Western Power Trading Forum (WPTF) Comments on Parameter Tuning Issues

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WPTF offers a number of comments including some guiding principles followed by some more specific comments for creating and revising “penalty price” parameters.

- First and foremost, WPTF members believe that in order to obtain optimal outcomes from the CAISO’s markets, parties need to submit economic bids with their schedules. Self-Schedules frustrate the CAISO’s efforts to obtain optimal outcomes. They require the CAISO to administratively set “penalty prices” when otherwise inflexible Self-Schedules must be adjusted. The CAISO should ensure that its choice of penalty prices, the process it uses to set and revise them, and the impacts of penalty prices on the LMPs encourage parties, in the first instance, to submit economic bids and in the second, to avoid economic harm to parties that offer to be dispatched economically.
- Penalty prices should not be set in a way that would – or could -- allow the targeted Self-Schedule to clear at a price less than the cap for load, or above the floor for supply (WPTF provides added guidance below regarding the floor). In this manner, highly-effective Self-Schedules will be priced in a manner which will reduce the potential for very high LMPs while not unduly dampening LMP prices for economically bid units.
- WPTF feels strongly that the tuning of the parameters will have a direct and measurable impact on the price clearing process. We believe that FERC must, pursuant to its obligation to ensure just and reasonable prices, have the ability to review and approve the creation of, and any revisions to, penalty prices. Therefore, WPTF believes that penalty prices and any tuning thereof, must be a part of the FERC-approved tariff and

certainly should not be delegated to an Operating Procedure. And certainly specific rules should be possible to specify regarding the values[1] and place within the tariff.

- From a process perspective, determining how to clear the market when sufficient economic bids are not available is very complex, and involves a number of difficult issues. A meaningful stakeholder process that thoroughly examines all of these issues will require a commitment by the CAISO to freely share its view of the results, concerns and unintended consequences from the market simulation and its related testing of the tuning parameters. Finally, the final rules should promote transparency to the maximum extent possible.

- WPTF is concerned about the potential incentives any specific parameter values may have on bidding and scheduling behavior that would lead to adverse market outcomes. WPTF requests that any perverse incentives identified by the CAISO be shared with market participants for further consideration so that they can inform stakeholder positions on the parameter design. For example, the choice of parameters and thresholds should not allow parties that submit Self-Schedules to influence LMPs to the disadvantage of parties that submit economic bids.

- WPTF believes that the any proposal to modify the current tariff to allow out of merit, uneconomic adjustments before all economic bids have been exhausted creates a possibility of unwarranted market intervention and inappropriate market price suppression, and therefore the setting of the parameters should protect against this.
- WPTF believes a threshold of 10% for relaxation of a constraint is too high. Other markets have used thresholds on the order of 5% or 6%. Moreover, WPTF advocates that the CAISO employ a shadow price-based threshold for relaxation of transmission constraints as is done in some of the other ISO markets. This would allow both consideration of effectiveness and the cost. For example a shadow price threshold of

[1] For example, "penalty prices will be adjusted in a specified way if effectiveness factors are less than some threshold (e.g. 5%) and cause shadow prices of greater than some amount (e.g. $1500/MWh)."

$10,000 would reflect an effectiveness of 5% at $500/MWh or an effectiveness of 1% if bid prices were $100/MWh. We believe such a shadow price threshold is more appropriate than an effectiveness threshold, especially when price differential between the distant node and the local node is small.

- Once a shadow price threshold is agreed upon, WPTF recommends this value become the basis for the penalty prices used by the CAISO to relax self-schedules such that all the penalty prices have a common fundamental basis.
- WPTF is also very concerned about the proposed level of the bid floor, its perverse impact on SCs' willingness to submit economic bids during low load conditions, and the interaction with penalty prices that will result. There may be a significant pool of bidders interested in submitting economic bids that are below the minus $30/MWh floor but these bidders may instead submit fixed schedules to avoid the economic harm they would otherwise suffer if they were economically dispatched based on the bid floor.[2] Instead, with current rules, at a minus $30/MWh floor all such economic bids are deemed uneconomic, and the true economic bidders are not fully cleared before the CAISO makes its "uneconomic" adjustments. WPTF suggests that the CAISO consider setting the magnitude of the negative bid penalty price equal to the magnitude of the positive cap (but with the opposite sign), as this would allow the market to manage reliability most economically and provide appropriate incentives to submit economic bids that result in efficient dispatch. This approach would also allow demand to help manage over generation conditions by being paid to receive energy. Alternatively, maintaining a minus $30/MWh bid floor could significantly increase the number of "uneconomic" adjustments and it would - among other things - increase the impact of any distortions in the penalty prices.

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[2] For example, during the spring when a combination of low off-peak demand, high hydro conditions, and high wind energy production could cause generation to exceed demand by a sizable margin generators with commitments for the following day may not have an incentive to reduce their output.

- While WPTF is not proposing specific scheduling run penalty prices at this time, WPTF strongly believes pricing run values must produce pricing results and a system dispatch that are consistent with system dispatch results from the scheduling run. WPTF is concerned that the CAISO's dispatch will be inefficient and LMPs will be distorted if the penalty values used for the scheduling run are substantially different from the penalty prices that are used for pricing and settlement. In fact, LECG apparently indicated some concerns about this very issue when they recommended using fixed LDFs for LAP clearing. WPTF is concerned that the CAISO's proposal could otherwise result in distorted prices, excessive use of uneconomic adjustments, little incentive to reduce Self-Schedules and instead provide economic bids, and undermine confidence in and the robustness of the CAISO's markets.
- WPTF believes that Convergence Bidding offers a very complementary set of functionality that SCs can use to protect themselves from the effects of imperfectly chosen penalty prices and from attempts to manipulate prices using self-schedules. In the Day-Ahead market SCs who believe the parameters could create distortions would be free to submit convergence bids. Though the convergence bids will be "backed out" in real time, nevertheless in real time the CAISO's load forecast is used to set prices. WPTF continues to encourage the CAISO to implement convergence bidding as soon as possible.