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Bay Area Municipal Transmission Group's comments on the CEC 2015 IEPR – Renewable Progress, Challenges and Opportunities Workshop.

Additional submitted attachment is included below.

Bay Area Municipal Transmission Group's Comments on the CEC's Workshop on Renewable Progress, Challenges, and Opportunities

June 15, 2015

The Bay Area Municipal Transmission Group¹ (BAMx) appreciates the opportunity to submit post-workshop comments on issues raised at the May 11th workshop as part of the California Energy Commission's (CEC) 2015 Integrated Energy Policy Report ("2015 IEPR" hereafter) on Renewable Progress, Challenges and Opportunities.

Introduction

BAMx applauds the CEC for holding the kind of workshop that occurred on May 11, 2015, because it enabled stakeholders to interact with Commissioner's and executives of California's regulators and policymakers. Below we comment on two of the subjects covered in the workshop:

- 1. The best policies to adopt to achieve the 2050 goal of reducing greenhouse gas emissions by 80% below the 1990 level.
- 2. One method to dramatically reduce the cost of adding renewable energy projects in California

Best Policies to Achieve Greenhouse Gas Goals

BAMx supports the State's 2050 goal of reducing greenhouse gas (GHG) emissions by 80% below the 1990 level. BAMx members are well-positioned to meet and exceed the 2020 Renewables Portfolio Standard (RPS) compliance requirements. BAMx also supports a State policy that gives utilities the flexibility to address these emission reduction goals in a manner that controls costs to consumers and maintains reliability. Flexibility could include the use of renewable resources, energy efficiency, demand response, and energy storage. Allowing utilities to use and combine these tools in a way that best accommodates their local resources, load profile, infrastructure, and financial needs of their customers has delivered proven results to date. BAMx members look forward to working through Northern California Power Agency (NCPA) and California Municipal Utilities Association (CMUA) to help achieve the State's climate policies in a cost-effective and reliable manner. Balancing the impact of policy on customers'

¹ BAMx consists of Alameda Municipal Power, City of Palo Alto Utilities, and the City of Santa Clara's Silicon Valley Power.

² For the details on each member utility's full compliance with the law for the 2011-13 compliance period, see the Comments of the Northern California Power Agency on May 11, 2015 Commissioner Workshop- Renewable Progress, Challenges, and Opportunities, pp. 1-2. (http://docketpublic.energy.ca.gov/PublicDocuments/15-IEPR-06/TN204863 20150603T082245 Scott Tomashefsky Comments Comments of the Northern California.pdf)

bills is a major priority for BAMx. Efforts to reduce carbon emissions and other greenhouse gasses should consider their costs to the public. Significant or rapid cost increases for residents could compromise the state's important climate goals.

Reducing the Cost of Adding Renewables to the California Grid

Below we comment on a specific question posed by the California Independent System Operator (CAISO) management at the May 11th Workshop on revisiting the CAISO's deliverability³ assessment criteria used to determine the need for transmission to count the resource adequacy (RA) credit of the interconnecting generating resources. BAMx suggests three ways to reduce the costs of connecting additional renewable energy to the transmission grid: 1) Evaluate the system's need for capacity; 2) when capacity is needed, consider the lowest cost alternatives to obtain the capacity; and 3) review the CAISO's deliverability criteria.

Since 1998, billions of customer dollars have been spent, and are planned to be spent, in building transmission infrastructure, not to access the renewable energy, but rather to obtain credit for the full capacity of renewable generation.⁴ These expenditures are driven by stringent CAISO "deliverability" requirements and, with few exceptions, without any cost/benefit analysis.

A generator that has obtained "deliverability" can count its dependable capacity towards a CAISO Load Serving Entity's (LSE's) CPUC-specified RA requirements. However, RA capacity is plentiful. Therefore, the important question is whether it makes sense for customers to pay for added transmission infrastructure just to allow a new generator's capacity to fully count towards LSEs' RA requirements when there is no need for the additional capacity. If additional capacity is needed in the future, then the goal should be to find the least-cost method to obtain it. Other lower cost alternatives could include relying on sources of RA capacity that do not require new transmission infrastructure to obtain deliverability status, or perhaps relying on a different mix and/or location of new generation where the additional transmission infrastructure required is of smaller scope and lower cost.

BAMx is encouraged that the CEC proposes to discuss deliverability of renewable and other generation as part of the Strategic Investment Plan in the 2015 IEPR. In our comments to the CEC on the 2014 IEPR Update⁵, we outlined a number of issues concerning the stringent CAISO

³ Deliverability is an essential element of any resource adequacy requirement. Specifically, Load Serving Entities (LSEs) must be able to show that the supplies they intend to procure to meet their load requirements can be delivered to load when needed. Otherwise, such resources are of little, if any, value for the purposes of resource adequacy. The California Public Utilities Commission (CPUC) requires LSEs to demonstrate the deliverability of the resources they procure in both their annual resource plans and their long- term resource plans.

⁴ Since 2007 an estimated \$8 billion in large-scale deliverability-driven transmission projects have been approved, permitted and/or are under construction.

⁵ "Bay Area Municipal Transmission Group's Comments on the CEC 2014 Draft IEPR Update." dated December 11, 2014 (http://www.energy.ca.gov/2014_energypolicy/documents/2014-11-24_workshop/comments/). pp.2-4.

"deliverability" requirements that have driven excessive and unneeded transmission infrastructure expenditure primarily to obtain credit for the full capacity of renewable generation.

Major transmission additions are proposed because the CAISO uses extremely conservative criteria to determine whether RA capacity can be counted towards meeting the LSE's RA requirements. If those criteria were more reasonable, then many more renewable projects would be able to provide RA capacity without necessitating upgrades to the transmission. During the May 11th workshop, Keith Casey, Vice President of Market and Infrastructure Development at the CAISO raised the issues questioning the need for continuing the CAISO's strict deliverability assessment criteria going forward. In particular, Dr. Casey's stated the following.

"Part of the challenge we have from the transmission planning standpoint is that renewable development can happen in so many places at so many levels that if you build transmission all over the State, it results in exorbitant transmission cost. We rely on a coordinated process with the CPUC in terms of developing the RPS portfolios in considering the transmission implications. As somebody noted earlier today, one of the things we are exploring in the context of the 50% RPS is should we require the high standard of transmission deliverability that to date the utilities have required in their procurement of renewables. (Which means) can those renewables be delivered to the load on a peak demand day with two major transmission contingencies on the system? It is a very high standard. And it drives more transmission than what would be required under a more lenient standard. I was just curious if you all had any thoughts on that particular standard with regard to the 50% (renewable) portfolio."

BAMx strongly agrees with Dr. Casey that the current CAISO deliverability criteria are very stringent and recommends relaxing those standards going forward. We are extremely encouraged to see Dr. Casey thinking creatively about methods to achieve our GHG goals at minimum consumer cost.

BAMx believes the deliverability criteria the CAISO uses are extremely conservative for the reasons Dr. Casey points out. That is, the CAISO requires the generation to be deliverable with two lines out of service on a peak day. In addition, for intermittent renewables, it assumes the generators are interconnected and generating at a much higher level of output than what the CPUC allows jurisdictional LSEs to count towards their RA obligations. In other words, the MW standard that has to be "deliverable" is much higher than the MW capacity that the utilities are allowed to count for RA. These assumptions are overly conservative given the deliverability

Entities to count towards their Resource Adequacy obligations. (A lower exceedance threshold equates to higher generation assumptions.)

⁶ The current CPUC NQC is based is based on the "exceedance method," i.e., the level of production exceeded in 70% of peak hours specified by the CPUC, based on a rolling average of three years of data. There is also a "diversity adjustment" based on the 70% exceedance level for all similar resources in the state. However, the CAISO Deliverability Methodology uses exceedance levels of 20% to 50%, which means the CAISO studies interconnecting generators at a much higher level of output than what the CPUC allows jurisdictional Load Serving

criteria's commercial purpose of qualifying resources to provide RA.⁷ Over the past several years, BAMx has been seeking a broader Stakeholder involvement in reforming the CAISO's Deliverability Assessment criteria. We appreciate the CAISO's training⁸ on the deliverability methodology. Based on what we learned during this training, we were further convinced that the conservative CAISO deliverability studies grossly underestimate the capability of the current transmission system (including planned CPUC-approved transmission upgrades) to provide not only the energy needed to meet out renewable goals but also to deliver reliable capacity. Several adverse consequences have resulted and may result in the future if the CAISO continues its implementation of the existing deliverability methodology.

To date the deliverability assessments have failed to provide accurate market signals for the renewable project developers. Viable generation projects have been deemed undeliverable and thus have become unviable in the competitive market due to a lack of RA credit. Most importantly, expensive transmission upgrades deemed necessary by the CAISO to make projects "deliverable" have initially burdened the renewable energy generators, but ultimately the cost of those upgrades are borne by the ratepayers. A more equitable set of deliverability criteria would provide for a more reasonable path for renewable project developers and improve their decision making process on desirable sites.

Another deliverability issue is the CAISO's practice of identifying transmission upgrades needed to provide deliverability status to the resources in the RPS portfolios jointly developed by CPUC, CEC and the CAISO. The CAISO now assumes **all** of the generation within those portfolios seeks deliverability. BAMx believes that a two pronged approach— one that incorporates energy only renewable resources in the RPS portfolios⁹ and another that relaxes the current stringent CAISO deliverability assessment criteria – would result in meeting the State's current 33% RPS and future GHG and renewable goals in a more economically efficient manner. The benefits of streamlining the deliverability process, recognizing the changes in the market and regulatory environment since it was originally conceived, are huge. These include saving potentially hundreds of millions, if not billions of dollars, from unneeded transmission upgrades, reducing the associated environmental impacts of new transmission, and enhancing competition in a rapidly changing renewable development market.

BAMx appreciates the opportunity to comment on the May 11th Workshop. We recognize that any meaningful resolution to the workshop topics will require the support of multiple State agencies. We support the cooperation of those agencies and are encouraged to see that it is happening. We look forward to continued public stakeholder participation.

⁷ For example, see BAMx Comments on the CAISO Deliverability Methodology, December 18, 2012, (http://www.caiso.com/Documents/BAMxCommentsDeliverabilityMethodologyTraining.pdf)

⁸ "Generator Interconnection and Deliverability Study Methodologies Training" on December 4, 2012.

⁹ BAMx strongly supports the CAISO's proposed new approach in the special study in the CAISO 2015-16 to assume the incremental renewable generation to be energy-only in going beyond a 33% RPS.

If you have any questions concerning these comments, please contact Barry Flynn (888-634-7516 and brflynn@flynnrci.com) or Dr. Pushkar Waglé (888-634-3339 and pushkarwagle@flynnrci.com)