

# Austin Energy Operational Update Q3 FY21

## Austin Energy Utility Oversight Committee – September 2021

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September 2021

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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 (%)	
		Q2 FY21 AVG	Q3 FY21 AVG
Decker Steam Units	95	91	94
Sand Hill Combined Cycle	95	98	63.9
Fayette Units	97	100	90.2
South Texas Project	100	91	87.2

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

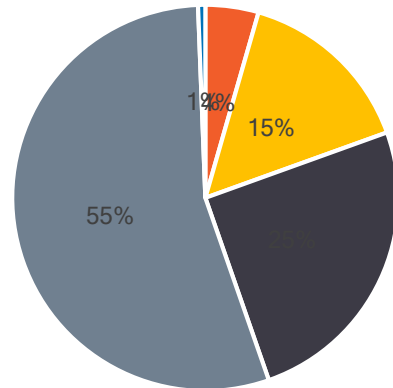
## Start Success

	Start Success Target(%)	Start Success Actuals (%)	
		Q2 FY21 AVG	Q3 FY21 AVG
Simple Cycle Start Success	99	100	100



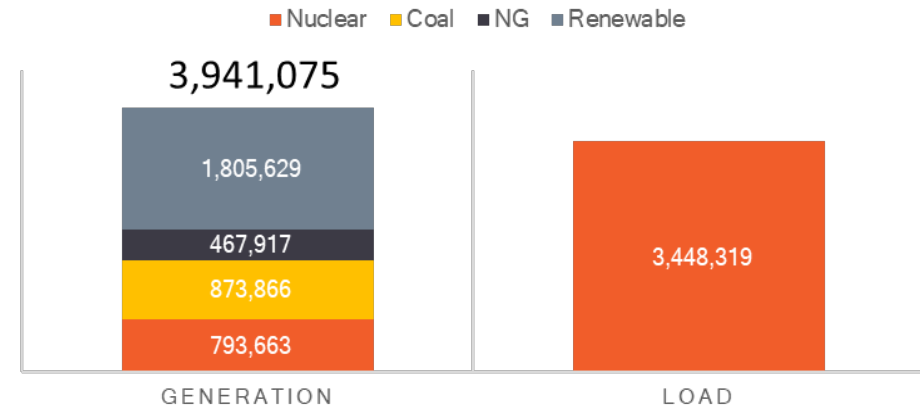
# Net Generation and Load Analysis FY 2021 Q3

## Power Generation Cost by Fuel Type

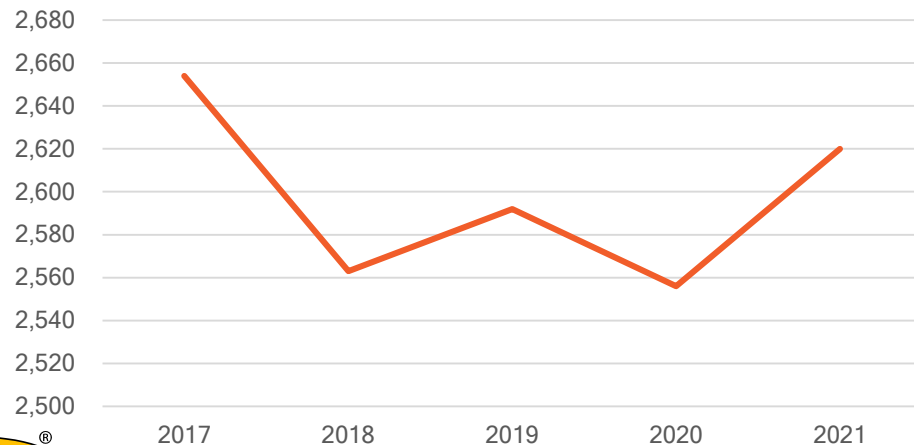


■ Nuclear ■ Coal ■ NG ■ Renewable ■ Biomass  
*\*Costs include fuel for generation, fuel transportation, renewable Power purchases agreements*

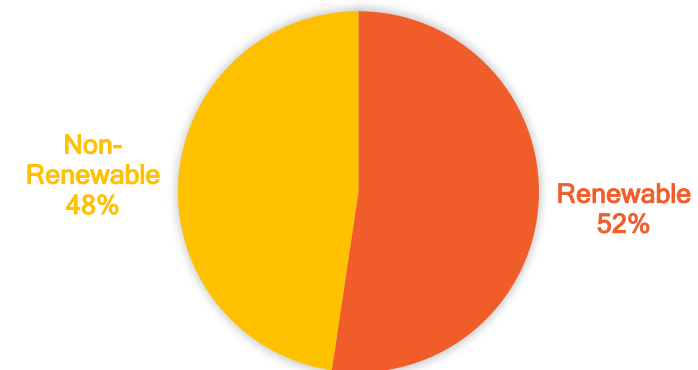
## GENERATION VS. LOAD (MWH)



## Historical FY Q3 System Peak Demand (MW)



## RENEWABLE POWER AS PERCENT OF CONSUMPTION



# System Reliability

**CAIDI = Customer Average Interruption Duration Index**

*Average time to restore service.*

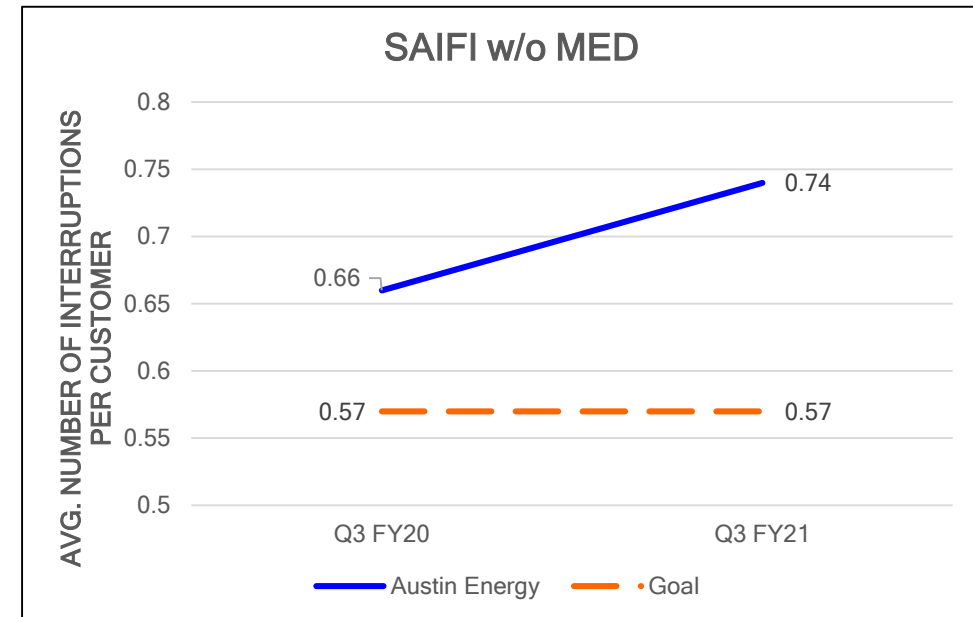
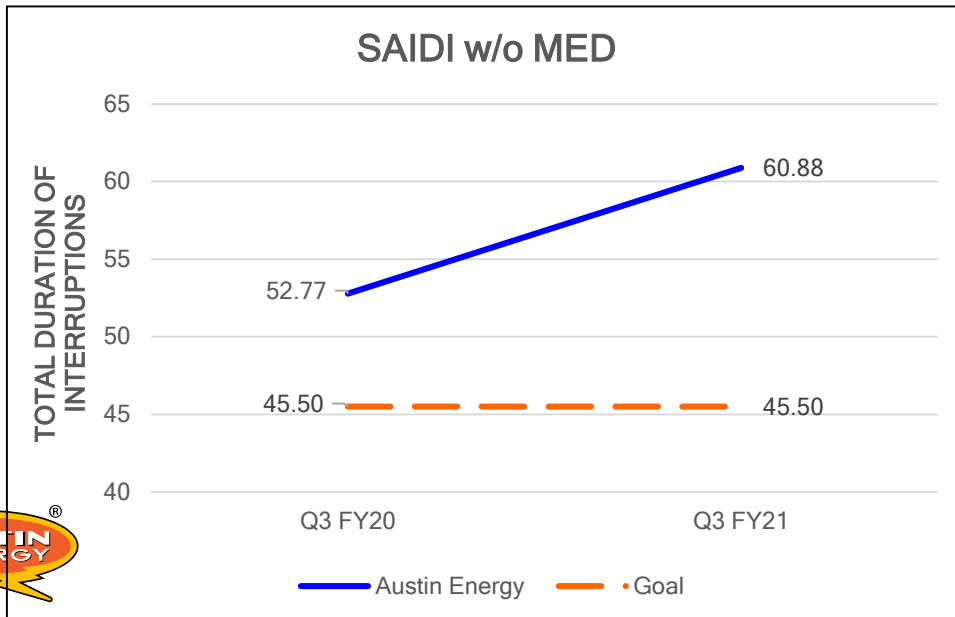
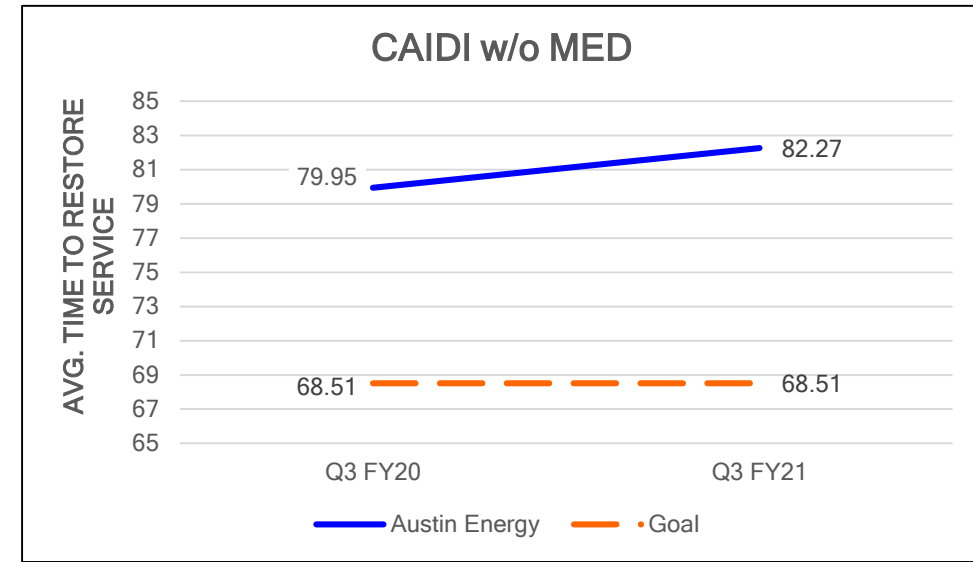
**SAIDI = System Average Interruption Duration Index**

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

**SAIFI = System Average Interruption Frequency Index**

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

**MED = Major Event Days**

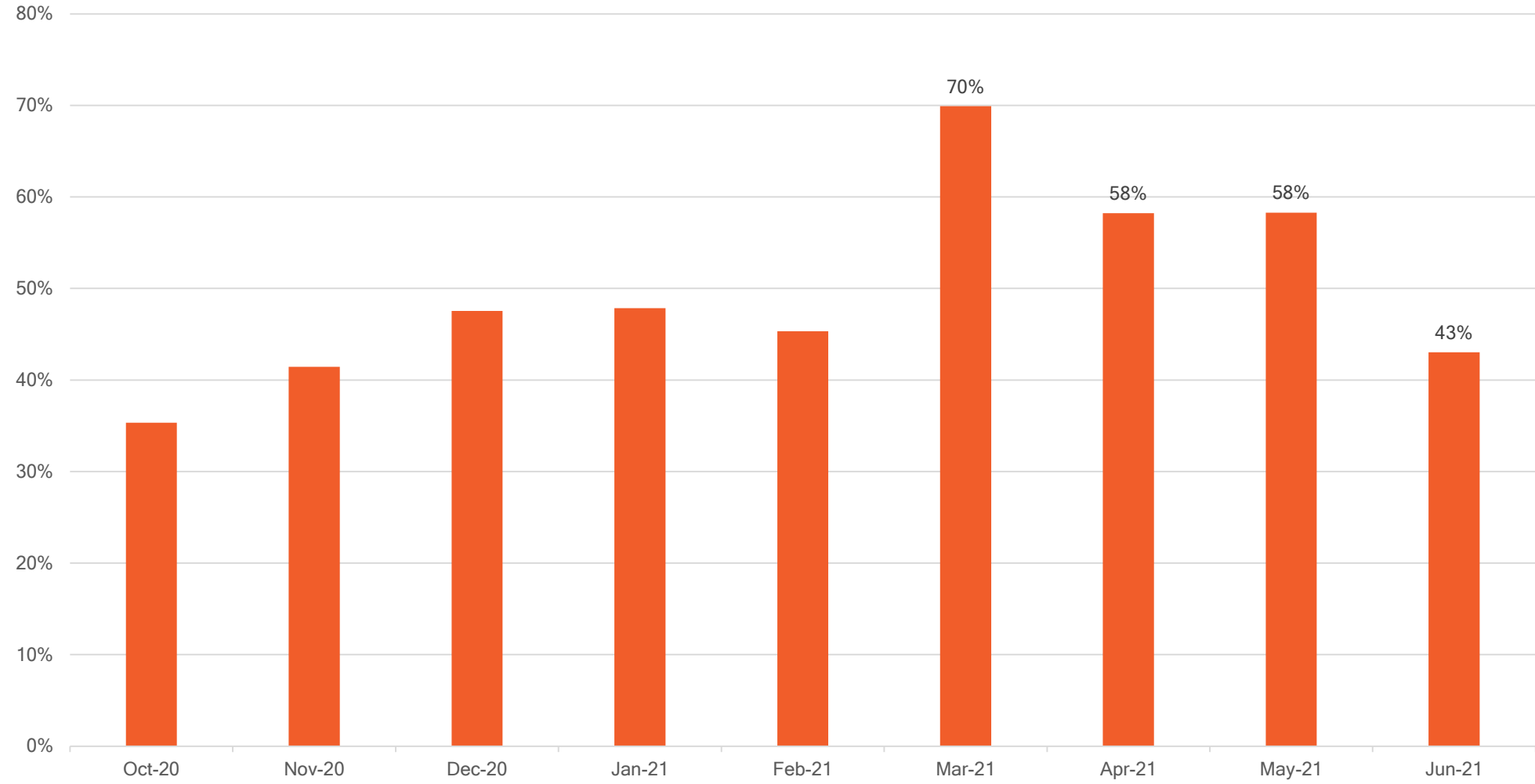


# Austin Energy Operational Update

## 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



### Austin-Bergstrom Airport Project (ABIA):

- New solar array completed: 1.8MW locally-generated renewable energy
- The equivalent energy to supply 160 homes/year
- Solar panels equal the distance of 2 football fields and sit atop ABIA Blue garage
- Awaiting final administrative step: Certificate of insurance, expected any day
- Project closed out in July 2021 and fully operational.

### New Wind and Solar Resources:

- Gulf Wind (170 MWs) original contract went COD on May 12, 2021.
- East Blacklands aka Pflugerville Solar (144 MWs) went COD on July 15, 2021.
- Aragorn Solar (180 MWs) has an expected COD of October 2021
- Pandora Solar (250 MWs) is an outer year PPA with an unchanged expected COD of December 2023



# 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

- Construction of project is almost complete.
- Working towards obtaining Certificate Of Occupancy and addressing inspection punch-list items
- Turnover to AE Operations anticipated in August 2021

## Austin Community College Highland Campus

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

- Initial phase will be for 4500 tons based upon campus needs.
- Changes initiated by the customer (ACC) to include a well on site
- Cost of this change is approx. \$1 million but will save several million over the lifecycle of the plant
- Final completion of project altered by 4 months
- Beneficial use of the plant will be October 2021
  - On-Target for substantial completion in Q4 2021

## Mueller Energy Center #2 (Mueller Redevelopment Zone)

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

- Project still in the design phase.
- Plant status under evaluation due to budget increase
- Decision how move forward is InProgress.



# Austin Energy Operational Update

## Future State



# Grid Resilience

## AE Strategic Goals 2020-2025

### 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)**



#### Improve Substation Reliability

Evaluate substation equipment operation and address legacy equipment needs.

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

**Phase II - Slow Breaker Operation - Review, Rank and Schedule Substation Breakers for maint. and remediation**



#### 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 fully Modeled in ADMS - (Q3/2020) (COMPLETE)**

**Phase II - Enhance model through GIS/ADMS to increase system mapping and visibility Primary - (Q2/2021) (COMPLETE)**

**Phase III - Enhance model to increase system mapping, visibility; support analysis of load and flow (Q1/2022)**



#### 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 (Q3/2021) (COMPLETE)**

**Phase II - Evaluating RFP bid responses (ongoing)**



# Austin Energy Operational Update

## Appendix

