

Description of Meeting:	NTTG Planning Committee
Meeting Date:	February 8, 2017
Meeting Notes Prepared By:	Amy Wachsnicht
Approved for Posting:	March 8, 2017

1. Agenda:

- a. Welcome and Agenda Review
- b. Approval of November 9, 2016 NTTG Planning Committee Meeting Notes
- c. NTTG Stakeholder Comments and NTTG Draft Response
- d. Technical Workgroup Update
 - i. Dynamics Analysis
 - ii. Public Policy Consideration Analysis
 - iii. Next Steps
- e. Round Table/Other Business
 - i. Upcoming Meetings
 1. Next NTTG Planning Committee Meeting
 2. Annual Interregional Coordination Meeting
 3. NTTG Quarterly Public Stakeholder Meetings

2. Discussions & Decisions:

Decision: Approval of November 9, 2016 NTTG Planning Committee Meeting Notes

- Following roll call, it was noted that quorum requirements were met in both Class 1 and Class 3, but not met in Class 2. With quorum met in Class 1 and one other Class, approval of the past meeting notes could move forward.
- With a motion by Chelsea Loomis and seconded by Don Johnson, the November 9th NTTG Planning Committee meeting notes were **approved** for posting in Class 1 & Class 3.

Discussion: NTTG Stakeholder Comments and NTTG Draft Response

- NTTG received three sets of stakeholder comments on the 2016-2017 NTTG Draft Regional Transmission Plan.
- Chelsea Loomis walked through the stakeholder comments and NTTG draft responses.
- With regards to [UAE and WIEC's](#) comments, over all, the comments focused on their concern of a disconnect between reliability planning to meet possible contingencies on a regional bases and the cost responsibility for transmission investment on a localized bases. Specifically, the comments pointed to the fact that the draft plan did not address cost allocation for the Energy Gateway projects. Nor did the draft report focus on the need for the Energy Gateway projects.
 - NTTG follows the Attachment K and its regional processes does not engage in local transmission planning or cost allocation. NTTG only conducts regional cost allocation if requested by a project sponsor.
 - Chelsea Loomis also explained that it was not just the wind in Wyoming that caused the results of Change Case 23, but also the needs of the region.
- Nathan Powell indicated that Deseret shared the same concerns with UAE and WIEC's comments, and felt a change in the report was warranted. He inquired if the 700 megawatts of wind added to TEPPC 2026 Common Case caused the issues to occur.
 - Ron Schellberg indicated that the hours selected did not have the wind dispatched high enough to represent a full dispatch of the wind, and the 700 megawatts were only added to the dispatch level.

- Nathan Powell requested the report should better clarify that the whole Gateway project is necessary, but only because the wind dispatch amount was modified.
- It was also requested that comments from today's meeting be taken into consideration so NTTG is clear on how the results of the Regional Transmission Plan are being conveyed.
- Chelsea Loomis then walked through the comments submitted by [TransCanyon](#) and NTTG's draft responses.
 - Ravi Varanasi asked which change cases included the additional 2,000MW of wind to California.
 - Ron Schellberg indicated that he believed they were in Change Cases 8 or 9 through Change Case 21, but he indicated to refer to the Change Case Matrix in the Draft Plan for the specific cases.
- Lastly Chelsea Loomis walked through [LS Power's](#) comments and NTTG's draft responses.
- Sharon Helms indicated the purpose of today's meeting was to walk through the document and look for Planning Committee feedback. Those would be considered and reviewed by the Technical Workgroup to see if a modification is needing to be made. Final consideration will be discussed during the March Planning Committee meeting. The stakeholder comments will also be submitted to the Cost Allocation Committee for their approval of the draft responses. Actual approval of the Regional Transmission Plan is through the Steering Committee.

Discussion: Technical Workgroup Update

- Dynamics Analysis
 - The objective of dynamics analysis is to confirm the transmission system recovers from a disturbance within a specified timeframe.
 - The Technical Workgroup (TWG) started with Case A (NTTG Summer Peak Load) then had to apply the DYD file to be able to initialize and run a "No Event". Chelsea Loomis explained that a "No Event" is when all the dynamics data is applied to the case to show if the model is working correctly. This is done prior to applying contingencies.
 - There were complications from the mapping changes which resulted from round trip process. This has been communicated with the production cost modeling group so they were aware of where the issues were coming from, and take action in order to prevent the issues when work on the Anchor Data Set (ADS) begins.
 - Irregularities were seen in the "No Event" and the TWG worked through the issues resulting in a successful initial run. Case A resulted in a stable system that met all the requirements.
 - Chelsea Loomis walked through the results for Case A, using a 10 second run. The runs were successful which made the TWG comfortable in the dynamics process.
- Public Policy Consideration Analysis
 - Chelsea Loomis explained the purpose of the study was to understand the transmission implications of replacing approximately 1,500 MW of coal with wind, looking at the west-bound flows on Path 8 from Montana to the Northwest.
 - The original request was to retire Colstrip units 1, 2 and 3. Since this request was submitted to NTTG and approved prior to the announcement of the shutdown of Colstrip units 1 and 2, the TWG made a modification of retiring unit 3 in addition to the already retired units 1 and 2.
 - The process includes modeling 1,494 MW of wind at the Broadview 500 kV bus, and dispatched the wind at 0%, 35% and 100%. Steady-state analysis is to be ran on each of the three cases to determine if there are voltage violations that inhibit flows on Path 8. If any are found, then the TWG would model in a synchronous condenser. Dynamics will also be run on the appropriate cases.
 - Once that is completed, the TWG would reduce the wind by 250 MW and add in a 250 MW natural gas generation plan in Billings. The wind would again be dispatched at 0%, 35% and 100%. Dynamics will be ran on the new case.

- The TWG will then look at the difference between the cases with and without the natural gas plant and choose the best case to run PCM. The best case would be the case that results in the fewest violations and cheapest solutions of West bound Path 8 exports.
- The TWG started with Case C (Montana Maximum Path 8 case) and turned off Colstrip unit 3 then modeled in 1,494 MW of wind at Broadview. Given the issues with applying the DYD files to Case A, the TWG applied the file to the Public Policy Consideration (PPC) case and were successful.
- When the TWG originally saw the PPC request on Path 8 case before the announcement, which would have had all 4 units retired, it would have been easy to replace coal with wind and obtain a like for like case. The TWG discussed internally that with units 1 and 2 off line in 2026, there is approximately 2,200 MW exporting on Path 8. It was decided to keep the 2,200 MW exporting on Path 8 when retiring unit 3 and the addition of wind at Broadview due to the fact that it is the megawatt flow on Path 8 that determines the amount of tripping that happens on the units.
- Chelsea Loomis walked through a [table](#) which showed the megawatt flows exporting on Path 8 for each of the PPC cases.
- A question was asked regarding the TWG's process for backing down generation with the retirement of Colstrip unit 3 and adding in the 1,494 MW of new wind. Along with the retirement of Colstrip unit 3, what other coal generation was backed down.
 - Chelsea Loomis explained that the emphases of the PPC is what happens when coal is backed off on Path 8 and wind is introduced. The TWG was comfortable with changing some of the path flows or internal generation in Montana to accommodate the flows, but it wasn't a universal coal everywhere on the system for the wind.
- Fred Heutte and Cameron Yourkowski commented that the presentation honors the intent of their PPC study request and thanked NTTG and Chelsea Loomis for the work done so far.
- The TWG ran dynamics on Case C and no major issues were noted. The other three PPC cases have been prepped and the TWG is working to establish dynamics. Results for the initial run of the additional 1,494 MW of wind showed one of the 500 kV system is flattening out at .95. The TWG will review the data to make sure there are no violations and not operating below typical requirements. However, if the initial results are confirmed, then the TWG will need to add a synchronous condenser or natural gas plan.
- The TWG will continue to examine the cases and finish up the steady state and dynamics analysis.

Discussion: Round Table/Other Business

- Upcoming Meetings
 - Next NTTG Planning Committee Meeting is scheduled for March 8th starting at 1:00pm (Pacific)/2:00pm (Mountain)
 - The Annual Interregional Coordination Meeting is scheduled for February 23rd at the Embassy Suites in Portland, Oregon and is hosted by ColumbiaGrid. Craig Quist encouraged everyone to participate.
 - NTTG Quarterly Public Stakeholder Meetings
 - Quarter 5 is scheduled for April 12th in Portland, Oregon and will be at the Sheraton.
 - Quarter 6 is scheduled for June 29th in Boise, ID at the Boise Airport Conference Center
- With regards to the discussion previously on the Wyoming wind, Bela Vastag inquired if the decision was to include additional information in the plan regarding what Wyoming resources were included and how they were studied. He also inquired if there would be information in



the plan relating to PacifiCorp's 887 megawatts of transmission service obligations for 2026 which are for three wind projects yet to be developed.

- Craig Quist indicated the Technical Workgroup will take that into account, and have further discussions.
- Sharon Helms reminded attendees that the window for updated project information is open through March 31st. The window for submitting Economic Study Requests is also open through March 31st.
- A question was asked if NTTG would be including the presentation given by Chelsea Loomis today, in their presentation for the upcoming Annual Interregional Coordination Meeting.
 - At this time the regions are still working on the final agenda. The meeting will most likely focus on the selection of the interregional projects, the information that was submitted and how those interregional projects were considered.

3. Assignments:

Item #	Assignment	Owner	Target Date	Status
1.				
2.				
3.				
4.				

Next Meeting: The next Northern Tier Planning Committee Meeting is scheduled for March 8th at 1PM Pacific.

- Dial: **(626) 425-3121**
- Access Code: **432-608-245**



Attendees:

NTTG Planning Committee Member Representatives

Membership Class 1

Jared Ellsworth, Idaho Power	Chelsea Loomis, NorthWestern	Ravi Varanasi, TransCanyon
Bill Hosie, TransCanada	Nathan Powell, Deseret	Scott Waples, Avista Corp
Don Johnson, Portland General	Craig Quist, Chair, PacifiCorp	Curt Winterfeld, Citizens Energy

Membership Class 2

Marshall Empey, UAMPS	Rhett Hurless, Absaroka Energy	
-----------------------	--------------------------------	--

Membership Class 3

Bob Decker, MT PSC	Jennie Jonsson, UT PSC	Matt Wiggs (Proxy), ID OER
Morgan Fish, WY PSC		

Other NTTG Members & Guests

Jamie Austin, PacifiCorp	Katie Kaplan, Exelon Energy	Bela Vastag, UT OFC CC
Justin Bieber, UAE	John Leland, NTTG	Amy Wachsnicht, NTTG
Gary Dodge, UAE	Kishore Patel, PacifiCorp	David Walker, WY PSC
Kelly Francone, UAE	Bob Pomeroy, Legal Counsel, WIEC	Cameron Yourkowski, NW Renewable
Sharon Helms, NTTG	Ron Schellberg, NTTG	
Fred Heutte, NW Energy Coalition	BJ Schubert, NorthWestern Energy	