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## CALIF. ISO PROPOSES ENERGY CRISIS SOLUTION

### CRISIS REQUIRES ACTION

The California ISO Seeks Solution to Energy Crisis with April 6 filing with the Federal Energy Regulatory Commission (FERC). The plan, intended for consideration, is certain to draw opposition. It represents a refreshing and innovative plan to control run-away energy prices in California.

The degradation of financial stability for Southern California Edison (SCE) and Pacific Gas & Electric (PG&E) are a result, not cause, of run-away energy prices. PG&E has filed for protection under Chapter 11 of federal bankruptcy laws. The State's proposal to purchase transmission facilities from SCE and PG&E only deals with the effect, not the cause of the market crisis. The sale of facilities to the State will infuse the seller with cash to help mitigate the near-fatal credit unworthiness. The sale will not address the root cause of the energy crisis. The root cause is run-away energy pricing and the inability to pass-through those costs to customers.

The ISO plan presents a real solution addressing the causes of run-away energy prices, rather than just a short term "effect." The plan aggressively confronts the causes and presents a viable "fix."

### ISO INNOVATIVE PLAN

The ISO Plan may be accessed at the California ISO website accessible at <http://www.caiso.com/publicinfo/> under "Proposed Market Stabilization Plan..." filed with FERC on April 6, 2001. The proposal boldly proclaims the facts, *"The supply-demand imbalance in California is such that virtually all suppliers are pivotal and can therefore strongly influence (if not set) the price of electricity. Under these circumstances, the Commission (FERC) must impose strong market-power mitigation measures if it is to uphold its obligation to ensure just and reasonable electric rates."*

The proposal sets forth a clear action plan to achieve control. The goals presented by ISO are: (1) To prevent further unjust and unreasonable wholesale prices in the California spot electricity markets, by mitigating the market power of suppliers and providing CAISO with the authority to make the most efficient use of available resources; and (2) To provide greater stability for CAISO operations, by reducing the volume of real-time transactions to meet system load and ensure through enabling the CAISO to commit and dispatch resources on a forward basis. These are revolutionary concepts when viewed from the market perspective, but quite valid in light of the

inability of the market operation under previous Tariff and CPUC restrictions.

### **Basics of the proposed changes**

The ISO proposes changes in the way the market operates. The major attributes include the following three major points:

1. *The introduction of a new Availability Payment that would ensure full recovery of costs by all Participating Generators in exchange for an explicit obligation on the part of all Participating Generators (and any other resource that elects to receive the Availability Payment) to satisfy the demand for electricity in California;*
2. *The implementation of Resource-Specific Cost-Based Bid Caps (“RCBCs”) and a must-bid requirement for such resources; and*
3. *The creation of forward CAISO markets for energy through which the CAISO would optimize the procurement of energy to satisfy the forecasted level of CAISO demand, the procurement of ancillary services to satisfy reliability requirements, and the management of congestion.*

As we understand the plan, it would not inhibit bilateral contracts, but would impose these rules upon the market transactions as described. The action would certainly appear to address (a) the needs of ISO, (b) the needs to control ancillary service and imbalance energy costs, and (c) serve to influence and impose some limits upon the run-away market energy prices.

Under the Market Stabilization Market Stabilization Plan, ISO proposed two fundamental changes to the current California market: (1) in the forward markets the CAISO will commit resources and procure energy to meet unmatched demand (imbalance) in addition to performing congestion management and procuring ancillary services, and (2) the CAISO will have extensive commitment and dispatch control of participating resources at mitigated prices, in return for which the CAISO will implement an availability payment that will allow these resources to recover fully their fixed and variable costs.

FERC has approved mechanisms in New England, New York and the PJM region whereby these Eastern independent system operators provide capacity payments to resources within their control areas and in return those resources bid their capacity into the independent system operator’s day-ahead energy market to serve control area load. Those market structures are not identical to those proposed in the CAISO Market Stabilization Market Stabilization Plan. The conceptual design of the ISO market structure has similarities to those of the installed capacity (ICAP) requirements in PJM, New England, and New York.

Operational objectives that will guide the design of the market power mitigation and forward energy market elements of the Market Stabilization Plan include the following:

1. Procure energy in the day-ahead and hour-ahead markets to serve “Unmatched Demand.” The target would be to have at least 90% of forecasted system load scheduled by the close of the day-

- ahead market and 95 percent by the close of the hour-ahead market. This will reduce the energy volume of the Real Time Market to 5 percent or less of total demand, consistent with the original design of the CAISO's Real Time Market.
2. Ensure commitment of generating resources in the day-ahead and hour-ahead markets to secure sufficient supply to meet the forecasted load and ancillary service requirements, while producing resource schedules that are feasible with respect to both transmission constraints and resource operating constraints. This will enable the CAISO to make optimal use of available resources by considering resource performance characteristics over a longer time horizon than the individual Trading Hour.
  3. Procure ancillary services: regulation, spinning and non-spinning reserves as required to cover the forecasted load, while allowing Scheduling Coordinators to self-provide ancillary services if they prefer. Under the Market Stabilization Market Stabilization Plan, replacement reserves would no longer be necessary since the CAISO would have the ability to dispatch any remaining capacity of participating resources in real-time by virtue of the availability requirement, and therefore this service and the associated costs would be eliminated.
  4. Perform congestion management so that hourly schedules are feasible with respect to network constraints. Congestion management initially would employ the same zonal network structure now used by the CAISO.
  5. Minimize the total energy and ancillary service procurement cost over the whole time horizon considering startup, shutdown, no-load, energy and ancillary service costs.
  6. Apply resource-specific cost-based Energy Bid caps to participating resources and use these bids to establish clearing prices in the CAISO markets.
  7. Provide availability payments to participating resources to enable the full recovery of fixed costs in return for those resources' standing availability to serve CAISO control area load.

**Day-Ahead Market**

According to the proposal, the day-ahead market will be changed by replacing the current congestion management function (CONG), as previously applied to a Scheduling Coordinator's balanced schedule, with Transmission Constrained Unit Commitment Economic Dispatch (UCED). The UCED software is intended to minimize energy and ancillary service procurement costs over a rolling multi-day time window. Only the results for the 24 hours of the next trading day will be used to produce final day-ahead schedules for the market.

**Hour-Ahead Market**

The hour-ahead energy market will handle schedule deviations from the final day-ahead energy schedules. Since congestion costs will be implicit in the forward energy markets, final day-ahead schedules will not be frozen, but will be re-optimized as needed to satisfy both the energy and congestion needs of the hour-ahead market. To avoid excessive

schedule volatility due to hour-ahead re-optimization, the day-ahead final schedules, which include RMR (reliability must run) and FTR (firm transmission rights) schedules, will be given higher scheduling priority than hour-ahead preferred schedules. As today, there will be no FTR scheduling priority for schedules in the hour-ahead market.

### **Ancillary Services**

The proposal is to procure ancillary service capacity optimally along with energy through the UCED program. The ISO scheduling software will accept and validate ancillary service bids like today, but only for non-participating resources. The UCED will use a \$0/MW bid for ancillary service capacity of participating resources, and will optimize the energy output and available ancillary service capacity of these resources based on their standing RCBC Energy bids. The UCED will implicitly price ancillary service capacity from these resources at the appropriate opportunity cost of reserving capacity for ancillary services instead of scheduling that capacity as Energy, *i.e.*, the difference between the zonal MCP for energy and the individual resource's RCBC, thus capturing the foregone above-cost revenue for that ancillary service capacity.

Non-participating resources (*e.g.*, import suppliers) may bid ancillary service capacity as they do today, and may be selected if their bids are below the imputed ancillary service capacity costs of some available participating resources.

The functionality of the existing ancillary service procurement will be used to calculate ancillary service requirements, provide for ancillary service self-

provision and ancillary service buybacks, and calculate the ancillary service demand for input to the UCED. The UCED will then include these demands as reserve constraints for regulation, spinning reserve, and non-spinning reserve. As noted above, the replacement reserve service will no longer be needed since the associated capacity will already be scheduled to provide energy in the final hour-ahead energy schedules.

Ancillary service suppliers will be paid the appropriate ancillary service MCP. The total ancillary service procurement cost (from both day-ahead and hour-ahead markets) will be charged to the metered demand that is not covered by ancillary service self-provision, as is done today.

The ancillary service MCPs will be mitigated by the demand side bid on the residual load in connection with energy procurement, up to the point where all residual load is scheduled off. In other words, if available capacity from participating resources and from bids below the RCBC of the highest-cost Participating Resource is not adequate to meet both ancillary service requirements and residual load energy requirements, the CAISO will meet its ancillary service requirements first.

### **Real-Time Market**

ISO proposed no changes to the Imbalance Energy market other than the use of standing cost-based energy bids (both incremental and decremental) for participating resources for all available capacity. These bids will be the same bids used for these resources in the day-ahead and hour-ahead markets. The same bids will also be used to dispatch energy from operating reserve capacity under

emergency conditions. The energy bid for operating reserves will be the portion of the standing bid starting from the operating point specified in the final hour-ahead energy schedule. The remaining resources that can participate in the real-time market (e.g., non-participating import suppliers) may bid with no restriction other than any damage-control price cap that may be applied to the CAISO markets. However, resources selected at a price higher than the highest mitigated bid will be paid as-bid; thus the ex post MCP will be mitigated. This approach is analogous to the current soft-cap mechanism, except for the fact that the applicable mitigated price will vary by hour depending on the highest mitigated bid available, thus approximating a competitive-market outcome.

*The descriptive text is edited and condensed from the document submitted by ISO to FERC on April 6, 2001. The ISO source is gratefully acknowledged <http://www.caiso.com> and our intent is to carefully reflect the concepts as ISO intended. However, a download of that document in PDF format is available on the CAISO site.*

### **Commentary**

Opposition will be mustered against the ISO plan. The fact is that a “free energy market” as implemented in California has failed to a large extent. Refer to the paper, “CA Energy Market, Success Or Failure,” on the elektrikgrid web site, <http://www.elektrikgrid.com>.

Regardless of the effects, the causes of the crisis has been exorbitantly high energy prices, the inability to pass-through energy cost to end users, lack of generation in California, lack of incentive to alleviate transmission congestion, and lack of quick action by regulators to solve the problem.

Yes, the introduction of greater ISO authority and implementation of price controls for market components is a far distance from the original market rules. We have passed the “market power” (controlling influence) from the investor owned utilities to the new generation resource owners. That unchecked market power, together with the cited accompanying causes, produced the California crisis.

The idea of just passing on exorbitant energy costs to customers will merely transfer the financial degradation from the investor owned utilities to the customers and the whole economy. The ISO proposal presents a solution to the core problem. This solution need not be permanent, because as the installed generator capacity reaches and exceeds the California peak load, there can be greater competition. At that point, the proposed controls can be reassessed.

The California experience reveals how fragile a new market can be and how reliant it may be upon: ability to pass-through costs to customers, available resources, adequate regional transmission, controls, balances, rules that serve all parties, and market power from all potential sources. Emerging markets need to carefully look at these issues, as well as how quickly generation resources are sold to for-profit corporations.

The California energy market needs help. Will FERC react to this need? Time is running out.