Description of Meeting:	**NTTG Planning Committee**
Meeting Date:	**September 19, 2018**
Meeting Notes Prepared By:	**Amy Wachsnicht**
Approved for Posting:	**October 17, 2018**

1. **Agenda:**
   a. Approve August 15, 2018 NTTG Planning Committee Meeting Notes
   b. Stakeholder comments on the selection of 2018-2019 Stressed Hours and the Change Case Matrix
   c. Approval Item:
      i. RESOLVED: That the Planning Committee approves NTTG's response to stakeholder comments on the selection of stressed hours and the 2018-2019 Change Case matrix
   d. Technical Workgroup Update and Preliminary Reliability Study Results
   e. Round Table/Other Business

2. **Discussions & Decisions:**

Decision: Approve August 15, 2018 NTTG Planning Committee Meeting Notes

- Prior to calling for a vote, Chelsea Loomis asked if there were any last comments or questions on the August 15, 2018 NTTG Planning Committee Meeting notes.
- Marshall Empey commented that he believed in the sentence, "*The Dave Johnson, North Valmy and Naughton Gas units were retired*." the word "gas" should be changed to "coal".
  - Ron Schellberg indicated in the ADS power flow case Naughton 3 was modeled, however, in the PCM data set it was mapped to the gas conversion. He also indicated that since the coal unit is retired, and the gas conversion has yet to be formalized, the NTTG Technical Workgroup removed the gas unit.
  - After discussion the sentence was revised to "*The Dave Johnson, North Valmy and Naughton Coal units were retired, and the Naughton Gas Unit was not modeled"*
- With a motion by Craig Quist and second by John Chatburn, the August 15, 2018 NTTG Planning Committee Meeting notes, as modified during the meeting, were **unanimously approved** by consensus for posting.

Discussion: Stakeholder comments on the selection of 2018-2019 Stressed Hours and the Change Case Matrix

- NTTG received one set of comments from Justin Bieber with Utah Association of Energy Users (UAE). Jared Ellsworth walked though UAE's comments and NTTG responses. Below is a summary of the comments and NTTG's response. For the full version click here.
- *Comment #1* – Three additional stressed conditions were added to study. Justification was asked for including these studies and addressed concerns with the stressed conditions as well.
  - *NTTG Response* – Per Attachment K, NTTG is charged with preforming Transmission Reliability Analysis. The additional stressed cases were an effort to provide a good assessment of the bulk electric transmission system and compliant analysis calls on identifying all violations.
- With regards to NTTG's response, clarification was asked on the guideline for considering the absolute worst violation even though it may only occur in one hour of the entire year. There was a concern of resolving a 1 in 10 scenario for reliability purposes with a transmission solution rather than an operational mitigation.
  - It was indicated that the TWG was not trying to consider the absolute worst-case one-hour nor the frequency. The TWG is tasked with looking at the existing

transmission commitments on the paths and new transmission commitments required based on what resources were submitted by the Transmission Providers.
    - It was also indicated that the NTTG Regional Plan is not a construction plan and the information is fed back to the Transmission Providers to review and do as they see fit. It is the responsible of the Transmission Providers to meet their commitments for reliability.
- *Comment #2* – There is a concern with running the Production Cost Model (PCM) with the planned projects identified in the Prior Regional Plan (pRTP) and gave an example of how BPA did their studies. It was asked what NTTG's reasoning was for including the planned projects in the PCM simulations.
    - *NTTG Response* – NTTG does not question the firm requirements of the data submitters. The TWG did a PCM run on the null case. Had the Technical Workgroup (TWG) used the null case PCM run to extract the stressed conditions, the analysis would have planned for a system that does not satisfy the 10 year out firm transmission requirements.
- Clarification was asked on the PCM null case run and why the TWG does a PCM run on expected transmission rather than the existing transmission system to show where the issues were.
    - The PCM run includes the pRTP facilities and uses the dispatch to test the various non-committed projects against those dispatch conditions. The null case uses the dispatch results from the PCM run looking out 10 years with future load and resource obligations. If the TWG were to use the null case for the PCM run and use its dispatch instead of the pRTP, it would not show many performance problems.
- *Comment #3* – Suggested to remove Case D "High B2H Export" seed case as it is not a stressed hour condition.
    - *NTTG Response* – The TWG agrees and removed the case.
- Comment #4 – Why did the TWG chose Case G (High Borah West) and how frequently does the condition to occur.
    - *NTTG Response* – The case was chosen to test the conditions above the 2,557 MW ratings observed in the PCM run and noted frequency is not a driver to study the condition or not.
- For transparency, it was asked that NTTG provide the frequency in which the condition occurs as it would be informative for stakeholders and provide some insight for other cases.
    - There was a concern that the information could be taken out of context as the PCM runs only look at net flows and doesn't have schedules. It was also felt that providing the PCM number may not be of value.
- Push back indicated there is value in providing information from the PCM simulation as it would highlight what the assumptions were.
    - Following discussion, the TWG will look into providing the information in the draft report with caveats.
- *Comment #5* – Was the 2,557 MW path rating for Borah West Path included in the null case or the pRTP? If in the pRTP, what segments of Gateway West were included.
    - *NTTG Response* – The null case is consistent with the 2,557 MW path rating. The Borah West Capacity of the pRTP configuration could be approx. 3,400 MW, but no rating studies created for this configuration.
- *Comment #6* – Reasoning for choosing Case H (Max NTTG Import Case), the frequency in which the condition occurs and how many import hours occur greater than 5,000 MW and 6,000 MW.
    - *NTTG Response* – Case H was chosen as the TWG does not believe this condition was studied before. There was a concern the condition could expose performance issues as the hour selected observed Wyoming wind resources near zero.
- As in prior discussions, it was requested, for transparency, the frequency of this occurrence in the PCM simulation would be helpful to include in the report, even if it included caveats.

- *Comment #7* – Reasoning for choosing Case I (High Aeolus South & West Case), the frequency in which the condition occurs and the number of hours in the PCM where Wyoming Wind was greater than 96%.
    - *NTTG Response* – A few selected hours showed that Gateway South path not was overloaded and Case I was choses to study a condition when Gateway South was loaded. The frequency of occurrence is approx. 500 hours.
- *Comment #8* – Why is there a difference in the Wyoming Wind max capacity from Attachment 2 of the approved Study Plan implying 2,972 MW and Case I implying 3,185 MW.
    - *NTTG Response* – In reviewing the TWG discovered a few existing and planned wind plants were missing from the Study Plan appendix analysis:
        - Added Dunlap Project – 111 MW
        - Added McFadden Ridge – 29.7 MW
        - Added Pioneer Wind Project – 85.1 MW
        - Energy Vision Capacity – 1539 MW (Contract limited to 1311. Exported cases use values limited to 1311 MW)
- While the first three projects listed above accounted for the megawatt difference, clarification was asked about the Energy Vision Capacity 1,539 MW vs. the contract limit of 1,311 MW.
    - The PCM simulation showed capacity of the project is 1,539 MW, however, the exported hours were limited to 1,311 MW as that is the current capacity of the project, until other transmission is built to justify a capacity increase.
- *Comment #9* – The pRTP is the only case where Gateway West is included but not the entire segments. All other cases include the entire Gateway West projects. UAE requested a more granular evaluation of Gateway West of the same variations that were used in the 2016-2017 RTP.
    - *NTTG Response* – Of the variations listed in the comments, the configuration of Gateway West without Midpoint Hemingway #2, Cedar Hill - Midpoint, and Populus – Borah is the pRTP for the current 2018-2019 planning cycle. Depending on the performance of this case, the TWG may or may not perform the same change cases as last cycle.
- *Comment #10* – Requested the Antelope Projects be removed from the Change Case matrix and included in the base model as the absence of the facilities could cause a reliable change case to appear unreliable.
    - *NTTG Response* – The Antelope Projects are currently non-committed bulk electric transmission projects and NTTG is required to consider them. The change cases are to demonstrate the need for the Antelope Projects
- Craig Quist indicated PacifiCorp has formally received an interconnection request from UAMPS for these facilities.
- *Comment #11* – Were adjustments made to the coal prices from the August 15th NTTG Planning Committee Meeting presentation? If so why?
    - *NTTG Response* – The TWG used the 50% coal price assumption.
- Clarification was asked why the TWG would go through the effort of changing to the coal prices if it didn't make a difference for selecting the stressed conditions.
    - The model and coal assumptions are continuing to be discussed at WECC and the TWG needed to make the correction for a more rational dispatch of the coal fleet in the NTTG footprint. In the PCM ADS version 1, the coal retirements at Dave Johnson, Valmy and Naughton were modeled, where NTTG's sensitivity studies have them as retired, which has a significant impact on the remainder of the coal fleet.
- *Comment #12* – Explain why the adjustment to the coal prices do not result in a significantly different dispatch for the selected cases.
    - *NTTG Response* – Although the dispatch between the two PCM runs include a change in dispatch, due to the 8,760 hours to choose from, similar stressed conditions can be found in either PCM results.

Decision: Approval Item

- ***RESOLVED:*** That the Planning Committee approves NTTG's response to stakeholder comments on the selection of stressed hours and the 2018-2019 Change Case matrix

- With a motion by Craig Quist, seconded by John Chatburn, the above resolution was **unanimously approved**

Discussion: Technical Workgroup Update and Preliminary Reliability Study Results

- The approved Study Plan listed 6 stressed conditions for analysis. Subsequent to stakeholder comments and further consideration, the TWG added 3 additional cases and dropped one case that didn't warrant any further analysis. The TWG also renamed the description of some cases to reflect the flow conditions of the system and not the transmission configuration within each of the change cases.
- The Change Case Matrix included in the approved Study Plan had 31 different cases including the null case, pRTP and iRTP, as well as a number of study conditions to be applied to the chase cases. Subsequent to the approval of the Study Plan, in August 2018, the TWG added Change Case 5 and dropped Change Case 20 as it didn't make sense to perform a SWIP-N case without any improvements into the Wyoming system.
- The current Change Case Matrix, has Gateway West modeled using the pRTP configuration for all studies with the exception of iRTP case. The Interregional Transmission Project (ITP) studies include the Antelope project in all configurations, and a change case added to study the TransWest Express DC line with the Gateway West configuration.
- At this time, the TWG has run preliminary analysis of all the stressed conditions on the null case through Change Case 10 as well as analysis adding additional resources for each of the ITP cases.
- Ron Shellberg walked through the methods used in preliminary reliability analysis for each of the stressed conditions. The analysis concluded with over 16,000 records where limits were exceeded. Given the large number of records and for ease of review, the TWG came up with pivot tables and graphical results for each of the cases. He indicated that all the results are preliminary and subject to change.
- For each stressed condition, the pivot table results include three columns. The first column shows the number of contingencies where there are violations or limits are exceeded, the second column has the number of limits that were exceeded, and the third shows the number of unsolved contingencies, which is a sever indication of performance issues.
- Ron Shellberg also walked through graphical analysis results for each of the stressed conditions. This included a bubble diagram, physical map and heat map.
- With regards to the heat maps, the results presented, were a comparison between each stressed condition with the null case included and the pRTP included.
    - A color range was used to represent the limit exceedances by each zone. Overloads are weighted as more severe than low voltages and low voltages weighted more than high voltages. A legend will be created for the heat map violation colors.
    - When comparing the results of the null case to the pRTP, violations showing in the null case were somewhat resolved with the pRTP, however, there are still violations and further analysis needs to be done to resolve those violations.
- A question was raised on Slide 14. It was unclear what zones ID BPA, ID NPC and IC SPC represented.
    - Ron Schellberg indicated that "ID BPA" were the BPA type facilities in the PacifiCorp area, and that he would have to review the other two. He also indicated that he would look into making a glossary of the different zone labels.
- The TWG looked at a modified Case C where 200 MW of additional generation was added from PacifiCorp and Portland General and scheduled to Idaho.

- To see if any of the ITPs provided a benefit to the NTTG footprint, analysis was done for each project and applied to each stressed case without any additional resources. Preliminarily results showed no significant performance issue being solved with any of the ITPs.
- Another analysis was done to see if the pRTP supported the transfer of interregional resources when focused on exporting power. Lastly, the TWG looked at a combination of the ITPs with 3,000 and 4,500 MW being exported. The results showed that with the loss of Gateway South there could be major overloading.
- Next steps for the TWG include completing the review of reliability data and revising cases as necessary. Once that is completed, the TWG will begin to look at the facilities to be included in the Draft Regional Transmission Plan as well as an evaluation of Alternative Projects that could be more efficient or cost effective.
- Following the discussion, there were still questions on the Idaho Zones discussed earlier and it was indicated that having a description of all the zones would be helpful. Ron Schellberg indicated that given the number of zones, he would try to have the descriptions completed by the October Planning Committee meeting.

Discussion: Round Table/Other Business

- Chelsea Loomis reminded everyone, the next NTTG Quarterly Stakeholder meeting was on Thursday, September 27th in Bozeman, MT. She encouraged those who are planning to attend, and have not RSVP'd to do so.

3. Assignments:

Item #	Assignment	Owner	Target Date	Status
1.	The technical workgroup will include documentation in the Draft RTP that describes the frequency of the conditions that were studied in the PCM runs, along with appropriate caveats to ensure that the information is not taken out of context	J. Ellsworth/ R. Schellberg	11/15/18	
2.	Include a glossary of the different zone labels in the Draft RTP	J. Ellsworth/ R. Schellberg	10/11/18	
3.				
4.				

Next Meeting: The next Northern Tier Planning Committee Meeting is scheduled for October 17th at 1PM Pacific.

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

Attendees:

NTTG Planning Committee Member Representatives		
Membership Class 1		
Ian Beil, Portland General	Kevin Johnson, TransCanyon (proxy)	Craig Quist, PacifiCorp
Jared Ellsworth, Vice Chair, Idaho Power	Chelsea Loomis, Chair, NorthWestern	Paul Scheuerman, Citizens Energy (proxy)
Bill Hosie, TransCanada	Nathan Powell, Deseret	

Membership Class 2		
Marshall Empey, UAMPS	Rhett Hurless, Absaroka	

Membership Class 3		
James Branscomb, WY PSC	John Chatburn, ID OEMR	Bob Decker, MT PSC
Steven Goodson, ID PUC		

Other NTTG Members & Guests		
Justin Bieber, UAE	John Leland, NTTG	Ron Schellberg, NTTG
Kathleen Fraser, Energy Strategies	Katie Pegan, ID OEMR	Amy Wachsnicht, NTTG
Sharon Helms, NTTG		