# ISO TARIFF APPENDIX L

**Rate Schedules** 

### **Grid Management Charge**

The Grid Management Charge (ISO Tariff Section 8.0) is a formula rate designed to recover the ISO's administrative and operating costs, including costs incurred in establishing the ISO before its operations began. The Grid Management Charge also includes costs associated with Scheduling, System Control and Dispatch Service as described in Order No. 888.

The Grid Management Charge will be \$0.7342/MWh, as of January 1, 1998.

The Grid Management Charge will be levied monthly in arrears on all Scheduling Coordinators by charging each Scheduling Coordinator the product of the Grid Management Charge rate as calculated under section 8.4 and the monthly metered demand in MWH of energy for that Scheduling Coordinator. The Grid Management Charge may change quarterly if the volume estimates, on an annual basis, change by 5% or more during the year. Each year the Grid Management Charge will be recalculated to reflect the following year's budget estimates and to adjust for any difference between the previous year's cost estimates and actual costs incurred.

The Grid Management Charge includes the following costs:

- Operating Costs
- Financing Costs, including Start-up and Development Costs
- Operating and Capital Reserve Costs

### adjusted annually for:

• any surplus revenues from the previous year in the Operating and Capital Reserve Account, as defined under Section 8.5, which incorporates the difference between projected and actual costs from the previous year.

### divided by:

• forecast annual volume in MWh

### adjusted quarterly for:

• a change in the volume estimate used to calculate the GMC, if, on an annual basis, the change is 5% or more.

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### The Grid Management Charge Formula is as follows:

Grid Management Charge = Operating Expenses (Accounts 560-574 and 901-935) + Debt Service (Account 128 subaccounts) + the greater of (Coverage Requirement x Senior Lien Debt Service (Account 128 subaccounts) or Cash Funded Capital Expenditures (Accounts 301-399) - Interest Earnings (Account 419) - Other Revenues (Account 456 subaccounts) - Reserve Transfer (Account 128 subaccounts)

Where,

**Coverage Requirement** = 25% or such other coverage requirement as included in financing documents for senior lien bonds as approved by the ISO Board of Governors

**Debt Service** = for any fiscal year, scheduled principal and interest payments, sinking fund payments related to balloon maturities, repayment of commercial paper notes, net payments required pursuant to a payment obligation, or payments due on any ISO notes.

**Senior Lien Debt Service** = all debt service that has a first lien on ISO Net Operating Revenues.

**Other Revenues** = connection fees associated with communications equipment and application fees.

**Reserve Transfer** = the projected reserve balance for December 31 of each year less the Reserve Requirement as adopted by the Board. If such amount is negative, the amount may be divided by two, so that the reserve is replenished within a two year period.

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# MCI COMMUNICATIONS CHARGE BREAKDOWN

Service Class		Percent By Class	Allocated Annual By Class	Allocated Annual By CE	Allocated Monthly By CE .
Dial-up	(160)	2.7%	\$ 210,786	\$1,317	\$ 109.78
ISDN	(480)	12.2%	936,826	1,952	162.64
Frame Relay	(880)	6.1	468,413	532	44.36
768 Leased	(192)	72.9	5,620,955	29,276	2,439.65
64 Leased	(288)	6.1	468,413	1,626	<u>135.54</u> .
	2000		\$7,705,393		

# **Scheduling, System Control and Dispatch Service**

The costs associated with the ISO's provision of Scheduling, System Control and Dispatch Service, the service that comprises the ISO's primary operating function, will be recovered through the ISO's Grid Management Charge (Schedule 1). There is no other charge for this service.

### **Voltage Support Service**

In order to maintain transmission voltages on the ISO Controlled Grid within acceptable limits, generation facilities under the control of the ISO are operated to produce (or absorb) reactive power. Thus, Voltage Support must be provided for each transaction on the ISO Controlled Grid. The amount of Voltage Support that must be supplied with respect to the Customer's transaction will be determined based on the reactive power support necessary to maintain transmission voltages within limits that are generally accepted in the region and consistently adhered to by the ISO.

Voltage Support consists of services provided by Generating Units or other equipment such as shunt capacitors, static var compensators, or synchronous condensers that are required to maintain established grid voltage criteria. This service is required under normal or system emergency conditions.

The ISO will determine on an hourly basis for each day the quantity and location of Voltage Support required to maintain voltage levels and reactive margins within WSCC and NERC criteria using a power flow study based on the quantity and location of scheduled Demand. The ISO shall issue daily voltage schedules that are required to be maintained for ISO Controlled Grid reliability. (See ISO Tariff Section 2.5.3.4).

Voltage Support cannot be self-provided and must be purchased from the ISO (See ISO Tariff Section 2.5.20.3). The charges for such service will be based on the rates set forth below (See ISO Tariff Section 2.5.27.5).

### Rate for Voltage Support:

The user rate per unit of purchased Voltage Support will be calculated in accordance with the formula in ISO Tariff Section 2.5.28.5 as follows:

the ISO's payments for Voltage Support in the short-term market

plus

the ISO's payments for Voltage Support in connection applicable long-term contracts (*See* ISO Tariff Section 2.5.27.5)

#### divided by

the charging quantity of Voltage Support required for the Scheduling Coordinator in the settlement period equal to the total Demand scheduled by the Scheduling Coordinator for the Settlement Period in the Day Ahead Market.

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The amount charged to customers will be the rate calculated above multiplied by the number of units of Voltage Support purchased in each Settlement Period (ISO Tariff Section 2.5.29).

### **Regulation Service**

Regulation Service is necessary to provide for the continuous balancing of resources (generation and interchange) with load and for maintaining scheduled interconnection frequency at sixty cycles per second (60 Hz). Regulation is provided by Generating Units equipped and operating with AGC that will enable such units to respond to the ISO's direct digital control signals in an upward and downward direction to match, on a real time basis, Demand and resources consistent with established NERC and WSCC operating criteria. Regulation is used to control the power output of electric generators within a prescribed area in response to a change in system frequency, tieline loading, or the relation of these to each other so as to maintain the target system frequency and/or the established interchange with other areas within the predetermined limits.

The ISO will maintain sufficient Generating Units and System Resources immediately responsive to AGC in order to provide sufficient Regulation Service to the entire system to meet WSCC and NERC criteria. Customers can self-provide the whole, or a portion, of their Regulation Service requirements or can request that the ISO provide this service (*See* ISO Tariff Section 2.5.20.3).

#### Regulation Obligation:

Each Scheduling Coordinator's share of Regulation will be pro-rata based on the ratio between the Scheduling Coordinator's scheduled hourly Demand and the total Demand scheduled to be served in each hour. (ISO Tariff Section 2.5.20.1)

#### **Regulation Rates:**

The formulas for calculating the amount of and charges for Regulation Service are referenced in ISO Tariff Sections 2.5.27, 2.5.28. Pursuant to those sections, the ISO will pass through its actual costs for Regulation Service. User rates for Regulation will be charged to Scheduling Coordinators on a volumetric basis applied to all Demand not covered by a self-provision arrangement.

# Schedule 4 Page 2

The ISO will calculate the user rate for Regulation in each Zone for each Settlement Period as:

the Total Regulation Payments (for Day-Ahead) based on the formula in ISO Tariff Section 2.5.27.1

divided by:

charging quantity for Regulation for the Scheduling Coordinator in the Settlement Period based on the formula in ISO Tariff Section 2.5.28.

### **Spinning Reserve Service**

Spinning Reserve Service is needed to serve load immediately in the event of a system contingency and may be provided by generating units that are on-line and loaded at less than maximum output. Spinning Reserve Service is provided from the portion of unloaded synchronized generating capacity that is capable of being loaded in ten minutes and that is capable of running for at least two hours.

Customers can self-provide the whole, or a portion, of their Spinning Reserve Service requirements or can request the ISO to provide this service (*See* ISO Tariff Section 2.5.20.3).

### Spinning Reserve Obligation:

Each Scheduling Coordinator's share of Operating Reserve shall be equal to 5% of its scheduled Demand scheduled to be met by Generation from hydroelectric resources plus 7% of its scheduled Demand scheduled to be met by Generation from non-hydroelectric resources, plus 100% of any Interruptible Imports that it schedules. Where the requirement for the ISO to maintain contingency Operating Reserves sufficient to meet the single largest contingency results in a requirement for greater quantity of Operating Reserve than that which would result from applying the 5% and 7% criteria, each Scheduling Coordinator's share of the excess shall be calculated pro rata in the same proportion as the Scheduling Coordinator's share of contingency Operating Reserve (exclusive of such excess) calculated on the 5% and 7% basis bears to the total amount of contingency Operating Reserve (exclusive of such excess) calculated on the same basis. (ISO Tariff Section 2.5.20.1)

### Spinning Reserve Rates:

The formulas for calculating the amount of and charges for Spinning Reserve Service are referenced in ISO Tariff Sections 2.5.27, 2.5.28. Pursuant to these sections, the ISO will pass through its actual costs for Spinning Reserve Service. Rates for Spinning Reserve Service will be charged to End-Use Customers on a volumetric basis applied to all scheduled, metered, or load-profiled consumption not covered by a self-provision arrangement.

# Schedule 5 Page 2

The ISO will calculate the user rate for Spinning Reserve in each Zone for each Settlement Period as:

the Total Spinning Reserve payments (for Day-Ahead) based on the formula in ISO Tariff Section 2.5.27.2

divided by:

the charging quantity for Spinning Reserve for the Scheduling Coordinator in the Settlement Period based on the formula in ISO Tariff Section 2.5.28.

### **Non-Spinning Reserve Service**

Non-Spinning Reserve is needed to serve load in the event of a system contingency; however, it is not available immediately to serve load but rather within a short period of time. Non-Spinning Reserve is provided from that portion of off-line generating capacity that is capable of being synchronized and ramping to a specified load in ten minutes (or load that is capable of being interrupted in ten minutes) and that is capable of running (or being interrupted) for at least two hours.

Customers can self-provide the whole, or a portion, of their Non-Spinning Reserve Service requirements or can request the ISO to provide this service (*See* ISO Tariff Section 2.5.20.3).

### Non-Spinning Reserve Obligation:

Each Scheduling Coordinator's share of Operating Reserve shall be equal to 5% of its scheduled Demand scheduled to be met by Generation from hydroelectric resources plus 7% of its scheduled Demand scheduled to be met by Generation from non-hydroelectric resources, plus 100% of any Interruptible Imports that it schedules. Where the requirement for the ISO to maintain contingency Operating Reserves sufficient to meet the single largest contingency results in a requirement for greater quantity of Operating Reserve than that which would result from applying the 5% and 7% criteria, each Scheduling Coordinator's share of the excess shall be calculated pro rata in the same proportion as the Scheduling Coordinator's share of contingency Operating Reserve (exclusive of such excess) calculated on the 5% and 7% basis bears to the total amount of contingency Operating Reserve (exclusive of such excess) calculated on the same basis. (ISO Tariff Section 2.5.20.1)

### Non-Spinning Reserve Rates:

The formulas for calculating the amount of and charges for Non-Spinning Reserve Service are referenced in ISO Tariff Sections 2.5.27, 2.5.28. Pursuant to those sections, the ISO will pass through its actual costs for Non-Spinning Reserve Service.

Rates for Non-Spinning Reserve Service will be charged to Scheduling Coordinators on a volumetric basis applied to all Demand not covered by a self-provision arrangement.

# Schedule 6 Page2

The ISO will calculate the user rate for Spinning Reserve in each Zone for each Settlement Period as:

the Total Non-Spinning Reserve payments (for Day-Ahead) based on the formula in ISO Tariff Section 2.5.27.3

divided by:

the charging quantity for Non-Spinning Reserve for the Scheduling Coordinator in the Settlement Period based on the formula in ISO Tariff Section 2.5.28.

### **Replacement Reserves**

Replacement Reserve Service is provided from generating capacity that is dedicated to the ISO, capable of starting up if not already operating, being synchronized to the ISO Controlled Grid, and ramping to a specified Load point within a sixty (60) minute period, the output of which can be continuously maintained for a two hour period. Replacement Reserve Service can also be provided from Curtailable Demand that is capable of being curtailed within sixty (60) minutes and that can remain curtailed for two hours.

Customers can self provide the whole, or a portion, of their Replacement Reserve requirements or can request the ISO to provide this service (*See* ISO Tariff Section 2.5.20.3).

### Replacement Reserve Obligation:

In accordance with ISO Tariff Section 2.5.3.3, the ISO will have discretion to determine the quantity of Replacement Reserves it requires in each year.

#### Replacement Reserve Rates:

The formulas for calculating the amount of and charges for Replacement Reserve Service are referenced in ISO Tariff Sections 2.5.27, 2.5.28. Pursuant to those sections, the ISO will pass through its actual costs for Replacement Reserve Service.

Rates for Replacement Reserve Service will be charged to Scheduling Coordinators on a volumetric basis applied to all Demand not covered by a self-provision arrangement.

# Schedule 7 Page 2

The ISO will calculate the user rate for Replacement Reserve for each Settlement Period as provided in ISO Tariff Section 2.5.28.4.

the Replacement Reserve Payments made in both the Day-Ahead and Hour Ahead markets for each settlement period, as calculated in ISO Tariff Section 2.5.27.4.

#### minus:

Replacement Reserve dispatch costs (defined as the MW weighted average rate of Replacement Reserve scheduled in both the Day Ahead and Hour Ahead Markets for Replacement Reserve minus the Energy dispatched from Replacement Reserve in each Zone from resources of the Scheduling Coordinator for the Settlement Period. (ISO tariff Section 2.5.28.4).

### divided by:

the quantity charged in Zone X for Replacement Reserve for each Scheduling Coordinator in the Settlement Period based on the formula in ISO Tariff Section 2.5.27.4.

# multiplied by:

the quantity charged in Zone X for Replacement Reserve for each Scheduling Coordinator in the Settlement Period

### **Black Start Capability**

Black Start is the procedure by which a Generating Unit self-starts without an external source of electricity thereby restoring power to the ISO Controlled Grid following system or local area blackouts.

Generating Units providing Black Start Capability must meet the requirements in ISO Tariff Appendix D.

Black Start Capability cannot be self-provided and must be purchased from the ISO. Rates for Black Start Capability will be charged to Scheduling Coordinators on a volumetric basis applied to all Demand not covered by a self-provision arrangement.

### Black Start Capability Obligation:

In accordance with ISO Tariff Section 2.5.3.5, the ISO will determine the amount and location of Black Start Generation it requires through contingency studies that are used as the basis of the ISO's emergency plans. The ISO will also specify the load restoration performance goals.

### Black Start Capability Rates:

The user rate per unit of purchased Black Start Capability for each Settlement Period will be calculated in accordance with ISO Tariff Section 2.5.28.6 as follows:

The sum of Black Start payments for Generating Units applicable to each Settlement Period, as calculated in ISO Tariff Section 2.5.27.6.

### divided by:

the charging quantity for Black Start for each Scheduling Coordinator equal to the total Demand scheduled by the Scheduling Coordinator for each Settlement Period in the Day Ahead Market.

# **Imbalance Energy Charges**

Imbalance Energy is the real time change in Generation output or Demand (from dispatchable Generating Units or Loads) which is instructed by the ISO to ensure that the reliability of the ISO Controlled Grid is maintained in accordance with Applicable Reliability Criteria. Sources of Imbalance Energy include Regulation, Spinning and Nonspinning Reserves, Replacement Reserve, and Energy from other Generating Units that are able to respond to the ISO's request for more or less Energy.

Rates for Imbalance Energy will be calculated in accordance with the formula in ISO Tariff Section 11.2.4.1:

Under ISO Tariff Section 11.2.4.1, the ISO will calculate, account for and settle Imbalance Energy in the Real Time Market for each Settlement Period for the relevant Zone or Scheduling Point within the ISO Controlled Grid. Imbalance Energy attributable to each Scheduling Coordinator in each Settlement Period in the relevant Zone will be deemed sold or purchased by the ISO. Payments for Imbalance Energy will be settled by debiting or crediting the Scheduling Coordinator with an amount for each Settlement Period calculated in accordance with ISO Tariff Section 11.2.4.1

#### **Replacement Reserve Charge**

In accordance with ISO Tariff Sections 2.5.28.4 and 11.2.4.1, an additional charge will apply to Scheduling Coordinators whose Generators fall below their Schedules, or whose Loads exceed their Schedules, such that the net Schedule is unbalanced. The additional charge, calculated in accordance with ISO Tariff Section 11.2.4.1, allocates the cost of dispatched Replacement Reserve to Scheduling Coordinators in proportion to their contribution to the need for the dispatch of that Replacement Reserve, as measured by the magnitude of the Energy insufficiency served through the Imbalance Energy market.

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### **Unaccounted for Energy**

Unaccounted for Energy (UFE) (ISO Tariff Section 11.2.4.3) is the difference in Energy, for each UDC Service Area and Settlement Period, between the net Energy delivered into the UDC Service Area, adjusted for UDC Service Area Transmission Losses (calculated in accordance with ISO Tariff Section 7.4.3), and the total metered Demand within the UDC Service Area adjusted for distribution losses using Distribution System loss factors approved by the Local Regulatory Authority.

UFE is calculated in two components: 1) UFE attributable to meter error, theft and distribution loss deviations, which is applied to all Scheduling Coordinator Demand; and 2) UFE attributable to Load profiling error, which will be allocated pro rata to Scheduling Coordinators' profiled metered Demand.

UFE will be included in the net settlements for Imbalance Energy in ISO Tariff Section 11.2.4.1.

#### Rates for UFE:

In accordance with ISO Tariff Sections 11.2.4.4 and 11.2.4.5 and 11.2.4.6, until such time as the ISO has installed the necessary software, the ISO will allocate UFE in each UDC Service Area to Scheduling Coordinators based on each Scheduling Coordinator's metered Demand in the UDC Service Area. The ISO will provide 30 days notice published on the WEnet before UFE is calculated in accordance with 11.2.4.5 and 11.2.4.6.

### **Transmission Losses Imbalance Charges**

Scheduling Coordinators may provide for Transmission Losses in two ways:

- 1) Scheduling Coordinators may self-provide Transmission Losses by submitting Schedules (which may include Energy provided by other Scheduling Coordinators) that include the appropriate quantity of Transmission Losses as determined under ISO Tariff Section 7.4; or
- 2) Scheduling Coordinators may settle obligations to provide for Transmission Losses with the ISO at the Hourly Ex Post Price for Imbalance Energy, as determined in ISO Tariff Section 2.5.23.

Transmission Losses for each hour will be calculated in accordance with ISO Tariff Sections 7.4.2 and 7.4.3.

### **Access Charges**

The Access Charge is a charge paid by all Market Participants withdrawing Energy from the ISO Controlled Grid as provided in ISO Tariff Section 7.1 and TO Tariff Section 5. The Access Charge will recover that portion of the Participating TO's Transmission Revenue Requirement not recovered through Revenue Credits.

The Access Charge will be calculated as follows:

Amt. Payable = PTO's NonSelf-Sufficient x Dependent PTO's NonSelf-Sufficient + Applicable Transmission Contract demand rate Contract Demand as determined under the ISO Tariff Account Adjustment Charge

The PTO's Non-Self-Sufficient Contract Demand Rate is calculated in Appendix II of the TO Tariffs.

### **Usage Charges**

The Usage Charge is used by the ISO to charge Scheduling Coordinators for the use of Congested Inter-Zonal Interfaces during a given hour. The Usage Charge is further described in ISO Tariff Section 7.3.1.

The amount payable by Scheduling Coordinators is determined in accordance with ISO Tariff Section 7.3.1.4.1. Usage Charges will be calculated as follows:

The Usage Charge is determined using Inter-Zonal Congestion Management described in Section 7.2.5 and is calculated as the hourly marginal value of an incremental kW of Inter-Zonal Interface capacity (in cents per kWh).

The marginal value of an Inter-Zonal Interface is calculated from the Adjustment Bids of the Scheduling Coordinators and the ISO's computer optimization algorithms, using the procedures described in ISO Tariff Section 7.2.

The price used to determine the Usage Charge will be the Day-Ahead price for those scheduling in the Day-Ahead market, or the Hour-Ahead price for those schedules submitted after the Day-Ahead Market closes.

Scheduling Coordinators whose Schedules require use of a Congested Inter-Zonal Interface and that have been accepted by the ISO will pay a Usage Charge for each hour they use the Inter-Zonal Interface.

The Amount payable =

the Usage Charge for the particular hour (developed from Section 7.3.1. through 7.3.1.6

multiplied by:

the Scheduling Coordinator's scheduled flows (in kW) and capacity, if any, reserved for Ancillary Services over the Inter-Zonal Interface for that hour.

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The Usage Charge will be used to compensate Scheduling Coordinators who, in effect, create transmission capacity through counter schedules on Congested Inter-Zonal Interfaces.

### **Default Usage Charge**

The Default Usage Charge (ISO Tariff Section 7.3.1.3) will only be used by the ISO if inadequate or unusable Adjustment Bids are submitted and the ISO's Congestion Management is not able to schedule Inter-Zonal interface capacity on an economic basis.

The Default Usage Charge will be calculated as follows:

The ISO will assume a decremental bid of zero and an incremental bid equal to the highest Hourly Ex Post Price for the Zones on either side of the Inter-Zonal Interface for the relevant Settlement Period.

### The Usage Charge Formula is as follows:

### E2. Fundamental Formulae

### **E2.1 ISO Usage Charges on Scheduling Coordinators**

Each Scheduling Coordinator j whose Final Schedule includes the transfer of Generation scheduled in one Zone<sub>x</sub> (the Export Zone) to the Zone on the other side of a Congested Inter-Zonal Interface (the Import Zone) where the path between the two Zones is Congested in the direction of the Scheduling Coordinator's scheduled transfer, shall (save to the extent that the transfer involves the use of transmission capacity represented by Existing Rights and Non-Converted Rights) pay Usage Charges in Trading Interval t calculated in accordance with the following formulae:

Schedule 11 Page 3

In the Day-Ahead Market:

$$UC_{jtd} = \sum_{x} NetZoneImp_{jtxd} * \mathbf{1}_{dxt}$$

In the Hour-Ahead Market:

$$UC_{jth} = \sum_{x} NetZoneImp_{jtxh} * \mathbf{1}_{hxt}$$

### **E2.2** Rebates for Day-Ahead Schedules

Each Scheduling Coordinator j whose Final Schedule includes the transfer of Generation scheduled in one Zone<sub>x</sub> (the Export Zone) to the Zone on the other side of a Congested Inter-Zonal Interface (the Import Zone) where the path between the two Zones is Congested in the opposite direction to the Scheduling Coordinator's scheduled transfer, shall (save to the extent that the transfer involves the use of transmission capacity represented by Existing Rights and Non-Converted Rights) receive a Usage Charge rebate from the ISO calculated in accordance with the formula described in section E2.1.

# E2.3 ISO Payments to Transmission Owners of Net Usage Charge Revenues

The ISO will pay to the Transmission Revenue Balancing Account of the Participating TO n (being the owner, or part-owner, of a Congested Inter-Zonal Interface) its share of the total Usage Charge revenue for that billing cycle collected by the ISO calculated as follows:

$$PayUCTO_y = \sum_{y} m_y * K_{yn}$$

# E3. Meaning of terms of formulae

### E3.1 $UC_{itd}$ (\$)

The Usage Charge payable by or to Scheduling Coordinator j for the relevant Trading Interval t in the Day-Ahead Market.

### E3.2 $UC_{ith}$ - \$

The Usage Charge payable by or to Scheduling Coordinator j for the Trading Interval t in the Hour-Ahead Market.

### E3.3 NetZoneImp<sub>itxd</sub> (MWh)

The net Zonal import, including any capacity reserved for Ancillary Services, scheduled by Scheduling Coordinator j in Zone x for the relevant Trading Interval t in the Day-Ahead Market. Net Zonal import equals Scheduled Demand minus Scheduled Generation plus transfers.

### Schedule 11 Page 4

### E3.4 NetZoneImp<sub>itxh</sub> (MWh)

The net Zonal import, including any capacity reserved for Ancillary Services, scheduled by the Scheduling Coordinator j in Zone x for the relevant Trading Interval t in the Hour-Ahead Market. Net Zonal import equals Scheduled Demand minus Scheduled Generation plus transfers.

# E3.5 $\lambda_{dxt}$ (\$/MWh)

The reference Zonal marginal price for Zone x (the Export Zone) for the relevant Trading Interval t in the Day-Ahead Market, as determined by the ISO's Congestion Management computer optimization algorithm.

# **E3.6** $\lambda_{hxt}$ (\$/MWh)

The reference Zonal marginal price for Zone x (the Export Zone) for the relevant Trading Interval t in the Hour-Ahead Market, as determined by the ISO's Congestion Management computer optimization algorithm.

# E3.7 PayUCTO<sub>n</sub> (\$)

The payment of Usage Charge revenues for all Trading Intervals in the relevant billing cycle from the ISO to Participating TO n.

# E3.8 $\mu_y$ (\$/MW)

The Day-Ahead Congestion price for (shadow price) at the Zonal interface at Zonal Interface y. This factor is calculated by the scheduling module.

### $\mathbf{E3.9} \qquad \mathbf{K_{vn}} \quad (\mathbf{MW})$

The percentage ownership by Participating TO n of the Congested Inter-Zonal interface y multiplied by the interface loading.

# **Grid Operations Charge for Intra-Zonal Congestion**

Section 7.3.2 of the ISO Tariff provides that Scheduling Coordinators whose schedules are adjusted by the ISO, in accordance with Intra-Zonal Congestion Management, will be paid or charged based on the Adjustment Bids they have provided to the ISO. The ISO will recover any associated net redispatch cost in each Zone through the Grid Operations Charge. The Grid Operations Charge will be paid to the ISO on a monthly basis by all Scheduling Coordinators in proportion to their metered Demand within, and metered exports from, the zone.

The Grid Operations Charge will be calculated as provided in ISO Tariff Sections 7.2.6.1.4 and 7.2.6.1.5, where a Scheduling Coordinator's Schedule must be increased or decreased by the ISO, respectively:

If a Scheduling Coordinator's Schedule must be increased by the ISO for Intra-Zonal Congestion Management purposes, the ISO will pay the Scheduling Coordinator the price specified in the Adjustment Bid for the resource (i.e., the as-bid price for increased Generation multiplied by the incremental output). *See* ISO Tariff Section 7.2.6.1.4.

If a Scheduling Coordinator's Schedule must be decreased by the ISO for Intra-Zonal Congestion Management purposes, the Scheduling Coordinator will pay the ISO the price specified in the Adjustment Bid for the resource (i.e., the as-bid price for decremental Generation multiplied by the decreased output). *See* ISO Tariff Section 7.2.6.1.5.

### **Wheeling Access Charges**

As provided in ISO Tariff Section 7.1.4, Scheduling Coordinators or other entities scheduling a Wheeling Out or Wheeling Through transaction shall pay to the ISO the applicable Wheeling Access Charge times the total hourly schedules of Wheeling (in KWh) for each month at each Scheduling Point associated with the transaction.

The Wheeling Access Charge for transmission service will be the TO-specific Access Charge at the point at which the energy is scheduled to exit the ISO Controlled Grid and will be calculated in accordance with Section 7.1.4.1 and Appendix II of the TO Tariffs:

Wheeling Access Charge for each Participating TO =

the Participating TO's Base Transmission Revenue Requirement

divided by:

the annual KWh deliveries by the Participating TO to end-use customers connected to its transmission and distribution facilities

plus:

the Participating TO's TRBA adjustment calculated in Section 5.0 of the TO Tariff.

Wheeling Access Charges shall not apply for Wheeling under a bundled non-economy Energy coordination agreement of a Participating TO executed prior to July 9, 1996. (ISO Tariff Section 7.1.4.1). Existing Rights and Non-Converted Rights exercised under an Existing Contract in accordance with ISO Tariff Sections 2.4.3 and 2.4.4 are excepted from the definition of Wheeling Out and Wheeling Through transactions. (ISO Appendix A – Master Definitions Supplement).

# **Charge for Failure to Conform to Dispatch Instructions**

Under ISO Tariff Section 2.5.22.11, if a Generating Unit, Load or System Resource fails to respond to a dispatch instruction in accordance with its terms, the Generating Unit, Load or System Resource a) will be declared and labeled as non-conforming to the ISO's instructions; b) cannot set the Five Minute Ex Post Price and the Scheduling Coordinator for the Participating Generator, owner or operator of the Load or System Resource concerned will pay to the ISO the difference between the Generating Unit's, Load's or System Resource's instructed and actual output (or Demand) at the Hourly Ex Post Price.

### **Reliability Must-Run Charge**

In accordance with ISO Tariff Section 5.2.7, the ISO will recover costs it incurs under each Reliability Must-Run Contract through payments under each Reliability Must Run Contract from the utility that is a party to the TCA in whose service area the Reliability Must Run Generating Unit is located, less the revenues received from 1) the Scheduling Coordinator(s) whose Energy schedules are reduced (in the manner set forth in Section 7.2.6) to accommodate the output of the Must-Run Generation, and 2) the ISO's sale of Ancillary Services purchased under the Reliability Must-Run Contract.