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**Bay Area Municipal Transmission Group's Comments on the Renewable Energy Transmission Initiative 2.0 Transmission Technical Input Group June 9, 2016 Workshop**

*Additional submitted attachment is included below.*

## **Bay Area Municipal Transmission Group's Comments on the Renewable Energy Transmission Initiative 2.0 Transmission Technical Input Group June 9, 2016 Workshop**

**June 23, 2016**

### **1. Introduction**

The Bay Area Municipal Transmission Group<sup>1</sup> (BAMx) appreciates the opportunity to comment on the Renewable Energy Transmission Initiative 2.0 (RETI 2.0) Transmission Technical Input (TTIG) Group June 9, 2016 Workshop. We appreciate the TTIG's efforts in compiling the existing and planned transmission capability information to support the RETI 2.0 process. However, we remain concerned about the direction that this effort is heading. We do not believe that investigating what transmission to build on paths that may not be necessary to fulfill our RPS or GHG goals is the best way to spend limited resources. The goal should be to determine what transmission issues may impede California's ability to achieve its goals with the least environmental and financial impacts on ratepayers.

BAMx provides comments on the following two (2) topics discussed during the June 9<sup>th</sup> workshop.

- Proposed Renewable Resource Ranges Studied for the Transmission Assessment Focus Areas (TAFA);
- Need to account for the Full Capacity Deliverability Status (FCDS) Capacity Potentially Freed up by Retiring Generation.

### **2. Proposed Renewable Resource Ranges Studied for Transmission Assessment Focus Areas (TAFA)**

#### **A. Proposed Study Range is Still Unrealistic**

Although the new amount the RETI 2.0 study team is asking the TTIG to study in the San Joaquin valley (reduced from 10,000MW to 5,000MW) is more reasonable, BAMx remains concerned that the TTIG is asked to assess transmission for several other TAFAs at

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<sup>1</sup> BAMx consists of Alameda Municipal Power, City of Palo Alto Utilities, Port of Oakland, and the City of Santa Clara's Silicon Valley Power.

unrealistically high level of renewable capacity.<sup>2</sup> Please refer to BAMx’s comments to RETI 2.0 study team dated May 16<sup>th</sup>, where we have articulated why the current approach goes completely against the least-cost best-fit principle for procuring renewable resources and will end up identifying transmission solutions for problems that do not exist.<sup>3</sup>

### **B. Need for an Approach Involving Economic Mix of FCDS and EO**

We applaud the TTIG’s efforts in putting together existing transmission capability estimates within the CAISO BAA based on either purely FCDS or Energy-Only (EO) capacity as shown in Table 1. The TTIG has indicated that transmission information from previous Planning Area studies and analyses would be used to assess the TAFAs. BAMx supports the TTIG’s proposed plan to include potential transmission upgrades limited to achievable transmission development (those that can be accommodated without significant modifications to the current grid). BAMx also appreciates the TTIG clarification that the capacity provided may be less than the Proposed Study Range identified by RETI 2.0 management team for each TAFE.

**Table 1: Transmission Capability Estimates within the California ISO<sup>4</sup>**

Renewable Zones	FCDS Transmission	EO Transmission
Greater Carrizo	0	590
Central Valley North &	130	1,889
Greater Imperial	523	1,849
Kramer & Inyokern	0	412
Lassen & Round	unknown	1,250
Mountain Pass & El	535	2,735
Tehachapi	2,628	3,794
Solano	0	879
Sacramento River	36	2,099
Riverside East & Palm	2,450	4,754

<sup>2</sup> See TAFE Information (Illustrative, Partial) (slide #44) of the Transmission Technical Input Group Update, by Neil Millar, CAISO, TTIG Meeting, 9 June, 2016

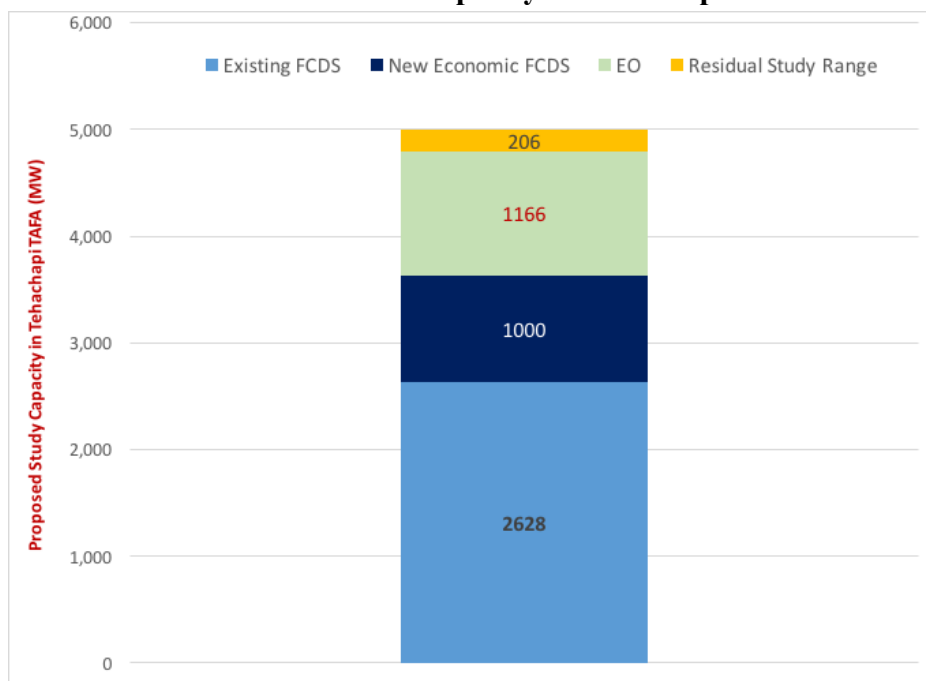
<sup>3</sup> [http://docketpublic.energy.ca.gov/PublicDocuments/15-RETI-02/TN211487\\_20160516T084230\\_Joyce\\_Kinnear\\_Comments\\_Bay\\_Area\\_Municipal\\_Transmission\\_Group%E2%80%99s.pdf](http://docketpublic.energy.ca.gov/PublicDocuments/15-RETI-02/TN211487_20160516T084230_Joyce_Kinnear_Comments_Bay_Area_Municipal_Transmission_Group%E2%80%99s.pdf)

<sup>4</sup> Table 2-1 in Renewable Energy Transmission Initiative 2.0, Transmission Technical Input Group, June 8, 2016.

Table 1 provides a useful estimate of the bookends for existing transmission capability under the either/or scenarios: all FCDS or all EO. As a next step, BAMx recommends that the RETI management team consider a possible mix of “fully deliverable and energy only” resources that could be added in each area from a least-cost best-fit perspective.

BAMx suggests that the TTIG complete a more analytical approach in identifying transmission needs. First identify the FCDS capacity that can be accommodated on the existing transmission (as done in Table 1). Next, identify additional FCDS capacity that can be accommodated on the new, economic transmission. For example, in the Tehachapi TAFE, the TTIG has been asked to study 5,000MW. First, 2,628MW of FCDS capacity can already be accommodated on the existing transmission, as shown in Table 1. Then, if it makes economic sense to build a transmission upgrade costing \$100 million that can accommodate 1,000MW of incremental FCDS resources, that could be identified rather than assuming that the incremental 1,000MW capacity would be EO.<sup>5</sup> Finally, TTIG needs to consider whether the additional capacity of 1,372MW (=5,000-3,628) could be accommodated on the existing system with \$100 million in upgrades as EO or through any additional economic transmission upgrades that are needed for congestion benefit.

**Figure 1: Identification of FCDS and EO Capacity in Tehachapi TAFE: An Illustration**



<sup>5</sup> In order for the 1,000MW of FCDS capacity to be economic, its incremental resource adequacy credit and congestion benefit, if any, should exceed the levelized cost of capital associated with the new upgrade that it triggers.

Suppose only 1,166MW additional generation can be accommodated as an EO based upon economics and that any supplementary facilities cannot be accommodated either without significant and expensive modifications to the current grid or excessive congestion. If the TTIG is following the analysis recommended by BAMx, then it could identify any transmission upgrade needed to accommodate the residual portion of the study range, i.e., 260MW (=5,000-3,628-1,166). BAMx believes that this more analytical approach will be useful in understanding the role of transmission in meeting the State's RPS and GHG goals rather than assuming that the new renewable capacity in a given TAFAs would be exclusively either FCDS or EO.

BAMx also hopes the TTIG considers the following three aspects as elaborated in the BAMx's May 16<sup>th</sup> comments (included in the Attachment A), while assessing TAFAs.

- Capability of Existing Transmission Needs to be Further Explored
- Need to Study Exports; and
- Need to Better Understand Capability of Existing Transmission to Import OOS Resources

### **3. Need to Account for FCDS Capacity Freed Up by Retiring Generation**

BAMx understands that the FCDS transmission capacity reported by the TTIG (Table 1) is based upon the CAISO's latest assessment applicable to the current year. However, given the objective of the RETI 2.0 in understanding the adequacy of transmission over a longer-term, BAMx believes that the TTIG needs to take into account additional FCDS capacity that would likely be freed up in the medium to long-term in the CAISO BAA. The economically-driven early retirement of gas-fired generation is a very relevant and important issue that is being studied as part of the CAISO's special study under its 2016-17 transmission planning cycle.<sup>6</sup>

Consistent with Section 6.2.7.3 of the CAISO Business Practice Manual (BPM) for Generator Interconnection and Deliverability Allocation Procedures (GIDAP), according to the CAISO<sup>7</sup>,

“Although Full Capacity Delivery Status will be retained, any capacity that is unused as a result of retirement or during a repowering period will be available to other

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<sup>6</sup> Special Studies Stakeholder Call Presentation, CAISO 2016-2017 Transmission Planning Process Stakeholder Call, June 13, 2016

<sup>7</sup> See page 3 of the Comments of The California Independent System Operator Corporation In the Matter of the Application of Southern California Edison Company for a Certificate of Public Convenience and Necessity for the Coolwater-Lugo Transmission Project, A.13-08-023, dated January 8, 2015.

interconnection customers in the form of interim deliverability. The CAISO annually re-allocates unused capacity through its operational partial and interim Deliverability Assessment as part of the Phase II Interconnection Study.”

The CAISO’s BPM provides that the existing generators can keep their deliverability for three years unless the existing generators also announce that they have no intent to repower.<sup>8</sup> The administrative process and policy envisioned in the CAISO’s *Reliability Services* BPM allows market participants to retain FCDS and interconnection rights for existing plants during a limited period to allow the owner to decide whether to repower. However, once the three-year period expires, the retiring generator’s FCDS capacity could become available to be allocated to the remaining generation seeking FCDS.

BAMx encourages the TTIG to take into account the potential FCDS capacity that might be available over the next decade or so. For example, the TTIG identifies that Kramer and Inyokern area has no FCDS capacity available on the existing transmission (see Table 1). However, several existing generators in the Kramer area have recently retired<sup>9</sup> and others are at risk of retiring in the near future. This means that there could be at least 636MW of associated Coolwater GS FCDS capacity potentially counted as “available FCDS capacity” going forward. Note that BAMx is not requesting the TTIG to assume the FCDS capacity associated with the retiring generation unless the three-year period has expired and the generator owner has decided not to repower. What BAMx is requesting is that TTIG compile the data on the retiring generating capacities within the different TAFAs, so that stakeholders are better informed regarding the potential availability of additional FCDS capacity on the existing transmission in the near future.

Thank you for the opportunity to comment.

If you have any questions concerning these comments, please contact Joyce Kinnear ([jkinnear@santaclaraca.gov](mailto:jkinnear@santaclaraca.gov) or (408) 615-6656).

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<sup>8</sup> Without taking a position on the specific impacts of the closure on the CLTP, the CAISO addresses NRG’s options with regard to the capacity at issue under the its BPMs. See CAISO comments, pp. 2-3.

<sup>9</sup> NRG California South LP (“NRG”) announced (NRG letter to Paul Clanon/CPUC dated October 24, 2014, A.13-08-023) that the Coolwater Generating Station Units 1, 2, 3 and 4 (“Coolwater GS”) will no longer operate after January 1, 2015. retirement of Coolwater GS potentially frees up significantly higher FCDS capacity (i.e., 636MW).

## **Attachment A: Excerpts from the BAMx May 16<sup>th</sup> Comments**

### **A. Capability of Existing Transmission Needs to be Further Explored**

During the May 2<sup>nd</sup> workshop, TTIG also presented some insights into the non-CAISO California existing and planned transmission capability to accommodate additional renewable resources.<sup>10</sup> Prior to evaluating new transmission, BAMx believes there needs to be better understanding among the policymakers and stakeholders regarding the locations of In-State resources that can be accessed and OOS renewable resources that can be imported on the existing transmission infrastructure. Such an assessment would involve scenarios which assume the timely retirement of coal resources. There are already studies completed by WECC which can help with this effort.<sup>11</sup> Such scenarios should include studying the effect of the “repurposing” proposed for the Intermountain DC Intertie, an HVDC line owned and operated by the Los Angeles Department of Water and Power (LADWP).

### **B. Need to Study Exports**

We know that California’s ability to export is a very effective tool in reducing the need to build additional renewable resources to meet the State RPS and GHG goal.<sup>12</sup> Therefore, we encourage RETI 2.0 management to further study the capability and adequacy of the existing transmission system to facilitate California exports. BAMx shares Commissioner’s Picker’s concern that any new transmission built to access remote renewable resources will not necessarily be used to effectively export California excess renewables during certain times of the day or year. Therefore, rather than jumping to a conclusion that it is necessary to build new transmission to access renewables that can also be utilized to facilitate California’s exports, RETI 2.0’s efforts are better served in exploring whether the existing transmission system is really the limitation for exports. If not, then the market issues that are creating barriers to exporting California renewables should be investigated rather than constructing new transmission.

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<sup>10</sup> N. Millar, “Revised Presentation on Update on Existing Transmission Capability for Renewable Resources,” Slide #9.

<sup>11</sup> An October 29, 2015 WECC presentation that reports PC-21 case study and can be found here: [http://westernenergyboard.org/wp-content/uploads/2015/10/10-29-15\\_CREPC-SPSC-WIRAB\\_woertz\\_WECC\\_reliability\\_study\\_requests.pdf](http://westernenergyboard.org/wp-content/uploads/2015/10/10-29-15_CREPC-SPSC-WIRAB_woertz_WECC_reliability_study_requests.pdf)

<sup>12</sup> CPUC ED’s 2016 RPS Portfolio Sensitivities Results indicate that a 5,000MW of export capability for the CAISO BAA reduces the annual renewable curtailments from 7.9% to as low as 0.5%. **Source:** DRAFT 2016 RPS Portfolios, RETI 2.0 Plenary Group Meeting, Slide #9, 3/18/2016.



### **C. Need to Better Understand Capability of Existing Transmission to Import OOS Resources**

Currently, the CPUC RPS Calculator assumes that no existing transmission is available (e.g., new transmission must always be built) to access OOS renewable projects.<sup>13</sup> BAMx believes there needs to be better understanding among the policymakers and stakeholders regarding the level of OOS renewable resources that can be imported on the existing transmission infrastructure. There is clearly some amount that can be imported over the existing transmission system. The SB 350 study provides some insights in this regards, where it assumes that nearly 3,000 MW of external medium-quality wind and solar resources would be available over the existing transmission system at the proximity to the existing delivery points into California.<sup>14</sup> BAMx strongly encourages the RETI 2.0 management team to investigate the capability of the existing system to import and accommodate OOS renewable resources. BAMx believes that RETI 2.0 management team is ideally suited to undertake this very important task that requires joint agency coordination.

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<sup>13</sup> RPS Calculator User Guide, Version 6.1, p. B-25, August 20 2015.

<sup>14</sup> Draft Renewable Portfolios for CAISO SB 350 Study, slide #23, CAISO Public Workshop, February 8, 2016.