



Observation	OA No.	Sub-Observation	Follow-up Action	Target Date	Status	Q4 2021 Update
Observation 1 – Community Communications	1.1	Media and Communications	Engage with the Communication and Public Information Office (PIO) and Homeland Security and Emergency Management (HSEM) to determine communication tools and resources for non-digital outreach. (Ongoing)	Ongoing	Ongoing	A series of exercises and “Grid Failure” informational and educational seminars are being developed with the COA and Travis County’s HSEM. The first of this series of seminars was held on December 15, 2021 and included a joint city and county Tabletop Exercise. The primary objective of this exercise and future exercises will be to identify planning gaps and resource shortages including the identification of communications tools and resources for non-digital outreach.
Observation 1 – Community Communications	1.2	Media and Communications	Identify budget resources to secure backup resources for Austin Energy communications staff (power packs, weather radios, mobile Wi-Fi hotspots, etc.). (Qtr. 1, 2022)	Qtr. 1, 2022	In Progress	Austin Energy has secured contract resources for backup resources (including power packs, weather radios, and mobile Wi-Fi hotspots) for Austin Energy communications staff. These acquisitions are planned for Qtr. 1, 2022.
Observation 1 – Community Communications	1.3	Media and Communications	Work with the COA’s Communications and PIO to develop a plan or protocol for the involvement of City Council offices. (Ongoing)	Ongoing	Ongoing	Austin Energy communications staff performed work during 2021 to refine plans and protocols for the involvement of City Council offices during emergency events.
Observation 1 – Community Communications	1.4	Media and Communications	Continue conducting media training with the executive team and Communications staff. (Qtr. 1, 2022)	Qtr. 1, 2022	In Progress	Austin Energy is securing a contract with a communications firm to conduct media training for utility executives and communications staff. Media training will be scheduled and completed during Qtr. 1, 2022.
Observation 1 – Community Communications	1.5	Media and Communications	Engage in the Public Utility Commission of Texas (PUCT) rulemaking on statewide emergency messaging. (Ongoing)	Ongoing	Ongoing	During 2021, Austin Energy actively engaged with the regulatory process. This engagement included the submittal of comments to the Public Utility Commission concerning the Review of Market Design Project in August and again in November. Similarly, Austin Energy actively collaborated with the Texas Public Power Association (TPPA) and provided comments on the Review of Market Design Project in November and again in December. Additionally, Austin Energy staff collaborated with TPPA to provide comments on 10 other PUCT projects focused on the response to the Winter Storms.



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Observation 1 – Community Communications	1.6	Media and Communications	Provide emergency materials in other languages besides English and Spanish. (Completed Qtr. 3, 2021)	Qtr. 3, 2021	Completed	As Austin Energy messaging during the Winter Storms was limited to English and Spanish, the Austin Energy PIO has taken corrective measures during 2021 to expand messaging to the limited English proficiency community during emergency and winter weather events by translating multiple emergency messages (including energy conservation alerts and sustained outages notices for ERCOT events) into Simplified Chinese and Vietnamese. The availability of these message translations has broadened Austin Energy’s ability to communicate to the limited English proficiency community during future emergency events.
Observation 1 – Community Communications	1.7	Media and Communications	Coordinate with Customer Care and provide a pool of trained representatives to help respond to social media messages during an emergency. (Qtr. 2, 2022)	Qtr. 2, 2022	In Progress	Due Qtr. 2, 2022
Observation 1 – Community Communications	1.8	Media and Communications	Continue to encourage customers to monitor news and emergency broadcasts, charge phones, laptops and tablets if a storm is coming, create a family emergency communication plan and sign up to receive alerts and warnings. (Ongoing)	Ongoing	Ongoing	Austin Energy communications staff regularly review and make improvements to its draft communications that are prepared in advance of extreme weather events. These draft communications include customer reminders to charge phones, laptops and tablets if a storm is anticipated, to create a family emergency communication plan and to sign up to receive alerts and warnings.
Observation 1 – Community Communications	1.9	Outage Map	Resolve technical issues for outages not reflected on the map. (Completed Qtr. 3, 2021)	Qtr. 3, 2021	Completed	Austin Energy worked with its outside consultant to resolve over 20 technical issues that had negatively impacted the accurate depiction of outages on the Austin Energy Outage Map. All technical issues (over 20 cases) were addressed and the associated corrections were successfully implemented. These corrections resulted in more accurate and improved Outage Map reporting of outages and counts of affected customers.
Observation 1 – Community Communications	1.10	Outage Map	Disable outage map elements that display shaded outage areas that are not an industry practice in most dense metro areas. (Completed Qtr. 3, 2021)	Qtr. 3, 2021	Completed	Austin Energy worked with its outside consultant to disable Outage Map elements (polygons) that previously displayed shaded outage areas. This work was successfully completed and released into production in the third quarter of 2021.



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Observation 1 – Community Communications	1.11	Outage Map	Retrain all personnel managing the Advanced Distribution Management System (ADMS) on internal processes to ensure outage information is entered timely and accurately, thus reflecting correctly on the outage map. (Completed Qtr. 3, 2021)	Qtr. 3, 2021	Completed	All personnel managing ADMS were retrained on internal processes to ensure the timely and accurate entry of outage information. Six retraining sessions for System Operations personnel were conducted between July 9, 2021 and August 27, 2021. The topics included merging incidents and the impact/importance of closing restored incidents.
Observation 1 – Community Communications	1.12	Outage Map Text Alerts	Improve Austin Energy Website messaging to better educate the public regarding outages. (Completed Qtr. 2, 2021)	Qtr. 2, 2021	Completed	The Austin Energy IT Web Team implemented improved messaging on its website on May 7, 2021, to better educate the public regarding outages.
Observation 1 – Community Communications	1.13	Outage Map Text Alerts	Update the “outage restored” text message to clarify the status and expectation to respond if a nested outage exists. (Completed Qtr. 3, 2021)	Qtr. 3, 2021	Completed	Austin Energy worked with its outside consultant to update the “outage restored” text message to clarify the status and expectation to respond in the event of a nested outage. Updates were released into Production in June, 2021.
Observation 1 – Community Communications	1.14	Outage Map Text Alerts	Resolve ADMS issues that caused messaging to be inconsistent with the customer’s incident experience. (Completed Qtr. 3, 2021)	Qtr. 3, 2021	Completed	Following the Winter Storms, Austin Energy worked with its outside consultant to resolve ADMS issues (ETR Confidence and Orphaned Customers). Updates were successfully released into Production in July, 2021.
Observation 1 – Community Communications	1.15	Outage Map Text Alerts	Continue delivery of the next Outage Map and Text Alert Application, scheduled to be upgraded in 2022. Expected benefits include features such as natural language processing, a highly configurable interface to create new map views on-demand, low-impact change product configuration updates, social media integration, a solution for displaying the magnitude of master metered properties on the outage map, an improved graphical outage history tracking and improved user interface. (Qtr. 2, 2022)	Qtr. 2, 2022	In Progress	Austin Energy conducted the Outage Map and Text Alert Application upgrade project kick-off with the vendor in December, 2021. Configuration workshops will be scheduled in January.
Observation 1 – Community Communications	1.16	Austin 3-1-1 Service	Work with the COA’s Communication and Technology Management Office (CTM) to designate all Austin 3-1-1 offices as Critical Load Customers to safeguard against power outages during Load Shed events. (Completed Qtr. 3, 2021)	Qtr. 3, 2021	Completed	Austin 3-1-1 worked with the COA’s CTM to designate all Austin 3-1-1 offices as Critical Load Customers to better protect these facilities against power outages during Load Shed events. CTM completed this designation in Qtr 3, 2021.



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Observation 1 – Community Communications	1.17	Austin 3-1-1 Service	Purchase and install portable generators for the two sites that complete the power requirements for the City Communication ring. The permanent generator build for these two sites is planned for 2024. (Qtr. 2, 2024)	Qtr. 2, 2024	In Progress	The onsite generator at the Austin 3-1-1 main site has been repaired. CTM is on target for Qtr. 2, 2024 to have the two-site permanent generators build. This will complete the power requirements for the City Communication ring.
Observation 1 – Community Communications	1.18	Austin 3-1-1 Service	SIP Trunking (a method of sending voice and other unified communications services over the internet) was implemented at Austin 3-1-1 to provide CTM the ability to reroute calls to an alternate location when a communications site failure occurs. (Completed Qtr. 3, 2021)	Qtr. 3, 2021	Completed	SIP Trunking was implemented at Austin 3-1-1 to provide CTM the ability to reroute calls to an alternate location when a communications site failure occurs. Austin 3-1-1 and CTM completed this work during Qtr 3, 2021.
Observation 2 – Other Utilities and COA Departments that Provide Public Services	2.1	Texas Gas Service (TGS)	TGS and Austin Energy shared information pertaining to critical infrastructure as necessary for storm response while continuing to protect sensitive and critical infrastructure information that also possibly falls under Federal Electric or Gas Line regulatory agencies. (Completed Qtr. 3, 2021)	Qtr. 3, 2021	Completed	TGS designated a location for their Emergency Operations center which meets the qualifications for Critical Load status. Accordingly, Austin Energy has designated the TGS Emergency Operations Center as the highest priority Critical Load, which provides increased protection during future Load Shed events.
Observation 2 – Other Utilities and COA Departments that Provide Public Services	2.2	TGS	TGS and Austin Energy worked collaboratively during the storm to address power supply issues that negatively affected TGS's ability to distribute gas. This process should continue. (Ongoing)	Ongoing	Ongoing	Austin Energy and TGS have continued to work collaboratively since the Winter Storms, and both utilities have identified primary points of contact for information sharing regarding critical facilities and power supply issues.
Observation 2 – Other Utilities and COA Departments that Provide Public Services	2.3	TGS	Austin Energy will continue to work with TGS to identify TGS's critical facilities, so that during storm events key natural gas distribution facilities are prioritized for receiving power and for power restoration following outages. This work will allow TGS to better maintain gas supply and address pressure challenges within affected areas in its service territory. (Ongoing)	Ongoing	Ongoing	Austin Energy and TGS have continued to work collaboratively since the Winter Storms, and during Qtr. 4, 2021, TGS worked at Austin Energy's request to assemble a list of 10-12 facilities that are expected to meet the criteria for CL3 status. The inclusion of these sites on the CL3 status list will provide some protection from outages during Load Shed events.



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Observation 2 – Other Utilities and COA Departments that Provide Public Services	2.4.1	Austin Water (AW)	The following actions are underway at the Ullrich Water Treatment Plant (WTP): AW and Austin Energy – Evaluate improved utilization of Bee Creek Substation circuits as well as the Ullrich WTP electrical system and develop an action plan. (Qtr. 4, 2021)	Qtr. 3, 2021	Completed	Austin Energy and AW have assembled a formal working group and have held numerous working sessions. The team has developed a comprehensive plan for improvement of the utilization of Austin Energy dual circuits and the third back-up Austin Energy circuit. AW is working to further improve utilization of the Ullrich WTP electrical system by performing work that enables improved switching and automation within the facility.
Observation 2 – Other Utilities and COA Departments that Provide Public Services	2.4.2	AW	Implement auto switch for the backup circuit at Ullrich WTP for automatic operations after loss of either of the primary circuits. (Qtr. 2, 2022)	Qtr. 2, 2022	In Progress	Modifications or upgrades to breakers and switches at Bee Creek Substation serving the Ullrich WTP are underway. Substation feeder breaker refurbishment work was completed in 2021, and one transfer switch feeding the plant has been configured for automatic transfer. The second transfer switch feeding the plant will be upgraded for automatic transfer capabilities in 2022.
Observation 2 – Other Utilities and COA Departments that Provide Public Services	2.5.1	AW	The following actions are underway at Longhorn Dam: Austin Energy – Initiate a project to build a second electric circuit to Longhorn Dam. This is a challenging, multi-year project involving multiple COA departments as well as siting challenges for the circuit and electrical facilities. This project is funded. (Estimated 2023)	Ongoing	Ongoing	This is a challenging, multi-year project involving multiple COA departments as well as siting challenges for the circuit and electrical facilities. This project is funded, and Austin Energy is nearing completion on design and site work necessary to bring a second feed to Longhorn Dam. (Estimated 2023)
Observation 2 – Other Utilities and COA Departments that Provide Public Services	2.5.2	AW	The following actions are underway at Longhorn Dam: AW – Evaluate the installation of backup generators at Longhorn Dam to safeguard the facility while the second circuit is being constructed. (Qtr. 1, 2022)	Ongoing	Ongoing	Following a meeting with AW representatives in November, 2021, Austin Energy is investigating the project requirements for the installation of a backup generator at Longhorn Dam to safeguard the facility while a project to install a second circuit is underway. Meanwhile, Austin Energy is nearing completion on design and site work necessary to bring a second feed to Longhorn Dam to establish dual feed to the facility.



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Observation 2 – Other Utilities and COA Departments that Provide Public Services	2.6.1	AW	The following actions are underway for resilience improvements at lift stations: Austin Energy – Provide AW a list of lift stations that are currently on a Critical Load circuit. This action will assist AW to plan for future outage contingencies and help determine locations most and least likely to lose power in a similar event. (Qtr. 4,2021)	Ongoing	Ongoing	Austin Energy worked with AW to update Austin Energy's list of lift stations for inclusion in its Critical Load List, and this list has been updated. Austin Energy has also contacted other water authorities within the Austin Energy service territory to obtain updated lift station location and contact information for each facility to ensure that these facilities are afforded the appropriate Critical Load status and so that Austin Energy has visibility of these facilities on the electric system. Every lift station is assigned a Critical Load designation in accordance with Austin Energy's Critical Load Guidelines and Work Processes (GWP). Austin Energy's Critical Load list has been updated to reflect the updated information.
Observation 2 – Other Utilities and COA Departments that Provide Public Services	2.6.2	AW	The following actions are underway for resilience improvements at lift stations: AW – Strategically site and increase the pool of available backup generators (either on-site or portable). (Qtr. 4, 2021)	Ongoing	Ongoing	Austin Energy has worked with AW and other water authorities in the Austin Energy service territory to encourage the water authorities to provide further resiliency through the provision of backup generation (on-site or portable) for water facilities.
Observation 2 – Other Utilities and COA Departments that Provide Public Services	2.7	AW	The joint AW and Austin Energy team will identify, explore and recommend electrical improvements at the following sites to improve resiliency. (Qtr. 1, 2022) OA 2.7.1 - Davis WTP OA 2.7.2 - Walnut Creek WTP OA 2.7.3 - South Austin Regional WTP OA 2.7.4 - Handcox WTP	Qtr. 1, 2022	In Progress	Austin Energy and AW have assembled a formal working group and have held numerous working sessions to identify, explore and recommend electrical improvements for AW sites. The team is developing a comprehensive plan for improvements at water treatment and wastewater treatment plants and continues to implement improvements.
Observation 2 – Other Utilities and COA Departments that Provide Public Services	2.8	Austin Transportation Department (ATD)	Austin Energy and ATD are collaborating to develop methods to mitigate the impacts of electric outages on traffic light operations. (Ongoing)	Ongoing	Ongoing	During 2021, Austin Energy Leadership and ATD conducted joint work sessions to develop methods to mitigate the impact on electric outages on traffic light operations. This work is ongoing.
Observation 2 – Other Utilities and COA Departments that Provide Public Services	2.9	Communication Companies	Continue direct contact between the dedicated service team and these customers on a regular basis to resolve issues. (Ongoing)	Ongoing	Ongoing	Austin Energy representatives continue to engage with communication company representatives on a regular basis. This regular and direct contact, which occurs on most business days, continued during the fourth quarter of 2021.



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Observation 3 – Medically Vulnerable Registry (MVR)	3.1		Incorporate processes to check meter status, alert staff to outages among MVR populations and confirm a triage plan for wellness checks with internal teams and other COA departments. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	Processes have been developed to check status of all MVR meters during a storm outage event and to alert staff to MVR outages. A triage process has been developed to identify the appropriate resources to conduct MVR wellness checks in various situations.
Observation 3 – MVR	3.2		Work with other COA departments to establish a coordinated communication process to assist the medically vulnerable. (Qtr. 4, 2021)	Qtr. 1, 2022	In Progress	Austin Energy is documenting the MVR communication processes that were successfully implemented during the Winter Storms. Work is also underway to further improve the processes for communicating the results of wellness checks and requests for assistance to HSEM and other City departments during emergency events.
Observation 3 – MVR	3.3		Refine the existing MVR process to update contact information regularly through outbound call efforts. (Qtr. 2, 2022)	Qtr. 2, 2022	In Progress	Due Qtr. 2, 2022
Observation 4 – Incident Command	4.1		Review Incident Command Policy and Procedures and identify areas for improvement focusing on employee preparedness and emergency training including emergency role-playing exercises. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	Incident Command Policy and Procedures have been reviewed and opportunities for improvement have been identified in emergency management training and for improvement implementation including filling Incident Command Team vacancies promptly, implementing steps to ensure compliance with FEMA training requirements and providing additional guidance to Incident Command Team members on specific tasks associated with assigned roles and responsibilities during Incident Command activations.
Observation 4 – Incident Command	4.2		Develop an Incident Command System training plan for new team members, conduct training activities and exercises and review annually. (Completed Qtr. 3, 2021)	Qtr. 3, 2021	Completed	Austin Energy developed an Incident Command training plan for new team members that includes conducting training activities and the continuation of annual emergency response exercises and reviews. A new monthly first response rotation was established where the following have been enhanced and documented in Austin Energy's internal emergency response files: first-week confirmation of member contact information conduct review and refresher on essential personnel policies and conduct first-week huddle.
Observation 4 – Incident Command	4.3		Promptly assign personnel to fill vacancies in the Incident Command Team. (Ongoing)	Ongoing	Ongoing	During 2021, all vacancies in the Austin Energy Incident Command organization chart were filled and some new positions created to formalize roles deemed necessary during the Winter Storms.



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Observation 5 – Management of ERCOT-Directed Load Shed	5.1	Load Shed	Review Austin Energy’s existing Load Shed Program and identify opportunities for improvement. (Qtr. 1, 2022)	Qtr. 1, 2022	In Progress	Austin Energy continues to review its Load Shed Program to identify opportunities for improvement. Austin Energy’s existing Manual Load Shed Program is able to execute rotating outages in instances where the quantity of the ERCOT imposed outage does not exceed the utility’s Load Shed portfolio. Austin Energy identified and continues to assess opportunities to transition the Manual Load Shed Program to its ADMS to add additional intelligence and functionality to the Manual Load Shed process. With respect to Under Frequency Load Shed (UFLS), Austin Energy uses feeder protection relays to trip the feeder breakers at pre-defined levels in accordance with ERCOT regulations. These relays performed as intended and held despite electric system frequency drops close to the trigger level. Accordingly, the UFLS program does not require adjustment at this time.
	5.2	Load Shed	Refine customer communications in anticipation of Load Shed events to adequately communicate the possibility of prolonged outages and the importance of having robust emergency plans in place. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	During 2021, Austin Energy PIO and Key Accounts personnel continued existing customer communication programs and increased regular communications with customers. These continued and increased communications include preparing updated customer Alerts and NewsFlashes that are provided to all customers during extreme weather events, conducting individual meetings with Key Account customers that occur at least once annually, and conducting at least one general attendance annual Key Account Customer meeting. In addition, Austin Energy’s PIO works to ensure that all Media Communications, Customer Care and 3-1-1 messaging and Liaison talking points are regularly reviewed and revised during each extreme weather event. In Key Account customer meetings, ERCOT-issued forecasts and Austin Energy EEA process are reviewed with customers. In addition Key Accounts personnel regularly inform customers on background information and the process for the issuance of Appeals for Energy Reduction and EEAs, the Resilience Offering (an Austin Energy program which focuses on the importance of installation of back-up generation and fuel storage as appropriate based upon the customer’s determination) and the development of appropriate Emergency Plans for emergency events (including safe storage of hazardous materials during power outages). At least once annually, Key Accounts personnel also conduct detailed conversations regarding back-up generation with staff from Austin Water and the Austin-Bergstrom International Airport and with industrial, grocery and Critical Load Customers.



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Observation 5 – Management of ERCOT-Directed Load Shed	5.3	Load Shed	Increase communications with Commercial and Industrial (C&I) customers on the need for emergency plans and backup generators to ensure that chemicals are stored safely in the event of a prolonged power outage. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	During 2021, Austin Energy Key Accounts continued existing customer communication programs and increased regular communications with customers. These continued and increased communications include conducting individual meetings with customers that occur at least once annually and the conduct of at least one annual general attendance Key Account Customer meeting. In these meetings, ERCOT-issued forecasts and Austin Energy EEA process are reviewed with customers. In addition Key Accounts personnel regularly inform customers on background information and the process for the issuance of Appeals for Energy Reduction and EEAs, the Resilience Offering (an Austin Energy program which focuses on the importance of installation of back-up generation and fuel storage as appropriate based upon the customer’s determination) and the development of appropriate Emergency Plans for emergency events (including safe storage of hazardous materials during power outages). At least once annually, Key Accounts personnel also conduct detailed conversations regarding back-up generation with staff from Austin Water and the Austin-Bergstrom International Airport and with industrial, grocery and Critical Load Customers.
Observation 5 – Management of ERCOT-Directed Load Shed	5.4	Load Shed	Continue active engagement in the regulatory process, including ongoing and proposed changes at ERCOT and PUCT. (Ongoing)	Ongoing	Ongoing	During 2021, Austin Energy actively engaged with the regulatory process. This engagement included the submittal of comments to the PUCT concerning the Review of Market Design Project in August and again in November. Additionally, Austin Energy, as a member of TPPA, collaborated with staff to provide TPPA comments on the Review of Market Design Project and 10 other PUCT projects focused on the response to the Winter Storms. Austin Energy actively participates in all levels of the ERCOT stakeholder process that develops and adopts revisions to the ERCOT Protocols and Operating guides.



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Observation 5 – Management of ERCOT-Directed Load Shed	5.5	Load Shed	Continue to evaluate Austin Energy electric system to identify circuits appropriate for sectionalization, and initiate projects to sectionalize additional circuits. (Ongoing)	Ongoing	Ongoing	Additional customers have been added to the Austin Energy Critical Load List since the Winter Storms. To help offset these additions to Austin Energy's Load Shed protected electric load, Austin Energy has continued to evaluate its electric system to identify circuits appropriate for sectionalization and to initiate projects to sectionalize circuits. Austin Energy has initiated projects to install reclosers, which section off non-critical loads downstream of Critical Load Customers. This allows the downstream non-critical load to be included in Austin Energy's shedable load.
Observation 5 – Management of ERCOT-Directed Load Shed	5.6.1	Critical Load	Evaluate further sectionalizing of circuits with CL Customers. Actions are on a case-by-case basis and can include initiating a project to identify whether critical customers could be moved onto dedicated circuits, and the required equipment and resources to reconfigure circuits. (Qtr.1. 2022)	Qtr. 1, 2022	In Progress	Additional customers have been added to Austin Energy Critical Load List since the Winter Storms. To help offset these additions to Austin Energy's Load Shed protected electric load, Austin Energy is evaluating additional opportunities for sectionalizing circuits with Critical Load Customers. Austin Energy is currently working on three circuits to move Critical Load Customers to adjacent dedicated Critical Load circuits. By switching these Critical Load Customers off of circuits that have no other Critical Load Customers, these circuits can be used for Load Shed.
Observation 5 – Management of ERCOT-Directed Load Shed	5.6.2	Critical Load	Initiate a project to identify locations for the installation of equipment that will allow Austin Energy to shut off power to as many customers that are not critical customers but are on a critical circuit. Austin Energy is currently working on seven circuits where critical load customers are located near the head of circuits and switches are in place to switch off downstream customers that are not critical customers. (Qtr. 1, 2022)	Qtr. 1, 2022	In Progress	Additional customers have been added to the Austin Energy Critical Load List since the Winter Storms. To help offset these additions to Austin Energy's Load Shed protected electric load, Austin Energy has continued to evaluate its electric system to identify circuits appropriate for installation of reclosers to allow Load Shed of loads downstream of the highest-status Critical Load Customers. Austin Energy is currently working on seven circuits where Critical Load Customers are located near the head of circuits and switches are in place to switch off downstream customers. By switching off downstream customers, Austin Energy can add load to its Load Shed Portfolio.
Observation 5 – Management of ERCOT-Directed Load Shed	5.7	Critical Load	Evaluate inclusion of select Downtown Network loads in Load Shed programs and determine the feasibility of large customer voluntary load curtailment. (Qtr. 1, 2022)	Qtr. 1, 2022	In Progress	A draft voluntary large C&I customer Load Shed Curtailment Program has been developed by Austin Energy for use during grid emergencies. This Draft Program will be presented to the PIAC for comment and is under review by Austin Energy management.



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Observation 5 – Management of ERCOT-Directed Load Shed	5.8	Critical Load	Evaluate refining the current processes for identifying CL Customers and the implementation of an improved online process for CL request intake to optimize CL data handling. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	The process for identifying Critical Load Customers has been evaluated and a project has been scoped to improve Critical Load processes by incorporating an on-line process for identifying and qualifying Critical Load Customers.
Observation 5 – Management of ERCOT-Directed Load Shed	5.9	Critical Load	Communicate to CL Customers the importance of installing their own backup generators to free up additional circuits for Manual Load Shed. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	Communication materials have been prepared for use in communicating severe weather resiliency concepts, including the importance of the installation of backup generation and emergency planning, to Critical Load Customers. Austin Energy is also working with Critical Load Customers that provide essential services, such as grocery store chains and other public utilities, to communicate resiliency concepts. While this follow-up action is complete, these communication initiatives will continue beyond 2021.
Observation 5 – Management of ERCOT-Directed Load Shed	5.10	Critical Load	Improve education and communication outreach to CL Customers to ensure they understand that there is always a possibility of an extended outage in extreme grid emergencies and encourage these customers to develop robust emergency plans, including back up generation, sufficient fuel or energy storage and plans for emergencies lasting longer than 24 hours. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	Communication materials have been prepared for customer meetings for communicating severe weather resiliency concepts, including the importance of the installation of backup generation and emergency planning, sufficient fuel or energy storage and availability of ERCOT EEA app, to Critical Load Customers. Austin Energy is also working with Critical Load Customers that provide essential services, such as grocery store chains and other public utilities, to communicate resiliency concepts. While this follow-up action is complete, these communication initiatives will continue beyond 2021.



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Observation 5 – Management of ERCOT-Directed Load Shed	5.11	Critical Load	Review Austin Energy’s ERCOT-mandated UFLS participation and work with ERCOT to jointly develop a strategy to enable greater flexibility around using UFLS circuits during ERCOT-directed Load Shed. (Qtr. 1, 2022)	Qtr. 1, 2022	In Progress	Austin Energy has taken several steps since the Winter Storms to address observation 5.11. Austin Energy has participated in ERCOT-required submittals and Requests for Information to assess load shed capability across the state of Texas, taking into account Critical Load customers and circuits needed for UFLS. Austin Energy maintains awareness of the ERCOT-aggregated and reported results. Additionally, Austin Energy continues to review and adjust its feeder list and associated assignments for manual load shed, UFLS, and Critical Load in accordance with Austin Energy’s Critical Load criteria. When changes are made to the program, Austin Energy updates its Load Shed application. Finally, Austin Energy participates in multiple ERCOT Working Groups that are reviewing various revisions to ERCOT rules that involve UFLS. Some of the proposed revisions would allow utilities like Austin Energy to manually shed Load connected to under-frequency relays during an energy emergency as long as they can still meet their overall UFLS requirement. This would allow for more load to qualify for manual load shed, helping Austin Energy maintain the ability to rotate outages further into the timeline of an energy emergency.
Observation 5 – Management of ERCOT-Directed Load Shed	5.12	Advanced Metering Infrastructure (AMI)	Conduct project feasibility discussions between Austin Energy and representatives of its AMI vendor to explore utilizing AMI technology for Load Shed. (Ongoing)	Ongoing	Ongoing	During 2021, Austin Energy conducted project feasibility and kicked off a project, in consultation with the Austin Energy AMI vendor, to develop a manual process for the utilization of AMI for the performance of load shed by the utility. The team is documenting a draft process and capturing the project requirements for integrating the process into Austin Energy ECC operations. The team is also continuing work on AMI application upgrades that will facilitate the use of AMI for load shed performance. This project is ongoing.
Observation 5 – Management of ERCOT-Directed Load Shed	5.13	Large C&I Customers	Establish a collaborative Load Curtailment program for large C&I customers to safely increase the amount of power available for Load Shed during ERCOT-directed Load Shed events. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	A draft voluntary large C&I customer Load Shed Curtailment Program has been developed by Austin Energy to safely increase the amount of power available for Load Shed during ERCOT-directed Load Shed events. This draft Program has been discussed with numerous large C&I customers including select Network customers, was presented to the PIAC for comment and is under review by Austin Energy management.



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Observation 5 – Management of ERCOT-Directed Load Shed	5.14	Large C&I Customer	Identify large C&I customers that require coordination due to complex service arrangements or potential onsite hazards. (Qtr. 1, 2022)	Qtr. 1, 2022	Completed	Austin Energy has identified large C&I customers that require coordination during Load Shed events due to complex service arrangements or potential onsite hazards (such as hazardous material storage).
Observation 5 – Management of ERCOT-Directed Load Shed	5.15	Downtown Underground Electric Network	Develop a communications protocol to engage Downtown Network customers on voluntary, collaborative and customer-implemented reductions of power use. This includes shutting down all non-essential lighting and equipment. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	Austin Energy has compiled a list of customers in large commercial buildings on the downtown network with which to engage in discussions of a voluntary load reduction program. For these customers, Austin Energy has developed communication protocols and materials for contacting building representatives individually. Communications materials for these customers mirror draft EEA communications.
Observation 5 – Management of ERCOT-Directed Load Shed	5.16	Downtown Underground Electric Network	Develop a method to manually cycle large commercial buildings for future Load Shed events. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	Austin Energy staff have conducted on-site assessments at large commercial buildings in order to develop methods to manually shut off load during ERCOT-directed Load Shed events. Methods were developed that considered variables such as Austin Energy crew logistics and optimum number of buildings to be shut off at any one time.
Observation 5 – Management of ERCOT-Directed Load Shed	5.17	Downtown Underground Electric Network	Initiate a project to document and formalize this manual process. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	Austin Energy developed methods to manually shut off large downtown commercial buildings during ERCOT-directed Load Shed events. These manual methods were documented and formalized.
Observation 6 – ERCOT Market and Generation Plants	6.1		Monitor and engage with regulatory changes in the Weatherization Preparation area. (Ongoing)	Ongoing	Ongoing	During 2021, Austin Energy actively engaged with the regulatory process with respect to the weatherization and winter weather preparation of generation facilities. Austin Energy worked to implement weatherization directives. Austin Energy’s regulatory engagement included the submittal of comments to the PUCT concerning the development and adoption of the PUCT’s Weatherization Rule.
Observation 6 – ERCOT Market and Generation Plants	6.2		Review and update the existing Plant Freeze Protection Checklists. (Completed Qtr. 4, 2021)	Qtr. 4, 2021	Completed	Austin Energy conducted an assessment of Plant Freeze Protection Checklists and all identified updates have been successfully implemented or are scheduled for immediate implementation following generation facility maintenance outages that are currently underway.



Observation	OA No.	Sub-Observation	Follow-up Action	Target Date	Status	Q4 2021 Update
Observation 6 – ERCOT Market and Generation Plants	6.3		Assess heat tracing on lines at floors of gas Generation Plants and outside water piping and perform any necessary upgrades. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	Austin Energy hired a third-party to perform an assessment of heat tracing at gas Generation Plants including on lines in floors and outside water piping. Upgrades and improvements identified in the assessment have been performed.
Observation 6 – ERCOT Market and Generation Plants	6.4		Review and evaluate the weatherization practices, including checklists and procedures for routine winter preparedness, at power generation facilities. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	Weatherization practices, including checklists and procedures for routine winter preparedness, were evaluated at all power generation facilities.
Observation 6 – ERCOT Market and Generation Plants	6.5		Evaluate field instrumentation and conduct engineering analysis of winterization measures at all facilities. Implement the identified corrective and freeze protection measures. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	An evaluation of field instrumentation was completed, and an engineering analysis of winterization measures was conducted and completed at all facilities. The identified corrective and freeze protection measures were successfully implemented.
Observation 6 – ERCOT Market and Generation Plants	6.6.1		At District Energy and Cooling (DEC) facilities, review existing cooling tower procedures to include draining non-operational cooling towers and maintaining continuous flow in operational ones. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	Cooling towers have been inspected and verified to be functional and ready for winter temperatures and procedures are in place for draining non-operational cooling towers and maintaining continuous flow in operational towers. A final Standard Operating Procedure is in place to operate the storage tanks as needed to keep towers warm in winter temperatures.
Observation 6 – ERCOT Market and Generation Plants	6.6.2		At DEC facilities, design and implement change controls to optimally run cooling towers when temperatures are below freezing. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	Change controls have been designed and implemented for all DEC facilities, so that DEC cooling towers will operate on "Auto Mode" and will be able to run in below freezing temperatures.
Observation 6 – ERCOT Market and Generation Plants	6.6.3		At DEC facilities, fabricate and install protection on a gas turbine inlet filter to prevent ice and snow buildup from entering a gas turbine and causing a power trip. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	As the manufacturer has not approved a permanent solution for the fabrication and installation of protection on a gas turbine inlet filter to prevent ice and snow buildup from entering the gas turbine (potentially causing a power trip), measures are in place for the installation of a temporary shield to prevent snow from entering the gas turbine. Austin Energy DEC staff continuing to work with the manufacturer on a permanent solution.



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Observation 6 – ERCOT Market and Generation Plants	6.7		Recommission Nacogdoches Generation Facility in anticipation of 2021–2022 winter season. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	Nacogdoches Generation Facility is in service and has been reported to the PUCT and ERCOT as available.
Observation 7 – Restoration Process	7.1	Damage Assessment Personnel	Document expansion of the Incident Command Team to include damage assessment functions and responsibilities, to be activated during major storms and events. (Qtr. 1, 2022)	Qtr. 1, 2022	Completed	The Austin Energy Incident Command Team organization was reviewed and damage assessor positions were added to the organizational chart. During Incident Command activations, these damage assessor positions are tasked with performing damage assessments. Necessary equipment and applications have been acquired for these new Incident Command positions.
Observation 7 – Restoration Process	7.2	Damage Assessment Personnel	Expand damage assessment staffing with selected Engineering and Distribution Electrician staff in secondary roles. (Qtr. 2, 2022)	Qtr. 2, 2022	In Progress	Due Qtr. 2, 2022
Observation 7 – Restoration Process	7.3	Damage Assessment Personnel	Document damage assessment role into the ADMS Field Client ¹² and implement this capability in ADMS. (Qtr. 1, 2022)	Qtr. 1, 2022	Completed	The addition of damage assessor positions to the Austin Energy Incident Command organization has been documented. The associated work order process has been automated and has been implemented into ADMS. Candidates to perform damage assessments were identified among traditional and non-traditional crew positions (including the metering group, streetlight crews and home inspectors), and assigned to these roles. In December, 2021, these candidates received field client training and all other training needed to perform the damage assessment role. Necessary equipment and applications have been acquired for these new Incident Command positions.
Observation 7 – Restoration Process	7.4	Single Outage Process	Add the Single Outage Process to the Incident Command Process Catalog. (Qtr. 1, 2022)	Qtr. 1, 2022	Completed	The Single Outage Process has been added to the Incident Command Process catalog. This process includes the performance of single-outage investigation and repair using AMI and ADMS.
Observation 7 – Restoration Process	7.5	Single Outage Process	Enhance the Single Outage System by integrating ADMS and the AMI Head End System (the front-end system that transmits meter data from the field). This integration will minimize or eliminate the need for manual intervention, resulting in increased efficiency and a more rapid response time. (Qtr. 2, 2022)	Qtr. 2, 2022	In Progress	Due Qtr. 2, 2022



Observation	OA No.	Sub-Observation	Follow-up Action	Target Date	Status	Q4 2021 Update
Observation 7 – Restoration Process	7.6	ADMS	Brief the Field Crews and Control Room Operators on the importance of promptly updating the work order status in ADMS. (Completed Qtr. 1, 2021)	Qtr. 1, 2021	Completed	Training on the proper methodology for updating ADMS (ADMS Updating Training) was provided to all field personnel during their regularly scheduled Field Client/WebDMD training. ADMS Updating Training was also provided to Field Crews and Control Room Operators during their 2021 training on nested outages. ADMS Updating Training will continue to be conducted on an "as needed" basis.
Observation 7 – Restoration Process	7.7.1	ADMS	Address ADMS user screen issues as follows: A technical issue was identified and resolved by immediately installing a patch by the ADMS vendor during the Winter Storms event. (Completed Qtr. 2, 2021)	Qtr. 2, 2021	Completed	The ADMS software vendor identified a technical issue with user screens that was the result of a software error. The vendor created a patch to resolve this error, and the technical issue was resolved by the installation of the patch by the ADMS vendor.
Observation 7 – Restoration Process	7.7.2	ADMS	A production update that addressed screen issues was posted in Production. (Completed Qtr. 2, 2021)	Qtr. 2, 2021	Completed	The ADMS software vendor identified a technical issue with user screens that was the result of a software error. The vendor created a patch to resolve this error. The vendor then tested this patch and applied it to Austin Energy production ADMS environment during the Winter Storm event.
Observation 7 – Restoration Process	7.7.3	ADMS	ADMS outage-file-related issues that impacted the Outage Map and Outage Alert Texting were caused by file format and internal processing issues. These issues caused a group of affected customers to be unrepresented on the outage map and excluded from outage text alerts. A set of fixes was deployed. (Completed Qtr. 3, 2021)	Qtr. 3, 2021	Completed	The ADMS software vendor identified that the file the ADMS software sends to the Outage Map had misrepresented a subset of customers' outage status. The ADMS vendor determined the cause of this issue, created and tested a software patch, and then supplied these patches for application by Austin Energy. These fixes were successfully deployed by Austin Energy.



Observation	OA No.	Sub-Observation	Follow-up Action	Target Date	Status	Q4 2021 Update
Observation 7 – Restoration Process	7.8	ADMS	Evaluate and improve existing restoration processes to include identification of factors that determine when ADMS should switch out of “tiered Estimated Time of Restoration (ETR) mode” and back into normal operations mode, information on truck availability, automation of work orders and implementation of a Distributed Dispatch Process. (Completed Qtr. 2, 2021)	Qtr. 2, 2021	Completed	An evaluation of existing storm restoration processes has been completed, and the following determinations and improvements have been made. An evaluation determined that the deactivation of the ADMS Storm Mode restoration process and shift to a “tiered ETR” restoration process is not appropriate at this time. Factors considered included the number and type of outages, the rate of outage acceleration or deceleration and crew availability. Accordingly, the Energy Control Center will continue to use ADMS Storm Mode during major storms until such time as these factors change. Storm restoration work orders have now been automated in Field Client and Field Client training has been given to all appropriate personnel. In addition, an Austin Energy On-Call Operations Dashboard has been created in Smartsheet and implemented. This Dashboard is the sole repository for crew numbers, crew make-up and work order automation. This Dashboard enables System Operations to assign crews to investigate incidents and to update reporting on incident restoration and close-out, and it also establishes a hierarchy for assignment of crews and communication of customer support needs. All follow-up actions have been completed.
Observation 7 – Restoration Process	7.9	ADMS	Identify activities that can be delegated to other roles to allow staff serving as Operators and Shift Supervisors additional bandwidth and conduct a Dispatcher training simulation. (Completed Qtr. 2, 2021)	Qtr. 2, 2021	Completed	The Single Outage Process is now complete. An evaluation of what activities can be delegated is also now complete. It has been determined that the existing SmartSheet Austin Energy On-Call Operations Dashboard is appropriate for use as the sole repository for crew make-up and numbers.
Observation 7 – Restoration Process	7.10	ADMS	Develop and formalize the Single Outage Process. (Completed Qtr. 3, 2021)	Qtr. 3, 2021	Completed	The development and formalization of the Single Outage Process is complete. To facilitate the automation of work orders, Field Client training has been given to all appropriate employees. System Operational personnel can now assign crews to incidents and these crews are trained on the Escalation Process and can investigate, update, restore and close incidents, as appropriate.
Observation 7 – Restoration Process	7.11	ADMS	Evaluate and improve the Escalation Process, communicate with and train personnel on the new Escalation Process. (Completed Qtr. 3, 2021)	Qtr. 3, 2021	Completed	The evaluation and the related incorporation of improvements to the Escalation Process are now complete. A Distributed Dispatch Process has been implemented and the roles of ADMS personnel during a storm scenario have been identified. The flow of communication has also been mapped in order to avoid communication overload and to free up System Operations personnel to work on other objectives.



Observation	OA No.	Sub-Observation	Follow-up Action	Target Date	Status	Q4 2021 Update
Observation 7 – Restoration Process	7.12	ADMS	Develop and implement a tiered ETR process to be used during future storm restorations. (Qtr. 2, 2022)	Qtr. 2, 2022	In Progress	Due Qtr. 2, 2022
Observation 7 – Restoration Process	7.13	ADMS	Develop tier levels, e.g., large groups, medium groups, small groups and singles. (Qtr. 2, 2022)	Qtr. 2, 2022	In Progress	Due Qtr. 2, 2022
Observation 7 – Restoration Process	7.14	ADMS	Develop new team with roles and responsibilities as part of Incident Command. (Qtr. 2, 2022)	Qtr. 2, 2022	In Progress	Due Qtr. 2, 2022
Observation 7 – Restoration Process	7.15	Energy Management System/ Supervisory Control and Data Acquisition System (EMS/SCADA)	Continue to test and update the EMS/ SCADA System as necessary to maintain its effectiveness. (Ongoing)	Ongoing	Ongoing	In the normal course of business, Austin Energy conducts regular testing and updates to its EMS/SCADA System to maintain its effectiveness. Regular testing and updating was performed during 2021.
Observation 7 – Restoration Process	7.16	Cold Load Pickup	Continue to field sectionalize and restore circuits in increments where Cold Load Pickup is an issue in the short term, while evaluating long-term alternative processes. (Ongoing)	Ongoing	Ongoing	Austin Energy has reviewed its Cold Load Process and has determined that, during periods of extreme weather when Cold Load Pickup is a concern, it will continue to bring circuits back up incrementally or will bring circuits back up in segments using remote controls or by dispatching field personnel to operate field sectioning devices. Austin Energy is also implementing projects to add reclosers on distribution feeders, so that it can remotely operate these devices instead of dispatching field personnel during periods of inclement weather. These projects are expected to have benefits from a safety perspective and to improve restoration times.
Observation 7 – Restoration Process	7.17	Cold Load Pickup	Evaluate the Cold Load Pickup process to determine necessary changes and document the process for bringing back circuits when Cold Load Pickup may affect restoration. (Qtr. 1, 2022)	Qtr. 1, 2022	In Progress	Austin Energy has reviewed its Cold Load Process and has determined that, during periods of extreme weather when Cold Load Pickup is a concern, it will continue to bring circuits back up incrementally or will bring circuits back up in segments using remote controls or by dispatching field personnel to operate field sectioning devices.



Observation	OA No.	Sub-Observation	Follow-up Action	Target Date	Status	Q4 2021 Update
Observation 7 – Restoration Process	7.18	Cold Load Pickup	Evaluate geographic areas with large penetrations of electric heating appliances and further analyze alternative relay settings and other mitigation factors, such as automated reclosers. (Qtr. 1, 2022)	Qtr. 1, 2022	In Progress	Austin Energy is evaluating methods for alleviating Cold Load Pickup issues by studying the effects of extended periods of extreme cold on substation feeder breakers. Periods of extreme extended cold can potentially cause main-line reclosers to exceed the associated manufacturer's rated values, which may cause the reclosers to be placed in by-pass mode. Methods currently being evaluated for alleviating these effects include potentially placing main line reclosers into a manual/bypass mode to allow a substation feeder to pick up load. A high-level evaluation is underway of the required processes and coordination that would be required to implement this method and for ECC and field crews to monitor feeder head loading and closely monitor the slow process of bringing load back so as to avoid main line conductor failure.
Observation 7 – Restoration Process	7.19	Cold Load Pickup	Continue to communicate to the public, and to building operators and facility managers, the importance of turning off electrical devices and setting back thermostats when electric outages occur, and to slowly adjust thermostat settings after power is restored. (Ongoing)	Ongoing	Ongoing	Austin Energy communications staff regularly communicate to the public, to building operators and to facility managers the importance of turning off electrical devices and setting back thermostats when electric outages occur and to slowly adjust thermostat settings after power is restored. This staff also regularly review and make improvements to its draft communications that are prepared in advance of extreme weather events.
Observation 8 – Management of Vegetation Near Power Lines	8.1		Continue the Austin Energy vegetation management pruning cycle program and maintain adequate clearances between trees and wires in accordance with the tree pruning clearances established in 2019. (Ongoing)	Ongoing	Ongoing	During 2020 and 2021, the Austin Energy vegetation management program, in addition to performing spot pruning on underperforming circuits and on specific construction related projects, has completed the pruning of 10 circuits at the clearance requirements that were established in 2019. Ongoing.
Observation 8 – Management of Vegetation Near Power Lines	8.2		Communicate to HOAs and other community groups the pressing need for Austin Energy to prune regularly in accordance with its standard clearances to ensure that adequate tree and vegetation clearances are established and maintained around power lines. (Ongoing)	Ongoing	Ongoing	During 2021, multiple meetings with HOA's, community groups and citizens have been conducted for the purpose of collaborating with and notifying customers of the recommended standard clearance requirements for Austin Energy circuits.



Observation	OA No.	Sub-Observation	Follow-up Action	Target Date	Status	Q4 2021 Update
Observation 9 – Substations	9.1		Identify, through a dedicated Austin Energy team, remediation approaches for gas transmission breakers. These include monitoring and control changes, selected breaker replacements, etc. The team uses Electric Power Research Institute (EPRI) contacts and resource materials to develop these approaches. (Qtr. 1, 2022)	Qtr. 1, 2022	In Progress	Utilizing EPRI contacts and resource materials, Austin Energy has identified remediation approaches for gas and pneumatic transmission breakers. During 2021, a project was initiated to perform selected breaker replacements and for monitoring and control changes for gas and pneumatic transmission breakers, as appropriate. The project to replace selected pneumatic breakers is ongoing and work on pneumatic transmission breaker winterization upgrades has been successfully completed. The majority of gas transmission breakers identified for maintenance or remediation have been addressed and work is underway to schedule outages necessary for the remaining work.
Observation 9 – Substations	9.2		Develop, with a dedicated Austin Energy team, a distribution breaker refurbishment program and identify potential routine breaker maintenance improvements to reduce incidences of slow breaker operations. This team is also using EPRI contacts and resource materials to assist in resolution. As of mid-September 2021, this team has refurbished over 100 breakers using in-house technicians and an innovative program. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	Utilizing EPRI contacts and resource materials, Austin Energy in 2021 developed a distribution breaker refurbishment program that has identified routine breaker maintenance improvements that are in accordance with manufacturers' and EPRI's recommendations for improving distribution breaker performance. Improvements have been implemented and these have successfully reduced incidents of slow breaker operations. The majority of the identified work was completed in 2021 and a schedule for completion of this work has been established.
Observation 10 – Transmission Lines	10.1		Coordinate with the Lower Colorado River Authority (LCRA) to replace damaged static conductors for 345kV lines on jointly owned transmission towers. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	Damaged static conductors on 345kV lines have been repaired and all work is complete.
Observation 10 – Transmission Lines	10.2		Meet with LCRA to review emergency event response responsibilities for jointly owned facilities. (Completed Qtr. 3, 2021)	Qtr. 3, 2021	Completed	Austin Energy and LCRA have cooperated under the terms of an existing Interlocal Agreement to jointly perform work on jointly owned facilities. Austin Energy representatives have verified that LCRA will continue to work cooperatively with Austin Energy to perform necessary future restoration and repair work on electric transmission facilities and to jointly execute emergency event response responsibilities. Complete.
Observation 10 – Transmission Lines	10.3		Evaluate the need for additional anti-galloping devices on affected circuits. (Completed Qtr. 3, 2021)	Qtr. 3, 2021	Completed	The evaluation of the need for additional anti-galloping devices on affected circuits is complete, and Austin Energy determined that no additional anti-galloping devices are needed.



Observation	OA No.	Sub-Observation	Follow-up Action	Target Date	Status	Q4 2021 Update
Observation 11 – Black Start Process	11.1		Evaluate the existing Black Start Process to ensure consistency and continuity between the Black Start Process and Business Continuity Plans. (Completed Qtr. 2, 2021)	Qtr. 2, 2021	Completed	Austin Energy evaluated its Black Start Process to ensure consistency and continuity between its Black Start Process and Business Continuity Plans. The evaluation included 19 findings that were identified and addressed.
Observation 11 – Black Start Process	11.2		Develop scheduling scenarios for multiday emergency events that can be filled out ad-hoc and develop a process to track and identify available call center staff and other staff necessary to handle essential needs during emergency events. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	Staffing scheduling scenarios have been developed for Call Center personnel for use during multiday emergency events. Austin Energy has completed the development of new processes where; 1) a framework for scheduling shifts for instances in which staffing coverage needs to expand to 7-days or to 24 hour/7-day operations, 2) days off are included in the scheduling options, 3) employees have the opportunity to review the expanded schedules and sign up for schedules that best meet their personal needs and 4) form sign-up sheets have been developed and are accessible. The new processes were developed to provide better advance scheduling information for employees and to develop better work life balance for employees during emergency events.
Observation 11 – Black Start Process	11.3		Maintain and communicate a regularly updated list of available work sites and meeting locations for staff and team meetings. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	The Emergency Management Coordinator maintains multiple designated primary and alternate meeting locations that are to be utilized during times of Incident Command activations. This Austin Energy internal location list is available through Austin Energy Emergency Management.
Observation 11 – Black Start Process	11.4		Work with HSEM to develop a Grid Failure and Business Continuity seminar for stakeholders to strengthen organizational resilience, better coordinate decisions and identify and address planning gaps. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	Currently a series of exercises and “Grid Failure” informational and educational seminars are being developed with the COA and Travis County’s HSEM. The first of this series of seminars was held on December 15, 2021 and included a joint city and county Tabletop Exercise. The primary objective of this exercise and future exercises will be to identify planning gaps and resources shortages.
Observation 12 – Fleet Management	12.1		Identify and document the types of vehicles and winter storm equipment needed for major and prolonged storm events. (Completed Qtr. 3, 2021)	Qtr. 3, 2021	Completed	Vehicles have been identified for winter event deployment. Equipment has been ordered and employee training is scheduled for January, 2022.



Observation	OA No.	Sub-Observation	Follow-up Action	Target Date	Status	Q4 2021 Update
Observation 12 – Fleet Management	12.2		Ensure Austin Energy and the COA's Fleet Department have clear lines of responsibility for ensuring that vehicles are winter storm ready and that winter storm related accessories and parts are readily available at appropriate Austin Energy facilities. (Completed Qtr. 3, 2021)	Qtr. 3, 2021	Completed	Austin Energy and the COA Fleet Department have established clear lines of responsibility through the recently published City of Austin Fleet GWPs to ensure appropriate vehicle winterization. Additionally, contracts and acquisitions for winter weather vehicle accessories are in place and winter equipment is readily available through Austin Energy Fleet Management and located at an Austin Energy service center.
Observation 12 – Fleet Management	12.3		Ensure that Austin Energy and the COA's Fleet Department have an established communication plan to coordinate support of the fleet being dispatched to the field during winter storm events. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	A GWP for use by Austin Energy and City of Austin Fleet is in place and establishes coordination procedures and communications plans for winter storm events. This GWP is in the queue for review and should be published in quarter 1, 2022.
Observation 12 – Fleet Management	12.4		Develop training on winter storm driving including how to drive with snow chains as well as support for how and when to install and remove snow chains. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	Procedures are implemented and training materials on snow chain installation and use have been prepared for presentation during January Safety Meeting.
Observation 12 – Fleet Management	12.5		Ensure fleet vehicles are made available to COA's Fleet Service Center Operations to ensure all appropriate preventative maintenance is performed seasonally and are complete prior to the winter season. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	Austin Energy worked with the COA Fleet Services Department to ensure fleet vehicles were available to Fleet Services for the performance of all appropriate preventative maintenance in advance of the 2021-2022 winter season. Austin Energy staff perform schedule coordination for planned maintenance through vehicle schedulers to ensure timely maintenance.
Observation 13 – Vegetation Debris Resulting from Winter Storms	13.1		Collaborate with COA departments (including Austin 3-1-1) and communicate to the public on social media platforms on major storm debris pickup process. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	Austin Energy communications staff have prepared draft communications that communicate to the public on social media platforms explaining the debris pickup process in effect during major storms. Austin Energy also collaborates with ARR during major storms to communicate these processes.
Observation 13 – Vegetation Debris Resulting from Winter Storms	13.2		Update Austin Energy website to highlight the debris pickup process in effect during the major storms. (Qtr. 4, 2021)	Qtr. 4, 2021	Completed	The Austin Energy Tree Pruning and Vegetation Management webpages have been updated to highlight the debris pickup process in effect during major storms. The storm response and debris removal content has been emphasized by placing it in a highlighted and shaded box. The highlighted text includes a link to the debris removal guidance in the ARR website.



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Observation 14 – Emergency Critical Supplies	14.1		Determine a means of obtaining and storing safe drinking water for use during severe weather events. As of September 2021, approximately 70 pallets of shelf-stable drinking water have been obtained at no cost by the Austin Energy Emergency Management staff. (Completed Qtr. 3, 2021)	Qtr. 3, 2021	Completed	As of September 2021, approximately 70 pallets of shelf-stable drinking water were acquired and stored for future use by the Austin Energy Emergency Management staff.
Observation 14 – Emergency Critical Supplies	14.2		Determine a means of obtaining shelf-stable food supplies that can be stored for extended periods without damage or degradation. (Qtr. 2, 2022)	Qtr. 2, 2022	In Progress	Due Qtr. 2, 2022
Observation 14 – Emergency Critical Supplies	14.3		Review current critical supply inventory list, determine minimum supply storage levels and determine firm schedule for refreshing inventory. (Qtr. 2, 2022)	Qtr. 2, 2022	In Progress	Identified needs for emergency critical supplies. Work underway to identify appropriate vendors and determine firm schedule for refreshing inventory.
Observation 14 – Emergency Critical Supplies	14.4		Review current vendors and caterers list. Strengthen and establish vendor and caterer relationships and determine firm schedule for periodically updating the list of vendors and caterers. (Completed Qtr. 2, 2021)	Qtr. 2, 2021	Completed	Austin Energy reviewed its lists of vendors, caterers, restaurants and hotels, worked to strengthen relationships with these entities and established a firm schedule for periodically updating its list of these providers. Austin Energy also updated its list of supplies appropriate to have on hand in advance of extreme weather and reviewed its processes for confirming arrangements with vendors, caterers, restaurants and hotels in advance of extreme weather.
Observation 15 – Employee Health and Well-Being	15.1		Continue having supervisors and leadership perform regular employee well-being check-ins to determine how employees are coping in the aftermath of the Winter Storms. (Completed Qtr. 3, 2021)	Qtr. 3, 2021	Completed	The performance of regular employee well-being check-ins has been added to the new Austin Energy shift change checklist. Wellness checks will be performed for employees calling in and those that are "No Call No Show". A list of services that are available for employees has been made available. This information was updated in the utility's shared network drive.
Observation 15 – Employee Health and Well-Being	15.2		Continue to reinforce the Employee Assistance Program (EAP) as many employees were affected by the stress of the Winter Storms event. (Ongoing)	Ongoing	Ongoing	During 2021, Austin Energy reviewed and implemented improvements to its EAP. These improvements included the addition of regular employee well-being check-ins to the new shift change checklist and the performance of wellness checks for employees calling in and those that are "No Call No Show". A list of services that are available for employees has been made available to employees in the utility's shared network drive.



Observation	OA No.	Sub-Observation	Follow-up Action	Target Date	Status	Q4 2021 Update
Observation 15 — Employee Health and Well-Being	15.3		Review existing employee support plans and procedures, update existing ones, and identify additional steps to support employees who carry out duties in extreme weather conditions, such as security guards stationed outside and the Customer Care team. (Completed Qtr. 3, 2021)	Qtr. 3, 2021	Completed	Existing employee support plans and procedures were reviewed and improvements were implemented. These improvements include the creation of a new shift change checklist for supervisors using the FEMA template. Corresponding updates have been made to the appropriate database and the Customer Care branch portion of the emergency response manual. These updates have been cascaded to supervisors. Within the new shift change checklist, wellness checks have been added that provide a list of services available for employees and the community.
Observation 16 — Remote Workforce	16.1		Continue supporting a remote workforce, including the final transition to notebook computers and further strengthen the IT infrastructure. (Ongoing)	Ongoing	Ongoing	Austin Energy has continued to support a remote workforce by taking additional steps to strengthen the IT infrastructure and by performing a final transition to notebook computers, which has been completed for Austin Energy personnel for which laptop use is appropriate. Austin Energy has also increased inbound/outbound internet bandwidth by 90%, upgraded firewalls, and implemented additional remote tools to support remote assets.
Observation 17 — Safety Management	17.1		Research and review other electric utility After Action Reports and documented safety event synopses that were prepared following the Winter Storms and determine if any additional safety precautions can be implemented during future severe weather events. (Ongoing)	Ongoing	Ongoing	Austin Energy contacted other utilities for guidance on their respective Emergency and Incident Response Plans for bench-marking purposes when Austin Energy's Safety Incident Action Plan was being developed. Austin Energy Safety personnel regularly monitors and will continue to monitor industry safety associations and other industry resources for best practices in handling extreme weather events.
Observation 18 — Climate Event Risk Assessment	18.1		Enhance existing climate event risk analysis and vulnerability assessments to incorporate updated climate forecast data. Develop scenarios for planning purposes reflecting updated expectations for average climate conditions, extreme climate events and grid-scale impacts. (Qtr. 1, 2022)	Qtr. 1, 2022	In Progress	Climate risk analyses and vulnerability risk assessment enhancements and scenarios used for planning purposes have been identified and are in review for approval.
Observation 18 — Climate Event Risk Assessment	18.2		Conduct formal risk assessments with these updated scenarios to understand impacts to Austin Energy from different types of climate events and develop mitigation measures. (Qtr. 1, 2022)	Qtr. 1, 2022	In Progress	Formal risk assessments for identified climate events are in progress. These assessments are expected to be completed on a timely basis.



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Observation 19 – Collaboration with COA Departments	19.1		Develop a policy in coordination with the HSEM to determine in-person versus remote Emergency Operations Center (EOC) attendance. (Completed Qtr. 3, 2021)	Qtr. 3, 2021	Completed	During 2021, Austin Energy and HSEM successfully implemented remote attendance during EOC activations. The remote attendance practice is that remote versus in-person attendance will be decided on an event-by-event basis that takes into account all aspects of a particular event.
Observation 19 – Collaboration with COA Departments	19.2		Work with the City Controller’s office to pre-establish reporting codes prior to a severe weather event to ensure proper tracking of activities and tasks. (Completed Qtr. 3, 2021)	Qtr. 3, 2021	Completed	A process has been created for Austin Energy Finance personnel to confirm with the City Controller’s office the next available reporting code in advance of each potential Citywide tracking event. If a task order is created prior to a reporting code being established, Austin Energy has confirmed the ability to modify the task order’s funding as long as no reimbursement charges have been recorded into the City financial system.
Observation 19 – Collaboration with COA Departments	19.3		Support the development of a City-wide Resilience Hubs Network in accordance with the direction provided by City Council Resolution 20210408-028 passed in April 2021. The Resolution calls for COA departments to design and equip pilot resilience hubs that provide the community with resources during disasters. The Resolution also calls for COA departments to create a community-wide plan for more hubs sufficient to serve all Austinites during emergencies. This multi-department effort is being led by the Office of Sustainability with input from Austin Energy and other departments. (Ongoing)	Ongoing	Ongoing	During 2021, Austin Energy representatives have attended City meetings with the Office of Sustainability and representatives of other City departments to formulate plans for a City-wide Resilience Hubs Network and to provide other resources during disasters. Austin Energy and Austin Energy Green Building are identified as Existing and Potential Resilience Hub Collaborators going forward.