
Transmission & Resource Planning

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APS Transmission

Agenda

- Arizona Transmission System
 - APS lines/ownership
 - Path Descriptions
 - APS 10 Year Plan Projects
 - Other Arizona and Regional Projects
 - Renewable Energy Task Force
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APS Transmission Paths

Palo Verde Area – Phoenix/Yuma

- Overall APS TTC (includes Yuma direction outlet): 3071MW
 - Existing long-term resources that use path
 - Palo Verde
 - Redhawk
 - Tolling PPAs
 - Market purchases
 - Amount available after long-term resource commitments: 628MW in 2008
 - Future path utilization (as seen by APS)
 - Existing commitments
 - Long-term & short-term market purchases
 - Renewables
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APS Transmission Paths

Mead – Phoenix

- Overall APS TTC: 236MW
 - Existing long-term resources that use path:
Market purchases
 - Amount available after long-term resource commitments: 11MW in 2008
 - Future path utilization (as seen by APS)
 - Market purchases
 - Renewables
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APS Transmission Paths

Navajo – Phoenix

- Overall APS TTC: 559MW
 - Existing long-term resources that use path: Navajo Generation
 - Amount available after long-term resource commitments: 244MW in 2008
 - Future path utilization (as seen by APS)
 - Navajo Generation
 - Renewables
 - Market purchases
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APS Transmission Paths

Four Corners/Cholla – Phoenix

- Overall APS TTC: 1925MW
 - Existing long-term resources that use path
 - Four Corners, Cholla, & Saguaro Generation
 - PacifiCorp Diversity Exchange
 - Wind & Biomass PPAs
 - Market purchases
 - Amount available after long-term commitments: 0MW in 2008
 - Future path utilization (as seen by APS):
 - Existing commitments
 - Renewables
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10 Year Plan Projects (APS Capacity)

- Palo Verde to Sun Valley 500kV Line
 - Increases amount of resources that can be utilized at Palo Verde and taken to APS Phoenix load – 400MW in 2010 (estimated capacity)

 - Sun Valley to TS9 500kV Line
 - Increases amount of resources that can be utilized at Palo Verde and taken to APS Phoenix load – 400MW in 2012 (estimated capacity)

 - Palo Verde to North Gila 500kV Line
 - Increases amount of resources that can be utilized at Palo Verde area – 160MW in 2012 (160MW in 2012 and 500MW long term - estimated capacity)

 - Navajo to Westwing Upgrade
 - Increases by 207MW in 2010

 - Mead to Westwing Upgrade
 - Increases by 113MW in 2009
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Resources & Transmission Paths

- ❑ Resource Planning assumptions in Transmission Planning
 - ❑ Transmission Uses
 - ❑ Scheduling Capability
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Other Transmission Projects

■ Arizona

- Southeast Valley
- Coronado upgrade
- Navajo Transmission Project
- Devers - Palo Verde #2

■ Regional

- TransWest Express
 - SunZia & High Plains Express
 - Gateway Projects
 - Northern Lights
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Renewable Energy Task Force

- Original BTA requirement
 - Accomplished through open forum - SWAT
 - Development of Resource Zones
 - Transmission Solutions
 - Next Steps – Regional Assessment
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BTA Response - Resources

- A renewable resource map displaying areas where resources development could occur was developed with input from three specific areas
 - The Arizona Renewable Energy Assessment recently prepared for APS, SRP and TEP by Black and Veatch (2007)
 - The **queue for renewable resource** in Arizona requesting potential interconnection (as of October 15th 2007)
 - **Stakeholder/developer input** on prospective development opportunities.
 - The renewable resource map was developed during workshop meetings on Oct 8th and Nov 16th 2007
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BTA Response – Transmission System

- The map was developed by the utilities and stakeholders during both meetings and included in the map are:
 - existing transmission lines
 - APS, SRP and TEP 10 year plans
 - other WECC Projects in Phase II process
 - potential transmission lines
 - Next steps
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