

NIAGARA MOHAWK POWER CORPORATION
A **National Grid** Company
300 Erie Boulevard West
Syracuse, New York 13202
July 18, 2003

Honorable Jaclyn A. Brilling, Secretary
State of New York
Public Service Commission
Office of the Secretary, 19th Floor
Three Empire State Plaza
Albany, NY 12223-1350

RE: Case No. 02-M-0515

Dear Secretary Brilling:

The attached tariff leaves, issued by Niagara Mohawk, are transmitted for filing in accordance with the requirements of the Public Service Commission, State of New York:

Seventh Revised Leaf No.	3
Third Revised Leaf No.	98
Third Revised Leaf No.	99
Fourth Revised Leaf No.	103
Sixth Revised Leaf No.	105
Fifth Revised Leaf No.	107
Tenth Revised Leaf No.	108
Fourth Revised Leaf No.	108.1
Fourth Revised Leaf No.	109
Sixth Revised Leaf No.	133
Fourth Revised Leaf No.	184.1
Third Revised Leaf No.	187.3
Seventh Revised Leaf No.	188
Twelfth Revised Leaf No.	190
Second Revised Leaf No.	197.6.3
Second Revised Leaf No.	198
Second Revised Leaf No.	199
Third Revised Leaf No.	200
Fifth Revised Leaf No.	201
Second Revised Leaf No.	202

To PSC No. 218 Gas

Effective: November 1, 2003

Purpose

The purpose of this filing is to comply with the Commission's April 24, 2003 Order in Case 02-M-0515. Ordering Paragraph 1 of the April 24th Order requires Niagara Mohawk to file tariff leaves instituting firm delivery service for non-residential Distributed Generation customers within 90 days after the issuance date of the Order. The tariff leaves filed herein constitute Niagara Mohawk's compliance with that requirement.

Non-Rate Impediments to Development of Distributed Generation Market

Ordering paragraph 2 of the April 24th Order requires gas utilities to “review their existing gas tariffs and identify any non-rate terms and conditions that may be barriers to the development of Distributed Generation and shall provide a letter signed by an officer of the corporation attesting to the fact that no non-rate impediments were found or file tariff revisions removing any impediments to DG.” Attachment 1 to this filing sets forth Niagara Mohawk’s response to this requirement. Niagara Mohawk does not know of any terms or conditions of its PSC 218 Gas Tariff which treat Distributed Generation customers differently from any other customers, such that they pose a barrier to Distributed Generation.

Load Profile Analyses

The April 24th Order states that baseload DG service rates should be set using an average class load factor of 70% with a minimum qualifying load factor of 50% where load factor is defined as annual usage divided by (peak day use x 365 days). The Order further directed filing of separate tariffs for customers with DG units less than five MW and for those customers with DG units equal to or greater than five MW. In order to comply with these guidelines, Niagara Mohawk first needed to develop information about the levels of anticipated gas consumption and capacity requirements such customers would place on the gas delivery system. We used the Company’s Distributed Generation (DG) model to develop gas related load profile information for customers that undertake both full bypass and baseload bypass DG installations.

The DG model was developed by Niagara Mohawk strategic planners in association with engineers and financial analysts at Research Triangle Institute (RTI) and Christensen Associates.¹ The model identifies customers served under SC3 and SC3A electric rates that are most likely to install on-site generation equipment assuming those customers install the optimal amount (size) of alternative technologies (natural gas reciprocating engines or micro turbines) for the three different applications (full bypass, base bypass, or peak-shaving). Full bypass means that the customer cuts the wires and would meet 100% of their needs with their own generation, base bypass means the customer runs onsite generation all the time but not enough to cover all their needs, and peak-shaving refers to running onsite generation to cover peak needs only at any time of the year. The model also provides monthly gas consumption information for these DG installations. The model utilizes various electric load duration curves for each customer, develops optimal unit size on-site generation installations, and includes allowance for use of waste heat (co-generation applications) for additional fuel savings. It includes outage rates, heat and efficiency rates of DG units, as well as other variables to calculate the amount of electricity that customers will purchase from the grid after the on-site generation is installed and to calculate how much natural gas is consumed to generate on-site.

Summary results of the load profile analyses are provided in Attachment 3. The analyses were performed on 581 representative electric SC 3 customers and 141 electric SC 3A customers assuming both natural gas fired reciprocating engines and micro turbines. These results provide valuable guidance for the development of our proposed rates for DG customers. The electric loads for most of these installations fall below 5 MW, the target tariff demarcation guideline in the Order indicating that there may be only a few gas customers with DG installations of 5 MW and greater. The average gas usage load factors for the 722 customers with Distributed Generation installations in the analyses vary significantly from 65% to over 100%, based upon their winter peak period gas demands. This information supports the minimum load factor criteria of 50% for eligibility for the DG tariff. It also shows that DG installation may well have gas load factors substantially in excess of the Order’s target class load factor of 70%. The results of the load profile analyses have implications for rate design.

Pricing Subgroups

The load profile analyses shows the annual gas consumption for these customers falls into three subgroups that are reasonably consistent with the definition of Niagara Mohawk’s existing gas delivery service classes, i.e., SC

¹ A detailed description of the DG Model was filed by the Company in PSC Case No. 01-E-1847 as Attachment 2 to the Reply Comments and is included here as Attachment 2.

7 and smaller, SC 5, and SC 8. This information can be used in conjunction with the Company's existing cost of service information as guidance for rate design. Currently, the SC 7 tariff applies to customers with annual consumption of 50,000 therms up to 250,000 therms; delivery-only customers with usage of less than 50,000 therms would take service under SC 2. The SC 5 tariff applies to customers with annual consumption of 250,000 therms to 1,000,000 therms, and the SC 8 tariff applies to customers with annual gas usage greater than 1,000,000 therms. Therefore, Niagara Mohawk has proposed pricing sub-groups for customers capable of consuming less than 250,000 therms, 250,000 therms to 1,000,000 therms and over 1,000,000 therms. Given that the new service classification is designed to be optional for these customers, defining the pricing sub-groups by annual consumption consistent with their otherwise applicable rate alternative helps to ensure that we will not increase cross-subsidies between rate classes or barriers to entry with the new tariff's rate design. In addition, Niagara Mohawk has analyzed the load profiles referred to above by MW subgroups and has concluded that the "unique" MW subgroups containing similar usage characteristics are reasonably consistent with the usage groups proposed by the Company.

Cost Basis

The proposed SC 12 rates for DG service are based on cost of service information from the Unbundling Embedded Cost of Service Study (ECOS) currently on file with the Commission in PSC Case 00-M-0504 for the forecasted rate year ending December 31, 2002. Even though there was no specific Distributed Generation rate classification for the ECOS, the unit cost information for non-residential customers can be used to develop cost based DG rates with reference to the load characteristics we found in the Load Profile Analyses and the guidelines provided in the Order. Relevant unit cost information from the ECOS is provided as Attachment 4. The relevant summary data on lines 29, 31, and 32 indicates that the unit cost for transmission and distribution system fixed delivery capacity is approximately \$0.80 per therm of maximum daily peak demand (winter) per month, regardless of the level of demand. The variable commodity related costs for delivery service are approximately \$0.0004 per therm for all delivery volumes. For a 70% load factor delivery service customer regardless of level of maximum peak demand, these delivery service related capacity and commodity related costs can be converted to a volumetric cost of \$0.0380 per therm as shown:

$$\frac{12 \text{ months} \times \$0.80/\text{therm of max demand/month}}{365 \text{ days} \times 0.70} + \$0.0004/\text{therm} = \$0.0380/\text{therm}$$

Customer related costs for metering service, laterals and interconnection, etc. will vary based upon the size of the customer. As discussed above, we have segregated potential DG customers into three subgroups using the same size criteria as our traditional gas delivery service customers. Customer costs for SC 2 Industrial and SC 7 are \$100 and \$112 per month, respectively. Customer costs for the SC 5 service class are approximately \$334 per month. Customer costs for the SC 8 service class are \$1,376 per month. Niagara Mohawk's ECOS measures cost responsibility based upon its system design criteria, i.e., peak design day demand and, therefore, does not recognize any seasonal cost differentiations.

Rate Design

The April 24th Order on pages 7 and 8 discusses three-part rate design with separate customer, demand, and energy charges. It states that a separate demand rate for large customers is required "because the characteristics and operating usage of baseload DG units can vary significantly enough to warrant differentiation into separate sub-classes of a baseload DG service option." Niagara Mohawk's proposed SC 12 tariff for non-residential baseload DG installations, regardless of electric load, incorporates a three-part rate with the demand charges set at the full unit cost of delivery service capacity of \$0.80 per therm of maximum peak period daily demand. SC 12 also includes a delivery service commodity rate of \$0.0004 per therm. Monthly customer charges are provided for three different subgroups based on annual consumption consistent with ECOS results and the existing customer standard service classifications. The proposed rate design structure is most appropriate for prospective baseload DG for the following reasons:

1. Separate customer, demand, and commodity rates provide for more accurate cost recovery.

2. Three-part rates set at pure cost of service send better price signals to customers regarding the cost consequences of their usage characteristics.
3. Niagara Mohawk's load profile analyses indicate that baseload DG customers may have load factors significantly higher than the 70% class average load factor criteria established for the DG service class in the PSC Order.
4. A rate design that uses a pure volumetric price for all usage under-recovers the cost of providing service for low load factor customers and over-collects the cost of service from higher load factor customers and creates serious cross subsidy issues for all customers that have load factors that are different from the class average load factor used to develop the pure volumetric rate.
5. A rate design that incorporates a demand charge that recovers less than the full capacity related cost of service and collects the remaining fixed capacity costs in a volumetric rate also under-recovers costs from low load factor customers and over-collects costs from high load factor customers and also creates serious cross subsidy issues for customers with load factors either higher or lower than the load factor assumption used to develop the adjusted volumetric rate.
6. Rates that recover capacity related costs through volumetric charges create barriers to entry for baseload DG installations.
7. NM proposes to install automatic meter reading equipment on all DG installations for more accurate data recovery, as well as cost recovery related to peak demand requirements as is more fully discussed below.

Attachment 5 illustrates the cross subsidy issue where pure cost based rates are modified to incorporate either partial capacity cost recovery or full capacity cost recovery in a volumetric charge. Column (a) defines the load factor characteristic of the customer based on winter peak demand and annual consumption. Baseload DG customers that have higher gas demands in the summer to serve electric loads or processing requirements will have load factors at or above 100%. The target load factor for the rate design is 70% as provided in the Order, and the minimum load factor is 50% as also provided in the Order. Column (b) is the resulting pure cost based volumetric rate based on the range of load factors in Column (a) where the demand charge is set at the full capacity cost of \$0.80 per therm of maximum daily winter demand, and the variable delivery rate is set at cost at \$0.0004 per therm. Column (c) is the resulting average rate per therm for customers with the various load factors under a rate structure where approximately two-thirds of the capacity related costs (\$0.60) are recovered in the demand rate, and the remaining capacity costs are recovered in a volumetric rate (\$0.0098/therm) set such that the 70% load factor pays an average unit cost of \$0.0380. Column (d) calculates the cross subsidies such a modified rate creates compared to the pure cost base rate in Column (b) for customers with higher than 70% load factor and lower than 70% load factor. Columns (e) and (f) illustrate the results when the demand charge is set at \$0.50 per therm of maximum daily winter peak demand. Columns (g) and (h) show the results for the pure volumetric rate set, assuming class average load factor of 70%, i.e. \$0.0380/therm.

As the ratios in columns (d), (f) and (h) of Attachment 5 demonstrate, as more capacity costs are collected in a volumetric rate, even if the rates for the 70% load factor customers are set equal to the cost of service, the high load factor usage customer pays a higher premium above pure cost of service and subsidizes the lower than average load factor customers. A pure volumetric rate of \$0.0380 provides the most extreme case of a high load factor customer paying more than cost of service. Under such a rate, the 90% load factor customer (not unusual for a DG installation that includes cogeneration) could end up paying 28% more than the cost of service. This is a barrier to entry. The three-part, cost based rate proposed for SC 12 provides a fair rate design for gas customers with DG installation.

Niagara Mohawk's proposed SC 12 rates do not include any seasonal rate variation because a) the proposed three-part rates set at the unit cost of service values allow for full cost recovery of winter peak design day related capacity costs, therefore, eliminating the need for a seasonal variation, and b) the ECOS does not include seasonal cost information that could be used to set a seasonal rate.

Requirement for Approved Remote Meters

Niagara Mohawk proposes that all customers taking service under Service Classification No. 12 be required to have installed an Approved Remote Meter as set forth in Rule 13.5 of the Company's Tariff. This requirement is consistent with the existing tariff's requirement that all Daily Balancing customers be required to have an Approved

Remote Meter. Customers electing service under SC 12 and choosing delivery-only service will be placed in Daily Balancing. Given that all SC 12 customers have the potential of being placed in Daily Balancing, Approved Remote Meters will be required for all SC 12 customers. The only SC 12 customers not in Daily Balancing would be customers initially requesting commodity service who subsequently migrate to an alternate supplier, as explained below.

Niagara Mohawk further will collect the load data which is obtained from the Approved Remote Meters in order to fully understand the cost imposed by these customers on the Company's system. That load data will be used to develop a cost based final rate design to be proposed at the end of the three year rate cap required by the Order. Niagara Mohawk's installed cost billed to customers under Rule 13.5 of its tariff is currently \$900. The only incremental charge the customer would incur is the cost of the phone line. Niagara Mohawk does not believe that this one time charge can possibly constitute a barrier to the development of the Distributed Generation market and also treats these customers consistently with all other customers.

Requirement for Sales Service & Balancing

The Commission's April 24th Order requires utilities to provide commodity as well as delivery service. Further, the Order requires that customers choosing to buy their gas from the utility will be subject to the same gas cost as other utility customers. As discussed at the technical conference held on May 28th in this proceeding, a discussion took place concerning the Commission's existing regulations set forth in 16NYCRR 720-6.5(h) which allows utilities to set gas supply rates based on load characteristics. Consistent with Niagara Mohawk's existing tariff provision set forth in Rule 17.3.7, Niagara Mohawk currently adjusts the Average Demand Cost of Gas by factors reflecting the ratio of the system load factor to the class load factor. Niagara Mohawk has filed Leaf 93 to update the ratio to those currently being used and to set a ratio for the new Service Classification No. 12 class. The ratio has been initially set at 0.40, reflecting the division of Niagara Mohawk's system load factor of 27.8% by the design load factor required by the Order of 70% for the Distributed Generation class.

Niagara Mohawk's proposed Service Classification No. 12 allows Distributed Generation customers the option of purchasing their gas supply from the Company. Niagara Mohawk has provided for this service in the "Character of Service" section of Service Classification No. 12. However, consistent with the Commission's vision set forth in its Policy Statement issued on November 3, 1998 in Case 97-G-1380, Niagara Mohawk reserves the right to reject an allocation for commodity service where the provision of such service would require the purchase of incremental interstate pipeline capacity. The Commission's Policy Statement required LDC's to develop a strategy to hold new capacity contracts to a minimum.

As stated above, customers electing to participate in Service Classification No. 12 delivery only service will be placed in Daily Balancing. Customers participating in Daily Balancing have no right to return to sales customer status in the future. In addition, Niagara Mohawk's existing tariff indicates in Rule 3.2.2 that "customers purchasing non-Niagara gas supplies, other than residential and human needs customers described above or SC 8 standby sales service customers electing a D-1 demand, will not retain the right to return to Niagara Mohawk as the supplier of last resort." New SC 12 customers initially electing commodity service who later choose to migrate to an alternative supplier, will be placed in the Company's Monthly Balancing service program. Again, this treatment is consistent with the Company's existing tariff provisions.

Lost Revenue Monitoring

Page 12 of the Commission's April 24th Order provides for the deferral of any "net lost revenues (that are not offset by any gains these new tariffs produce)" for later recovery. Niagara Mohawk interprets this provision to allow this deferral for existing Distributed Generation customers taking standard service who then elect to take service under the Company's proposed new Service Classification 12. The net lost revenues for each customer to be deferred would be the difference between delivery service revenues under the standard rate versus delivery service revenues under SC 12. Niagara Mohawk requests clarification on its interpretation of this provision of the April 24th Order.

System Reinforcements

Niagara Mohawk will apply the existing provisions of Rule 10 related to system reinforcements to SC 12, consistent with Page 17 of the Commission's April 24th Order. Specifically, Rule 10.3.9, applicable to customers with applications greater than 25,700 Dth per year, will be applied to the new service classification. This rule requires main extension and system reinforcements be justified by adjusted gas revenue within a two year period. In the event that the main extension or system reinforcement is not justified, the customer will pay a contribution for the cost of the facilities not covered by the adjusted gas revenues.

Electric & Gas System Reliability

Consistent with Page 14 of the Commission's April 24th Order, Niagara Mohawk reserves its right to Petition for a cap on Distributed Generation projects on its system, in the event that this market results in a negative impact on either gas or electric system reliability.

Three Year Rate Freeze

Page 3 of the Commission's April 24th Order sets the DG rates filed herein as a cap for a three year period. Niagara Mohawk has utilized its Embedded Cost of Service Study filed in Case 00-M-0504 as a basis for setting rates for this class. This cost of service study is based on a forecasted income statement for the year 2002. Niagara Mohawk's delivery service rates have remained unchanged for most customers since December of 1996. Additionally, Niagara Mohawk's existing gas delivery rates are subject to a rate freeze only through December 2004. Niagara Mohawk would like to clarify that, in the event that Niagara Mohawk were awarded a revenue requirement increase during the three year DG rate cap, that the SC 12 delivery service rates would be modified accordingly at that time.

Workpapers

The attachments referred to in the body of this filing letter will be sent directly to the Commission Staff by overnight mail.

Advertising

Newspaper publication of the proposed tariff changes will be made in accordance with 16NYCRR 720-8.1 on August 6, 13, 20, and 27, 2003.

Please address any questions regarding this filing directly to the undersigned at (315) 428-5692 or John Powers at (315) 428-5613. Please advise the undersigned of any action taken in regards to this filing.

Sincerely,

Marcia G. Collier
Manager, Gas Pricing

MGC/jsc (S:Tariff/218Tariff/Letters/Lett262)