

DOCKETED

Docket Number:	15-RETI-02
Project Title:	Renewable Energy Transmission Initiative 2.0
TN #:	213596
Document Title:	LS Power Comments: Western Outreach workshops - LS Power comments
Description:	N/A
Filer:	System
Organization:	LS Power/SANDEEP ARORA
Submitter Role:	Public
Submission Date:	9/9/2016 4:02:39 PM
Docketed Date:	9/9/2016

Comment Received From: SANDEEP ARORA

Submitted On: 9/9/2016

Docket Number: 15-RETI-02

Western Outreach workshops - LS Power comments

Please see attached.

Additional submitted attachment is included below.

RETI 2: Western Outreach – Portland & Las Vegas Workshops

LS Power Comments – 9/9/16

Sandeep Arora (sarora@lspower.com)

Mark Milburn (mmilburn@lspower.com)

LS Power applauds the work done by Western Interstate Energy Board, National Association of State Energy Officials, California Natural Resources Agency and all other Agencies involved on the Western Outreach project. The purpose of this project was to gather stakeholder input from across the Western Interconnection regarding the availability of renewable energy and electric transmission that could contribute to meeting California's renewable energy and greenhouse gas (GHG) objectives by 2030. The Agencies held two workshops, one in Portland and the other in Las Vegas that were very well attended and provided good feedback. LS Power attended both of these workshops and presented its SWIP North transmission project at the Portland workshop. LS Power has the following comments for RETI's consideration. We look forward to the report that will be released by RETI towards the end of September and believe this will be a key piece of information that will be used by policy makers in shaping the policy decisions related to 50% RPS portfolios and new transmission investment. We would appreciate the RETI team's timely release of the report so it would allow for enough time to feed this information in CPUC renewable portfolio development process which would eventually feed into CAISO's 2017/18 Transmission Planning Process.

LS Power has the following comments on focus questions raised at the two workshops:

- (1) Existing transmission capacity and known constraints – what is the existing transmission capacity to deliver power from high-quality renewable energy areas to California load centers? Where are there known constraints that limit additional deliveries? What is the capacity or constraints to delivering California surplus renewables to potential out-of-state markets? What are the constraints to delivering out-of-state renewables to other load centers when California is in surplus? How is the deployment of advanced bulk electric system sensing and control technology expected to affect the need for transmission?

Based on the discussions at the two Western Outreach meetings and our knowledge of the bulk electric system in WECC, it does not appear that any significant capacity is available on the existing transmission system to allow delivery of out of state renewables into California. As currently being discussed at various proceedings in California related to SB350, 50% RPS portfolios, etc., it is evident that importing high quality out of state renewable resources, such as Wyoming wind, does not only make economic sense but also provides the diversity that California needs to integrate its solar-dominated fleet of in-state renewable resources. In order to tap into the potential of such high quality wind resources, it will be prudent for California to make new transmission investments so the potential of these resources can be unlocked.

As California begins to think about new transmission investments for importing renewables, understanding where to deliver these renewables during over-supply conditions is also an important question. Since the existing transmission system has essentially no available capacity, it would be wise for California to look into transmission investments that will not only improve import capability into California, but also improve export capability from these out of state resource pockets to other markets when California is experiencing over supply conditions.

- (2) Generation fleet trends – How will the current or potential coal plant closures affect the availability of transmission capacity for renewables to California? Will changes to the utilization of northwest hydro resources change the availability of transmission for renewable imports or exports to California? Are there other grid-scale storage projects that could materially impact the availability or need for transmission to deliver renewable energy to or from California?

Current and planned coal plant closures will undoubtedly have impacts on existing transmission availability. In theory, coal retirements should free up some existing transmission capacity, however whether that capacity will be available to California or not is uncertain. If the current transmission right holders of the impacted transmission paths simply choose to retain their rights for their own transactions, then its availability for California's broader market and CAISO in particular will not be there. Further, coal retirements may improve transfer capability between high quality renewable resource locations and other major transmission hubs nearby but may not necessarily provide any new transmission capability into CAISO or elsewhere in California. Thus there will likely still be a need to add new transmission capacity such that the remote out of state renewable resources could be delivered to California load pockets.

- (3) Institutional changes – How would increased use of “energy-only” (as opposed to fully- deliverable) renewables procurement affect transmission availability and need, and how likely are utilities to be interested in out-of-state energy-only procurement? How could the use of dynamic scheduling and other transmission contracting affect

deliverability of renewables to California? How could the expansion of Energy Imbalance Market affect transmission availability? What other institutional reforms or balancing area agreements could improve utilization of existing capacity? Where are non-transmission alternatives processes in place and how will that affect the need for transmission?

Energy-only procurement, if it happens, will be a major policy shift for California and this will bring some new challenges which should be very carefully considered. Energy-only procurement essentially means that CAISO will be implementing congestion management in lieu of building new transmission, which will undoubtedly cause more congestion and hence trigger the need for renewable curtailments. This could leave new renewables stranded and curtailment of these resources will mean even more renewables will need to be added to meet the same RPS goals, which will be an added cost to California ratepayers. This curtailment will not only impact new Energy-only resources but also the Full Capacity Deliverability Resources which typically fund transmission upgrades through the interconnection process so they can be delivered. Therefore, there is a potential major shift in business risk for these resources. Further, Energy-only resources cannot be counted by LSEs to meet their Resource Adequacy obligations, which mean LSEs will have to procure Resource Adequacy from other resources in addition to contracting with the new renewable resources. Resources will not be able to collect any capacity payments from LSEs which means renewable resources will not be as competitive for tolling agreements with LSEs, again leading to higher cost to ratepayers.

EIM and its continued expansion to other entities will continue to drive benefits to all parties which will encourage the need for additional transmission capacity between EIM entities. As seen from various EIM benefit studies, EIM market participation offers significant benefits to all EIM entities, but these benefits usually get capped due to lack of existing transmission capacity between these entities. The benefits to all entities can be significantly higher if more transmission capacity were to be available between EIM entities. As California thinks about making new transmission investment it should consider this attribute of the new transmission, i.e. does the new transmission improve transmission capacity between CAISO and other participating EIM entities.

- (4) Current expansion proposals – Is the RETI 2.0 list of regional transmission project proposals complete? Is the WECC Common Case Transmission Assumptions accurate? How could the transmission cost assumptions for out-of-state renewable energy in the CPUC RPS Calculator be improved? Which proposals have received the most interest from utilities in other states and why? What potential expansion scenarios do you think are most likely? Where have proposals not been made, but should? Where would other kinds of line upgrades or new technology obviate the need for expansion?

The Western Outreach meetings gathered inputs from all major transmission developers on the attributes of their transmission projects. As a next step, RETI should add a section in its report summarizing key information about these transmission projects. The information, at minimum, should describe attributes such as transmission capacity, capital cost, permitting status, new market opportunities created by the project, etc. If any key information is missing about a particular project, RETI should seek inputs from the project developer. Further, a discussion on the benefits these projects bring to California under these three plausible scenarios, would be helpful: (a) Status Quo – CAISO continues to operate and expand its EIM market while keeping the same footprint, (b) CAISO and PacifiCorp integrate and CAISO footprint expands, and (c) Complete west-wide integration takes place and CAISO's footprint expands to the entire west. This should help policy makers make prudent decisions and this information should then feed into the CPUC RPS calculator for 50% RPS portfolios.

- (5) Costs and benefits of transmission expansion options – What are the pros and cons of different configurations of transmission expansion? How would different expansion options affect deliverability directly to California? Indirect (commercial) deliverability to California? Exports from California? Ability to defer imports during excess supply? Which configuration of potential transmission expansion options is most likely to support efficient dispatch and utilization of renewable diversity across the west? How should advanced transmission technologies and non-wires alternatives be considered in evaluating expansion options?

As stated in response to Question (4) above, it is highly important for RETI to consolidate all inputs that it received at the Western Outreach meetings with respect to transmission expansion options. While several expansion options were presented at these meetings, absent a report that summarizes these options and weighs in the costs, benefits, and feasibility of building these options, it would be hard to provide any inputs to the regulatory processes related to 50% RPS portfolio development. Due to reasons stated in our response to Question (3) above, the incremental deliverability that these transmission options bring to California should be considered. Further, the ability of these options to allow switching automatically from bringing imports to delivering exports, thereby allowing for efficient and economic dispatch should be weighed in. Considerations should be given to whether a transmission option is a fully integrated network facility or not. Incremental reliability benefits of each option should also be given due consideration. If an

option alleviates any existing congestion issues thereby allowing for improved transfer capability on not only the CAISO boundary point where it connects, but also other import points, should be considered.

To summarize, here are some key questions that would help better understand the relative value different transmission options bring:

- (1) Capital cost of the project and new transmission capacity the project provides?*
 - (2) Permitting status, feasibility of the project in getting built, timing?*
 - (3) Which out of state renewable resources does the project allow California to access? If more than one state, list all states.*
 - (4) In addition to policy benefits, does the project bring any Reliability and/or Economic benefits to the ratepayers?*
- (6) Next steps - What additional planning initiatives could California pursue, alone or with federal or western state partners, to facilitate the more efficient utilization of existing transmission capacity for accessing renewables.*

As a key next step, the RETI report should provide timely input to the CPUC proceedings so renewable portfolios for 50% RPS can be developed prior to kick off of CAISO's 2017/18 Transmission Planning cycle.

To support our comments above, below is additional information describing LS Power's SWIP North Transmission Project:

SWIP-North is the final portion of a three-phase, 560 mile high voltage western corridor that extends from the Midpoint Substation (PACE, IPC, BPA) in southern Idaho to the Eldorado Substation in southern Nevada (CAISO). The first phase, the 231-mile Robinson Summit to Harry Allen 500 kV transmission line built by a joint development effort between LS Power and NV Energy known as the One Nevada Transmission Line (ON Line) began commercial operations in January 2014. In December 2014 the CAISO board approved the second phase, the 60-mile Harry Allen to Eldorado 500 kV transmission line, as an economic project with benefits to California consumers. In January 2016 CAISO awarded the competitively bid project to LS Power affiliate DesertLink to be constructed and placed in service by 2020.

What remains to be constructed is the 275-mile Midpoint to Robinson Summit segment being developed by LS Power known as SWIP-North. The federal NEPA analysis is complete for SWIP-North and a federal BLM right-of-way grant and Notice to Proceed with Construction have been secured. Due to this significant development progress, SWIP-North is nearly "shovel-ready" and could be in service as early as 2020 once cost recovery is secured.

Under an agreement between LS Power and NV Energy for the construction of ON Line and SWIP-North, LS Power retains approximately 1000 MW of capacity on ON Line to support the buildout of the SWIP-North. These future capacity rights and NV Energy's 345 kV system at Midpoint create limitations on NV Energy's ability to utilize ON Line's 2000+ MW capacity. Meanwhile, the capacity that is available to NV Energy on ON Line is substantially subscribed through native reservations and long term transmission service agreements, severely limiting the ability of new transmission or generation interconnections other than SWIP-North to access an additional 1000 MW of ON Line capacity. Upon completion of SWIP-North a new 2000 MW path from Midpoint to Robinson and an incremental 1000 MW on ON Line will be in service. This means that the full capacity from PACE to CAISO will be unleashed providing significant economic, reliability and policy benefits to CAISO via a 500 kV bulk pathway with more than 1000 MW that can be fully dedicated to CAISO.

Because the cost of ON Line is already allocated to NV Energy (WestConnect), the cost to unleash this additional capacity is limited to the capital cost of building SWIP-North, which can be completed for an estimated \$500 million. This low capital cost leverages off of the transmission investments already made in Nevada and California, firmly positioning SWIP-North as a no-regrets investment...the low hanging fruit in the quest to incrementally build high value projects that support California policy goals as well as demonstrated economic and reliability needs. SWIP-North will cost effectively complement any transmission and renewable buildout scenario envisioned by CAISO and the CPUC. Further delaying the construction of SWIP-North will result in significant annual ratepayer costs that could otherwise be avoided.