

April 8, 2010

Comments on the CAISO's Draft Straw Proposal on Interconnection Standards Review Initiative for Renewable Resources dated March 25, 2010

NextEra Energy Resources, LLC ("NextEra") is the largest renewable resources developer in the US, with active development of solar thermal, PV, and wind projects in California and the West. NextEra shares the CAISO's goal of maintaining system reliability as this fundamental requirement creates a solid foundation for renewable resource investment. From this standpoint, NextEra recognizes that instituting new technical standards may be required as renewable resource make up a greater share of the resource mix. While NextEra supports necessary new standards, it is critical that the rules be consistent with WECC and NERC standards. In addition, NextEra is committed to controlling costs to minimize the consumer impacts of the RPS mandate. For this reason, NextEra believes the CAISO should focus on the most essential standards and apply them only on a prospective basis to new generation facilities. Detailed comments on specific aspects of the proposal are set forth below.

Consistency with NERC and WECC

Voltage Ride Through

The CAISO highlights that many of its proposed requirements are under development at NERC and WECC and that it will ultimately adopt the new standards to the extent that differ from those the CAISO is proposing in the straw proposal. For instance, the CAISO proposes that all new generation facilities comply with voltage ride-through criteria specified in draft 2 NERC Standard PRC-024-1. The CAISO states that it "is unwilling to abstain from establishing a standard at this time in favor of an unconditional deference to the NERC process"¹. The CAISO states that it is concerned that waiting for NERC rules could allow a projects to avoid the new standard and that NERC standards will exclude a subset of generators (i.e. multiple generating units less than 75 MVA).

While NextEra understands the CAISO's concerns that some facilities may avoid the standard while NERC and WECC rules are being finalized, we believe that the threat of inconsistent standards is a greater concern. First, the CAISO's proposal cannot be squared with FERC Order 661-A. There, FERC concluded that the voltage ride-through standard should be determined on an interconnection-wide basis only, and specifically rejected a request for independent entity variations. As the FERC explained:

¹ Straw Proposal page 11

We also adopt the NERC/AWEA proposal to permit variations to the low voltage ride-through provisions of Appendix G only on an interconnection-wide basis. The low voltage ride-through provisions we adopt in this order on rehearing were crafted specifically, after negotiation among the wind industry and NERC, to ensure that NERC Reliability Standard TPL-002-0 is met in all regions. While other interconnection standards may be more susceptible to variation among Transmission Providers or independent entities, the close connection of this standard to an industry-wide reliability standard persuades us that *limiting variations to those made on an interconnection-wide basis will best ensure that reliability is protected*. Accordingly, we reject SCE's request that we clarify that Transmission Providers may implement other guidelines from the German interconnection standard. Adoption of other guidelines from the German standard on a Transmission Provider-specific basis could result in varying requirements that may not meet established reliability standards. For the same reasons, *we also reject New York ISO's assertion that the Commission should continue to permit variations to the low voltage ride-through provisions under the three variation standards in the Final Rule, and particularly the independent entity variation.*²

Furthermore, if the national and Western reliability and compliance organizations require additional time to finalize the ride through reliability standards, it is unclear why the CAISO requires a more urgent pace when all three organizations share the same reliability objective.

Consistency with NERC Generator Size Thresholds

The CAISO should not develop a size threshold inconsistent with those adopted by NERC for applicability of reliability standards.³ The NERC stakeholder process that resulted in the generator size thresholds was lengthy, thorough, and involved. The size thresholds approved by both NERC and FERC explicitly considered a lower generators size threshold but adopted the higher threshold of greater than 75 MVA for the following reasons:

1. Older technologies were unable to comply with the low voltage ride through requirements;
2. Smaller generation sites were insignificant in the event of a low voltage ride through event

It is unclear why CAISO requires a threshold rejected by NERC in a fully vetted process. For this reason, NextEra strongly encourages consistency with the federal and regional reliability standards. Different standards could well result in a delay in the supply by wind turbine manufacturers that have to develop new technical capabilities or have to retrofit wind turbines that have been developed. It was for this reason that FERC (with NERC's concurrence) in Order 661-A (issued in December 2005) provided for a transition period before the effective date of a new voltage ride-through standard as the CAISO notes and provides for in its

² *Interconnection for Wind Energy*, Order No. 661-A, 113 FERC ¶ 61,254 at P 33 (

³ See Statement of compliance registry Section III(c) Generator Owner/Operator

proposal Moreover, generators invest considerable resources in participating in the NERC process and assuring compliance with NERC and WECC rules. If each individual region develops separate standards it both raises the cost of compliance as well as introduces more risk of a compliance violation, which in the case of the NERC standards means a penalty of as high as \$1 million/ day. In the current proposal, for example, the CAISO makes no argument why the NERC size threshold is inadequate. At minimum, the CAISO must explain the argument that the NERC standard do not apply in the CAISO.

For these reasons, the CAISO should 1) apply voltage ride through requirements consistent with Order 661A (i.e. on an interconnection wide basis); and 2) defer to the effective NERC and WECC standards regarding generator size thresholds, and propose any modifications to the standard through the NERC and WECC standard development process. I

Grandfathering

If a proposal is submitted to FERC for consideration, NextEra strongly supports the CAISO's position that the new recommendations will not apply to any project with an executed LGIA. We also appreciate the CAISO's consideration of exempting projects that have already ordered equipment and have executed PPAs and therefore a limited ability to pass through the additional costs associated with the new standards. Such an exemption is appropriate because it would be consistent with the transition period one adopted by FERC in Order No. 661-A.

However, NextEra requests clarity regarding the transition period and requirements presented in the stakeholder discussion on April 1. For example, with regard to Generator Power Management requirements applicable to wind resources, the CAISO's proposed transition and exemption are as follows:

1. Facilities online and operating as of 6/1/2010 under a QF contract as of FERC filing are exempt until expiration of QF contract and/or Type I and II facilities;
2. All other Type III and IV facilities shall be required to meet the standards by the later of their online date or December 31, 2011

The exemption of QF facilities from complying with generation management protocols only until such time as the QF contract expires is inconsistent with the CAISO statement that the new requirement will not apply retroactively. NextEra requests clarification that the new requirements will not apply to any existing facilities, regardless of whether they have a LGIA. If approved by FERC, applying the proposed standards to new facilities is manageable following a reasonable transition period and so long as the project developer and turbine manufacturers have clear requirements for the standard. However, to apply the standard retroactively to existing projects simply because a contract expires may be infeasible or, at a minimum, is extremely expensive. Applying the new standards to existing generating facilities is even less cost effective considering that the CAISO has not stated that intermittent resources on the system today have raised reliability concerns and the CAISO reliability concerns have been focused on the anticipation of additional resources being added to the system. A going forward obligation is therefore most consistent with the CAISO stated reliability concerns - increases of intermittent resources on the system.

For these reasons, NextEra strongly supports the exemption for all existing generation regardless of whether the resource has an executed LGIA.

Power Factor Requirements

The CAISO proposal should be consistent with FERC Order 661 and 661-A, which does not provide for a system wide power factor standard. FERC Order 661 provides in relevant part:

“that wind plants are required to meet this standard only if the Transmission Provider shows, in the System Impact Study, that reactive power capability is necessary to ensure the safety or reliability of the transmission system.

The case-by-case approach to a reliability needs assessment adopted in the Final Rule will not threaten reliability, as several of those seeking rehearing argue. As we noted in the Final Rule, if reactive power is necessary to maintain the safety or reliability of the transmission system, the System Impact Study performed by the Transmission Provider will establish that need. We stated in the Final Rule, and reiterate here, that the System Impact Study is the appropriate study for determining whether reactive power capability is needed.

Furthermore, we reasoned in the Final Rule that requiring wind plants to maintain the power factor standard only if the System Impact Study shows it to be necessary will not only ensure that increased reliance on wind power will not degrade system safety or reliability, but also will limit opportunities for undue discrimination by ensuring that Transmission Providers do not require costly equipment that is not necessary for reliability.

As we noted in the Final Rule Appendix G was adopted to take into account the technical differences between wind plants and traditional generating plants. One of these differences is that for wind plants, reactive power capability is a significant added cost, while it is not a significant additional cost for traditional generators. Given these technical differences, treating wind plants differently with regard to reactive power requirements is not unduly discriminatory or preferential. Additionally, we note that the outcome of the System Impact Study, which determines whether reactive power will be required, can be challenged, which will serve to minimize the opportunities for discrimination by the Transmission Provider. Also, the wind plant Interconnection Customer will have recourse to the Commission if it believes the Transmission Provider has acted in a discriminatory manner.”

Given FERC precedent and the fact that a system wide reactive power standard has already been vetted and rejected at FERC, NextEra opposes the CAISO proposal because it will add unnecessary costs to wind facilities without a demonstrable reliability need for the costly investment. We believe the FERC precedent provides a fair avenue for the CAISO to

demonstrate the reliability need on a project specific basis through a system impact study to assure reliability while at the same time protecting against undue discrimination against intermittent resources and unnecessary costs to ratepayers.

Frequency Response

While NextEra believes that over frequency response requirements for wind and solar are manageable, we have concerns about under frequency requirements. It is not clear why the CAISO would require under frequency response capability in addition to the generation power management requirements of active power management, ramp rate and control, and over frequency response. In addition, the ability of wind and solar resources to provide under frequency response is limited since these resources are often at full output.

With regard to over frequency, NextEra appreciates the CAISO's commitment to using the ability to spill wind and solar power judiciously consistent with economic and environmental objectives. While NextEra understand there will be another stakeholder process to more fully develop curtailment rules, we note that spilling wind and solar should take place only after the CAISO has exhausted the ability to back down thermal resources on the system as wind and solar resources have the lowest dispatch cost. While NextEra does not oppose the over frequency standard, the next phase of the process requires the development of explicit operating criteria that detail the protocols the CAISO will utilize before spilling wind and solar resources.

NextEra appreciates the opportunity to comment on the CAISO's proposal.

Sincerely,

Kerry Hattevik
Director of Market Affairs
NextEra Energy Resources

(510) 898-1847 (office)
(510) 221- 8765 (cell)