ATTACHMENT B

I. LBMP CALCULATION METHOD

The Locational Based Marginal Prices ("LBMPs") for Generators and Loads will be based on the system marginal costs produced by either the Security Constrained Dispatch ("SCD") program, or during intervals when certain conditions exist at Proxy Generator Buses, the Balancing Market Evaluation ("BME") program, for Real-Time Market prices, or the Security Constrained Unit Commitment ("SCUC") program for Day-Ahead Market prices. The marginal cost of a Fixed Block Unit may only set LBMP when some portion of its Energy is necessary, given the security requirements of the NYS Transmission System, to meet Load, displace higher cost Energy, or satisfy Operating Reserves requirements.

THE USE OF FIXED BLOCK UNITS IN SETTING REAL-TIME LBMPS

The marginal cost of a Fixed Block Unit that forces more economic units to be backed down will not set Real-Time LBMP unless it is needed to meet Load, displace higher price Energy or meet Reserve requirements. The marginal cost of a Fixed Block Unit will not set Real-Time LBMP at any other time including those times when it is scheduled solely to meet its minimum runtime requirements or because of other inflexibilities in its operation.

LBMPs in the Real-Time Market are calculated using the following four passes in the Security Constrained Dispatch:

Pass 1 consists of a least cost commitment decision ideal dispatch that blocks on all minimum runtime constrained fixed block gas turbine units ("GTs") at their maximum operating limits. All other GTs are assumed to be dispatchable on a flexible basis (they can be dispatched anywhere between zero (0) MW and their maximum Capacity). This step will determine if it is necessary to turn a GT on or off to meet load at least cost.

Issued by: William J. Museler, President Effective: October 30, 2001
Issued on: May 7September 25, 2001
Filed to comply with order of the Federal Energy Regulatory Commission, Docket Nos. ER00-3591-000, *et al.*, issued April 26, 2001, 95 FERC ¶ 61, 121 (2001).July 16, 2001, 96 FERC ¶ 61,080 (2001).

Pass 2 consists of a least cost dispatch that determines final unit schedules, blocking on ~~all GTs selected in the first pass~~, at maximum Capacity ~~and any~~ all online GTs and all GTs ~~not~~ selected in the first pass ~~that have not yet been turned off by the operator~~.

Pass 3 consists of a least cost dispatch that treats all GTs as flexible regardless of their minimum runtime status.

Pass 4 consists of a least cost dispatch that blocks on at maximum capacity any minimum run-time constrained GTs dispatched in Pass 2 that were ~~GTs~~ identified as uneconomic in Pass 3 ~~puts uneconomic minimum runtime constrained GTs (units that cannot yet be turned off because of their minimum runtime) on at their maximum operating limits~~ and calculates prices with all other on-line or dispatchable GTs treated as flexible.

THE USE OF FIXED BLOCK UNITS IN SETTING DAY-AHEAD LBMPS

The marginal cost of a Fixed Block Unit that forces more economic units to be backed down will not set Day-Ahead LBMP unless it is needed, given the security requirements of the NYS Transmission System, to meet Load, displace higher price Energy or meet Reserve requirements.

LBMPs in the Day-Ahead Market are calculated using six passes. The first three passes are commitment and dispatch passes, Passes 4 and Pass 5 are dispatch only and Pass 6 is a modification of the Pass 5 dispatch but is not a dispatch in and of itself.

Pass 1 consists of a least cost commitment and ideal dispatch to meet bid load at least cost that assumes that all fixed block gas turbine units ("GTs") are dispatchable on a flexible basis (they can be dispatched anywhere between zero (0) MW and their maximum Capacity).

It consists of several steps. Step 1A is a complete security constrained unit commitment to meet bid load at least cost. At the end of this step, committed generation is modeled at dispatch levels to meet bid load at least cost with GTs treated as dispatchable on a flexible basis. LBMPs, calculated from this dispatch are used in Step 1B to determine whether In-City

mitigation mechanisms will be triggered. If In-City mitigation is triggered, SCUC replaces the offer prices of the affected In-City units with pre-determined reference prices and repeats a complete security constrained unit commitment to meet bid load at least cost. GTs are treated as dispatchable on a flexible basis and LBMPs are re-calculated for this dispatch. Following Step 1A, or 1B if In-City mitigation is triggered, SCUC tests for AMP activation.

If AMP is activated, Step 1C applies the AMP impact test to determine if the AMP will be triggered by mitigating offer prices that exceed the conduct threshold to their respective reference prices. These mitigated offer prices are then used to commit generation and dispatch energy to meet bid load at least cost. This step is another iteration of the security constrained unit commitment process. At the end of Step 1C the committed generation is again modeled as dispatched to meet bid load at least cost with fixed block units treated as dispatchable. LBMPs are determined for each location. The LBMPs determined at the end of Step 1C are compared to the LBMPs determined at the end of Step 1B to determine the hours and zones in which the impact test is met.

In Step 1D, generation offer prices that exceed the conduct threshold are mitigated for those hours and zones in which the impact test was met in Step 1C and the mitigated offer prices are used to commit generation and dispatch energy to meet bid load at least cost. This step is also a complete iteration of the security constrained unit commitment process. All units committed in this pass are handed to the dispatch passes (Passes 4 through 6) as required commitments.

Pass 2 consists of a least cost commitment and dispatch to forecast load that assumes all GTs are dispatchable on a flexible basis (they can be dispatched anywhere between zero (0) MW and their maximum Capacity).

Pass 3 consists of a least cost commitment and dispatch to forecast load that assumes all GTs are dispatchable on a flexible basis (they can be dispatched anywhere between zero (0) MW and their maximum Capacity). GTs dispatched in this Pass are not blocked on in Pass 6. Non-GT units committed in this step are blocked on at minimum load in Passes 4 through 6. The difference between Pass 2 and Pass 3 is the inclusion of the In-City reserve and second

contingency local reliability criteria,

Pass 4 consists of a least cost dispatch to forecast load that is not used for schedules or prices but provides a dispatch of the GTs committed in Pass 1 and the non-GTs committed in Pass 3 (the "day-ahead committed resources") against expected forecast loads.

Pass 5 consists of a least cost dispatch of day-ahead committed resources to bid load that calculates prices with all GTs treated as flexible.

Pass 6 adjusts the schedules determined by the Pass 5 dispatch. To the extent that there are GTs committed in Pass 1 that are not fully scheduled in Pass 5, or that there are GTs partially dispatched in Pass 5, the final schedules of those GTs are increased to the level of the units' upper operating limits. The schedules of dispatchable units and imports are backed down, and export schedules increased, to offset the additional MW scheduled on these GTs.

System marginal costs will be utilized in an *ex post* computation to produce LBMP bus prices using the following equations.

The LBMP at bus 1 can be written as:

$$\gamma_i = \lambda^R + \gamma^L{}_i + \gamma^C{}_i$$

Where:

γ_i	=	LBMP at bus i in $/MWh
λ^R	=	the system marginal price at the Reference Bus
γ^L_i	=	Marginal Losses Component of the LBMP at bus i which is the marginal cost of losses at bus i relative to the Reference Bus
γ^C_i	=	Congestion Component of the LBMP at bus i which is the marginal cost of Congestion at bus i relative to the Reference Bus

The Marginal Losses Component of the LBMP at any bus i within the NYCA is calculated using the equation:

$$\gamma_i^L = (DF_i - 1)\,\lambda^R$$

18, 2000.