

# Comments of Pacific Gas and Electric Company

## *Stepped Constraint Parameters – Issue Paper*

Submitted by	Company	Date Submitted
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Pacific Gas and Electric Company (PG&E) appreciates the opportunity to comment on the California Independent System Operator’s (CAISO) Stepped Constraint Parameters Issue Paper.<sup>1</sup> PG&E requests CAISO provide more information in its straw proposal regarding both drivers of these changes as well as clarity on its proposals after which PG&E can provide more precise comments. PG&E offers its initial feedback on each of the following topics:

1. **Transmission constraint relaxation parameter** - PG&E is generally supportive of CAISO’s direction of stepped constraints based on both the voltage level of the transmission and magnitude of the violations but believes that additional considerations should be taken into account.
  - i. PG&E notes that there are voltage levels between 115kV and 230kV that CAISO’s current proposal does not take into account and would need to be included.
  - ii. PG&E request CAISO look into defining “special cases” of transmission lines that use stepped penalties that are not solely categorized on voltage level since it is possible that enforcing transmission limits on some lower voltage lines is as important to reliability or system economics as enforcing limits on higher voltage lines.
  - iii. PG&E requests that CAISO clarify if this change is directed at real-time, day-ahead, or both market processes.
2. **Shift factor effectiveness threshold** – PG&E requests that the CAISO provide adequate simulation results and testing to show that day-ahead and real-time run-times are not adversely affected by this proposed change.
  - i. PG&E is conceptually supportive of CAISO’s lowering the shift-factor cut-off level since this would improve the accuracy of calculated flows. However, this support depends upon the impact on optimization run time and the ability of CAISO to clear its markets in the time available. CAISO should provide adequate simulation results to show that day-ahead and real-time run-times are not adversely affected.
3. **Power balance constraint** PG&E assumes that CAISO is looking for a system-wide (including EIM entities) power balance constraint relaxation in this section.

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<sup>1</sup> Stepped Constraint Parameters Issue Paper (Issue Paper), May 10, 2016:  
<http://www.caiso.com/Documents/IssuePaper-SteppedConstraintParameters.pdf>

- i. PG&E agrees that implementing a stepped relaxation of the system wide power balance constraint in relatively small quantities would provide potential benefits since the resulting imbalance could be covered by conventional reserves.
  - ii. PG&E seeks a set of study results to demonstrate the effectiveness of the range of MW quantities and the range of associated penalty price values. As the CAISO mentioned in the Issue Paper, NYISO has developed its current values based on several years of experience and actual system condition and requirements.
- 4. EIM transfer limit when resource sufficiency evaluation fails**
- i. PG&E looks forward to CAISO providing a detailed explanation and clarification of the issue that is intended to be resolved here.
  - ii. PG&E is not convinced that moving to a penalty mechanism would cover all potential cases and that market results would warrant a change.
  - iii. PG&E is concerned that moving to a penalty mechanism would promote resource adequacy (RA) leaning due to difference in RA requirements between BAs and must offer obligations across those entities.
- 5. PG&E opposes CAISO lowering energy bid floor**
- i. PG&E opposes this change unless CAISO can provide more detailed economic studies that prove this change is warranted and results in real benefits to the market. Otherwise, PG&E is concerned this change promotes more volatility with little to no efficiency gains.
  - ii. CAISO's paper states that "Lowering the bid floor would cover the opportunity costs of not producing for many variable energy resources... (and) the deeper pool of economic bids, which could result in decremental dispatches would allow the ISO to rely more on market-based curtailment in periods of over-supply." PG&E believes that current bid floor of -\$150/MWh provides ample incentives for variable energy resources to curtail, and if market prices were set regularly at or near the current -\$150 bid floor, there would be a strong incentive for additional market-based bids in periods of over-supply of variable resources to be made available.
  - iii. Additionally we continue to agree with the CAISO that the transient nature of extreme prices increased risk to resource from being dispatched in one interval only to have price switch direction and the resource to have insufficient ramping capability respond to the updated dispatch. Lowering the bid cap would increase the economic impact of these spikes, creating the need for additional bid cost recovery paid by load with no market benefit.