

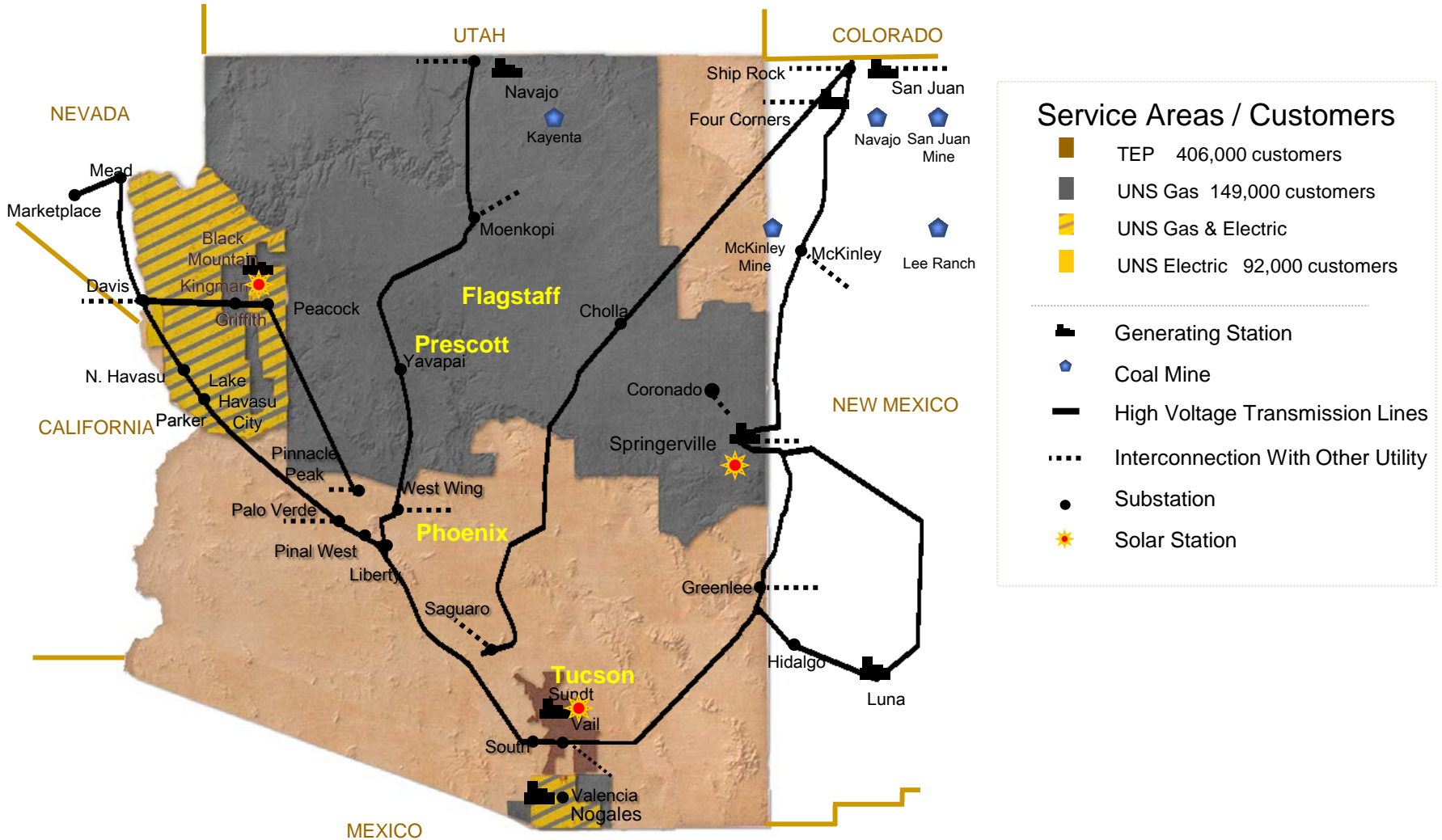
Tucson Electric Power Company UNS Electric, Inc.

2013 Summer Preparedness

Ed Beck
Director Transmission Policy & Contracts

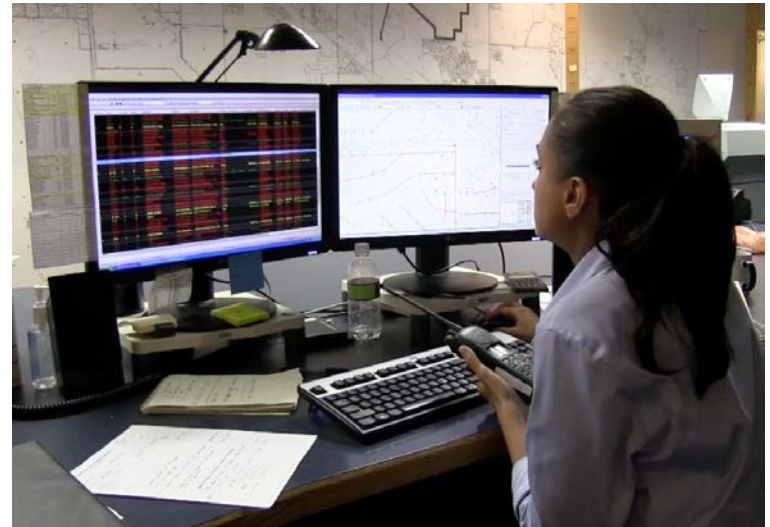
April 25, 2013

Utility Service Areas



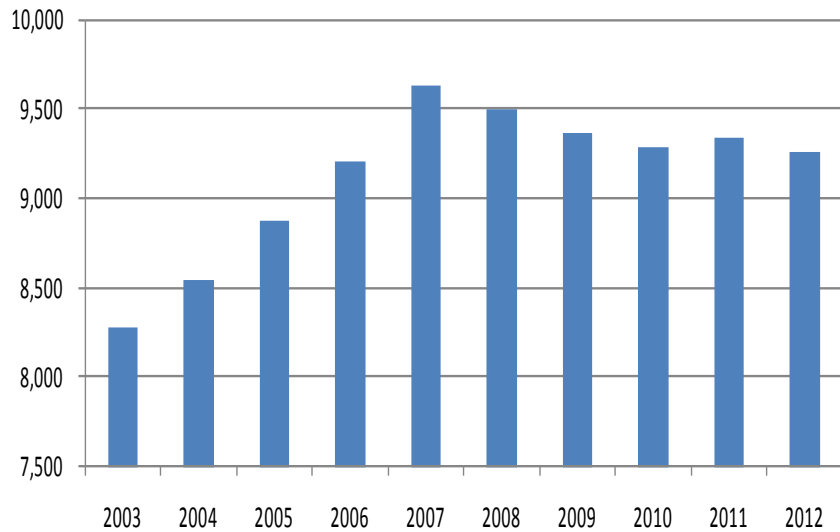
TEP & UNSE Operations

- Regional black start drills between Balancing Authorities and the Reliability Coordinator are completed for the year
- Verification of TEP's Emergency Operations Center (EOC) readiness scheduled prior to summer
- Weekly check of EOC systems occurs
- Daily conference call between Reliability Coordinator and Balancing Authority operators to review system conditions
- During summer peak AZ entities anticipate holding daily reliability call
- Weekly updates from Transmission Construction & Maintenance regarding wildfires that may impact TEP facilities

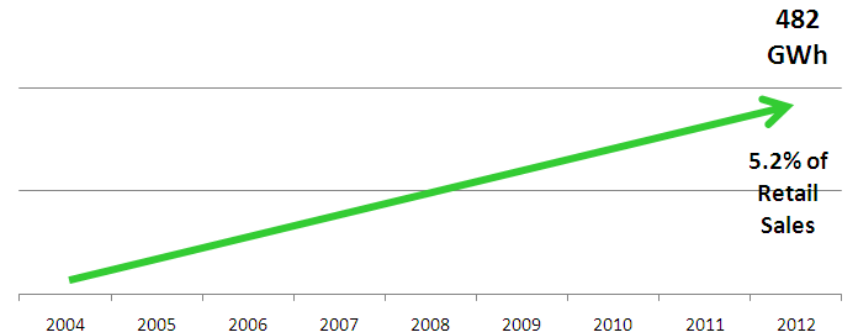


TEP Retail Sales & Renewable Generation

TEP Retail GWh Sales

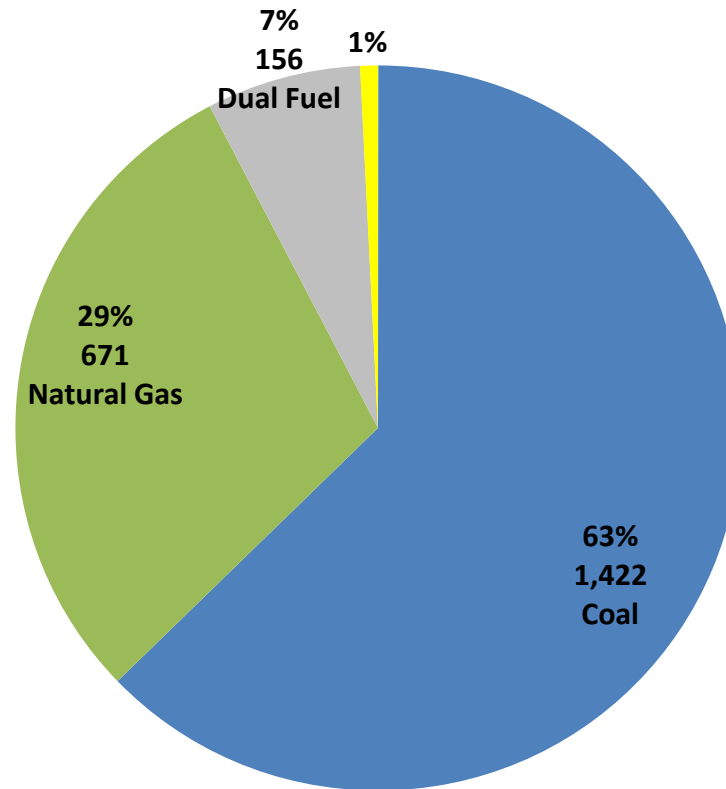


TEP Renewable Resources



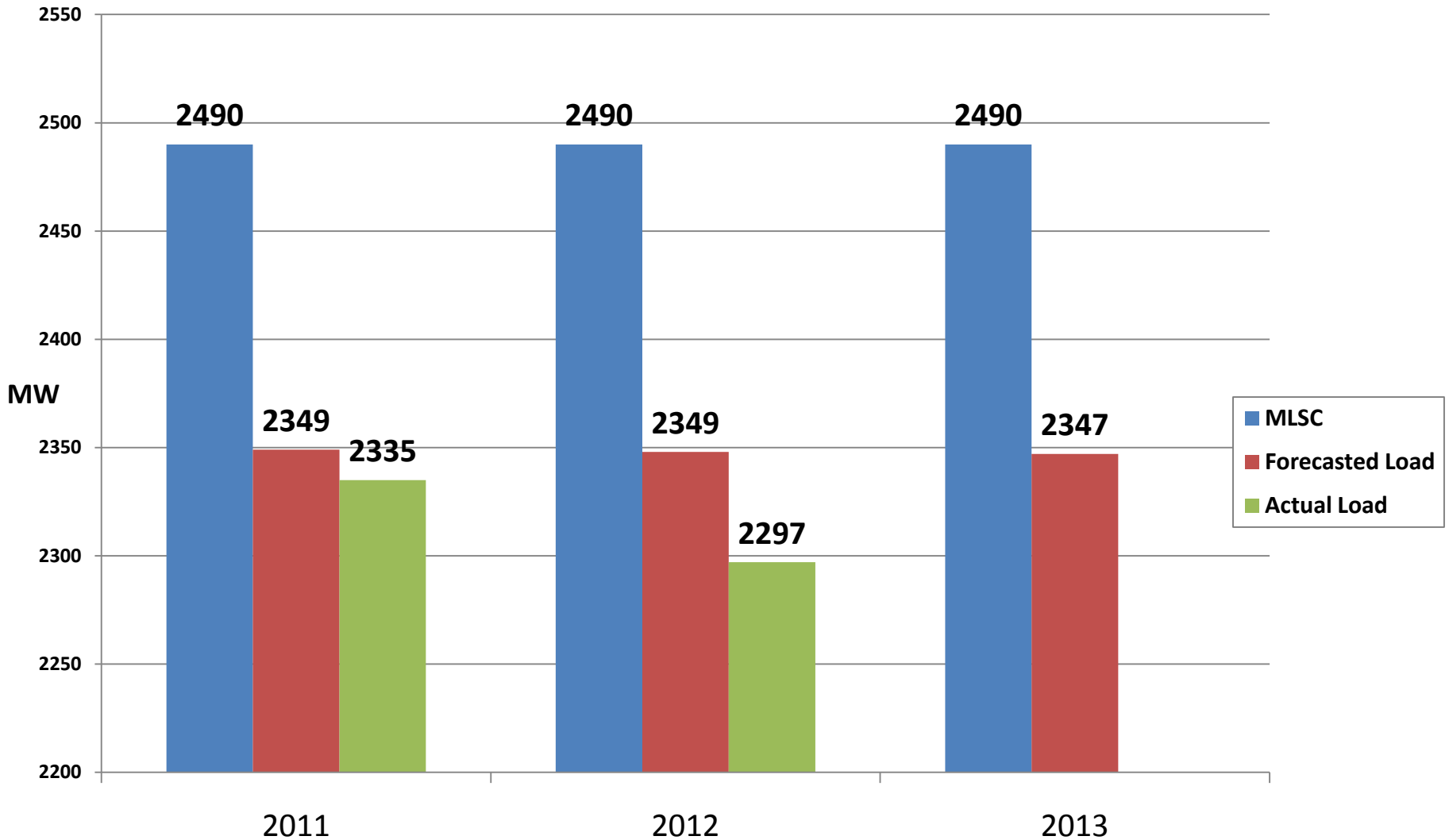
TEP Generation Capacity

Generation Capacity – 2,267 MW

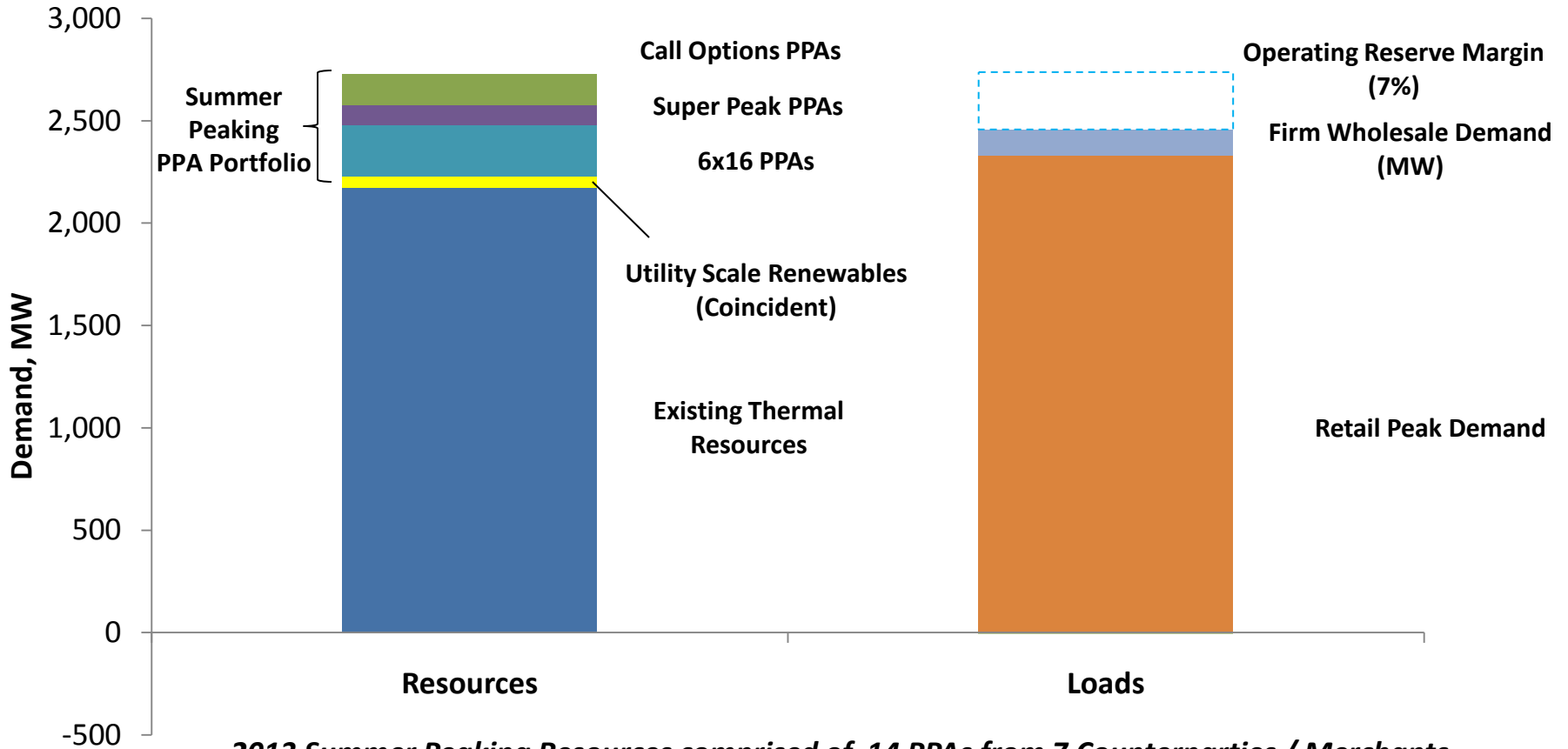


■ Coal ■ Natural Gas ■ Dual Fuel ■ Solar, Renewable PPAs, Purchased Power

TEP Maximum Load Serving Capability



2013 TEP Loads & Resources



2013 Summer Peaking Resources comprised of 14 PPAs from 7 Counterparties / Merchants

TEP Fuel Supply

Coal

- Current and future inventory will meet the projected 2013 requirements.
- Any source or delivery issues will be mitigated by on-site inventories.

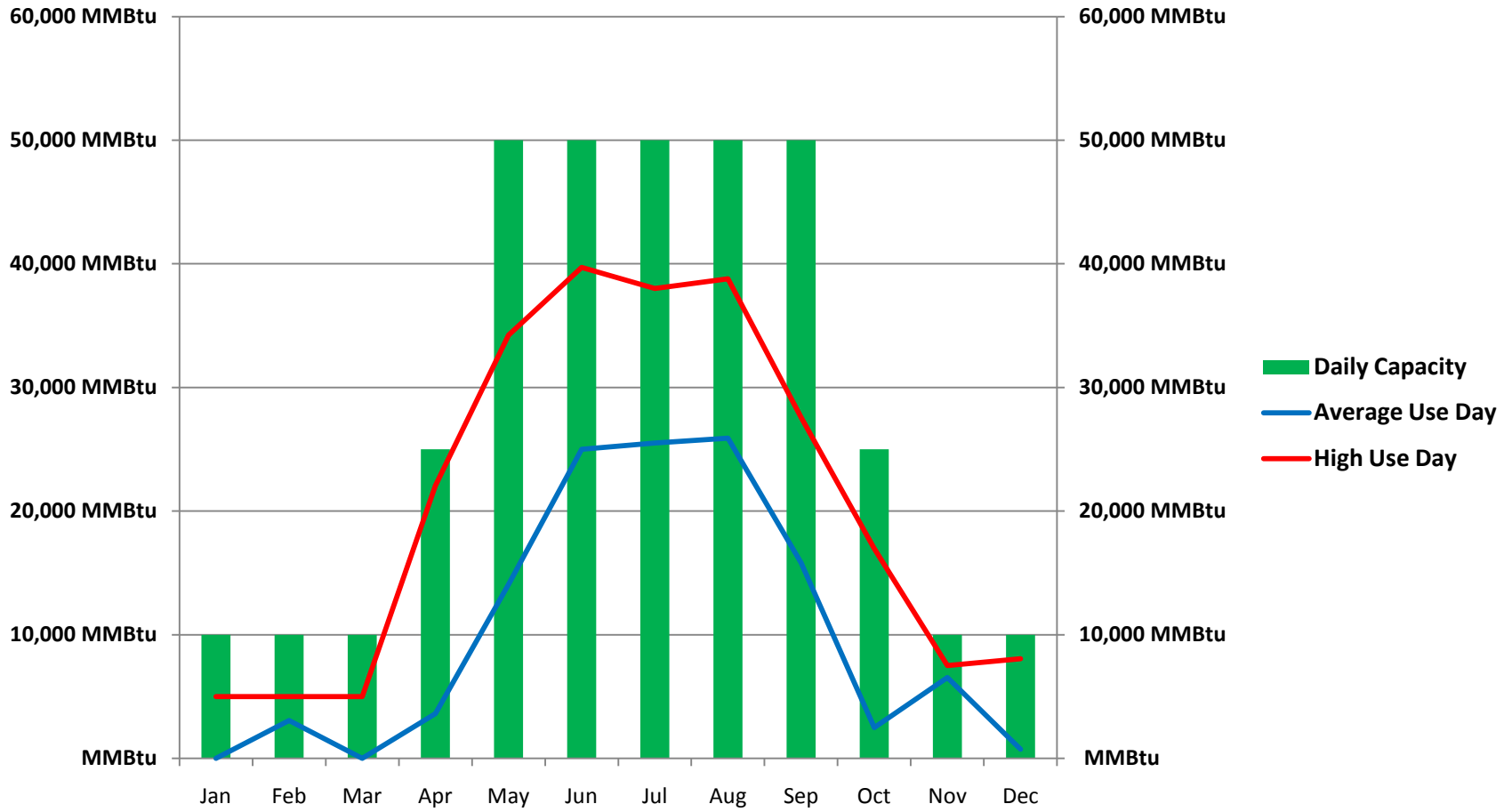


Natural Gas

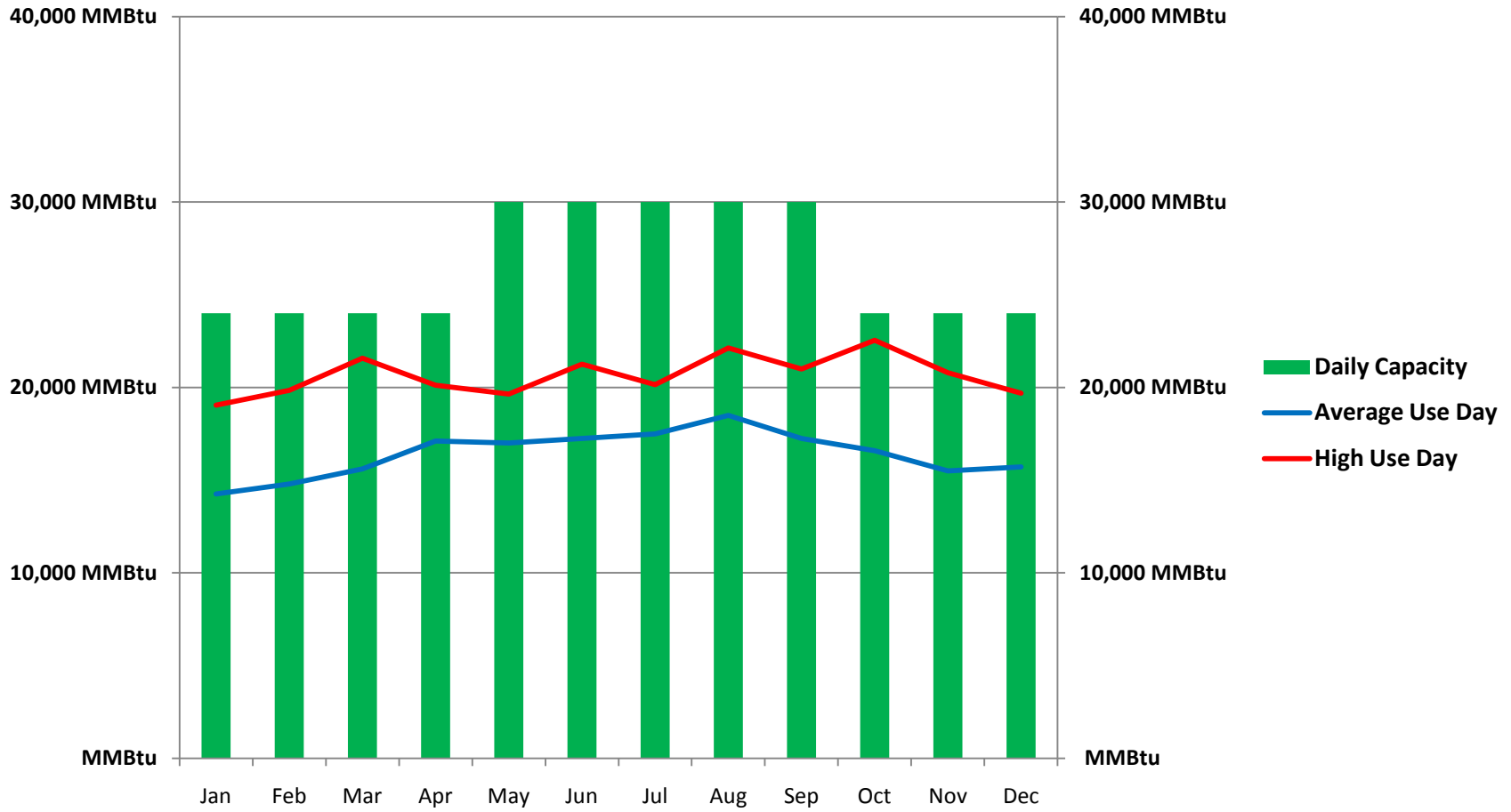
- Inventory via gas transport agreements with El Paso will meet the projected 2013 requirements.
- Variations in demand and/or delivery issues will be addressed through monthly and daily purchases.



TEP Pipeline Capacity - Sundt Gas



TEP Pipeline Capacity - Luna Gas



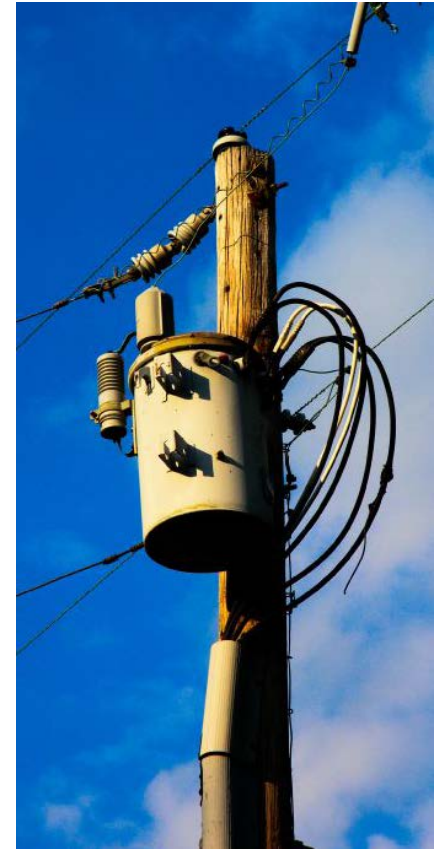
TEP - System Reliability Enhancements

- Vail Substation – 5 new EHV breakers & 3rd bulk power transformer
- 3rd bulk power transformer at Tortolita
- Pinal West transformer to be installed prior to June 2013(Warranty replacement)
- Completing final phase of Tortolita 138 substation(gateway into TEP's system)
- Completed phase 2 of 3 138kV breaker upgrades to North Loop substation



TEP Emergency Equipment Availability

- **Emergency Equipment**
 - Emergency Towers
 - Restoration Kits - (4) 4-pole emergency structures plus (2) hardware kits
 - 10 spare 345 kV towers
 - 8 spare lattice structures of various sizes
 - 1 spare 345 kV monopole
- **Spare Poles (46 kV and 138 kV Class)**
 - 50+ poles capable of supporting 46kV through 138kV loading and framing
 - Specialty kit for Santa Cruz County including multi-pole dead-end structures for emergencies
 - Common standard allows use of structures for Mohave, Tucson, and Santa Cruz



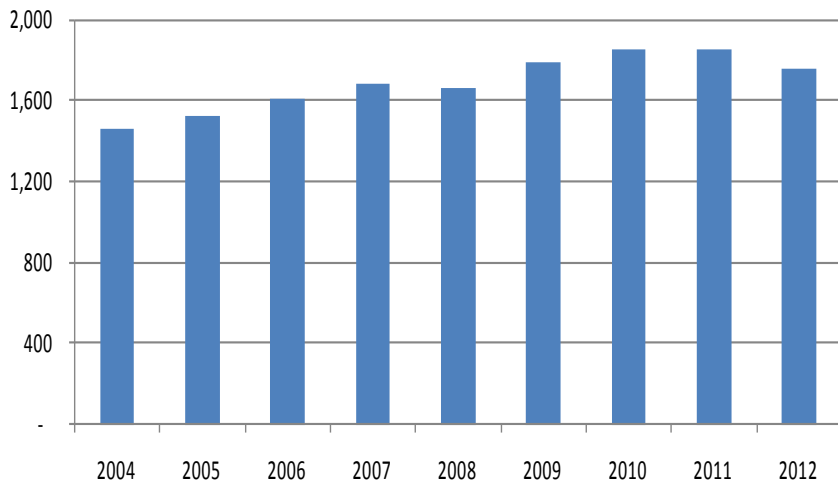


TEP Emergency Equipment Availability

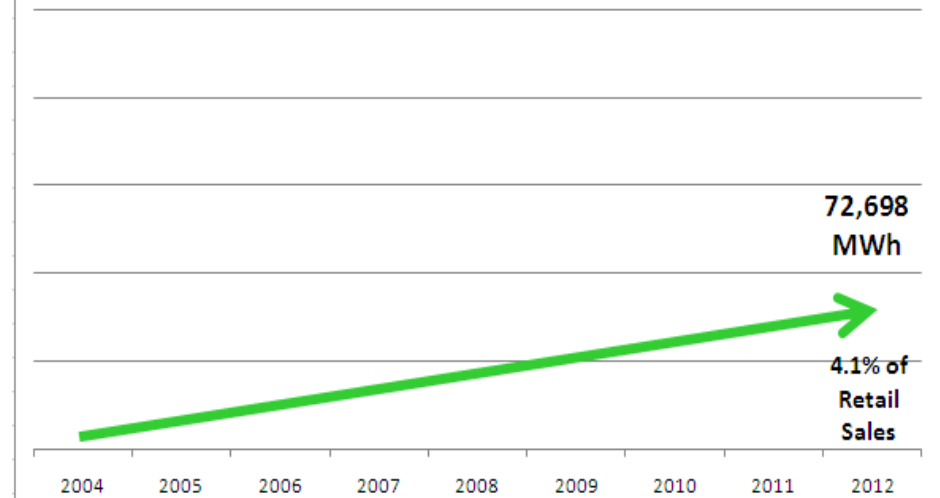
- **Mobile / Portable Transformers (138/115/46kV)**
 - One 25 MVA – (138kV or 46kV)/14kV or 4kV
 - One 40 MVA – (138kV or 115kV)/14kV
 - One 100 MVA – (138kV/46kV/14kV or 7.2kV)
- **Spare Transformers (138/46kV)**
 - One 138/14 kV (30/40/50 MVA)
 - Six 46/14 kV

UNSE Retail Sales & Renewable Generation

UNS Electric Retail GWh Sales

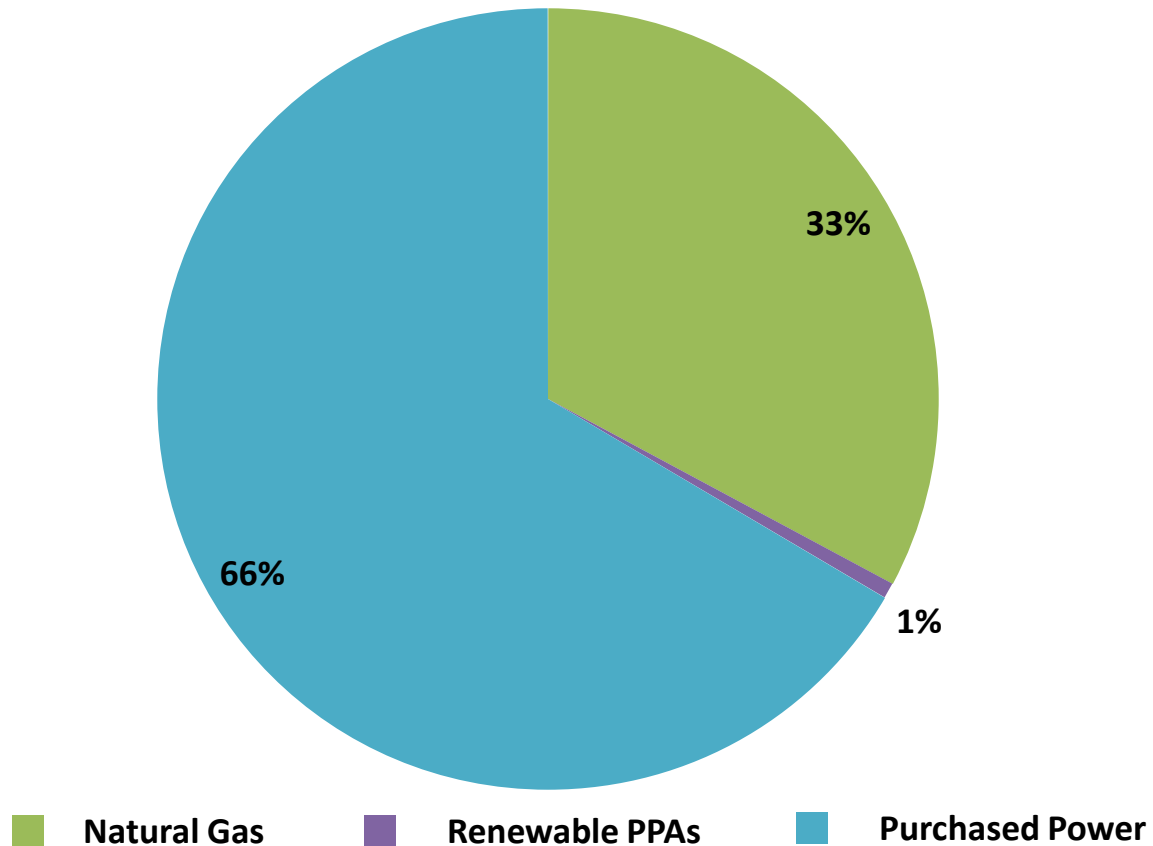


UNSE Renewable Resources

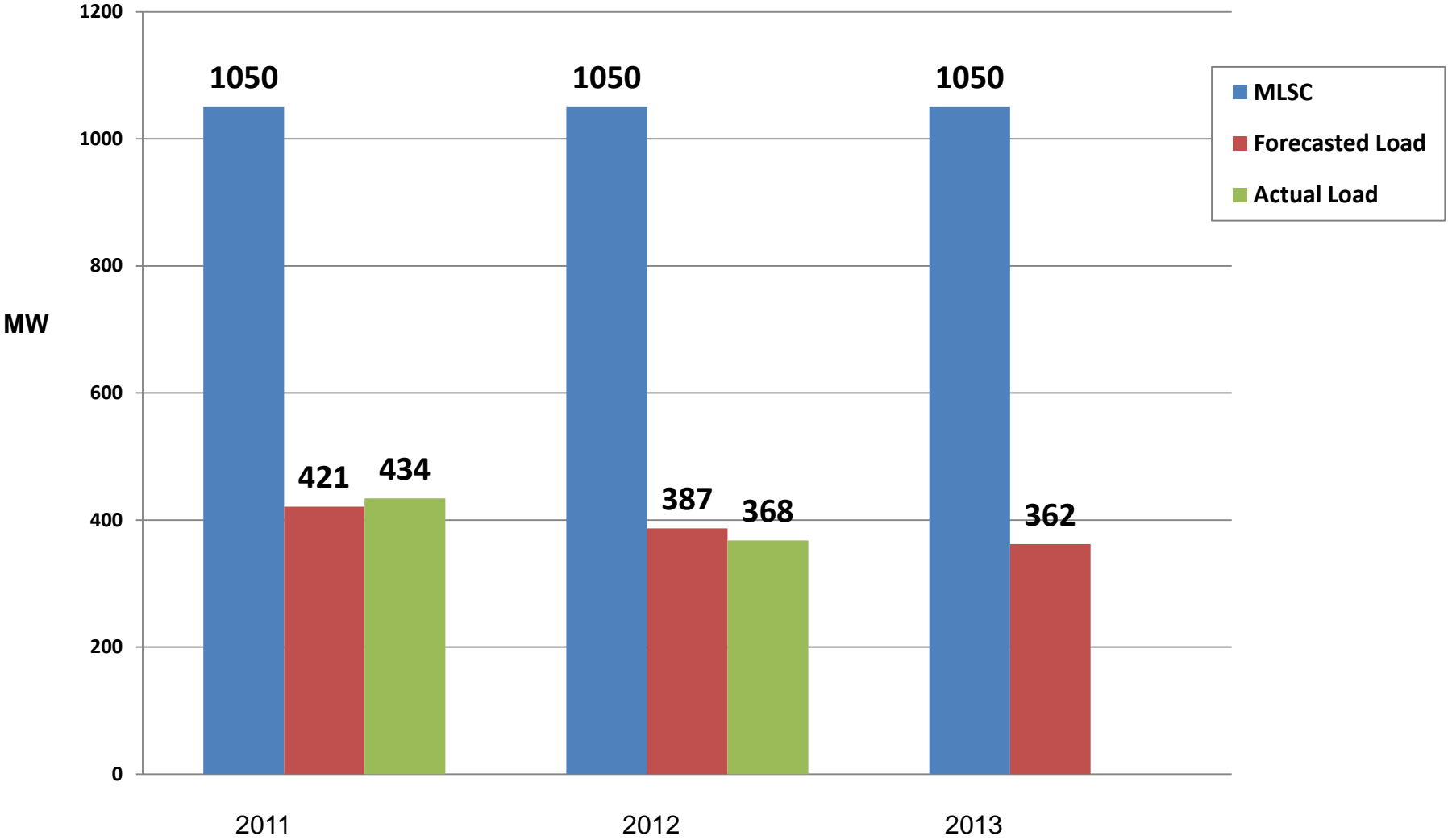


UNSE Generation & Market Capacity

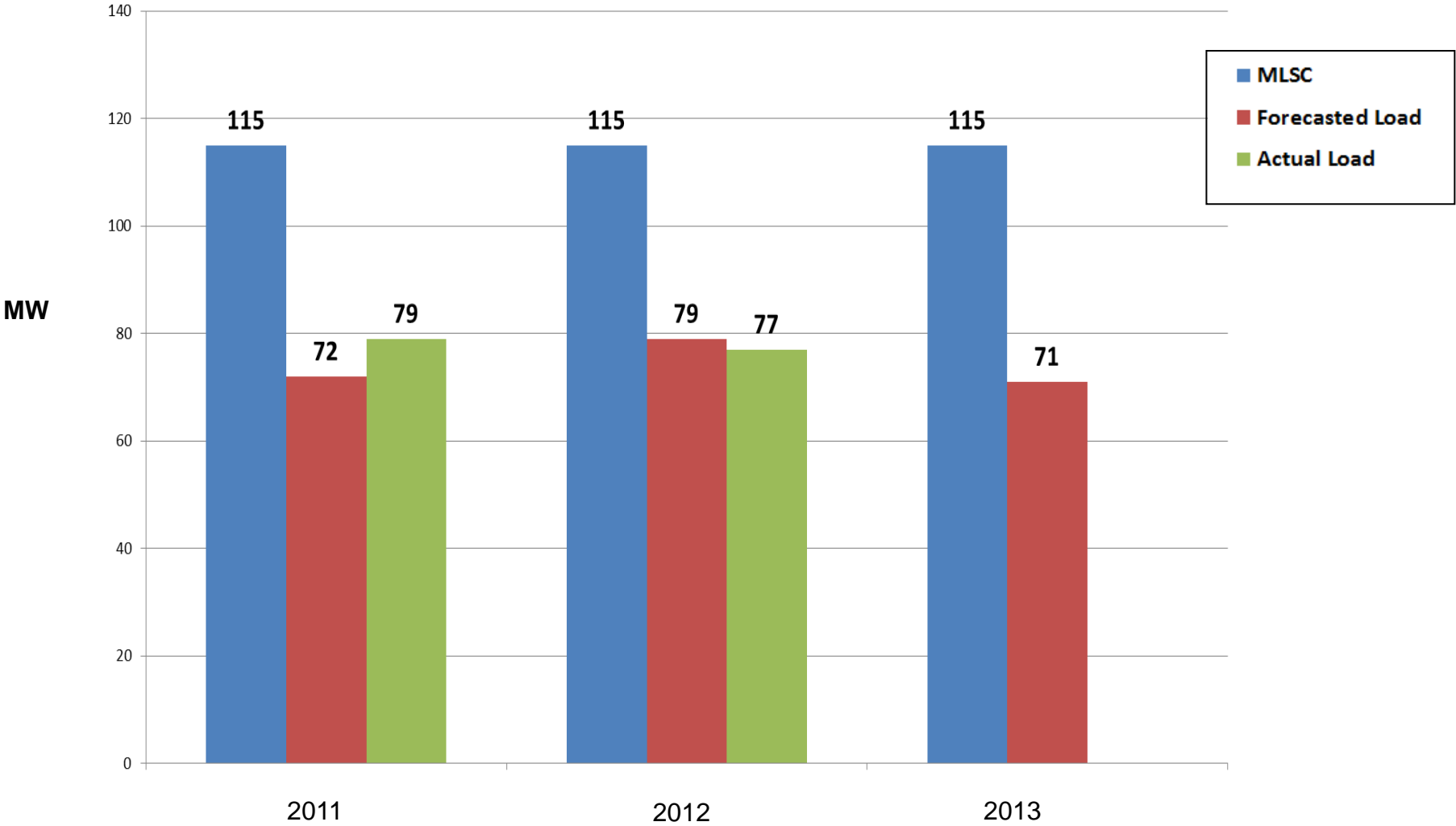
Generation and Market Capacity – 466 MW



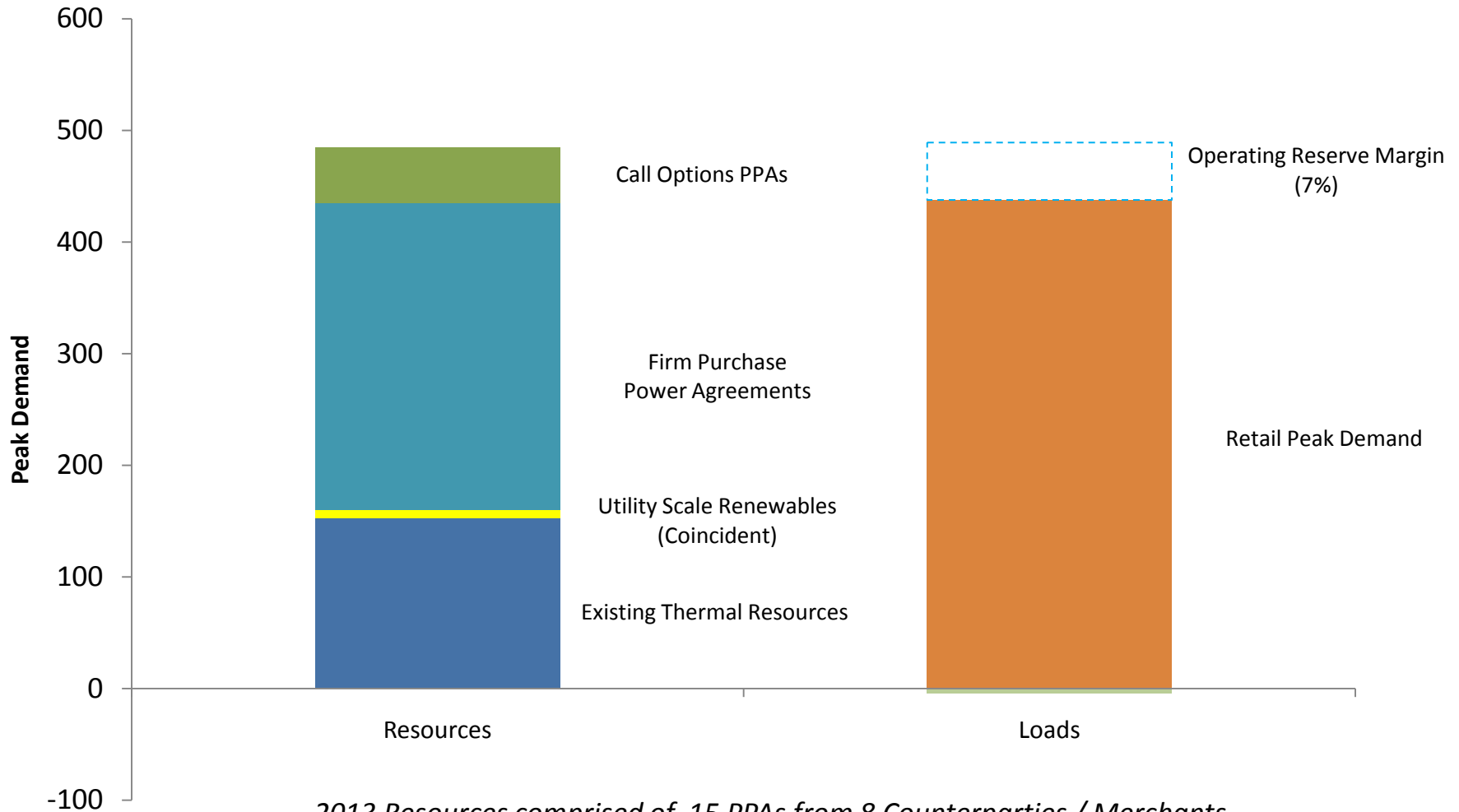
UNSE (Mohave County) Maximum Load Serving Capability



UNSE (Santa Cruz County) Maximum Load Serving Capability



2013 UNSE Loads & Resources



2013 Resources comprised of 15 PPAs from 8 Counterparties / Merchants

UNSE System Reliability Enhancements

- Additional voltage support from 5 new voltage regulators near Canez Substation
- Added transformation at Canez, Kantor and Valencia Substations
- Two new breakers at Sonoita Substation



UNSE Fuels Supply

Natural Gas

- Gas transportation agreements will meet projected 2013 requirements
 - El Paso Natural Gas(for Valencia turbines in Nogales)
 - Transwestern Pipeline Co.(for Black Mountain)
- Variations in demand and/or delivery will be addressed through monthly and daily purchases



UNSE Emergency Equipment Availability

Mohave - Emergency Equipment

- Mobile 69/13.2 X 20.8 X 12 kV Transformer
 - 25MVA Dual Distribution Voltage Mobile
- 20 spare 69 kV poles

Santa Cruz - Emergency Equipment

- 115 kV Transformer (20 MVA shared with TEP)
- Spare poles provided by TEP



Outage Communications

Typical Outage

Outage status information

- Recorded phone message
- Call center staff available 24x7

Media updates

- “News Line” recordings
- 24x7 access to media relations staff
- Local media very attentive to even modest outages, particularly during monsoon season

Twitter updates for larger incidents
(@TEPOutageInfo)

Critical Outage

Press release; press conferences; customer outreach, as needed

Coordination with state, local Emergency Operations Management officials

- Advance notice of scheduled curtailments
- Coordinated relief efforts

Web site updates

- Large presence on TEP.com / UES.com home pages, if needed
- Frequent updates through critical periods



Customer Care

Service Alert on TEP.com

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Tucson Electric Power

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Manage Your Account

Energy Efficiency
Save Energy & Money

Renewable Energy
Solar & More

Resources
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Community
Supporting Arizona

Search

BRIGHT SOLUTIONS

Wildlife Protection Program

TEP works with UA researchers and state wildlife experts to protect raptors and other animals from electrical hazards.

Learn More

⚠ SERVICE ALERT: Restoration efforts continue in Winslow. Supply line damage causes service outage for 4,500 customers.

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TEP & UNSE Summer Preparedness

- Sufficient generation and transmission resources available to meet anticipated loads
- Reliable transmission & distribution systems with adequate capacity
- Operational testing conducted; summer system operations plans in place
- Equipment available to respond to emergencies
- Emergency response plans in place to respond quickly and efficiently

