

**California ISO
Interconnection Standards Review Initiative**

Draft Straw Proposal

dated
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Comments Submitted by Mark J Smith

On
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Summary:

Calpine supports the emerging consensus that reliability requirements should be incorporated in interconnection standards for all resources including variable energy resources (VERs). Calpine recognizes, however, that substantial disagreement remains with respect to the timing of the implementation of such standards. Given the significant number of projects that are expected to move forward in the near future, in part to obtain ARRA funding, and the difficulty of imposing standards retroactively, Calpine recommends that standards be implemented sooner rather than later. Calpine is largely supportive of the specific reliability requirements articulated in the Draft Straw Proposal.

The Draft Straw Proposal is directionally correct.

As the penetration rates of VERs increase, the CAISO's ability to ignore their reliability impacts – or actively seek that they disconnect from the grid when system stress occurs – diminishes. Most participants seem to support the expansion of reliability-related interconnection requirements for VERs, albeit with some project-specific exceptions.

The proposal to implement standards in the near term is controversial, but imposing requirements retroactively on approved, financed and negotiated interconnections might be worse.

Calpine is keenly aware of the risks created by changing regulations and market rules. Indeed, we understand renewable developers' cautions that the requirements to install equipment without full knowledge of its ultimate use (e.g., power management capability) can and will affect financing and commercial negotiations. However, the need for reliability-oriented equipment is undeniable. Calpine suggests that it is wise to impose requirements now, when the risks and costs of these changes still may be incorporated into PPAs and financing arrangements. In contrast, the disruption of pre-existing contracts necessary to impose reliability standards retroactively may prove more controversial and difficult.

Specific comments on Proposals:

Power Factor requirements:

Calpine support the standards incorporated in the Straw Proposal, particularly the measurement at the point of interconnection and the "rectangular" requirement (to provide or absorb reactive sufficient to maintain .95 lag and .95 lead at *rated* power).

Voltage Regulation Requirements:

Calpine supports the application of this requirement to all generators.

Ride-through Capability Requirements:

Calpine supports the prospective application of this requirement to new resources.

Generator Power Management Requirements:

Calpine supports the requirement for VERs to possess the described capabilities.