



**Southwest Power Pool
TRANSMISSION/ECONOMIC STUDIES WORKING GROUP MEETING**

November 29, 2017

Net Conference

• Summary of Action Items •

1. None



Southwest Power Pool
TRANSMISSION/ECONOMIC STUDIES WORKING GROUP MEETING
November 29, 2017
Net Conference

• M I N U T E S •

Agenda Item 1 – Administrative Items

Call to Order

TWG Chair Travis Hyde called the meeting to order at 12:31 pm. The following members were in attendance (Attachment 1a – Attendance):

TWG

Travis Hyde (Chair), Oklahoma Gas & Electric
Daniel Benedict, City of Independence
Scott Benson, Lincoln Electric System
John Fulton, Southwestern Public Service Company
Joe Fultz, Grand River Dam Authority (Phone)
James Ging, Kansas Power Pool
Kalun Kelley, Western Farmers' Electric Cooperative
John Knofczynski, East River Electric Power Cooperative
Dan Lenihan, Omaha Public Power District
Randy Lindstrom, Nebraska Public Power District
Jim McAvoy, Oklahoma Gas & Electric
Matt McGee, American Electric Power
Nathan McNeil, Midwest Energy Inc.
Michael Mueller, Arkansas Electric Cooperative Corporation
Alan Myers, ITC Great Plains
John Payne, Kansas Electric Power Cooperative
Chris Pink, Tri-State Generation and Transmission
Matthew Stoltz, Basin Electric Power Cooperative
Harold Wyble, Kansas City Power & Light

ESWG

Alan Myers (Chair), ITC Great Plains
Natasha Henderson, Golden Spread Electric Cooperative
Leon Howell, Oklahoma Gas & Electric
Jon Iverson, Omaha Public Power District
Bethany King, Empire District Electric
John Olsen, Westar Energy, Inc.
Tim Owens, Nebraska Public Power District
Jeremy Severson, Basin Electric Power Cooperative
Anita Sharma, American Electric Power
Kurt Stradley, Lincoln Electric System
Michael Watt, Oklahoma Municipal Power Authority
Bennie Weeks, Southwestern Public Service Company

Proxies



One proxies (Attachment 1b – Proxies) were provided prior to the meeting by TWG members. Proxies were provided to the following:

- Jerry Bradshaw (CUS) proxy from John Boshears (CUS)

Kirk Hall and Amber Greb, SPP staff, informed their respective chair that the groups had achieved a quorum.

Agenda Item 2 – Mountain West Education Session

Antoine Lucas, SPP staff, reviewed the Mountain West Transmission Group Educational Session materials (Attachment 2 – MWTG Education Materials) with the TWG and ESWG. The TWG, ESWG, and other stakeholders discussed the similarities and differences with Antoine and Chris Pink (Tri-State G&T). Specific items discussed included the Mountain West local planning process, the competitive project minimum requirements and the cost allocation for projects in the West. Members also asked questions related to the governance differences requested by the Mountain West.

Seeing as there was no further business, the meeting adjourned at 2:28 pm.

Respectfully Submitted,

Kirk Hall
TWG Secretary

Amber Greb
ESWG Secretary

All sessions in Central Standard Time (Chicago, GMT-06:00)

Session detail for 'TWG/ESWG Net Conference':

Participant Name	Email
1 Blake Poole	bpoole@spp.org
2 Wayne Penrod	wpenrod@sunflower.net
3 Bennie Weeks(SPS)	bennie.weeks@xcelenergy.com
4 Josh	jrawley@burnsmcd.com
5 Don Frerking (KCP&L)	don.frerking@kcpl.com
6 Liz Gephardt (SPP)	lgephardt@spp.org
7 John Stephens	John.Stephens@cityutilities.net
8 Mary Ann	mzehr@tristategt.org
9 Jordan Schmick	jordan.h.schmick@xcelenergy.com
10 David Sargent	dave.sargent@swpa.gov
11 Nathan McNeil	nmcneil@mwenergy.com
12 Daniel Benedict (INDN)	dbenedict@indepmo.org
13 John Olsen	john.olsen@westarenergy.com
14 Jim McAvoy	jmcavoy@ompa.com
15 Joseph Meier	joseph.meier@navigant.com
16 Harold Wyble (KCPL)	harold.wyble@kcpl.com
17 Kalun Kelley (WFEC)	k_kelley@wfec.com
18 Jeff Knottek	jeff.knottek@cityutilities.net
19 TJ Newkirk	tnewkirk@otpc.com
20 743 978 157	richard.seide@apexcleanenergy.com
21 Alan Decker	Alan.Decker@GRDA.com
22 reene.miranda	rene.miranda@xcelenergy.com
23 Sherri Maxey	smaxey@spp.org
24 Meena (PUCT)	meena.thomas@puc.texas.gov
25 Adam Mummert	amummert@burnsmcd.com
26 Bob Tallman OG&E	tallmarj@oge.com
27 Kurt Stradley and Scott Benson	kstradley@les.com
28 Chris Cranford (SPP)	ccranford@spp.org
29 Travis Hyde	hydtd@oge.com
30 Steve Gaw	rsgaw1@gmail.com
31 Calvin Daniels (WFEC)	calvin.daniels@wfec.com
32 Dan Lenihan	djlenihan@oppd.com
33 Gayle Freier	gfreier@spp.org
34 Dave Silver	dwsilver@aep.com
35 Jason Speer	jspeer@spp.org
36 Ashley Gibbons (Xcel)	ashley.gibbons@xcelenergy.com
37 larry holloway	lholloway@kpp.agency
38 Kelsey Allen	kallen@spp.org
39 Jason Mazigian	jmazigian@bepc.com
40 Sara McQuillen	smcquillen@schiffhardin.com
41 jseverson	jseverson@bepc.com
42 Leon Howell	howelllc@oge.com
43 Michael Watt (OMPA)	mwatt@ompa.com
44 Ben Hammer	hammer@wapa.gov

45 Charles Shue (ITC)	cshue@itctransco.com
46 Holli Krizek	krizek@wapa.gov
47 Jim Hirning (WAPA-RMR)	hirning@wapa.gov
48 Parker	parker@wapa.gov
49 Randy Lindstrom	rrlinds@nppd.com
50 Brian Johnson (AEP)	bajohnson1@aep.com
51 James Ging(KPP)	jging@kpp.agency
52 Chris Hagman (ATC)	chagman@atcllc.com
53 Dory Batka - BHE	dory.batka@blackhillscorp.com
54 Sherri Maxey	smaxey@spp.org
55 Sherri Maxey	smaxey@spp.org
59 Jim Jacoby (AEP)	jwjacoby@aep.com
60 Dave Hardy	dhardy@tristategt.org
61 Dona Parks (GRDA)	dparks@grda.com
62 Leslie James	creda@creda.cc
63 Blaine Erhardt	berhardt@bepc.com
64 Chenal WebEx	awhite@spp.org
65 Yohan Sutjandra (TEA)	ysutjandra@teainc.org
66 Jeremy Severson	jseverson@bepc.com
67 HweePing Won	hwon@spp.org
68 Robert Stillwell (INDN)	rstillwell@indepmo.org
69 Kass Portra	portra@wapa.gov
70 Jerry Bradshaw (SPRM)	jerry.bradshaw@cityutilities.net
71 Sam Zewdie	ss.zewdie@midwestreliability.org
72 Jarrod Wolford (NTEC)	jwolford@ntecpower.com
73 Josie Daggett	daggett@wapa.gov
74 Aaron Vander Vorst	avandervorst@tradewindenergy.com
75 Frederic Belanger (HQUS)	belanger.frederic.2@hydro.qc.ca
76 matthew stoltz	mstoltz@bepc.com
77 Adam McKinnie	adam.mckinnie@psc.mo.gov
78 Tim Cerveny	tcerveny@nmppenergy.org
79 Michael Mueller	michael.mueller@aecc.com
80 Robert Safuto (Customized Energy Solutio	rsafuto@ces-ltd.com
81 Lisa	lisa.sot@enel.com
82 Brian Rounds (AESL)	brian.rounds@aeslconsulting.com
83 Rebekah Kelman	rkelman@gridliance.com
84 Derek Johnson	jjohnson@spp.org
85 Noel Darce	ndarce@stonepigman.com
86 John Bell (KCC)	j.bell@kcc.ks.gov
87 Michael Engleman	michael.engleman@squirepb.com
88 Dirk Shulund	shulund@wapa.gov
89 Ryan Yokley	ryokley@sunflower.net
90 Antoine Lucas	alucas@spp.org
91 Michael Wegner (ITC)	mwegner@itctransco.com
92 Natasha	nhenderson@gsec.coop
93 Ben Elsey (SPS)	ben.r.elsey@xcelenergy.com
94 Dori Quam	dori.quam@northwestern.com

95 John Weber (MRES)	john.weber@mrenergy.com
96 Derek Brown	derek.brown@westarenergy.com
97 Rodney Massman	Rodney.Massman@psc.mo.gov
98 Steve Hohman	shohman@oppd.com
99 Anita Sharma (AEP)	asharma@aep.com
100 Clayton Mayfield (SPP)	cmayfield@spp.org
101 John Fulton	john.fulton@xcelenergy.com
102 James Bailey (SPP)	jbailey@spp.org
103 Rachel Hulett	rhulett@gridliance.com
104 Casey Petty	cpetty@gridliance.com
105 Scott Rainbolt	skrainbolt@aep.com
106 John Turner (BPU)	jturner@bpu.com
107 Jamie	keller@wapa.gov
108 Zac	hagerzc@oge.com
109 Alan Myers	amyers@itctransco.com
110 David Schmitt	david.schmitt@iub.iowa.gov
111 Bruce Doll	bdoll@nmpenergy.org
112 John Knofczynski	jknofczynski@eastriver.coop
113 Caller05	rpadmanabhan@teainc.org
114 Matt McGee	mcmcgee@aep.com
115 Jason Davis	jdavis@spp.org
116 Sharon Segner	ssegner@lspower.com
117 WAPA Shared3	wapashared3@wapa.gov
118 Eric Burkey	eburkey@gridliance.com
119 chris pink	cpink@tristategt.org
120 ed pfeiffer (quanta)	epfeiffer@quanta-technology.com
121 Tim Owens (NPPD)	tjowens@nppd.com
122 Dustin Betz (NPPD)	ddbetz@nppd.com
123 Jon Iverson	jiverson@oppd.com
124 Steve Rowley	srowley@bhetransmission.com
125 John Payne	jpayne@kepcos.com
126 Jeremy Harris (Westar)	jeremy.harris@westarenergy.com
127 Andy Berg (MRES)	andrew.berg@mrenergy.com
128 Marisa Choate	mchoate@spp.org
129 Charles Hendrix	chendrix@spp.org
130 Ross Hohlt	dhohlt@ameren.com
131 Joe Fultz	jfultz@grda.comj
132 lisahickey	lisahickey@newlawgroup.com
133 Katie Southworth	katherine.southworth@gmail.com
134 Steve Hardebeck (OGE)	hardebsm@oge.com
135 Bethany King	bking@empiredistrict.com
136 Josh Verzal	jverzal@oppd.com
137 John O'Dell	jodell@spp.org
138 Robert Pick (NPPD)	rjpick@nppd.com
139 Bill Leung (NPRB)	bleung@bjleung.com

Kirk Hall

From: Boshears, John
Sent: Monday, November 27, 2017 8:17 AM
To: Kirk Hall
Cc: Bradshaw, Jerry; Foflygen, Kevin; Knottek, Jeff
Subject: **External Email** TWG/ESWG JOINT MEETING 11-29-17

Kirk,
I have a doctors appointment on the 29th. I am going to give Jerry Bradshaw my proxy for that meeting. My surgery is scheduled for 12-4-17. I have been told I will be away from work for 2 weeks after that, therefore I will go ahead and give Jerry my proxy for any meetings or votes for that time period. Please be sure he is notified for any special meetings. Thank you,

John Boshears
Eng III-Transmission Planning
O: 417.831.8512



PO Box 551 | Springfield, MO 65801-0551
cityutilities.net



HELPING OUR MEMBERS WORK TOGETHER
TO KEEP THE LIGHTS ON... TODAY AND IN THE FUTURE.

SPP Working Group Introduction to MWTG

TWG/ESWG

Antoine Lucas, November 2017

Agenda

- Introduction of MWTG Participants
- Stakeholder Process and Governing Documents
- Tentative TWG & ESWG Review Schedule

Mountain West Transmission Group (MWTG)

1. Basin Electric Power Cooperative (BEPC)
2. Black Hills Energy (BHE)
 - a) Black Hills Power, Inc.
 - b) Black Hills Colorado Electric
 - c) Cheyenne Light, Fuel and Power
3. Colorado Springs Utilities (CSU)
4. Platte River Power Authority (PRPA)
5. Public Service Company of Colorado (PSCo)
6. Tri-State Generation and Transmission Association, Inc. (TSGT)
7. Western Area Power Administration
 - a) Loveland Area Projects (WAPA RMR)
 - b) Colorado River Storage Project (WAPA CRSP)

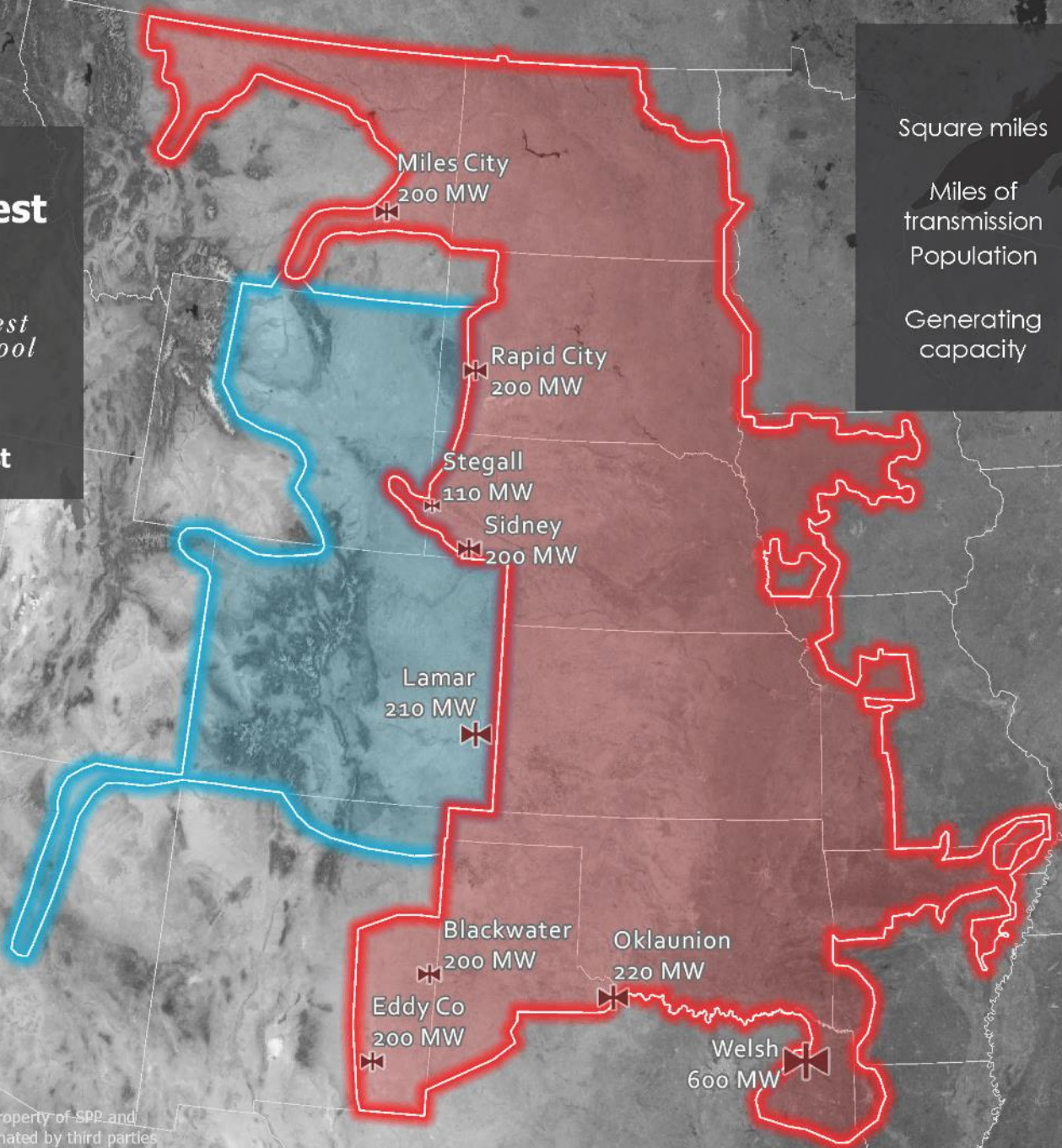
Characteristics of MWTG Transmission Owners

- Average Monthly Peak Load = ~12,000 MW
- Annual Energy = ~70 Million MW-hrs
- Miles of Transmission = ~16,000
- Transmission Revenue Requirements = ~\$600 Million/Year

SPP & Mountain West Footprint



- SPP
- Mountain West



	SPP	MWTG
Square miles	546,000	165,000
Miles of transmission	65,755	16,000
Population	17.5 mil	6.4 mil
Generating capacity	83,945 MW	21,000 MW

This map contains the intellectual property of SPP and may not be used, copied or disseminated by third parties without the express permission of SPP. All rights reserved.
 Date Exported 10/6/2017 1 inch equals 178 miles

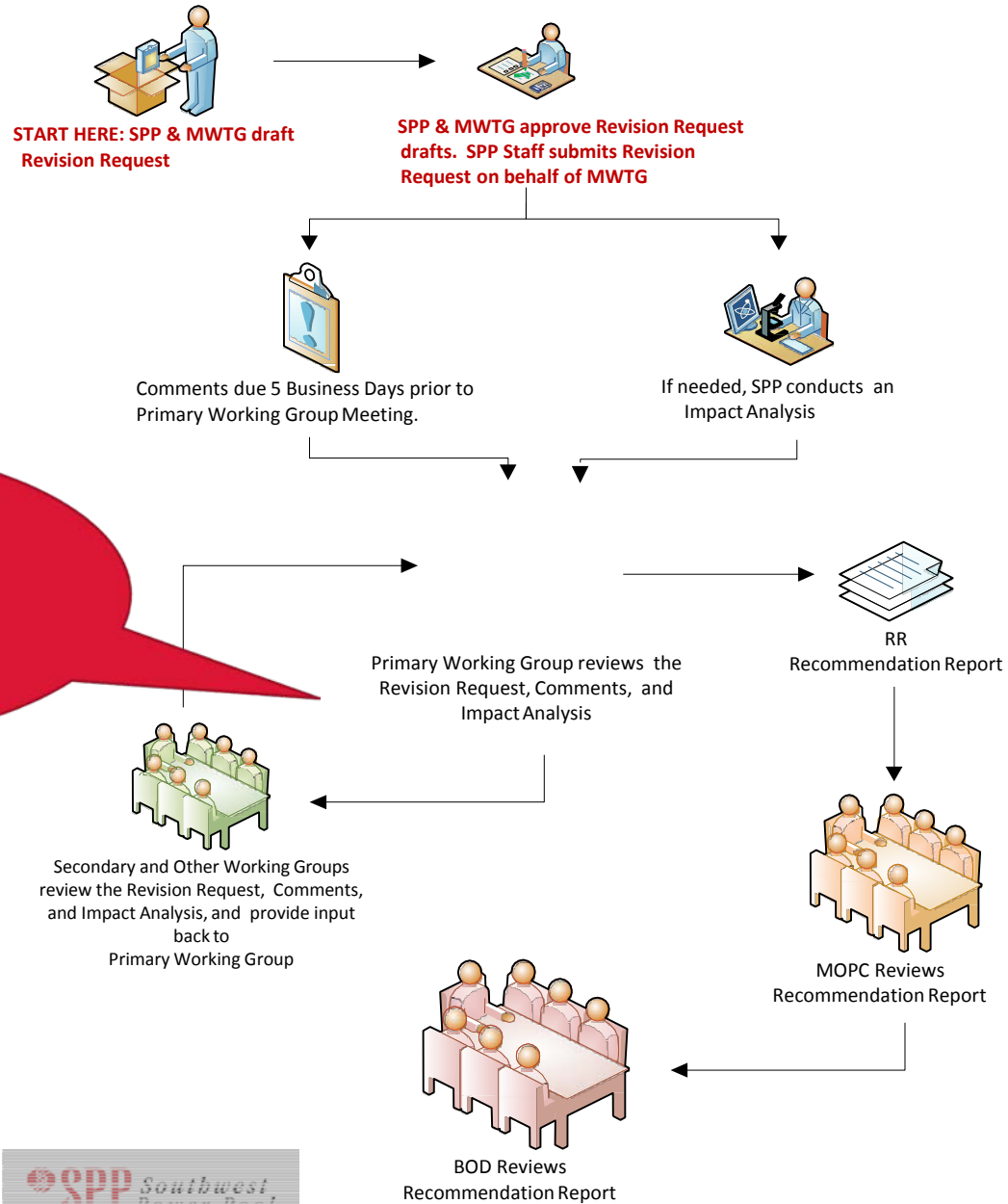
Stakeholder Process

- Policy level stakeholder discussions will continue and are expected to result in decisions impacting most of SPP's governing documents
- The following are the governing documents that are likely to be impacted by the MWTG integration:
 - SPP Bylaws
 - SPP Membership Agreement
 - **Tariff**
 - Market Protocols
 - **Integrated Transmission Planning Manual ("ITP")**
 - **Planning Criteria**
 - Operating Criteria
 - Business Practices

MWTG Doc Change Process

- **MWTG Integration will utilize the SPP Revision Request (RR) Process**
 - RRs will be grouped by topic and submitted by SPP staff on behalf of MWTG
 - Standard RR forms, submittal timelines, comments, etc.
 - RR process routing criteria will determine routing
- **Not all governing documents for MWTG integration are subject to RR process**
 - Membership Agreements
 - Bylaws
 - Approvals will utilize similar structure and review methods as RR process

The Revision Request Process, at a Glance specific to MWTG Integration



Opportunity to be involved, SPP stakeholder process



MWTG WG Schedule Spreadsheet

- A meeting schedule detailing all required WG reviews for each document will be posted
 - When and where each RR section will be reviewed
 - Primary and secondary WG reviews and dates
 - Organized according to governing document (i.e. tariff, bylaws, protocols, etc.)
 - Updated often during review and approval process as additional meetings are scheduled, actions are taken, etc.
- Anticipated that initial tariff, bylaws, and membership agreement review meetings will begin in Dec. 2017.
- Other documents will begin Jan. 2018

Planning Process

- MWTG will adopt SPP's existing ITP, transmission service, and generator interconnection planning processes
 - Planning for SPP East and SPP West will use common futures and all benefit metrics currently utilized in SPP East
 - Portfolio of proposed regional solutions in SPP West would be reviewed for approval by stakeholders before going to the SPP Board for consideration
 - SPP Board makes final decision on portfolio approval
- Establish two planning regions for Order 1000 purposes
 - SPP East will engage in interregional planning with other planning regions in the Eastern Interconnection
 - SPP West will engage in interregional planning with other planning regions in the Western Interconnection
- SPP West Local Planning Process
 - MWTG requests that the ITP accommodate locally planned projects coordinated among MWTG planners and stakeholders
 - Includes upgrades below 200 kV and treated as zonal reliability upgrades

Competitive Bidding Process

- MWTG will adopt the Order 1000 competitive bidding process developed by SPP subject to the following conditions and changes:
 - Two separate FERC Order 1000 planning regions (East and West) under a single SPP tariff
 - There will be no bonus points with the MWTG project proposal process
 - Projects under the Order 1000 competitive bidding process must:
 - receive regional cost allocation,
 - have an installed cost greater than \$25M and
 - transmission lines must be greater than 50 miles in length
- The MWTG project proposal process will be transparent and the timing will be consistent with the SPP East DPP process

Cost Allocation for ITP Upgrades in SPP West

Different from Highway/Byway: Benefits test applied to allocate portion of “regional” costs to benefitting zones

Threshold: Greater than \$15 million in projects costs

VOLTAGE	SPP WEST LOAD-RATIO-SHARE	ZONAL ALLOCATION BASED ON BENEFITS
300 kV and above	50%	50%
200 kV to 300 kV	30%	70%

*Below 200 kV allocated to local zone

SPP Tariff: Highway/Byway

VOLTAGE	SPP EAST LOAD-RATIO-SHARE	LOCAL ZONE PAYS
300 kV and Above	100%	0%
< 300 kV and > 100 kV	33%	67%
100 kV and Below	0%	100%

Cost Allocation And Rate Design

- The Federal Service Exemption, which is described later, will apply to all project costs eligible for regional cost allocation.
- MWTG will periodically review the reasonableness of the cost allocation methodologies beginning in the fifth year after the first SPP West regionally allocated project is placed into service.
 - MWTG entities may review the reasonableness of the cost allocation at any time and SPP staff will provide analytical and other support.
 - Any changes to the SPP West cost allocation design will only apply prospectively for facilities not yet approved by the SPP Board; previously approved upgrades will not be reallocated.

TRANSMISSION WORKING GROUP MWTG REVIEW SCHEDULE

RTO IMPLEMENTATION - GO LIVE OCT 1, 2019

TOPIC	PLANNING CRITERIA/ITP MANUAL REFERENCE	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018
Secondary Reviews	Tariff Cost Allocation RR			X							
	Tariff Planning RR			X							
	Market Protocols ARC RR			X							
	Market Protocols DC Ties RR			X							
Planning Criteria	Any Tariff impacts identified		X								
	Section 4							X			
	Section 7							X			
ITP Manual	Tariff references		X								
	Non Tariff reference impacts										X

* Secondary WG review requirements will be immediate impact to TWG. Primary Role will come with second filing for MWTG Integration

ECONOMIC STUDIES WORKING GROUP MWTG REVIEW SCHEDULE

RTO IMPLEMENTATION -
GO LIVE OCT 1, 2019

TOPIC	ITP MANUAL REFERENCE	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018
Secondary Reviews	Tariff Planning RR				X						
ITP Manual	Tariff references		X								
	Non Tariff reference impacts										X

* Secondary WG review requirements will be immediate impact to ESWG. Primary Role will come with second filing for MWTG Integration