



Southwest Power Pool
ECONOMIC STUDIES WORKING GROUP
February 11th, 2015
Net Conference

• SUMMARY OF ACTIONS TAKEN •

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• MINUTES •

Agenda Item 1 – Administrative Items

Agenda Item 1a - Call to Order, Introductions

Chair Alan Myers (ITC Great Plains) called the meeting of the Economic Studies Working Group (ESWG) to order at 2:06 PM, welcomed those in attendance, and asked for introductions.

There were 50 participants representing 10 of 13 ESWG members. (Attachment 1 – February 11th, 2015 Attendance List)

Agenda Item 1b – Receipt of Proxies

Alan Myers (ITC Great Plains) asked for any proxy statements. One proxy was identified; Kip Fox (AEP-Transource) named Wayman Smith (AEP) as his proxy. (Attachment 2 – Proxy Statements)

Agenda Item 1c – Review of Agenda

Chair Alan Myers (ITC Great Plains) presented the agenda for review and asked for any additions or corrections. (Attachment 3 – February 11th, 2015 Agenda)

Paul Dietz (Westar) made a motion; seconded by Kurt Stradley (LES) to adopt the agenda. The motion was approved unanimously.

Agenda Item 2 – RCAR II Modeling Discussion

Josh Ross (SPP Staff) presented on the RCAR II modeling techniques. On January 29th, Staff presented to the group two modeling issues to be addressed. Staff agreed to bring additional data and recommendations on the issues at a later date. These two issues were discussed in more depth.

The first issue for discussion was Trapped Generation Pockets, and how preliminary PROMOD runs are showing west KS zones having negative APC savings, even though their more expensive generation is being displaced with cheaper generation in the change case. Staff presented a short-term recommendation of leaving the modeling technique as is for RCAR II, but developing a long-term solution for future RCAR base cases in which wind is moved to zonal load centers if it is dependent on the transmission being evaluated. Members were uncertain about leaving the model as is, and requested further analysis and results for the following options:

- Current approach
- Moving wind to zonal load centers in base case
- Removal of wind in base case
- Hybrid between the current approach and removal of wind approach
- Incremental approach in which some of the transmission upgrades are included in the base case

The second issue for discussion was Load Pockets. A load pocket in SPS is showing excessive emergency generation and breaching constraints in preliminary base case runs, causing high LMPs and resulting in high APC. Staff presented two short-term options as alternatives to the current approach – adding reliability upgrades to the base case, and adding new CTs to the load pocket in the base and change cases. Adding CTs to the load pocket in the base and change cases was the long-term recommendation. There was concern over the idea of adding CTs to the change case when they are only needed for resolving issues in the base case. Members requested to see results for the addition of CTs



to the load pocket in the base case, both with and without the consideration of capital costs for the new CTs.

ACTION ITEM: SPP Staff to provide results for the different approaches to RCAR II modeling issues.

The last topic of discussion was Patrick McCool's request that the RCAR II models be modified to incorporate the removal of some KCPL/GMO units that have been publically announced to no longer be running on coal in 2016. Staff stated that the current direction from RARTF is to use the ITP10 models and modeling assumptions, and to complete the assessment by July 2015.

Patrick McCool (KCPL) made a motion; seconded by Randy Collier (CUS) to recommend to the RARTF that certain KCPL units be turned off in the RCAR II models. The motion failed with 2 yes votes, 6 no votes, and 1 abstention.

Paul Dietz (Westar) made a motion to allow members to take general modifications regarding the RCAR II models to the RARTF. The motion failed as it did receive a second.

Closing Items

Chair Alan Myers (ITC Great Plains) requested other items meriting discussion.

List of action items from the meeting:

1. SPP Staff to provide results for the different approaches to RCAR II modeling issues.

The meeting was adjourned at 5:00 PM.

Respectfully Submitted,

Kelsey Allen
ESWG Secretary

Name

Brian Moix
Kurt Stradley (LES)
Blaine Erhardt
Brian Buffington (Xcel Energy)
Leon Howell
Paul Dietz
Bill Leung (NPRB)
Steve Gaw
ed pfeiffer (quanta)
John Knofczynski
Bennie Weeks
Jeremy Severson
Jon Iverson
Michael Wegner (ITC)
Terri Gallup (AEP)
Dennis Reed
Kirk Hall
Jason Shook (GDS/ETEC)
Wayman Smith
Tamika Barker
Michael Watt (OMPA)
John Boshears
Mike Knapp (OCC)
Robert Stillwell (INDN)
Adam McKinnie
Jon Shipman (OPPD)
Tom DeBaun (KCC)
Tim Owens (NPPD)
Alan Myers
Nathan McNeil - WERE
Anita
sam loudenslager (SPP)
Rosemary Mittal
Randy Collier (CUS)
Jason Chaplin (OCC)
Cindy Ireland (AR PSC)
Pat McCool
Tim Soles (Occidental)
Jason Schmidt (Xcel)
Jeremy Harris
Jerry Bradshaw (SPRM)
Kim McClafferty (NorthWestern Energy)
John Olsen
Joe Fultz
Meena Thomas
Jim Jacoby - AEP

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1. Kip Fox (AEP Transource) proxy to Wayman Smith (AEP)

From: Kip M Fox [mailto:kmfox@aep.com]
Sent: Monday, February 02, 2015 2:53 PM
To: Kelsey Allen; Myers, Alan; Juliano Freitas
Cc: Smith, Wayman
Subject: Re: ESWG 2/10 Meeting Times

Please let this email serve as allowing Wayman Smith my proxy for the ESWG conf call. Thank you - Kip

Sent from my iPad
Kip Fox

972-400-1384 cell



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• A G E N D A •

2:00 pm – 5:00 pm

1. Administrative items
 - a. Call to Order, Introductions..... Alan Myers (5 minutes)
 - b. Receipt of Proxies Kelsey Allen (1 minute)
 - c. Review of Agenda Alan Myers (1 minute)
2. RCAR II Modeling Discussion SPP Staff
3. Closing Items All

RCAR II Modeling Discussion

February 11th, 2015

ESWG



Helping our members
work together to
keep the lights on...
today and in the future

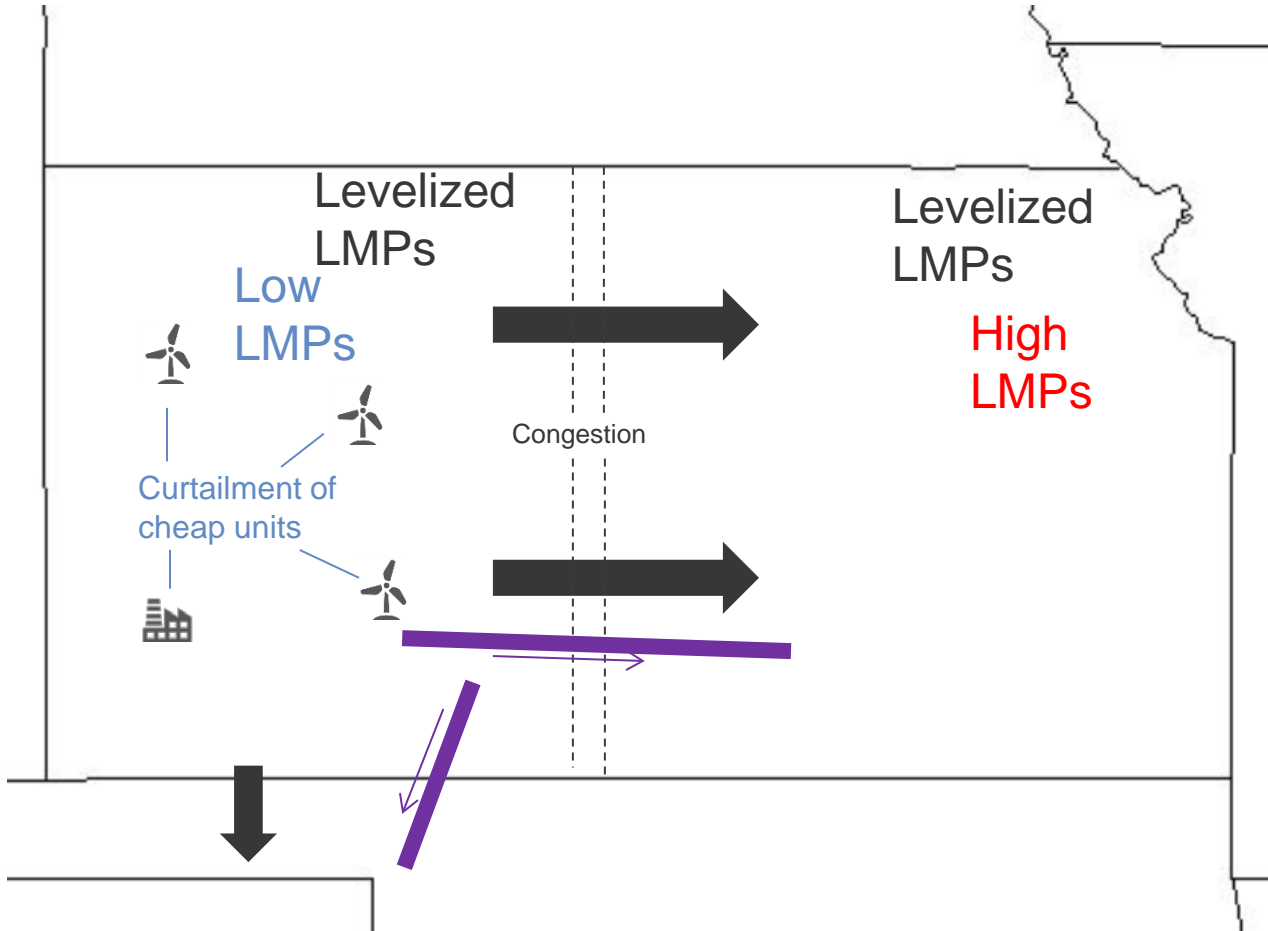
Economic Modeling Issues Technical Discussion

- **1/29:** Introduced the 2 issues, agreed to bring more material for discussion in future conference call
- **2/11:** Discuss the issues in more depth, request approval of recommendation
- **2/19:** Continue discussion, deadline for finalization

Economic Modeling Issues

- **When removing all HWBW upgrades to create a base case, the resulting model is transmission-deficient.**
 - Results in a couple of modeling issues identified by Staff
 - These modeling issues are expected to increase as time progresses
- **Staff has developed recommendations for short- and long-term solutions to two modeling issues**

Issue #1: Trapped Generation Pockets



Base Case

Lack of transmission ->
 Curtailment of cheap units ->
 Large LMP differential ->
 Low LMP purchase prices in west KS ->
Low APC

Change Case

Robust transmission ->
 Cheap units generate more->
 Levelized LMPs ->
 Moderate LMP purchase prices in west KS ->
Moderate APC

Under current approach:

- APC savings is negative for west KS zones, even though the new transmission unleashes more of their cheap generation.
- Conversely, APC savings for zones to the east will be inflated due to artificially high LMPs in the base case

Load and gen are identical
 between base and change cases

Issue #1: Trapped Generation Pockets

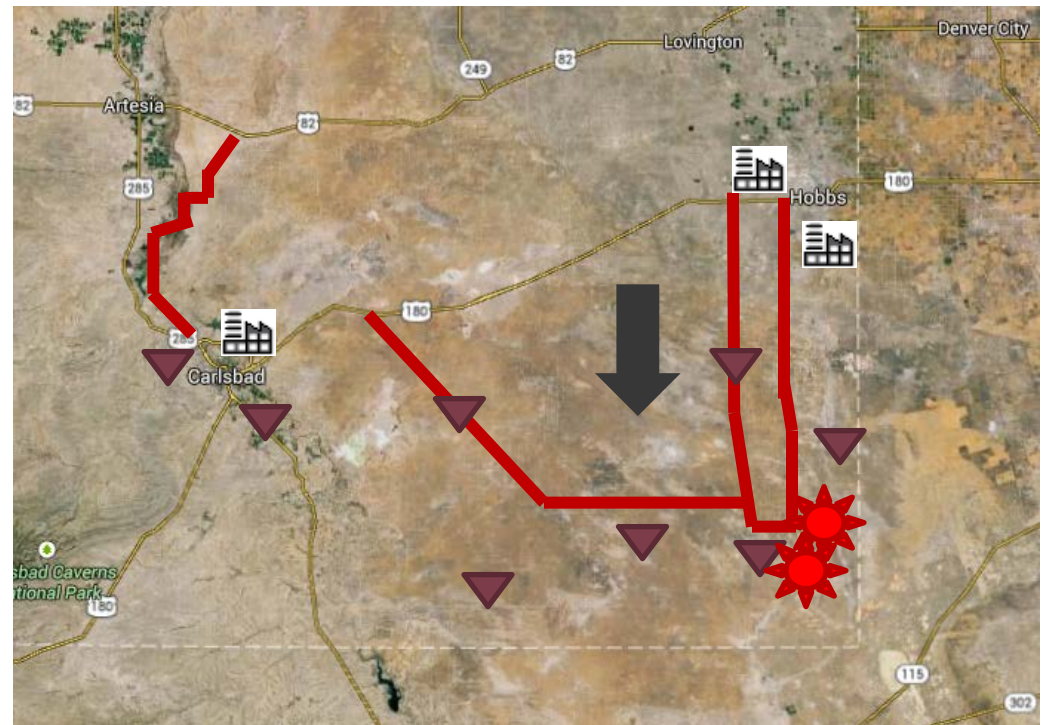
- **West KS zones are showing negative APC savings, even though their more expensive generation is being displaced with cheaper generation in the change case**
 - This issue is created due to the modeling approach adopted in the RCAR process
 - When the economic models are transmission-deficient, current modeling practices overstate the separation of prices between zones
 - Impact more pronounced in smaller zones
 - Model does not recognize that wind interconnection was granted subject to transmission upgrades

Issue #1: Solutions

- **Long-Term Solution Recommendation: Move wind to the zonal load centers**
 - Move wind only if it is dependent on the HWBW transmission
 - Decreases capacity factors
 - Zones still meet their public policy mandates/goals
- **Short-Term Solution Recommendation: Continue with current modeling practices for the RCAR II**
 - Pursue long-term approach through ESWG review and vetting

Issue #2: Load Pockets

- Load pocket does not have enough transmission to serve load in base case
- Excessive emergency gen and breaching constraints are causing high LMPs in the base case, resulting in high APC
- Initial 1-year SPS APC benefit: \$1.2B
 - Benefit > 1/3 of their total APC



Issue #2: Solutions

– 2 Short-Term Solution Options

▪ Add reliability projects to base case

– Does not account for potential economic benefit of the reliability projects

» Reliability projects are not approved based on economics

» Although there is often some APC benefit for reliability projects, it is typically less than the cost

▪ Add new CTs to load pocket of base and change case models

– Consistency between base and change cases

– Would need vetting and approval of additional resources

– Long-Term Solution Recommendation

▪ Add new CTs to load pocket of base and change case models