

Tapoco Transmission Group Questions from Marketing Group – 7/6/10

The following questions are being asked to facilitate planning studies that may reveal viable purchase and sales options that marketing could consider in optimizing its services to our joint customers known as Tapoco Hydro and Tennessee Operations. This is not a request for specific transmission service for any specific period.

All questions are being asked for the following periods starting mid 2011; 1 year, 3 years, 5 years, 10 years. In each scenario, we are seeking an answer that is accurate for 95% of the period.

APGI-Tapoco Response (provided 8/2/2010 by Jennifer Connors, System Operations and Engineering Manager):

Presently, APGI-Tapoco only has the capability of conducting Planning Studies utilizing PSSE software. The Planning Studies are designed to support transmission planning for reliable operation of the interconnected Bulk Electric System (BES). The study results are based on computer simulations of the interconnected BES operations under specific assumed operating parameters at a specific point in time. Projections of numerous factors regarding the operation of the interconnected electric system are included in the base study models. In real time operation of the BES, system parameters and factors represented by the assumed projections in these simulations are constantly changing. Therefore, the interconnected electric system may not reach the level of performance determined by the planning studies can vary significantly for real-time changing conditions. Planning studies provide an indication of system capability, but cannot determine system capability that is accurate for 95% of any period.

APGI-Tapoco does not have the ability to conduct the extensive real-time modeling studies that would be required to determine system capability that would be accurate for 95% of any period. Since real time operating conditions are dependent on numerous conditions outside of APGI-Tapoco's control and due to APGI-Tapoco's small size relative to the neighboring utilities, we are not willing to estimate with any level of confidence a percentage of accuracy for some of the requested conditions.

APGI-Tapoco's system capability is presently, and will continue to be, heavily impacted by any business and system conditions of TVA and Duke. In addition, there are times that APGI-Tapoco can be impacted by system conditions in the Southern Company footprint.

All statements provided below assume constant fuel supply and no transmission or generation outages.

1. What % of Tapoco current and planned capacity can be delivered to the Tennessee Operations smelter and RPD loads (450MWs):
 - a. Using only APGI transmission? Transmission is capable of delivering 85% of Tapoco capacity, however real-time operating power flow conditions out of APGI-Tapoco's control can limit generation thus reducing the ability to significantly less than 95% of any period.
 - b. Using 100% APGI and xxx MWs of TVA transmission capacity?
2. What % of Tapoco current and planned capacity can be delivered to the RPD loads:
 - a. Using only APGI transmission? APGI-Tapoco can cover 100% of RPD load.
 - b. Using 100% APGI and xxx MWs of TVA transmission capacity? No additional capacity needed.
3. What % of Tapoco current and planned capacity can be delivered to the RPD load and 1 pot line (~250MWs):
 - a. Using only APGI transmission? System is capable to cover 100% of RPD and 1 pot line load. However, this is based on no outages and generating capacity availability. As noted above, system conditions, at any given time, can significantly impact the system capability. Real-time system power flows can impact generation dispatch and system limits.
 - b. Using 100% APGI and xxx MWs of TVA transmission capacity? See 3a and previous notes.

4. How many MWs can Tapoco export via its tie with Duke (no contractual use of TVA Trans.): **See comments previously noted as APCI-Tapoco Response.**
 - a. If all Tapoco generators are running?
 - b. If no Santeelah generation is available?
 - c. If tie with TVA at smelter is open
5. How many MWs can APCI import via Duke tie: **See comments previously noted as APCI-Tapoco Response.**
 - a. If all generators are running & load is 450MWs
 - i. Using no TVA contractual transmission
 - ii. With use of TVA contractual transmission
 - b. If no Tapoco generators are running
 - i. Using no TVA contractual transmission
 - ii. With use of TVA contractual transmission
6. What % of Tennessee Operations (450MWs) can TVA transmission serve: **See comments previously noted as APCI-Tapoco Response.**
 - a. Without use of APCI jurisdictional transmission
 - i. With Tapoco generation on at capacity **100%**
 1. With Santeelah tie in and out **No impact**
 - ii. With no Tapoco generation **100%**
7. What is the current planned outage schedule for Tapoco generating units for next 10 years?
http://www.alcoa.com/alcoa_energy/en/about/tapoco_division.asp
8. Is there a public posting of major planned transmission outages of APCI transmission over the next ten years and the associated impact on ability to serve load or export out of the ties?
http://www.alcoa.com/alcoa_energy/en/about/tapoco_division.asp **Web site includes link to TVA Transmission OASIS.**

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