



NTTG 2014-2015 Public Policy Consideration Scenario Draft Report Stakeholder Comment and NTTG Response

Commenter Contact Information			NTTG Tracking Info	
Date: April 30, 2015			Date Received: April 30, 2015	
Name: Rhett Hurless			Committee Assignment: NTTG Technical Workgroup	
Organization: Absaroka Energy				
Comments			NTTG Response	
Section	Page /Line #	Comment	Response Date	Response
All		Absaroka Energy acknowledges and appreciates the effort by NTTG and the NWE study team to perform this study and report the results. We also appreciate the opportunity provided for Absaroka's representative, Chuck Stigers, to participate in the review of the technical work	5/8/2015	Thank you.
3	Page 4; Line 61-66	Absaroka believes the results of the analysis are technically sound. While, there may be opportunities to improve on some of the details of the analysis (Colstrip station loads, for example), we do not believe refining these details would change the results or conclusions.	5/8/2015	Thank you.
1	Page 3; Line 13-15	<p>Absaroka believes the disclaimer language may leave readers with a misperception of the value of this study. We suggest changing</p> <p>"The results of this analysis do not suggest or imply that a one-for-one substitution of wind for coal is feasible without further analysis or system improvements."</p> <p>to</p> <p>"The results of this analysis indicate that acceptable power flow results can be achieved by the one-for-one substitution of wind for coal. However, additional analysis, including transient stability studies, is needed to determine the ultimate feasibility of this approach."</p>	5/8/2015	<p>With the changes in new environmental laws, there may be studies similar to this study which could indicate that replacing coal with an alternate form of generation is feasible. The phrase "one-for one" can be misleading. In this particular study, the assumption was deliberately made that 1 MW coal was replaced by 1 MW wind, thus were a one to one exchange. In reality, that is incorrect. For the state of Montana, in 2012, the reported average capacity factor was 33.8%. This clearly indicates this is not a one to one exchange. Also, wind isn't consistently blowing full force all the time, and there are other factors that would be required to be evaluated to fulfill a complete and accurate study for this scenario. It is most likely possible that with good engineering, solutions could be found to accommodate an exchange of an alternate form of generation in place of Colstrip 1 and 2. The statement written in the document was assuming a MW for MW exchange and the caveat is there to remind the reader that the study was limited and had not evaluated many other variable factors. For these reasons it is believed that the language should not be changed.</p>

6	Page 9; Line 192-194	<p>Absaroka believes the disclaimer language may leave readers with a misperception of the value of this study. We suggest changing</p> <p>"The results of this analysis do not suggest or imply that a one-for-one substitution of wind for coal is feasible without further analysis or system improvements."</p> <p>to</p> <p>"The results of this analysis indicate that acceptable power flow results can be achieved by the one-for-one substitution of wind for coal. However, additional analysis, including transient stability studies, is needed to determine the ultimate feasibility of this approach."</p>	5/8/2015	Same as above.
4	Page 7; Line 152-173	<p>Absaroka encourages NTTG to move forward with transient stability studies, the logical next step in this analysis. The public policy implications of this analysis are becoming increasingly important given recent legislative activities in Washington, Oregon and Montana and the need for states to develop plans to comply with EPA's proposed 111(d) rules. The results of this analysis will provide valuable information to regional policymakers.</p> <p>Absaroka understands that NTTG has not conducted transient stability studies in the past. However, given the stability-limited nature of the Colstrip Transmission System, an analysis that does not include transient stability analysis has only limited value in the public policy arena.</p> <p>The report suggests using a "dynamics-ready" base case if transient stability analysis is under taken. This is a common sense approach to managing the amount of work necessary to conduct the dynamic stability analysis.</p>	5/8/2015	It is duly noted that an accurate and complete study for this scenario would involve conducting transient stability studies in the future. This Public Policy Consideration study for this study cycle was strictly Power Flow only.

Commenter Contact Information			NTTG Tracking Info	
Date: May 4, 2015			Date Received: May 4, 2015	
Name: Cameron Yourkowski & Fred Heutte			Committee Assignment: NTTG Technical Workgroup	
Organization: RNP & NWECC				
Comments			NTTG Response	
Section	Page /Line #	Comment	Response Date	Response
1	4	Renewable Northwest appreciates NTTG accepting and moving forward with this study request. The process and dialogue has been a useful exercise from our perspective and has produced useful results. Although we recognize that this study identifies next steps (discussed more below), we are concerned that some of the disclaimer language in the study report could leave readers with the impression that study doesn't provide significant value. We suggest summarizing in lay terms what this study does tell us and then what additional questions remain.	5/8/2015	Thank you for your comments. The caveat language is needed in the report to remind the readers that this study was a limited power flow study based on set assumptions. The results of the study indicate the value of moving forth with Transient studies sometime in the future.
3	4	The paragraph discussing the differences in station service loads and the impact that has on this study would benefit from a slightly expanded explanation, especially on how the station load differential impacts the study. We assume that the impacts are minimal. If that is correct it would be helpful to indicate such.	5/8/2015	Yes, the impact would be minimal. With the station service loads lighter, this stressed the transmission lines more so than would have been found with the full values of the service loads. Therefore, the results would be more conservative (more likely to show problems) than if the station loads were at full values.
4	7	We appreciate the details provided on how to approach the next steps for a dynamic analysis. For the purposes of this public policy study request, which is to develop policy level information, we suggest that a reasonable path forward may be to glean relevant information from existing transient stability analysis conducted for prior interconnection study requests. A formal summary and professional opinion about what the existing studies tell us about how to generally address the ATR issues associated with our study request is a reasonable and efficient next step that would allow NTTG and stakeholders additional time to consider the merits and appropriate structure for any additional study work.	5/8/2015	A big limitation of this study was the proprietary ATR (Acceleration Trend Relay). This is inherently a dynamic device. In this study, ATR tripping was based on past studies, events and engineering experience. Again, the results of the study indicate the value of moving forth with Transient studies sometime in the future. A review of past studies may yield some information, but wouldn't be a replacement for a transient study with the assumed generation changes.
5	7	In the last sentence, would it be more clear if it said, "a double Colstrip-Broadview [contingency]"?	5/8/2015	Agreed.
6	9	Similar to our first comment above, we are curious if the conclusion could be framed to explain more what the study does imply rather than what it does not imply. For example, our understanding of these study results is that it does imply that, assuming the replacement wind can be tripped seamlessly with the existing ATR structure, all of the credible contingencies could be solved with some amount of tripping without violating any thermal or voltage limitations. If that is a correct statement, or whatever the correct positively framed statement is, we would suggest summarizing the study results in that way. After that, the study report could then go on to talk about the next steps required to confirm the assumptions about the ATR interaction.	5/8/2015	Generation was tripped based on the expected response from the ATR given past studies and events. For this study, either tripping wind, coal or a combination of both alleviated overloads observed on the 500 kV system during contingency. However, it is very likely the response of the ATR would be affected for wind. So the study shows that under the steady state conditions studied, assuming a MW for MW online exchange in generation, and proper generator tripping (either the wind machines at Broadview or the Colstrip units), it may be possible that wind generation interconnected to the 500 kV bus could possibly replace coal-fired generation at Colstrip. However, the study cannot definitively conclude that the wind for coal replacement is possible. Nevertheless, again it should be noted that the study assumptions only give a limited conclusion. Moving forth with Transient studies, using a dynamics ready case and the actual ATR simulation program would be the next step in confirming the assumptions made of the ATR for this study.
		Thank you for the opportunity to comment!	5/8/2015	Thank you for your comments.