Before the

Arizona Corporation Commission

Arizona Public Service Company 2009 Summer Assessment

March 24, 2009

Presenters

Bob Smith
Director, Asset Management and Planning

Tom Carlson
Director, Fuels

Tom Glock
Director, Power Operations

Agenda

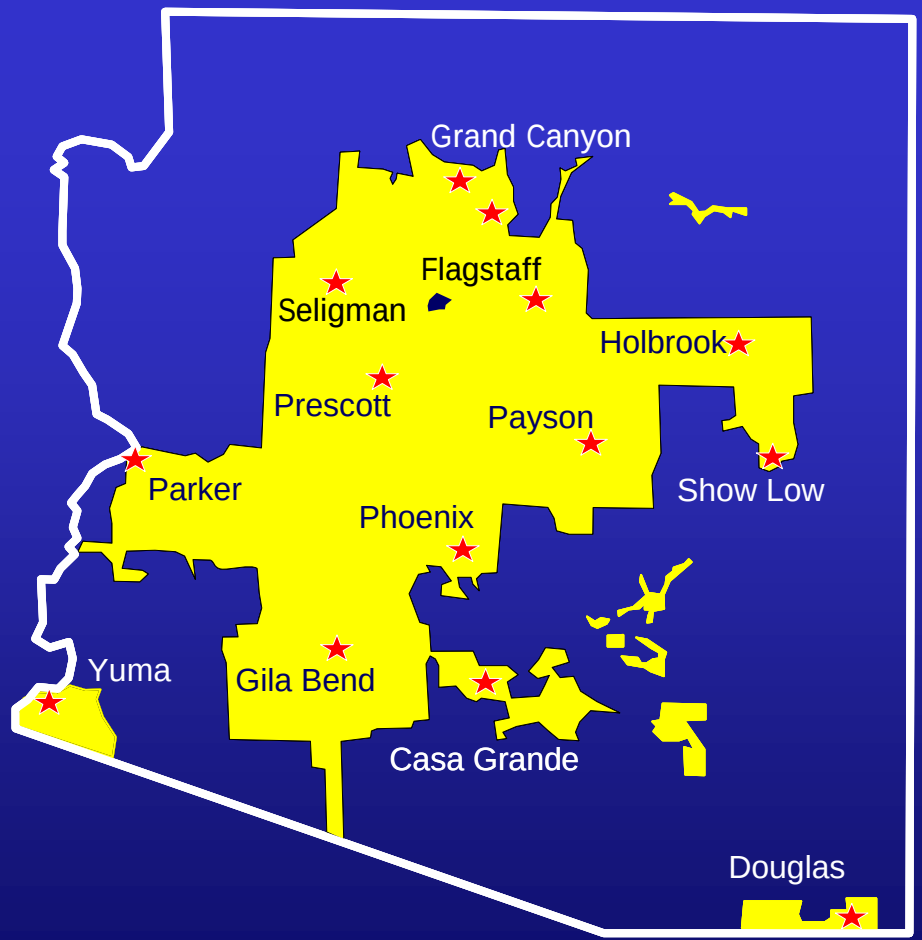
- System Improvements
- Planned Maintenance Activities
- Emergency Preparedness
- Fuel and Purchase Power
- Loads and Resources
- Transmission System Adequacy
- Contingency Planning
- Conclusions

System Improvements
Emergency Planning

Bob Smith
Director
Asset Management and Planning

APS Service Statistics

- 11 counties
- 34,645 sq. mi. CC&N area
- 1.1 million customers
- 411 substations
- 28,022 distribution line miles
- 5,234 transmission line miles
- 54 generation units



Reliability Supply Chain

Delivery System Construction

	2008	2009
Distribution Sub MVA	717	119
Trans. Sub MVA	508	854
Trans. Line Miles, New	17	52
Trans. Lines Miles, Rebuild	10	42

Total distribution system substation capacity = 13,000 MVA

Total transmission system substation capacity = 25,000 MVA

State Area Transmission

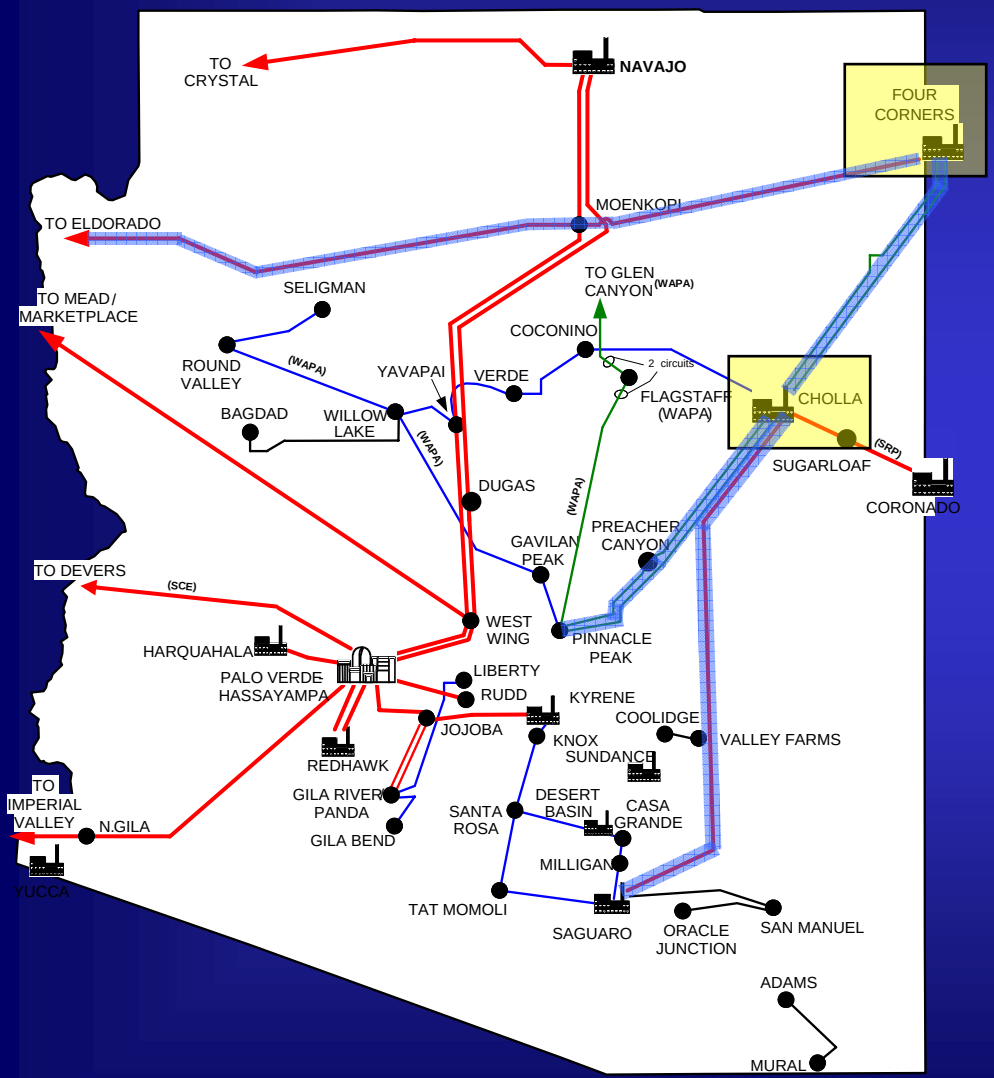
Red = 500 kV

Green = 345 kV

Blue = 230 kV

Black = 115 kV

Four Corners/Cholla System Transmission

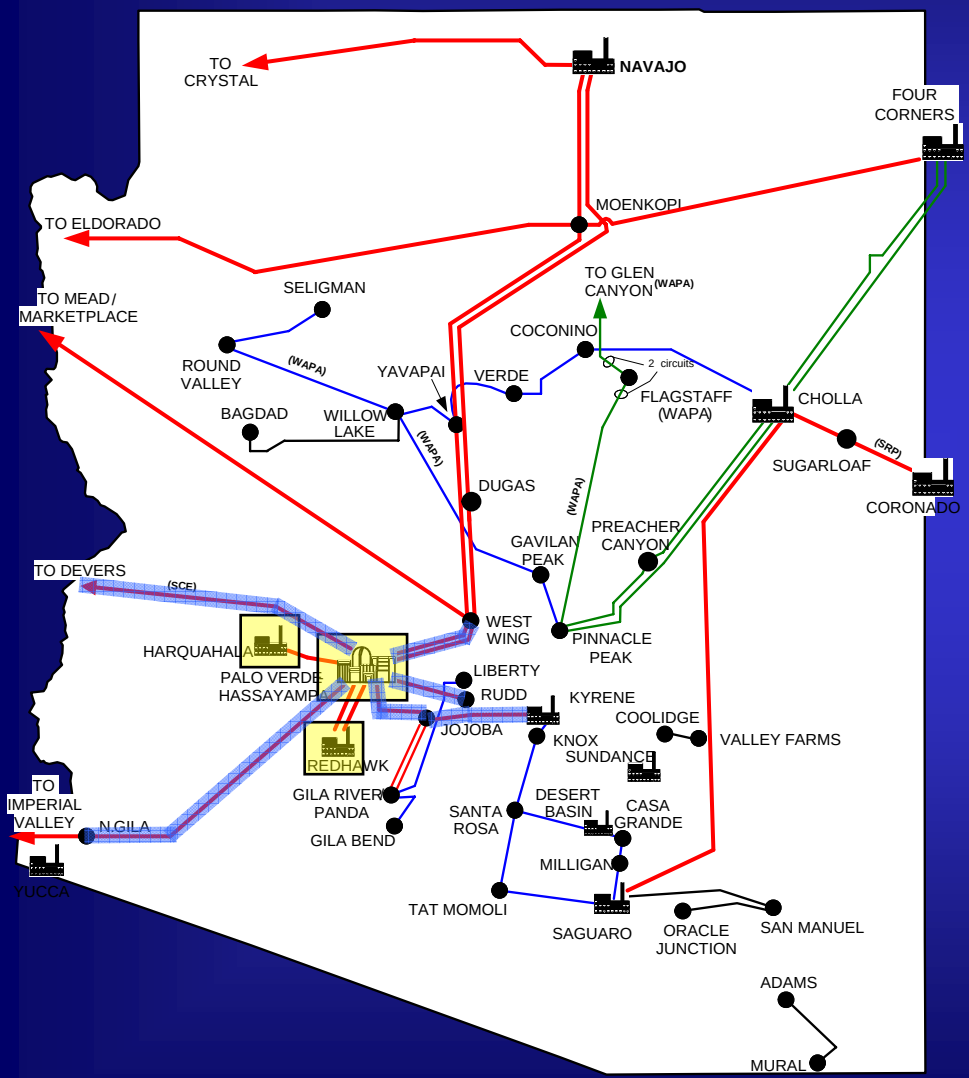


- Four Corners and Cholla Power Plants
- Four Corners-Moenkopi-Eldorado 500kV line
- Four Corners-Cholla 345kV lines
- Cholla-Pinnacle Peak 345kV lines
- Cholla-Saguaro 500kV line

Navajo System Transmission

- Navajo Power Plant
- Navajo-Crystal 500kV line
- Navajo-Westwing 500kV lines

Palo Verde Hub Transmission

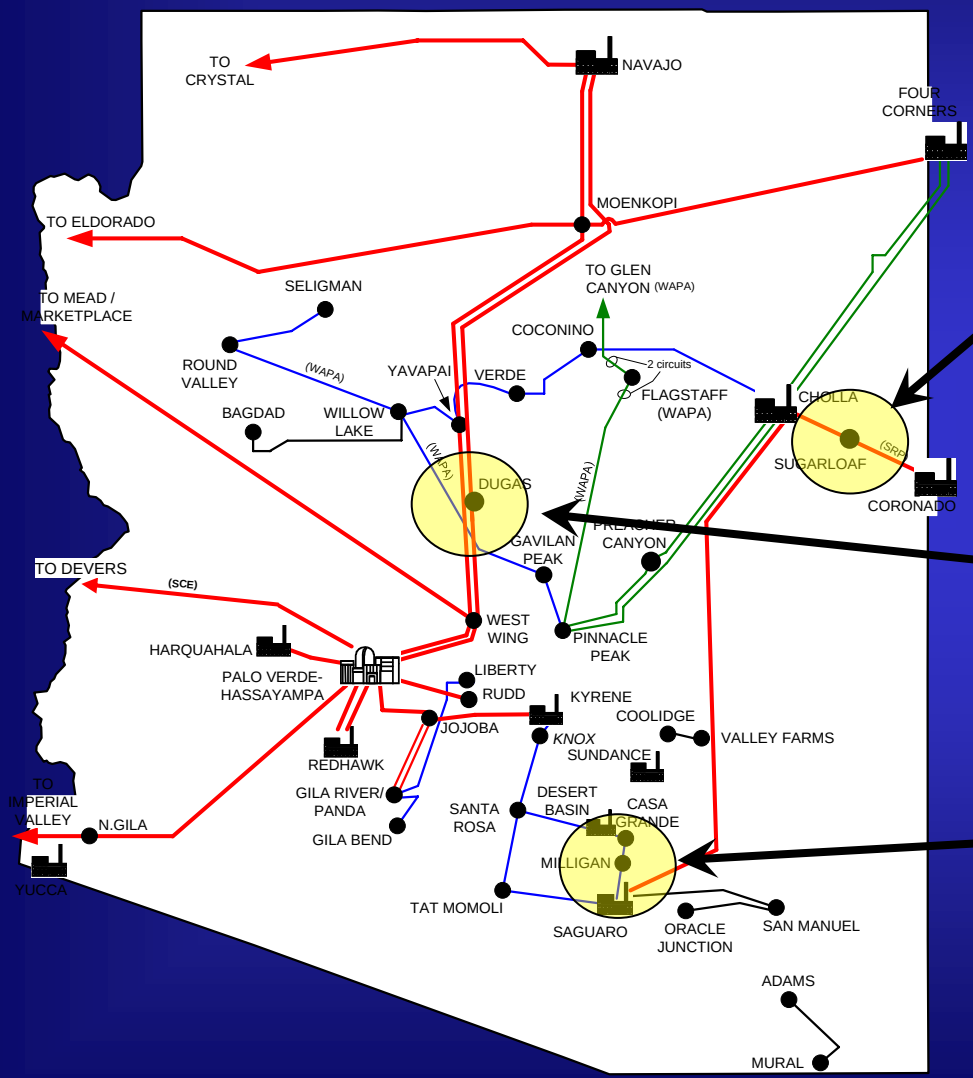


- Palo Verde Nuclear Plant and Hassayampa Gas Power Plants
- Palo Verde West
  - PV-Devers 500kV line
  - Hassayampa-North Gila 500kV line
- Palo Verde East
  - PV-Westwing 500kV lines
  - PV-Rudd 500kV line
  - Hassayampa-Jojoba-Kyrene 500kV line

Mead-Phoenix Transmission

- Mead-Phoenix 500kV line

Transmission Substation Additions 2009



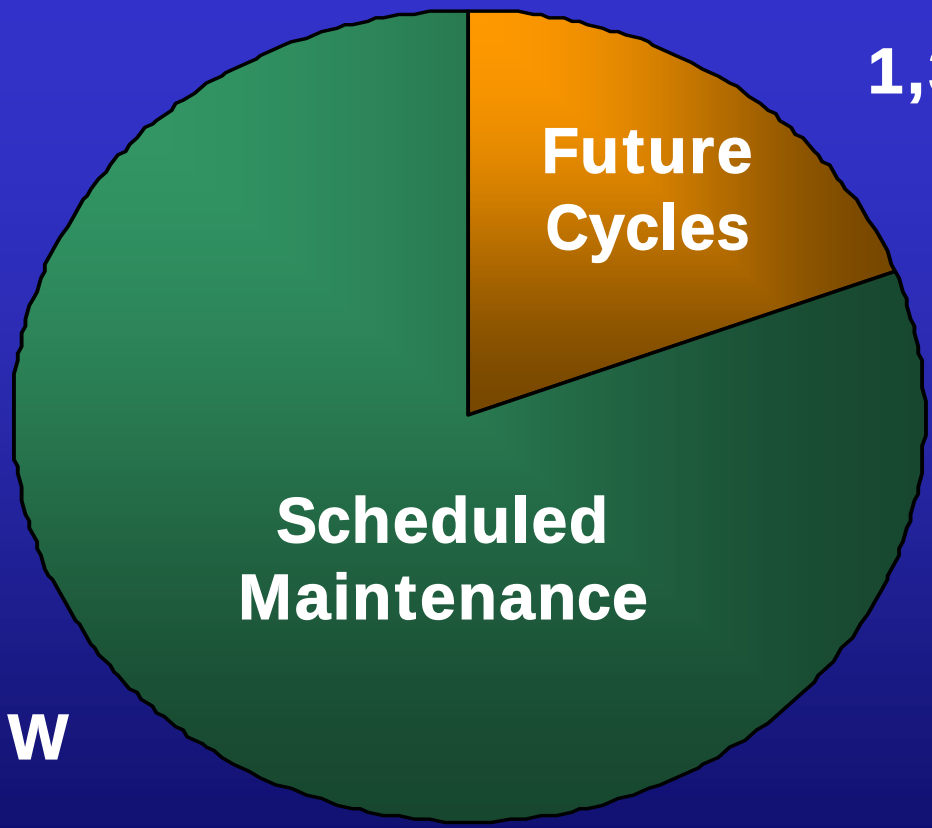
Sugarloaf 500/69kV Substation

Dugas 500/69kV Substation

Milligan 230/69kV Substation

Planned Reliability Activities

Planned Generation Maintenance
Pre-Summer 2009



Transmission and Distribution Maintenance and Monitoring

- Transformer and circuit breaker bushing replacement program
- Maintenance Optimization Project
- On-line equipment monitoring
- TOAN analysis software
- Annual line inspections

Vegetation Management

- Focusing on providing safe, reliable power and reducing wildfire risk
- Wildfire planning
  - Wildfire Academy, Prescott
  - Forest Service relationships / conditions monitoring
  - On-Site Incident Command presence
- Transmission corridor clearing
  - 2008 – completed 441 miles 115 kV and above
  - 2009 – EHV lines scheduled for completion
- Sub-transmission, distribution on track
- GIS\Lidar project

Lidar Equipped Helicopter

Emergency Equipment

- Mobile 69/12kV Transformers
- Emergency Towers - two Lindsey towers
- Generator – 1,500 KW Mobile Unit
- Mobile Command Center

Mobile Transformer

Lindsey Towers

Mobile Generator

Mobile Command Center

Preparing for Emergencies
Governmental Engagement

- Coyote Crisis – March 2009 State drill
- Continuing NIMS certification
- Incident Command Training / First Responders
- Joint training, planning, drills
- Agency familiarization – facility layout
- General business planning
  - Curtailment Plan annual filing
  - ECC Disaster Recovery Exercise, March 2009
  - Disaster Recovery / Business Resumption Plans

Summary

- Infrastructure will be in place to meet summer 2009 needs
- Maintenance efforts on track
- Coordination, integration with emergency planners in place
- Internal emergency preparedness
  - Plans
  - Training
  - Equipment

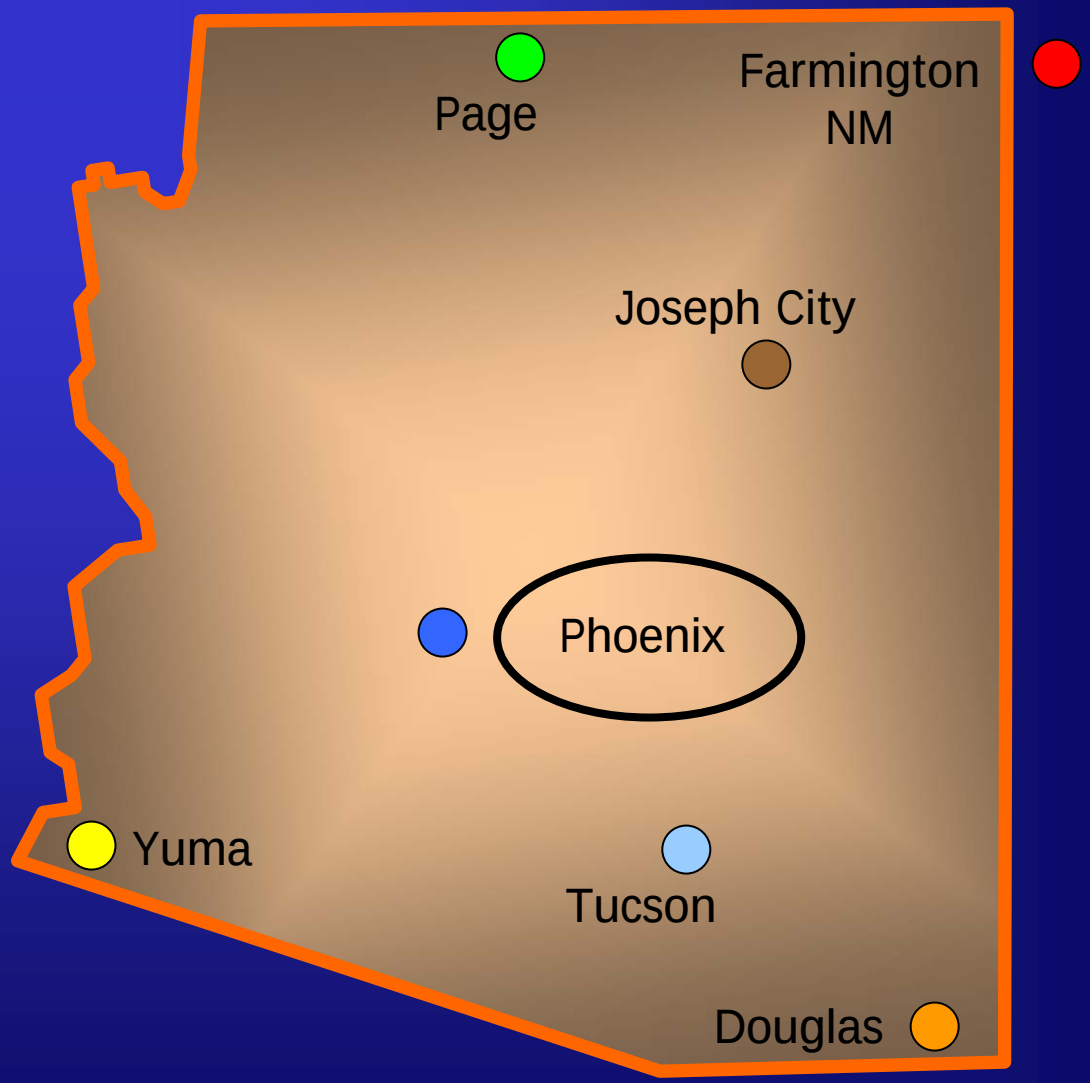
APS Fuels Procurement

Tom Carlson

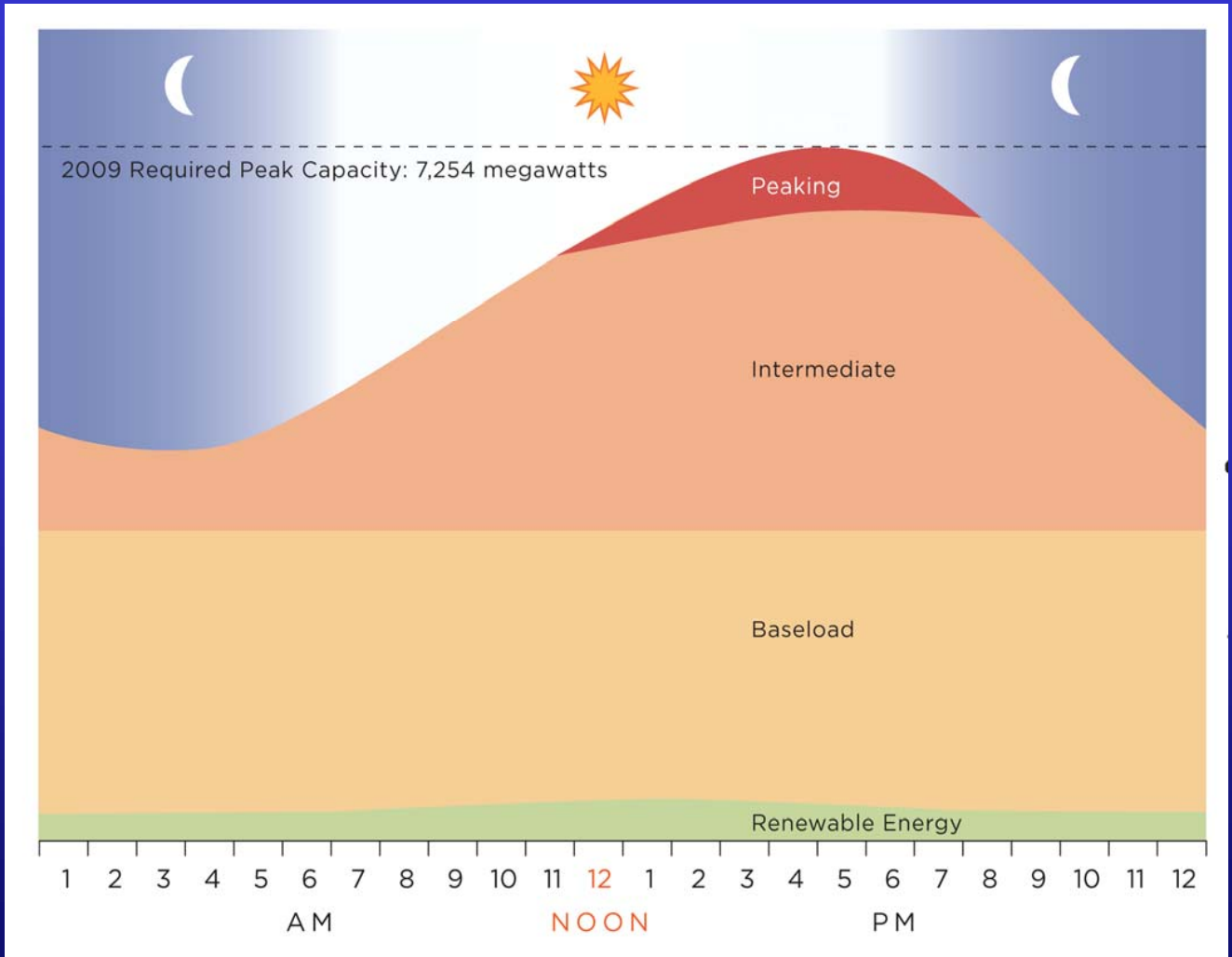
Director, Fuels

APS Generation

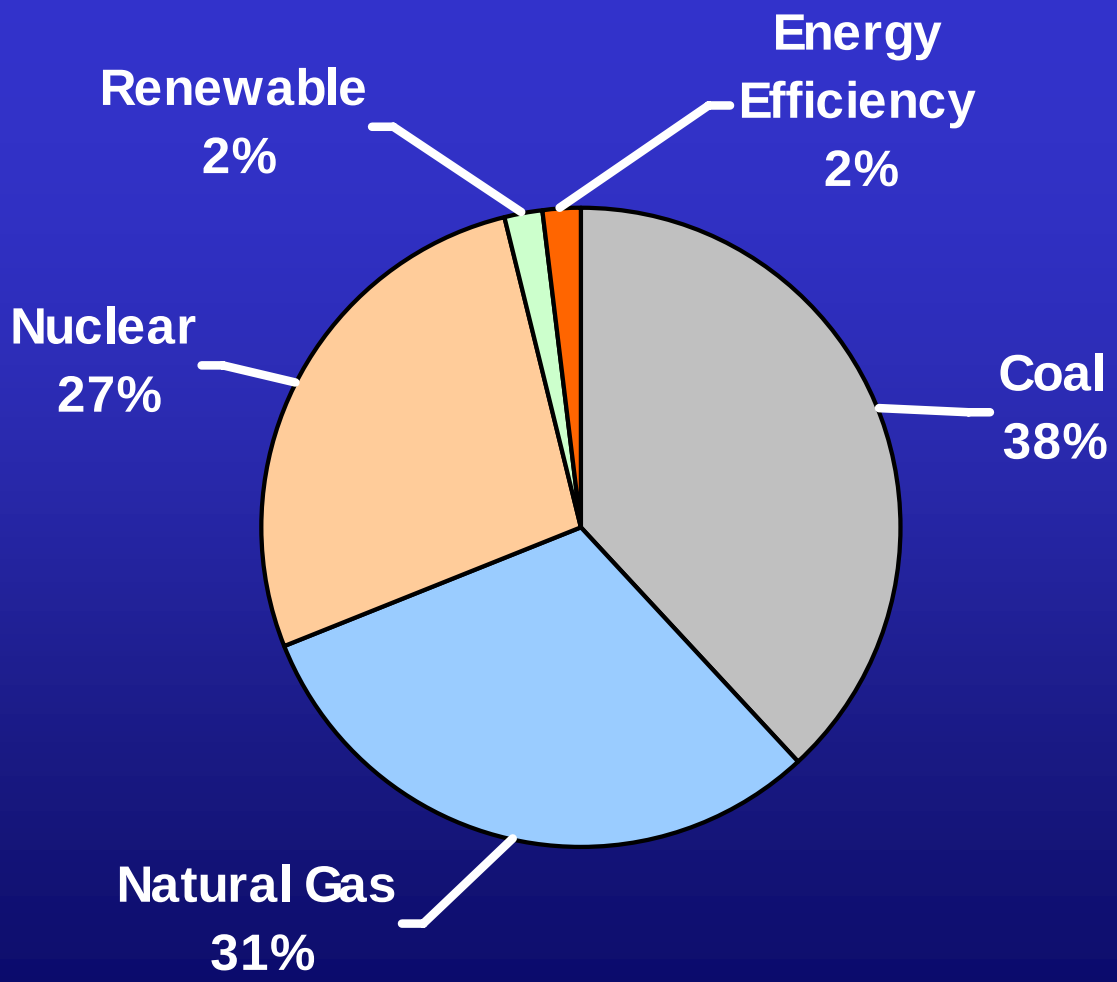
- Base Load, Nuclear
  - Palo Verde
- Base Load, Coal
  - Four Corners
  - Cholla
  - Navajo
- Intermediate and Peak Load, Gas, Oil back-up
  - Phoenix Area
    - West Phoenix
    - Sundance
    - Redhawk
    - Ocotillo
  - Saguaro
  - Yucca
  - Douglas



Meeting Customers' Needs



2009 Projected Energy Mix



Nuclear: Palo Verde

- Fuel sourced from multiple suppliers
- 100% of 2009 requirements under firm contract

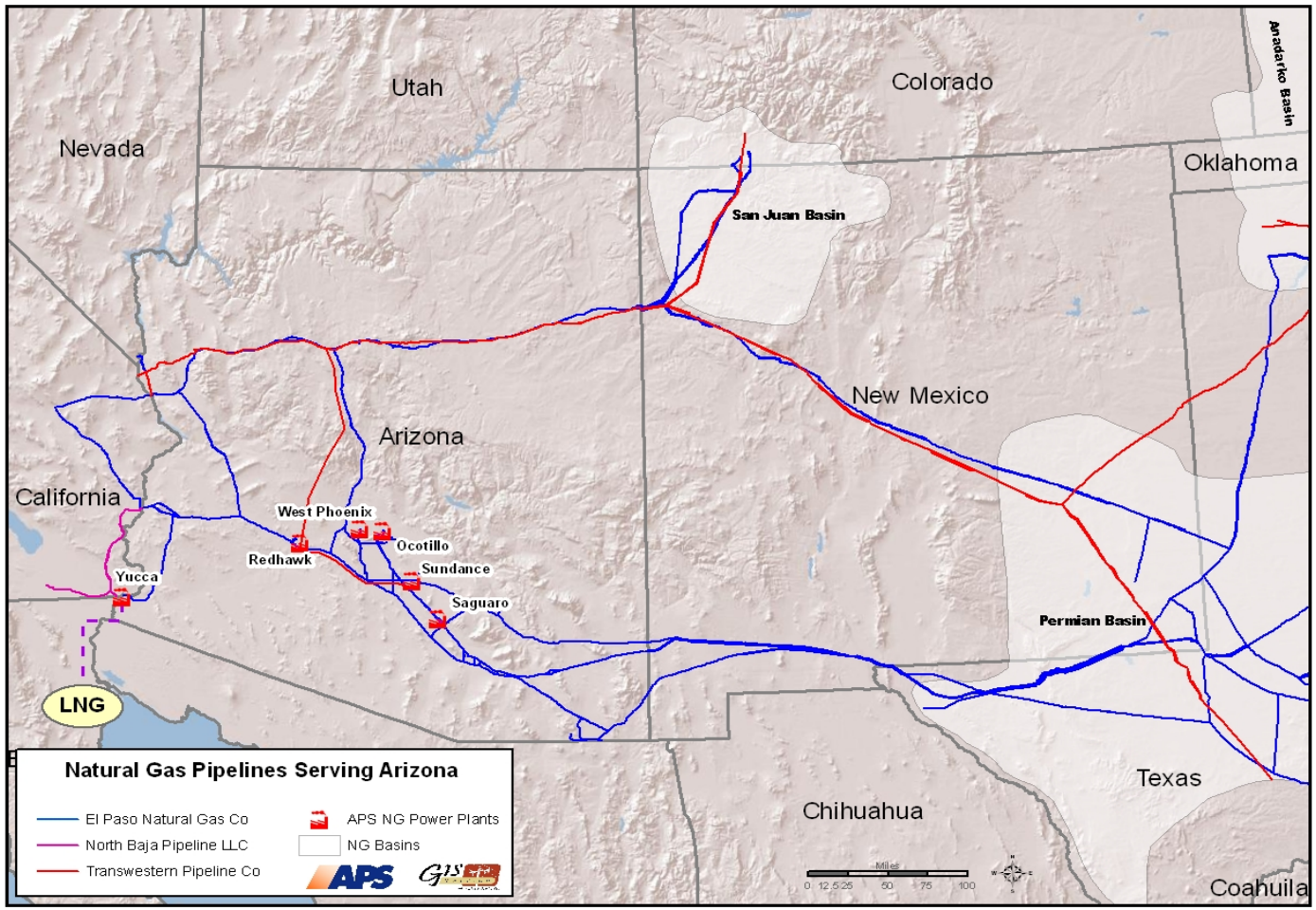
Coal: Four Corners Power Plant

- Mine mouth plant with full supply contract with BHP Navajo Mine
- Contract term currently runs through 2015
- Coal supplier maintains in-pit and processing plant inventory
- 60 days inventory available

Coal: Cholla Power Plant

- Current inventory and contract commitments provide adequate coal for the projected 2009 burn
- Primary supply source is delivered by rail from the El Segundo Mine near Grants, NM
- Expected inventory 45-60 days

Natural Gas Pipelines Serving Arizona



Natural Gas: Transportation

- APS has sufficient firm transport arranged with multiple suppliers to ensure reliable supply of natural gas to fully meet system needs.
- Transwestern Pipeline has begun delivery to Redhawk and Sundance power plants.
- El Paso Natural Gas supplies all APS natural gas plants.
- North Baja Pipeline continues to be delayed due to permitting issues.

Natural Gas: Supply

- Gas Supply
  - Physical gas supply under firm contracts with reliable counterparties.
  - Gas purchased on daily spot market as needed to adjust for fluctuations.
  - Adequate supplies available from Permian/San Juan basins.
- Additional purchased power available to ensure reliability.

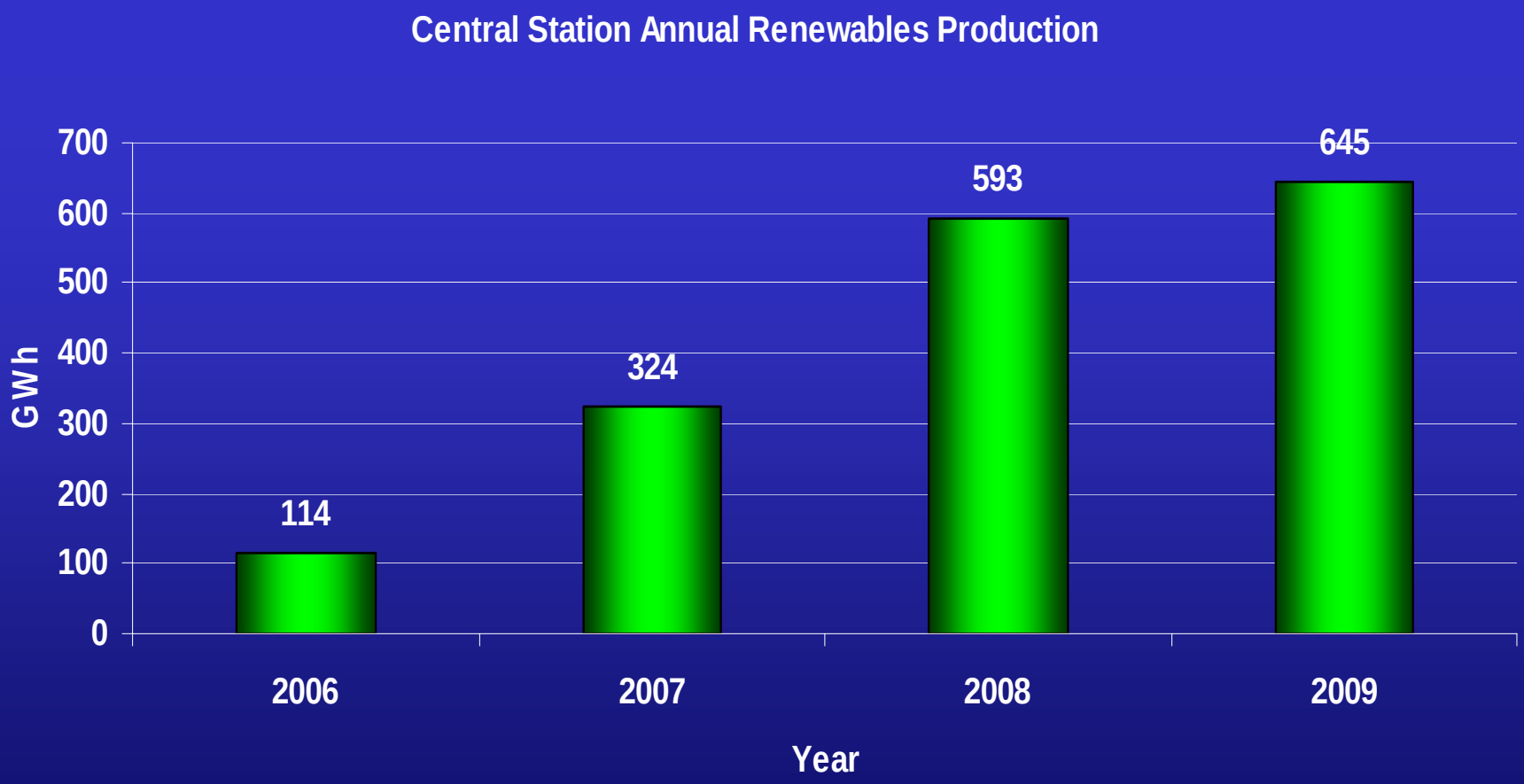
Natural Gas: Storage

- Arizona Gas Storage Project
  - Open Season completed
  - APS submitted bid for capacity
  - Project discontinued due to insufficient customer interest
- Eloy Gas Storage Project
  - Initial capacity interest submitted by APS
  - Precedent agreements discussions on-going
  - Interconnects with El Paso and Transwestern
  - Project uncertainty related to brine disposal and customer interest
  - Estimated start-up in 2013

Renewable Resources

1. Aragonne Mesa, 90 MW (Wind)
2. Salton Sea, 10 MW (Geothermal)
3. Prescott Airport, 2.9 MW (Solar)
4. STAR Center, 1.8 MW (Solar)

Renewables – Annual Production



Distributed Energy Systems

- 2002 – 2008: 2,412 installations (~ 8.5 MW/dc)
- 2008 Installations
  - $9.1 million incentive payments
  - $12.2 million commitments
  - Primarily “rooftop” photovoltaic and solar water heating, 60% increase over 2007
- Expect continued increase in participation in 2009

Loads and Resources 2009

Tom Glock
Director, Power Operations

APS Owned Generation

Fuel Source	Capacity - MW
Nuclear	1,146
Coal	1,750
Gas Combined Cycle	1,900
Gas/Oil CT, Steam	1,467
Solar	3
Total	6,266

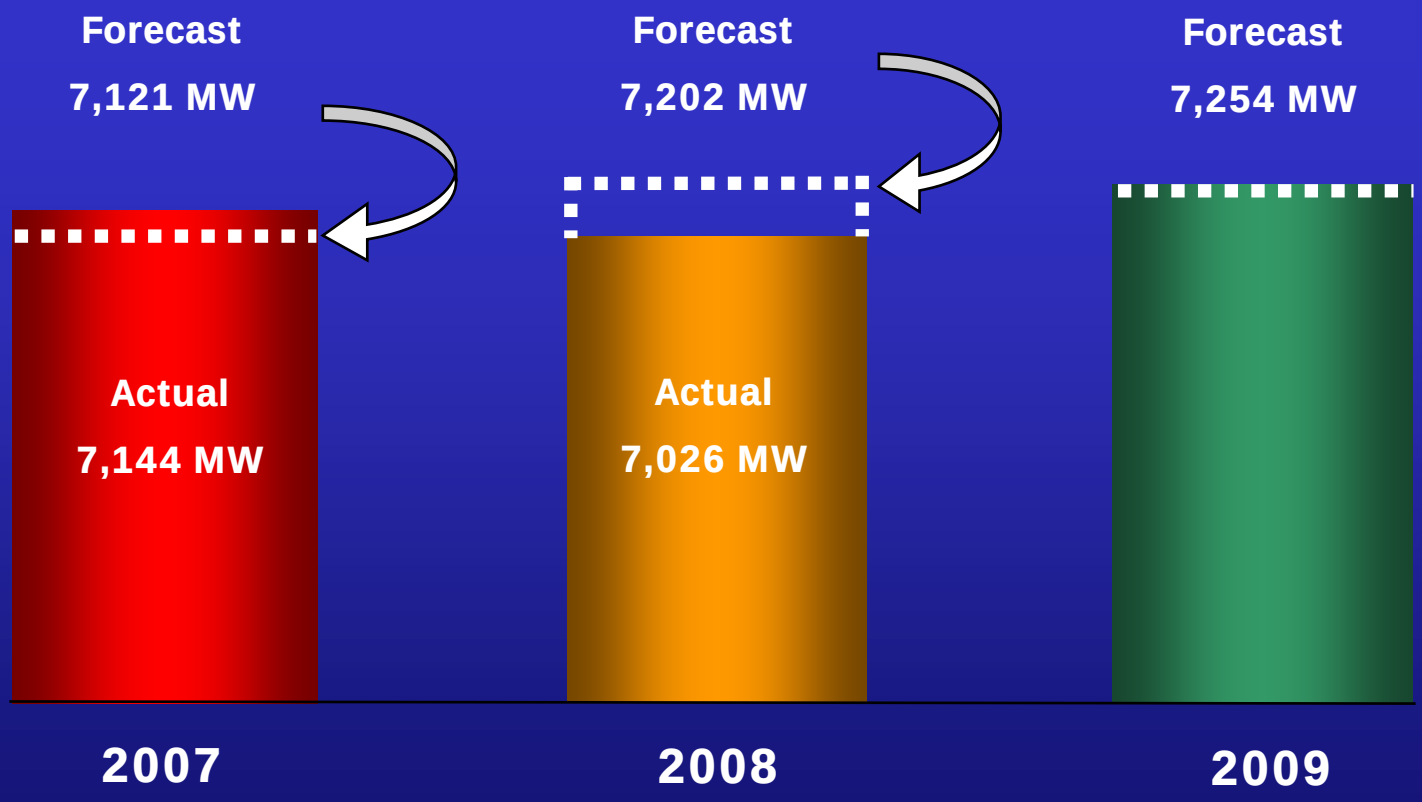
Renewable Resources

Resource	Planning Peak Contribution	Nameplate Capacity
Aragonne Mesa Wind	16.1	90.0
Salton Sea CE Turbo	10.0	10.0
SWMP Biomass	14.5	14.5
Solar Generation	3.4	5.7
Total (MW)	44.0	120.2

Generation Resources

	Capacity (MW)
Existing Generation	6,266
Long-term Contracts	
PacifiCorp Exchange	480
SRP (Contingent & Territorial)	238
Reliability RFP Purchases	1,150
Market Contract	90
Renewables	44
Subtotal	2,002
Short-term Market Contracts	192
Total Resources	8,460

APS System Peak Loads

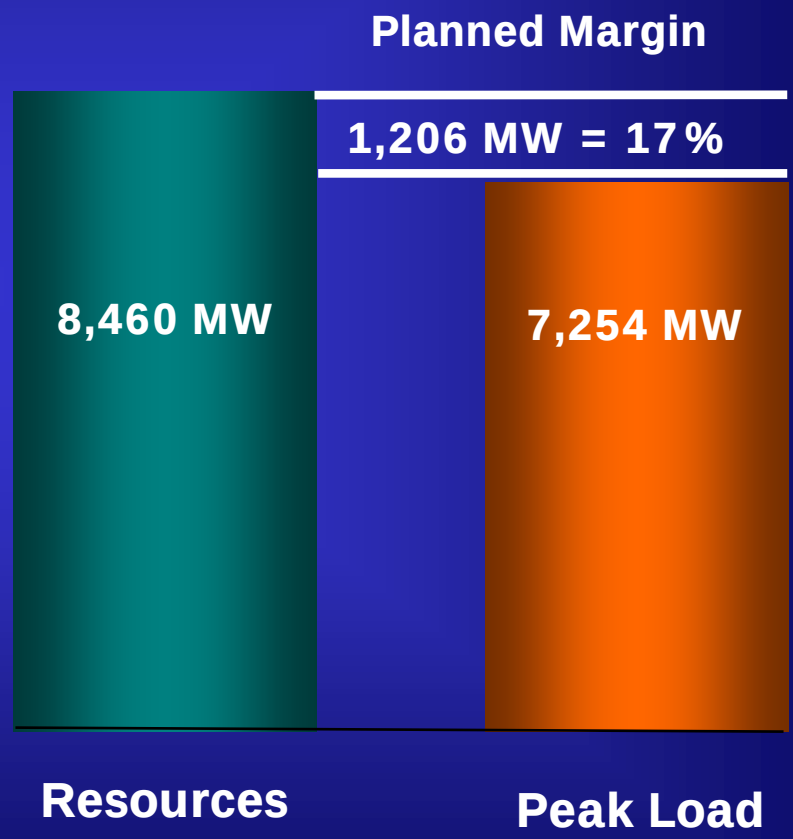


* 2007 excludes UNSE at 401 MW Actual and 421 MW Forecast

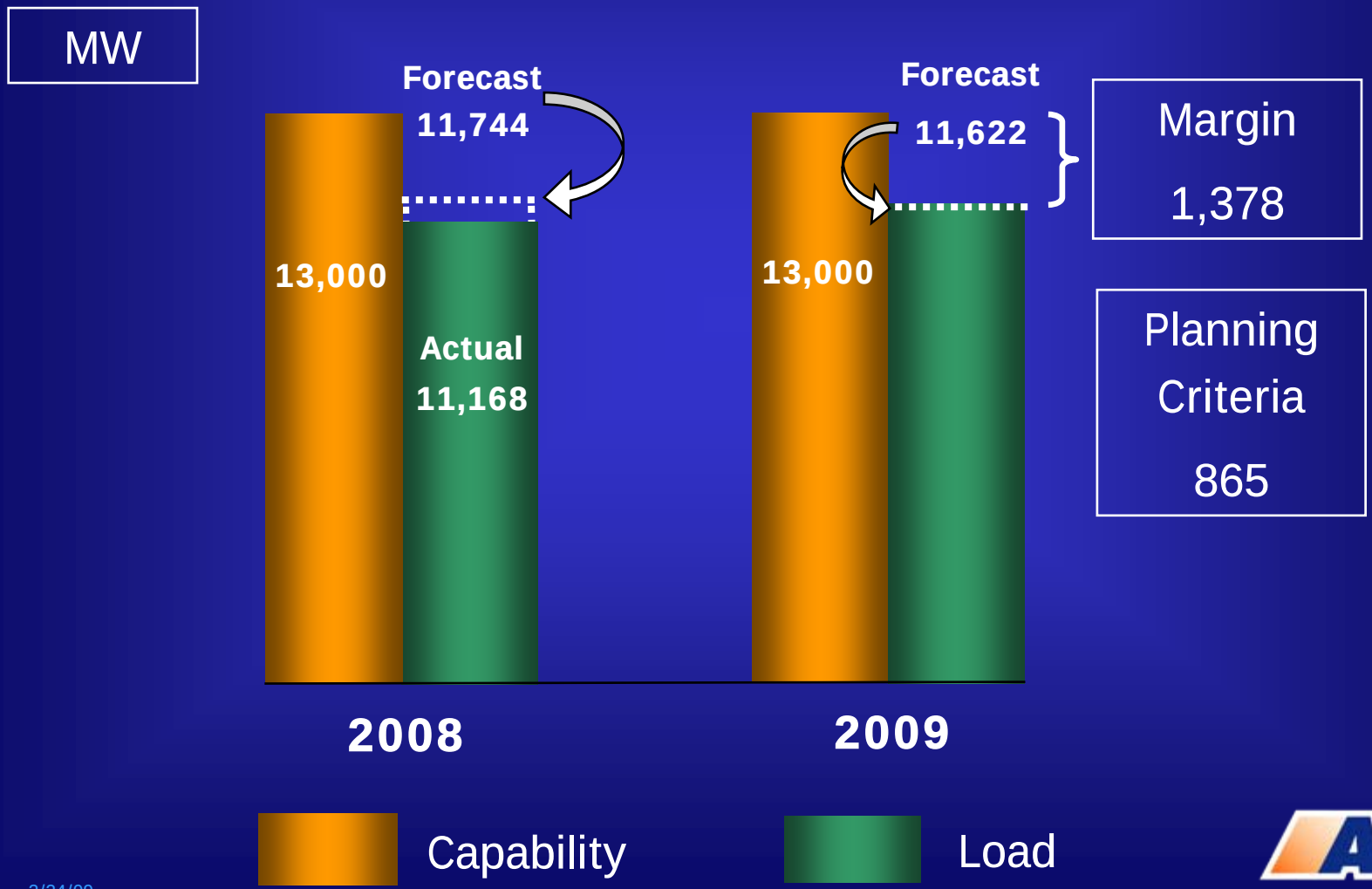
2009 Peak Generation Resources and Load

Planned Reserve Margin to manage uncertainties:

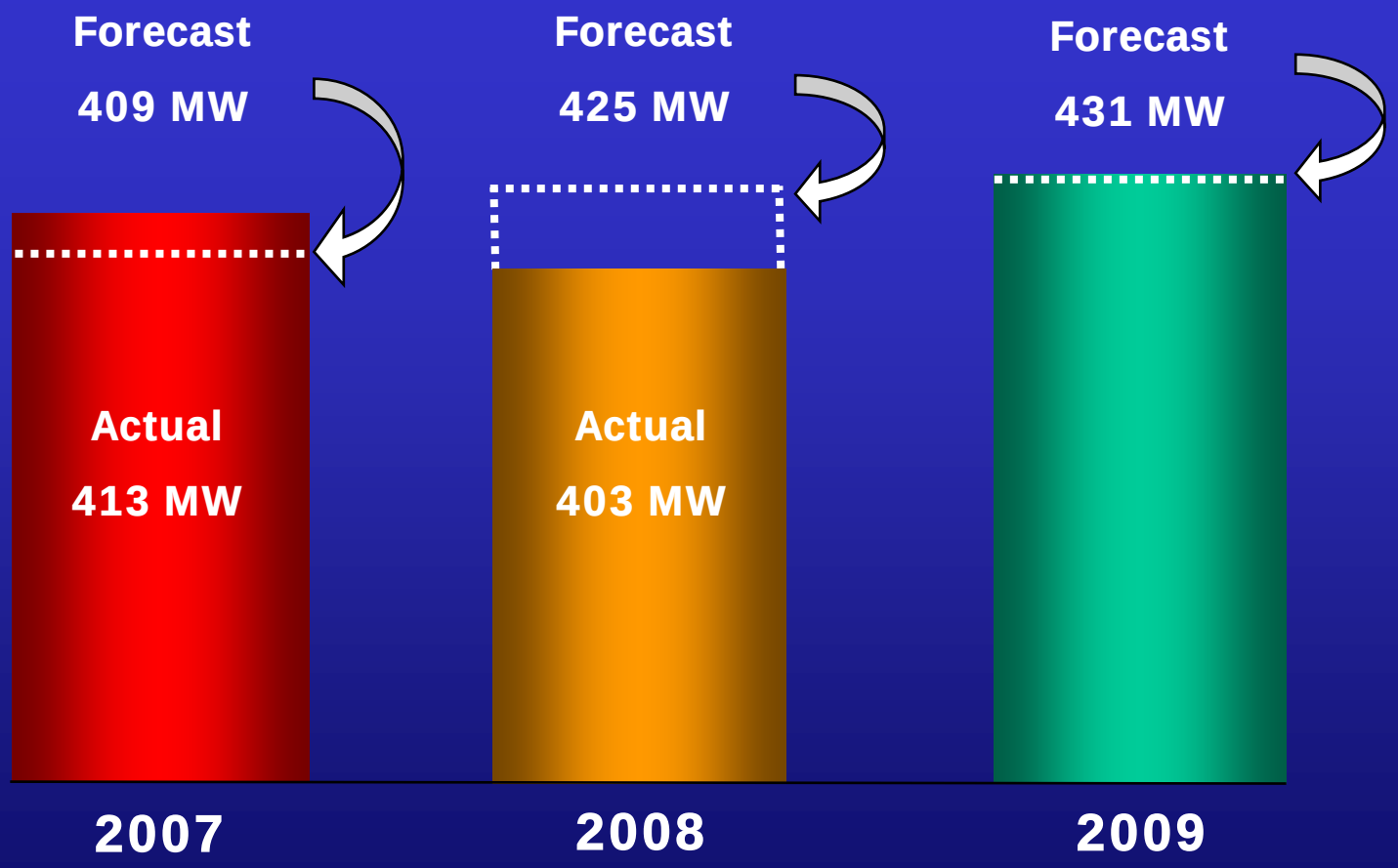
1. Load forecast uncertainties
    a. Extreme Weather
    b. Economic Changes
2. Multiple generator outages
3. Transmission outages



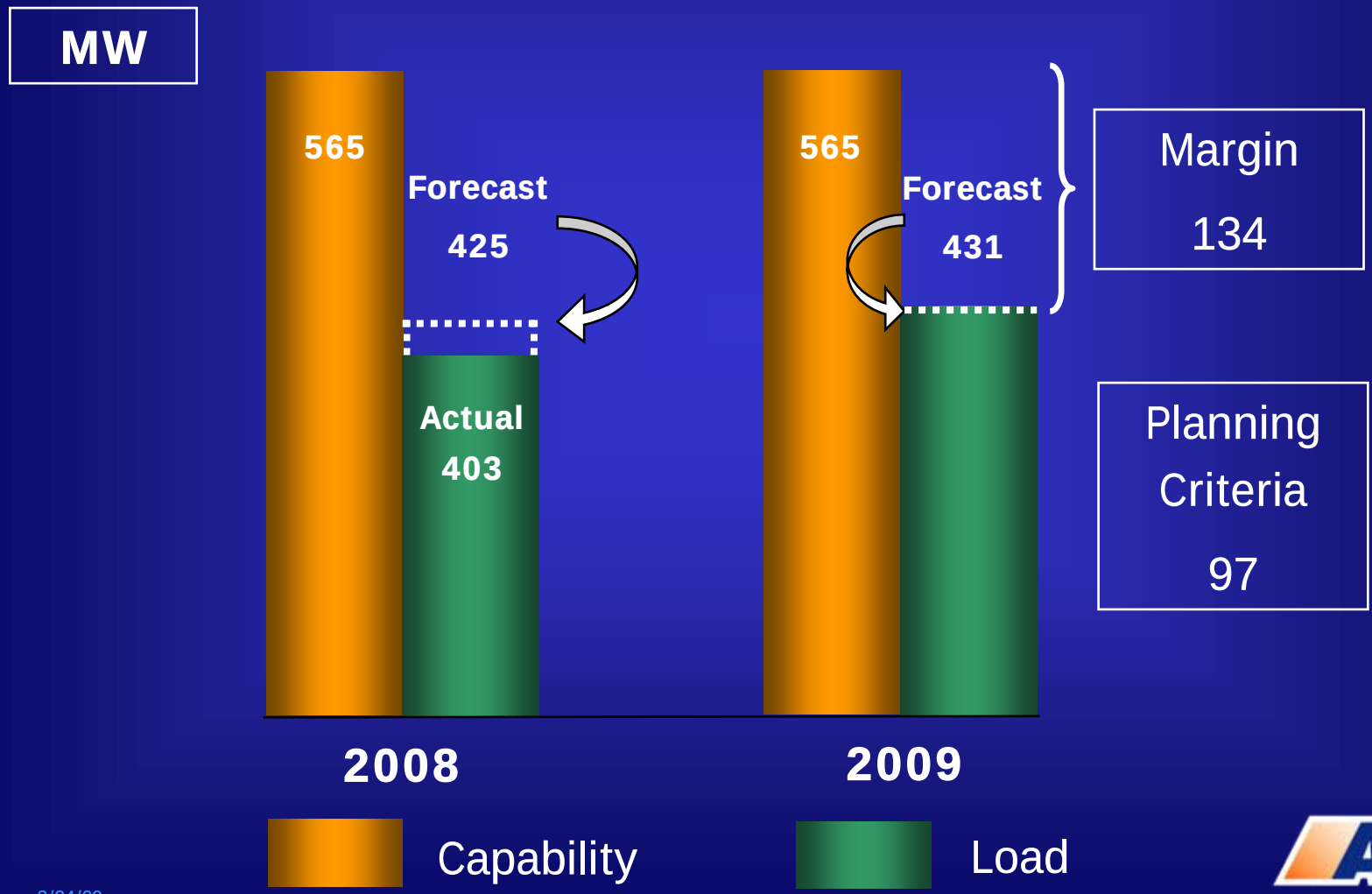
APS/SRP Maximum Load Serving Capability, Phoenix Valley



Yuma Area Peak Loads



Yuma Area
Maximum Load Serving Capability



Contingency Planning

Training and Drills

• Backup Center Testing	April - May
• Regional Black Start Drill	March
• Exercise Load Curtailment Tools	March - May
• Summer Studies (including fire corridors)	May
• Transmission Path Operations	May
• Emergency Operations Training	May

State Wide Operations Coordination

- Procedure developed by APS/SRP/WAPA/TEP
- Starting May 15th, each Monday, more as needed
- Wild fire Command Center participation
- APS/SRP/WAPA/TEP Coordinated Operations Conference Call

State Wide Coordination

APS/SRP/WAPA/TEP Logistics Schedule

7 AM Internal update on status of equipment and field conditions for each utility

9 AM Conference call topics:

- Planned/current generation outages
- Planned/current transmission outages
- Weather forecast
- Load forecast
- Forest fires

10 AM Internal meeting to determine action plan based upon current events

Conclusions

APS is Well Prepared

- Generation resources are in place to meet customer load and reserve requirements
- Transmission capacity in place to import remote generation and purchases
- Distribution infrastructure improvements on schedule to meet customer needs
- Plans in-place to respond to extreme conditions