

Statewide Energy Assessment (SEA) Status Updates

September 9, 2021



Background

January 30-31, 2019 Events

- Extreme cold weather below -25° F temperatures (high natural gas demand and reduced regional power plant output)
- Ray Compressor Station fire disrupted natural gas supply
- Midcontinent Independent System Operator (MISO) declared a system-wide electric emergency requiring all generation to operate at maximum output
- State Emergency Operations Center (SEOC) appeal to all residents to conserve natural gas

Letter from the Governor to MPSC

- Evaluate whether the design of the electric, natural gas, and propane delivery systems are adequate to account for changing conditions and extreme weather events
- Provide recommendations on how to mitigate risk on the energy system

Statewide Energy Assessment (SEA)

- SEA report divided into the following sectors:
 - Electricity
 - Natural Gas
 - Propane
 - Cyber and Physical Security
 - Energy Emergency Management
- Final Report issued on 9/11/19 in Case No. U-20464 provides **37 recommendations** and **15 observations** in total

Electric – Demand Response (DR) Tariffs

E-1.1 Review DR tariffs for consistency and clarity when deploying LMRs during emergency events, including notifications and penalty provisions (Complete)

E-1.2 Align retail DR tariffs with wholesale markets and emergency operations (Complete)

E-1.3 Review and test DR resources and communications to ensure ability to respond when called upon (Complete)

- Staff led a stakeholder workgroup per Commission order in Case No. U-20628
- Staff report issued 7/31/20
- Commission order directs utilities to revise tariffs by 4/1/21
- Most utilities filed tariff changes

Electric – Rulemakings

E-3 Workgroup to recommend changes to Service Quality and Reliability Rules and the Technical Standards for Electric Service (Complete)

E-4 Workgroup to update the MPSC's Interconnection Rules (Complete)

- Staff led Service Quality and Reliability workgroup in Case No. U-20629
- Staff led Technical Standards for Electric Service workgroup in Case No. U-20630
- Staff led Interconnection Rules workgroup Case No. U-20344
- Michigan Office of Administrative Hearings and Rules has authorized the formal rulemaking process for all three rulesets. RFRs submitted
- Customer Standards and Billing Practices rules revised with Service Quality and Technical Standards rulesets

Electric – Advanced Planning

E-5 Better align electric distribution plans with IRPs considering DERs, reliability, and increased intermittent resources (In Progress)

E-6 Quantify the value of generation diversity in IRPs (In Progress)

E-7 Quantify the value of resilience, particularly for DERs (In Progress)

E-8.1 Better accommodate transmission alternatives in IRPs (In Progress)

- Staff led workgroup per Commission order in Case No. U-20633
- Staff report issued 5/27/21
- Phase III Advanced Planning efforts expected to launch in late 2021 to revisit the IRP Planning Parameters and filing requirements
- Commission has addressed certain recommendations in distribution planning Case No. U-20147

Electric – Regional Transmission Organization (RTO)

E-2 Ensure that electric generators provide RTOs with all operating characteristics and improve generator startup performance during emergencies (Ongoing)

- Effort through MISO's Resource Availability and Need (RAN initiative) for all generators
- FERC approves NERC Cold Weather Reliability Standards to improve situational awareness with 4/1/23 implementation date

E-8.2 Investigate opportunities to expand Michigan's capacity import limit to aid with resource adequacy and reliability as aging plants retire (Complete)

- Formal request for CIL/CEL study made to MISO in 2019
- CIL/CEL Report issued June 2021

E-9 Improve data sharing between utilities, staff, other market participants and RTOs to operate system with increased DERs (Ongoing)

- Staff is leading effort at the Organization of MISO states

Electric – Regional Transmission Organization (RTO)

E-11 Create a seasonal capacity construct to supplement current single peak capacity model (In Progress)

E-12 Generator interconnection queue improvements (In Progress)

E-13 MISO's process should more carefully consider non-transmission alternatives (In Progress)

Staff will continue to develop and engage in efforts, where appropriate

Electric – EGLE Coordination

E-10 Discuss coordination issues with EGLE including options to address the conflict that arises when electric generators reach air emission limitations at the same time as RTO emergencies require increased output (In Progress)

- Staff held meetings with EGLE and generation operators
- MPSC is working towards a shared understanding with EGLE during declared energy emergencies



Natural Gas – Risk and Prioritization

G-1 Enhance Safety Management Systems to support and prioritize safety programs (Ongoing)

G-2 Incorporate probabilistic risk models to prioritize investments (Complete)

G-3 Utilities incorporate equipment and facility outages in risk models (Complete)

G-9 Conduct analyses to evaluating increasing the number of remote shutoff valves (Ongoing)

- Safety Management Systems meetings will continue
- Utility top risks reviewed annually
- Larger utilities conducted tabletop exercises in 2020 and will continue annually
- Utility ongoing analysis to incorporate remote shutoff valves
- Staff to meet with utilities on these items as they continually evolve

Natural Gas – Planning and Diversity

G-4 Utilities should consider contingency options for resilience at key facilities and Staff should consider those as well as consider more resilient design day plans (Ongoing)

G-5 Consider the diversity in supply sources and propose investments to increase reliability. Consider diversification of supply through GCR plans and reconciliations (Ongoing)

- Contingency and resilience options discussed in Case No. U-20631 workgroups
- Utilities filing Act 9 applications for additional supply
- Capital requests for resiliency improvements in rate cases
- GCR plan cases supplemented with contingency options and more resilient design day plans
- Diversification of supply included in GCR plan cases

Natural Gas – Mutual Assistance and Transmission Contingency Planning

G-6 Develop solutions that mitigate the risk of outages, improve flexibility and accommodate demand growth (Ongoing)

G-8.1 Workgroup to facilitate the development of mutual assistance agreements (Complete)

G-8.2 Workgroup to facilitate the development of transmission contingency planning (Complete)

- Staff led workgroups in Case No. U-20631
- Staff report issued 3/31/20 with recommendations on mutual assistance for gas utilities
- Staff report issued 3/31/21 with recommendations on transmission contingency planning
- Commission order issued on 5/13/21 accepting Staff's reports and adopting many recommendations and required additional efforts

Natural Gas – Demand Response (DR) and Legislation

G-7 Review the potential for natural gas demand response (DR) programs and encourage the development or expansion of natural gas DR programs (Complete)

- Staff met with utilities to discuss DR programs
- Utilities filed natural gas rate cases including testimony focused on DR

G-10 Michigan statute limits the ability of the MPSC to assess meaningful penalties for non-compliance with Michigan natural gas safety standards and may impact the health, safety, and welfare of Michigan residents (In Progress)

- Commission is working with Legislative partners to develop and adopt legislation to align with Federal law

Propane – Outreach and Communication

P-1 Staff continue to solicit market information from propane suppliers and create an annual retail propane survey (Ongoing)

- Staff developed annual retail propane survey which is reviewed and edited prior to each release to help clarify requests and improve data quality

P-2 MPSC continue public education efforts to promote the use of pre-buy and price lock-in purchase (Ongoing)

- Recurring annual press release during the mid-late summer regarding pre-buy and price lock-in. Summer 2021 release

P-5 Work with owners and operators of critical petroleum assets to ensure availability of NGLs and propane (Ongoing)

- Staff engaged in outreach with NGL and propane suppliers to monitor availability and proactively address potential supply disruptions
- Staff engaged in conversations regarding increasing storage utilization and the potential establishment of a Strategic Propane Reserve

P-6 Petroleum prime suppliers provide Energy Security Section with form EIA-782C to more accurately account for inflow and outflow of propane supply/storage (In Progress)

- Commission working with Legislative partners to better enable information sharing with the Commission



Propane – Planning and Analysis

P-3 Formal contingency plans needed for supply and delivery of propane (Complete)

- Michigan Propane Security Plan issued March 2021 identifying strategies to ensure the availability of propane throughout the state
- A decision matrix is expected to be used in conjunction with the Petroleum Shortage Response Plans to improve coordination and response efforts during market disruptions

P-4 Alternatives analysis considering rail and trucks to supply Rapid River, options for importing propane into UP, extension of natural gas infrastructure for home heating, use of electric heat sources and heat pumps and targeted EWR for propane customers (In Progress)

- Staff supported the U.P. Energy Task Force and Public Sector Consultants in the development of the Analysis of Propane Supply Alternatives for Michigan report
- Staff conversations related to the Michigan Department of Transportation's (MDOT) U.P. Rail Study to examining potential improvements to the rail network pertaining to increased propane shipments

Propane – Training

P-7 State of Michigan should support the development of a HAZMAT Driver Training Program to help supply the propane market with properly trained and qualified transport drivers, potentially in partnership with the Michigan Propane Gas Association (In Progress)

- Staff identifying state and private sector partners to develop training program

Propane – Feasibility Studies

P-8.1 Study the feasibility of increased utilization of Appalachian Basin natural gas liquids (NGLs) and purity propane supplies in conjunction with additional in-state geological storage and fractionation capacity to diversify fuel sourcing (In Progress)

- Staff exploring opportunities for increased utilization of Appalachian Basin NGLs and is actively engaging industry participants

P-8.2 Study the feasibility of additional rail and storage infrastructure buildout near the Rapid River, Michigan fractionation facility to enhance resilience, including the potential use of the existing Michigan Economic Development Corporation's Freight Economic Development Program to offset 50% of the cost of a rail spur to serve the Rapid River facility (In Progress)

- MDOT provided grants to expand track capacity and unloading capabilities in Escanaba and Kincheloe
- Governor's FY 2022 Budget Recommendation recommends 10 million dollars for MDOT's Rail Economic Development Program and 5 million dollars for the development of propane storage tanks near rail infrastructure
- MDOT's U.P. Rail Study expected to explore in more detail

Cyber and Physical Security – Rulemakings and Standards

S-1 Include cybersecurity standards and reporting for natural gas distribution systems under MPSC jurisdiction through proposed amendments to the Gas Technical Standards (Complete)

S-2 Continue to evaluate existing Commission rules and utility data privacy tariffs for opportunities to enhance the protection of customer data and the cybersecurity of electric distribution infrastructure (Ongoing)

S-3 Electric and Natural Gas conduct annual self-assessments of cyber capabilities (In Progress)

S-6 Categorize physical and cyber incident types and severities and make clear internal and external notifications that will take place (In Progress)

S-8 Utilities run simulated phishing campaigns at least quarterly and include all employee levels (In Progress)

- Cybersecurity standards and reporting updates made to the Technical Standards for Gas Service
- Staff report issued 12/15/20 in Case No. U-20630 includes proposed baseline cybersecurity requirements and simulated phishing campaigns in the Technical Standards for Electric Service. RFR submitted
- Customer Education and Participation workgroup to review data privacy tariffs

Cyber and Physical Security – Reports

S-4 Utilities pursue the close coordination of OT, IT, and physical security operations, and centralize security functions (Ongoing)

S-7 Regularly audit operational technology environments for internet-facing systems (Ongoing)

S-9 Utilities require multifactor authentication to remotely access OT assets (Ongoing)

S-10 Encourage utilities to adopt best practices in mitigating threats from phishing and other IT threats, perform cost-benefit analysis on security controls, and implement additional controls (Ongoing)

- Staff engages with utilities through annual cybersecurity reporting and continues to monitor progress and ensure continuous improvement
- Staff to engage in further rulemaking, if necessary
- Staff working with utilities to ensure the inclusion of cost-benefit information for proposed security investments in rate case proceedings

Cyber and Physical Security – Metrics

S-5 Utilities work to develop and track metrics to assess cybersecurity performance (Ongoing)

- Staff working with larger utilities on additional cybersecurity and IT data streams and metrics for incorporation in multi-year IT and Security plans

Emergency Management – Communication

EM-1.1 Timely and consistent energy emergency communications to the public (Complete)

- Consumer tips on safety and other issues are being redesigned for release at appropriate times of the year
- Meetings held to brainstorm ideas for the pre-written drafts of emergency messaging

EM-1.2 Develop drafts of energy emergency messaging for use in emergencies (In Progress)

- Staff internal meetings to develop pre-written drafts of emergency messaging including press releases and social media messages in energy emergencies

EM-1.3 Staff annually provide an emergency contact list to energy providers and RTOs (Complete)

- Staff developed emergency contact list and will be distributed within the next few months

EM-2 Develop standardized communications to the MPSC regarding electric and NG emergencies among Investor-Owned Utilities and Cooperatives (Complete)

- Staff created outage reporting requirements for electric providers and distributed to utilities

Emergency Management – Drills and Training

EM-3 Expand upon traditional drills to include emergency drills that also focus on curtailment and demand response procedures (Ongoing)

- Utilities refocused drills to include curtailment and demand response scenarios

EM-5 The MPSC should work with State Police, RTOs, gas and electric utilities, and the Governor's office to exercise critical decision making during catastrophic energy events where sustaining natural gas and electricity service may be in conflict (Needs Action)

EM-6 Staff plan workforce development activities for Commissioners and Staff (Complete)

- Additional Staff trained in MI CIMS and FEMA incident command system
- On-call weekend coverage expanded to include additional Staff

Emergency Management – Workgroups

EM-4 Convene a workgroup on NG curtailment procedures to prioritize residential heating above NG use for electric generation when appropriate (Complete)

EM-8 Staff facilitate a workgroup to address potential gaps in petroleum fuel supply and delivery with the Michigan State Police, terminal owners, as well as other stakeholders (Needs Action)

- Staff led workgroup per Commission order in Case No. U-20632
- Staff report issued 6/30/20
- Commission order issued 9/9/21

Emergency Management – Plans and Reports

EM-7 Update the Michigan Energy Assurance Plan and Petroleum Shortage Response Plan bi-annually (In Progress)

- Energy Assurance Plan and Petroleum Shortage Response Plan updates underway with a planned two-year update schedule

EM-9 Adoption of the Incident Command System (ICS) at larger utilities and cooperatives to better align with federal and state emergency responders (In Progress)

- Most larger utilities have adopted the ICS structure
- Staff will monitor adoption in annual security meetings

EM-10 Municipal electric providers or a representative association follow the same outage reporting standard for MPSC and Michigan State Police during energy emergencies (In Progress)

- Michigan Municipal Electric Association (MMEA) president received training and access to MI CIMS to facilitate self-reporting
- Improved coordination with MMEA
- Staff to engage MMEA on outage reporting template

Emergency Management – Legislation

EM-11 Legislation is needed to provide protection of critical energy infrastructure information (In Progress)

- Commission working with Legislative partners to develop and adopt legislation

Thank You