

July 27, 2007

Mr. Raj Addepalli  
Chief of Resource Policy and Planning  
Office of Electricity and Environment  
State of New York Department of Public Service  
Three Empire State Plaza  
Albany, NY 12223-1350

Subject: Case 06-M-1017, Order Requiring Development of Utility-Specific Guidelines for Electric Commodity Supply Portfolios and Instituting a Phase II to Address Longer-Term Issues, issued April 19, 2007 (the “Order”)

Dear Addepalli:

Thank you for your letter of July 3, 2007 initiating the collaborative process ordered by the Commission for the purpose of identifying standards for measuring price volatility, goals for limiting it, and mechanisms for achieving these goals.<sup>1</sup> Based on your letter and our subsequent discussions with Staff, Niagara Mohawk Power Corporation d/b/a National Grid USA (“National Grid”) is pleased to submit the information and proposals set out below. We look forward to working with Staff and other interested parties in ensuring that National Grid’s hedging mechanisms effectively address the Commission’s policies.

Your letter requested that we provide National Grid’s “current portfolio management principles, including volatility measurement and management practices to limit it, as well as data illustrating the historical performance of the utility’s portfolio using those volatility metrics.” We respond to your requests below. For clarity of analysis, we first discuss what we believe to be appropriate metrics for measuring price volatility. We then present information regarding National Grid’s past performance against these metrics. Finally we discuss our current hedging approach, as well as modifications to it that we propose to undertake to support the Commission’s objectives.

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<sup>1</sup> Case 06-M-1017, Policies, Practices and Procedures for Utility Commodity Supply Service to Residential and Small Commercial and Industrial Customers, Order Requiring Development of Utility-Specific Guidelines for Electric Commodity Supply Portfolios and Instituting a Phase II to Address Longer-Term Issues (issued April 19, 2007) (Guidelines and Phase II Order) (“April 19 Order”).

### Price Volatility Measurement

National Grid proposes to track and compare price volatility for market prices vs. the commodity rates charged by National Grid to its Standard Rate Service Customers using a rolling twelve month price coefficient of variation metric (the “Volatility Metric”). The inputs to this Volatility Metric are (1) a rolling twelve-month standard deviation of the applicable customer rate (SC-1 or SC-2D) divided by the mean value of that same rate over the same period (this measures the variability of the customer rate) and (2) a rolling twelve-month standard deviation of underlying (unhedged) market prices for the same 12 months divided by the mean value of these market prices for the same period (this measures the variability of the market prices). The Volatility Metric is determined by comparing (1) to (2). That is, this metric evaluates the variability (magnitude of price variation) that customers experience in their rates compared to the variability in the underlying, unhedged market prices. If desired, this comparison can be expressed as a fraction or a percentage figure.

National Grid proposes that these measurements be performed separately for its Market Price, SC-1 Rate, and SC-2D Rate (each as defined below) on a weighted average basis representing a single value across all NYISO sub-zones in which National Grid serves load<sup>2</sup>. In proposing this measurement approach, National Grid is using the following definitions:

- Market Rate = National Grid’s Rule 46 rate as of the 28<sup>th</sup> of each month, which includes the 30 day rolling average of NYISO Day Ahead market energy prices, capacity costs, ancillary service costs and losses.
- SC-1 Rate = commodity rate charged by National Grid to its customers in the SC-1 rate class as of the 28<sup>th</sup> of each month which also includes the applicable Delivery Charge Adjustment (“DCA”), Commodity Adjustment Charge (“CAC”) and Competitive Transition Charge (“CTC”) rates/factors.
- SC-2D Rate = commodity rate charged by National Grid to its customers in the SC-2D rate class as of the 28<sup>th</sup> of each month which also includes the applicable DCA, CAC and CTC rates/factors.

### Volatility Management Practices and Historical Performance of Portfolio

As background, it should be recalled that National Grid provides two types of electricity commodity service to retail customers in the Niagara Mohawk service territory:

- Market Rate Service (“MRS”). For the largest customers, commodity service is provided at market rates. MRS service is mandatory for all customers over 100 kW and can be chosen by customers under 100 kW (subject to a limit of 2150 MW). National Grid’s

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<sup>2</sup> Alternatives include calculating weighted average prices for the three geographic regions in which National Grid’s load is located (i.e., West, Central and East) as well as individual prices in each of the NYISO zones (Zone A, Zone B, Zone C, Zone D, Zone E and Zone F).

Merger Rate Plan provides for a gradual transition exposing remaining customers to market prices over time, starting with the largest remaining customers on Standard Rate Service and transitioning the smallest customers last.

- Standard Rate Service (“SRS”). Smaller customers receive commodity service through a combination of the former Niagara Mohawk hedged supply contracts (energy supply portfolio) and unhedged spot market purchases. The allocation of these supply contracts to SRS customers is defined in the Company's Merger Rate Plan. SRS customers receive the benefits of the Company’s hedged supply contracts through their delivery rates, whether they buy commodity from the Company or choose to buy the commodity from an ESCO. It is important to note that even though the Company’s supply contracts serve as hedges, they are not fixed cost, i.e., the costs of the portfolio vary with fluctuations in natural gas prices, unit availability, hydro generation, and other factors.

The elements within the portfolio are shown in Attachment C. In general, physical energy needs are currently met from a number of legacy power purchase contracts with various terms which are supplemented with NYISO purchases in the Day Ahead and Real Time markets. Natural gas and electric futures are used to hedge purchases and financial arrangements which have variable prices.

Based on the structure of its electric commodity service as provided in the Merger Rate Plan and its tariff, National Grid’s hedging strategies are currently designed to maintain reasonably priced commodity service for SRS customers while continuing to facilitate the development of efficient retail commodity markets. The Company’s current Merger Rate Plan does not extend hedging to the projected unhedged portion of SRS customer load.<sup>3</sup> There is no hedging policy for MRS customers because they are served entirely at spot market prices and can buy price-hedging services directly from the market.

National Grid does not prospectively hedge ancillary services for either MRS or SRS customers because a liquid market for ancillary services at hedged prices does not currently exist. Accordingly, Rule 46 of National Grid’s PSC 207 Electricity tariff provides for a pass-through of the NYISO costs for these services.

National Grid currently uses a one-tailed Value at Risk (“VaR”) measurement at a 95% confidence level to monitor the cost and volatility of SRS customers’ hedged commodity supplies (which exclude ancillary services, the NYPA Transmission Adjustment Charge (“NTAC”), and the portion of customers consumption tied to market prices). The VaR measurement quantifies the potential volatility of SRS customers’ hedged commodity supplies for both a six month and twelve month

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<sup>3</sup> Under the current rules applicable to it, National Grid does not prospectively hedge the portion of SRS customers’ consumption tied explicitly to market prices, i.e. the unhedged sales pursuant to Rule 29 of National Grid’s PSC 207 Electricity tariff. As the Company understands it, the rationale for retaining a portion of customers’ consumption (which varies from 10 to 100%, depending upon the class) that is purchased at spot market prices is to facilitate the development of efficient retail commodity markets, to help the company exit the commodity function for certain classes of customers, and to allow customers to determine for themselves the value of price hedging services, and then decide whether to purchase those services from competitive suppliers. Rule 29 provides 10-years (until December 31, 2011) of hedged percentage factors that illustrate the time-phased reductions in the percentage of sales for each customer class that would be served by hedged commodity supplies.

forward looking time period. These six month and twelve month VaR values are calculated monthly and compared to a reference value which is derived based upon the Commodity Adjustment Charge (“CAC”) target of an average of 4 mills/kWh for 6 months and an average of 4.5 mills/kWh for 12 months. The basis of the 3 mills/kWh and 5 mills/kWh is the threshold established in Rule 29.3 whereby variances outside the 4 mills/kWh and 4.5 mills/kWh result in deferrals.

Historical average values for the Market Rate and SC-1 Rate in the Central Zone along with their twelve month rolling average standard deviations for the period January 2002 – June 2007 as well as forecasted values for the period July 2007 – December 2009 are provided in Attachment A.

Historical average values for the Market Rate and SC-2D Rate in the Central Zone along with as their twelve month rolling average standard deviations for the period January 2002 – June 2007 as well as forecasted values for the period July 2007 – December 2008 are provided in Attachment B.

### Limiting Price Volatility

National Grid proposes that the collaborative process should produce agreement on (1) a target magnitude for the Volatility Metric under various market conditions, and (2) an authorized volatility management regime appropriately structured to achieve this target. As discussed above, the Volatility Metric measures how much less volatile customer rates are than unhedged market prices. The proposed approach would thus be keyed to ensuring that National Grid follows a volatility management regime determined by the collaborative process to be appropriately structured to shield customers from the price volatility imposed by the markets as measured by the Volatility Metric.

An important aspect of such an agreed volatility management regime should be an agreed-upon portfolio design that is calculated to produce customer rates whose volatility is reduced from market levels to an acceptable degree. In analyzing a portfolio design of this type, National Grid anticipates that market price volatility and customer commodity rates under various scenarios would be forecast using a Monte-Carlo type analysis that would yield a range of expected portfolio costs and volatility measurements to enable the parties to select the optimum portfolio structure. The collaborative process would also take into account the projected cost-effectiveness of measures proposed for achieving the desired levels of reduction in volatility, as well as other, potentially competing goals, such as fuel diversity, renewable resources, etc.

National Grid also proposes that, in addition to implementing programmatic portfolio actions to achieve the agreed-upon portfolio design, the approved volatility management regime would provide for National Grid to monitor customer rates and market prices and, based on the Volatility Metric and other factors, determine whether additional discretionary actions should be taken to control or limit volatility if and when such actions are deemed warranted and cost effective. The incorporation of these discretionary actions should reflect the Commission’s recognition that utilities must retain the flexibility in their volatility management practices to react to unusual or

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unforeseen circumstances, or to conditions that may increase or decrease the cost effectiveness of a particular hedging strategy.<sup>4</sup>

To implement the portfolio design portion of the price volatility management regime approved by the collaborative process, National Grid proposes to utilize a commodity portfolio that incorporates a diverse mix of resources with various time elements. This portfolio, in combination with National Grid's Rate Plan, will be designed to produce the target levels of volatility reduction in commodity rates to SRS Customers versus market prices.

Building from its existing portfolio, National Grid has proposed a portfolio strategy for consideration by the collaborative (see Attachment D). National Grid believes that this strategy can produce rates that are significantly less volatile than market prices.

National Grid has not yet completed an analysis to determine if this particular proposed portfolio strategy produces an "optimal" result. During the collaborative process, National Grid will develop and evaluate additional strategies and, along with the parties to the collaborative, select the best strategy for final presentation to the Commission.

#### Reporting of Aggregate Price Information

National Grid proposes that it provide, on a quarterly basis, the following price information:

- Market Price;
- SC-1 Rate;
- SC-2D Rate;
- Rolling twelve month coefficient of deviation of Market Price;
- Rolling twelve month coefficient of deviation of SC-1 Rate;
- Rolling twelve month coefficient of deviation of SC-2D Rate.

Each of these values will be provided to the level of detail as agreed upon by the parties.<sup>5</sup>

We look forward to working with Staff and other members of the collaborative in designing a volatility management regime that will support the Commission's policies.

Sincerely,

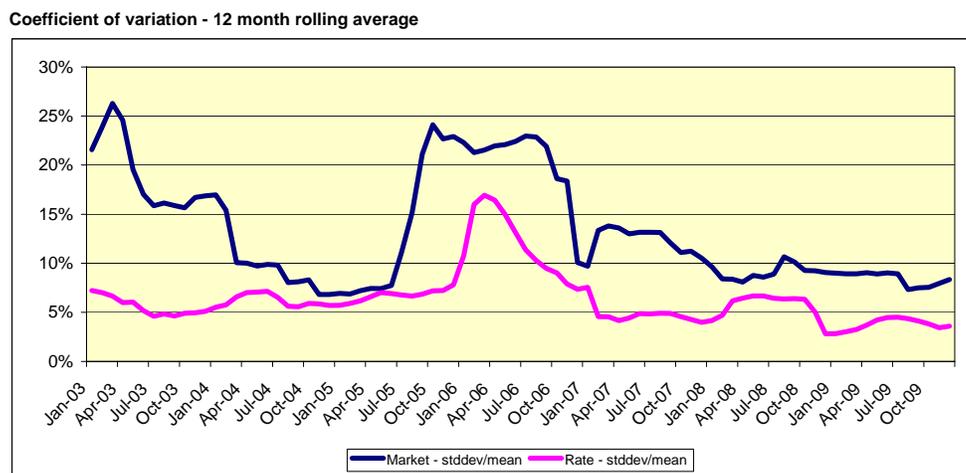
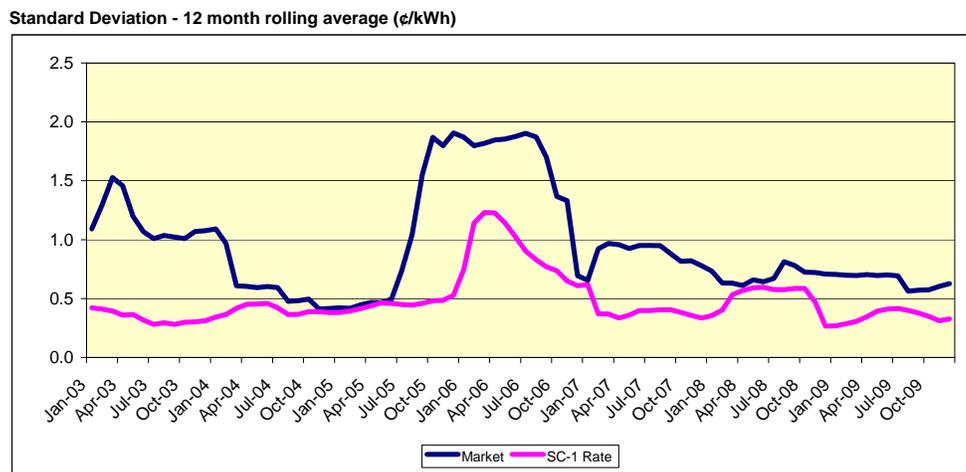
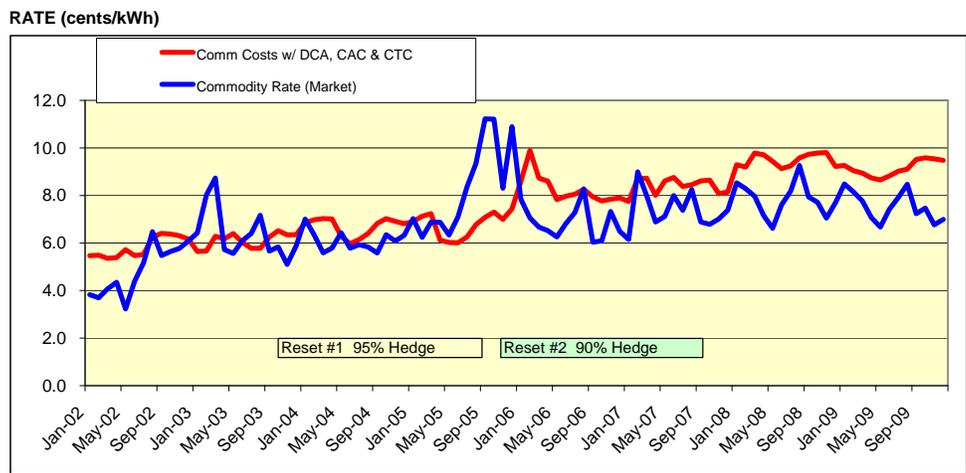
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<sup>4</sup> April 19, Order at pp. 20, 24.

<sup>5</sup> Such as (i) for each of the six NYISO zones in which National Grid serves load], (ii) on a weighted average basis in the geographic areas in which National Grid serves load (i.e. West, Central and East), or (iii) on a weighted average basis representing a single value across all NYISO zones in which National Grid serves load.

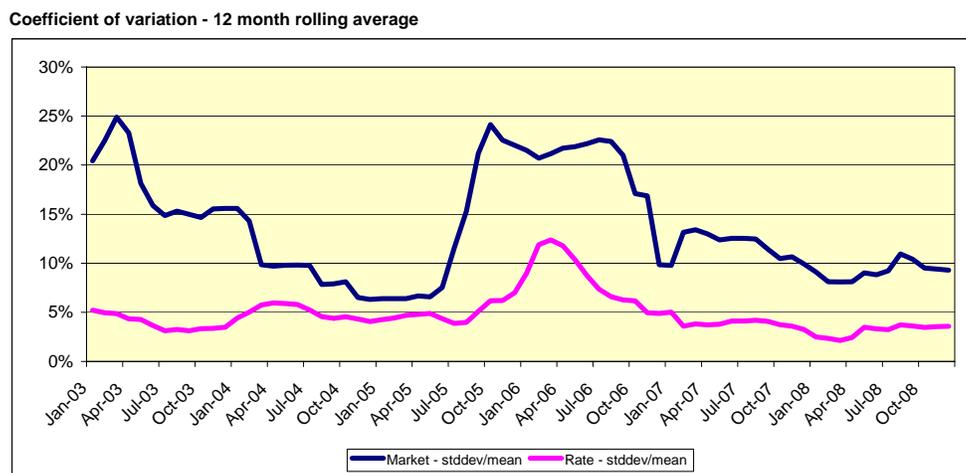
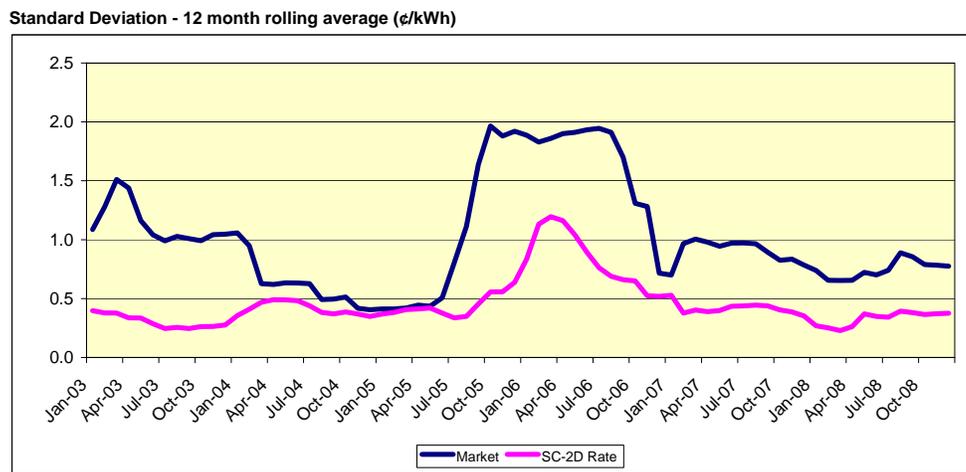
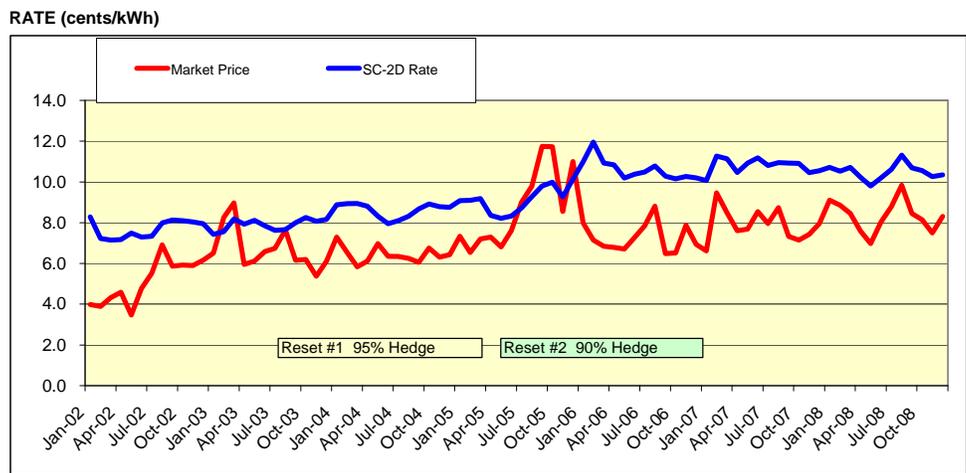
**ATTACHMENT A**

**Historical, Current and Projected Volatility Measures for SC-1 Rates**



**ATTACHMENT B**

**Historical, Current and Projected Volatility Measures for SC-2D Rates**



## ATTACHMENT C

### Current Portfolio Structure

National Grid's existing electric hedges include 1) physical price supply contracts with generators, 2) indexed swap agreements and 3) electric futures.

The physical supply contracts that serve as hedges are from a number of legacy power purchase contracts with various terms. These include the NYPA retail contracts, the Nine Mile Unit #1 and Unit #2 contracts and a subset of the IPP contracts. Market based contracts with IPP's, while providing physical supply, do not provide a hedge against price volatility. It is important to note that even though the Company's supply contracts serve as hedges, they are not fixed cost, i.e., the costs of the portfolio vary with fluctuations in natural gas prices, unit availability, hydro generation, and other factors.

The indexed swap contracts are structured such that the Company receives or makes payments based upon the differential between the contract price and the market price of electricity. The contract price is indexed primarily to natural gas prices and inflation. These financial contracts are used to hedge a portion of the day-ahead market purchases the Company makes to fulfill its load obligations. These contracts expire in June 2008.

Gas quantities embedded in the indexed swap contracts are explicitly known. To limit the volatility of the natural gas component of these contracts, National Grid purchases natural gas futures through NYMEX. A twelve month dollar cost averaging purchasing program was implemented in April 2002 to purchase the required natural gas futures. By purchasing NYMEX futures National Grid is hedging a majority of the price volatility in the swap contracts and passing through the hedge attributes to SRS customers through the Commodity Adjustment Clause (CAC).

To further hedge NYISO day-ahead market purchases, the Company purchases electric futures cleared through the NYMEX Clearport exchange. To help market participants better manage their market risk while mitigating counterparty risk, the NYMEX provides futures contracts for on-peak and off-peak electricity transactions established for the Locational Based Marginal Prices for the hourly day-ahead market for Zone A published by NYISO. These are purchased using a twelve month dollar cost averaging purchasing program. The table below provides a listing of the on-peak electric futures the Company has purchased as of July 20, 2007.

<u>Month</u>	<u>Quantity (MWh)</u>
July 2007	100,800
August 2007	128,800
September 2007	121,600
October 2007	36,800
November 2007	33,600
December 2007	32,000
January 2008	52,800
February 2008	50,400

## ATTACHMENT D

### Model Portfolio Structure

The following portfolio structure is based on National Grid's existing commodity portfolio and Rate Plan and represents a diverse portfolio of resources in terms of types of resources and term of arrangements. The structure applies only to the portion of National Grid's portfolio that is currently required to be hedged under the terms of the Rate Plan.

Portfolio Composition	Market Element
25 % via dollar cost averaging over a twelve month period	NYMEX electric futures, Financial swaps, NYMEX gas futures
25 % via one year fixed price contracts	Financial swaps, NYMEX electric futures
25 % via two year fixed price contracts	Financial swaps, Physical purchases
25 % via three year fixed price contracts	Financial swaps, Physical purchases

A programmatic schedule would be developed and agreed upon for when each element implement of the program would be implemented. Such a schedule would incorporate staggered procurements to ensure large portions of the portfolio did not expire simultaneously. In addition, all of one program element (such as the 25% from one year fixed price contracts) would not be purchased at the same time but rather purchased over two or more periods.