



Transmission Access

April 7, 2004



Introduction to Access Concepts



Access

- External access
 - Ability to transfer power between ATC and surrounding systems
- Internal access
 - Ability to transfer power within ATC footprint
- Both are needed to operate efficiently and effectively



ATC's Access Efforts to Date

- Numerous projects have been implemented that address chronic limitations within ATC's footprint
 - Internal only
 - Modest gains in external access
- Numerous projects are being pursued to improve access
 - External
 - Internal



Access Value Proposition

- Defining what access is
- Determining what level of access is justified
 - Balancing value with impacts
- Defining an appropriate transfer capability target
- Identifying projects to attain target
- Determining cost, benefits and impacts of projects
- Addressing other considerations
 - Regulatory requirements
 - Regional planning
 - Transmission pricing initiatives – who pays?



Transmission Access

- External and internal access are interrelated
- Both imply economic benefits
- Access projects typically improve reliability
- Reliability projects can improve access
- Internal access must be improved to realize benefits of increased external access



Transmission Access

- Economic value of increasing access
- Improving reliability
- Lowering system losses
- Strategic benefits



Economic Value of Access

- Analyze and evaluate using Security Constrained Economic Dispatch model
- Computes projected energy cost differences for various projects and scenarios
- ATC has obtained SCED model (PROMOD)
- Preliminary results to be reported in 2004 Assessment
- Also, potential reduction in reserve margin required



Value of Improving Reliability

- Deferring/eliminating need for reliability-based investments
- Reducing generation redispatch
- Reducing/eliminating need for operating guides
- Providing operating margin during unforeseen multiple outages
- Facilitating necessary maintenance to avoid future problems
- Lower LOLE – reducing reserve requirement



Improving Reliability

- Dollar value not easily quantified
- One approach is to measure using probabilistic planning techniques
 - Expected unserved energy
 - Relative measure of reliability benefits
 - Doesn't translate directly to monetary value
 - ATC has obtained EUE model
 - Preliminary results to be reported in 2004 Assessment



Value of Lowering System Losses

- Reducing transmission losses at peak
 - Reduces amount of installed capacity required to meet peak demand
- Reducing transmission losses throughout the year
 - Reduces the amount of energy required to be produced or purchased
- Both can be monetized



Strategic Benefits

- Provide adequate infrastructure
 - Accommodate load/generation additions
- Facilitate delivery of strategic resources
 - Example: renewable resources
- Reduce the burden on transmission system during high transfers
- Enhance value of other projects



ATC Approach to Access



Access Activities to Date

- 2001-2002 – Internal Access
- 2003 – Preliminary external access studies; information presented in 2003 10-Year Assessment report and various meetings
- Jan-March 2004 – Phase 1 access studies
- March 31 – 2003 10-Year Assessment Update report released
 - Access section
- April 7 – Initial Customer Access meeting



2004 Access Approach

- Intensive focus on external access
- Iterative and participative process
 - Planning studies
 - Customer and stakeholder discussions
 - Issues and implications
 - Chronic limiters
 - Regional market development
 - Regional planning and pricing models
 - Coordination with regulatory initiatives



2004 Access Approach

- Strive for “consensus” by end of 2004
 - ATC system transfer capability target
 - “Best” direction for major 345 kV line to adjacent system
 - “Best” set of projects necessary to achieve access target and resolve key limiters
- Integrate external access driver with other need drivers into 10 year capital plan



Discussion