

## Stakeholder Comments Template

### Transmission Access Charge Options

#### February 10, 2016 Straw Proposal & March 9 Benefits Assessment Methodology Workshop

| Submitted by  | Company   | Date Submitted |
|---|---|----------------|
| Joyce Kinnear<br><a href="mailto:jkinneer@santaclaraca.gov">jkinneer@santaclaraca.gov</a><br>(408) 615-6656 | Bay Area Municipal<br>Transmission Group<br>(BAMx) <sup>1</sup> | April 1, 2016  |

#### Overview

BAMx appreciates the CAISO's efforts to date to sponsor a discussion of potential changes to the existing TAC structure with a view towards new western PTO's joining the CAISO balancing area. Although we see the current activities as useful, we do not believe an issue as important as changes to a TAC structure can be decided without a complete vetting of the myriad matters that must be resolved before changing the current TAC methodology. We particularly are concerned regarding the totality of benefits to California consumers and the particulars of any potential transition agreement(s) with the CAISO. Although the discussions so far and the straw proposal from the CAISO are helpful, we describe our concerns about the proposal below and suggest the study of alternatives to the CAISO proposal. BAMx does not believe the self-imposed timelines developed by the CAISO should stand in the way of a thorough review of all options.

In this response, BAMx provides recommendations for further investigation, and does not necessarily support any particular position absent further review of the TAC options.

---

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

## **Section 1: Straw Proposal**

1. The proposed cost allocation approach relies on the designation of “sub-regions,” such that the current CAISO BAA would be one sub-region and each new PTO with a load service territory that joins the expanded BAA would be another sub-region. Please comment on the proposal to designate sub-regions in this manner.

BAMx appreciates the CAISO’s rationale for the designation of “sub-regions,” such that the current CAISO BAA would be one sub-region and each new PTO with a load service territory that joins the expanded BAA would be another sub-region. However, BAMx notes that the CAISO’s straw proposal is unclear about the treatment of the existing non-Participating Transmission Owners (non-PTOs) within the CAISO BAA. The statements made by the CAISO staff during the March 1<sup>st</sup> Stakeholder meeting indicate that such non-PTO’s “might be” handled via transition agreements on a case-by-case basis. BAMx requires more information on the terms of standard transition agreements to opine with respect to the designation of “sub-regions”. We request the CAISO provide clarity on the transition agreements envisioned so all stakeholders can understand the impact of the existing non-PTO’s becoming PTOs within the expanded ISO. BAMx believes that stakeholders should fully vet the contents of any transition agreements envisioned by the CAISO. In particular, as stated above, it is critical that the transition agreement with PacifiCorp be treated as the complex document that it is with potential complicated side effects on many market participants. This transition agreement requires a significant stakeholder comment process to allow all parties to thoroughly vet it and understand its implications, instead of being whisked past stakeholders through a confidential process.

Also, BAMx is concerned that the threshold for a new member to become a separate sub-region is either not sufficiently restrictive or needs further development/description. This is a critical concern because it appears that under the CAISO’s proposal a new entrant could use the existing transmission facilities of the entire existing and expanded BAA without paying for such use. For example, would any or all existing BAAs in California be eligible for such treatment? How would small BAAs outside of California be treated? Would they be given beneficial cost terms in comparison to California LSEs (both within the CAISO and in small BAAs that may choose to join the regional transmission system later). Does the CAISO proposal encourage entities to become a BAA before joining the CAISO so that they could obtain treatment as a separate sub-region upon joining? To the extent that it is not the CAISO’s intent that each such BAA be treated as a separate sub-area, more detail is needed on how such a determination would be made.

2. The proposal defines “existing facilities” as transmission facilities that either are already in service or have been approved through separate planning processes and are under development at the time a new PTO joins the ISO, whereas “new facilities” are facilities that are approved under a new integrated transmission planning process for the expanded BAA that would commence when the first new PTO joins. Please comment on these definitions.

BAMx requests the CAISO reconsider its stated intent to completely exclude the existing transmission facilities from regional cost allocation absent further analyses. BAMx believes that there may be benefits of existing transmission realized across sub-regions and participants and, if these benefits are identified, the CAISO should consider alternatives for allocating the costs associated with them. The CAISO straw proposal presumes that the benefits of the CAISO's existing transmission to any potential new PTO sub-region, such as PacifiCorp, will be equivalent to the benefit the CAISO would receive from the the new PTO's existing transmission. In other words, since the benefits of the two BAAs are assumed to balance each other out, there is no need to allocate the cost of the existing transmission of one BAA to another upon regionalization. This assumption and generalization lacks any concrete or quantitative support and should be verified using a defined benefits assessment tool and cost allocation methodology. No such analysis has been performed with the assumption that PacifiCorp becomes a new CAISO PTO. Given that the proposal is envisioned to apply to any potential new PTO sub-regions, and not just PacifiCorp, it is especially difficult to rationalize why such a balance of benefits would reasonably be expected for all potential new PTO sub-regions, especially given the comments noted above about the low threshold requirement for becoming a sub-region.

One rationale for preserving a license plate pricing approach for existing facilities in the straw proposal stated at the top of page 14 is that “the current CAISO and PTO#1 – have made decisions to build their existing systems for the benefit of their existing ratepayers without any anticipation of some other parties paying part of those costs.” In the case of PacifiCorp, having started the planning of the multi-billion-dollar Gateway Transmission Project almost a decade ago, PacifiCorp reasonably expected that the costs of these facilities would be recovered from its existing ratepayers, “without any anticipation of some other parties paying part of those costs.” Afterall, this project was planned to meet the needs of PacifiCorp's customers. The CAISO's existing versus new transmission distinction does not restrict PacifiCorp's incentive “to develop costly new high-voltage transmission for its area” and have the CAISO's existing customers pay for at least a portion of it, which would otherwise have been borne exclusively by PacifiCorp's own ratepayers.

Another rationale for a license plate approach for the existing transmission in the straw proposal stated at the bottom of page 14 is that “it would be difficult to show that a facility in San Diego area provides load ratio share benefits to customers in Utah based solely on its voltage level, even if the facility is rated at 500 kV, without further demonstration of benefits.” The same argument can be made about current charges in the CAISO footprint. That is, CAISO Load Serving Entities in Northern California are not likely to benefit from that same San Diego upgrade any more than the Utah customers cited in the example. While showing benefits may exist to all participants in the market is extremely difficult, whether within the existing CAISO BAA or across an expanded CAISO footprint, the current CAISO cost allocation system is not restrained by this difficulty in showing cost-causation.

Furthermore, based upon the past precedent, including an out-of-state entity (Valley Electric Association), each PTO that has joined the CAISO BAA has paid for the CAISO's then existing and new high voltage transmission. We do not think an exception has been justified for PacifiCorp.

For the reasons described above, the CAISO should evaluate postage-stamp and beneficiary-based allocations of the costs of the existing transmission across all sub-regions for all facilities above a voltage threshold. While the straw proposal threshold for new regional facilities has a threshold of 300 kV, this appears to be driven by the specific case of PacifiCorp and not the more general case of a regional ISO. Based upon precedent of how costs are currently allocated in California and the previously noted similarities in difficulty of finding benefits within California to the PacifiCorp benefits from distant transmission upgrades, BAMx supports a threshold of 200kV as being consistent and fair treatment with respect to current participants in the CAISO. Given the concerns about rate shock – should a postage-stamp rate be adopted – for either the CAISO or any new sub-region that joins the expanded BAA, a phase-in period could be considered for transitioning into the expanded BAA, consistent with the transition period that was established at the time of the CAISO's formation.

3. Using the above definitions, the straw proposal would allocate the transmission revenue requirements (TRR) of each sub-region's existing facilities entirely to that sub-region. Please comment on this proposal.

Please refer to the BAMx response to Q.2 above.

4. If you believe that some portion of the TRR of existing facilities should be allocated in a shared manner across sub-regions, please offer your suggestions for how this should be done. For example, explain what methods or principles you would use to determine how much of the existing facility TRRs, or which specific facilities' costs, should be shared across sub-regions, and how you would determine each sub-region's cost share.

Please refer to the BAMx response to Q.2 above.

5. The straw proposal would limit "regional" cost allocation – i.e., to multiple sub-regions of the expanded BAA – to "new regional facilities," defined as facilities that are planned and approved under a new integrated transmission planning process for the entire expanded BAA and meet at least one of three threshold criteria: (a) rating > 300 kV, or (b) increases interchange capacity between sub-regions, or (c) increases intertie capacity between the expanded BAA and an adjacent BAA. Please comment on these criteria for considering regional allocation of the cost of a new facility. Please suggest alternative criteria or approaches that would be preferable to this approach.

BAMx believes that criterion (a) rating > 300 kV is not appropriate and should be replaced with > 200 kV for the following three reasons. First, even if a transmission facility is 230kV, it may potentially have wide area benefits. That is consistent and

supported by the current cost allocation within California. There is no particular FERC guideline that would allow for the cost of a 345kV facility to be allocated on a regional basis, while disallowing a 230kV facility. Second, under the CAISO proposal, eligibility for allocation for new regional facilities is followed by a benefits test; therefore, there is no need to exclude 230 kV facilities as an initial screen. If such facilities are not beneficial to other sub-regions, those facilities should fail the benefits test. Lastly, the other two criteria (b & c) allow for any transmission facility without any regard for a voltage threshold level.

6. For a new regional facility that meets the above criteria, the straw proposal would then determine each sub-region's benefits from the facility and allocate cost shares to align with each sub-region's relative benefits. Without getting into specific methodologies for determining benefits (see Section 2 below), please comment on the proposal to base the cost allocation on calculated benefit shares for each new regional facility, in contrast to, for example, using a postage stamp or simple load-ratio share approach as used by some of the other ISOs.

BAMx supports the CAISO's proposed concept of determining each sub-region's benefits from the facility and allocating cost shares to align with each sub-region's relative benefits. BAMx prefers the benefits-based approach since the basic premise for regionalization is that the benefits are expected to outweigh the costs associated with it. Based upon the cost causation principle, if any load within a particular sub-region is not benefiting from a given transmission facility, that agency should not be responsible for paying for such facilities. Additionally, forcing any load to pay for new transmission that does not benefit that entity is unfair and inconsistent. This concern is if there is no cost sharing among different sub-regions for existing transmission.

7. The straw proposal says that when a subsequent new PTO joins the expanded BAA, it may be allocated shares of the costs of any new regional facilities that were previously approved in the integrated TPP that was established when the first new PTO joined. Please comment on this provision of the proposal.

BAMx supports the CAISO's straw proposal concept of a subsequent new PTO (PTO#2) joining the expanded BAA paying for its allocated share of the cost of any new regional facilities that were previously approved in the integrated TPP. BAMx agrees with the CAISO's rationale to ensure that PTO#2 is paying a fair share for projects from which it actually receives significant benefits. However, BAMx notes that this very same argument supports allocating costs of existing transmission to new PTO#1 and all subsequent PTOs, rather than the proposed license plate approach for existing facilities. Simply using the date when the first new sub-region joins the ISO to forever set the demarcation between Existing and New appears on the face to be arbitrary and unfair to current PTOs and non-PTOs within the CAISO BAA. (See the BAMx response to Q.2 above.)

8. The straw proposal says that sub-regional benefit shares – and hence cost shares – for the new regional facilities would be re-calculated annually to reflect changes in benefits that could result from changes to the transmission network topology or the membership of the expanded BAA. Please comment on this provision of the proposal.

Ideally, the benefit calculations that change how costs are allocated would adapt to major changes in the makeup of the regional transmission agency or when large changes are made during the development of a final transmission plan. However, BAMx believes that there may need to be some type of built-in protections, such as rate increase caps for the existing expanded BAA customers, to prevent the updates from resulting in a significant rate shock. BAMx looks forward to the CAISO proposing how such protections might work. BAMx notes that eventually there may be a large group of “new” regional transmission facilities that would need to be studied and re-calculated for cost allocation.

9. Please offer any other comments or suggestions on the design and the specific provisions of the straw proposal (other than the benefits assessment methodologies).

## **Section 2: Benefits Assessment Methodologies**

10. The straw proposal would apply different benefits assessment methods to the three main categories of transmission projects: reliability, economic, and public policy. Please comment on this provision of the proposal.

BAMx is open to retaining the flexibility of applying different benefits assessment methods for the three main categories of transmission projects. In the remaining portion of these comments, BAMx articulates the specific considerations for those methods.

11. The straw proposal would use the benefits calculation to allocate 100 percent of the cost of each new regional facility, rather than allocating a share of the cost using a simpler postage stamp or load-ratio share basis as some of the other ISOs do. Please comment on this provision of the proposal.

BAMx supports the straw proposal’s use of the benefits calculation to allocate 100 percent of the cost of each new regional facility, rather than allocating a share of the cost using a simpler postage stamp or load-ratio share basis as some of the other ISOs do. Please refer to the BAMx responses to Q.6 for our rationale for this support.

12. Please comment on the DFAX method for determining benefit shares. In particular, indicate whether you think it is appropriate for reliability projects or for other types of projects. Also indicate whether the methodology described at the March 9 meeting is good as is or should be modified, and if the latter, how you would want to modify it. BAMx does not believe that the DFAX model will be effective for determining benefit (and thus cost) shares in a regional transmission agency. The PJM-based DFAX method assumes that power flow equates to reliability benefit, which may be true only under certain limited conditions. Based on the illustration provided by the CAISO during the March 9<sup>th</sup> workshop, BAMx is not convinced at this time that flows in a particular

direction on a transmission facility indicate the facility's reliability benefit to a particular load. For reliability upgrades within the CAISO or PacifiCorp BA, BAMx believes that the DFAX method will likely allocate most of the costs to those areas where the upgrade resides. In PJM, where the neighboring systems are more integrated, with dozens of tie-points between any two neighboring system, DFAX-like analysis may be a better fit. However, for a sparse network in the Western Interconnection, the DFAX method may not be a worthwhile tool for determining benefit shares. Moreover, as mentioned in the straw proposal, presumably due to its ambiguity, the DFAX method has faced years of litigation, including two federal court cases. Lastly, BAMx also observes that transmission facilities may not fall into simple categories, but may have multiple benefits.

Given the above-mentioned apparent drawbacks associated with the PJM DFAX method, the CAISO should consider using elements of the Transmission Economic Assessment Methodology (TEAM) to allocate transmission costs of candidate reliability-driven transmission facilities to multiple sub-regions within the expanded ISO. The CAISO's TEAM approach, while assessing the benefit of a candidate transmission facility, in addition to production cost benefits, calculates multiple additional benefits including transmission losses, capacity, etc. BAMx is not endorsing the use of such additional benefits beyond those identified in the production cost analysis to determine the benefits associated with reliability-driven transmission. We believe that the CAISO investigation of this option should assume the benefit shares should be determined solely based on the production cost benefits for the following two reasons. First, the capacity benefits methodology that was determined under TEAM is outdated due to significantly changed circumstances, since the TEAM approach was originally developed more than a decade ago. These changed circumstances include increased renewable penetration and lower sensitivity to fossil fuel prices. Second, the TEAM approach was primarily focused on determining whether the overall benefits of any given transmission facility under consideration exceeds its cost. In the current context, we are evaluating the effectiveness of TEAM in terms of allocating costs to beneficiaries. Therefore, it is more appropriate to base that decision on a comprehensive production cost modeling tool rather than back-of-the-envelope capacity value calculations that are very subjective in nature, and may lack consensus among the stakeholders for its applicability. If the CAISO studies the application of the TEAM methodology in its entirety, the capacity benefits methodology and calculations should be updated through a comprehensive stakeholder process.

BAMx notes that the developers of TEAM anticipated that TEAM could be used to assess benefits of a reliability-driven project.<sup>2</sup> In particular, the TEAM authors state the following.

“For the ‘reliability’ projects, the TEAM methodology is intended to complement existing reliability studies and determine the additional economic benefits derived from an upgrade. In general, these benefits can include improvements in market

---

<sup>2</sup> M. Awad, *et al* (2006) The California ISO Transmission Economic Assessment Methodology, Power Engineering Society General Meeting, IEEE, 1-4244-0493-2.

competitiveness, decreases in fuel and capital costs of generation, and decreased probability and severity of service interruptions. The TEAM methodology is designed primarily to assess the first two categories of benefits, termed ‘economic benefits’. In short, for ‘reliability’ projects, the methodology is used to compare relative economic viability of candidate projects, all of which satisfy reliability objectives.”

We agree with TEAM authors that the TEAM approach could be an effective way to determine benefits shares of transmission projects, consistent with the reliability studies that determine the need for transmission projects. We, therefore, endorse studying its applicability for reliability and compare its attributes with those of DFAX whose apparent shortcomings we delineate above.

As the TEAM approach may not capture certain voltage-related benefits of reliability projects attributed to specific sub-regions, this benefits-based approach should also be informed by traditional power flow analysis used to determine the need for reliability projects.

In summary, the need for any reliability-driven project under an expanded ISO should be assessed using the traditional power flow, voltage and stability analysis tools to address reliability violations for one or more sub-regions. Once such a need is identified, BAMx recommends studying the use of the CAISO’s TEAM approach to identify beneficiaries and their transmission cost responsibilities accordingly.

13. Please comment on the use of an economic production cost approach such as TEAM for determining benefit shares. In particular, indicate whether you think it is appropriate for economic projects or for other types of projects. Also indicate whether the methodology described at the March 9 meeting is good as is or should be modified, and if the latter, how you would want to modify it.

BAMx supports studying the use of an economic production cost approach such as the key element of TEAM for determining benefit shares associated with an economic transmission project. Please refer to the BAMx response to Q. 12 for the suggested modifications to the existing TEAM approach that BAMx believes should be assumed in assessing its viability for its use in evaluating economic projects.

14. At the March 9 meeting some parties noted that the ISO’s TEAM approach allows for the inclusion of “other” benefits that might not be revealed through a production cost study. Please comment on whether some other benefits should be incorporated into the TEAM for purposes of this TAC Options initiative, and if so, please indicate the specific benefits that should be incorporated and how these benefits might be measured.

Please refer to the BAMx response to Q. 12.

15. Regarding public policy projects, the straw proposal stated that the ISO does not support an approach that would allocate 100 percent of a project’s costs to the state whose policy was the initial driver of the need for the project. Please indicate whether you agree with



this statement. If you do agree, please comment on how costs of public policy projects should be allocated; for example, comment on which benefits should be included in the assessment and how these benefits might be measured.

BAMx understands why the CAISO in not supporting an approach that would allocate 100 percent of a project's costs to the state whose policy was the initial driver of the need for the project. BAMx concurs with the CAISO that a transmission project's costs need to be allocated to the LSEs that drive the need for it and/or benefit from it. Please refer to the BAMx proposed benefits assessment methodology presented at the March 9<sup>th</sup> workshop, which addresses the CAISO's cost causation concern.<sup>3</sup>

16. At the March 9 and previous meetings some parties suggested that a single methodology such as TEAM, possibly enhanced by incorporating other benefits, should be applied for assessing benefits of all types of new regional facilities. Please indicate whether you support such an approach.

As indicated in its response to Q. 12 and Q. 13, respectively, BAMx supports investigating the use of some elements (in particular, production cost savings calculations) of the TEAM approach to be used in assessing the benefits of reliability and economic projects. However, we do not believe TEAM is an appropriate tool/approach for determining the benefits of a policy-driven transmission project for the following reasons. The need for a policy-driven project may come from commitments to resources made by entities whose loads might be electrically remote from the transmission project itself. In this case, the policy-driven project does not necessarily meet reliability or economic goals and can have a much narrower set of beneficiaries. An approach like TEAM, that is best suited to assess benefits of economic projects and certain elements of reliability projects (as articulated in the BAMx response to Q.12), would likely fail to relate benefits associated with a policy-driven project to the entities that are actually benefiting from the proposed facilities. That is, the particular entities using the proposed transmission to access particular resources needed to meet their individual contribution to their particular state's policy goals should bear the cost associated with such facilities. BAMx-proposed methodology corrects this failing of the TEAM approach. In particular, unlike TEAM, the BAMx approach meets each of the transmission cost allocation principles identified in the CAISO October 23, 2015 Issue Paper as summarized in the table below.

---

<sup>3</sup> <http://www.caiso.com/Documents/Presentation-BAMxBenefitsAssessmentMethodologyProposal.pdf>

| <b>Transmission Cost Allocation Principle</b>   | <b>TEAM Applied to Policy-Driven Projects</b> | <b>BAMx Methodology</b>  |
|---|---|--|
| Costs must be allocated in a way that is roughly commensurate with benefits             | Does not meet this goal                       | LSEs and Generators benefiting from resources using transmission pay for it  |
| Costs may not be allocated involuntarily to those who do not benefit                    | Does not meet this goal                       | Same as above  |
| Costs may not be allocated involuntarily to a region outside of the facility's location | Does not meet this goal                       | LSEs voluntarily procuring resources using transmission pay for it regardless of their location; residual cost allocated using reliability/economic benefit assessment |
| The process for determining benefits and beneficiaries must be transparent              | Meets this goal                               | Commitments to procure and build resources relying on transmission are readily determined  |

17. Please offer comments on the BAMx proposal for cost allocation for public policy projects, which was presented at the March 9 meeting. For reference the presentation is posted at the link on page 1 of this template.

As the proponent of this methodology, BAMx fully supports it for allocating costs for public policy projects. BAMx hopes its suggestion of an approach for cost allocation in public policy projects will positively contribute to the stakeholder discussion on this important issue. BAMx would like to address the following three (3) items identified by stakeholders during the March 9 Workshop.

1. **Altering of merchant generation bid and dispatch:** Under the BAMx proposal, in addition to LSEs, merchant generators using the project are also allocated a generation resource-ratio share of the transmission costs for any un-contracted generation capacity. One of the stakeholder concerns was that the desire to recover these transmission costs may alter merchant generation bids and, therefore, generation dispatch. BAMx would like to clarify that its proposal assumes that the transmission cost associated with the project (Transmission Revenue Requirement or TRR) will be allocated on a fixed-cost basis to the responsible merchant generation for any un-contracted capacity. The costs would not be allocated to the generator as a \$/MWh charge. It would be the merchant generator's responsibility to ensure its economic viability over a long term. If a merchant generator cannot support the cost of transmission associated with its un-contracted capacity, it would need to execute a PPA with a price allowing for the inclusion of such transmission costs. In the absence

of sufficient viable merchant generation to support the transmission project, the aggregate LSE contract capacity needs to exceed a threshold amount for the policy-driven transmission project to be approved and built. Note that the LSE portion of the costs also would be allocated on a fixed-cost basis to the responsible LSEs.

**2. What happens to the recovery of transmission costs once an LSE's PPA expires?**

Under the BAMx proposal, generation underlying a PPA will be responsible for the remaining transmission costs at the time of PPA expiration. Either the merchant generator needs to sign/renew another PPA (in which case the LSE executing the PPA would be responsible for the transmission cost) or it needs to operate as a merchant generator directly responsible for transmission costs. If the above two possibilities are not feasible and the merchant generator ceases its operation, appropriate levels of financial security would be used to cover the costs, with any remaining costs allocated using the benefits assessment methodology applicable for reliability or economic projects until more generation capacity is committed (contracted or merchant). By allocating most of the transmission cost (up to a certain threshold) to the entities responsible for driving the need for policy-driven transmission projects, and the remaining costs to other beneficiaries, the BAMx proposal minimizes the financial impact on entities that do not benefit from that transmission.

**3. A concern that assignment of regional transmission costs directly to generation have been rejected by FERC:** Allocation of transmission costs to generators is not new to the FERC-approved CAISO tariff. For example, the existing tariff under the Generator Interconnection and Deliverability Allocation Procedures (GIDAP) provisions, allocates any cost exceeding \$60,000 per MW of the reliability network upgrades (RNU) to the generators driving that need. Further, the BAMx methodology allocates Congestion Revenue Rights to the merchant generators funding the project, ensuring that the generators obtain something of value in exchange for their financial commitments (in addition to the financial benefits they realize by being able to bring their generation to market).

**18. Please offer any other comments or suggestions regarding methodologies for assessing the sub-regional benefits of a transmission facility.**

BAMx has delineated above why the CAISO should study how the costs of the existing as well as new facilities could be allocated to beneficiaries of those transmission facilities. BAMx encourages a consistent approach in allocating costs and benefits for both the existing and new transmission that is equitable to all participants.

In these comments, BAMx has referred to the need to study various transmission cost allocation methodologies. BAMx urges that those studies include a detailed quantitative assessment of the impact of different cost allocation methodologies on various groups of load serving entities.