

DOCKETED

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Black Forest Partners Comments on RETI 2.0 draft Plenary Group Report

Additional submitted attachment is included below.

January 10, 2017

RE: Black Forest Partners Comments on Draft RETI 2.0 Plenary Report

Dear Mr. Turner:

Black Forest Partners, LP appreciates the opportunity to provide comments on the draft RETI 2.0 Plenary Report. Black Forest is a California based infrastructure investment and development firm focused on energy transmission, storage and efficiency.

The RETI 2.0 effort is to be commended for the depth and breadth of information pulled together in a limited period of time. Black Forest is generally supportive of the draft RETI2.0 Plenary Report, particularly related to the in state analysis and conclusions.

We also appreciate the efforts made to survey available information regarding out of state resource options, export opportunities, and proposed Western transmission projects. We would offer for consideration the following observations and comments regarding the report's description of the proposed Western Transmission Summary:

In Table 1.1, the report presents clear bookends for potential California renewable demand ranging from 9,400 MW to 20,300 MW in different IEPR scenarios, and up to 29,000 MW in the high end Pathways scenario. The draft Import-Export path conclusions suggest that achievable hypothetical study ranges include Path 46 with 3,000 MW at Palo Verde and Eldorado/Marketplace (subject to Desert Area Constraint limits), and 1,000 MW at Baja California Norte (with east of Miguel solution).

The report could do a better job of using the demand and import levels identified above to frame and present a comparison out of state possibilities. The proposed Western Transmission Summary table uses \$/MW, which is an interesting, but limited metric, and is based on the best case fully scaled up versions of the projects. Other important metrics might include looking at total costs, total capacity, total mileage as these would give a better sense of the relative *risk* of different projects, and how those projects may or may not fit within the demand and import levels identified.

For example, there are a number of 3,000 MW – plus, long haul, multiple-billion dollar proposed transmission projects. Is it realistic or prudent to think that one single project would be 10 to 30% of total incremental California renewable demand? Would that be working toward a diverse and *balanced* portfolio as required in SB 350? We agree with the discussion of diversity and how non-correlated out of state resources could help diversify California's portfolio. However, to continue the financial portfolio analogy, if we had a diversified domestic stock portfolio and made the decision to invest internationally, would it be prudent to put 10, 20 or 30% of our portfolio in one international stock? A truly diversified portfolio should be balanced, which means not being overly concentrated.

Furthermore, what evidence is there to support the size of offtake required for out of state projects sized at 3,000MW? Is there a single buyer of 3,000 MW, are there two buyers of 1,500MW? Are there three buyers of 1,000MW? Are there six buyers of 500MW?

If the available market, import paths, and procurement appetite are smaller, then perhaps the western transmission summaries should be framed accordingly and compared at lower scales in more of an apples to apples basis. Building one of two 500kV circuits changes the math considerably but is not reflected in the high level, best case summary metrics presented. While capacity is reduced 50%, costs go down much less than 50%, which dramatically changes the cost/MW or any other metric.

The use of the TEPPC cost tool to create apples to apples costs across projects is a good idea, but may not include all the information needed to assess fully delivered costs. For example, in the New Mexico / Arizona region the costs for SunZia do not include, but should include, the required three 500kV underground sections and 6 required AC-DC conversion stations required for that project which would substantially increase costs. It is also misleading to compare the gen-tie projects like Western Spirit or Lucky Corridor to other network projects like Southline or to other delivery projects like SunZia or Centennial West. As pointed out by regional utilities in the Western Outreach process, the gen tie projects looking to deliver to and replace existing coal generation with wind have not studied the impacts and therefore the costs of losing the existing dynamic vars, and do not know what impacts that would have to accepted path ratings. Would replacing coal units with wind require new additional gas generation? Are those emissions counted in the total costs for those solutions?

Finally, regarding opportunities for export and exchange, there is a big difference between projects that connect and improve the existing network (Southline, SWPL DC, SWIP, Cross Tie) versus the long haul delivery projects (Centennial West, SunZia, Trans West, Zephyr) or the gen ties (Lucky Corridor, Western Spirit). Improving the network does much more than just provide a potential path for excess solar exports. Improving the network increases operating options and enhances the ability to integrate renewables into the grid. With new networked transmission between neighbors, it may not be the solar that is exported, but that extra solar may allow neighbors to carry less reserves, or exchange other existing resources.

Thank you very much for the opportunity to participate and congratulations on a very impressive effort.

Best Regards,

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