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Mr. Adrian Garcia, Project Manager
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Dear Adrian,

Enclosed is my reply to the Environmental Planning Group's (EPG's) responses to comments I submitted on the SunZia DEIS regarding congestion on Path 47 in southwestern New Mexico. I submitted these comments somewhat late on September 5, 2012 because I lacked the time to research the issue beforehand.

I am including a copy of EPG's annotated version of the cover letter from my submission for reference as well as the fifth chapter from my February 2013 report, *SunZia: An Unnecessary High-Risk Project?* This chapter discusses congestion on Path 47 in depth, although it repeats much of the information contained in my September 5, 2012 submission.

The Environmental Planning Group examined my report and arguments only cursorily and did not grasp their significance. In my reply I have tried to explain what the most important points were. It is important to understand them in order to avoid overbuilding transmission capacity.

Thank you for considering these comments.

Sincerely,



Norm "Mick" Meader, Co-Chair
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Attachments (3)

Response to BLM responses to Cascabel Working Group comments on the SunZia Draft Environmental Impact Statement

CWG Submission: Supplementary comments regarding congestion on Path 47, submitted by Norm “Mick” Meader, September 5, 2013

FEIS Page No.	Comment No.	BLM Text
J526-J527	2392	<p>The BLM recognizes that there are varying means to forecast conditions in the transmission grid; however, the data provided in this comment do not dispute the validity of the BLM’s purpose and need for the SunZia Southwest Transmission Project. The Draft EIS included a description of congestion associated with transmission Path 47. The following summarizes the statements applicable in response to the CWG’s comment.</p> <p>1) DOE identified Path 47 as a highly congested path;</p> <p>2) a nominal 170 MW of available firm transmission capacity in the west-to-east direction and 0 MW of available firm transmission capacity in the east-to-west direction (SunZia’s predominant planned power flow direction) was identified on transmission lines within Path 47 and beyond; and</p> <p>3) SWAT analyses illustrate an abundance of interest to interconnect renewable resources in the vicinity of Path 47 and SunZia.</p>

Although this issue may not be of great importance in deciding whether SunZia is needed, the responses above merit a reply. They indicate that the commenter did not fully review and grasp the information provided or its significance. I offer the following explanations.

Point 1): The discussion of congestion on Path 47 in the SunZia DEIS is very cursory and does not provide an in-depth analysis of the issue. The DOE study that the SunZia DEIS referenced was from 2009 and was based upon power flow and scheduling data reported to the Western Electricity Coordinating Council in 2007¹. I reference newer data in the report I submitted, although they in themselves are now somewhat dated. *The 2007 WECC report showed that in terms of actual power flow, Path 47 is one of the least congested in the West.* The SunZia Environmental Impact Statement does not make note of this. This form of congestion is what is most important. A 2011 report by the Western Electricity Coordinating Council² confirms this. A sharp reduction in congestion on Path 47 resulted from the integration of the Deming, New Mexico, Luna Energy Facility into the path in 2006. As the 2011 report states, “Path 47 was not

¹ Western Electricity Coordinating Council, Transmission Expansion Planning Policy Committee, Historical Analysis Work Group, *2008 Annual Report, Part 3, Western Interconnection Transmission Path Utilization Study, An Analysis of Path Flows and Schedules on the WECC Transmission System During 2007*, April 2009 (hereinafter WECC 2009). Available from <http://www.wecc.biz/library/StudyReport/Documents/2008%20Western%20Interconnection%20Transmission%20Path%20Utilization%20Study.pdf>. Accessed September 4, 2012.

² Western Electricity Coordinating Council, *Discussion of WECC Paths, Southern New Mexico (NM1) Path 47* (draft), WECC Path Report, 2011. Available from <http://www.wecc.biz/committees/BOD/TEPPC/External/2011%20WECC%20PathReport%20Path47.pdf>. Accessed September 4, 2012.

congested in the 2020 expected future study case, or any other cases in the 2010 Study Program.” A complete summary of the conclusions of this 2011 study is included at the end of this discussion, taken from my February 2013 report, *SunZia: An Unnecessary, High-Risk Project?*

What is critical in addressing transmission congestion is the physical ability to deliver power. This is currently not a problem with this path. Indeed, an earlier report by Public Service Company of New Mexico in 2004³, which integrated the Luna Energy Facility into its calculations before the plant was online, confirmed that Path 47 would have approximately 1,000 MW of excess capacity with which to export power from southwestern New Mexico.

This path remains overscheduled, however. That is, most of the capacity is tied up contractually by utilities, which allows them to monopolize the transmission system. To add more physical capacity to address this kind of problem is very inefficient and financially wasteful. This results in the overbuilding of capacity, which utilities want to avoid. While adding new capacity may eliminate scheduling congestion, the additional capacity will not be physically used before existing capacity is filled. This is the issue here. Assessing how long it may take to fill this capacity or whether it will actually occur is critical to avoid unnecessary expenditures.

Point 2): This point references what is contractually available and illustrates the problem noted in the discussion of Point 1). In this case, available firm transmission capacity is not a measure of what is physically available. The point of my analysis is that building new capacity merely to address contractual unavailability will result in the overbuilding of physical capacity and an inefficient use and underutilization of the transmission system. This can be avoided by making arrangements with the utilities that control existing transmission capacity to use it more efficiently.

Point 3: I do not doubt that these interconnection requests have been made, but one must be careful with them. The majority of these interconnection requests do not result in the building of facilities. Prospective energy developers usually submit the requests without knowing whether those facilities can or will be built. Potential developers do so to hold a place in the interconnection queue should a project become viable. When addressing these requests it is important to assess how much *physical transmission capacity* currently exists and to work with the owners of that capacity to ensure that it is available. With the potential for future development of natural gas and solar generation in southwestern New Mexico, additional transmission capacity may someday be needed. It is not needed to physically support these initial projects, however, and how much, if any, additional capacity will be needed is uncertain.

In considering the need for future transmission capacity, one needs to assess when and how new generation will be added. Most power flow on Path 47 in the past has been from west to east to meet the needs of El Paso Electric Company. The Path is also used predominantly by Public Service Company of New Mexico. Whether additional transmission capacity will be needed depends on (1) what generation facilities these utilities intend to build to meet future demand in their service areas, and (2) what generation facilities independent energy producers may build to export energy to users elsewhere in the region. The physical location of these facilities in

³ Public Service Company of New Mexico, Electric Services, Transmission Development and Contracts, *Path 47 Export Rating*, May 5, 2004. Available from http://www.mrlc.gov/nlcd2006_downloads.php. Accessed September 4, 2012.

relationship to one another and the power interactions between them determine how much additional transmission capacity may be needed, if any. This requires physically modeling the system to determine whether and where congestion problems may arise. The results can differ greatly from what one would intuitively expect.

While it is usually difficult to know exactly when such facilities will be built, it is still important to try to assess this so as not to overbuild transmission capacity, which is a major issue here. SunZia has not critically evaluated this. The peril of overbuilding capacity is increased by the possibility of constructing the Southline Transmission Project across the same region at the same time. Both SunZia and Southline should coordinate their projects in order to avoid this. They will be competing for the same generation sources in this region, and building both simultaneously financially imperils both. It is neither physically nor financially prudent to do so.

I am attaching the full discussion of congestion on Path 47 taken from my report, *SunZia: An Unnecessary High-Risk Project?*

Summary of Comments from WECC 2011 Study of Path 47

Observations and Historical Congestion

It is likely that Path 47 will have reduced flow in future historical analysis because of new generation located in southern New Mexico.

Path 47 was not congested in the 2020 expected future study case, or any other cases in the 2010 Study Program.

The 2009 Study did not identify Path 47 as one of the more congested paths.

Future Congestion Analysis

Expected Future

Path 47 was not heavily utilized or congested in the expected future case. The path exceeded U90 and U75 for 6.44 percent and 25.85 percent of the year, respectively. Neither of these values surpasses the utilization screening requirement. The duration plot in Figure 3 shows this light utilization.

Conditional Congestion

Congestion on Path 47 is not contingent on any future evaluated in the 2010 Study Program.

Project Development Impact

Path 47 is not heavily utilized in the base case or the resource relocation case. Change in flows caused by the implementation of the incremental transmission [SunZia, Southline] was not significant.

Other Observations

Congestion on Path 47 has been reduced due to the addition of the Luna Energy Facility (LEF) generating station owned by Phelps Dodge Energy, PNM, and TEP. The LEF generation output flows in an east to west direction which counter flows the natural flow of Path 47.