Arizona Corporation Commission

"Proactive Regulatory Reliability Related Requirements"

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STEP May 8, 2003 Meeting

Overview

- Value of Regulatory Participation in Planning
- Arizona Infrastructure Experience
- Arizona Siting Requirements
- 2nd Biennial Transmission Assessment (BTA)
- Initial Competitive Wholesale Solicitation
- Palo Verde Hub Risk Assessment

Value of Regulators Participation in Planning

- **Provides earliest awareness of potential future system deficiencies**
  - Allows proactive regulatory responses rather than reactive responses
- **Builds Staff siting knowledge base regarding "need" for future plants and transmission**
- **Provides regulators opportunity to encourage efficient collaborative solutions**
- **Not sufficient ACC resources (staff/computer) to perform own technical studies**

Value to Others of Regulators Participation

- **Industry opportunity to display commitment to efficient collaborative industry solutions**
- **Demonstrates "system need" to regulators outside a regulatory proceeding**
- **Consideration of competing alternative solutions pre-empts need to do so later**
- **Builds technical rapport with Staff and other industry participants**
  - Beneficial later during siting / other regulatory proceedings

Reliability of Interdependent Infrastructure

- **Electric Supply / Demand Balanced**
  - Adequacy of Supply
  - Demand Responsive Programs
- **Electric Transmission Delivery Capability**
  - Local Constraints
  - Regional Constraints
- **Fuel Supply, Storage and Delivery Capability**

Fuel
Supply, Storage & Delivery

- Arizona has no Natural Gas Production
- Arizona has no Natural Gas Storage
- Arizona is Totally Dependent Upon Import of Natural Gas for Local Consumption
- FERC is Requiring Conversion of Full Req. Contracts to Contract Demand Service

Generation Adequacy Determination

- Serve Existing and Projected Loads with Reserve Margins
- Ancillary Services
- Physically or Economically Displace Older, Less Efficient Plants
- Competitive Margin

New Plants in Arizona

Status	Year							Total MWs
	2001	2002	2003	2004	2005	2006	2007	
Commercial Operation	1,830	2,340	-	-	-	-	-	4,170
Under Construction	-	-	4,922	-	825	-	-	5,747
Reg. Approval Received*	-	-	-	2,400	1,885	620	530	5,435
Application Under Review	-	-	-	-	520	-	-	520
Application Filed	-	-	-			-	-	-
Announced	-	-	-	-	-	-	2,500	2,500
Total MWs	1,830	2,340	4,922	2,400	3,230	620	3,030	18,372

* Note: Includes La Paz (1080 MW), Arlington Valley II (600 MW) and Redhawk 3&4 (1060 MW) approved but financially suspended. Denied Projects: Big Sandy (720 MW) and Toltec (1800 MW)

Arizona
Plant Siting Requirements

- Arizona's Best Engineering Practices: at least two transmission lines out of every plant
- Meet WECC N-1 w/o use of remedial action ie. curtailment, unit tripping or load shedding
- WECC member / RMS agreement compliance
- Seek Southwest Reserve Sharing Group membership
- Must offer up to 10% of plant capacity for ancillary services to local CAO or RTO

2nd Biennial Transmission Assessment (BTA)

Posted on ACC Website under Hot Topics at:

http://www.cc.state.az.us/utility/electric

- **Period evaluated: 2002-2011**
- **Industry was responsive to concerns raised in 1st Biennial Transmission Assessment**
- **Plans meet Arizona needs in reliable manner**
- **Continued concerns re: transmission support of wholesale market**

Industry Response to 1st BTA Concerns

- **Arizona has achieved national acclaim for collaborative transmission planning process:**
  - CATS
  - WATS
- **Reliability Must Run (RMR) study process in progress for local import constraints**
- **Plants proposing transmission improvements**
- **New Arizona transmission projects announced and filed since 1st BTA**

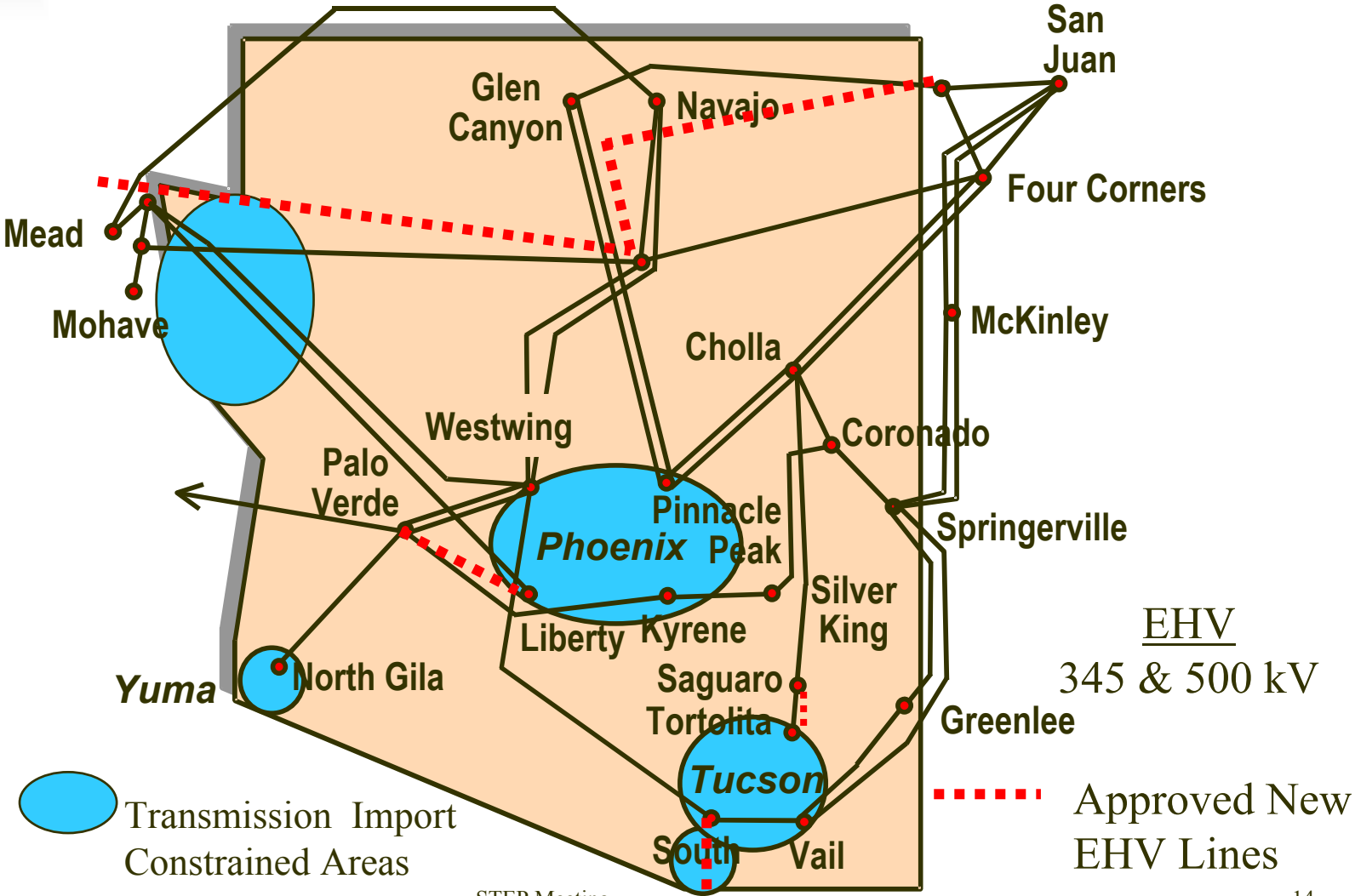
Meeting Arizona Local Needs

- **Five local load centers are transmission import constrained:**
  - Phoenix, Tucson, Yuma, Santa Cruz County and Mohave County
- **Sufficient local generation is available for RMR purposes in all but Santa Cruz County**
- **Transmission improvements planned for all import constrained areas but Mohave County**

Competitive Wholesale Market Needs

- Merchant plants' access to local Arizona markets is limited by local import constraints
- Little long-term firm transmission capacity is available to export or import energy over Arizona's transmission system
- Planned Palo Verde transmission system improvements fail to accommodate the full output of all plants interconnecting at the Hub
- Some plants are interconnecting via a single transmission line

Arizona
EHV Transmission



BTA Regulatory Response

- **Require Utility Dist. Companies to Ensure Sufficient Transmission Import Capacity to:**
  - Reliably Serve All Load In Its Service Area Without Limiting Access to More Economical or Less Polluting Remote Generation
- **Require New Power Plants to Ensure Sufficient Interconnection Trans. Capacity to:**
  - Reliably Deliver Its Full Output Without Use of Remedial Action Schemes or Displacing Apriori Generation at Same Interconnection

Arizona's Initial Competitive Solicitation

- **Required of Arizona Public Service Company and Tucson Electric Power by May 31, 2003**
- **Period of Wholesale Solicitation: 2003-2006**
- **Solicitation of capacity and energy required for unmet needs, RMR needs, and planned economy purchases**
- **Minimum amount of Contestable Load:**
  - 2500 to 3500 MW (35-45% of peak)
  - 4,900 to 8,700 GWh (15-20% of annual GWh)

Initial Solicitation System Criteria & Concerns

- **Deliverability (Commercially Operational)**
- **Reliability (Plant, ancillary services: reserves)**
- **Overcoming local transmission import constraints with RMR conditions via:**
  - Non-utility owned or rate-based generation within local constraint
  - Local access via non-APS / TEP firm transmission capacity
  - Financing short-term transmission improvements