Stakeholder Comments Template

Subject: Generation Interconnection Procedures Phase 2 ("GIP 2")

Submitted by	Company	Date Submitted
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This template was created to help stakeholders structure their written comments on topics detailed in the February 24, 2011 *Issue Paper for Generation Interconnection Procedures 2 (GIP-2) Proposal* (at http://www.caiso.com/2b21/2b21a4fe115e0.html). We ask that you please submit your comments in MS Word to GIP2@caiso.com *no later than the close of business on March 10, 2011*. For the 21 topics listed below, we ask that you rank each with a score of *0, 1, 2, or 3* in the space indicated (a more detailed description of each topic is contained in the *Issue Paper* at the link, above).

- *3:* For topics that are high priority and urgent.
- *2:* For topics that are high priority but not urgent. (i.e., topic could wait until a subsequent GIP stakeholder initiative).
- *1:* For topics that have low priority.
- *0:* For topics in which "the ISO need not bother."

Stakeholders need not rank or comment on every topic but are encouraged to do so where they have an opinion. The ISO will assume that a stakeholder has "no opinion" on issues for which no rank is provided.

Your comments on any these issues are welcome and will assist the ISO in the development of a Straw Proposal. Your comments will be most useful if you provide the reasons and the business case for your preferred approaches to these topics.

Comments on Items listed in GIP 2 Issue Paper:

1. Develop procedures and tariff provisions for cost-benefit assessment of network upgrades.

   Rank 0-3: **3**

   Comments:

   BAMx agrees with the CAISO to make this topic a high priority one under the GIP-2 initiative. BAMx agrees that in the GIP-2 initiative, the CAISO should reconsider the question of economic assessment of LGIP network upgrades and develop a new proposal that would remedy the shortcomings FERC identified with regard to the CAISO's earlier filing proposing an economic test. Such a test is critical in limiting the ratepayer impact associated with stranded transmission infrastructural assets. The CAISO generation interconnection studies (on only some of the CAISO grid) has shown substantial capacity exists to interconnect many thousands of megawatts of renewable generation with no or minor network upgrades.[1] Network upgrades should occur, but only when truly justified while accounting for all ratepayer costs.

   BAMx believes that there is a strong need to prevent CAISO approval of the interconnection projects with low probability of permitting agency approval. Approving multiple interconnection project requests without a thorough cost-benefit assessment leads to a burden on the permitting agencies to account for total ratepayer impact of transmission to reject proposed project approval. This causes inefficient use of scarce State resources. It also would be counter to the Memorandum of Understanding (MoU) between the California Public Utilities Commission (CPUC) and the CAISO regarding the Revised CAISO Transmission Planning Process (RTPP).

   In Attachment 1, BAMx has provided an example, which illustrates that efficient economic decisions are not likely to be made under the current socialization of network cost mechanism, where all LSE loads pay for network expansions caused by interconnecting generators. BAMx echoes the CAISO's staff's statements during the March 13th Stakeholder meeting that indicated a need to provide a proper economic signal, so the market can strike right balance between different generation technologies and locations. And, from an equity standpoint, LSEs that have met their RPS goals without the need for new network upgrades would not be charged the costs for the network expansion. At the current time, as stated above, there is no economic assessment of the most economic method to interconnect renewables and since network upgrades are "socialized" through TAC, proper economic signals for deciding on infrastructure needs are lost. Therefore, BAMx applauds the CAISO's proposal to include this topic as part of the Work Group 1 (LGIP/LGIA Cost Assessment Provisions).

   The recently approved revised transmission planning process envisions that, if economically justified, the CAISO may approve altered network upgrades, different from that approved under the LGIP process. It would not make much sense if the original

[1] See the CAISO's presentation, titled, "CAISO Comprehensive Transmission Planning to Meet 33% RPS, Preliminary Study Results: Transmission Utilization Analysis," dated December 2, 2010.

upgrades had not been justified economically. Therefore, co-ordination with the planning process requires a re-examination of this issue.

2. Clarify Interconnection Customer (IC) cost and credit requirements when GIP network upgrades are modified in the transmission planning process (per the new RTPP provisions)

   Rank 0-3: **1**

   Comments:

   We are not sure that the IC requirements should be changed in response to scope change for network upgrades as part of RTPP provisions.

3. Provide additional transparency regarding Participating Transmission Owner (PTO) transmission cost estimation procedures and per-unit upgrade cost estimates;

   Rank 0-3: **1**

   Comments:

   BAMx supports the need for stakeholders to understand the details of the process to develop per-unit costs.

4. Clarify applicability of GIP for a generator connecting to a non-PTO that is inside the ISO Balancing Area Authority (BAA) and wants to have full capacity deliverability status.

   Rank 0-3: **0**

   Comments:

   No comments at this time.

5. Explore potential modifications to the triggers that establish the deadlines for IC financial security postings.

   Rank 0-3: **1**

   Comments:

   No comments at this time.

6. Clarify definitions of start of construction and other transmission construction phases, and specify posting requirements at each milestone.

   Rank 0-3: **1**

Comments:

No comments at this time.

7. Clarify ISO information provision to assist ICs.

   Rank 0-3: **2**

   Comments:

   Transparency in the Generation Interconnection process is extremely important. Greater transparency in the process is needed so that stakeholders can assist the CAISO in identifying the most cost effective alternative to make the required interconnection. The CAISO should post both the Phase I Interconnection Study and the Phase II Interconnection Study on its secured website. While doing so, the only element under confidentiality should be the project names. The information that should be made available to stakeholders for meaningful participation include, PTO/CAISO/IC meeting minutes, Base Cases, contingency list, study criteria and findings. Maps should also be developed to assist developers to connect generation without new transmission.

   The CAISO should provide a forum for stakeholder input throughout the interconnection study process.

8. Consider partial capacity as an interconnection deliverability status option.

   Rank 0-3: **0**

   Comments:

   No Comments at this time.

9. Develop pro forma partial termination provisions to allow an IC to structure its generation project in a sequence of phases.

   Rank 0-3: **0**

   Comments:

   No Comments at this time.

10. Provide for partial repayment of IC funding of network upgrades upon completion and commercial operation of each phase of a phased project.

    Rank 0-3: **0**

    Comments:

No Comments at this time.

11. Applying Section 25 of the tariff to conversions of grandfathered generating units to compliance with ISO tariff.

    Rank 0-3: **0**

    Comments:

    No Comments at this time.

12. Clarify site exclusivity requirements for projects located on federal lands.

    Rank 0-3: **0**

    Comments:

    No Comments at this time.

13. Specify appropriate security posting requirements where the PTO elects to upfront fund network upgrades.

    Rank 0-3: **1**

    Comments:

    No Comments at this time.

14. Revise ISO insurance requirements (downward) in the pro forma Large Generation Interconnection Agreement (LGIA) to better reflect ISO's role in and potential impacts on the three-party LGIA.

    Rank 0-3: **0**

    Comments:

    No Comments at this time.

15. Clarify posting requirements for an IC that is already in operation and is applying only to increase its MW capacity.

    Rank 0-3: **0**

    Comments:

    No Comments at this time.

16. Standardize the use of adjusted versus non-adjusted dollar amounts in LGIAs.

    Rank 0-3: **0**

    Comments:

    No Comments at this time.

17. Clarify how GIP applies to storage facilities and behind-the-meter expansion of existing facilities.

    Rank 0-3: **1**

    Comments:

    BAMx supports creating a separate interconnection process to address interconnection of non-traditional generation assets, such as battery storage, flywheel technology and similar devices. An important issue on storage is cost allocation. Because of this aspect, this issue may belong in Group 1.

    As far as the treatment of existing facilities, it is important not to impede expansion of the existing facilities if they do not create the need for new transmission.

18. Conform technical requirements for small and large generators to a single standard, and develop study methodology to determine voltage impacts pursuant to FERC's 2010 order on ISO's proposed new interconnection standards.

    Rank 0-3: **1**

    Comments:

    BAMx suggests that the CAISO should investigate this issue without presuming that the requirements for small and large generators need to be the same.

19. Revisit tariff requirement for off-peak deliverability assessment.

    Rank 0-3: **0**

    Comments:

    No Comments at this time.

20. Include operational impacts in assessing generation interconnection impacts.

    Rank 0-3: **2**

Comments:

Operational impacts of interconnecting renewable generation is a very important issue. Those costs to integrate some types of renewable resources can be very substantial. Therefore, the cost recovery aspect of operational impacts should be considered as part of Topic #1. As stated in our comments to Topic #1, the CAISO should follow the cost causation/allocation principles for operational impacts.

21. Revise provisions for transferring queue position to a new IC.

Rank 0-3: **0**

Comments:

No Comments at this time.

Other Comments:

1. Are the five workgroups and their topic areas organized properly?

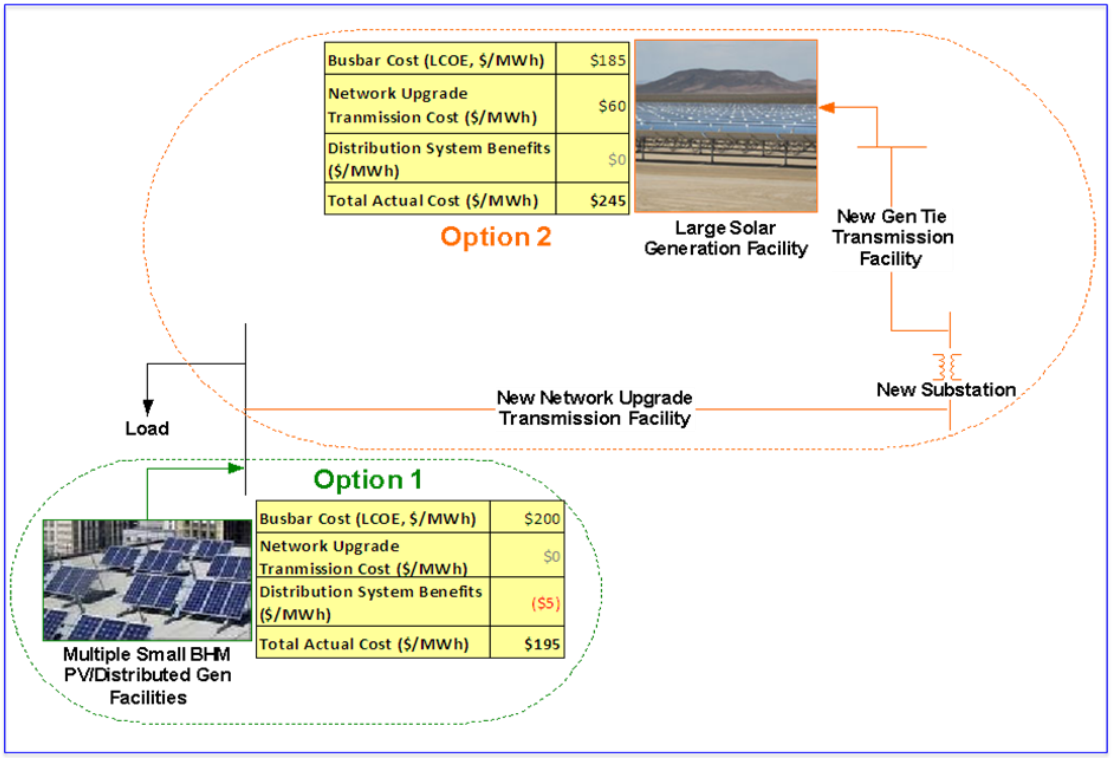
2. Are there other topics that you believe should be considered for the scope of GIP 2?

3. If you have other comments, please provide them here.

Attachment 1: An Example of Cost Allocation Associated with Distributed Generation versus Remote Large In-State Renewable Generation Facility

In this simplified example, we consider two options to meet the 33% renewable energy. Option 1 considers building a combination of multiple behind-the-meter (BHM) consumer-side solar generators as well as small-scale distributed generation (DG) producer-side facilities interconnected to the distribution system close to the load center. As shown in Figure 1 below, the average Levelized Cost of Energy (LOCE) of the DG facilities is $200/MWh. Since there is no new network transmission required under this option, the transmission cost is assumed to be zero.

Figure 1: A Comparison of Renewable Generation/Transmission Options



Furthermore, Option 1 avoids the cost associated with transmission line losses relative to other generation requiring transmission. This benefit is assumed to be $5/MWh. Overall, the total actual cost of renewable energy under Option 1 is calculated to be $195/MWh.

Alternatively, Option 2 entails building a large-scale solar generation facility away from the load center. In order to access this renewable generation a new High-Voltage (HV) network upgrade transmission facilities including a HV transmission line and a new substation are required. Moreover, as shown in Figure 1, you would also need a Gen-tie facility to connect the generation

facility to the new network transmission facilities. Although the cost of this Gen-tie is borne by the generator, the average Network Upgrade cost spread over the amount of renewable energy generated by this facility is nearly $60/MWh. The LCOE under this option is assumed to be $185, which is lower than the one assumed in Option 1. Given that there are no distribution system benefits associated with Option 2, the total actual cost of the renewable energy adds up to $245/MWh, which is significantly higher than $195/MWh under Option 1. However, if the transmission cost associated with the network facilities is socialized and spread to all customers (including those who are not consuming the particular renewable energy under consideration), it would amount to a much lower amount in terms of $/MWh, say $6/MWh. This interpretation would make Option 2 (with total cost of $191/MWh) more attractive than Option 1. See Table 1 below.

This example illustrates that with the current rolled-in or socialization of network upgrade costs, purchasers of renewable project output will make choices, which are more costly for all ratepayers as a group.

Table 1: A Summary of Overall Renewable Generation Purchaser Cost ($/MWh) Under Three Options

Category	Option 1	Option 2	
		w/o Socialization of Transmission Cost	w/ Socialization of Transmission Cost
Overall Purchaser Cost ($/MWh)	$195	$245	$191