

Stakeholder Comments Template

Transmission Access Charge Options

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

Submitted by	Company	Date Submitted
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Please note – these are a limited set of comments to address Questions 10, 14, 15, 16 and 17 in Section 2. Natural Resources Defense Council is signing onto the comments for all other questions on the Transmission Access Charge Options submitted by Western Resources Advocates.

The ISO provides this template for submission of stakeholder comments on the February 10, 2016 Straw Proposal and the March 9, 2016 stakeholder working group meeting. Section 1 of the template is for comments on the overall concepts and structure of the straw proposal. Section 2 is for comments on the benefits assessment methodologies. As stated at the March 9 meeting, the ISO would like stakeholders to offer their suggestions for how to improve upon the ISO's straw proposal, and emphasizes that ideas put forward by stakeholders at this time may be considered in the spirit of brainstorming rather than as formal statements of a position on this initiative.

The straw proposal, presentations and other information related to this initiative may be found at: <http://www.caiso.com/informed/Pages/StakeholderProcesses/TransmissionAccessChargeOptions.aspx>

Upon completion of this template please submit it to initiativecomments@caiso.com. Submissions are requested by close of business on **March 23, 2016**.

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.

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.

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.

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.

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.

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.

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.

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.

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.**

NRDC and the Sustainable FERC Project strongly believe that for purposes of transmission system planning, the most cost-effective (and environmental) overall approach should be first to account for existing and planned energy efficiency and demand response and maximize use of the existing transmission system, then to engage in robust system modeling with realistic inputs and assumptions that identify grid needs

driven by reliability, economic and public policy needs, and then to consider non-wires alternatives before determining that new transmission upgrades and lines are required.

We also recognize that in order to meet future system demands, some amount of new transmission infrastructure indeed will be necessary.

In estimating the benefits of this new transmission infrastructure, it is critical to maximize the benefits of planned regional transmission projects while minimizing costs. In many cases, new transmission upgrades or lines can provide some combination of reliability, economic, and/or public policy benefits. To artificially separate consideration of benefits ensures that customers will lose out on the benefit of the most-cost effective transmission project development, and potentially pay more than necessary for redundant development when the desired benefits are already being provided (but not counted). We point to MISO’s MVP project approach as demonstrating a means for considering combinations of economic, public policy and reliability benefits. The Brattle Group has provided [analysis](#) on the full scope of transmission benefit metrics that regions are considering in several venues, including the list provided in [this slide deck](#):

RTO Planning Process	Estimated Benefits	Other Benefits Considered (without necessarily estimating their value)
CAISO TEAM (as applied to PVD2)	<ul style="list-style-type: none"> • Production cost savings and reduced energy prices from both a societal and customer perspective • Mitigation of market power • Insurance value for high-impact low-probability events • Capacity benefits due to reduced generation investment costs • Operational benefits (RMR) • Reduced transmission losses • Emissions benefits 	<ul style="list-style-type: none"> • Facilitation of the retirement of aging power plants • Encouraging fuel diversity • Improved reserve sharing • Increased voltage support
SPP ITP Analysis	<ul style="list-style-type: none"> • Production cost savings • Reduced transmission losses • Wind revenue impacts • Natural gas market benefits • Reliability benefits • Economic stimulus benefits of transmission and wind generation construction 	<ul style="list-style-type: none"> • Enabling future markets • Storm hardening • Improving operating practices/maintenance schedules • Lowering reliability margins • Improving dynamic performance and grid stability during extreme events • Societal economic benefits
Additional benefits recommended by SPP’s Metrics Task Force	<ul style="list-style-type: none"> • Reduced energy losses, • Reduced transmission outage costs • Reduced cost of extreme events • Value of reduced planning reserve margins or loss of load probability • Increased wheeling through and out revenues • Value of meeting public policy goals 	<ul style="list-style-type: none"> • Mitigation of weather uncertainty • Mitigation of renewable generation uncertainty • Reduced cycling of baseload plants • Increased ability to hedge congestion costs • Increased competition and liquidity

RTO Planning Process	Estimated Benefits	Other Benefits Considered (without necessarily estimating their value)
MISO MVP Analysis	<ul style="list-style-type: none"> • Production cost savings • Reduced operating reserves • Reduced planning reserves • Reduced transmission losses • Reduced renewable generation investment costs • Reduced future transmission investment costs 	<ul style="list-style-type: none"> • Enhanced generation policy flexibility • Increased system robustness • Decreased natural gas price risk • Decreased CO₂ emissions output • Decreased wind generation volatility • Increased local investment and job creation
NYISO CARIS	<ul style="list-style-type: none"> • Reliability benefits • Production cost savings 	<ul style="list-style-type: none"> • Emissions costs • Load and generator payments • Installed capacity costs • Transmission Congestion Contract value
PJM RTEP	<ul style="list-style-type: none"> • Reliability benefits • Production cost savings 	<ul style="list-style-type: none"> • Public policy benefits
ERCOT LTS	<ul style="list-style-type: none"> • Reliability benefits • Production cost savings • Avoided transmission project costs 	<ul style="list-style-type: none"> • Public policy benefits
ISO-NE RSP	<ul style="list-style-type: none"> • Reliability benefits • Net reduction in total production costs 	<ul style="list-style-type: none"> • Public policy benefits

Although we are open to several specific approaches, we recommend the ISO ensure that as many economically quantifiable benefits across reliability, economic efficiency and public policy drivers as possible are defined and considered in determining the benefits of potential transmission infrastructure investment.

We recommend replacing the individual project drivers with a unified “multi-value” approach, or adding a fourth category of projects to capture the efficiencies of recognizing benefits across drivers.

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.

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.

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.
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.

We would like to understand more about the potential of the TEAM approach to determine if it would be applicable for multi-driver projects in lieu of or addition to economic efficiency projects. Per our response in #10 we recommend benefits be considered across drivers for potential transmission development. If the ISO decides to move forward with a production cost approach to determining benefits for economic productions as a separate class, we suggest that the analysis go beyond traditional production cost analysis. At a high level, we are encouraged by our understanding that the TEAM approach incorporates a broader range of benefits than standard production cost analysis. In its March 9, 2016 presentation, CAISO describes the TEAM approach as able to consider energy benefits, local and system capacity benefits, and potentially "other" benefits. We recommend that production cost analysis go beyond traditional production savings analysis to include (to the extent the energy and capacity benefits contemplated do not) the additional production cost savings that the Brattle Group also identified in its [WIRES report](#), including: "a. Impact of generation outages and A/S unit designations, b. Reduced transmission energy losses, c. Reduced congestion due to transmission outages, d. Mitigation of extreme events and system contingencies, e. Mitigation of weather and load uncertainty, f. Reduced cost due to imperfect foresight of real-time system conditions, g. Reduced cost of cycling power plants, h. Reduced amounts and costs of operating reserves and other ancillary services, i. Mitigation of reliability-must-run (RMR) conditions, and j. More realistic "Day 1" market representation."

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.

We agree with this statement. We appreciate CAISO's recognition that projects that are initiated due to public policy drivers may also provide other benefits across the region. Please see our responses to #10 and #17 for how costs should be allocated.

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.

See our response to #15. In addition to additional production cost savings, the following [Brattle table](#) demonstrates the other benefits that can more effectively be incorporated into a single multi-driver approach to benefits assessment.

Table 1
Potential Benefits of Transmission Investments

Benefit Category	Transmission Benefit
1. Traditional Production Cost Savings	Production cost savings as traditionally estimated
1a-1i. Additional Production Cost Savings	<ul style="list-style-type: none"> a. Reduced transmission energy losses b. Reduced congestion due to transmission outages c. Mitigation of extreme events and system contingencies d. Mitigation of weather and load uncertainty e. Reduced cost due to imperfect foresight of real-time system conditions f. Reduced cost of cycling power plants g. Reduced amounts and costs of operating reserves and other ancillary services h. Mitigation of reliability-must-run (RMR) conditions i. More realistic representation of system utilization in "Day-1" markets
2. Reliability and Resource Adequacy Benefits	<ul style="list-style-type: none"> a. Avoided/deferred reliability projects b. Reduced loss of load probability <u>or</u> c. Reduced planning reserve margin
3. Generation Capacity Cost Savings	<ul style="list-style-type: none"> a. Capacity cost benefits from reduced peak energy losses b. Deferred generation capacity investments c. Access to lower-cost generation resources
4. Market Benefits	<ul style="list-style-type: none"> a. Increased competition b. Increased market liquidity
5. Environmental Benefits	<ul style="list-style-type: none"> a. Reduced emissions of air pollutants b. Improved utilization of transmission corridors
6. Public Policy Benefits	Reduced cost of meeting public policy goals
7. Employment and Economic Development Benefits	Increased employment and economic activity; Increased tax revenues
8. Other Project-Specific Benefits	Examples: storm hardening, increased load serving capability, synergies with future transmission projects, increased fuel diversity and resource planning flexibility, increased wheeling revenues, increased transmission rights and customer congestion-hedging value, and HVDC operational benefits

Subject to further understanding and review of the TEAM approach, we do think that a single multi-driver methodology is an effective way to approach benefits assessment that ensures customers only pay for necessary transmission development and that they only pay for that development that proves cost effective.

It is critical to note that the use of a single multi-driver benefits assessment process does not mean that customers in states will pay for benefits that they do not receive. FERC's Order 1000 requires that costs be allocated roughly commensurate to benefits and that principle holds true in the case of multi-driver benefit assessment approaches.

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.

We would like to better understand the BAMx methodology generally. We would also like to understand whether and specifically how the proposal conforms the ISO's determination that public policy projects are likely to have some combination of public policy, economic and/or reliability benefits across states in the RSO footprint and when that is the case, project costs should be paid by all beneficiaries and not solely by the state that initially drives the project development.

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