ATTACHMENT F

MISCELLANEOUS TARIFF REVISIONS

2.5.20.1 Ancillary Service Obligations. Each Scheduling Coordinator shall be assigned a share of the total Regulation, Spinning Reserve, Non-Spinning and Replacement Reserve requirements by the ISO. The share assigned to each Scheduling Coordinator is described in Section 2.5.20 and in Section 2.5.28 as that Scheduling Coordinator's obligation. Each Scheduling Coordinator's Regulation obligation in each Zone shall be pro rata based upon the same proportion as the Scheduling Coordinator's metered hourly Demand bears to the total metered Demand served in each hour in that Zone. Each Scheduling Coordinator's Operating Reserve obligation in each Zone shall be pro rata based upon the same proportion as the ratio of the product of its percentage obligation based on Schedules and the sum of its metered Demand and firm exports bears to the total of such products for all Scheduling Coordinators in the Zone. The Scheduling Coordinator's percentage obligation based on metered output shall be calculated as the sum of 5% of its ~~scheduled~~ Demand (except the Demand covered by firm purchases from outside the ISO Control Area) met by Generation from hydroelectric resources plus 7% of its scheduled Demand (except the Demand covered by firm purchases from outside the ISO Control Area) scheduled to be met by Generation from non-hydroelectric resources in that Zone, plus 100% of any Interruptible Imports and on-demand obligations which it schedules. Each Scheduling Coordinator's Replacement Reserve obligation in each Zone is calculated as described in Section 2.5.28.4.

2.5.28.4 Replacement Reserve. The user rate per unit of purchased Replacement Reserve for each Settlement Period for each Zone shall be as follows:

$$ReplRate_{\mathrm{xt}} = \frac{Re\ plPayTotalDA_{xt} + Re\ plPayTotalHA_{xt} - Re\ plBuyBackTotal_{xt}}{ReplObligTotal_{\mathrm{xt}}}$$

where

ReplPayTotalDA$_{xt}$ = Total Replacement Reserve payments for the Settlement Period t in the Day-Ahead Market for the Zone x.

ReplPayTotalHA$_{xt}$ = Total Replacement Reserve payments for the Settlement Period t in the Hour-Ahead Market for the Zone x.

ReplBuyBackTotal = payments from Scheduling Coordinators buying back Ancillary Service capacity sold in the Day-Ahead Market or replacing capacity that was self-provided in the Day-Ahead Market.

ReplObligTotal$_{xt}$ = the total ISO Replacement Reserve requirement procured in the Day-Ahead Market and Hour-Ahead Market for the Settlement Period t for the Zone x less that which has been self provided by Scheduling Coordinators.

For each Settlement Period, each Scheduling Coordinator shall pay to the ISO a sum calculated as follows for each Zone:

ReplRate$_{xt}$~~*DA*~~**ReplOblig*

where

ReplOblig = DevReplOblig + RemRepl - SelfProv

DevReplOblig is the Scheduling Coordinator's obligation for deviation Replacement Reserve in the Zone in the Settlement Period and *RemRepl* is the Scheduling Coordinator's obligation for remaining Replacement Reserve.Deviation Replacement Reserve for Scheduling Coordinator j in Zone x for Settlement Period t is calculated as follows:

If $ReplObligTotal_{xt} > DevReplOblig_{xt}$ then:

$$DevReplOblig_{xjt} = \left[Max\left(0, \sum_i GenDev_{ixt}\right) - Min\left(0, \sum_i LoadDev_{ixt}\right)\right]$$

If $ReplObligTotal_{xt} < DevReplOblig_{xt}$ then:

$$DevReplOblig_{xjt} = \frac{ReplObligTotal_{xt}}{DevReplOblig_{xt}} * \left[Max\left(0, \sum_i GenDev_{ixt}\right) - Min\left(0, \sum_i LoadDev_{ixt}\right)\right]$$

where,

$GenDev_i$ = The deviation between scheduled and actual Energy generation for Generator i represented by Scheduling Coordinator j in Zone x during Settlement Period t as referenced in Section 11.2.4.1.

$LoadDev_i$ = The deviation between scheduled and actual Load consumption for resource i represented by Scheduling Coordinator j in Zone x during Settlement Period t as referenced in Section 11.2.4.1.

DevReplOblig is total deviation Replacement Reserve in Zone x for Settlement Period t.

Remaining Replacement Reserve for Scheduling Coordinator j in Zone x for Settlement Period t is calculated as follows:

$$RemRepl_{xjt} = \frac{MeteredDemand_{xt}}{TotalMeteredDemand_{xt}} * TotalRemReplxt$$

where:

MeteredDemand is the Scheduling Coordinator's total metered Demand excluding exports in Zone x for Settlement Period t.

TotalMeteredDemand is total metered Demand excluding exports in Zone x for Settlement Period t.

$TotalRemRepl_{xt} = Max[0,ReplObligTotal_{xt} - DevReplOblig_{xt}]$

29 Temporary Changes to Payments for Regulation

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29.2.2 Amendments to the Settlement and Billing Protocol

C ~~2.2.4~~2.2.5 Real-Time Market

(a) The ISO will charge the costs of purchasing Instructed Imbalance Energy output from Dispatched Spinning Reserve, Non-Spinning Reserve, Replacement Reserve and Supplemental Energy Resources through the Instructed Imbalance Energy settlement process.

(b) The ISO will charge the costs of purchasing Uninstructed Imbalance Energy (including incremental and decremental Energy from Generating Units providing Regulation) through the Uninstructed Imbalance Energy settlement process.

(c) The ISO will charge the costs of Regulation Energy Payment Adjustments as calculated in accordance with Section 2.5.27.1 of the ISO Tariff, in accordance with SABP 3.1.1(d).

ASRP 5.5.1 Obligation for Spinning and Non-Spinning Reserve

Except for the requirement for Non-Spinning Reserve referred to in paragraph ASRP 5.5.2, each Scheduling Coordinator's Operating Reserve obligation in each Zone shall be pro rata based upon the same proportion as the product of its percentage obligation based on metered output and the sum of its metered Demand and firm exports bears to the total of such products for all Scheduling Coordinators in the Zone. The Scheduling Coordinator's percentage obligation based on metered output shall be calculated as the sum of 5% of its ~~scheduled~~ Demand (except the Demand covered by firm purchases from outside the ISO Control Area) met by Generation from hydroelectric resources plus 7% of its Demand (except the Demand covered by firm purchases from outside the ISO Control Area) met by Generation from non-hydroelectric resources in that Zone.