

## **Proposed New Definitions to be added to the Tariff:**

### **Constraint Relaxation Logic:**

“Constraint Relaxation Logic” shall mean the logic applied in the market clearing software where the transmission limit is increased to prevent the Transmission Constraint Penalty Factor from setting the Marginal Value of a transmission constraint.

### **Marginal Value:**

“Marginal Value” shall mean the incremental change in system dispatch costs, measured as a \$/MW value incurred by providing one additional MW of relief for the transmission constraint.

### **Transmission Constraint Penalty Factor:**

“Transmission Constraint Penalty Factor” shall mean the maximum cost willing to be incurred to control the flows across a constrained transmission facility. It is also the maximum limit on the Marginal Value.

Operating Agreement, Schedule 1, section 5.6 (and parallel provisions of Tariff, Attachment K – Appendix, section 5.6):

### **(NEW) 5.6 Transmission Constraint Penalty Factors.**

#### **5.6.1 Application of Transmission Constraint Penalty Factors in the Day-Ahead and Real-Time Energy Markets.**

In the Day-ahead Energy Market, the Transmission Constraint Penalty Factors shall be used to ensure a feasible market clearing solution but not used to determine the Marginal Value of a transmission constraint. In the Real-time Energy Market, the Office of Interconnection shall use Transmission Constraint Penalty Factors to determine the Marginal Value for a transmission constraint when that transmission constraint cannot be managed within the binding transmission limit in a dispatch interval. The Marginal Value of the transmission constraint shall be used in the determination of the Congestion Price component of Locational Marginal Price as referenced in Tariff, Attachment K – Appendix, sections 2.5 through 2.6, and the parallel provisions of Operating Agreement, Schedule 1, sections 2.5 through 2.6. The Transmission Constraint Penalty Factor may set the Marginal Value of the transmission constraint during any dispatch interval in the Real-time Energy Market depending on the following:

- (a) If the market clearing software that clears the Real-time Energy Market cannot produce a solution that manages the flow on a constraint within the binding limit in a dispatch interval at a cost less than or equal to the Transmission Constraint Penalty Factor, the Transmission Constraint Penalty Factor shall set the Marginal Value of the transmission constraint. In such instances, to manage the flow over the constraint, the Office of the Interconnection may adjust the Transmission Constraint Penalty Factor as set forth in

section Operating Agreement, Schedule 1, section 5.6.3(b) and the parallel provisions of Tariff, Attachment K – Appendix, section 5.6.3(b).

(b) If the Real-time Energy Market constraints are subject to Market-to-Market congestion management protocols with an adjacent Regional Transmission Organization and the market clearing software cannot produce a solution that manages the flow on a constraint within the binding limit in a dispatch interval, the Office of the Interconnection may coordinate with such Regional Transmission Organization to either allow the Transmission Constraint Penalty Factor to set the Marginal Value of the transmission constraint or to apply the Constraint Relaxation Logic upon mutual agreement in accordance with applicable Joint Operating Agreements.

### **5.6.2 Default Transmission Constraint Penalty Factor Values.**

Transmission constraints located within the metered boundaries of the PJM Region, including market-to-market coordinated constraints, regardless of voltage level, are defaulted to a \$30,000/MWh Transmission Constraint Penalty Factor in the Day-ahead Energy Market. Constraints located within the metered boundaries of the PJM Region, excluding market-to-market coordinated constraints, regardless of voltage level, are defaulted to a \$2,000/MWh Transmission Constraint Penalty Factor in the Real-time Energy Market. Market-to-Market coordinated constraints in the Real-time Energy Market, located within the metered boundaries of the PJM Region, will use a default Transmission Constraint Penalty Factor of \$1,000/MWh or a value agreed upon by PJM and the relevant Regional Transmission Organization in accordance with applicable Joint Operating Agreements.

### **5.6.3 Modifications to Transmission Constraint Penalty Factor Values.**

(a) As referenced in the PJM Manual, the Office of Interconnection may modify the default Transmission Constraint Penalty Factor values used in the Day-ahead Energy Market for individual transmission constraints to ensure the market clearing solution is feasible. The Office of the Interconnection shall post as soon as practicable on its website any changes to the default Transmission Constraint Penalty Factor used in the Day-ahead Energy Market for monitored transmission facilities, as defined in the PJM Manuals.

(b) As referenced in the PJM Manual, the Office of Interconnection may modify the default Transmission Constraint Penalty Factor values used in the Real-time Energy Market for individual transmission constraints to: (1) reflect changes to the operating practices which are mutually agreed upon with the neighboring RTO for managing such constraints for market-to-market coordinated constraints or (2) reflect persistent system operational needs and the cost of the resources available to effectively relieve congestion on the constraint. The Office of the Interconnection shall post as soon as practicable on its

website any changes to the default Transmission Constraint Penalty Factor used in the Real-time Energy Market.