

### **Grid Modernization Update**

Oklahoma Corporation Commission November 14, 2019

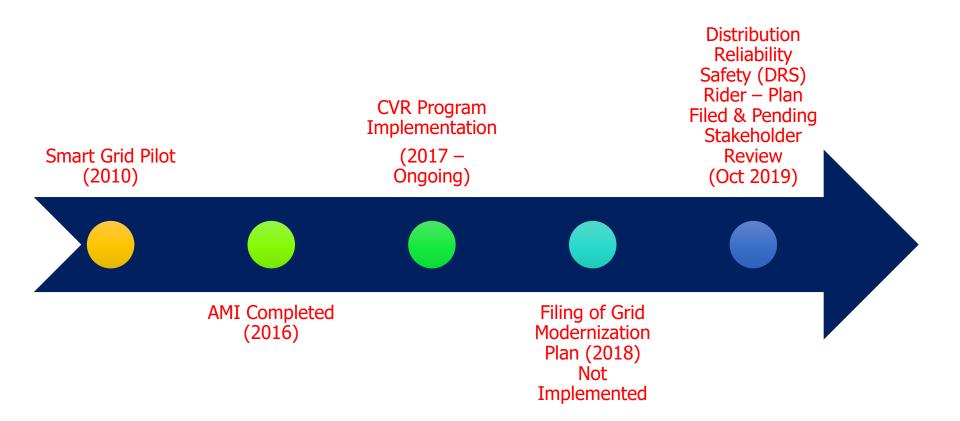


# **Modernization Acronyms**

- AMI Automated Metering Infrastructure
- CVR Conservation Voltage Reduction
- DA/CR Distribution Automation/
  Circuit Reconfiguration
- DER Distributed Energy Resources



## **Grid Modernization Projects**





## Progress and Future Technology Deployments

Summary of Current Progress

AMI Deployment (100%)

DA/CR (12% - YE 2019)

CVR (10% - YE 2019)

<u>Future</u> <u>Deployments</u> DA/CR: 45 – 50 Circuits Per Year (DRS Rider – 2020 & 2021) CVR: 15-25 Circuits Per Year (EE/DR Rider -2021) Smart Street Lighting and Non-Wires Alternatives pilot programs



# Benefits Realized by Modernization Investments

### <u>Automated Metering Infrastructure</u>

- Enabler for Customer Programs (TOU, Pre-Pay, etc.)
- Customer education on energy usage (Web Portal)
- Mobile alerts and outage communications
- Outage Restoration (major events and blue sky days)
- Equipment failure and power quality predictor
- Reduced operating expenses
- System operations and planning
- Reduces/delays capacity increases
- Public and employee safety



# Benefits Realized by Modernization Investments

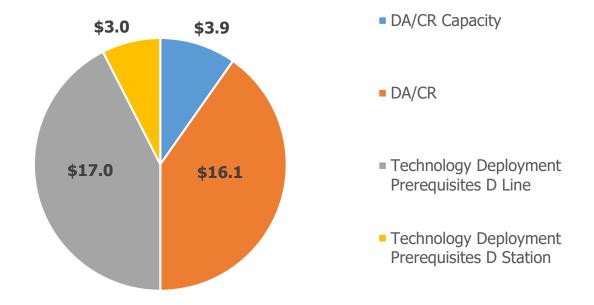
### **Distribution Automation**

- Automatic isolation of electrical faults and restoration of undamaged sections of grid (resiliency)
- Limits customers impacted by sustained outages
- Reduced trouble shooting and restoration time
- Improved public safety
- Facilitates DER integration
- Overall reduction of outage duration and scope lowers economic impacts on commerce



#### DRS Rider Plan 2020

#### Plan Components (proposed pending stakeholder review):



Total 2020 investment = \$40M

Note: Does not address accelerated replacement of aging infrastructure with modern equipment.



## **Modernization Drivers**

- OCC and stakeholder support for NARUC CI-1/EL-2 Resolution Regarding Infrastructure Modernization Programs
- Expansion and continuation of PSO's DRS Rider beyond next rate filing
- Accelerated replacement of aging grid infrastructure with modern equipment
- Added focus on ability to accommodate customer DER installations
- Continued discussions regarding alternative cost recovery mechanisms that support grid modernization activities