

# ATTACHMENT I

#### 11.2.4.1.2 Penalties for Uninstructed Imbalance Energy

The ISO shall charge Scheduling Coordinators Uninstructed Deviation Penalties for Uninstructed Imbalance Energy resulting from resource deviations outside a tolerance band from their Dispatch Operating Point, for dispatched resources, or their final Hour-Ahead Schedule otherwise. The Dispatch Operating Point will take into account the expected ramping of a resource as it moves to a new Hour-Ahead Schedule at the top of each hour and as it responds to Dispatch Instructions. The Uninstructed Deviation Penalty will be applied as follows:

- a) The Uninstructed Deviation Penalty will be calculated and assessed in each BEEP Interval that Section 5.6.3 is not in effect and the ISO has not declared a staged System Emergency;
- b) The Uninstructed Deviation Penalty will apply to Interconnection Schedules if a pre-dispatch instruction is declined or not delivered. Uninstructed Imbalance Energy resulting from declining intra-hour instructions, however, will not be subject to the Uninstructed Deviation Penalty. Dynamic Interconnection Schedules, to the extent they deviate from their Final Hour-Ahead Schedule plus any real-time Dispatch Instructions will be subject to the Uninstructed Deviation Penalty;
- c) The Uninstructed Deviation Penalty will not apply to Load, other than Participating Load; for Participating Load, the Uninstructed Deviation Penalty will not apply for the duration of the relevant Minimum Down Time;
- d) The Uninstructed Deviation Penalty will not apply to constrained resources for the duration of the relevant startup/shutdown and Minimum Up/Down Times;
- e) The Uninstructed Deviation Penalty will not apply to Regulatory Must-Run Generation or Participating Intermittent Resources that meet the scheduling obligations established in the technical standards for Participating Intermittent Resources adopted by the ISO and

published on the ISO Home Page or Regulatory Must-Run Generation. No other applicable charges will be affected by this exemption. The Uninstructed Deviation Penalty also will not apply to Qualifying Facilities that have not executed a Participating Generator Agreement (PGA), pending resolution of QF-PGA issues at the Commission;

- f) For Metered Subsystems (MSS), the Uninstructed Deviation Penalty will apply to the net injection (System Unit generation plus import minus MSS load and export) into the ISO Controlled Grid;
- g) The Uninstructed Deviation Penalty will not apply to Generators providing Regulation to the extent that the Generators' Uninstructed Deviations are within the range of their actual Regulation range;
- h) The Uninstructed Deviation Penalty will be calculated and assessed for each resource separately, however, resources represented by the same Scheduling Coordinator and connected to the same ISO Controlled Grid bus and voltage level can be aggregated for purposes of Uninstructed Deviation Penalty determination. Other levels of aggregation for purposes of the Uninstructed Deviation Penalty will be considered on a case-by-case basis based on an ISO review of impact on the ISO Controlled Grid;
- i) The tolerance band for the application of the Uninstructed Deviation Penalties to Generating Units or aggregated groups of Generating Units initially will be the Energy produced in a BEEP Interval by the greater of five (5) MW or three percent (3%) of the relevant generating unit's maximum output ( $P_{max}$ ), as registered in the Master File;
- j) The tolerance band for the application of the Uninstructed Deviation Penalties to Participating Loads initially will be equal to the Energy produced in a BEEP Interval by the greater of five (5) MW or three percent (3%) of the relevant final Hour-Ahead Schedule;

- k) The Uninstructed Deviation Penalty will not apply when the BEEP Interval Ex Post Price is negative or zero;**
- l) The Uninstructed Deviation Penalty for positive Uninstructed Imbalance Energy will be the amount of the Uninstructed Imbalance Energy in excess of the tolerance band multiplied by a price that initially will be equal to 100% of the corresponding BEEP Interval Ex Post Price; and the net effect of the Uninstructed Deviation Penalty and the Settlement for positive Uninstructed Imbalance Energy beyond the tolerance band will be that the ISO will not pay for such Energy;**
- m) The Uninstructed Deviation Penalty for negative Uninstructed Imbalance Energy will be the amount of the Uninstructed Imbalance Energy in excess of the tolerance band multiplied by a price that initially will be equal to 50% of the corresponding BEEP Interval Ex Post Price; and the net effect of the Uninstructed Deviation Penalty and Uninstructed Imbalance Energy settlement initially will be that any such Energy will be charged at 150% of the corresponding BEEP Interval Ex Post Price;**
- n) The Uninstructed Deviation Penalty will not apply to deviations from Energy delivered as part of a scheduled test so long as the test has been scheduled by the Scheduling Coordinator with the ISO or the ISO has initiated the test for the purposes of validating unit performance;**
- o) The Uninstructed Deviation Penalty will apply to Out of Market (OOM) transactions;**
- p) Generating Units, Curtailable Demand and dispatchable Interconnection resources with negative Uninstructed Imbalance Energy will be exempted from the Uninstructed Deviation Penalty if the Generating Unit, Curtailable Demand or dispatchable Interconnection resource was physically incapable of delivering the expected Energy, provided that the Generating Unit, Curtailable Demand or dispatchable Interconnection resource had notified the ISO within 30 minutes of the onset of an event that prevents the**

resource from performing its obligations. A Generating Unit, Curtailable Demand or dispatchable Interconnection resource must notify ISO operations staff of its reasons for failing to deliver the expected Energy in accordance with Section 2.3.3.9.2 and must provide information to the ISO that verifies the reason the resource failed to comply with the Dispatch instruction within 72 hours of the operating hour in which the instruction is issued; and

g) Operational adjustments associated with interchange schedules making use of Existing Rights shall not be subject to the Uninstructed Deviation Penalty.

\* \* \*

Amounts collected as Uninstructed Deviation Penalties shall first be assigned to reduce the portion of Residual Unit Commitment costs that would otherwise be included in Total Excess Hourly Unit Commitment Cost, pursuant to Section 5.12.8.3. Any remaining amounts of collected Uninstructed Deviation Penalties shall next be assigned to reduce the portion of above-MCP costs that would otherwise be assigned pro rata to all Scheduling Coordinators in that BEEP Interval pursuant to Section 11.2.4.2.2. Any remaining portion of amounts collected as Uninstructed Deviation Penalties after satisfying these sequential commitments shall be treated in accordance with SABP 6.5.2.

## ATTACHMENT J

**11.2.4.1 Net Settlements for Uninstructed Imbalance Energy.**

Uninstructed Imbalance Energy attributable to each Scheduling Coordinator for each Settlement Period in the relevant Zone shall be deemed to be sold or purchased, as the case may be, by the ISO and charges or payments for Uninstructed Imbalance Energy shall be settled by debiting or crediting, as the case may be, the Scheduling Coordinator with an amount for each BEEP Interval in accordance with Section 2.5.23.2.1.

**11.2.4.1.1 Settlement for Instructed Imbalance Energy**

Instructed Imbalance Energy attributable to each Scheduling Coordinator in each BEEP Interval shall be deemed to be sold or purchased, as the case may be, by the ISO and charges or payments for Instructed Imbalance Energy shall be settled by debiting or crediting, as the case may be, the Scheduling Coordinator with an amount for each BEEP Interval in accordance with Section 2.5.23.

**11.2.4.1.2 Penalties for Uninstructed Imbalance Energy**

The ISO shall charge Scheduling Coordinators Uninstructed Deviation Penalties for Uninstructed Imbalance Energy resulting from resource deviations outside a tolerance band from their Dispatch Operating Point, for dispatched resources, or their final Hour-Ahead Schedule otherwise. The Dispatch Operating Point will take into account the expected ramping of a resource as it moves to a new Hour-Ahead Schedule at the top of each hour and as it responds to Dispatch Instructions. The Uninstructed Deviation Penalty will be applied as follows:

- a) The Uninstructed Deviation Penalty will be calculated and assessed in each BEEP Interval that Section 5.6.3 is in effect; the ISO has not declared a Staged System Emergency;

- b) The Uninstructed Deviation Penalty will apply to Interconnection Schedules if a pre-dispatch instruction is declined or not delivered. Uninstructed Imbalance Energy resulting from declining intra-hour instructions, however, will not be subject to the Uninstructed Deviation Penalty. Dynamic Interconnection Schedules, to the extent they deviate from their Final Hour-Ahead Schedule plus any real-time Dispatch Instructions will be subject to the Uninstructed Deviation Penalty;
- c) The Uninstructed Deviation Penalty will not apply to Load, other than Participating Load; for Participating Load, the Uninstructed Deviation Penalty will not apply for the duration of the relevant Minimum Down Time;
- d) The Uninstructed Deviation Penalty will not apply to constrained resources for the duration of the relevant startup/shutdown and Minimum Up/Down Times;
- e) The Uninstructed Deviation Penalty will not apply to Regulatory Must-Run Generation or Participating Intermittent Resources that meet the scheduling obligations established in the technical standards for Participating Intermittent Resources adopted by the ISO and published on the ISO Home Page or Regulatory Must-Run Generation. No other applicable charges will be affected by this exemption. The Uninstructed Deviation Penalty also will not apply to Qualifying Facilities that have not executed a Participating Generator Agreement (PGA), pending resolution of QF-PGA issues at the Commission;
- f) For Metered Subsystems (MSS), the Uninstructed Deviation Penalty will apply to the net injection (System Unit generation plus import minus MSS load and export) into the ISO Controlled Grid;
- g) The Uninstructed Deviation Penalty will not apply to Generators providing Regulation to the extent that the Generators' Uninstructed Deviations are within the range of their actual Regulation rang



- h) The Uninstructed Deviation Penalty will be calculated and assessed for each resource separately, however, resources represented by the same Scheduling Coordinator and connected to the same ISO Controlled Grid bus and voltage level can be aggregated for purposes of Uninstructed Deviation Penalty determination. Other levels of aggregation for purposes of the Uninstructed Deviation Penalty will be considered on a case-by-case basis based on an ISO review of impact on the ISO Controlled Grid;
- i) The tolerance band for the application of the Uninstructed Deviation Penalties to generating units or aggregated groups of generating units initially will be the Energy produced in a BEEP Interval by the greater of five (5) MW or three percent (3%) of the relevant generating unit's maximum output ( $P_{max}$ ), as registered in the Master File;
- j) The tolerance band for the application of the Uninstructed Deviation Penalties to Participating Loads initially will be equal to the Energy produced in a BEEP Interval by the greater of five (5) MW or three percent (3%) of the relevant final Hour-Ahead Schedule;
- k) The Uninstructed Deviation Penalty will not apply when the BEEP Interval Ex Post Price is negative or zero;
- l) The Uninstructed Deviation Penalty for positive Uninstructed Imbalance Energy will be the amount of the Uninstructed Imbalance Energy in excess of the tolerance band multiplied by a price that initially will be equal to 100% of the corresponding BEEP Interval Ex Post Price; and the net effect of the Uninstructed Deviation Penalty and the Settlement for positive Uninstructed Imbalance Energy beyond the tolerance band will be that the ISO will not pay for such Energy;

- m) The Uninstructed Deviation Penalty for negative Uninstructed Imbalance Energy will be the amount of the Uninstructed Imbalance Energy in excess of the tolerance band multiplied by a price that initially will be initially equal to 50% of the corresponding BEEP Interval Ex Post Price; and the net effect of the Uninstructed Deviation Penalty and Uninstructed Imbalance Energy settlement initially will be that any such Energy will be charged at 150% of the corresponding BEEP Interval Ex Post Price;
- n) The Uninstructed Deviation Penalty will not apply to deviations from Energy delivered as part of a scheduled test so long as the test has been scheduled by the Scheduling Coordinator with the ISO or the ISO has initiated the test for the purposes of validating unit performance;
- o) The Uninstructed Deviation Penalty will apply to Out of Market (OOM) transactions;
- p) Generating Units, Curtailable Demands and dispatchable Interconnection resources with negative Uninstructed Imbalance Energy will be exempted from the Uninstructed Deviation Penalty if the Generating Unit, Curtailable Demand or dispatchable Interconnection resource was physically incapable of delivering the expected Energy, provided that the Generating Unit, Curtailable Demand or dispatchable Interconnection resource had notified the ISO within 30 minutes of the onset of an event that prevents the resource from performing its obligations. A Generating Unit, Curtailable Demand or dispatchable Interconnection resource must notify ISO operations staff of its reasons for failing to deliver the expected Energy in accordance with Section 2.3.3.9.2 and must provide information to the ISO that verifies the reason the resource failed to comply with the Dispatch instruction within 72 hours of the operating hour in which the instruction is issued; and
- q) Operational adjustments associated with interchange schedules making use of Existing Rights shall not be subject to the Uninstructed Deviation Penalty.

Amounts collected as Uninstructed Deviation Penalties shall first be assigned to reduce the portion of Residual Unit Commitment costs that would otherwise be included in Total Excess Hourly Unit Commitment Cost, pursuant to Section 5.12.8.3. Any remaining amounts of collected Uninstructed Deviation Penalties shall next be assigned to reduce the portion of above-MCP costs that would otherwise be assigned pro rata to all Scheduling Coordinators in that BEEP Interval pursuant to Section 11.2.4.2.2. Any remaining portion of amounts collected as Uninstructed Deviation Penalties after satisfying these sequential commitments shall be treated in accordance with SABP 6.5.2.

## ATTACHMENT K

period. The estimated opportunity cost for the energy-limited generation resource will remain constant for all hours in this constrained period. The opportunity cost may be increased to account for other constraints on the resource.

10. The Hourly Competitive Baseline Cost is the product of:
  - A) the competitive baseline price defined in this section, and
  - B) the total short-term and real-time incremental Energy defined in 28.2.2.

**28.2.1.4 Computation of the Price-cost Markup.**

The Price-cost markup shall be :

$$\frac{\text{SUM}_h(\text{Hourly Actual Market Cost}) - \text{SUM}_h(\text{Hourly Competitive Baseline Cost})}{\text{SUM}_h(\text{Hourly Competitive Baseline Cost})}$$

where h is each hour in the month;

The 12-Month Market Competitiveness Index (12MMCI) is computed as:

$$\frac{(\text{SUM}_M(\text{Monthly Actual Market Cost}) - \text{SUM}_M(\text{Monthly Competitive Baseline Cost}))}{\text{SUM}_M(\text{Monthly Competitive Baseline Cost})}$$

where M is each month of the previous 12 months.

**28.2.1.5 Accounting for Scarcity Rents.** To assess the degree to which high prices may be attributable to absolute scarcity of supply rather than market power, the DMA shall identify the portion of the price-cost markup that occurred during hours of potential resource scarcity. In this analysis, scarcity shall be defined to occur during the hours when the total available supply in the ISO system (including import bids and out-of-market purchases) is less than total system demand for energy plus a margin of 10 percent approximating requirements for three percent upward regulation and seven percent Operating Reserves).

**28.2.1.6 Trigger Threshold.**

The threshold for the 12MMCI shall be \$5/MWh.

**28.2.2 POSTING**

The ISO shall calculate and publish the 12MMCI every month.

**28.2.3 CONSEQUENCES FOR EXCEEDING THE 12MMCI**

If the threshold for the 12MMCI is exceeded, then the requirements of Sections 28.2.3.1, 28.2.3.2, 28.2.3.3, and 28.2.3.4 shall apply.

**28.2.3.1 Temporary Limitation of BEEP Prices Resulting from 12-Month Trigger**

**28.2.3.1.1 Limitation**

Notwithstanding any other provision of the ISO Tariff, including Section 2.5.23.3.1.2, the BEEP Interval Ex Post Price shall equal the highest Proxy Price calculated in accordance with Section 28.2.3.4 for a gas-fired Generating Unit that: (i) is eligible to set the Market Clearing Price as set forth in Section 28.2.3.8; and (ii) is dispatched by the ISO to provide Imbalance Energy. This Proxy Price shall establish the Market Clearing Price (the "Marginal Proxy Clearing Price") for all Scheduling Coordinators for Generating Units, System Units, and System Resources that submit bids at or below the level of the Marginal Proxy Clearing Price. All bids for the supply of Imbalance Energy submitted by Scheduling Coordinators for resources that do not meet the requirements set forth in Section 28.2.3.8 to be eligible to set the Market Clearing Price shall be bids deemed by the ISO to be paid the Marginal Proxy Clearing Price. Subject to Section 28.2.3.8, Scheduling Coordinators for Generating Units, System Units, and System Resources that submit bids above the Marginal Proxy Clearing Price for the supply of Imbalance Energy shall be paid in accordance with their bids if accepted for Dispatch by the ISO. Such bids shall be subject to the cost justification requirements and potential refunds as set forth in Section 2.5.23.3.5.

## ATTACHMENT L

**28.2.1.3 Computation of the CBAC.** The competitive baseline average cost is based on competitive baseline prices that represent the estimated variable operating cost of the marginal (highest cost) thermal generation unit within the ISO system needed to meet system demand each hour. The calculation procedure is as follows:

\* \* \*

10. The Hourly Competitive Baseline Cost is the product of:
  - A) the competitive baseline price defined in this section, and
  - B) the total short-term and real-time incremental Energy defined in 28.2.4.2.

\* \* \*

**28.2.3.1.1 Limitation**

Notwithstanding any other provision of the ISO Tariff, including Section 2.5.23.3.1.2, the BEEP Interval Ex Post Price shall equal the highest Proxy Price calculated in accordance with Section 28.2.3.4.4 for a gas-fired Generating Unit that: (i) is eligible to set the Market Clearing Price as set forth in Section 28.2.3.4.8; and (ii) is dispatched by the ISO to provide Imbalance Energy. This Proxy Price shall establish the Market Clearing Price (the "Marginal Proxy Clearing Price") for all Scheduling Coordinators for Generating Units, System Units, and System Resources that submit bids at or below the level of the Marginal Proxy Clearing Price. All bids for the supply of Imbalance Energy submitted by Scheduling Coordinators for resources that do not meet the requirements set forth in Section 28.2.3.4.8 to be eligible to set the Market Clearing Price shall be bids deemed by the ISO to be paid the Marginal Proxy Clearing Price. Subject to Section 28.2.3.4.8, Scheduling Coordinators for Generating Units, System Units, and System Resources that submit bids above the Marginal Proxy Clearing Price for the supply of Imbalance Energy shall be paid in accordance with their bids if accepted for Dispatch by the ISO. Such bids shall be subject to the cost justification requirements and potential refunds as set forth in Section 2.5.23.3.5.



## ATTACHMENT M

NOTICE SUITABLE FOR PUBLICATION IN THE  
FEDERAL REGISTER

UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION

San Diego Gas and Electric	)	
Company, Complainant	)	
v.	)	Docket No. EL00-95-001, <i>et al.</i>
Sellers of Energy and Ancillary	)	
Services Into Markets Operated by	)	
the California Independent System	)	
Operator and the California Power	)	
Exchange, Respondents,	)	
California Independent System	)	Docket No. ER02-1656-___
Operator Corporation	)	

Notice of Filing

[ ]

Take notice that on June 28, 2002, the California Independent System Operator Corporation ("ISO") tendered for filing in the above-captioned dockets Tariff Sheets to implement proposals for a Comprehensive Market Redesign ("MD02") filed on June 17, 2002, together with corrections to the blackline sheets filed on June 17, 2002, and further errata to its MD02 filing of May 1, 2002. The ISO states that this filing has been served on the California Public Utilities Commission, all California ISO Scheduling Coordinators, and all parties in Docket Nos. EL00-95 and ER02-1656.

Any person desiring to be heard or to protest the filing should file a motion to intervene or protest with the Federal Energy Regulatory Commission, 888 First Street, N.E., Washington, D.C. 20426, in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 C.F.R. §§ 385.211 and 385.214). All such motions or protests must be filed in accordance with § 35.9 of the Commission's regulations. Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Any person wishing to become a party must file a motion to intervene. Copies of this filing are on file with the Commission and are available for public inspection in the Public Reference Room. This filing may also be viewed on the Internet at <http://www.ferc.fed.us/online/rims.htm> (call 202-208-2222 for assistance).