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
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
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
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
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
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
Resources & Transmission Paths

- Resource Planning assumptions in Transmission Planning
- Transmission Uses
- Scheduling Capability
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
Renewable Energy Task Force

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