



Stakeholder Comments

Reactive Power Requirements for Asynchronous Resources

Issue Paper and Straw Proposal

Submitted by	Company	Date Submitted
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CESA appreciates the opportunity to comment on the CAISO's new initiative addressing reactive power requirements for asynchronous resources. CESA understands the need for a more standardized approach to providing reactive power from asynchronous resources, and appreciates the urgency of the CAISO's stakeholder process to revising its current approach given changing system conditions.

CESA generally agrees with the CAISO's conclusion that the provision of reactive power by asynchronous resources may reduce renewable curtailment, suboptimal dispatch of fossil generation, and/or retrofit transmission upgrades. CESA believes, however, a number of key issues in the CAISO's proposal need to be addressed to ensure that it fairly and equitably accounts for the economic implications of reactive power provision by system resources. Currently, the proposal does not account for:

- Reactive power dispatch requirements;
- Market impact & estimated upfront costs to generators, including the loss of real power dispatch opportunities;
- Interconnection study cost implications resulting from standardized requirements; and
- Potential cost avoidance of future transmission upgrades resulting from the new requirements.

Reactive power dispatch requirements

The CAISO's proposal seeks to establish a new set of capabilities for future generation, but does not identify a process for how such capability will be called on when needed. CESA recommends that the CAISO describe how it intends to call upon resources to provide reactive power during times of system deficiencies.

Market impact

CESA believes the most critical issue associated with imposing reactive power requirements on new resources is the potential for lost market revenue. Resources may sacrifice energy or ancillary services when called upon to provide reactive power due to system deficiencies. In such cases, reactive power provision is not dissimilar to the provision of other ancillary services. Current market compensation mechanisms do not account for this cost. CESA believes this issue to be particularly important in light of the CAISO's belief that demand for reactive power as an ancillary service will increase as additional asynchronous resources are added to the system.

Interconnection study cost implications

CAISO indicates that the current interconnection study approach would result in increased cost to generators applying through the GIDAP because additional study will be necessary:

The ISO estimates that to enhance its system impact study efforts to account for a more robust set of operating conditions would take at least another four months of study for each interconnection cluster at an additional cost of approximately \$2 million for each interconnection cluster.

Further, the current process would result in increased uncertainty of outcome due to the changing nature of the queue, generation retirements, etc.

However, it appears that the mandatory addition of reactive power requirements might avoid the \$2 million additional cost, and may even reduce the existing GIDAP study time and cost.

CESA recommends that the CAISO clarify whether the *current* process would be streamlined as a result of standardizing the reactive power requirement. If so, CESA suggests that these cost savings over current (rather than future) cluster study costs should be passed on to interconnection customers.

TAC impact

The CAISO indicates that "transmission providers can mitigate this [reactive power] deficiency by authorizing new transmission elements." There is precedent for doing so, as CAISO recently approved AES' conversion of two retired units at Huntington Beach to synchronous condensers

to provide voltage support due to shortfalls caused by the closure of SONGS. In order to understand the potential avoided costs due to this initiative, CESA requests that the CAISO provide informational analysis of the status quo situation, in which existing and currently queued generation reactive power shortfalls would be mitigated via the transmission planning process. This assessment might form the basis for establishing a market value of reactive power services from system resources.

As always, CESA appreciates CAISO's consideration of our comments. We look forward to continued participation in the CAISO's Reactive Power Requirements initiative.