BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Continue Implementation and Administration, and Consider Further Development of, California Renewables Portfolio Standard Program	Rulemaking 15-02-020 (Filed February 26, 2015)

COMMENTS OF THE BAY AREA MUNICIPAL TRANSMISSION GROUP AUGUST 28, 2015 ALJ RULING ON THE RPS CALCULATOR

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In accordance with California Public Utilities Commission ("Commission") Rules of Practice and Procedure ("Rules"), the Bay Area Municipal Transmission Group ("BAMx")[1] submits these comments to the Energy Division's Staff Paper on Incorporating Land Use and Environmental Information into the RPS Calculator and Developing and Selecting RPS Calculator Portfolios ("Staff Paper"), which was attached to the August 28, 2015 ALJ Ruling ("Ruling") on the Renewables Portfolio Standards Calculator ("RPS Calculator").

I. INTRODUCTION

The August 28th Ruling issued a paper by the Commission's Energy Division ("ED") on Incorporating Land Use and Environmental Information into the RPS Calculator and Developing and Selecting RPS Calculator Portfolios to potentially inform the Commission's Long-Term Procurement Plan ("LTPP") proceeding, Rulemaking (R.) 13-12-010, and the California Independent System Operator's ("CAISO") Transmission Planning Process ("TPP").

BAMx applauds the Commission and ED staff's efforts to overhaul the RPS Calculator that began in R.11-05-005 by way of the Administrative Law Judge's Ruling filed October 10, 2014. We are glad that the CPUC ED has met its original schedule to revise the RPS Calculator (Track 1) to produce portfolios for the purpose of enabling the CAISO to perform a special study

[1] The members of BAMx are Alameda Municipal Power, City of Palo Alto Utilities, City of Santa Clara, Silicon Valley Power, and Port of Oakland.

on ">33% RPS" scenarios as part of the 2015-2016 TPP. We are hopeful that the current schedule for Tracks 2a and 2b of the RPS Calculator overhaul process will also be met with robust and meaningful stakeholder involvement.[2] We are looking forward to reviewing and providing input on the Special Study results once they are available from the CAISO in terms of how that information would be used to develop the portfolios for the 2016 LTPP as well as the 2016-17 TPP.

Since we believe this work is critical to defining a cost effective method for California to meet its renewable procurement goals, including minimizing environmental impacts, we think this effort should receive top priority with respect to important resource allocation issues. For instance, we feel that the capability of the calculator to make the tradeoff between the impacts of contracting for Energy Only (EO) versus Full Capacity Deliverability Status (FCDS) could be transformational in terms of how the state reaches its RPS and GHG reduction goals. So even though we are not making specific suggestions below on how the process can be accelerated and be given top priority in terms of resources, we implore the Commission to find ways to do so.

We broadly agree, with one exception, with the guiding principles for developing RPS Calculator Portfolios listed in the Staff Paper[3], which is appended to the Ruling as Attachment A.

1) RPS Calculator portfolios should provide, at a minimum, the type and granularity of information needed by LTPP and TPP;
2) RPS Calculator portfolios should be plausible from economic, transmission, and land-use perspectives;
3) RPS Calculator portfolios should be consistent with efficient generation and transmission siting processes;
4) RPS Calculator portfolios should not prejudge transmission or generation permitting;
5) RPS Calculator portfolios should reflect multiple distinct and plausible futures that could result from different policy choices and market conditions;
6) RPS Calculator portfolios should be designed to facilitate the achievement of RPS goals at the least possible cost;
7) RPS Calculator portfolios should be developed on a regular schedule that permits

[2] Track 2a is intended to develop portfolios for use in the 2016 Long Term Procurement Plan ("LTPP") and policy-preferred portfolios for the 2016-2017 CAISO TPP, whereas Track 2b is intended to consider in greater detail several additional issues, including how best to incorporate environmental information into the RPS Calculator.
[3] Staff Paper, p.5

both stakeholder review and timely transmittal to LTPP and TPP; and

8) RPS Calculator portfolios should be produced through a process that is as transparent and efficient as possible.

Under the guiding principle #4, we do not understand how it is possible to achieve the other seven goals without having some effect on generation and transmission permitting/siting. It seems the whole purpose of the RPS Calculator is to have positive impacts in terms of making those decisions at both least cost and environmental impact. Conversely, despite having a purpose to effect the decisions on selecting generation and transmission in a positive manner, there is no ability to do anything with the calculator that would change the statutory requirements of a developer of a generation or transmission project. Therefore, we question the purpose of including the guiding principle #4.

The Staff Paper poses a number of questions for parties to answer that will inform a discussion in the proposed first workshop in October/November 2015 on how to prioritize the topics for further consideration. In response to the ALJ Ruling instructions, BAMx appreciates the opportunity to comment on some of these questions. Although we refrain from answering some of the questions at this time, we are not indicating we feel that they are inappropriate, but only that we have not yet formed an opinion about them.

II. BAMX RESPONSES TO THE STAFF PAPER QUESTIONS

In this section we include the specific questions posed under the Staff Paper and include the BAMx response to each one of them separately.

Q.19 Are the criteria described above[4] sufficient for selecting appropriate scenarios for use in "least regrets" planning in LTPP and TPP? If not, what changes are needed and why?

BAMx endorses the following two broad criteria for selecting which RPS Calculator portfolios are developed and selected for transmittal to TPP included in the Staff Paper including

[4] Staff Paper (pp.32-33).

- Portfolios are plausible from economic, transmission, and land-use perspectives; and
- Portfolios are materially distinct from one another.

These criteria are also consistent with the guiding principles for developing RPS Calculator Portfolios listed in the Staff Paper.[5] We concur with the Staff Paper that the portfolios should reflect uncertainty in transmission, integration, and energy costs. We believe that the starting point for defining the existing system should be whether projects have made enough progress to generally assure their completion. For transmission projects, that should include both approval by the CAISO and by permitting entities, in most cases a Certificate of Public Convenience and Necessity (CPCN) from the CPUC. Designating a transmission project as existing in the RPS Calculator, even though it lacks approval from the CPUC, disrespects the critical function the CPUC plays in deciding whether a transmission project deserves a CPCN. In particular, if a transmission project is not permitted, it should not be assumed as part of the existing system. It should be subject to being added only if it found to be needed based on the calculator's selection process for projects. This approach is also consistent with the guiding principles # 3,5 and 6 discussed earlier.

The current version of the RPS Calculator purely incorporates the environmental impact of the renewable resources and not the potential adverse impact of transmission upgrade triggered by those generating resources. In addition to incorporating the cost of transmission, we believe that it is very important to also capture the environmental impact of transmission projects. This approach is also consistent with the RPS Calculator Portfolios guiding principles #2 and # 3.

The Staff paper states the following.[6]

"*It should also be noted that all results presented are based on an assumption that sufficient transmission is built to enable all resources to achieve full capacity deliverability status (FCDS). Although RPS Calculator 6.1 does include the ability to model energy only projects, the assumptions used are still undergoing evaluation in the special study being performed in*

[5] Staff Paper, p.5, Guiding Principles #2 and #5.
[6] Staff Paper, p.11.

CAISO's 2015-2016 TPP to inform Track 1 of the RPS Calculator overhaul process. Because the rules that inform the modeling of energy only procurement have not yet been validated, FCDS was assumed for this staff paper."

BAMx observes that there is a wide support among the stakeholders that the RPS calculator should be used to evaluate energy-only ("EO") projects.[7] As indicated above, BAMx believes the capability of the calculator to decide whether EO or FCDS projects are in the consumer's interest is a major achievement. Delaying utilizing such capability would be delaying the effectiveness of the most important improvement made to date by the calculator. Incorporation of the potential for EO projects is critical to selecting a set of projects in the renewable resource portfolios that are sent to the CAISO. Without this option included in the selection process, such portfolios would be inconsistent with what is in the consumer's interest. Furthermore, as noted in the Staff Paper, allowing the selection of energy only procurement reduces overall cost in reference cases and does not consistently dampen or exacerbate the impacts of land-use restrictions on resource mix or costs.[8] The CAISO's 2015-2016 TPP Special study findings, which assume energy only procurement, will be available by the time the 2016-17 TPP portfolios are developed. Not allowing the option for energy only procurement be used in all portfolios going forward would be a step in the wrong direction. It would not be appropriate to exclude the capability that has been incorporated in the calculator to make a more cost-effective decision on EO versus FCDS based upon net value to consumers.

The Staff Paper suggests that portfolios could reflect multi value transmission solutions. We understand that the projects in the Multi Value transmission Project (MVP) category consider reliability, economic and public policy drivers in the development of transmission solutions that provide benefits in excess of its costs. BAMx could support such a concept; however, to develop a framework for determining MVPs, it is necessary to have a broader stakeholder cooperation

[7] Support for this approach was expressed in the December 3, 2014 comments include BAMx (see pp. 5, 9 and 10), Pacific Gas and Electric ("PG&E") (see pp. 4, 5, and 12), Southern California Edison ("SCE") (p.16), San Diego Gas and Electric ("SDG&E") (see pp. 10-11), City and County of San Francisco ("CCSF") (see pp. 2,3,4,5 & 6), Joint Environmental Parties ("JEP") (p.12), California Wind Energy Association ("CalWEA") (see pp. 1,5,6,11, 13 and 14), Independent Energy Producers Association ("IEP") (See p.9), Calpine (See p.4) and TransWest Express ("TransWest") (see p. 10).

[8] Staff Paper, p.12.

and inter-agency coordination.[9] This is clearly a worthwhile goal because most transmission projects exhibit more than one value. But this is also clearly not an immediate need and should be included after substantial stakeholder efforts. These efforts should not interfere with those dedicated to higher priority issues.

We agree with the Staff Paper's assessment that the CAISO is unlikely to study more than four RPS Calculator portfolios in the TPP. However, we believe that the CPUC needs to provide at least four RPS portfolios to the CAISO in order to ensure that the CAISO's assessments categorize a truly "least regrets" transmission project as a category 1 transmission project.[10]

BAMx supports the State's 2050 goal of reducing greenhouse gas (GHG) emissions by 80% below the 1990 level. BAMx also supports a State policy that allows 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 meets their local resource, load profile, infrastructure, and financial needs of their customers has delivered proven results to date. Therefore, BAMx would support incorporating alternative 2030 load shape that accounts for the effect of other possible GHG mitigation strategies on load shape in 2030, as modeled in the PATHWAYS project.[11] However, we note that various methods that would achieve our GHG goals most economically may conflict with the requirement for a 50% RPS requirement as contained in SB 350.

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[9] As part of the annual TPP, the CAISO does assess economic and policy benefit of candidate reliability-driven transmission projects. However, to our knowledge, the CAISO does not have a set guidelines to evaluate an MVP, similar to the one established in the Midwest ISO (See https://www.misoenergy.org/Planning/TransmissionExpansionPlanning/Pages/MVPAnalysis.aspx)

[10] Per the CAISO's Fifth Replacement FERC Electric Tariff, May 19, 2014. Section 24.4.6.6, "Any transmission solutions that are in the baseline scenario and at least a significant percentage of the stress scenarios may be Category 1 transmission solutions."

[11] The California Air Resources Board, California Energy Commission, CPUC, and the CAISO engaged Energy +Environmental Economics (E3) to evaluate the feasibility and cost of a range of potential 2030 targets along the way to the state's goal of reducing GHG emissions to 80% below 1990 levels by 2050. With input from the agencies, E3 developed scenarios that explore the potential pace at which emission reductions can be achieved as well as the mix of technologies and practices deployed. See a description of the PATHWAYS project here: https://ethree.com/public_projects/energy_principals_study.php

Q20. Given that less time is available for developing scenarios for the upcoming 2016 LTPP and 2016-2017 TPP launching in early 2016, are different criteria appropriate? What criteria are appropriate specifically for the upcoming LTPP and TPP cycles and which criteria are likely to be generally appropriate on an annual basis for all future LTPP and TPP cycles?

Taking into consideration the relatively short time available for developing scenarios for the upcoming 2016 LTPP and 2016-2017 TPP (Interim Proposal), BAMx recommends that the Energy Division staff focus on utilizing the existing features in the RPS Calculator v6.1 and enhancing some elements/criteria that can be implemented in a short period of time. In Table 1, we summarize the suggested criteria for both the Interim [2A] and Final [2B] proposals.

Table 1: BAMx Recommended Criteria for Scenario and Portfolio Development for Interim and Final Proposals

Criteria	***Interim Proposal [2A]***	***Final Proposal [2B]***
Portfolios are materially distinct from one another	✔	✔
Portfolios allow for Energy Only procurement	✔	✔
Transmission & Integration Cost	✔	✔
Subject Unpermitted transmission to Economic Test	✔	✔
Land use restrictions for generating Resources		✔
Land use restrictions for generating and transmission Resources		✔
Minimum # of Portfolios for CAISO TPP	**4**	**4**
Minimum # of Scenarios for LTPP	**8**	**8**

Q. 21 If the RPS Calculator is used to generate multiple scenarios, What types of scenarios are most likely to be essential to adequately reflect a range of plausible results that would be useful for developing a "least regrets" portfolio for LTPP? For TPP? Explain your reasoning, with quantitative examples if relevant. Please address comparative value of all scenarios you identify.

- ***Environmental Baseline***
- ***High DG***
- ***Alternative 2030 load shape (account for the effect of other possible GHG mitigation strategies on load shape in 2030, as modeled in PATHWAYS project)***
- ***Other? Please describe the scenario, including an explanation of why it is plausible and why it is essential.***

Q.22. In your proposal for a process for selecting the appropriate scenarios to model in RPS Calculator, please include an approach for how to select "least regrets" portfolios for use in LTPP and TPP that addresses the questions above.

BAMx agrees with the approach outlined by the CPUC Energy Division Staff during the September 9, 2015 teleconference--modeling 33% RPS portfolios for the CAISO 2016-17 TPP if, SB 350 (i.e., the 50% RPS bill) is not signed into a law by the time the portfolios are developed and finalized.

The RPS Calculator assumes that no existing transmission is available to deliver the out-of-state ("OOS") remote resources.[12] This assumption results in triggering a need for out-of-state transmission projects to deliver remote renewable resources to the California border. The RPS Calculator needs to take into consideration that a large amount of OOS renewable resources can be accommodated on the existing transmission. We believe the CAISO should estimate the amount of OOS Energy only resources that could be accommodated. Their security-constrained production cost studies now being performed should allow for a good estimate on such capability. Furthermore, when OOS resources are restricted, the RPS Calculator is forced to accommodate environmental land use restrictions by selecting higher cost resources within California.[13] Therefore, we believe that all candidate portfolios need to have realistic assumptions regarding the level OOS resources that can be accommodated on the existing transmission.

[12] RPS Calculator User Guide version 6.1, August 15, 2015, p. B-25.
[13] Staff Paper, p.18.

The RPS Calculator selects the least-cost resources from the renewable supply curve to fill the renewable net short. A supply curve of renewable resources is developed by ranking each of the generic projects by their Net Market Value (NMV)[14], accounting for resource potential limitations, including land use exclusions, geographic limits and DG set-asides, as well as the availability of transmission. BAMx proposes the following approach that entails developing materially distinct portfolios that are plausible from economic, transmission, and land-use perspectives. We believe that the following required features of this approach are consistent with all the guiding principles for developing RPS Calculator Portfolios.[15]

1. All scenarios allow energy only procurement in addition to economically justifiable FCDS renewable resources.
2. All scenarios should include the following additional features in the RPS calculator
    - Achievable level of WECC-wide OOS resources that can be accommodated on the existing transmission;
    - Only truly existing projects should escape an economic test; and
    - At a minimum, a reasonable level of Distributed Generation (DG).
3. Develop a separate scenario that considers an alternative 2030 load shape, i.e., accounting for the effect of other possible GHG mitigation strategies on load shape in 2030.
4. Develop another scenario that is driven by environmental and land-use considerations that are vetted by the stakeholders.
5. Develop another scenario that assumes an aggressive level of DG penetration.

Multiple combinations of the above-mentioned scenarios can be developed to select "least regrets" portfolios for use in the LTPP and the TPP.

III. CONCLUSION

BAMx appreciates the opportunity to comment on the criteria for developing RPS Calculator portfolios and acknowledges the significant effort of CPUC ED Staff.

[14] We understand that the cost and value elements in the RPS Calculator are similar to those in the NMV formula used in the "least cost, best fit" (LCBF) evaluation process required for actual procurement in the CPUC's RPS proceeding.
[15] See p3 or Staff Paper, p.5

September 28, 2015 Respectfully submitted,

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Verification

I, **Pushkar G. Wagle**, am the representative of the **Bay Area Municipal Transmission Group**. I am authorized to make this Verification on its behalf.

The statements in the foregoing copy of *COMMENTS OF THE BAY AREA MUNICIPAL TRANSMISSION GROUP AUGUST 28, 2015 ALJ RULING ON THE RPS CALCULATOR* are true of my own knowledge, except as to matters which are therein stated on information and belief, and as to those matters I believe them to be true.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on this 28th day of September 2015 at San Francisco, California.

/s/ Pushkar G. Wagle

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For the
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