20-Year Assessment Initiative

May 16, 2005

Purpose

- ATC is proposing to spend $2.8B in the next ten years.
  - How long do these projects perform adequately?
  - Are other more robust long-term solutions appropriate?
- Obtain long-term perspective of system needs.
  - What projects will be needed in the future (post-TYA)?
  - Get estimated cost of transmission projects for 2nd 10 years?
- Access alternatives:
  - What are the reliability benefits of each Access alternative?
  - How does the import capability performance of each Access alternative perform into the future?
- Evaluate impact of generation changes.
  - Evaluate critical generation retirements.
  - Evaluate specific generation additions.

Study Issues

- Load Modeling:
  - The 2005 EIA 2013-2014 load growths will be applied to each control area to obtain the required total load for each year. This will result in an ATC footprint load growth rate of 2.0% per year.
  - The individual substation non-coincident 2012-2013 growth rates will be applied to each load, then all loads in each control area will be scaled down to create the simultaneous peak loads.

Study Issues

- Sources For Load Increases:
  - Each 2-year load growth will be supplied by importing power from outside ATC (same areas as Access studies). Each control area will import enough power to supply its increased load and losses.
  - For generation retirement scenarios, the replacement power will be from outside ATC. For generation addition scenarios, all control areas within ATC will reduce their import by a 2-year growth value (total of about 650-800 MW). (No stability or short-circuit studies, only power delivery.)

The Process

- Model building:
  - Start with TYA 2014 model.
  - Build sequentially, every other year (2016, 2018, etc. out to 2024).
- Assess proposed reinforcements in each study case.
- Develop/refine reinforcement alternatives in each study case.
  - If appropriate, select more robust earlier reinforcement.
- Assess Access alternatives performance in each study case.
- Perform specific generation scenario analyses.

Schedule

- 2014 Studies — End Of May
  - Underway – Determine reliability benefits/import performance of Access alternatives.
  - Include results in 2005 TYA summer report.
- 2016 & 2018 Studies — End Of May
  - Underway – Determine required system reinforcements, performance of TYA projects, reliability benefits/import performance of Access alternatives.
  - Include results in 2005 TYA summer report.
- 2016-2018 Studies — June-December
  - Generation scenario analyses.
- 2020-2024 Studies — June-December
  - Determine required system reinforcements, performance of TYA projects, reliability benefits/import performance of Access alternatives, Generation scenario analyses.
  - Include all results in 2005 TYA winter update report.

Your Involvement

- Planned meetings
  - May
  - August
  - November