as Appendix A. In addition to the breakdown by individual supplier, Staff reports the following aggregate results in Figure 5 below.

Figure 6: Resource Breakdown (%) by Supplier Type Planning Year 2026/27

Supplier Type	Owned	DR	Contract – PPA	Contract - ZRC	Auction
Muni/Co-Op Aggregate	69.8%	0.0%	23.8%	2.7%	3.6%
AES Aggregate	0.3%	0.3%	5.0%	94.3%	0.0%
Utility Aggregate	76.7%	6.5%	14.4%	2.3%	0.0%

Just Energy Solutions

Staff has heard from several LSEs that procuring capacity has continued to be more difficult than previous years. Capacity procurement this year has many of the same challenges as previous years, such as overall tightening of the capacity market due to retirements while development of replacement resources has been slower than expected. Additionally, MISO LSEs have reported that the transition to a seasonal construct has resulted in fewer, if any, entities being willing to sell forward capacity because of the unknowns surrounding this transition. LSEs that might have surplus capacity are not sure exactly how much surplus they might have, nor of the value of that capacity in a seasonal market.

Just Energy Solutions has a small amount (<1 MW) of Michigan load located MISO LRZ 7. In previous demonstrations Just Energy Solutions has been able to contract for up to 2 MWs of capacity to serve this load but this year they have been unable to find any counterparty willing/able to sell them capacity for planning year 2026/27. Staff has been in contact with Just Energy Solutions since prior to their filing and has had multiple meetings and conversations with them throughout this process in the hopes of finding a solution. Based on these conversations it appears that Just Energy Solutions has been making a good faith effort to procure capacity but has to this point been unsuccessful. At the time of this report, Just Energy Solutions was continuing its efforts to remedy this situation.

Demand Response

As part of its analysis, Staff reviewed the LSEs' DR programs as an optional source of capacity. When used by a LSE, a reduction in demand through DR programs offsets a portion of their capacity needs. LSEs can utilize interruptible DR during critical peak times to quickly respond to bulk electric system needs which can delay future capital investment in new generation. Behavioral DR programs allow the utility to lower its peak demand forecast, thus mitigating the need for an equal of amount supply side resources.

Demand response played a prominent role in LSEs' integrated resource plan filings, where DR is required to be considered along with traditional supply side resources for meeting capacity needs. MCL 460.6t directs Staff to complete a statewide study of DR potential in Michigan every five years, and the most current state of Michigan Demand Response Potential Study was issued on September 24, 2021.[26] In addition, the Commission approved Michigan Integrated Resource Planning Parameters on November 21, 2017 in Case No. U-18418 that include provisions regarding including DR options in future integrated resource plans and Staff is currently working to updated those Parameters.

By planning year 2026/27, Consumers Energy is forecasting increased DR levels to support capacity through the expansion of existing programs. The DR levels assumed in both Consumers Energy's and DTE Electric's current integrated resource plans[27] are reflected in their capacity demonstration filing. Consumers Energy is continuing to offer its Bring Your Own Device program for residential customer classes and C&I demand response programs to deliver and manage significant peak load reductions. DTE Electric projects similar levels of Demand Response throughout the next 5 years, as was documented in last year's report. Staff will continue to monitor these plans and the use of DR in Michigan for the foreseeable future.

Demand Response Aggregation

Pursuant to the September 15, 2017 Order in Case No. U-18369, the Commission affirmed that AESs may offer DR programs to their customers through a curtailment service provider (CSP) or third-party aggregator. The Commission made this determination in the context of finding that it will continue to review DR programs offered by AESs as part of the capacity demonstration process.

As the Relevant Electric Retail Regulatory Authority (RERRA), the Commission is aware of aggregation of approximately 130 ZRCs of DR to be offered into the 2023 MISO capacity market, which is an increase from what was seen for the previous year. Staff continues to work with CSPs, ARCs and MISO to ensure that aggregated DR's PLCMM is accounted for

[26] Michigan Demand Response Statewide Potential Study (2021-2040), Guidehouse, September 24, 2021.
[27] DTE's current IRP filed and approved in MPSC Case No. U-21193.
CE's current IRP filed in MPAC Case No. U-21090.

when dispatched on MISO's coincident peak and continues to monitor the discussions taken place regarding FERC Order 2222.

ZRC Contracts

Staff recommended that forward ZRC contracts be used for capacity demonstration purposes to specify delivery of the ZRCs in the MISO Module E Capacity Tracking (MECT) tool prior to the applicable PRA auction. All new forward ZRC contracts were audited by Staff and all complied with Staff's requested delivery terms, allowing Staff to audit the ZRC transfers each year prior to the PRA. Figure 6 indicates a slight decrease in the percentage of ZRC contracts utilized this year by the utilities, municipal utilities and cooperatives, and a slight increase in the amount utilized by the AESs compared to last year.

An important thing to note is that ZRCs are defined in MISO's tariff and are created in the prompt year when UCAP for supply-side and demand-side resources are converted into ZRCs in the MISO MECT. ZRCs for any year further out than the prompt year are projected and don't become ZRCs until the prompt year. ZRCs are fungible products that can be sold or transferred, and in some cases, sold more than once. The characteristics of ZRCs allow for them to be easily traded and tracked within the MISO MECT. MISO has a view into the source and transfers of those ZRCs that occur prior to the PRA in the prompt year, and those ZRC transfers are audited by Staff as a secondary check on the ZRC contracts utilized in the capacity demonstrations.

At this point in time, the overall amount of ZRC contracts included in capacity demonstration filings do not impact Staff's ability to continue to make forward resource adequacy projections on a zonal basis. Staff will continue to monitor and audit ZRC contracts and ZRC transfers within the MECT going forward.

AES Load Switching

Staff requested that any AES who experienced load switching during this time provide a signed affidavit confirming the increase or reduction in their load compared to the PLC data provided by the utility with their capacity demonstration that contained the amount of load switching for each planning year. Each supplier contracting for additional customer load provided a copy of its affidavit confirming this transaction to the supplier that was losing the load to be accounted for in both suppliers' demonstrations. For this filing year, all of the load switching had occurred prior to the filing date.

Conclusion and Recommendations

All Michigan LSEs required to file capacity demonstrations with the Michigan Public Service Commission for planning year 2026/27 pursuant to MCL 460.6w and the June 23, 2022 Commission Order in Case No. U-21225 have filed. Staff has audited the filings, contracts and other materials and finds that all Michigan LSEs except for Just Energy Solutions have satisfied the capacity demonstration requirements and have procured appropriate levels of resources for planning year 2026/27.

Staff appreciates the cooperation of all Michigan LSEs with respect to this process and the willingness to provide data and answer questions necessary for Staff to complete its review. Staff also appreciates the LSEs participation in the stakeholder process discussing new MISO seasonal capacity construct and its effects on the Michigan demonstration process. Staff's report on this process and its recommendations for how to incorporate the seasonal construct into the capacity demonstration process are being filed separately in Case No. U-21099.

Appendix A

Planning Year 2026/27 Resource Breakdown (%) by Individual Supplier[28]

LSE	Owned	DR	Contract - PPA	Contract - ZRC	Auction
Supplier 1	0%	0%	0%	100%	0%
Supplier 2	0%	0%	100%	0%	0%
Supplier 3	79%	0%	21%	0%	0%
Supplier 4	48%	29%	23%	0%	0%
Supplier 5	28%	3%	69%	0%	0%
Supplier 6	91%	0%	9%	0%	0%
Supplier 7	89%	9%	2%	0%	0%
Supplier 8	0%	0%	0%	100%	0%
Supplier 9	0%	0%	100%	0%	0%
Supplier 10	86%	7%	6%	1%	0%
Supplier 11	0%	0%	100%	0%	0%
Supplier 12	0%	0%	100%	0%	0%
Supplier 13	9%	9%	81%	0%	0%
Supplier 14	0%	0%	100%	0%	0%
Supplier 15	0%	0%	0%	100%	0%
Supplier 16	0%	0%	0%	100%	0%
Supplier 17	0%	0%	0%	100%	0%
Supplier 18	51%	49%	0%	0%	0%
Supplier 19	0%	0%	0%	100%	0%
Supplier 20	64%	0%	30%	0%	7%
Supplier 21	56%	8%	28%	8%	0%
Supplier 22	0%	0%	0%	100%	0%
Supplier 23	0%	0%	100%	0%	0%
Supplier 24	0%	11%	46%	44%	0%
Supplier 25	44%	0%	14%	38%	5%
Supplier 26	0%	0%	0%	100%	0%

[28] Suppliers (municipal and cooperative electric utilities) that combined their capacity resources are shown as one supplier in the above figure. The total number of suppliers may vary from year to year based on changes to which suppliers combine their capacity demonstrations as well as new suppliers or suppliers no longer serving load in Michigan.