TEP Integrated Resource Plan Load Forecast

Public Meeting
Greg Strang, Lead Forecast Analyst

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Forecast Overview

- Customer, energy, and peak forecast
- The forecast period runs from 2020-2035
- Wherever possible, the forecast relies on sound statistical practice and shuns personal judgments
- Bottom up forecast
- Forecast accounts for Weather, Economic, and Seasonal variables
- Projection made in early December
Changes From Prior IRP, Weather Trend Adjustment
Changes from Prior IRP, Electric Vehicles

US Total New Electric Vehicle Sales

- Vendor 1
- Vendor 2
- Vendor 3
- Vendor 4
- TEP Average
Residential Use Per Customer by Temperature
TEP Residential Customer Growth

Year over Year Change in Customers TEP

95th Percentile Confidence Bands
Weather Normalized Annual Use Per Customer (kWh)

-1.2% annual growth heavily influenced by the Great Recession, Energy Efficiency and Distributed Generation
1% annual growth heavily influenced by the electrification of the transportation sector
1.6% annual growth

TEP Residential Use Per Customer Forecast
Historical Forecast Performance

- “Prediction is very difficult, especially about the future.”
  --Danish Proverb

- The Company evaluates forecast performance on a monthly basis

- Through this process we have identified what are the causes of the majority of forecast error
  - In the medium term, weather drives the forecast variance
  - In the long term, errors in economic forecasts drive the variance
First Economic Re-Projections

Arizona Unemployment Rate Seasonally Adjusted Annual Rate

- 19Q4
- 20Q1
- 20Q1 High
- 20Q1 Low
Most Recent Economic Projections

Arizona Unemployment Rate Seasonally Adjusted Annual Rate

- 19Q4
- 20Q1
- 20Q2
- 20Q2 High
- 20Q2 Low