

## DOCKETED

<b>Docket Number:</b>	15-RETI-02
<b>Project Title:</b>	Renewable Energy Transmission Initiative 2.0
<b>TN #:</b>	213617
<b>Document Title:</b>	Western Outreach - VEA Comments
<b>Description:</b>	N/A
<b>Filer:</b>	System
<b>Organization:</b>	Valley Electric Association, Inc.
<b>Submitter Role:</b>	Public
<b>Submission Date:</b>	9/12/2016 11:43:16 AM
<b>Docketed Date:</b>	9/12/2016

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*Submitted On: 9/12/2016*

*Docket Number: 15-RETI-02*

**Western Outreach - VEA Comments**

*Additional submitted attachment is included below.*



September 12, 2016

**RETI 2.0 Western Outreach  
Comments on Focus Questions from Outreach Workshop**

Valley Electric Association, Inc. (VEA) submits the following comments in response to focus questions presented at the RETI 2.0 Western Outreach Project: Las Vegas Workshop. VEA appreciates the opportunity to provide input on this important initiative and looks forward to the results of this project.

**I. Renewable Demand**

*How much additional renewable energy development in the west is likely?*

Since 2011, VEA has received a total of twenty-four interconnection requests with a total capacity of approximately 3,000 MW from potential renewable energy developers in its area. VEA's area offers a high level of solar potential with a direct connection to the CAISO and without the full burden of long California siting processes. At the present time there are seven solar projects (with a combined capacity of approximately 1,400 MW) in the CAISO's interconnection queue and located in the VEA area. In addition, areas of Nevada in and around the northwestern portion of the VEA system contain a significant level of untapped geothermal development potential.

In summary VEA's service area and the nearby surrounding areas offer attractive remaining renewable potential – both solar and geothermal.

*[What is the reason for this additional development?] To serve state RPS mandates? To meet Clean Power Plan compliance? Driven by economics like declining costs, customer preferences, and tax credits? To meet other policy objectives?*

As indicated above, VEA's service area offers the only existing renewable rich environment wherein development can occur under Nevada siting regulations yet satisfy California's RPS by being a part of the CAISO-controlled grid. At the present time, the VEA system accesses the CAISO-controlled grid at Mead Substation, and a direct tie between the VEA system and the Eldorado Substation is planned. Additionally, VEA has proposed a 230 kV project to connect to the CAISO-controlled grid in the less congested Bishop area. These interconnections provide an economically efficient and rich source from which to satisfy California's RPS requirement.

## **2. Renewable Supply**

VEA offers comments on the following questions based on its experience within its own service area and not generally for the whole of the region.

*Where, and in which technologies, is development of renewable energy most likely to occur in the next 15 years? Where are renewable developers pursuing projects?*

As noted above, there are currently seven solar projects in the CAISO interconnection queue that are located in the VEA area. Five of these projects are located north of the Nevada/California border and within about 50 miles northwest/southeast of Pahrump; the other two projects are located in the proximity of the VEA 230-kV line northwest of the Las Vegas area. Due to the presence of various federal protected land in the area and the location of the existing VEA transmission facilities, it is likely that the development of solar resources in the VEA area will be located in these areas. In addition, there is significant potential for geothermal resource development in or near the VEA service area in the Fish Lake Valley area of Nevada, which is northeast of Bishop, California. The Nevada West Connect project discussed below would provide access to these resources.

*Where (and in which technologies) are utilities most interested in procurement?*

VEA sees a significant interest in solar development in VEA's area. VEA also perceives a strong interest in geothermal energy development in Nevada; however, additional transmission development in Nevada would be required to interconnect these resources to the CAISO grid and upgrades would be required to the CAISO grid to allow the resources to be deliverable. To date, the costs of such additions/upgrades have proven to be prohibitively expensive. We understand that the geothermal resources offer a distinct production pattern that would counteract the "duck curve" profile of wind and solar facilities and thereby aid in the overall management of interconnecting resources in the grid.

## **3. Existing Transmission Capacity and Known Constraints**

VEA offers its expertise regarding its own service area for the questions below.

*What is the existing transmission capacity to deliver power from high-quality renewable energy areas to California load centers?*

In 2013, VEA completed its 230 kV looped network upgrade. This loop improved the reliability of the VEA system and facilitates the reliable delivery of up to 350-400 MW of renewable resources located within the VEA area to the main transmission grid in southern Nevada.

*Where are there known constraints that limit additional deliveries?*

As noted above, the capability of the VEA system to deliver resources to the balance of the grid is limited to 350-400 MW. These limitations are due to the fact that there are only two 230-kV connections between the VEA system and the balance of the grid in southern Nevada. In addition, there are limitations on the CAISO-controlled grid between southern Nevada and southern California that limit the amounts of renewables that can be delivered over these facilities.

*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?*

With respect to the VEA system, any such constraints would be due to the limitations on the existing VEA system as discussed above. Once capacity from the VEA system is delivered to the main grid in southern Nevada it could be delivered to out-of-state markets over existing facilities.

#### **4. Current Expansion Proposals**

*Is the RETI 2.0 list of regional transmission project proposals complete?*

No. The RETI 2.0 list of projects does not include projects such as the Nevada West Connect Project, which VEA proposed to the CAISO in September 2014. The Nevada West Connect Project offered a 230-kV line interconnecting the VEA system with the CAISO-controlled grid in the Bishop, California area. While this Project was not accepted by the CAISO at that time, VEA believes it is worthy of consideration in that it would facilitate the development of geothermal resources in central portion of Nevada near Bishop. It would improve the delivery of those geothermal resources and the southern Nevada solar resources into California.

*How could the transmission cost assumptions of out-of-state renewable energy in the CPUC RPS Calculator be improved?*

VEA would be pleased to work with the CPUC to verify cost assumptions for transmission development in VEA's service area.

*Where have proposals not been made, but should?*

As noted above, Nevada is rich in geothermal resources. If the full costs of renewable integration were captured as part of renewable procurement, geothermal resources that avoid adverse grid ramping and duck-belly overgeneration may likely be seen as more attractive resources. Proposals for transmission directly into California from the central and northern portions of Nevada should be made.

*Where would other kinds of line upgrades or new technology obviate the need for expansion?*

VEA has investigated the potential for reconductoring certain of its 230-kV line using composite conductors to increase the ratings of these lines and the amounts of power that could be delivered over them.

## **5. Cost and Benefits of Transmission Expansion Options**

*How would different expansion options affect deliverability directly to California?*

Increased capacity to deliver resources through VEA's service area would enhance deliverability directly to California.

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