

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter, on the Commission's Own Motion,  
regarding the implementation of MCL 460.6w.

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Case No. **U-18441**  
**(e-file paperless)**

**MPSC STAFF REPORT AND RECOMMENDATIONS**

Pursuant to the Michigan Public Service Commission's (MPSC or Commission) order in this matter, the Commission's Staff (Staff) files its report and recommendations regarding the recent capacity demonstration filings.

**I. BACKGROUND**

On September 15, 2017, the Commission issued an order in Case No. U-18441 for Michigan electric providers to submit electric capacity demonstrations to the Commission pursuant to MCL 460.6w(8). The Commission ordered the electric utilities<sup>1</sup> to submit capacity demonstrations in Case No. U-18441 in accordance with the requirements established in the September 15, 2017 order in Case No. U-18197 for the planning year beginning June 1, 2018, and the subsequent three planning years (planning years 2018/19 through 2021/22), to establish that the electric utility owns or has contractual rights to capacity sufficient to meet its capacity obligations as set by the Midcontinent Independent System Operator, Inc. (MISO), PJM

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<sup>1</sup> 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.

Interconnection, LLC (PJM), or the Commission, as applicable, and as required by MCL 460.6w, on or before December 1, 2017. (9/15/17 Order, p 4.) The Commission ordered the alternative electric suppliers<sup>2</sup> (AES) to submit capacity demonstrations in Case No. U-18441 for planning years 2018/19 through 2021/22 on or before February 9, 2018. (*Id.* at 6.) The Commission also ordered the cooperatives<sup>3</sup> and the municipal utilities,<sup>4</sup> to submit capacity demonstrations in Case No. U-18441 for planning year 2021/22 on or before February 9, 2018. (*Id.* at 5-6.)

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<sup>2</sup> AEP Energy, Inc., Calpine Energy Solutions, LLC, f/k/a Noble Americas Energy Solutions, LLC, CMS ERM Michigan LLC, Constellation Energy Services, Inc., f/k/a Integrys Energy Services Inc., Constellation NewEnergy, Inc., Dillon Power, LLC, Direct Energy Business, LLC, Direct Energy Services, LLC, EDF Energy Services, LLC, Eligo Energy MI, LLC, Energy Services Providers, Inc., d/b/a Michigan Gas & Electric, FirstEnergy Solutions, Interstate Gas Supply, Inc., d/b/a IGS Energy, Just Energy Solutions, Inc., f/k/a Commerce Energy Inc., Liberty Power Delaware, LLC, Liberty Power Holding, LLC, MidAmerican Energy Services, LLC, Nordic Energy Services, LLC, Plymouth Rock Energy, LLC, Powerone Corporation, Premier Energy Marketing LLC, Spartan Renewable Energy, Inc., Texas Retail Energy, LLC, U.P. Power Marketing, LLC, and Wolverine Power Marketing Cooperative, Inc.

<sup>3</sup> Alger Delta Cooperative Electric Association, Bayfield Electric Cooperative, Inc., Cherryland Electric Cooperative, Cloverland Electric Cooperative, Great Lakes Energy Cooperative, Midwest Energy Cooperative, Ontonagon County Rural Electrification Association, Presque Isle Electric & Gas Co-op, Thumb Electric Cooperative, and TriCounty Electric Cooperative.

<sup>4</sup> Village of Baraga, City of Bay City, City of Charlevoix, Chelsea Department of Electric & Water, Village of Clinton, Coldwater Board of Public Utilities, Croswell Municipal Light & Power Department, City of Crystal Falls, Daggett Electric Department, City of Dowagiac, City of Eaton Rapids, City of Escanaba, City of Gladstone, Grand Haven Board of Light & Power, City of Harbor Springs, City of Hart Hydro, Hillsdale Board of Public Utilities, Holland Board of Public Works, Village of L'Anse, Lansing Board of Water & Light, Lowell Light & Power, Marquette Board of Light & Power, Marshall Electric Department, Negaunee Department of Public Works, Newberry Water and Light Board, Niles Utilities Department, City of Norway, Village of Paw Paw, City of Petoskey, City of Portland, City of Sebawaing, City of South Haven, City of St. Louis, City of Stephenson, City of Sturgis, Traverse City Light & Power, Union City Electric Department, City of

On September 15, 2017, the Commission issued an order in Case No. U-18197 establishing the format and requirements for electric providers in the state to make capacity demonstrations to the Commission pursuant to MCL 460.6w. This order opened Case No. U-18441 for the initial capacity demonstrations (planning years 2018/19 through 2021/22), detailed the capacity demonstration process and requirements, and indicated that Staff would issue a memo in the docket with updated capacity obligations based upon the latest MISO Loss of Load Expectation (LOLE) Study Report in November of 2017. The order also had the following specific direction for Staff:

Staff is directed to prepare and file in the docket a table that identifies the capacity by type for each individual electric provider. To avoid revealing the identity of individual electric providers, the capacity can be stated in percentages with the electric providers identified by number instead of name (e.g., electric provider 1's capacity is 50% from owned resources, 25% under PPA, and 25% new DR).

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Pursuant to Section 6w(8)(d), the Staff is required to work with MISO to determine whether specific resources put forward by an electric provider meet federal reliability requirements, and the Staff's determinations will be supported by that requirement for federal-state cooperation. [MPSC Case No. U-18197, 9/15/17 Order, p 44.]

On November 20, 2017, the Commission issued an errata to its September 15, 2017 order including two reporting templates that were previously inadvertently omitted. Staff issued its memo with updated capacity obligations based upon MISO's Planning Year 2018-2019 LOLE Study Report<sup>5</sup> on October 27, 2017

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Wakefield, Wyandotte Department of Municipal Service, and Zeeland Board of Public Works.

<sup>5</sup> <https://cdn.misoenergy.org/2018%20LOLE%20Study%20Report89286.pdf>

indicating that the planning reserve margin (PRM) unforced capacity (UCAP) requirement for planning years 2018/19 and 2019/20 is 8.4% and the PRM UCAP requirement for planning years 2020/21 and 2021/22 is 8.3% for Michigan providers in MISO.

## **II. PRE-DEMONSTRATION PROCESS**

### **A. MISO Technical Assistance**

Pursuant to the Commission's direction, the Staff engaged with MISO throughout the latter half of 2017 to obtain technical assistance regarding Michigan load serving entity (LSE) capacity demonstrations.

Following the capacity demonstration technical conferences held during the summer of 2017, MISO discussed several options with Staff on ways to request zonal resource credit (ZRC) information for LSEs. One of the options discussed was to request that LSEs provide screen shots of UCAP ZRC qualifications from the MISO Module E Capacity Tracking Tool in order for Staff to verify that the amount of UCAP MW or ZRCs claimed by a Michigan LSE in a capacity demonstration for existing resources matches the amount that the resources have been qualified for under MISO's Resource Adequacy construct. In addition, Staff could request that LSEs provide their aggregate ZRC balances from the MISO Module E Capacity Tracking Tool.

Regarding the qualification of new resources, MISO shared an excerpt from its previously drafted business practice manuals (BPM) for its Competitive Retail Solution (CRS) proposal. Sections four and five of MISO's draft BPMs for the CRS

were received by Staff on November 7, 2017. Staff also discussed the possibility of obtaining peak load contribution (PLC), or the peak load plus reserves requirement for each individual Michigan LSE, directly from MISO in order to verify that accurate requirements were reported in Michigan capacity demonstrations. In order for MISO to be able to release PLC data for Michigan LSEs, it was necessary for each Michigan LSE to provide its permission to MISO for the release of that data. Staff issued a formal request for access to Michigan PLC data to all Michigan LSEs on December 13, 2017 and subsequently worked with MISO to ensure that all Michigan LSEs complied with the request and provided written permission for MISO to share the data with MPSC Staff. All of the necessary permissions were received from the Michigan LSEs for the release of the PLC data. During Staff's auditing phase, several Michigan LSEs also shared screen shots from the MISO Module E Capacity Tracking Tool showing planning reserve margin requirement (PRMR) calculations and ZRC transactions. The MPSC Staff appreciates the technical assistance provided by MISO throughout this process.

## **B. Prefiling Consultations**

Prior to the filing deadlines, Staff received several inquiries regarding the capacity demonstration process. Those inquiries led Staff to host a large group meeting for all of the AESs serving customers in Michigan in order to review the capacity demonstration process approved by the Commission and answer any questions they may have had. That optional meeting took place on December 5, 2017. Based upon issues arising at that meeting surrounding the timing associated

with customer contracts and the desire for a process to be developed to capture load changes arising from customers switching suppliers prior to or during the demonstration period, Staff developed an AES Capacity Demonstration FAQ document for educational purposes. The FAQ document describes methods that could be employed to deal with customer switching prior to or during the demonstration period. Also arising from that group meeting were requests from several individual LSEs to review draft capacity demonstration filings with Staff prior to the filing date. Staff attempted to accommodate all meeting requests to resolve as many questions as possible, prior to the filing deadline.

### **III. CAPACITY DEMONSTRATION FILINGS**

On or before December 1, 2017, capacity demonstration filings were received from Northern States Power Company, Consumers Energy Company, Alpena Power Company, Upper Michigan Energy Resources Corporation, Wisconsin Electric Power Company, Upper Peninsula Power Company, Indiana Michigan Power Company, and DTE Electric Company. Several LSEs filed confidential information under seal as part of their demonstration. Staff reviewed the filings and reached out to individual LSEs with specific questions regarding their capacity demonstration. In addition, Staff held meetings with several LSEs and audited a limited number of contracts, focusing specifically on contracts that may not have already been approved by the MPSC in other proceedings. Best efforts to completely understand the filings and work through issues with all LSEs were undertaken. Staff worked with the LSEs, when necessary, to obtain additional

information. Staff's review and auditing of the first batch of capacity demonstration filings led to one amended capacity demonstration filed by Alpena Power Company on January 22, 2018.

In addition, on or before February 9, 2018, capacity demonstration filings were received from Croswell Light and Power, Michigan Public Power Agency, Wolverine Power Supply Cooperative (on behalf of Cherryland, Great Lakes, HomeWorks, Midwest, Presque Isle, Wolverine Power Marketing Cooperative and Spartan Renewable Energy), Michigan South Central Power Agency, FirstEnergy Solutions, CMS ERM Michigan, LLC, Just Energy Solutions, MidAmerican Energy Services, Direct Energy Business, Eligo Energy, Calpine Energy Solutions, Constellation Energy Services and Constellation NewEnergy (collectively referred to as Constellation), WPPI Energy, Ontonagon County Rural Electrification Association, and Thumb Electric Cooperative. UP Power Marketing's capacity demonstration shows as being filed on February 13 in the docket, Newberry Water and Light Board and Escanaba Electric Department on February 16, Bayfield Electric Cooperative on February 20 and Cloverland Electric Cooperative on February 23. In addition, several AESs<sup>6,7</sup> filed letters in Case No. U-18441

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<sup>6</sup> AEP Energy, Dillon Power LLC, Direct Energy Services, EDF Energy Services, Energy International Power Marketing d/b/a PowerOne Corp, Energy Services Providers, Inc. d/b/a Michigan Gas & Electric, Interstate Gas Supply d/b/a IGS Energy, Nordic Energy Services, LLC, Plymouth Rock Energy, LLC, and Texas Retail Energy. Staff did not receive letters from two AESs that Staff believes are not currently serving customers in Michigan, even after several attempts to contact the suppliers: Liberty Power Delaware, LLC and Liberty Power Holding, LLC.

<sup>7</sup> Premier Energy Marketing, LLC is an AES who is not serving customers in Michigan but did not submit a letter stating as such. However, Premier Energy

indicating that they are not currently serving customers in Michigan. Daggett Electric Department, City of Dowagiac, City of Stephenson, and the City of Wakefield have not filed capacity demonstrations as of the date of this report, however, they have indicated plans to file those demonstrations by March 9, 2018.

Regarding the February filings, Staff conducted similar audits, meetings and contract reviews. Staff reviewed all of the contracts submitted in the AES and cooperative capacity demonstrations, as well as the vast majority of the contracts submitted in municipal utility capacity demonstrations prior to the issuance of this Staff report. Staff expects to complete its audit and review of the municipal utility filings within two weeks of the receipt of the outstanding capacity demonstrations. Best efforts to completely understand the filings and work through issues with all LSEs has been and will continue to be undertaken. Staff will continue to work with the LSEs in order to ensure that additional information is provided when necessary.

Staff notes that Direct Energy Business, UP Power Marketing and Constellation filed either corrected or supplemental capacity demonstration information in the docket after consultation with Staff. As discussed earlier in this report, Staff agreed to implement a process to audit and confirm load switching that had taken place since the determination of the PLC data and before the February 9<sup>th</sup> filing date. Staff requested that any AES who experienced load switching during

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Marketing, LLC has requested voluntary relinquishment of their AES license. An order issued on February 22, 2018 in Case No. U-13620 granted the license surrender and relieved Premier of any obligation to comply with its reporting requirements.



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 picking up additional load provided a copy of its affidavit confirming new load to the supplier that was losing the load to include in both suppliers' demonstrations. The supplemental filings made by these AESs were a result of Staff's inquiries and continued load switching after the original filing date.

The remaining discussion in this report includes the results of the filings received through March 1, 2018, and subsequent review and auditing activities taking place through March 5, 2018. Staff proposes to update the data in this report within two weeks of the receipt of all outstanding capacity demonstrations.

#### **IV. OVERVIEW OF ZONAL ADEQUACY**

This Staff report is based on the capacity demonstration filings in Case No. U-18441, as well as the results of Staff's review and subsequent audit of those filings, information gathered in meetings and consultations with the LSEs, responses to data requests, and supplemental filings. This report does not disclose any protected Critical Energy/Electric Infrastructure Information or other commercially sensitive information.

The primary concern regarding resource adequacy in Michigan is driven by the recent retirement of many of Michigan's older coal-fired generation units, and potential for future retirements, due in part to environmental regulations imposed by the United States Environmental Protection Agency, as well as age and economic

considerations. The retirement of these resources significantly impacts the amount of in-state generation resources that can be utilized to meet projected peak demand requirements in coming years and could result in a possible capacity shortfall, depending on a host of variables and any import constraints.

In general, the primary focus of the Staff's analysis of the filings received in this proceeding has been MISO Local Resource Zone (LRZ or Zone) 7, which comprises the Lower Peninsula of Michigan (with the exception of the southwest corner, served by the Indiana Michigan Power Company (I&M), a PJM Regional Transmission Organization market participant). Staff is keenly interested in working with Michigan LSEs to address any potential reliability concerns in a proactive manner.

The term "capacity shortfall," when used in the context of the relative capacity position of a particular LRZ, has the potential to be misinterpreted. The manner in which this term is defined can yield a significant impact on the results, and how those results can be interpreted. Staff proposes that for the purposes of its analysis, the term "capacity surplus (shortfall)" means:

The expected total load forecast plus the planning reserve margin requirements versus the total number of available planning resources located within a particular LRZ.

When defined in this manner, the capacity surplus or shortfall of a particular zone is equal to the difference between the total amount of MW (or in the case of Staff's analysis in this matter, ZRCs) that are owned or contractually obligated to a particular LSE, and its respective PRMR. For purposes of this calculation, the capacity resources must be physically located within LRZ 7. Provided that any

shortfall experienced by a particular zone is less than the zonal Capacity Import Limit (CIL), as determined by MISO in the Planning Year 2018-2019 LOLE Study Report,<sup>8</sup> and the amount of resources in the zone is greater than the Local Clearing Requirement (LCR), the zone can theoretically meet its load and reserve obligations without violating the LOLE reliability criteria of one day of outage in 10 years due to an insufficient amount of resources. An LRZ can fall short of its PRMR, if:

- The magnitude of the shortfall is less than the amount of resources that can physically be imported.
- The LRZ must have a specified amount of capacity resources, equal to or greater than the LCR, physically located within the LRZ in order to meet the LOLE reliability criterion.

The *only exception* to this condition would occur if there were not sufficient capacity resources available within the MISO footprint outside of the LRZ and available for import. In this specific case, even if the zonal capacity shortfall is less than the CIL, the LRZ could potentially not meet its capacity obligations due to an overall lack of available resources within the MISO footprint. In this scenario, where there is an insufficient amount of resources available within MISO's footprint to import into a particular LRZ to satisfy its respective PRMR, the statistical likelihood of a resource adequacy related outage would increase exponentially, depending on the severity of the shortage, such as an extended period of extremely hot weather in multiple regions of the country and/or significant unplanned generator or transmission outages.

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<sup>8</sup> Planning Year 2018-2019 Loss of Load Expectation Study Report  
<https://cdn.misoenergy.org/2018%20LOLE%20Study%20Report89286.pdf>.

## A. MISO - Local Resource Zone 7

Table one provides a summary of the results of the capacity demonstrations on a zone-wide basis.

Table 1: Preliminary U-18441 Results - LRZ 7 Capacity Position (ZRCs) <sup>9</sup>						
Line #			PY 2018/19	PY 2019/20	PY 2020/21	PY 2021/22
1	Planning Reserve Margin Requirements (PRMR)	(1)	22161	22131	22081	22051
2	Local Clearing Requirement (LCR)	(2)	20769	20743	20717	20690
3	Capacity Import Limit (CIL)	(3)	3785	3785	3785	3785
4	Total Owned		17116	17307	17429	17628
5	Total PPA Contracts		2772	2948	2949	2235
6	Total ZRC Contracts		312	455	469	415
7	Total Qualified Demand Response		977	1112	1228	1341
8	Total Resources (Line 4 + Line 5 + Line 6 + Line 7)		21177	21821	22074	21619
9	LCR Demonstrated Position (Line 8 - Line 2)		408	1078	1357	929
10	PRMR Demonstrated Capacity Position (Line 8 - Line 1)		-984	-310	-6	-432
11	Undemonstrated Zone 7 Capacity (Approximate)	(4)	374	231	217	291
12	Anticipated LCR Position (Line 9 + Line 11)		782	1310	1575	1220
13	Anticipated PRMR Capacity Position (Line 10 + Line 11)		-611	-79	211	-140
	<i>(1) PRMR calculated using the corresponding peak demand forecast from the 2018-2019 LOLE Study Report and multiplying by the coincidence factor (96%) and reserve margin (108.4% in PY 2018 and PY 2019 and 108.3% in PY 2020 and PY 2021).</i>					
	<i>(2) LCR calculated by multiplying the peak demand forecast and the LRR UCAP per-unit of LRZ Peak demand and the subtracting the capacity import limit. All values are from the 2018-2019 LOLE Study Report.</i>					
	<i>(3) CIL from the 2018-2019 LOLE Study Report, held constant at prompt year value per MISO recommendation.</i>					
	<i>(4) Undemonstrated Zone 7 Capacity is Staff's estimate of the amount of undemonstrated resources located in Zone 7. This is a conservative estimate as Staff only included resources in which part of the capacity was included in the demonstration filings. Staff made no assumptions about resources which were entirely excluded from the capacity demonstrations.</i>					

<sup>9</sup> Staff will finalize this table once it receives and reviews the last few outstanding municipal capacity demonstrations.

On April 14, 2017 MISO published a summary of the annual Planning Resource Auction (PRA) results for the 2017/18 planning year.<sup>10</sup> The PRA is a residual market for LSEs who do not have sufficient generation resources or purchased power agreements to satisfy their capacity obligations. An LSE may obtain capacity resources to meet its PRMR through ownership, either within or outside the LRZ, participation in the PRA, or through bilateral contracts.

Of particular interest to Staff is the LCR. The LCR is defined as the amount of planning resources required within a particular zone in order to meet the one day in 10 years LOLE criteria. Staff recognizes the importance of a particular LRZ meeting its LCR. Failure to do so would violate the Federal Energy Regulatory Commission (FERC)-approved North American Electric Reliability Corporation reliability standards and the MISO LOLE process, and it could also place a financial burden on certain rate-payers within the Zone. As indicated by line 9 of Table 1, Staff's findings in this matter indicate that LRZ 7 is likely to exceed its LCR by 408 ZRCs in 2018 when only demonstrated resources are considered. Any changes in actual 2018 PRMR requirements, or UCAP ratings of LRZ 7 resources in 2018 will have a direct impact on this positive balance.

Line 10 of Table 1 outlines the capacity position of LRZ 7 relative to the PRMR. Based on Staff's analysis of LSE filings in this docket, when only demonstrated generation resources physically located within LRZ 7 are considered,

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<sup>10</sup> <https://cdn.misoenergy.org/2017-2018%20Planning%20Resource%20Adequacy%20Results87196.pdf>.

there is an expected shortfall of approximately 984 ZRCs in the 2018/19 planning year with respect to the PRMR. Therefore, Staff would expect approximately 984 ZRCs either to be imported into LRZ 7 which is well below the Zone's CIL of 3,785 ZRCs, or to be purchased from LRZ 7 resources not included in LSE capacity demonstrations in the 2018/2019 MISO PRA. Line 11 lists estimated amounts of undemonstrated LRZ 7 capacity and may not be all inclusive. Some LRZ 7 existing independent power producer owned generating units had only portions of their expected unforced capacity levels included in Michigan LSE capacity demonstrations and the estimate of undemonstrated LRZ 7 capacity includes only the remaining portions of projected unforced capacity levels for those generating units. With the inclusion of the resources in line 11, Staff expects that the results of the upcoming MISO PRA will be closer to the numbers reported in line 12, showing LRZ exceeding its LCR by 782 ZRCs and line 13, potentially importing up to 611 ZRCs. As a point of reference, the 2017/2018 MISO PRA results indicate that LRZ 7 imported 338 ZRCs.

Hypothetically, if a particular MISO LRZ was projected to experience a capacity shortfall that approached the magnitude of its CIL, it would cause concern amongst the stakeholders with responsibilities regarding resource adequacy. Since the process by which the planning reserve margin is calculated is a probabilistic determination, even if the capacity shortfall exceeded the CIL, it would not necessarily mean that the LRZ in question would experience a loss of load event.

The probability of such a loss of load event, however, would exceed the generally accepted criteria that govern the resource adequacy planning process.

**1. Significant Changes in 2018**

**a. Palisades Nuclear Plant**

Based upon the Commission order in Case No. U-18250, Consumers Energy and Entergy Nuclear Palisades, LLC have indicated that the Palisades Nuclear Power Plant will continue operations through 2021, resulting in an increased projection of LRZ 7 resources available from 2018 through 2021 when compared to Staff's June 27, 2017 memo in Case No. U-18197.

**b. Unit UCAP Ratings**

In recent years, a few LRZ 7 generating units have experienced forced outage events, thereby decreasing the UCAP rating of those units on a three-year rolling average basis. Based on the submittals in U-18441, these units are expected to return to their historical average forced outage rate, thereby increasing the amount of ZRCs available to meet Michigan capacity needs in future planning years.

**c. T.E.S. Filer City Station Expansion**

On February 5, 2018, the Commission issued an order approving a settlement agreement in Case No. U-18392 involving a request by Consumers Energy for approval on Amendment 2 of its power purchase agreement with T.E.S. Filer City Station Limited Partnership. As explained in the settlement agreement, the capacity of T.E.S. Filer City will be increasing to 225 MW.

**d. Increased Demand Response Programs**

DTE Electric and Consumers Energy have increased forecasted amounts of available demand response programs over the planning period as reported in ongoing cases, Case No. U-17936 and Case No. U-18013.

**e. Decreasing Load Forecast and Planning Reserve Margin Requirement**

Over the past few years LRZ 7 has seen a slight decrease in load forecast and PRMR, annually. Lowering a particular Zone's PRMR decreases the amount of planning resources that are required to meet its total capacity obligation in the annual MISO PRA.

**f. Increased CIL**

In the 2017 PRA, the CIL for LRZ 7 was 3,320 ZRCs. The 2018 LOLE Study Report shows the LRZ 7 CIL increasing to 3,785 ZRCs for planning year 2018. All other things being equal, increasing the CIL for a particular LRZ lowers the LCR for that LRZ.

**2. Demand Response and Dynamic Peak Pricing**

As part of its analysis in this matter, Staff reviewed the LSEs' demand response (DR) programs as an optional source of effective capacity. A reduction in demand through the use of DR programs could potentially offset a portion of LSE's current capacity needs. LSEs can utilize interruptible DR during critical peak times to quickly respond to bulk electric system needs and potentially delay future



capital investment in new generation. Behavioral DR programs allow the utility to lower their peak demand forecast, thus avoiding the need for some costly supply side resources.

Demand response is expected to play a prominent role in LSEs' upcoming integrated resource plan filings, where DR is required to be considered along with traditional supply side resources for meeting capacity needs. Public Act 341 of 2016 directed Staff to complete a statewide study of DR potential in Michigan, and the State of Michigan Demand Response Potential Study<sup>11</sup> was issued on September 29, 2017. In addition, the Commission approved Michigan Integrated Resource Planning Parameters on November 21, 2017 in Case No. U-18418 and they include provisions regarding including DR options in future integrated resource plans. Staff will continue to monitor these plans for and the use of DR in Michigan for the foreseeable future.

#### **B. MISO - Local Resource Zone 2 (MI Upper Peninsula)**

MISO's LRZ 2 encompasses almost the entire Upper Peninsula (UP) of Michigan and northern and eastern Wisconsin. MISO does not define MW capacity imports or export limits between states within the boundaries of the same MISO LRZ. However, MISO does define that LRZ 2 has a CIL of 2,317 ZRCs for planning year 2018/19. Considering this, aggregation of data supplied by the UP LSEs in their filings for the purposes of determining a net capacity position, as Staff did in

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<sup>11</sup> [http://www.michigan.gov/documents/mpsc/State\\_of\\_Michigan\\_-\\_Demand\\_Response\\_Potential\\_Report\\_-\\_Final\\_29sep2017\\_602435\\_7.pdf](http://www.michigan.gov/documents/mpsc/State_of_Michigan_-_Demand_Response_Potential_Report_-_Final_29sep2017_602435_7.pdf)

its analysis of LRZ 7, is not applicable to LRZ 2 because it is located in both Michigan and Wisconsin.

As discussed in previous Reliability Assessments, MISO determined that there are limitations to the transmission system in the UP that require the availability of the Presque Isle Power Plant (PIPP) to reliably serve all of the load in the UP until such time as additional generation and/or transmission in the UP are constructed. The PIPP is owned and operated by Wisconsin Electric Power Company (WEPCo) and is subject to the Amended and Restated Settlement Agreement (ARSA).<sup>12</sup> Under the ARSA, WEPCo has agreed to operate the PIPP according to prudent utility practice, and provide safe, reliable, and adequate electric service to all of WEPCo's Michigan customers.

On January 30, 2017, Upper Michigan Energy Resources Corporation (UMERC) filed an application requesting approval of a certificate of necessity to build two reciprocating internal combustion engine (RICE) electric generation facilities in Michigan's UP. UMERC also requested approval of certificates of public convenience and necessity, along with approval of a Retail Large Curtailable Special Contract between WEC Energy Group, Inc., and Tilden Mining Company L.C. On October 25, 2017, the Commission issued an order approving construction of the proposed RICE units and the Retail Large Curtailable Special Contract.

The transmission system in the UP and Eastern Wisconsin is owned by the American Transmission Company, LLC (ATC) and operated by MISO. ATC is the

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<sup>12</sup> <https://mi-psc.force.com/s/filing/a00t0000005pQyWAAU/u176820215>

transmission service provider under MISO's tariff. As part of their plans to reinforce the electrical transmission grid in the UP and northeastern Wisconsin, ATC is moving forward with the Bay Lake Project.<sup>13</sup> The Michigan portion of the Bay Lake Project has been completed; however, the Wisconsin portion has an in-service date of late 2018. Upon completion of the overall Bay Lake Project, and construction of the approved RICE units, localized resource adequacy and operational reliability issues experienced in the northern Wisconsin and Michigan's UP region should be lessened.

The 2017 Organization of MISO States (OMS)-MISO Survey results indicate an installed capacity surplus of 600 MW in the 2018/19 planning year for LRZ 2.<sup>14</sup> Notwithstanding the localized reliability issues in the UP, the results of the OMS-MISO Survey indicate that LRZ 2 is projected to have an adequate supply of capacity resources to meet its PRMR for the 2018/19 planning year.

### **C. MISO - Local Resource Zone 1 (Western tip of MI Upper Peninsula)**

A very small fraction of Michigan's UP load is located in LRZ 1. Northern States Power, Bayfield Electric Cooperative and the City of Wakefield municipal utility have less than a total of 30 MW in MISO LRZ 1. The 2017 OMS-MISO Survey results indicate an installed capacity surplus of approximately 1,000 MW

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<sup>13</sup> <http://www.atc-projects.com/projects/bay-lake/>

<sup>14</sup> The OMS-MISO survey is published annually in June, therefore the results for the 2018 survey are not yet available. 2017 OMS-MISO Survey Results [https://www.eenews.net/assets/2017/06/16/document\\_ew\\_02.pdf](https://www.eenews.net/assets/2017/06/16/document_ew_02.pdf)

indicating that LRZ 1 is projected to have an adequate supply of capacity resources to meet its PRMR for the 2018/19 planning year. *Id.*

#### **D. PJM - Indiana Michigan Power Company**

Indiana Michigan Power Company (I&M)'s capacity demonstration filed in Case No. U-18441 indicates that the Company plans to continue with the PJM Fixed Resource Requirement (FRR) option that allows them to opt out of participation in the PJM competitive capacity market. I&M's current capacity demonstration also states "Under AEP's [American Electric Power Company] FRR plan for PYs 2018/19, 2019/20 and 2020/21, AEP and I&M met PJM's FRR reserve margin requirements in each planning year. Additionally, although based on a preliminary estimate, at this time AEP and I&M expect to meet the PJM FRR reserve margin requirements for PY 2021/22 and will submit its 2021/22 plan in an amendment to this filing within two weeks after the May 2018 PJM RPM auction results are posted."

However, as a participant in the PJM energy market, I&M is subject to the performance rules and regulations of the PJM capacity market structure. In response to poor generator performance during the Polar Vortex in 2014, PJM developed new penalties and enhanced performance requirements for generators in their Capacity Performance proposal approved by the FERC in Docket No. ER15-623-000.<sup>15</sup> These requirements apply to all of the LSEs in PJM, including those

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<sup>15</sup> <http://www.pjm.com/committees-and-groups/committees/elc.aspx>

electing the FRR option, such as I&M. The FERC order approving PJM’s proposal requires that all resources must meet Capacity Performance requirements by 2020.

Table 2 below outlines the details of I&M’s filing in Case No. U-18441.

<b>Table 2: Indiana Michigan Power Company Capacity Demonstration Summary</b>				
<b>Item</b>	<b>PY 2018/19</b>	<b>PY 2019/20</b>	<b>PY 2020/21</b>	<b>PY 2021/22</b>
Total Planning Reserve Margin (expected reserves), UCAP MW	4,715	4,632	4,339	4,337
Total Company Owned Generation, MW	4,346	4,166	4,053	4,286
Total Qualified Demand Response Resources Including PRM UCAP, MW	327	400	251	220
Total PPA, MW	276	271	225	228
Total Planning Resources, MW	4,948	4,836	4,528	4,734
UCAP Surplus / (Shortfall), MW	232	204	189	397

Based on this data Staff expects I&M’s resources to be adequate to serve its load obligations. In its 2017 Summer Assessment, the FERC projects that PJM will have a reserve margin approaching 28%.<sup>16</sup> With such an abundance of reserve resources, if I&M were to encounter an unanticipated shortfall in the immediate future, it is anticipated that it could easily be accommodated through the procurement of some amount of these reserve resources.

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<sup>16</sup> <https://www.ferc.gov/market-oversight/reports-analyses/mkt-views/2017/2017-summer-assessment.pdf>

## V. LSE CAPACITY DEMONSTRATION RESULTS<sup>17</sup>

The 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 made by Staff throughout this process. 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 prior to March 5, 2018 is included as Attachment A. In addition to the breakdown by individual supplier, Staff reports the following aggregate results in Table 3 below.

<b>Table 3: Resource Breakdown (%) by Supplier Type</b>							
	<b>PY</b>	<b>Owned</b>	<b>DR</b>	<b>Contract ZRC</b>	<b>Contract PPA</b>	<b>MISO PRA</b>	<b>PJM BRA</b>
<b>Muni/Co-Op Aggregate</b>	2018	81.5%	0.1%	7.8%	7.9%	2.7%	
	2019	82.4%	0.1%	8.3%	8.9%	0.2%	
	2020	79.9%	0.1%	7.3%	8.1%	0.2%	4.4%
	2021	80.3%	0.1%	5.5%	9.9%	0.0%	4.1%
<b>AES Aggregate</b>	2018	8.6%		81.1%	1.9%	8.4%	
	2019	8.3%		89.8%	1.8%	0.1%	
	2020	8.5%		89.5%	1.9%	0.1%	
	2021	8.5%		89.5%	1.9%	0.1%	
<b>Utility Aggregate</b>	2018	76.5%	6.4%	1.6%	15.6%	0.0%	
	2019	76.3%	7.5%	0.7%	15.6%	0.0%	
	2020	76.2%	7.4%	0.7%	15.7%	0.0%	
	2021	78.0%	7.7%	0.1%	14.1%	0.0%	

<sup>17</sup> The reported results are preliminary. This section will be updated within two weeks of receipt of the final outstanding capacity demonstration filings.

Additional data regarding ZRC contracts included in capacity demonstrations in Case No. U-18441 is provided in Table 4 below. Staff notes that a relatively small amount of the ZRC contracts were for LRZ 7 ZRCs (Line 1) as many of the ZRC contracts were sourced from resources in other zones (Line 2). The total ZRC Contracts (Line 3) includes ZRC contracts utilized by LSEs in LRZ 1, LRZ 2, and LRZ 7 capacity demonstrations, however, a large portion of the ZRC contracts coming from resources outside of LRZ 7 were included with capacity demonstrations of LSEs whose load is located in LRZ 7.

Staff observes that LSEs provided two different types of ZRC contracts in their demonstrations. There is a significant difference between the two types. The first type, representing the majority of ZRC contracts LSEs utilized in demonstrations in this case, specified delivery of the ZRCs in the MISO Module E Capacity Tracking Tool at least some minimum number of days prior to the applicable PRA auction (Line 4). The second type represented only a handful of the ZRC contracts. These contracts specified that the ZRCs be offered into the applicable MISO PRA (Line 5).

Regarding the first type of contract, for the 2018/19 planning year, Staff was able to audit the delivery of the ZRCs into the MISO Module E Capacity Tracking Tool (MECT) for those that already had ZRCs delivered in the MISO MECT, by having the LSE show Staff the appropriate information in the MISO MECT. Staff could complete these audits as the PRA nears, as well as audit planning years 2019, 2020, and 2021 around the time of their respective PRAs. But for the second type of

contract, which does not require the transfer of the ZRCs to the LSE, similar auditing may not be possible. In these contracts, the LSE obtains a commitment that a number of ZRCs will be offered into the MISO PRA, essentially on the LSE’s behalf. Staff notes that, through planning year 2021/22, the total amount of those types of contracts is relatively small, compared to those transferred in the MECT prior to the PRA. However, Staff is unable to verify the ZRC transactions ahead of the PRA and because PRA purchases do not specify any particular resources for any particular LSE load, Staff has not identified methods to audit delivery for these types of contracts. Thus, Staff recommends that in future demonstrations, the LSEs use the first type of contract, rather than the second.

<b>Table 4: ZRC Contracts</b>					
<b>Line #</b>		<b>PY 2018/19</b>	<b>PY 2019/20</b>	<b>PY 2020/21</b>	<b>PY 2021/22</b>
1	LRZ 7	312	455	469	415
2	Other LRZ (not LRZ 7)	1672	1319	1356	1136
3	Total ZRC contracts	1984	1774	1825	1551
4	ZRC transferred in MECT prior to PRA	1920	1610	1666	1392
5	ZRC entered into PRA	64	164	159	159

The vast majority of LSEs that have filed capacity demonstrations in Case No. U-18441 as of March 5, 2018 have met the requisite levels of planning resources for planning years 2018/19 through 2021/22. Staff highlights a few outstanding issues in the next section.

## **VI. OUTSTANDING ISSUES**

While reviewing the capacity demonstration filings, Staff performed due diligence audits, questioning LSEs regarding details submitted in the filing,



reviewing confidential contracts, reviewing particular items in the MISO Module E Capacity Tracking Tool, and when necessary, requesting that supplemental information be filed in the docket in order for a capacity demonstration to be deemed complete and sufficient. As of the date of this report, Staff does not yet have resolution for a few outstanding issues. The following are issues that have not yet been fully resolved with individual suppliers regarding individual capacity demonstration filings.

Staff is aware of one disagreement between a particular AES and the incumbent utility regarding the 2018 PLC value for one of the AES's customers. Staff notes that the AES in question has submitted a demonstration with enough resources to be sufficient regardless of the outcome of the PLC dispute. Staff will continue to monitor the disputed PLC. However, Staff recommends no additional further actions are necessary at this time since the AES has demonstrated sufficient resources in either event.

MidAmerican Energy Services, LLC filed a public capacity demonstration in this case explaining that the contracts for all of its current customers would be expiring prior to the start of the 2018/19 planning year and that MidAmerican has no plans to continue marketing to customers in Michigan after the current contracts expire. MidAmerican has continuously reached out to all of its customers in order to determine whether they would each be contracting with a new supplier or returning to the incumbent utility. At the time of MidAmerican's demonstration, it was unaware of whether four customers, totaling 1.4 MW would be returning as

bundled customers to DTE Electric or contracting with another supplier. Staff has been in contact with MidAmerican to obtain progress updates on the status of the undemonstrated for 1.4 MW. While MidAmerican has indicated that they believe 1.35 MW of this load has or will be signing contracts with a new AES, Staff has not received final confirmation as the date of this report. Staff notes that should the 1.35 MW be transferred to the new AES, the AES in question has not planned to utilize the allowable 5% PRA purchases in its demonstration and the addition of utilization of a portion of its allowable PRA purchases would allow this AES's previously filed capacity demonstration to be sufficient. Staff will continue to monitor the status of this remaining load and will update the Commission once the information is received. At this point in time Staff does not recommend that a show-cause case be opened for MidAmerican to show why its customers should not be assessed the state reliability mechanism (SRM) charge, because MidAmerican will no longer have customers in Michigan to assess the SRM charge to starting in June of 2018.

Similar to the situation described with MidAmerican, an AES serving customers in Upper Peninsula Power Company's service territory is unaware of future plans for a very small portion of its current load. Less than 1.0 MW has not been demonstrated for by this AES. Staff has been working with the AES, as well as Upper Peninsula Power Company, to try to determine where the load in question is going. Staff will continue to monitor the transition of this load. Staff does not recommend a show-cause action for this AES, however, because the AES has

demonstrated sufficient resources to cover its expected requirements without utilizing the allowable 5% PRA purchases. The additional less-than-one megawatt of load the AES has not demonstrated for will fall within the allowable 5% PRA purchase amount.

As part of a due diligence audit, while reviewing a confidential contract provided as a planning resource in a LRZ 2 cooperative's capacity demonstration, Staff discovered that the contract expires prior to planning years 2020/21 and 2021/22. The cooperative explained that its current full requirements wholesale contract with a LRZ 2 utility was currently in the process of being extended and the extension had not been completed prior to filing its capacity demonstration. The cooperative agreed to advise Staff as soon as the contract extension was available for Staff review. Staff will continue to follow up with the cooperative and does not recommend further action at this time.

Several of the municipal utility capacity demonstrations were filed after the February 9, 2018 deadline and several more are expected to be filed March 9, 2018. The late filings have significantly reduced the amount of time available to Staff to review and audit, however Staff understands the significant time and investment necessary in order to develop new forward resource plans to meet the new requirements in MCL 460.6w. Staff is still working with the municipalities and will be able to complete the review and audit of the municipal utility capacity demonstrations shortly after the last few are filed. Staff will update this report with the results of any outstanding issues arising from municipal utility capacity

demonstrations within two weeks of the receipt of the final municipal utility capacity demonstration filing.

## **VII. STAFF RECOMMENDATIONS – PROCESS GOING FORWARD**

To continue streamlining the demonstration process going forward, Staff has taken into consideration the continued feedback of all electric providers and makes the overall recommendations outlined below:

### **A. Extension for March 2019 Staff Report**

Staff appreciated the efforts made by Michigan LSEs to work with Staff regarding additional requested information and the review of contracts. To continue to allow sufficient time in the future for Staff to conduct due diligence audits of the providers capacity demonstration filings and contracts, the Staff respectfully requests that for future demonstrations, the Commission consider extending the deadline for the Staff report by approximately three additional weeks, or near the end of March.

### **B. Capacity Demonstration Technical Conference**

Several Michigan providers have made suggestions for potential changes to the process going forward, some of which are outlined below. To gather feedback on these suggestions, as well as learn about other possible process improvements, Staff recommends that the Commission direct that a Capacity Demonstration Technical Conference take place during the summer of 2018.

### **C. Reporting Template**

Based on the initial demonstration filings, Staff recommends individualizing the reporting template for each type of electric provider (incumbent utility, municipality, cooperative and AES) going forward. Potential modifications to the reporting templates could be vetted during the proposed capacity demonstration technical conference.

### **D. Affidavit Templates**

Throughout the demonstration period, Staff received several requests for an affidavit “template” that contained what an acceptable commitment requirement pursuant to the approved Attachment A would look like. Additionally, there were a lot of questions about what Staff would deem acceptable for the AES affidavits that Staff requested to confirm any load switching. Because there was no defined process or template for this process, Staff was flexible with formatting so long as Staff received all the information needed. To forego confusion, Staff recommends that an affidavit template be drafted for both the commitment affidavit and the AES load switching affidavit and that these be included with the updated reporting template for planning year 2022/23.

## **VIII. CONCLUSION**

For the reasons stated above, the Staff does not recommend the Commission initiate any show-cause proceedings regarding any LSE at this time. The Staff does

request the Commission to approve its recommendations regarding the process for upcoming capacity demonstrations.

Respectfully submitted,

**MICHIGAN PUBLIC SERVICE COMMISSION  
STAFF**

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**DATED: March 6, 2018**  
18441/Staff Report and Recommendations

**ATTACHMENT A**

<b>U-18441 Resource Breakdown (%) by Individual LSE</b>							
	<b>PY</b>	<b>Owned</b>	<b>DR</b>	<b>Contract ZRC</b>	<b>Contract PPA</b>	<b>MISO PRA</b>	<b>PJM BRA</b>
<b>Supplier 1</b>	2018	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	2019	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	2020	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	2021	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
<b>Supplier 2</b>	2018	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	2019	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	2020	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	2021	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
<b>Supplier 3</b>	2018	97.6%	0.0%	0.0%	2.4%	0.0%	0.0%
	2019	97.6%	0.0%	0.0%	2.4%	0.0%	0.0%
	2020	97.6%	0.0%	0.0%	2.4%	0.0%	0.0%
	2021	97.6%	0.0%	0.0%	2.4%	0.0%	0.0%
<b>Supplier 4</b>	2018	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	2019	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	2020	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	2021	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
<b>Supplier 5</b>	2018	89.5%	6.2%	2.8%	1.6%	0.0%	0.0%
	2019	90.8%	6.7%	0.9%	1.6%	0.0%	0.0%
	2020	89.7%	6.9%	1.8%	1.6%	0.0%	0.0%
	2021	91.2%	7.2%	0.0%	1.6%	0.0%	0.0%
<b>Supplier 6</b>	2018	0.0%	0.0%	22.2%	77.8%	0.0%	0.0%
	2019	0.0%	0.0%	22.2%	77.8%	0.0%	0.0%
	2020	0.0%	0.0%	22.2%	77.8%	0.0%	0.0%
	2021	0.0%	0.0%	22.2%	77.8%	0.0%	0.0%
<b>Supplier 7</b>	2018	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	2019	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	2020	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	2021	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
<b>Supplier 8</b>	2018	65.1%	3.8%	0.2%	30.8%	0.0%	0.0%
	2019	63.6%	4.6%	0.2%	31.6%	0.0%	0.0%
	2020	63.3%	5.6%	0.2%	30.8%	0.0%	0.0%
	2021	69.3%	7.2%	0.0%	23.6%	0.0%	0.0%
<b>Supplier 9</b>	2018	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
	2019	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	2020	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	2021	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%

<b>Supplier 10</b>	2018	97.6%	0.0%	0.0%	2.4%	0.0%	0.0%
	2019	97.6%	0.0%	0.0%	2.4%	0.0%	0.0%
	2020	97.6%	0.0%	0.0%	2.4%	0.0%	0.0%
	2021	97.6%	0.0%	0.0%	2.4%	0.0%	0.0%
<b>Supplier 11</b>	2018	87.8%	6.6%	0.0%	5.6%	0.0%	0.0%
	2019	86.1%	8.3%	0.0%	5.6%	0.0%	0.0%
	2020	89.5%	5.5%	0.0%	5.0%	0.0%	0.0%
	2021	90.5%	4.6%	0.0%	4.8%	0.0%	0.0%
<b>Supplier 12</b>	2018	0.0%	0.0%	91.2%	0.0%	8.8%	0.0%
	2019	0.0%	0.0%	98.9%	0.0%	1.1%	0.0%
	2020	0.0%	0.0%	98.9%	0.0%	1.1%	0.0%
	2021	0.0%	0.0%	98.9%	0.0%	1.1%	0.0%
<b>Supplier 13</b>	2018	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	2019	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	2020	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	2021	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
<b>Supplier 14</b>	2018	97.6%	0.0%	0.0%	2.4%	0.0%	0.0%
	2019	97.6%	0.0%	0.0%	2.4%	0.0%	0.0%
	2020	97.6%	0.0%	0.0%	2.4%	0.0%	0.0%
	2021	97.6%	0.0%	0.0%	2.4%	0.0%	0.0%
<b>Supplier 15</b>	2018	44.3%	0.0%	0.0%	55.7%	0.0%	0.0%
	2019	43.1%	0.0%	0.0%	56.9%	0.0%	0.0%
	2020	43.8%	0.0%	0.0%	56.2%	0.0%	0.0%
	2021	42.0%	0.0%	0.0%	58.0%	0.0%	0.0%
<b>Supplier 16</b>	2018	85.3%	0.0%	12.1%	2.6%	0.0%	0.0%
	2019	87.4%	0.0%	8.5%	4.1%	0.0%	0.0%
	2020	79.7%	0.0%	9.0%	3.6%	0.0%	7.7%
	2021	81.3%	0.0%	7.7%	3.6%	0.0%	7.3%
<b>Supplier 17</b>	2018	9.8%	6.6%	0.0%	82.9%	0.7%	0.0%
	2019	10.0%	6.8%	0.0%	82.5%	0.8%	0.0%
	2020	10.0%	6.8%	0.0%	82.5%	0.8%	0.0%
	2021	10.0%	6.8%	0.0%	82.5%	0.8%	0.0%
<b>Supplier 18</b>	2018	38.0%	0.0%	0.0%	62.0%	0.0%	0.0%
	2019	38.0%	0.0%	0.0%	62.0%	0.0%	0.0%
	2020	38.0%	0.0%	0.0%	62.0%	0.0%	0.0%
	2021	38.0%	0.0%	0.0%	62.0%	0.0%	0.0%
<b>Supplier 19</b>	2018	28.0%	0.0%	0.0%	15.0%	57.0%	0.0%
	2019	27.8%	0.0%	52.3%	14.9%	5.0%	0.0%
	2020	59.0%	0.0%	21.5%	14.4%	5.0%	0.0%
	2021	56.6%	0.0%	0.0%	43.4%	0.0%	0.0%



<b>Supplier 20</b>	2018	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	2019	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	2020	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	2021	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
<b>Supplier 21</b>	2018	69.8%	8.8%	0.7%	20.7%	0.0%	0.0%
	2019	68.6%	8.2%	0.7%	22.5%	0.0%	0.0%
	2020	68.7%	8.2%	0.0%	23.1%	0.0%	0.0%
	2021	67.5%	8.1%	0.0%	24.4%	0.0%	0.0%
<b>Supplier 22</b>	2018	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
	2019	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	2020	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	2021	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
<b>Supplier 23</b>	2018	0.0%	20.6%	0.0%	79.4%	0.0%	0.0%
	2019	45.7%	54.3%	0.0%	0.0%	0.0%	0.0%
	2020	45.7%	54.3%	0.0%	0.0%	0.0%	0.0%
	2021	45.7%	54.3%	0.0%	0.0%	0.0%	0.0%
<b>Supplier 24</b>	2018	36.0%	44.5%	18.8%	0.8%	0.0%	0.0%
	2019	36.0%	44.5%	18.8%	0.8%	0.0%	0.0%
	2020	36.8%	45.5%	15.4%	0.4%	1.9%	0.0%
	2021	36.8%	45.5%	15.4%	0.4%	1.9%	0.0%
<b>Supplier 25</b>	2018	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	2019	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	2020	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	2021	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
<b>Supplier 26</b>	2018	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	2019	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	2020	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	2021	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
<b>Supplier 27</b>	2018	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	2019	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	2020	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	2021	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
<b>Supplier 28</b>	2018	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	2019	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	2020	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	2021	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter, on the Commission's Own Motion,  
regarding the implementation of MCL 460.6w.

Case No. **U-18441**  
(e-file paperless)

**PROOF OF SERVICE**

STATE OF MICHIGAN    )  
  ) ss  
COUNTY OF EATON    )

TINA L. BIBBS, being first duly sworn, deposes and says that on **March 6, 2018**, she served a true copy of the **MPSC Staff Report and Recommendations** upon the following parties **via e-mail only**:

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TINA L. BIBBS

Subscribed and sworn to before me  
this **6th** day of **March, 2018**.

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Corinna C. Swafford, Notary Public  
State of Michigan, County of Ionia  
Acting in the County of Eaton  
My Commission Expires: 12-13-2019