

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

New York Independent System Operator, Inc.

Docket No. ER11-4338-000

**MOTION FOR LEAVE TO ANSWER AND ANSWER OF
THE NEW YORK INDEPENDENT SYSTEM OPERATOR, INC.**

Pursuant to Rules 212 and 213 of the Commission’s Rules of Practice and Procedure,¹ the New York Independent System Operator, Inc. (“NYISO”) hereby files this Motion for Leave to Answer and submits this Answer in response to the various motions to intervene and protests filed in this proceeding on September 9, 2011 (“Protests”).² The protesting parties contend that the NYISO’s August 19, 2011 compliance filing (“Compliance Filing”) did not meet the requirements of Order 745.³

I. Motion for Leave to Submit an Answer

Pursuant to Rule 213, an answer to a protest may be made only if allowed by the Commission.⁴ The Commission has found good cause to permit answers in various circumstances, including where a protestor has provided an inaccurate interpretation of the

¹ 18 CFR §§385.212, 385.213.

² Motions and protests were filed by the following parties: Occidental Chemical Corporation, the New York Association of Public Power, the New York Transmission Owners, and by Comverge, Inc., Demand Response Partners, EnergyConnect by Johnson Controls, Inc., Energy Curtailment Specialists, Inc., Energy Spectrum, Inc., EnerNOC, Inc., Wal-Mart Stores, Inc., and Viridity Energy, Inc. collectively as “Demand Response Supporters.” Additional submissions styled as comments challenging the NYISO’s approach to compensating “behind the meter generation” (“BTMG”) were filed by certain trade groups as Joint Commenters and by Energy Spectrum, Inc. and Marathon Engine Systems. The Alliance for Clean Energy New York filed a letter in support of the Demand Response Supporters’ protest.

³ *Demand Response Compensation in Organized Wholesale Energy Markets*, Order No. 745, FERC Stats. & Regs. 31, 322 (2011) (hereafter, “Order 745” or “the Order”).

⁴ 18 CFR §385.213.

contents of a filing,⁵ where the answer would assure a complete record in the proceeding,⁶ or provide information helpful to the disposition of an issue,⁷ or permit the scope of the issues to be narrowed or clarified.⁸ The NYISO's proposed answer fulfills these purposes, as it clarifies the scope of this proceeding, points out inaccuracies in the Protests, and provides information that will assist the Commission in reaching an informed decision.

II. Answer to Protests

As the NYISO understands Order 745, the Commission's principal objective is to facilitate the integration of demand response into the wholesale electricity markets. The Order accomplishes this goal by mandating compensation at the Locational Marginal Price ("LMP") for demand response resources when they are dispatched, and by requiring that system operators dispatch those resources when they are cost-effective. The Order also requires Independent System Operators ("ISOs") and Regional Transmission Operators ("RTOs") to make sure that they have the appropriate measurement and verification tools to track these resources' performance.⁹

The NYISO integrated demand response resources into its markets from the early days of its operations, including payment at LMP, measurement and verification processes, and a penalty structure intended to enforce the program rules. Because the NYISO's program already includes most of the elements envisioned by Order 745, the NYISO's task in developing the Compliance

⁵ See, e.g., *Alliance Cos., et al.*, 91 FERC ¶ 61,152 at 61,577-78 (2000).

⁶ See, e.g., *Pacific Interstate Transmission Co.*, 85 FERC ¶ 61,378, at 62,443 (1998), reh'g denied, 89 FERC ¶61,246 (1999).

⁷ See, e.g., *New York Independent System Operator, Inc.*, 135 FERC ¶ 61,264, at 61,264 (2011); *CNG Transmission Corp.*, 89 FERC ¶ 61,100 at 61,287 n.11 (1999).

⁸ See, e.g., *Tennessee Gas Pipeline Company*, 86 FERC ¶ 61,290, at 62,032 (1999).

⁹ Capitalized terms not defined herein have the meanings specified in Section 1 of the NYISO Open Access Transmission Tariff and Section 2 of the NYISO Market Services Tariff.

Filing was relatively circumscribed. The NYISO focused on its adaptation of the Commission's cost-effectiveness test to the New York markets and identifying the aspects of the existing program that might be impacted by increased demand response participation. The NYISO's compliance filing accomplishes these objectives and thus satisfies the requirements of Order 745.

To assist the Commission in its consideration of the issues raised in the Protests, the NYISO respectfully submits the following:

A. THE COMMISSION SHOULD REJECT PROTESTS THAT RAISE ISSUES OUTSIDE THE SCOPE OF ORDER 745.

Many of the Protests seek Commission action on aspects of the NYISO's Day Ahead Demand Response Program ("DADRP") that were not the subject of Order 745. The Commission should reject these Protests because they raise issues outside the scope of the Commission's directives, and because any redesign of the program rules not required by the Order should be pursued through the NYISO's existing stakeholder processes.

Demand Response Supporters and others assert that the NYISO should allow Behind-the-Meter-Generation ("BTMG") to participate as Demand Side Resources in the DADRP.¹⁰ These protestors ignore the fact that the program has excluded all local generation, with the Commission's approval, since June 2003, and that nothing in Order 745 requires the NYISO to change the rules defining the types of resources that are eligible to participate.¹¹

Similarly, Demand Response Supporters claim that the NYISO's filing is deficient because it includes a cap on in-day adjustments to the customer baseline calculation and

¹⁰ Comments and Protest of Demand Response Supporters ("DR Protest") at 11; Comments of Joint Commenters at 2.

¹¹ See New York Independent System Operator, Inc., Order Accepting Tariff as Modified, Docket No. ER03-810-000 (June 30, 2003).

penalties for under-performance.¹² Demand Response Supporters also argue that the filing should have included a mechanism to compensate Demand Side Resources for their over-performance.¹³ Both the cap on in-day adjustments and the penalty have been part of the NYISO's administration of the demand response program for several years. The DADRP formula for calculating a demand response customer's baseline already includes an in-day adjustment factor corresponding to NYISO's proposal; the NYISO's filing simply carries forward this existing element of the program.¹⁴ The NYISO also carried forward the existing penalty provisions in its tariff, and nothing in Order 745 requires the NYISO to review or modify these rules. The program does not, and has not, included compensation for over-performance, an issue that lies well outside the scope of the Commission's aim of establishing a cost-effectiveness threshold for demand response participation.

Demand Response Supporters also assert that the NYISO's compliance filing eliminates the NYISO's ability to consider alternative baseline measurement methodologies.¹⁵ The NYISO currently considers alternative baseline proposals using statistical sampling to accommodate aggregations of small Demand Side Resources that do not have interval meters. Demand Response Supporters' request that alternatives should be made available goes beyond the scope of the task the Commission set out in the Order. The NYISO reviewed its measurement and verification protocols ("M&V") and determined that some adjustments were necessary in light of the probable impacts of the implementation of the Net Benefits Test. Nothing in the Order

¹² DR Protest at 8 and 15-16.

¹³ Id. at 16.

¹⁴ NYISO Day-Ahead Demand Response Program Manual at § 6 (2003), available at www.nyiso.com.

¹⁵ DR Protest at 10.

requires the NYISO to revisit every aspect of its approach to measuring suppliers' baselines, or to offer more than one methodology.

The NYISO respectfully submits that the protestors could take up these issues – outside the scope of Order 745 – in the stakeholder process. The existing tariff has already benefited from the NYISO's collaborative governance structure, and this same collaborative process provides the appropriate venue for all stakeholders to participate in the development of changes to the demand response program. The Commission should avoid imposing rule changes here that are not closely linked to the goals of the Order and that do not have the benefit of Market Participants' views and input.

B. THE COMMISSION SHOULD NOT SET A DEADLINE FOR NEW YORK'S REAL TIME DEMAND RESPONSE PROGRAM

Demand Response Supporters urge the Commission to fix a "date certain" for the implementation of participation in NYISO's real-time energy market for demand response resources.¹⁶ Again, this request is outside the scope of this proceeding. The NYISO is aware of its obligation to develop a program for real-time demand response in its energy market, and has reported regularly to the Commission and to Market Participants on its progress.¹⁷ At the same time, in requiring a study of the impacts of the Net Benefits Test, Order 745 itself recognizes the difficulty that the NYISO and other ISO/RTOs face in attempting to integrate the proposed

¹⁶ DR Protest at 3.

¹⁷ NYISO Semi Annual Report on Demand Side Management Programs, submitted in Docket No. ER01-3001 (June 3, 2011). The NYISO has discussed the status of the real-time project with Market Participants in the course of developing its Order 745 compliance filing, and has also raised it in the budgeting process, where the NYISO has stated "The focus of this project in 2012 is development of the market rules and identification of software changes required to permit demand response entities to participate in the NYISO's real-time energy market. The scope of this effort will be determined in the 4th quarter of 2011." NYISO Budget Priorities Working Group presentations dated 6/23/11, 7/29/11, 8/24/11, 9/13/11 and 9/23/11, available at www.nyiso.com.

dynamic Net Benefits Test into their market and dispatch software. The design of a real-time program will require consideration of the results of this study, among other things. Nothing in Order 745 requires the NYISO to modify its ongoing approach to the development of a real-time market design.

C. DEMAND RESPONSE SUPPORTERS MISUNDERSTAND THE NYISO FILING

Certain protests appear to arise from a misunderstanding or mischaracterization of the NYISO's compliance filing. In particular, Demand Response Supporters assert that the NYISO has left the development of M&V protocols to ISO Procedures and should instead incorporate them into the tariff. This suggestion does not correctly describe the scope of the tariff amendments proposed in the filing or the NYISO's approach to M&V.

In developing this part of the Compliance Filing, the NYISO looked at its existing programs for measuring and verifying Demand Response Resources' demand reductions. The NYISO already documents these procedures in its Day-Ahead Demand Response Program Manual, which includes, among other things, a description of the method for calculating a customer's baseline load.¹⁸ The NYISO proposes to modify the methodology and to add it directly to the Market Services Tariff as new section 24.2. Thus, this fundamental component of the NYISO's M&V protocols will no longer be part of the ISO Procedures. The NYISO also proposes to add other M&V requirements that are currently in the Manual to the Services Tariff at section 24.3. Contrary to Demand Response Supporters' assertions, the only aspects of the

¹⁸ NYISO Day-Ahead Demand Response Program Manual at § 5.

M&V program that are left to be developed as ISO Procedures are the details relating to the data to be provided, and the time and format in which it is to be reported.¹⁹

Demand Response Providers are also misreading the NYISO's filing when they assert that the Commission "should require NYISO to adhere to the advance-posting requirement specified in Order 745."²⁰ Demand Response Providers ask the Commission to reject the NYISO's proposal to adjust the threshold near the end of the month. However, the NYISO's filing expressly provides for the posting of the net benefits threshold on the 15th of each month, as the Order requires.²¹ The NYISO's proposal to adjust a threshold near the end of the month, when warranted by significant changes in fuel prices, is consistent with the Commission's directive that the threshold take account of such changes. However, should the Commission determine that this feature is not consistent with the Order, the NYISO does not object to removing it from the proposed tariff changes.

Finally, Demand Response Providers mischaracterize the NYISO's approach to the Net Benefits Test where they assert that the NYISO will "adjust the supply curve based on an implied heat rate."²² The NYISO proposes to adjust the supply curve for changes in fuel prices, as Order 745 requires. This step produces an implied heat rate for each price quantity point. The NYISO later converts the heat rate threshold to a LMP threshold, which are mathematically

¹⁹ NYISO Compliance Filing, Attachment I, Section 24.3. The NYISO notes that these details, which do not affect the rates charged for demand response, and which may change as the NYISO's and Market Participants' experience with the revised DADRP evolve, are appropriate for a procedure document.

²⁰ DR Protest at 19.

²¹ See NYISO Compliance Filing Attachment II, at Section 4.2.1.9.

²² DR Protest at 17.

equivalent.²³ To illustrate this equivalence, the NYISO submits Attachment A, which was also provided to Market Participants in the course of stakeholder discussions on the development of the compliance filing.

D. ORDER 745 DOES NOT REQUIRE MULTIPLE NET BENEFITS THRESHOLDS

The New York Transmission Owners (“NYTOs”) assert that Order 745 requires the NYISO to determine average supply curves and net benefits thresholds for the individual load zones in the New York Control Area (“NYCA”).²⁴ According to the NYTOs, the NYISO’s single net benefits threshold fails to account for congestion and will result in the over-activation of Demand Side Resources;²⁵ therefore, NYTOs assert that the NYISO should calculate multiple thresholds.

The Commission recognized the limitations of the net benefits test in Order 745, as NYTOs acknowledge: “We recognize that the threshold price approach that we adopt here may result in instances both when demand response is not paid the LMP but would be cost-effective and when demand response is paid the LMP but is not cost-effective. We accept this result given the [...] difficulty of adopting a dynamic approach [...] at this time.”²⁶ The NYISO’s adoption of a single threshold is consistent with the requirements of the Order.

Furthermore, NYTOs overlook the significant complications and burdens that Demand Side Resources and the NYISO would face if Order 745 were read to mandate applying multiple thresholds. There are a number of combinations of congestion patterns that can arise in the

²³ NYISO Compliance Filing at 6-8.

²⁴ Protest of the New York Transmission Owners (“NYTO Protest”) at 4.

²⁵ *Id.* at 3 and 6.

²⁶ Order 745 at P 80; NYTO Protest at 4.

NYCA, even if intra-zonal congestion is not accounted for. Implementing the net benefit test in a manner that reflects even a simple subset of those possible congestion patterns would require calculating a number of different representative supply curves reflecting different congestion patterns, and then calculating a net benefit threshold for each of these patterns. Just accounting for the major distinct internal congestion patterns would require 13 distinct net benefit thresholds.²⁷ Accounting for possible combinations of constraints on external interfaces could multiply the number of thresholds threefold or more.²⁸ Implementation of multiple thresholds in the Day Ahead Market raises additional complex challenges: several of these arise from the fact that congestion patterns may change even as the Security Constrained Unit Commitment (“SCUC”) develops a solution, in which case the demand response thresholds will also be impacted. This would create uncertainty for Demand Side Resources, who would not know ahead of time which threshold they would be subject to. For these reasons, the Commission should approve the NYISO’s adoption of a single threshold as being compliant with the Order.²⁹

²⁷ These would include: (1) NYCA wide, (2) west of Central East, (3) north of Pleasant Valley-Leeds, (4) east of Central East including zones J and K, (5) east of Central East including J but not zone K, (6) east of Central East including zone K but not zone J, (7) east of Central East excluding both J and K, (8) south of Pleasant Valley-Leeds including J and K, (9) south of Pleasant Valley-Leeds including J but not K, (10) south of Pleasant Valley-Leeds including K but not J, (11) south of Pleasant Valley-Leeds excluding both J and K, (12) Zone J, and (13) Zone K.

²⁸ NYISO also notes that zonal thresholds could require more frequent month-end adjustments, which other protestors would likely object to.

²⁹ If the Commission determines that the NYISO should develop zonal thresholds, the NYISO concurs with the NYTOs’ suggestion that the existing \$75/Mwh threshold should remain in place in the interim.

E. THE NYISO PROPERLY ALLOCATES COSTS TO CUSTOMERS WITH BILATERAL CONTRACTS

The New York Association of Public Power and Occidental Chemical Corporation (“Occidental”) argue that the NYISO’s cost allocation methodology does not comply with Order 745 because it allocates costs to customers who have bilateral contracts for energy. In their view, such customers do not “purchase in the relevant energy market,” and thus are not beneficiaries of the dispatch of cost-effective demand response.³⁰ The Commission should reject these assertions.

First, these parties’ bilateral contracts are a part of the larger New York market, even if the contract price is not directly derived from NYISO market clearing prices. Second, these customers benefit from the trends in the New York electricity markets over time, whether or not those benefits accrue immediately under the terms of those contracts.³¹ Third, the burden of monitoring and scrutinizing the terms of such contracts to determine whether a particular party was or was not purchasing from the New York markets would be substantial and intrusive.

Finally, contrary to the assertions made in these Protests, the NYISO’s cost allocation method reasonably apportions the costs of demand response. The methodology proposed in the tariff filing is an enhanced version of the method the NYISO has been using since the inception of the DADRP.³² To identify beneficiaries, the method takes account of ex post congestion patterns using historical congestion, so that costs are not arbitrarily allocated to all NYCA load,

³⁰ Protest of the New York Association of Public Power at 4; Protest of Occidental Chemical Corporation at 6-16.

³¹ It is hard to imagine any purchaser opting to renew a contract at a price that did not reflect a decrease in the prevailing market rate, if market prices were to drop at the end of the contract term.

³² Letter Order Accepting Filing, New York Independent System Operator, Inc., Docket No. ER01-1740-002 (September 13, 2001).

as Occidental suggests.³³ Thus, load that is upstream of a constraint does not pay the costs associated with demand response activated downstream of the constraint. At the same time, it is reasonable to assume that there is a benefit to the load in a zone where demand response is dispatched under the Commission's cost-effectiveness test, and therefore it is reasonable to allocate the costs of that demand response to all load in that zone.

III. Conclusion

For the foregoing reasons, the NYISO requests that the Commission grant its motion for leave to answer, accept this Answer, and reject the Protests.

Respectfully submitted,

/s/ Elizabeth A. Grisaru

Elizabeth A. Grisaru
Counsel for New York Independent System
Operator, Inc.

September 26, 2011

³³ On this point, the Electric Power Supply Association agrees that the NYISO's proposed adjustment to its cost allocation method will more accurately reflect the impacts of congestion. Comments of the Electric Power Supply Association at 6.

Attachment A

Regarding the Order of steps 7 and 8 in the NYISO's Net Benefit Test and Price Threshold Calculation

The NYISO chose to calculate the elasticity based on the estimated supply curve expressed in terms of heat rate, then convert the threshold point to a power price, based on the projected gas price. This is mathematically equivalent to first converting the heat rate supply curve to a power price supply curve based on the projected gas price and then calculating the elasticity.

The estimated heat rate equation is [1]:

$$[1] \quad \text{Heat Rate} = A + B * MW + C * MW^2 + D * MW^3 + \exp^{(E * MW + F)}$$

The elasticity calculated in terms of heat rates is:

$$[2] \quad \text{Elasticity} = \frac{\frac{\text{Heat Rate}}{MW}}{\frac{d(\text{Heat Rate})}{d(MW)}}$$

Then taking the derivative of [1] with respect to MW, yields:

$$[3] \quad \frac{d(\text{Heat Rate})}{d(MW)} = B + 2 * C * MW + 3 * D * MW^2 + E * \exp^{(E * MW + F)}$$

Hence the elasticity in terms of heat rates is:

$$[4] \quad \text{Elasticity} = \frac{\text{Heat Rate}}{MW} * \frac{1}{B + 2 * C * MW + 3 * D * MW^2 + E * \exp^{(E * MW + F)}}$$

Alternatively, the supply curve could be expressed in terms of price by multiplying equation [1] by the gas price (Gp) for the study month. Hence

$$[5] \quad \text{Price} = G_p * [A + B * MW + C * MW^2 + D * MW^3 + \exp^{(E * MW + F)}]$$

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The elasticity of the supply curve in terms of power prices is:

$$[6] \quad \text{Elasticity} = \frac{\frac{\text{Price}}{MW}}{\frac{d(\text{Price})}{d(MW)}}$$

Then taking the derivative of price (equation [5]) with respect to MW, yields:

$$[7] \quad \frac{d(\text{Price})}{d(MW)} = G_p * [B + 2*C*MW + 3*D*MW^2 + E*\exp^{(E*MW+F)}]$$

Hence

$$[8] \quad \text{Elasticity} =$$

$$\frac{G_p * \text{Heat Rate}}{MW} * \frac{1}{G_p * [B + 2 * C * MW + 3 * D * MW^2 + E * \exp^{(E * MW + F)}]}$$

The G_p terms in Equation [8] cancel out, yielding equation [4].

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding in accordance with the requirements of Rule 2010 of the Rules of Practice and Procedure, 18 C.F.R. §385.2010.

Dated at Rensselaer, NY this 26th day of September, 2011.

/s/ Joy Zimmerlin

Joy Zimmerlin
New York Independent System Operator, Inc
10 Krey Blvd.
Rensselaer, NY 12114
(518) 356-6207