Comments of
California Wind Energy Association
on the CAISO's March 26, 2010, Draft Straw Proposal
On Interconnection Standards for Renewables

April 9, 2010

The California Wind Energy Association (CalWEA) unequivocally supports the CAISO's efforts to maintain the reliability of the CAISO controlled grid and in that regard wishes to work closely with the CAISO to ensure that wind generation resources contribute to this goal. Wind generators interconnecting to the CAISO grid are already subject to the reliability requirements spelled out in FERC Order 661A and have incorporated the technologies and solutions to meet those requirements.

In these proceedings, the CAISO intends to immediately expand the requirements of FERC Order 661A in the following areas:

- High voltage ride-through requirement;
- Frequency ride-through requirement;
- Generation droop requirement; and
- Active power control requirement.

We will refer to these requirements as "CAISO Incremental Reliability Requirements" (CIRR).

We do not object to the expansion of the FERC Order 661A reliability requirements to include CIRR for new wind generation interconnections provided that their application is determined on the basis of reasonable and meaningful reliability needs rather than a vague sense that they may help meet reliability standards that may already be completely outdated. More specifically, we would like to offer the following comments:

1. All CAISO reliability requirements should apply equally to conventional generators.
2. The CAISO reliability requirements should apply only to generators larger than 20 MW.
3. CIRR should not be retroactively applied to generators that are currently in operation or those that have already committed to the installation of certain equipment regardless of their PPA or LGIA status. The application of the CIRR to existing projects or projects with equipment commitments should be made only prospectively, if and when these projects completely replace their existing generation equipment. Other project changes, such as changes in contractual arrangements, should not trigger the application of CIRR to these generators.
4. The application of the generation droop requirement to a wind generator or a cluster of wind generators should be based on a demonstration of the need as determined in the LGIP Phase 2 studies (or an equivalent process, such as the TPP). In that regard, the extent of the requirement should be determined as part

of meaningful and relevant studies and under no circumstances should it exceed the WECC's 5% droop requirement for longer than 10 seconds (AGC should take over the frequency control after 10 seconds) -- there should also be a provision for 0.05 Hz deviation deadband before the droop kicks in. This requirement should also account for the availability of the wind to allow for droop action to take place. In those cases where the generation droop requirement is shown to be needed for a cluster of generators, the total requirement should be allocated to individual generators based on their MW size.

5. CAISO should work with NERC/WECC to reconcile CIRR with the requirements being developed on a national/regional level by those organizations.
6. A transition period should be provided for all wind generators that will be subject to CIRR. The transition period should be the later of: a) two years after the signing of an LGIA by the wind generator; b) two years after the date when the CIRR is reconciled on a national/regional level; or c) one year after the necessary technologies are available on a competitive basis from at least three equipment manufacturers offering the technology in North America.
7. When meeting the voltage regulation and power factor requirements (0.95 lead/lag) at the POI, wind generators that are connected to the POI via a long gen-tie (one mile or longer) should be allowed to install and control VAR management technology of its choice at the POI (PTO substation). If the PTO is not willing to grant such installation and control to the wind generator, the voltage regulation and power factor requirement (0.95 lead/lag) should be transferred from the POI to the wind generator's terminal (high side of the step-up transformer).
8. The requirement for active power control and specifically that of active power curtailment and ramp should satisfy all ramp requirements on wind. Active power control of wind resources should also be very judiciously applied and only after all available customary measures of managing active power in the grid are exhausted. The customary measures include:
    - Reduction of all conventional generation resources to their minimum generation levels;
    - Ensuring that minimum generation levels known to the system operator for conventional generators is up-to-date;
    - Ensuring that imports are at minimum allowed levels;
    - Ensuring that all export possibilities are taken into consideration;
    - Ensuring that the minimum must-take generation, if applicable, is properly accounted for; and
    - Ensuring that other must-run resources such as hydro generation are sharing curtailments along with wind generators. There should be no built-in assumption that wind should be "spilled" ahead of water, i.e., minimum generation here should reflect only other factors like physical capabilities, environmental requirements, etc.

9. Wind generators should be allowed to offer curtailment bids and CAISO should curtail wind generators based only on such curtailment bid values and should compensate the wind generator accordingly. CAISO may cap the value of the curtailment bid for an operating hour at the generator's lost revenue for that hour (lost PPA payment plus lost PTC payment). The provision of a curtailment bid by a wind generator will allow the CAISO to weigh the curtailment of a wind generator alongside other measures that are available to it for managing active power in its grid.
10. CAISO should work with the LSEs and the CPUC to exclude all CAISO initiated curtailments from provisions in PPAs pertaining to minimum energy deliveries.