

**Final SATS Meeting Notes  
Tucson Electric Power Company Offices  
April 2, 2009**

Attendees:

Dale Benth, Ft. Huachuca  
Craig Hansen, Ft. Huachuca  
John Kyei, PDS SunZia  
Bruce Evans, SWTC  
Jim Rein, SWTC  
EvaMarie King, SWTC  
Ray Som, SWTC  
Ken Bagley, Genesee/SSVEC  
David Bryan, SSVEC  
Gary Trent, TEP  
Nazar Dhahir, TEP  
Ron Belval, TEP  
Andy Meyer, TEP  
Bobby Chavez, TEP  
Kathy Estrada, TEP  
Vincent Thor, APS  
Estit Ramirez, APS  
Jim Tang, CAP  
Don Stoneberger, FMI  
Randy Etheridge, Acciona  
Stephanie Benjes, Western  
Joshua Johnston, Western  
Joe Herrera, ED3

On Phone Bridge:

Brian Cole, APS  
Gary Romero, SPPR  
Paul Stocking, Sequoia Energy  
Vicki Sandler, AzISA

Agenda Items:

1) Welcome and Introductions

Gary Trent welcomed everyone to TEP's offices and asked for introductions. The individuals participating via the phone bridge were also acknowledged.

2) Review Agenda

A revised agenda for the meeting was passed out. Cochise County is now agenda item #6. The Stimulus Package Update is now agenda item #7. A new agenda item, "Additional Items" was added as agenda item #13.

A "Discussion of base cases to use" was added to Cochise County and "Responses from SATS-Area to Western RFI" was added to the Stimulus Package Update.

There were no comments to the revised agenda.

### 3) Review/Approve 2/12/09 Meeting Notes

Ken Bagley pointed out typographical errors on pages 3 and 6. He posed a question to the group on whether or not the WGA had issued a report on construction costs. Ron replied that he was aware of this effort through WREZ who is also working on the development of maps with the WECC TEPPC for the 2012-2017 time frame. Ways to ease congestion in this time frame are being looked at by moving large amounts of Renewables to load.

Jim Rein stated that he has also seen information on this from WREZ, with costs, but that there wasn't much to it; it was more of a general idea of what to expect. Ken said that he would visit with Jim off-line about this.

Ken also pointed out that page 6 of the Notes shows that the SATS group agreed to use the 2013 and 2018 base cases for the Cochise County study. Ron replied that at the last Cochise County Study Group Meeting there was discussion of moving to the 2019 case. Ken stated that a lot of work went into the 2013 and 2018 cases and they are ready to run. Ron generally agreed, but stated that it will be necessary to develop a 2019 case for the study work that will go into the ACC Ten Year Plan filing.

Ken also asked about the Cochise County Study Scope found in the Notes - it has evolved considerably since the last SATS Meeting. Bruce replied that the Study Scope in the Notes is what was provided to Ken from Ron.

Bruce will fix the minor changes on pages 3 and 6, and will send out the final version of the notes in a few days.

### 4) Review Action Items from 2/12/09 Meeting

- Bruce - Invite Mike McErath of FMI to next SATS meeting to discuss increased FMI loads in the SATS Study Footprint. *Bruce stated that he did invite Mike to come to the meeting to discuss this, but Mike stated that he did not have anything to report due to the economic slowdown in the country. Don Stoneberger of FMI confirmed this, and added that the decrease in the price of copper is a major contributor to this slowdown, as far as FMI is concerned.*
- All - Provide Gary with latest load forecasts. *This will be discussed in greater detail under agenda item #9 SATS-Area Load Forecast Changes.*
- All - Provide Gary with new projects added to 10-year plans. *This will be discussed in greater detail under agenda item #8 New SATS-Area Projects Added between filing of 2008 and 2009 Ten-Year Plans.*
- Gary - Send out for review cases to be used for SATS Study. *This will be discussed in greater detail under agenda item #10 Power Flow Case Development Status.*

- All – Provide comments on cases by agreed upon deadlines. *Ditto – agenda item #10.*
- Ken – Send out e-mail for next CCTSG CC. *This item was completed.*
- Craig - Presentation on Fort Huachuca oversight on review of permits, proposed construction, etc. that impacts the Fort area. *This will be discussed in greater detail under agenda item #6 c Ft. Huachuca Senate Bill 1387 Presentation.*
- Joshua - Stimulus Package update and its impact to Western. *This will be discussed in greater detail under agenda item #7 Stimulus Package Update.*

#### 5) SATS 2009 Study Plan Review

- Presented plan & subsequent findings to SWAT, WestConnect and to local stakeholders.
  - December 5, 2008 SATS Conference Call
  - January 13, 2009 SWAT Meeting
  - *This item is complete*
- Revise load forecasts
  - TEP load forecast was revised in February 2009
  - *This will be discussed today under Agenda Item #7*
- Engage SATS in early case building to ensure accuracy of database for 2009 ten year planning cases:
  - Focus on Arizona for ten year planning to include cases for years 1 through 5 plus year ten;
  - Preparation for ACC ten year plans, RMR, BTA and compliance studies;
  - Provide support and documentation to other regulatory agencies such as FERC and Rural Utilities Service (RUS);
  - *This will be discussed today under Agenda Item #8*
- Investigate implications of increased FMI loads in SATS study footprint.
  - Seek input from, and participation by FMI, to address their anticipated plant expansion.
  - *As noted earlier FMI has nothing to discuss due to the economic downturn.*
- Investigate alternative configurations to mitigate high flows on the Winchester 345/230 kV transformer, Apache - Bicknell 230 kV line and 345/230 kV Bicknell transformer caused by EHV system contingencies;
  - *Nothing to report*
- Develop and evaluate alternatives to the two joint Tortolita - North Loop 345 kV proposal based on the SPPR Three Terminal Proposal;
  - *Nothing to report*
- Investigate impact of SunZia in coordination with CATS-EHV, NM, SWAT RTTF and other entities;
  - *Nothing to report*
- Develop and evaluate alternatives for joint SWTC/TEP substation(s) to supply TEP/Trico loads south of Tucson;
  - *Nothing to report*

- Continue Cochise County planning in an effort to comply with ACC recommendations;
  - *This will be discussed today under Agenda Item 6*
- May conduct studies to accommodate renewable projects;
  - *Nothing to report*
- Complete capital cost estimates and economic analysis, including losses;
  - *Nothing to report*
- Identify potential projects;
  - *Nothing to report*
- Conduct Scenario Sensitivity analysis, such as Load Forecast, Efficiency, Local Renewable Resources, Local & Distributed Generation, and location of external resources
  - *Nothing to report*

## 6) Cochise County

- a. Study Update. A Cochise County Study Group Meeting was held on March 25<sup>th</sup> at APS. The main effort for the group is to finalize the Consultant Study Scope. It was agreed by the 4 funding entities to sole source the Study to PDS Consulting. David Bryan has developed a letter agreement and Ken is looking for comments to the Study Scope and Letter Agreement. The expectation is to get an executed agreement so that PDS can get started on the study work. Ken is still looking for input on contingencies that need to be put into the Study Scope.

Ken informed the group that the location of CS2 Substation will be adjacent to Kartchner Substation. He is looking for comments on this and 7 items in David's recent e-mail to the group.

The December meeting notes were finalized at this meeting, but work is still needed on the January meeting notes.

- b. Discussion of Base Cases to Use. The Study Scope provides for 2 cases to be provided to PDS Consulting, with the results of the study to be presented in the utility 10 year plans. The issue then is do we want to produce a 2019 case? Discussion at the March 25<sup>th</sup> meeting led to bringing this issue before the general SATS membership. Ken expressed a concern about the time frame – at least 2 months – to develop a 2019 case. Ron replied that he doesn't feel that it is critical to use the 2019 case, however, TEP is anxious to get a 2019 case developed for the ACC 10 year plan study work. The 2019 case should be relatively easy to update from the existing WestConnect 2018 case.

Jim stated that he agreed with the two cases that have already been developed, 2013 and 2018, to be used for the Cochise County Study, but that work should proceed on developing the 2019 case. Ken replied that another thought is to allow the letter agreement to rule in this matter. If it is finalized by the time a 2019 case

is developed, then the group will use it. If not, then the group will use the 2013 and 2018 cases.

Joe replied that he had sent the CATS-HV 2019 case out yesterday which could be used. Any changes to this case need to be sent to Joe by tomorrow, April 3<sup>rd</sup>. APS replied that they did not have a problem with using this case for SATS.

David felt that the biggest issue will be on the solution for the Cochise County area.

Bruce offered up a suggestion that language be put into the Cochise County Study Report stating that the 4 funding entities are in agreement in using the 2018 case.

Ken stated that since the letter agreement is not finalized, then a decision doesn't need to be made at this time. If the 2019 case is available then we'll use it. If not, then we'll get the 2013 and 2018 cases to PDS Consulting.

An action item was developed asking the 4 funding entities of the Cochise County Study to get comments to Ken on the Study Scope and Letter Agreement asap.

- c. Ft. Huachuca Senate Bill 1387 Presentation. Senate Bill 1387 discusses areas of concern, not areas of exclusion. The fort is to have input, however, into study plans.

The pattern for the Fort Range Preservation Map of the area of concern is due to mountain ranges – it encompasses the entire valley where the Fort is located and includes all Line of Sight in the valley.

The law requires that as part of a permitting process, anything that is proposed to be built needs to have notification sent to the Fort. Also, disclosure of this notification is to be part of any land sales or home building permits.

Some entities that have a mission on the Fort caused this Bill to occur, but didn't realize its impact!

Part of the selection of the Preservation Range was cost related because there are areas where houses have been built that have garage door openers which impact the Radio Frequency in the area.

David asked if the permitting requirement applies to utility distribution lines. Craig Hansen replied that it applies to any permit – for housing, highway crossing, etc. Notification must go to the entities applying for the permit.

Dale Benth explained that the Fort has time limits for the review of these permits – 10 days on some and 30 days on others.

Craig stated that this new law doesn't give more "teeth" to the Fort than what it already has. He explained that the Electronic Proving Ground is what keeps the Fort in the area. He also stated that the law is not intended to restrict development in Cochise County but ensure that the Fort retains its critical mission and economic impact to the State.

A question was asked if the EMF issue could be reduced through the heights of transmission poles and increase in voltage levels. The type of construction is also critical whether wood, concrete or steel is used. Craig replied that the experts are not sure which has the most impact to emissions.

Ken stated that what is needed from the Fort is a preference for the type of construction that should be used and the best areas for location of new transmission line facilities.

## 7) Stimulus Package Update

- a. Western Presentation/Discussion. Josh Johnston stated that he does not have a lot of information to share with regards to the new Transmission Infrastructure Program or TIP. The Requests for Information (RFI) process ends tomorrow and he hopes to have answers then, i.e. which projects will be chosen.

BPA and Western were given \$3.2B for a borrowing authority and there are still lots of unresolved questions – mostly how they will get the money and how it will be paid back.

- b. Responses from SATS-Area to Western RFI. Ron stated that APS is drafting a cover letter for the utilities that are submitting RFI's. The joint cover letter is to be signed by all 4 utilities – APS, SRP, SWTC and TEP.

Gary briefly reviewed the Joint TEP/SWTC proposal, which is an upgrade of the Western Saguaro to Apache 115 kV Line. It is proposed as a double-circuit 230 kV line with the towers and one side of the line owned by Western.

SSVEC stated interest in this project and Ron asked them write a letter of support. Acciona will also send a letter of support. Ron accepted an action item to forward the RFI to SSVEC and Acciona.

Continuing his review of the RFI, Gary stated that the project follows the Western policy of upgrading 115 kV to 230 kV that has been consistent with their ten year planning process.

The project could provide additional transmission transfer capability of as much as 1,000 MW. This would increase Western customers' access to renewable energy zones with a potential of 5,000 MW or more of new renewable resources in southern Arizona.

Randy Etheridge of Acciona expressed that these numbers may be low for southern Arizona. He pointed out that across the border it is a 7.3 renewable zone and there is already a land rush there. However, there is no transmission to get it out.

Ken stated that it would be helpful if a renewable developer would sign onto this. Randy said that Acciona could support the project, but he wouldn't be able to put down the parent company, Acciona Energia, on the list. It would have to be Acciona Solar Power. Ron will add Acciona Solar Power to the RFI.

The last paragraph of the RFI will be removed, as it states the same information in the cover letter that APS is developing. A general statement will be left with reference to specific projects removed.

Gary also discussed a project in Mohave County – the North Havasu to Griffith 230 kV line. Since a CEC already exists for this line, it is a shovel-ready. There are large amounts of resources available in the area - approximately 260-860 MW. The North Havasu to Griffith 230 kV line would a good start to getting at these resources.

A question was raised about the environmental review of these projects. Josh stated that he was not sure if it would be a CX (categorical exclusion) or an EA. Most felt that it would likely not be a CX but an EA. Ken asked if Josh or someone could provide this information at the next CRT meeting.

The SRP RFI was also briefly discussed. Segment 1 is Oracle/Saguaro to ED2/Pinal Central and is planned as a double-circuit 230 kV line. Segment 2 is Pinal Central to Abel and is proposed as a double-circuit 500/230 kV line. If 500 kV is not feasible, then it will be a double-circuit 230 kV line. Segment 3 is Abel to Browning and Segment 4 is Browning to Pinnacle Peak. These last two segments are also planned as double-circuit 500/230 kV lines, but if 500 kV is not feasible, then they will be double-circuit 230 kV lines.

The APS RFI contains two projects. The first of these is the Arizona portion of the proposed Devers II to Palo Verde 500 kV line. The Western DSW upgrades to this project are as outlined in the WestConnect Transmission Plan. (Upgrading the 161 kV to 230 kV) The second project is in the Yuma area and involves the Palo Verde to North Gila #2 500 kV line. This line also has Western participation.

The recovery of Western's investment is not explicit in the Federal Register. The idea was expressed that this could help the acceptance of the projects. Ron felt that recovery could be accomplished by a roll-in of costs to either NITS or Point-to-Point revenue requirements.

John Kyei provided a short update on the SunZia project. A Comprehensive

Progress Report has been completed and will be submitted to WECC to initiate the path rating process.

#### 8) New SATS-Area Projects Added between filing of 2008 and 2009 Ten-Year Plans

APS had no changes to report. CAP had not changes to report also, but stated that there a few changes in the near term but these are contained in the SWTC ten year plan. Western stated that the most recent ten year plan shows that 2013 is when the proposed upgrades from Coolidge to the ED's take place. However, the Stimulus Plan could change this.

Jim provided an update to the upgrades planned for Bay 15 at Saguaro. APS and Western are doing the work. The first part of the upgrades to the Bay will take place this month and involve the upgrade of the switches. The second part of the upgrades will occur in September and involve the upgrade of CT's. Once this work is done, the limiting factor will be the conductor. Western stated that the change in ratings have already been incorporated into the cases starting in 2010 and beyond.

Bruce reviewed the SWTC changes.

#### 9) SATS-Area Load Forecast Changes

Gary produced a graph of the updates to the SATS Forecast for 2009. Updates to the data were not received from APS or CAP. CAP is assumed to be the same as last year.

The load is approximately 3,000 MW for 2009, rising to 3,800/3,900 in 10 years. TEP is the major player in the area with approximately 2,400 to 2,750 MW over 10 years. SWTC is next with approximately 425 MW to 750 MW over 10 years.

Ray Som pointed out that the Safford and Thatcher loads were not updated for this Forecast and an update to their loads would need to come from KRSA.

#### 10) Power Flow Case Development Status

- 2010-2014 and 2019 Heavy Summer Cases
- Cases sent out for review on February 16<sup>th</sup>.
- SATS Cases:
  - 2010 HS case to be developed from WECC 09HS3a (approved 2/4/09)
  - 2011-2014 HS cases to be developed from Cochise County 2013 case
  - Comments received from SWTC on March 10<sup>th</sup> and revisions received on March 23<sup>rd</sup>.
  - Comments received from Western on March 19<sup>th</sup>.
  - Comments received from APS on ???
  - 2019 – Waiting on WestConnect

The following outlines the most recent update to the case development effort:

- 2010 – TEP, SWTC, Western
- 2011 – TEP, SWTC, Western
- 2012 – TEP, SWTC, Western
- 2013 – TEP, SWTC, Western, APS
- 2014 – TEP, SWTC, Western
- 2018 – TEP, SWTC, Western, APS
- 2019 – currently being developed by PDS

The group suggested that the 2019 case being developed by CATS could be used instead of the WestConnect 2019 case. Joe stated that the WestConnect 2019 case should be out by this Friday for comment. However, Gary Romero replied that the 2019 case is up in the air because voting on the newly proposed WestConnect budget may preclude this case from being built.

Gary Trent suggested using the CATS 2019 case if the WestConnect 2019 case isn't built.

#### 11) Study Update

An update to SATS will be made at the SWAT Oversight Committee Meeting on May 19<sup>th</sup> in Albuquerque. It will involve:

- Review of Study Plan
- Load Forecast Update
- Case Development Schedule/Status
- Cochise County Summary
- Responses to Western RFI
- 2<sup>nd</sup> Quarter Stakeholder Meeting

Ken asked if there is an intent to publish a 2009 SATS Study Report. Gary replied yes – it is part of the Study Plan.

Gary will try to get the presentation to the group for an e-mail review before the SWAT meeting.

#### 12) 2<sup>nd</sup> Quarter Stakeholder Meeting Status

The time is fast approaching to get this meeting calendared. It is proposed to be a joint SWTC-TEP meeting as it has been in the past. A date of June 4<sup>th</sup> was suggested for the meeting, with the location to be determined; preferably the Tucson Airport Holiday Inn where the previous meetings have been held. Bruce accepted an action item to set-up the meeting location.

#### 13) Additional Items

John Kyei provided a short update on Bowie.

Joe announced that the CATS-HV subcommittee will host a Transmission Corridor Workshop on April 9<sup>th</sup> in Casa Grande. Development of a data base will be discussed at the meeting. The meeting is mostly at the request of Pinal County who would like have a data base that is GIS-based using SHAPE files. Pinal County has expressed a concern about some projects that are being planned without their knowledge.

Joe accepted an action item to send the agenda for the meeting to Bruce who will forward it to the general SATS membership.

#### 14) Review of Action Items

- The 4 funding entities of the Cochise County Study to get comments on Study Scope and Letter Agreement to Ken asap.
- Ron to forward the TEP/SWTC SOI to Western document to SSVEC and Acciona.
- Joe to provide the agenda for the CATS-HV Transmission Corridor Workshop, scheduled for April 9<sup>th</sup>, to Bruce for dissemination to SATS Membership.
- Gary to distribute the CATS-HV 2019 Base Case to SATS Membership and ask entities to provide updates to the case if they have not already done so.
- Gary to ask Ron if the TEP/SWTC SOI to Western can be sent to the entire SATS Membership.
- Bruce to set-up the meeting location for the Joint TEP/SWTC 2<sup>nd</sup> Quarter Stakeholder Meeting that is scheduled for June 4<sup>th</sup>.

#### 15) Next Meeting Agenda

The agenda items for the next meeting are proposed as follows:

- Review/Approve Meeting Notes
- Case Development Status
- Study Update
- Cochise County Update
- SWAT Oversight Review
- Western Update on SOI's Received

#### 16) Next Step(s)/Meeting

After some discussion, it was decided that the next meeting will be on June 4<sup>th</sup>, the same day as the 2<sup>nd</sup> Quarter Stakeholder Meeting.