



Southwest Power Pool

ECONOMIC STUDIES WORKING GROUP/TRANSMISSION WORKING GROUP

December 14th, 2016

Net Conference

• SUMMARY OF ACTIONS TAKEN •

1. The ESWG and TWG approved the completion of the portfolio consolidation, project staging, sensitivity analysis, benefit metrics, and rate impacts milestones as outlined in the 2017 ITP10 scope.
2. The ESWG and TWG endorsed the merits of the technical work performed by SPP staff to develop a portfolio of recommended projects for consideration by the SPP MOPC and Board of Directors.



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• MINUTES •

Agenda Item 1 – Administrative Items

Agenda Item 1a - Call to Order, Introductions

Chair Alan Myers (ITC) and Vice-Chair Nathan McNeil (WERE) called the joint meeting of the Economic Studies Working Group (ESWG) and Transmission Working Group (TWG) to order at 3:00 PM, welcomed those in attendance, and asked for introductions.

There were 63 web conference participants. (Attachment 1 – December 14th, 2016 Attendance List)

Agenda Item 1b – Receipt of Proxies

Alan Myers (ITC) asked for any proxy statements from ESWG members; two proxies were identified. Leon Howell (OGE) named Zac Hager (OGE) as his proxy and Jon Iverson (OPPD) named Jon Shipman (OPPD) as his proxy.

Nathan McNeil (WERE) asked for any proxy statements from TWG members; four proxies were identified. John Fulton (SPS) named Rene Miranda (SPS), Dan Lenihan (OPPD) named Josh Verzal (OPPD), Travis Hyde (OGE) named James Thomas (OGE), and Noman Williams (SCMCN) named Eric Burkey (SCMCN), as their proxies respectively

(Attachment 2 – Proxy Statements).

Agenda Item 1c – Review of Agenda

Chair Alan Myers (ITC) presented the agenda for review and asked for any additions or corrections. (Attachment 3 – December 14th, 2016 ESWG/TWG Agenda). It was suggested that we simply continue with any item that was not reviewed at the previous meeting and items that needed further discussion.

Agenda Item 2 – 2017 ITP10 Assessment

Kelsey Allen (SPP Staff) and Liz Gephardt (SPP Staff) continued the discussion of the additional analysis conducted for the Texas Panhandle target area. During the discussion of the Texas Panhandle target area some stakeholders requested staff to identify the project type of the new Potter – Tolk 345 kV line. SPP staff informed the group that the Potter – Tolk 345 kV line is being recommended as an economic project.

SPP staff asked for approval from the ESWG and TWG for the completion of the portfolio consolidation, project staging, sensitivity analysis, benefit metrics, and rate impacts milestones as outlined in the 2017 ITP10 scope. In the discussion, Bethany King (EDE) shared her concern about the updated wind profiles not being used in the benefit metrics.

Jody Holland (SCMCN) made a motion accepting the SPP staff recommendation for completion of the 2017 ITP10 milestones as scoped for the ESWG; Tim Owens (NPPD) seconded. The ESWG approved the motion unanimously.

John Boshears (CUS) made a motion accepting the SPP staff recommendation for completion of the 2017 ITP10 milestones as scoped for the TWG; Jason Shook (GDS) seconded. The TWG approved the motion unanimously.

SPP staff also asked both working groups for their endorsement of the merits of the technical work performed by SPP staff to develop a portfolio of recommended projects for consideration by the SPP MOPC and Board of Directors. Staff received a request to explain why projects included in the



Consolidated Portfolio, between Futures 1 and 2, were not included in the staff Recommended Portfolio. SPP staff pointed out that the Consolidated Portfolio did not consider the knowledge and analysis from the side bar work or additional project analysis work, as well as additional considerations of current operational issues and the expected firmness of the drivers of each project. SPP staff generally made recommendations considering the impact of model updates (including corrections and previously issued NTC projects), whether or not the project performed well in more than one scenario (Future 1, Future 3, or expected to relieve current operational issues), additional investigation of drivers that could be speculative, as well as recognizing the economic nature of some needs that were originally classified as reliability. In the discussion, Zac Hager (OGE) reiterated his initial concerns with recommending any project selected for Future 1 or 2 and his appreciation for the additional effort SPP staff took to make a recommendation on each project individually.

The motion for the ESWG was made by Jody Holland (SCMCN) and seconded by Kurt Stradley (LES) to endorse the technical merits of the work completed by SPP staff. The ESWG approved the motion unanimously.

The motion for the TWG was made by John Boshears (CUS) and seconded by Richard Dahl (MRES). The TWG approved the motion with a unanimous vote.

(Attachment 4 – 2017 ITP10 Recommended Portfolio).

Agenda Item 3 – 2017 ESWG/TWG Quarterly Meeting Schedule Update

There was an update to the February Joint Meeting, which will now be on Wednesday, February 15th, 2017 from 8:00 am to 12:00 pm.

Closing Items

It was suggested that SPP staff complete benefit metrics on the recommended portfolio prior to MOPC and BOD meetings.

The meeting was adjourned at 4:32 PM.

Respectfully Submitted,

Kelsey Allen
ESWG Secretary
Kirk Hall
TWG Secretary

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Jeremy Severson
Joe Fultz
Eric Burkey
David Binkley
Bryan Rushing
James Thomas
Zac Hager
Michael Mueller
Brian Johnson - AEP
reene miranda
Jason Mazigian
Harold Wyble (KCPL)
John Boshears
David Sargent

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dave.sargent@swpa.gov

ESWG Proxy Statements

1. Leon Howell (OGE) proxy to Zac Hager (OGE)

From: Howell, Leon
Sent: Tuesday, December 13, 2016 12:28 PM
To: Kelsey Allen
Cc: Myers, Alan; Hager, Zac; Hyde, Travis
Subject: **External Email** ESWG/TWG Dec. 14 proxy

Kelsey,
Zac Hager has my proxy for the Dec. 14 ESWG/TWG meeting.
Leon

2. Jon Iverson (OPPD) proxy to Jon Shipman (OPPD)

From: Iverson, Jon
Sent: Tuesday, December 13, 2016 4:28 PM
To: Kelsey Allen; Myers, Alan
Cc: Shipman, Jon; Lenihan, Dan
Subject: **External Email** OPPD ESWG proxy for 12/14/16 ESWG meeting

Kelsey, Alan,
Jon Shipman has OPPD's ESWG proxy for tomorrow's net conference meeting.
Thanks,
Jon



Jon Iverson, PE
Energy Marketing and Trading
Omaha Public Power District
444 South 16th Street Mall, 10E/EP-1, Omaha, NE 68102
402-514-1015

TWG Proxy Statements

Yes. Forgot about that one.

Sent from my iPhone

On Dec 14, 2016, at 3:00 PM, Kirk Hall <khall@spp.org<<mailto:khall@spp.org>>> wrote:

XCEL ENERGY SECURITY NOTICE: This email originated from an external sender. Exercise caution before clicking on any links or attachments and consider whether you know the sender. For more information please visit the Phishing page on XpressNET.

John,

Did you intend for Rene to have it for the joint TWG/ESWG Call as well? It's about to start.

Kirk Hall
Sr. Engineer
Reliability Planning
501.688.8230

<image001.jpg>

From: Fulton, John
Sent: Tuesday, December 13, 2016 10:55 AM
To: Kirk Hall <khall@spp.org<<mailto:khall@spp.org>>>; Hyde, Travis <hydetsd@oge.com<<mailto:hydetsd@oge.com>>>
Cc: Miranda, Reene' <rene.miranda@xcelenergy.com<<mailto:rene.miranda@xcelenergy.com>>>
Subject: **External Email** SPS Proxy for TWG Call on Dec. 14, 2016
Importance: High

I will be out of town on business Dec. 14 and unable to participate in the TWG call. Rene Miranda will have my proxy and can vote on any matters for SPS/XE.

John S. Fulton
Xcel Energy | Responsible By Nature
Manager, Transmission Planning South
600 South Tyler, 27 Amarillo, TX 79101
P: 806.378.2193 C: 806.679.0801 F: 806.378.2702
E: John.Fulton@xcelenergy.com<<mailto:John.Fulton@xcelenergy.com>>

XCELENERGY.COM<<http://XCELENERGY.COM>>

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Kirk,

Josh Verzal will be my proxy for the joint ESWG/TWG meeting on the afternoon of 12/14/16.

Thanks,

Dan Lenihan, P.E.

Director – Planning & Strategy

Energy Delivery

Omaha Public Power District

Energy Control Center, ECC-5

Voice: (402) 552-5126

Email: djlenihan@oppd.com

From: bounce-55227-94369@spplist.spp.org [<mailto:bounce-55227-94369@spplist.spp.org>] **On Behalf Of** Audrey White

Sent: Monday, December 12, 2016 5:09 PM

To: Economic Studies Working Group - Created by MSB 5/5/09

Subject: ESWG/TWG Joint 12/14/16 Agenda & Background Materials posted

External Email Notice

Think before you click!

Email sent from bounce-55227-94369@spplist.spp.org

ESWG/TWG Joint 12/14/16 Agenda & Background Materials have been posted to the SPP website for your review at the link shown below:

[ESWG Meeting Materials](#)

[ESWG/TWG Joint 12/14/16 Online Registration](#)

Audrey White | Administrative Assistant | awhite@spp.org | 501-688-2531 | C-501-350-1158

201 Worthen Drive | Little Rock, AR 72223-4936

Southwest Power Pool | SPP.org | twitter.com/SPPorg | facebook.com/SouthwestPowerPool

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

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Kirk – I will be engaged at the NERC PC meeting tomorrow during both the TWG and the Joint TWG/ESWG meetings so I will provide a proxy to Eric Burkey for both meetings

Noman Williams

Senior Vice President Engineering & Operations, COO

South Central MCN, LLC

Midcontinent MCN, LLC

Mid-Atlantic MCN, LLC

Phone: 816-492-2014

Cell: 785-259-5110

Nwilliams@gridliance.com

Kirk,

James Thomas will have my proxy for tomorrow.

Thanks,

Travis D. Hyde, PE

Director

OG&E T&D Planning

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hydetsd@oge.com

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ECONOMIC STUDIES WORKING GROUP/TRANSMISSION WORKING GROUP

December 14th, 2016

Net Conference

• A G E N D A •

3:00pm – 5:00pm

1. Administrative Items
 - a. Call to Order, Introductions..... Alan Myers (5 minutes)
 - b. Receipt of Proxies Kelsey Allen (1 minute)
 - c. Review of Agenda¹ Alan Myers (1 minute)
2. 2017 ITP10 Assessment (Approval Item)..... SPP Staff (90 minutes)
 - a. Portfolio Consolidation and Project Staging
 - b. Sensitivity Analysis
 - c. Benefit Metrics
 - d. Rate Impacts
 - e. Project Recommendations
3. 2017 ESWG.TWG Quarterly Meeting Schedule Update..... All (5 minutes)
8. Closing Items All (5 minutes)

¹ Background Material Included

*Relationship-Based • Member-Driven • Independence Through Diversity
Evolutionary vs. Revolutionary • Reliability & Economics Inseparable*



75

SEVENTY-FIVE YEARS OF
RELIABILITY THROUGH RELATIONSHIPS



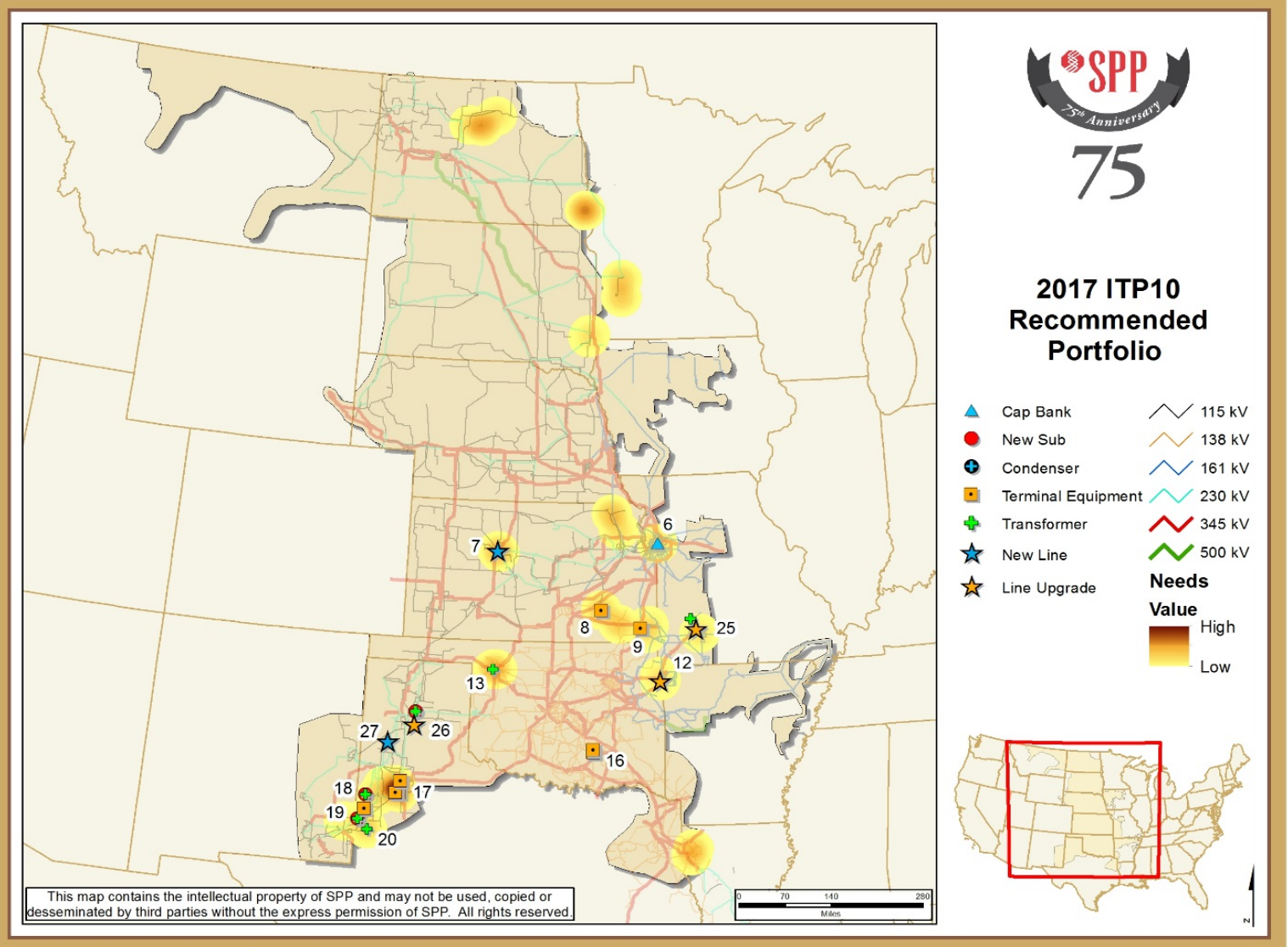
2017 ITP10 Assessment Recommendations

December 14th, 2016

ESWG/TWG

SPP Staff

2017 ITP10 Recommended Portfolio



2017 ITP10 Recommended Portfolio

Label on Map	Project Description	Area(s)	Type	Cost Estimate (2017\$)	Mileage	Need Date
6	Add 2 ohm Series reactor to Northeast - Charlotte 161 kV line	KCPL	E	\$512,500	-	2018
8	Upgrade any necessary terminal equipment at Butler and/or Altoona to increase the rating of the 138 kV line between the two substations to a summer emergency rating of 110 MVA.	WR	E	\$244,606	-	2017
9	Upgrade any necessary terminal equipment at Neosho and/or Riverton to increase the rating of the 161 kV line between the two substations to a summer emergency rating of 243 MVA.	WR/EDE	E	\$114,154	-	2017
13	Install one (1) 138 kV phase shifting transformer at Woodward EHV along with upgrading relay, protective, and metering equipment, and all associated and miscellaneous materials.	OGE	E	\$7,459,438	-	*2017
7	Build a new second 230 kV line from Knoll to Post Rock.	MIDW	E	\$3,389,019	1	2017

* Current NTC in service date

2017 ITP10 Recommended Portfolio

Label on Map	Project Description	Area(s)	Type	Cost Estimate (2017\$)	Mileage	Need Date
18	Tap the intersection of the 230kV line from Tolk to Yoakum and the 115 kV line from Cochran to Lehman Tap and terminate all four ends into new substation. Install new 230/115 kV transformer at new substation.	SPS	E	\$11,961,951	-	*2019
19	Tap the existing 230kV line from Hobbs to Yoakum and the existing 115 kV line from Allred Tap to Waits. Terminate all four end points into new substation. Install 230/115 kV transformer at new Hobbs - Yoakum Tap substation.	SPS	E/R	\$9,953,077	-	*2018
20	Replace first existing 230/115 transformer at Seminole. Replace second existing 230/115 transformer at Seminole.	SPS	E	\$7,423,880	-	*2018
12	Rebuild 2.1-mile 161 kV line from Siloam Springs (AEP)-Siloam Springs City (GRDA) and upgrade terminal equipment at Siloam Springs (AEP) and/or Siloam Springs City (GRDA) to increase the rating of the line between the substations to at least 446/446 (SN/SE)	AEP/GRDA	E	\$5,185,885	2.1	2017

* Current NTC in service date

2017 ITP10 Recommended Portfolio

Label on Map	Project Description	Area(s)	Type	Cost Estimate (2017\$)	Mileage	Need Date
	Install a 345/161 kV transformer at Morgan substation and upgrade the Morgan - Brookline 161 kV line to summer emergency rating of 208 MVA and winter emergency rating of 232 MVA.	AECI	E	\$9,481,250	-	2017
	Upgrade any necessary terminal equipment at Martin, Pantex North, Pantex South, and Highland tap to increase the rating of the 115 kV lines to 175/175 MVA (SN/SE).	SPS	E	\$682,034	-	2017
16	Upgrade any necessary terminal equipment at Tupelo and/or Tupelo Tap to increase the rating of the 138kV line between the two substations to a summer and winter emergency rating of 169/201 MVA. Upgrade terminal equipment at Lula and/or Tupelo Tap to increase the rating of the line between the substations to 171/192 (SN/SE).	OGE/WFEC	E	\$102,500	-	2020
	Build new 345 kV line from Potter to Tolk	SPS	E	\$147,790,334	103	2017

* Current NTC in service date