

# Austin Energy Operational Update Q1 FY22

## Austin Energy Utility Oversight Committee – February 2022

Sidney Jackson

Chief Operating Officer, Austin Energy



February 2022

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# Austin Energy Operational Update

## Discussion Topics



Performance



Carbon Footprint

On-Site Energy  
Resources

Future State



# Austin Energy Operational Update

## Performance



# Commercial Availability & Start Success

## Commercial Availability

Generation Resource	Target Seasonal Commercial % Availability	Commercial Availability Actuals (%)	
		Q4 FY21 AVG	Q1 FY22 AVG
Decker Steam Units	95	96	76
Sand Hill Combined Cycle	95	95	44
Fayette Units	97	99	51
South Texas Project	100	100	84

Commercial Availability values reflect maintenance or refueling outages typical for this period

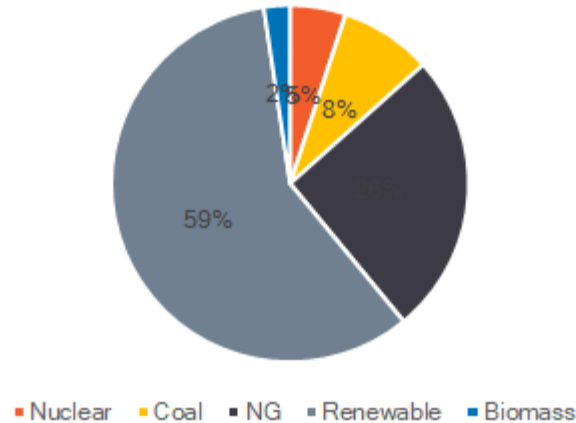
## Start Success

	Start Success Target(%)	Start Success Actuals (%)	
		Q4 FY21 AVG	Q1 FY22 AVG
Simple Cycle Start Success	99	100	100



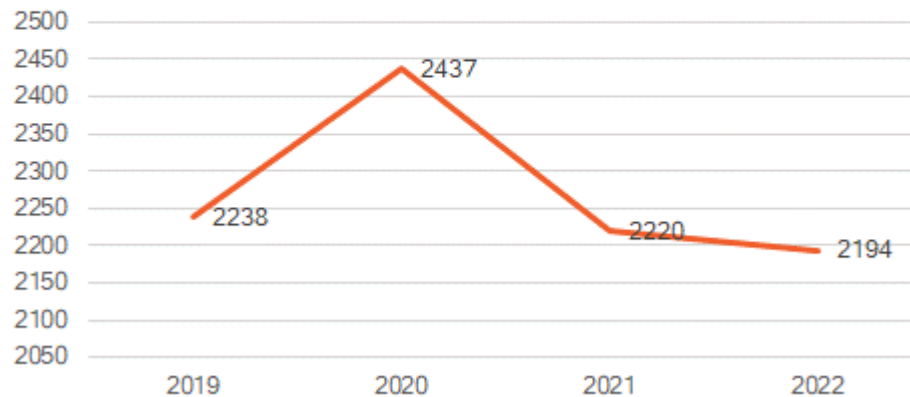
# Net Generation and Load Analysis FY 2022 Q1

Power Generation Cost by Fuel Type

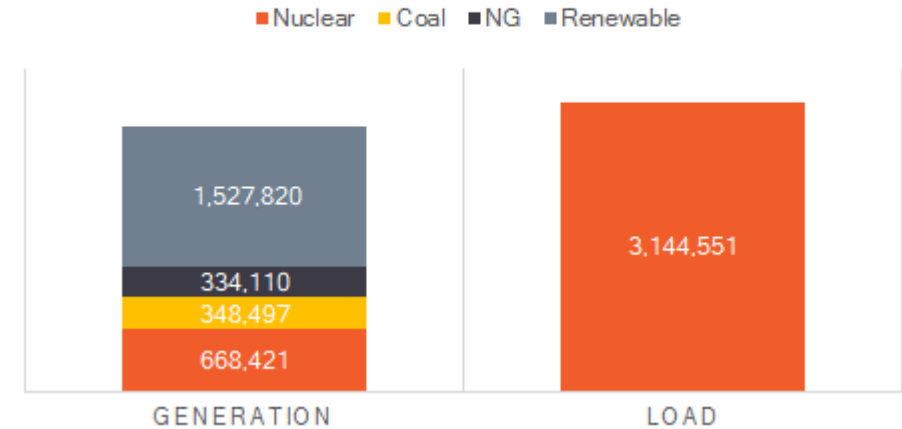


Power purchases agreements

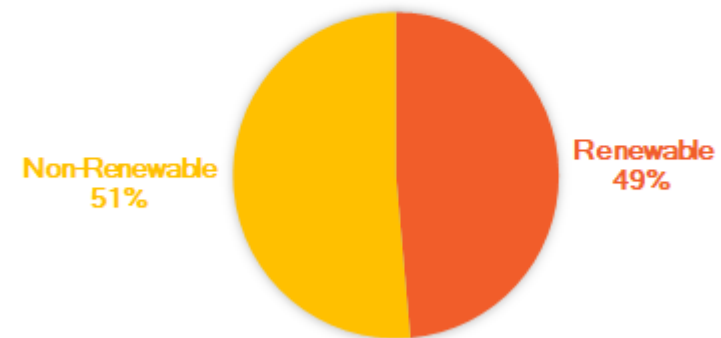
Historical FY22 Q1 System Peak Demand (MW)



CONSUMPTION VS. GENERATION (MWH)



RENEWABLE POWER AS PERCENT OF CONSUMPTION



# Electric System Resilience and Reliability

- **Resilience and Reliability are a Strategic Goal**
- **Two Industry Awards for Overall System Reliability**
  - First Quartile Consulting Benchmarking Services
  - PA Consulting ReliabilityOne
- **Reliability Strengths**
  - Overall Distribution Reliability
  - Transmission System Performance
- **Current Improvement Initiatives**
  - Addressing pockets of poor performance on the distribution system
  - Identified and have largely resolved the root causes of 4<sup>th</sup> quartile substation reliability

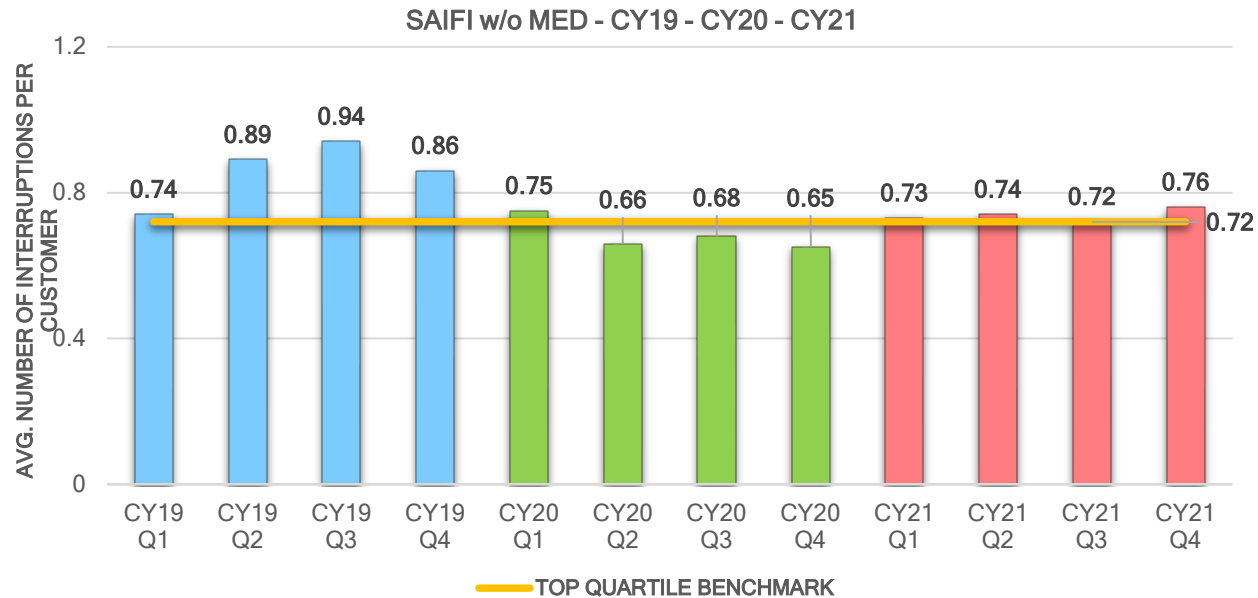
***“Austin Energy stands among a handful of Electric Utilities in providing its customers with the best overall reliability in North America,” Rob Earle, Director, First Quartile Consulting***



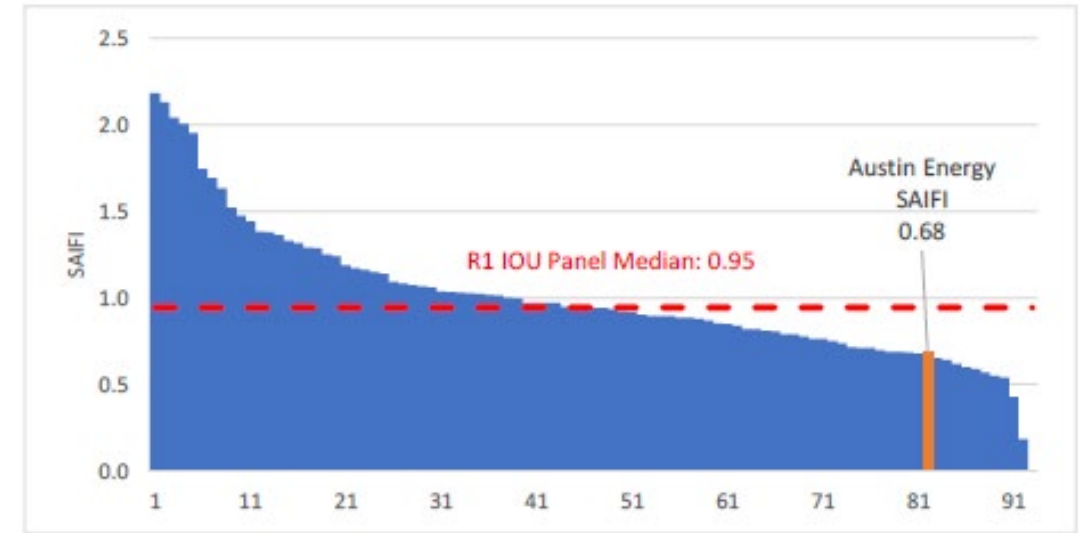
***Award from ReliabilityOne – November 17, 2021***



# System Reliability - SAIFI



Austin Energy performance compared to Top Quartile  
(calendar years 2019-2021)



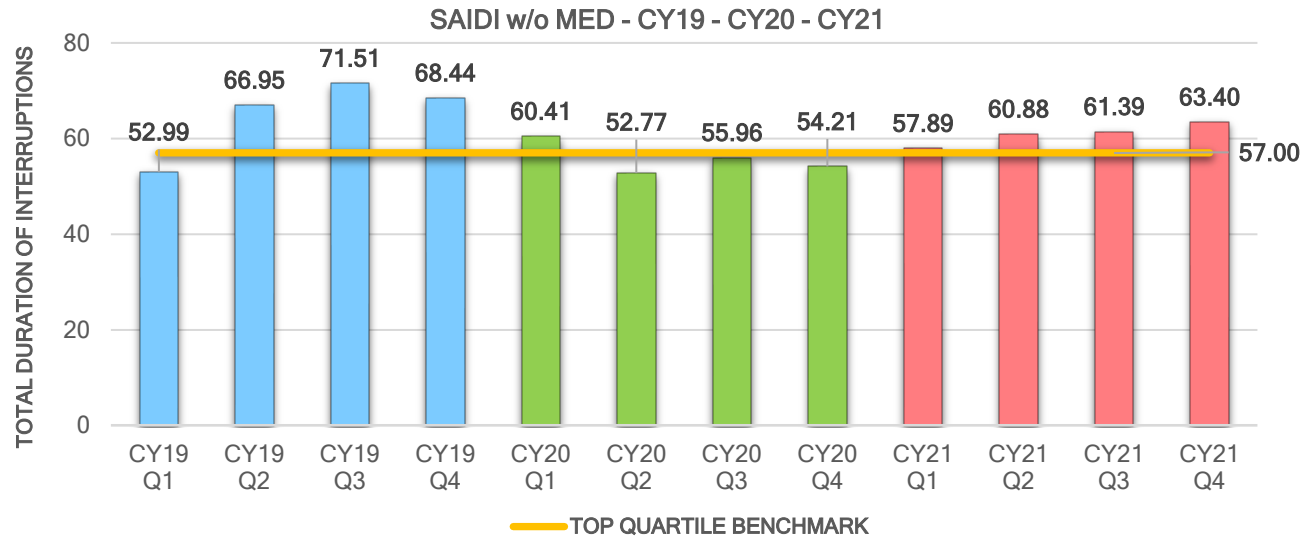
ReliabilityOne® North America Panel: Electric Utilities  
with more than 300,000 customers (calendar year 2020)

**SAIFI = System Average Interruption Frequency Index**

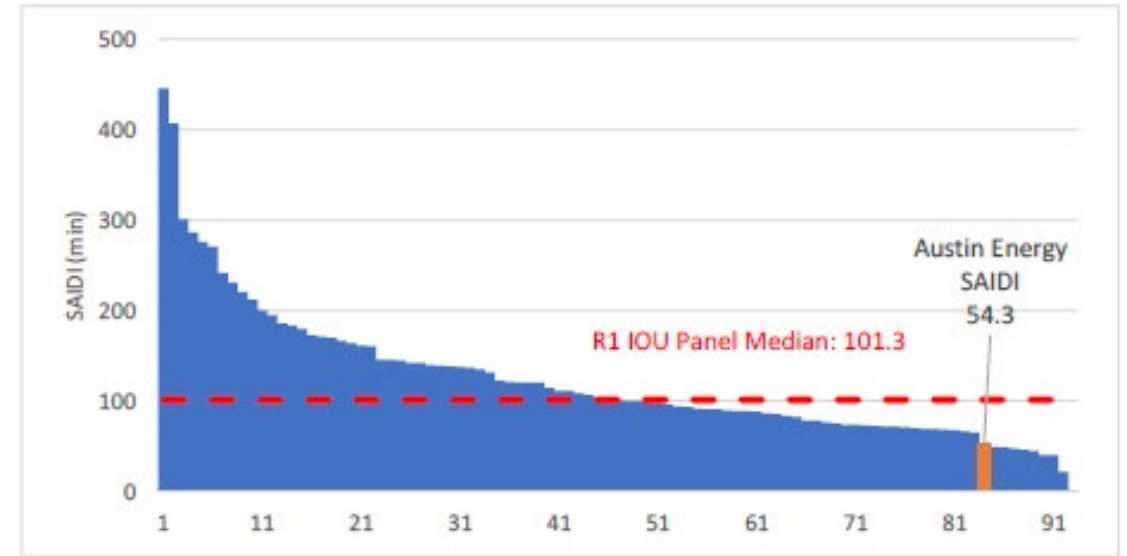
*How often the average customer experiences a sustain interruption, over a period of time*



# System Reliability - SAIDI



Austin Energy performance compared to Top Quartile  
(calendar years 2019-2021)



ReliabilityOne® North America Panel: Electric Utilities  
with more than 300,000 customers (calendar year 2020)

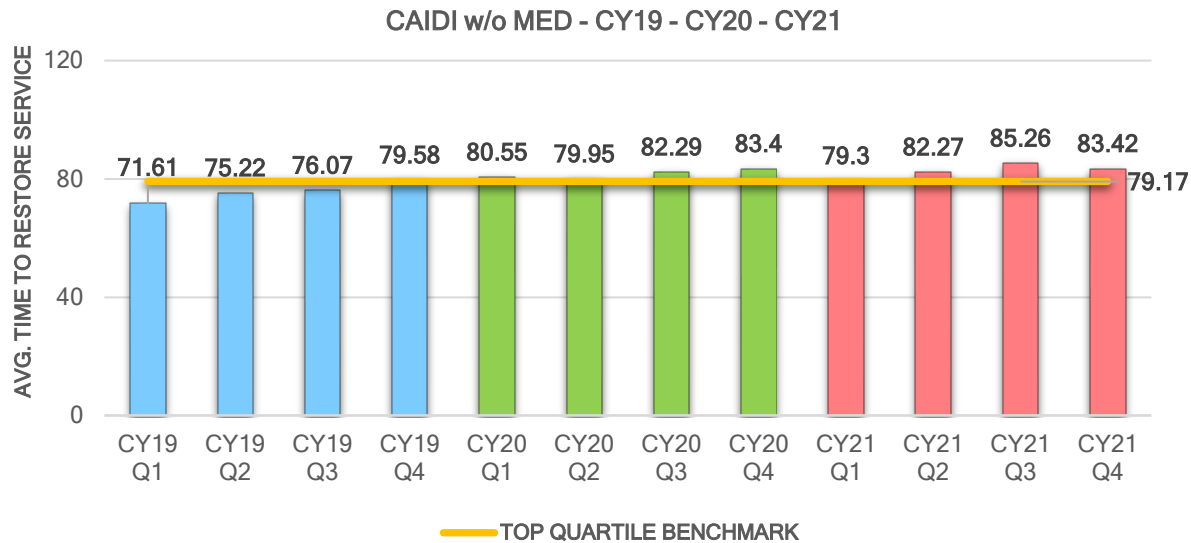
**SAIDI = System Average Interruption Duration Index**

*Total duration of interruptions for the average customer, during a period of time*

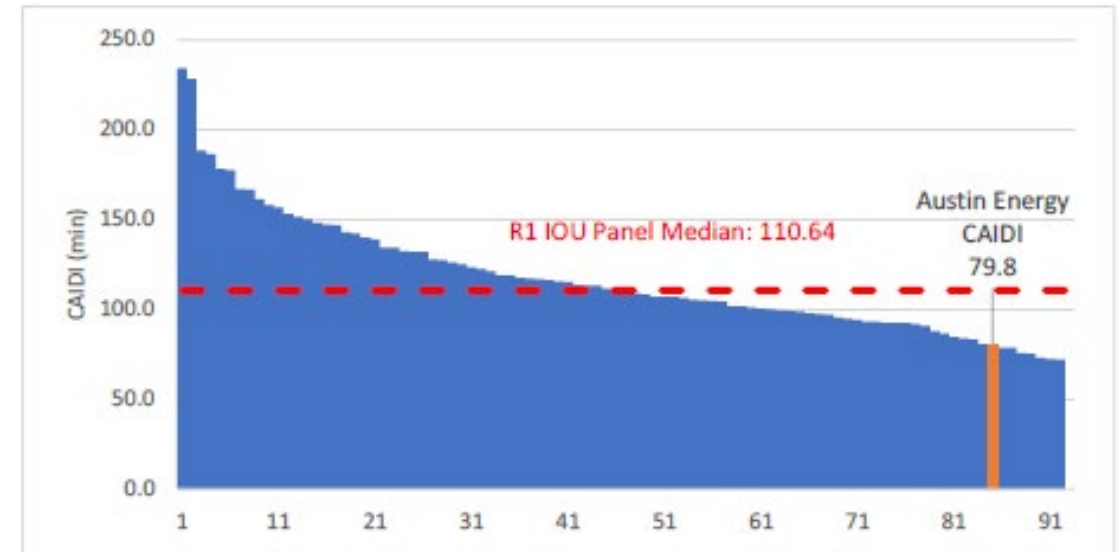




# System Reliability - CAIDI



Austin Energy performance compared to Top Quartile  
(calendar years 2019-2021)



ReliabilityOne® North America Panel: Electric Utilities  
with more than 300,000 customers (calendar year 2020)



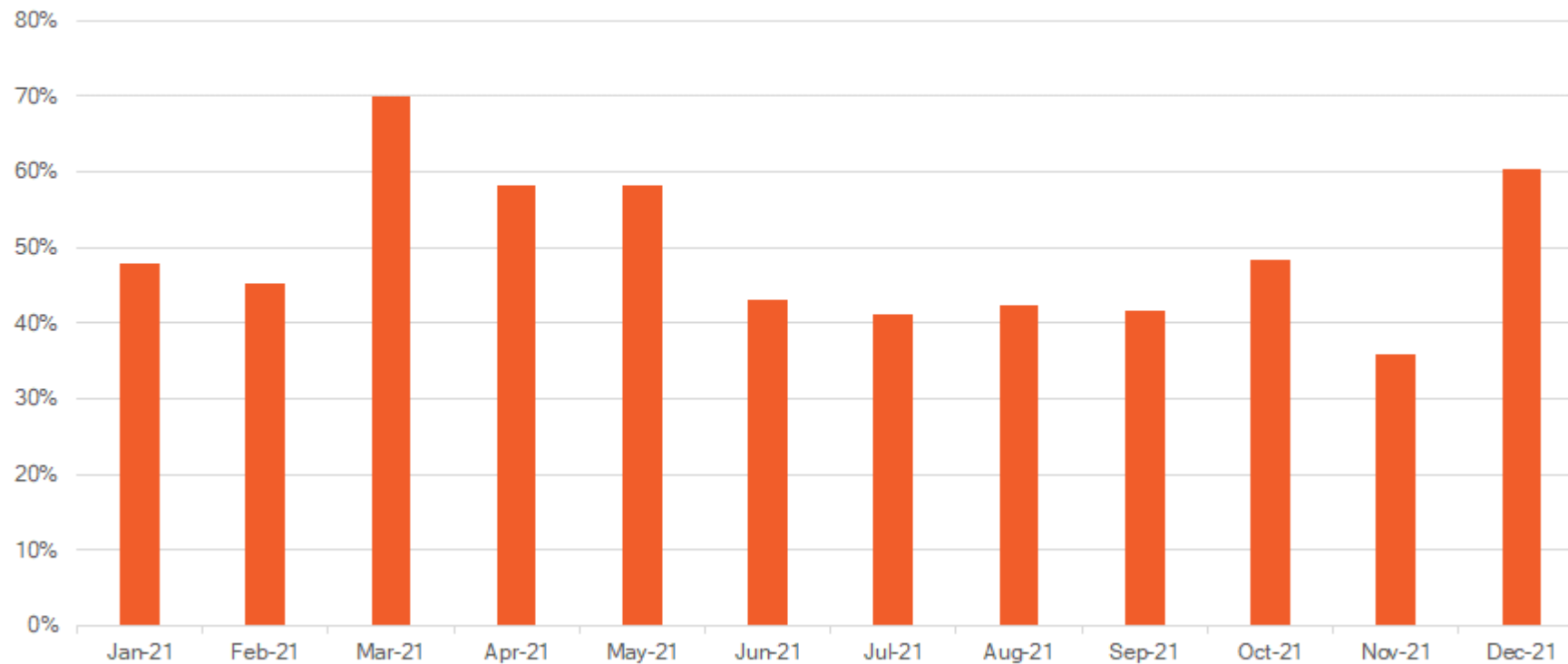
**CAIDI = Customer Average Interruption Duration Index**  
*Average time to restore service*

# Austin Energy Operational Update

## Carbon Footprint



# Renewable Generation as a Percentage of Load



# Environmental Focus

## Reducing our Carbon Footprint

### Key programs and projects designed to:

- Expand Renewable Portfolio
- Integrate Distributed Energy Resources

### New Wind and Solar Resources

- Aragorn Solar (180 MWs) went COD per the PPA on December 31, 2021
- Plan to issue an RFP for battery storage by the end of the month
- Currently refreshing offers on our last solar RFP



# Austin Energy Operational Update

## District Cooling Projects



# Key District Energy & Cooling Activities

## District Cooling Plant #3 (Downtown, Crescent Tract)

Constructing 10,000 ton chilled water plant for the Downtown System

- Project is substantially complete
- Progress to final completion continues.

## Austin Community College Highland Campus

Constructing a 6,000 ton chilled water plant with Thermal Energy Storage

- Project expected to be substantially complete in the coming weeks



# Austin Energy Operational Update

## Future State



# Grid Resilience

## AE Strategic Goals 2020

### Grid Resilience



#### Improve Distribution System Reliability

Identify, Rank, and Address feeder maintenance needs in areas historically beset by outages. Identify, Rank and Address system hardening needs in areas most susceptible to wildfire risk.

Phase I - Top 10 Feeders in both Performance and Wildfire Criticality addressed (CY/2021 - **N PROGRESS**)

Phase II - Overall Distribution Resilience Program established, roll out (Q1/2022 - **IN PROGRESS**)



#### Improve Substation Reliability

Evaluate substation equipment operation and address legacy equipment needs.

Phase I - ~~Fiskville Substation Upgrades~~ (**COMPLETE**)

Phase II - Slow Breaker Operation -Rank and Schedule Substation Breakers for maintenance and remediation (**COMPLETE**)



#### Improve Underground Network Reliability

Starts with enabling greater Visibility to our downtown network through the integration of our network model into our Advanced Distribution Management System

Phase I - ~~Network Modeled in ADMS~~ - (Q3/2020) (**COMPLETE**)

Phase II - ~~Network Primary Circuits Complete/Modeled in ADMS~~ - (Q2/2021) (**COMPLETE**)

Phase III -Network Secondary Circuits Complete/Modeled in ADMS - (Q4/2022)



#### Transmission System of the Future

As part of the 2030 generation plan, Austin Energy is commissioning a Transmission system study that will investigate ways to achieve our goals set forth in the plan while compensating for the loss of generation plants.

Phase I - ~~Development of evaluation criteria~~ (Q1/2021) (**COMPLETE**)

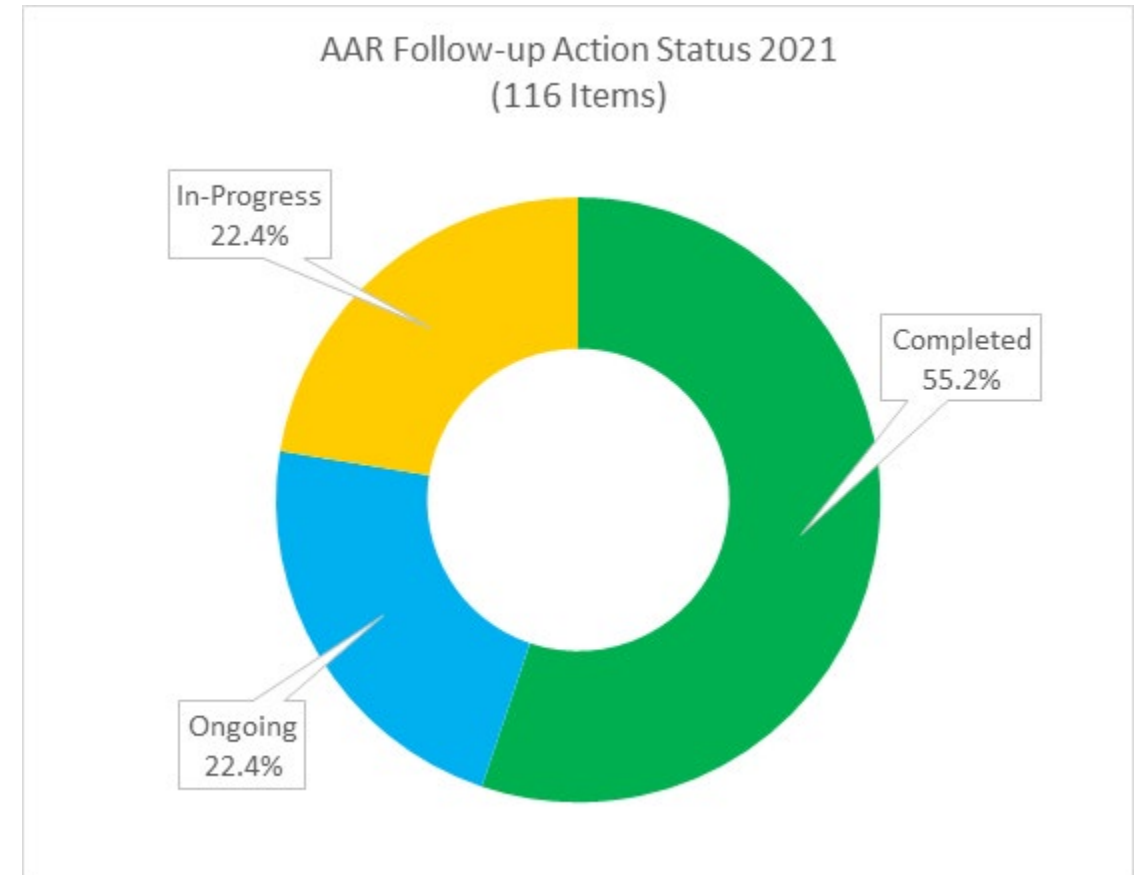
Phase II - ~~Develop SOW for RFP release~~ (Q2/2021) (**COMPLETE**)

Phase III - Transmission System Assessment (Q4/2023)





# After Actions Report Status of Follow-up Actions



# Austin Energy Operational Update

## Appendix

