

# Notes V2

## APS and SRP Stakeholder Meeting For Transmission Planning FERC 890 OATT Attachment K - 2<sup>nd</sup> Quarter Meeting

APS Corporate Headquarters  
400 North 5th Street in Phoenix

May 21, 2008  
1:00 p.m. – 5:00 p.m.

1. Attendance – attached is a list of those persons in attendance **(ATTACHMENT 1)**

2. Action Items – The action items generated by this meeting are summarized below:

**A/I** (5-08-1) APS/SRP will update slide #6 in an effort to clarify where the integration of retail network customers fits into the planning methodology block diagram. The results of this update will be presented at the next stakeholders meeting in the 4<sup>th</sup> quarter of this year.

**A/I** (5-08-2) APS will look into why Western's request for a wires-to-wires interconnection at APS' North Gila Sub from Western's Gila Sub does not show up on APS' OASIS posting of interconnection requests.

**A/I** (5-08-3) APS will talk with both the other stakeholders interested in 230kV around the North Gila area and the SWAT CRT group and determine whether it is appropriate to bring the study group that has already been identified into a subcommittee under the SWAT CRT group.

**A/I** (5-08-4) APS/SRP will work with the other transmission providers who are members of WestConnect to see if they want to put the material they presented at their Attachment K workshops on the WestConnect website. The question was asked and was agreed to by all attendees that only the current Attachment K workshop presentation materials and the previous Attachment K workshop presentation should be kept on the site; i.e. the goal was not to have a build-up of historical presentations.

**A/I** (5-08-5) APS/SRP will make sure the two additional substations APS is proposing for the area of Pinal Central are included in the Pinal Central study work and in their presentation materials for this project. The two 230/69kV substations in question are Milligan Substation and SE10 Substation. Both substations will be connected to the Saguaro to Casa Grande 230kV line.

3. Welcome, Introductions, and Stakeholder Meeting Overview

Robert Kondziolka introduced the program, the purpose for the meeting, and the first speaker. The power point presentation used at this meeting is found on **ATTACHMENT 2.**

4. APS Planning Process

Peter Krzykos outlined the APS planning process including a discussion of each of the topics listed below. Questions and answers that evolved from the presentation are captured below as well.

a. Planning Calendar

Q – Is there a deadline for submitting requests for planning studies with respect to the planning calendar? ANS – Requests can be submitted at any time. If the requests qualify to be studied and are not submitted in time to be studied in the current round of planning studies they will be studied the following year

Q – How do the studies done for the WATS forum fit into the planning process? ANS – The WATS is not a planning group and therefore the work of that group doesn't fit into this process.

Q – How are the revised load forecasts that are generated following the current summer peak factored into the planning process? ANS. In September the impact of the current summer peak load on the forecast for future years is studied and factored into the previous study results.

b. Methodology

Q – If a transmission service request is received for an amount of transmission capacity which is greater than can be accommodated, the need for a study is generated. Where do studies such as these fit into the planning process?

ANS – Studies done to determine what must be done to accommodate transmission service requests follow the TSR study process which is outlined in the OATT. Deadlines for accomplishing these type studies are well defined in the OATT and must be complied with to avoid penalty.

Q – Where does analysis of service for new native load network customers fit into the planning methodology process? ANS – Studies run to determine how to accommodate new native load network customers would be done as part of the System Reliability Improvements process or the interconnection study process if a new interconnection is required.

AI (5-08-1) APS/SRP will update slide #6 in an effort to clarify where the integration of retail network customers fits into the planning methodology block diagram. The results of this update will be presented at the next stakeholders meeting

Q – It was mentioned in the presentation that transient stability studies were only run on the 2011 and 2016 base cases. In order to have a complete picture of the state of the system in the 10<sup>th</sup> year of the 10-year plan shouldn't the transient stability study work be performed on the 2018 case instead of on the 2016 case?

ANS. The 2016 case was selected to be used to conduct transient stability studies because there exists a stability deck or model for that year whereas none exists for the 2018 base case. Also, there are no significant changes in the Transmission model between 2016 and 2018. The results will be identical.

c. Reporting

d. Stakeholder comments/questions on planning process

5. APS 2008 Studies – Jason and Peter presented this portion of the presentation including the following topics:

a. Ten-Year Plan – Jason Spitzkoff addressed this subject

Q – APS' Sugarloaf Sub in the Snowflake area will be fed off of SRP' Coronado/Cholla 500kV line it looks like from the presentation material. How will APS get transmission service to serve this new sub? ANS – APS will request point to point or network transmission service to serve the new Sugarloaf sub.

Q – Are there any new substations planned for the new Sunvalley to TS9 230kV line? ANS – There are no new substations planned for this line presently because it is located in an area which today is very remote. However, the line is in the plan for that very reason. The area has been identified as an area where large development will occur in the future and the 230kV line will provide the High Voltage transmission source for the future needs of the area. Future substations along that line are not identified as of yet because that will develop as the plans for how and where the development in the area is determined.

- b. Interconnection Requests and Transmission Service Requests – Jason Spitzkoff addressed this subject

Q – Does APS have a lines-to-lines OASIS queue? ANS – APS does not have an OASIS queue for wires-to-wires interconnection requests.

Q – Where can one find Western’s request for interconnection to APS’ North Gila Sub from Western’s Gila Sub for the San Luis Rio Colorado Generator? ANS. No answer to this question was provided.

**A/I** (5-08-2) APS will look into why Western’s request for a wires-to-wires interconnection at APS’ North Gila Sub from Western’s Gila Sub does not show up on APS’ OASIS posting of interconnection requests.

Q – Is this the forum to request that a study group be formed to integrate APS’ plans for the North Gila Area with that of other stakeholders in the area? Should this be a separate study group or should it be dealt with by the existing SWAT study group working on this area? ANS – This question was discussed but no specific answer was agreed upon.

**A/I** (5-08-3) APS will talk with both the other stakeholders interested in 230kV around the North Gila area and the SWAT CRT group and determine whether it is appropriate to bring the study group that has already been identified into a subcommittee under the SWAT CRT group.

- c. Economic Study requests of APS (if any) – none received to date.
- d. TransWest Express – Peter Krzykos addressed this subject

Q – What kind of feedback has APS received from WECC to date regarding construction of a DC line in the same corridor as an AC line. ANS – APS strongly believes there is a synergy between the two projects, i.e. the AC project and the DC project compliment each other. The actual pros and cons of having the two projects share the same corridor will be identified in the phase one portion of the WECC project rating process which has just started.

Q – What will be the width of the corridor? ANS – The width has not been defined yet. The answer to that question will be identified as a part of the study results.

- e. Stakeholder comments/questions on study plan
- f. Stakeholder submittal of requests for additional transmission studies

## 6. SRP Planning Process – presented by Brian keel

Brian Keel outlined the SRP planning process including a discussion of each of the following topics. Questions and answers that evolved from the presentation are captured below as well.

- a. Planning Calendar
- b. Methodology

Q – When SRP does its 69kV planning studies does it add +20mw at every 69/12kV substations all at once? ANS – No, the +20MW is added to each 69/12kV substation one at a time and only in developing areas where it makes sense to study that possibility.

Q – When SRP does its planning studies is the potential for the interconnection of renewable resources studied or are these looked at only on a case-by-case basis as formal interconnection requests are received? ANS – If the renewable resource is not a large project SRP waits to do studies for renewable until an interconnection request is received.

Q – How does SRP decide if a renewable resource is large enough to study without receiving a formal interconnection request? ANS – The size of the project determines whether it is studied or not without a formal interconnection request. Examples of projects that wouldn't require a formal interconnection request are the SunZia Southwest transmission project that might be in the WECC regional planning process or SWAT projects that are in the planned or development phase.

Q - Does SRP plan for distributed generation in its planning process? ANS – SRP has a few areas where there are small “pockets” of small size distributed generation. Currently SRP accounts for distributed generation by subtracting the capacity of the generation from the load forecasted for the area the generation is located in. SRP does this because the magnitude of distributed generation on SRP's system is very small. Currently for example the amount of photovoltaic generation on SRP's system is less than one MW.

Q – When SRP does its “n-x studies” does it include loss of all the transformers in a substation? ANS – Yes, but SRP only studies potential “n-x” situations that have a common mode for occurrence, e.g. bus or bus divider breaker outage causing loss of all transformers.

Q – What differences are there between the APS and SRP load forecast methodologies? ANS.- SRP models a 1 in 10 forecast load. APS models a 1 in 2 forecast load and performs additional sensitivities in specific areas with a 1 in 10 forecast load.

Q – When does SRP do the SIL (Simultaneous Import Limit) studies? ANS – The SIL studies are done for the coming summer season and for selected future years. APS performs Maximum Load Serving Capability (MLSC) studies for all ten years of our planning horizon, for the Yuma and Phoenix areas. In Phoenix the combined APS and SRP systems are studied.

Q – If stakeholders have an interest in talking with SRP about the SIL studies when would it be appropriate to do that? ANS – These Attachment K workshops are an appropriate forum for discussion regarding SIL studies.

Q – Are there significant changes in the SIL or the MLSC (Maximum Load Serving Capability) study results from year to year? ANS – Transmission additions, valley generation additions and VAR support additions all improve or enhance the SIL and MLSC results. Transmission additions and VAR support additions improve the SIL results. Valley generation additions do not improve the SIL results since the SIL is determined with all valley generation set at zero MW's output.

Q – Have any of the assumptions changed between last year and this year that affect the SIL or MLSC? ANS –Yes, SRP has upgraded the Santan to Thunderstone 230kV line and added 230kV shunt capacitors to the system this year which have improved the SIL.

Q – When SRP does its planning studies does it take into account demand side management? ANS Demand side management affects the load forecast since it is simply a voluntary reduction in load by participating customers. Thus the impact on transmission planning of demand side management is a reduction in the load forecast which is modeled and studied. SRP's load forecasting group makes the determination what impact demand side management will have on the load forecast and the transmission planning group reflects the resultant forecast in its study models. Demand side management does not affect either the SIL or

the MLSC. It only affects the peak load forecast and the forecast for the load in the area it occurs.

Q – Does the “SIL bubble” expand with time? ANS – Yes it does expand with time assuming the network continues to expand with time. The rate at which the “SIL bubble” expands is a function of how fast the load is growing in the valley.

- c. Reporting
- d. Stakeholder comments/questions on planning process

7. SRP 2008 Studies

a. Ten-Year Plan

Q – Will the Palo Verde to Pinal West 500kV line be included in the Palo Verde East Cutset? ANS – That is currently the plan. To include this line in the Palo Verde East Cutset for determination of its TTC will require approval from the Palo Verde Valley Transmission System, Southwest Valley Project, and Southeast Valley Project Engineering & Operating Committees.

Q – Will the Palo Verde to Pinal West new line be included in SRP’s OATT tariff rate? ANS – This new line hasn’t been included yet and won’t be included until the next time the OATT is revised which is anticipated to be next year or the year after.

- b. Interconnection Requests and Transmission Service Requests
- c. Economic Study Requests of SRP (if any) none received to date
- d. Stakeholder comments/questions on study plan
- e. Stakeholder submittal of requests for additional transmission studies

8. Regional Update – WECC – Peter Krzykos made this presentation

Q – Does the modeling validation work group validate that the system response to disturbances predicted by the power flow and stability models match the disturbance response observed. ANS – Yes that is one of the functions of this group.

Q – How many disturbances does this group validate routinely? ANS – One or two disturbances are analyzed each year on average. The gathering of data to do the analysis is a very labor intensive task.

q- What is the function of the Reliability Performance Evaluation Work Group (RPEWG)? ANS – The RPEWG is responsible for determining whether a particular corridor outage can be downgraded in significance with respect to the reliability table from a “Category C” outage to a “Category D” outage. The Palo Verde to North Gila double line outage successfully went through the process and was down-graded to Category D.

- a. Planning Coordination Committee
- b. Technical Studies Subcommittee
- c. System Review Work Group
- d. Transmission Expansion Planning Policy Committee – review economic study requests and prioritization – presented by Robert Kondziolka

Q – It has been reported that PNM anticipates that their region is capable of producing 3000MW of wind generation. Have any studies been done to determine if that is a realistic assumption?. ANS –New Mexico has the potential for 10,000MW and possibly more of wind generation. There are currently around 3,000MW of wind interconnection requests in New Mexico. The SWAT New Mexico Subcommittee has studied and developed a conceptual transmission system for the central New Mexico system to interconnect the wind interconnection requests. The conceptual transmission system will allow for interconnection but additional transmission will be required to areas outside of

New Mexico to allow for simultaneous operation and delivery of the nameplate capacity.

Q – Who determines the priority of options to be studied in the Transmission Expansion Planning Policy Committee (TEPPC) study work process? ANS – The TEPPC study work group makes a recommendation to the Technical Advisory Subcommittee and TEPPC for approval.

Q – Has the Western Wires group submitted any potential options for TEPPC to study? ANS – No, they did not submit a separate request to TEPPC. Their input is captured by the Western Interconnection Reliability Advisory Board (WIRAB) request.

9. Sub-regional Update – presented by Robert Kondziolka
  - a. SWAT
  - b. WestConnect

#### 10. Stakeholder Questions/Comments

Q – Will the slides for this workshop be posted on OASIS? ANS – They are currently posted on both APS and SRP's OASIS sites.

Q – If we have questions about the presentation material how do we contact the presenters to get an answer? ANS – There are email addresses posted on the APS OASIS, SRP OASIS and WestConnect websites you can send your questions to. Also, the email addresses were specifically listed within the presentation.

Q – Will the material presented at this workshop be posted on the WestConnect web site also? ANS – Before this question can be answered there needs to be a discussion with the other transmission providers who are members of WestConnect in order to come to a consensus.

**A/I** (5-08-4) APS/SRP will work with the other transmission providers who are members of WestConnect to see if they want to put the material they presented at their Attachment K workshops on the WestConnect website. The question was asked and was agreed to by all attendees that only the current Attachment K workshop presentation materials and the previous Attachment K workshop presentation should be kept on the site; i.e. the goal was not to have a build-up of historical presentations.

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Q – With the advent of more and more joint studies of regional projects has there been any effort to “sync-up” the decisions made in the budgeting process with respect to the in-service date of these projects. ANS – The changing assumptions due to volatility of the economy makes it difficult to firm up in-service dates. This is a continuing problem due to the volatility of the assumptions that drive the in-service date for major projects.

11. Action Items – The action items resulting from this meeting are summarized above in section 2 of these notes.