Integrated Resource Plan

• Comprehensive analysis and guide that identifies future generation and transmission capacity requirements

• Meet future demands while maintaining reliability

• Comply with regulatory requirements

• Balance between minimizing costs to customers, mitigating environmental impacts, effective utilization of infrastructure and support of local economies
Approximately 9,000 MW of coal fired capacity is currently on-line in Arizona and New Mexico.

- San Juan U2 – 170 MW reduction by 2018
- Navajo – Proposal to shut down one unit by 2020 with no impact to TEP
- Four Corners – SCR installation by 2018
- Sundt U4 – Convert to gas by 2018
- Springerville U1 – Exercised purchase option at 49% of the unit (190 MW)
TEP Loads & Resource Forecast

2015 Acquire New Combined Cycle Resource (Increase of 400 MW)

2018 Sundt Unit 4 Committed to Natural Gas

2015 Springerville Unit 1 Lease Expiration (Reduction of 197 MW)

2018 San Juan Unit 2 Retirement (Decrease of 170 MW)

Resource Capacity, MW

- Coal Generation
- Natural Gas Resources
- New Combined Cycle Resource
- Firm Purchase Power PPAs
- Utility Scale Renewables
- Firm Load Obligations with Reserves
2014 TEP Reference Case Plan

-197 MW
Reduce TEP’s Coal Commitments on Springerville Unit 1

Pinal Central Tortolita 500kV EHV

-170 MW
Retire TEP’s Share of San Juan Unit 2

100 MW Combustion Turbine

100 MW Combustion Turbine

400 MW
Acquire Gila River Combined Cycle Plant (75%)

2018 Sundt Natural Gas Conversion

100 MW Combustion Turbine

-120 MW
Commit Sundt Unit 4 to Natural Gas

100 MW Combustion Turbine

Fully Compliant with Arizona Renewable Energy Standard
15% by 2025 (400MW Utility Scale and 250 of DG)

100 MW Combustion Turbine

Fully Compliant with Arizona Energy Efficiency Standard
22% by 2020 (250 MW Energy Efficiency)
TEP’s Evolving Resource Portfolio Energy Mix

- **2013 Existing Portfolio**
  - Coal Generation: 80%
  - Natural Gas/Purchase Power: 15%
  - Distributed Generation Resources: 2%
  - Utility Scale Renewables: 3%

- **2020 2012 Resource Plan**
  - Coal Generation: 71%
  - Natural Gas/Purchase Power: 14%
  - Distributed Generation Resources: 5%
  - Utility Scale Renewables: 7%
  - Energy Efficiency Programs: 7%

- **2020 2014 Resource Plan**
  - Coal Generation: 57%
  - Natural Gas/Purchase Power: 28%
  - Distributed Generation Resources: 5%
  - Utility Scale Renewables: 7%
UNSE Loads & Resource Forecast

- **Natural Gas, Peaking**
- **Market Purchases**
- **New Combined Cycle Resource**
- **Renewables**
- **Future Combustion Turbines in Santa Cruz and Mohave Counties**

2015: Acquire New Combined Cycle Resource (Increase of 150 MW)

Future Combustion Turbines in Santa Cruz and Mohave Counties

Resource Capacity, MW
2014 UNSE Reference Case Plan

Vail to Valencia 115kV – 138kV Conversion

150 MW Acquire Gila River Combined Cycle Plant

21 MW Combustion Turbine (Santa Cruz)

45 MW Combustion Turbine (Mohave)

45 MW Combustion Turbine (Mohave)

2014 2016 2018 2020 2022 2024 2026 2028

Fully Compliant with Arizona Energy Efficient Standard 22% by 2020 (74 MW)

Fully Compliant with Arizona Renewable Energy Standard 15% by 2025 (80 MW Utility Scale, 50 MW DG)
2016 IRP and 111(d)

- Summer 2015 – EPA’s Final Rule
- April 1, 2016 – IRP Filed
- State Implementation Plan – 2016/2017
- EPA Approval of SIPs – 2017/2018
- Summer 2015 – EPA’s Final Rule