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Lisa Malagon
Leader
Federal and State Compliance

Mail Station 9712
PO Box 53999
Phoenix, Arizona 85072-3999
Tel 602-250-5671
Elisa.Malagon@aps.com

April 23, 2015

Docket Control
Arizona Corporation Commission
1200 W. Washington
Phoenix, AZ 85007

RE: Arizona Public Service Company
Summer 2015 Energy Preparedness Special Open Meeting Presentation
Docket No. E-00000F-07-0199

Attached please find Arizona Public Service Company's Summer 2015 Energy Preparedness Presentation provided at the April 15, 2015 Special Open Meeting.

If you have any questions regarding this information, please contact Gregory Bernosky at (602)250-4849.

Sincerely,

Lisa Malagon

LM/sb
Attachment

Arizona Corporation Commission
DOCKETED

APR 23 2015

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Arizona Public Service Company
2015 Summer Readiness

Before the Arizona Corporation Commission

April 15, 2015

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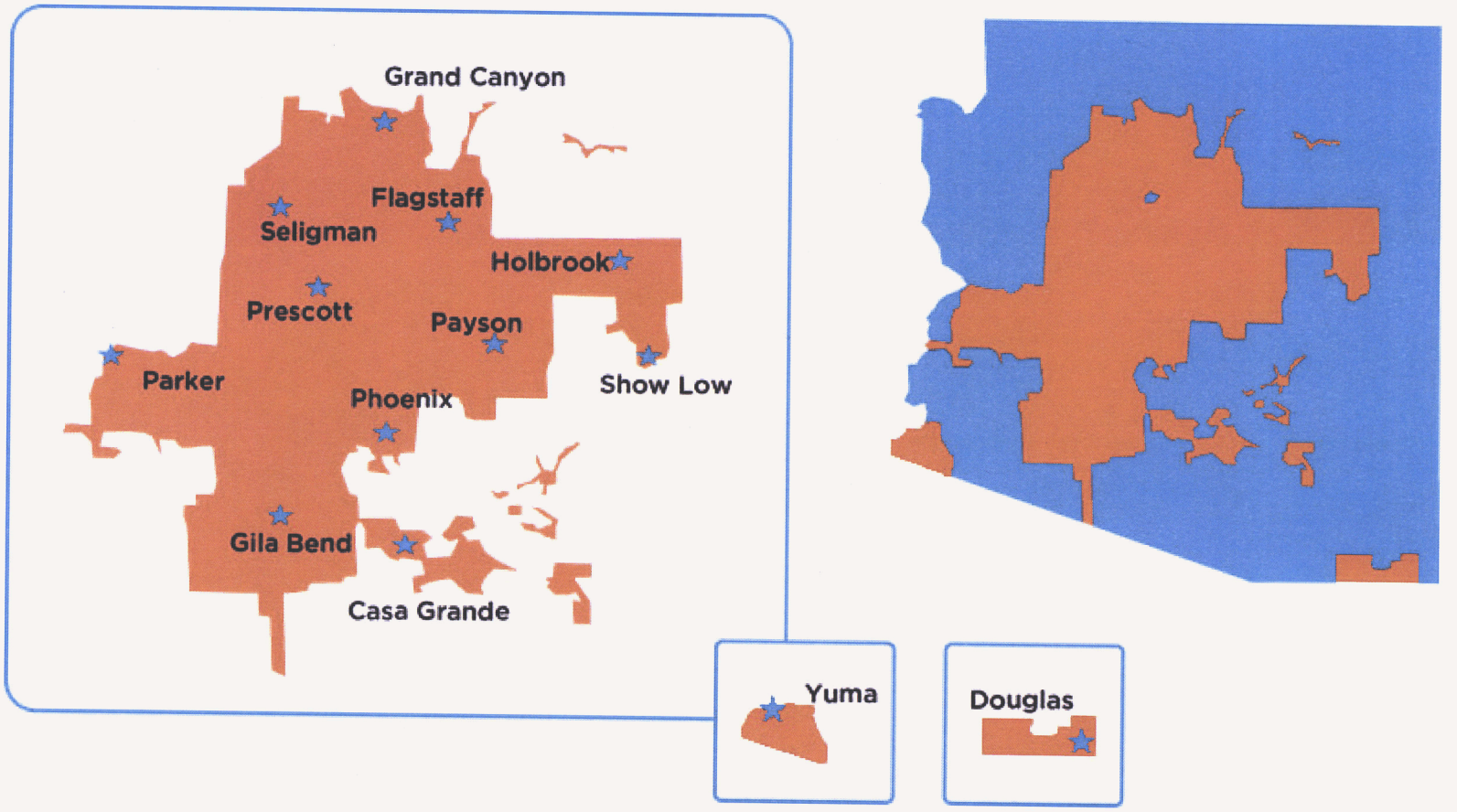
Presenters

- **Jim Wilde**
  Director, Resource Planning
- **Jacob Tetlow**
  General Manager, Transmission and Distribution Operations and Maintenance

Agenda

- Loads and Resources
- Fuel Supplies
- Planned Maintenance Activities
- Emergency Preparedness & Customer Outreach
- Conclusions

APS Service Territory



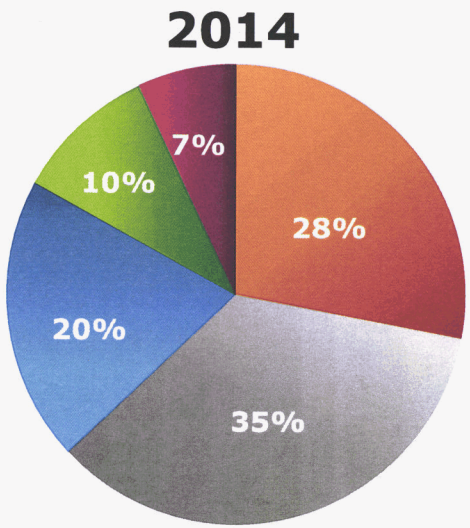
APS Service Statistics

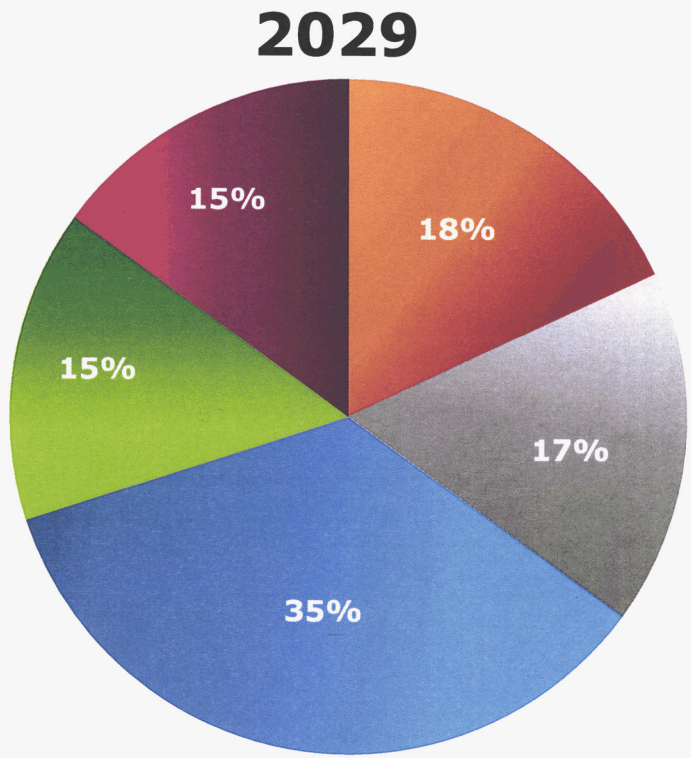
- 11 counties
- 34,646 square mile service area
- 1.2 million customers
- 425 substations
- 28,979 distribution line miles
- 5,958 transmission line miles
- 64 generation units

2015 Total Generation Resources

Fuel Source	Capacity at Peak (MW)
Nuclear	1,146
Coal	1,932
Gas Combined Cycle	1,852
Gas/Oil CT, Steam	1,253
Long-Term Contracts	2,407
Renewables (nameplate 753MW)	505
Total	9,095

Diverse Energy Mix

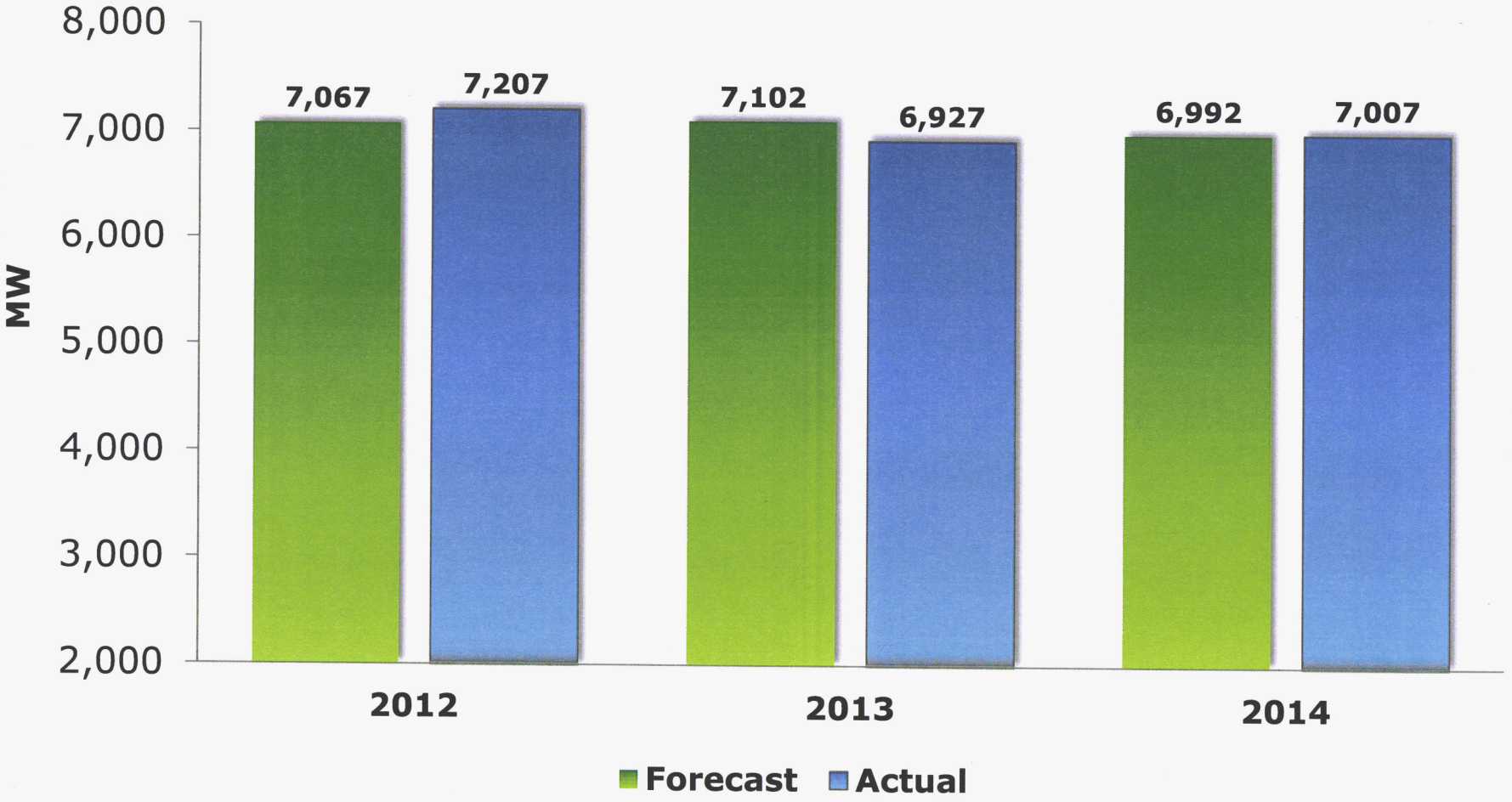




- **Over 50% of energy growth planned to be supplied by zero emission resources**
- **Growth in natural gas generation to meet peak demand and integrate renewable energy resources**

Nuclear **Coal** **Natural Gas** **Renewable Energy** **Energy Efficiency**

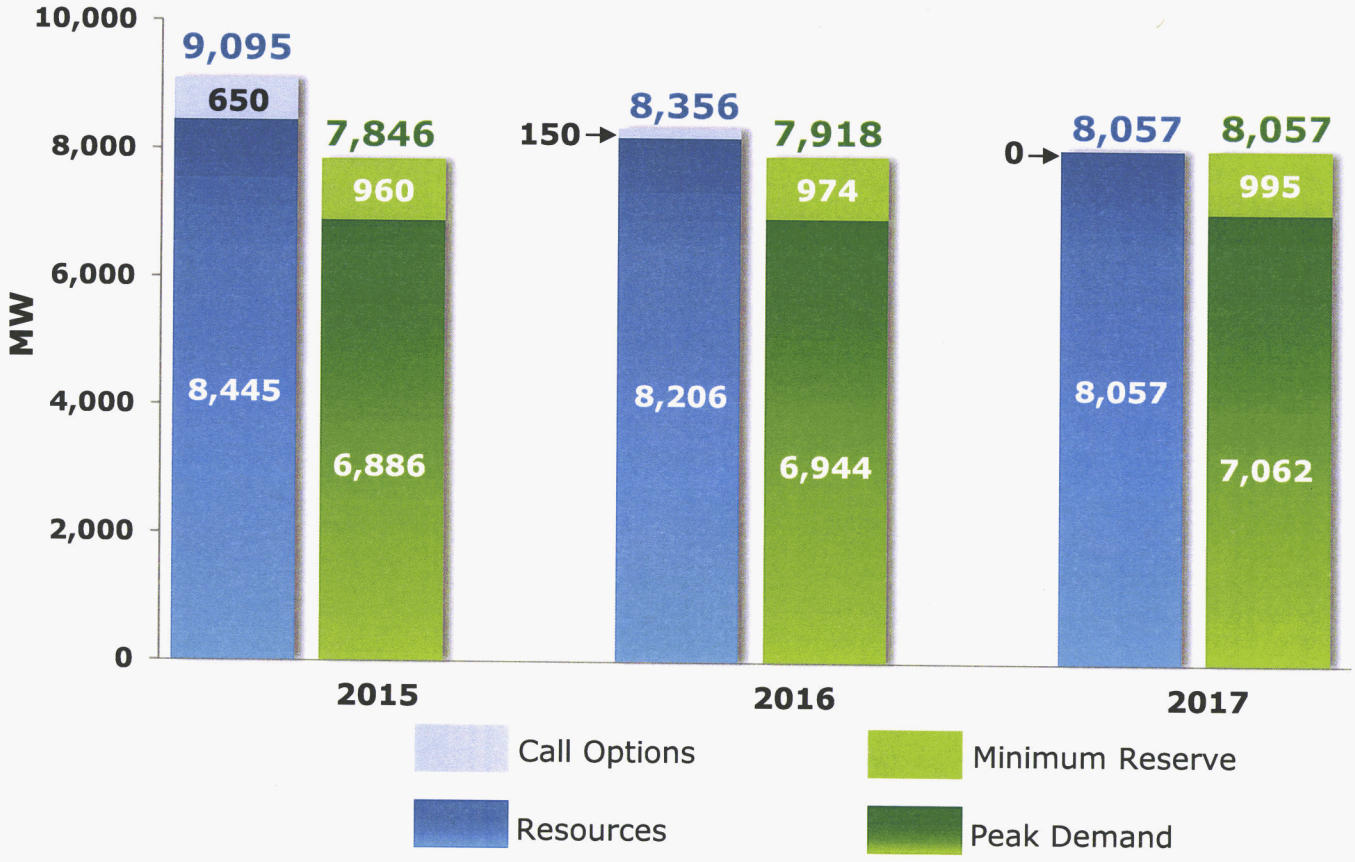
APS System Peak Demand



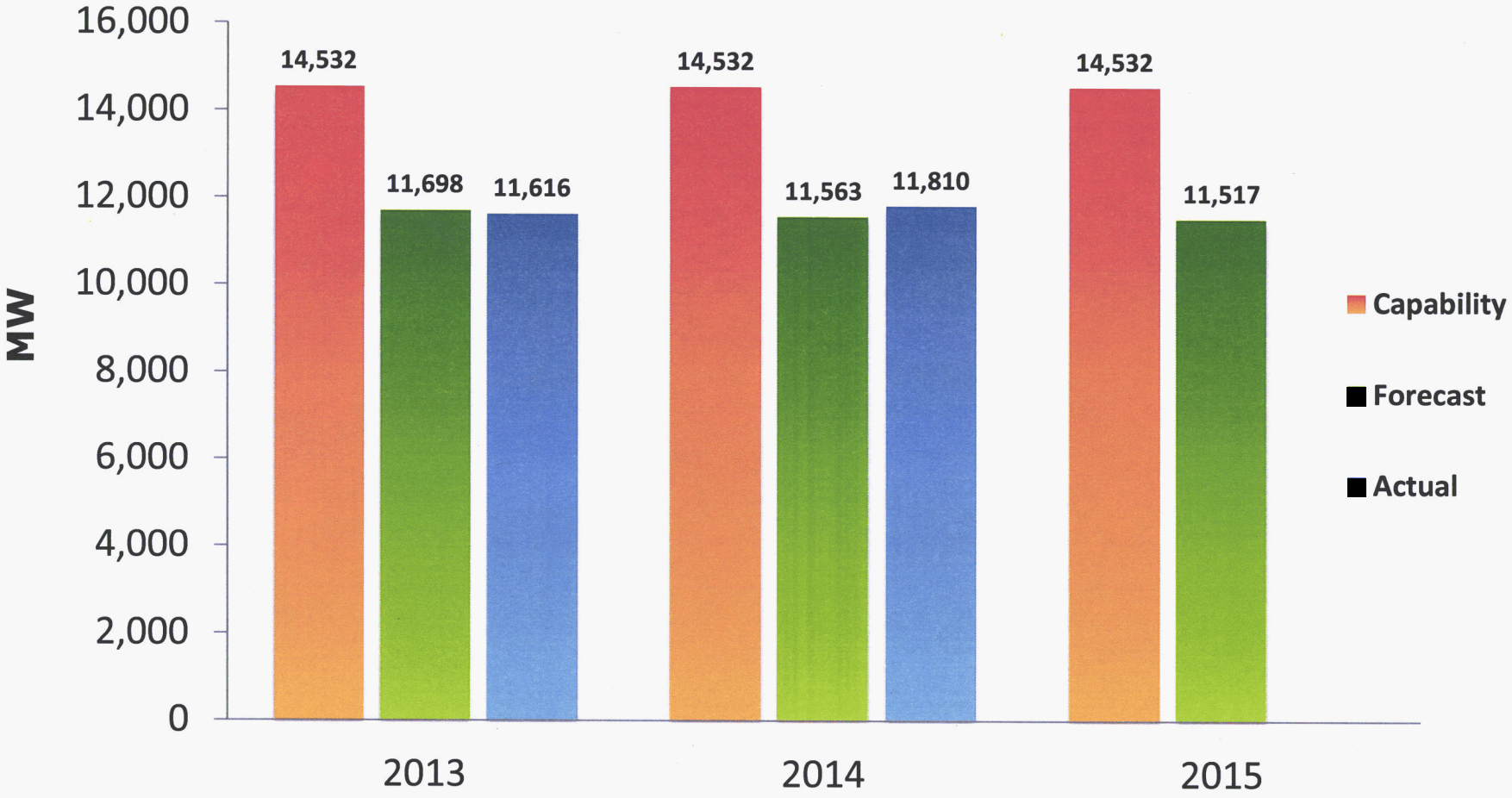
2015 - 2017
Peak Generation Resources and Demand

Planned minimum reserves to manage uncertainties

- Load forecast uncertainties (weather, economy)
- Unplanned unit outages
- Varying levels of customer participation in resource standards
- Minimum reserve drops from 35% in 2015 to 15% in 2017



APS/SRP Valley Maximum Load Serving Capability



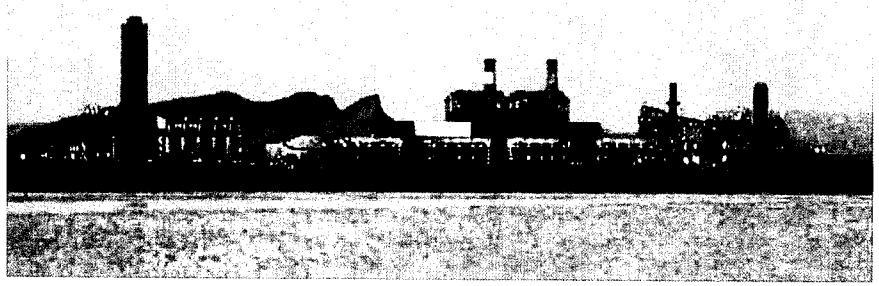
Nuclear: Palo Verde

- Fuel sourced from multiple suppliers
- 100% of 2015 fuel in pipeline
  - Spring outage, all fuel is on site
  - Fall outage, all fuel components procured, fabrication on normal schedule
- 100% of fuel requirements contracted through 2018
- Overall station capacity factor at 93.7% in 2014

Coal Supply

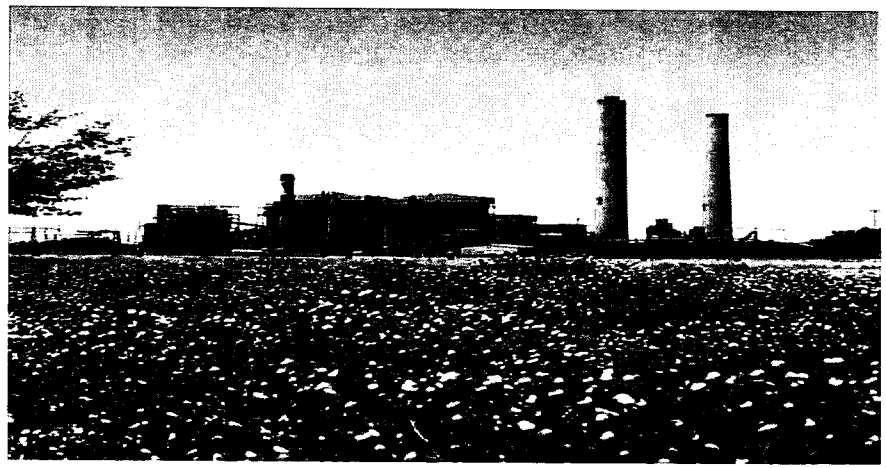
Four Corners Power Plant

- Mine-mouth plant with NTEC – Term through 2031
- BHP is mining contractor through 2016
- 80-90 days of reserves



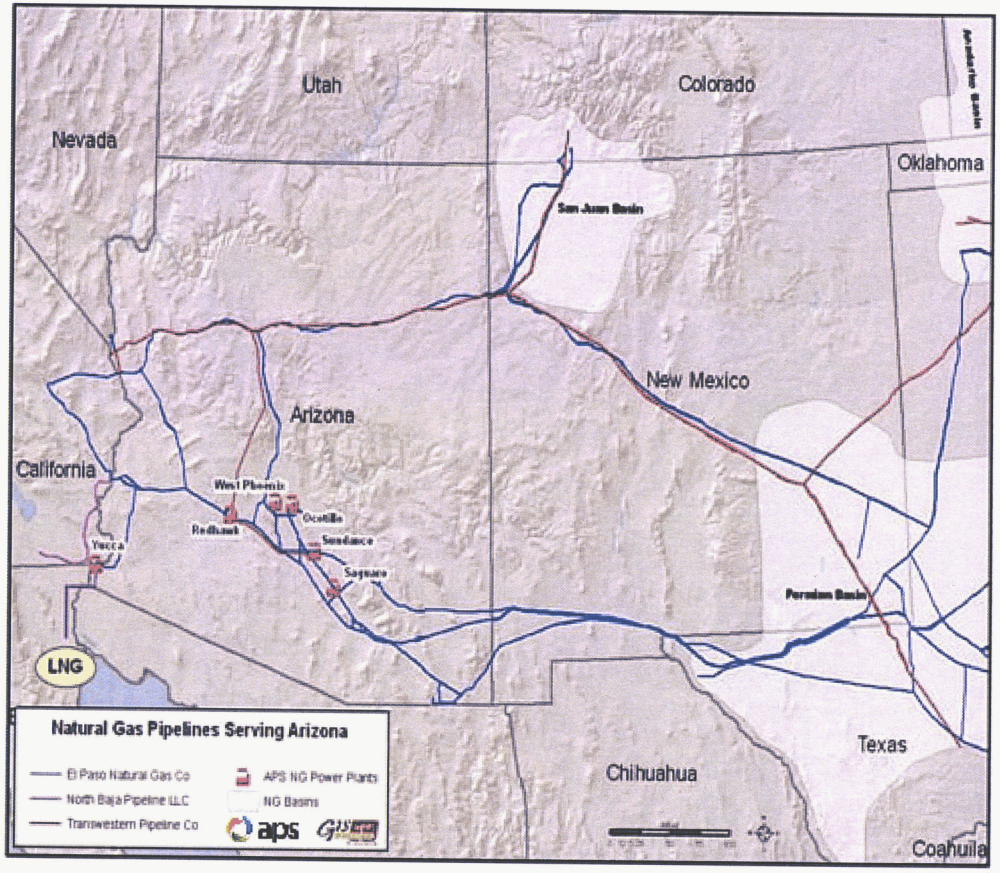
Cholla Power Plant

- Fuel Source: El Segundo mine near Grants, NM
- Contract commitments in place through 2024
- 60-70 days of reserves

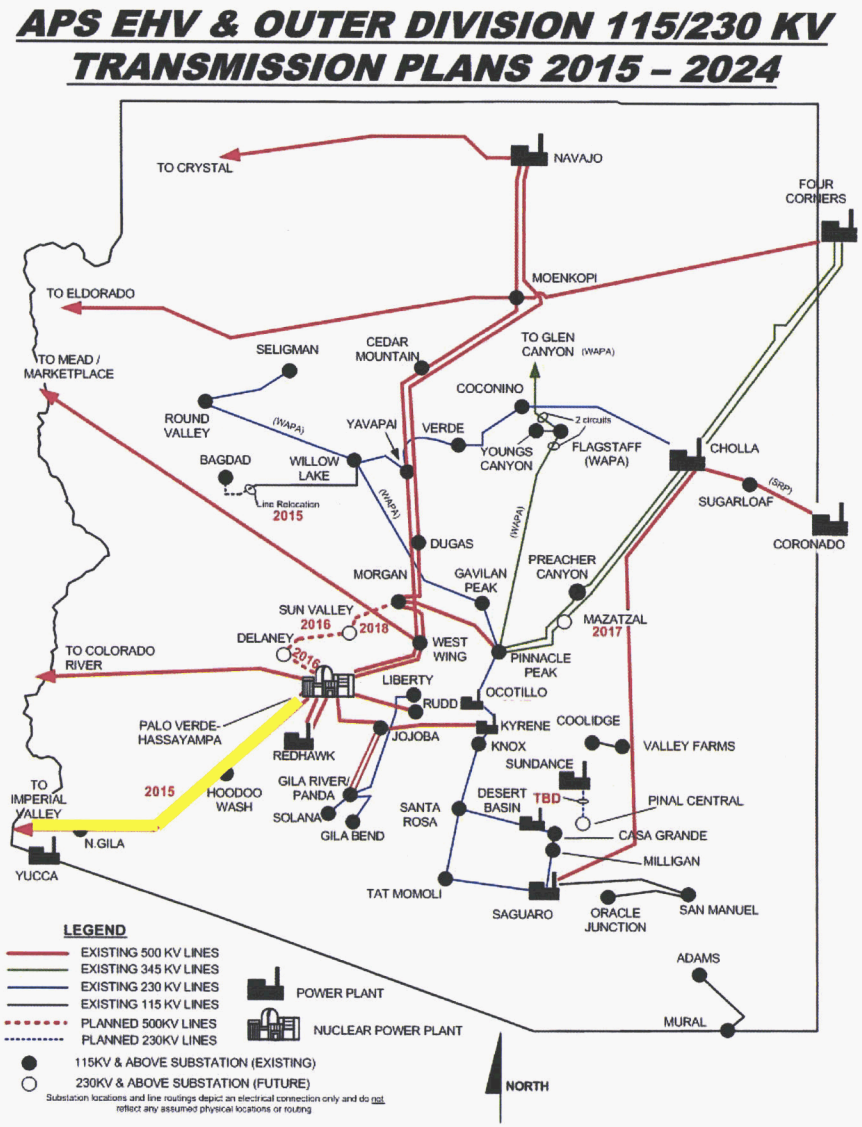


Natural Gas Supply

- APS has sufficient pipeline transportation and supply under contract to meet peak system needs
- El Paso Natural Gas supplies all APS natural gas plants
- Transwestern pipeline also supplies the APS Redhawk and Sundance power plants
- North Baja pipeline also supplies Yucca units 5 & 6
- Gas storage arrangement in West Texas contracted through May of 2018 connecting to both El Paso and TransWestern Pipelines



Transmission System



- Coordination of transmission system
- Access to markets is important factor in managing supply contingencies and bringing new resources to load
- Hassayampa to North Gila II 500kV line in final stages of construction
- Continued construction activity in NW Valley
- Situational awareness of the transmission grid within western interconnect

Fire Season 2014

Slide Fire, May 20th

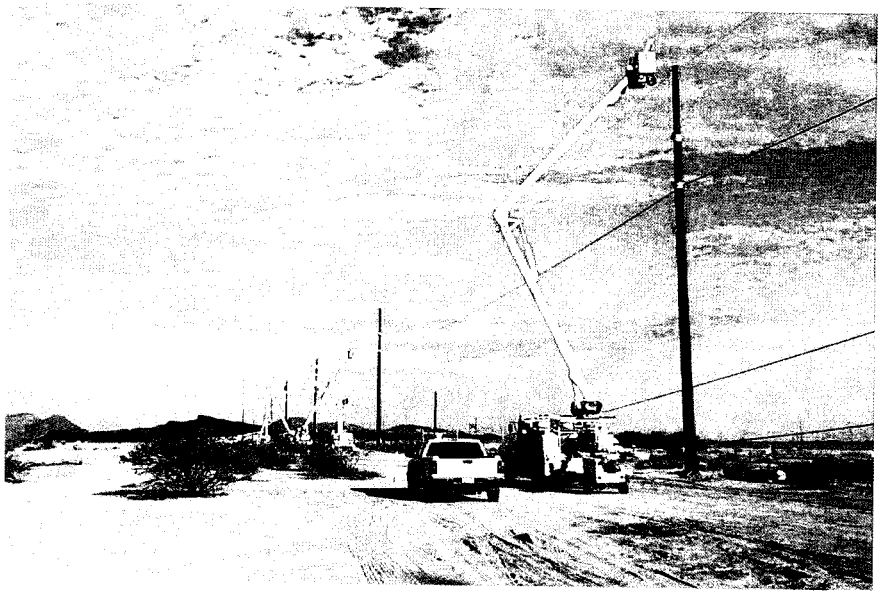
Forestry

- Vegetation Management & Wildfire Planning
  - Pre-wildfire season meetings with Forest Service and BLM
  - Prepare APS personnel for fire season
    - Fire academy and hazard tree identification training
    - Training of employees and contractors on Wildland Fire & Prevention
    - Clearing vegetation around poles within wildland-urban interface areas providing combustible free space from sources of ignition
    - Clearing vegetation around APS's transmission and distribution lines

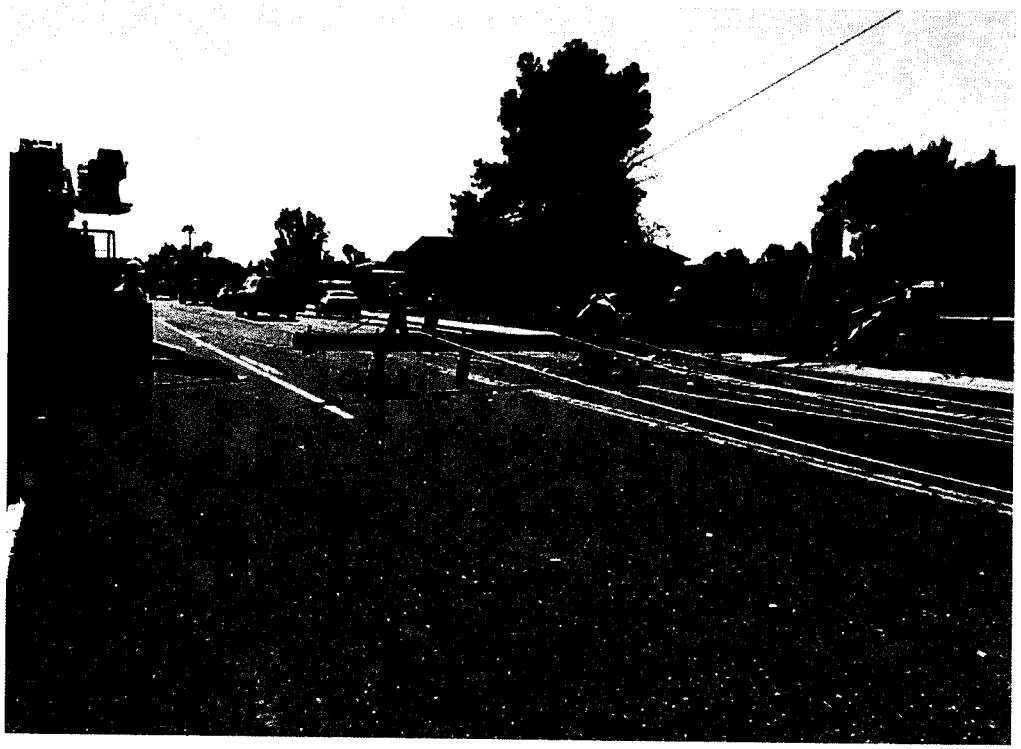
  Fire Season - Most all of the factors point to a delayed fire season onset and overall normal fire potential. (SWCC)
    - A period of above normal fire potential to develop across mid and lower elevations of Arizona between final curing of fine fuels and monsoon onset. (Estimated June - Mid-July)

Summer 2014 Monsoon Storms

Arizona City-230KV-July 9th



59th Ave and Greenway – 69kV/12kV – September 28th



Reliability Activities

- Transmission / Distribution Operations & Maintenance:
  - Substation health monitoring – critical assets
  - Substation, predictive & preventative maintenance initiatives
  - Annual transmission and distribution line patrols
- Enhancements
  - Storm hardening of 69KV system in West Valley
  - Reliability improvements in downtown Phoenix networks
  - Physical and cyber security upgrades in progress throughout the system

Emergency Preparedness and Response

Emergency Management Coordination & Communication

- Continued interface with state, county, & local Emergency Managers
- Continued quarterly coordination meetings with utility Emergency Managers (SRP, TEP)

Training and Exercises

- Updated and Trained on critical Emergency Response Plans
  - Load Curtailment
  - Incident Command
  - Black Start
  - Business Continuity
  - Wild Fire and Summer Storm Response Plans
- Pinnacle Peak and Westwing Fire Emergency Plan training with local Fire Departments – March/April 2015

APS Customer Outreach

- Targeted communications for customers, emergency managers & public safety personnel, and community leaders
- Coordination with local emergency management organizations to establish temporary shelters and/or provide outreach for vulnerable populations (need for shelters determined by local emergency managers)
- Purchase or reimburse of dry ice and/or bagged ice (for residential customers' refrigerators and freezers)
- Medical Care Preparedness Program (life support/medical monitoring)

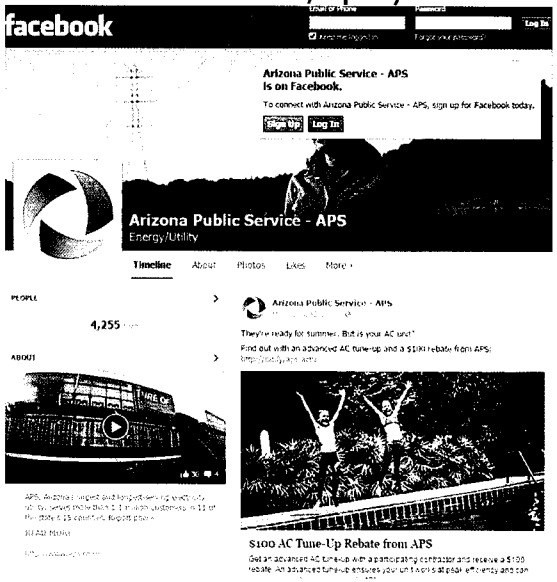
APS Customer Outage Information Sources

- Call Center staffed with live agents 24hrs, 7 days/week
  - Automated recorded outage messages updated regularly
  - Outbound customer calls when power is restored
  - Outage notification via email and text messaging (2015)
  - View and report outages at aps.com (2015)
- News media
  - APS media hotline monitored 24hrs, 7 days/week
  - Access to Arizona DPS media alert system
- Social media
  - Broadcast updates for large-scale outages
  - Response to individual outage inquiries

Social Media

- Facebook & Twitter
  - ETR's (estimated time of restoration)
  - General area affected
  - Outage cause – if and when known
- Response to customer service inquiries
  - Two-way communication

facebook.com/apsfyi



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Summary

- Generation resources, fuel supplies and transmission capacity in place to meet customer demand and reserve requirements
- Maintenance efforts on track
- On going coordination, integration with external emergency planners
- New and improved customer communication channels