Theodore J. Paradise
Assistant General Counsel, Operation & Planning

October 20, 2015

BY E-FILING and FEDEX
Stephen August, Presiding Officer
Massachusetts Department of Public Utilities
One South Station
Boston, MA 02110

RE: Petition of New England Power Company, d/b/a National Grid, D.P.U. 15-44/15-45

Dear Mr. August

Enclosed with this cover letter is an original and ten copies of the Direct Testimony of Stephen J. Rourke and Brent Oberlin on behalf of ISO New England Inc. and a certificate of service.

Sincerely,

Theodore J. Paradise
Assistant General Counsel, Operations & Planning
ISO New England Inc.
One Sullivan Road
Holyoke, MA 01040

Enclosure

cc: David Rosenzweig, Esq.
Service List

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COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC UTILITIES

Petition of New England Power Company d/b/a National Grid for Approval to Construct and Operate a 345 kV Overhead Transmission Line on an Existing Right-of-Way in Tewksbury, Andover and Dracut, Massachusetts Pursuant to G.L. c. 164, § 72 and for Zoning	))))))	D.P.U. 15-44/15-45

DIRECT TESTIMONY OF
STEPHEN J. ROURKE AND BRENT OBERLIN
ON BEHALF OF ISO NEW ENGLAND INC.

I. Introduction

Q1. PLEASE SATE YOUR NAME, POSITION AND BUSINESS ADDRESS.

A1. *Mr. Rourke.* My name is Stephen J. Rourke. I am Vice-President of System Planning at ISO New England Inc. ("ISO"). My business address is One Sullivan Road, Holyoke, Massachusetts, 01040.

Mr. Oberlin. My name is Brent K. Oberlin. I am Director of Transmission Planning at the ISO.

Q2. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE

A2. *Mr. Rourke.* I have a Bachelor of Science degree in Electrical Engineering from Worcester Polytechnic Institute, and a Master of Business Administration degree from Western New England University. In my current position as Vice-President of System Planning, among other related roles, I am responsible for overseeing the regional planning process, including the Needs Assessment[1] process, which identifies violations of reliability criteria used to help ensure that the New England bulk electric system can reliably and safely provide power to residential and commercial users of electricity.

Previously, I served as the ISO's Director, Reliability and Operations Services. I am also a former manager of the Rhode Island Eastern Massachusetts Vermont Energy Control, often abbreviated as "REMVEC", control center in Westborough, Massachusetts, and a

[1] Capitalized terms used but not otherwise defined in this testimony have the means ascribed to them in the ISO's Transmission, Markets and Services Tariff. The ISO Tariff can be found at the following URL: http://www.iso-ne.com/participate/rules-procedures/tariff

former manager of marketing operations for Northeast Utilities/Select Energy Inc. in Berlin, Connecticut. I have over 30 years of experience in the operations and planning of the New England bulk power system.

Mr. Oberlin. I have Bachelor of Science degree from Rensselaer Polytechnic Institute and I am a Licensed Professional Engineer in the state of Connecticut. In my current position of Director, Transmission Planning, which I have held since 2011, I oversee regional bulk power system planning. I originally joined the ISO in 2006 and served as a Principle Engineer, and then as Manager, Area Transmission Planning for Northern New England.

Prior to joining the ISO in 2006, I was a Project Manager in the Transmission Planning Department at Northeast Utilities. Before that, I was an engineer with the Northeast Nuclear Energy Company at the Millstone nuclear plant. I have over 20 years of experience regarding the operation and planning of the bulk electric power system in New England.

Q.3 HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE MASSACHUSETTS DEPARTMENT OF PUBLIC UTITILITIES OR THE ENERGY FACILITIES SITING BOARD?

A.3 *Mr. Rourke.* Yes, I testified in the Greater Springfield Reliability Project Proceeding in Docket No. EFSB 08-2, and in the Interstate Reliability Project proceeding

in Docket Nos. EFSB 12-1, D.P.U. 12-46 / D.P.U. 12047. I also provided oral testimony to the Department of Public Utilities in D.P.U. 12-77.[2]

Mr. Oberlin. I provided testimony in the Interstate Reliability Project proceeding in Docket Nos. EFSB 12-1, D.P.U. 12-46 / D.P.U. 12047.

II. Summary of Testimony

Q4. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A4. This testimony adopts the Needs Assessment material submitted by New England Power Company, doing business as National Grid (the "Applicant" or "National Grid") in support of the Massachusetts portions of the Merrimack Valley Reliability Project ("MVRP") ("Project"). The Greater Boston Area Updated Needs Assessment, dated January 30, 2015, was submitted as Appendix 2-1 of the NEP-1 filing ("Updated Needs Assessment").

The ISO conducts regional transmission system planning for the bulk electric system pursuant to reliability criteria to help ensure the safe and reliable operation of the power system for residential and commercial users of electricity throughout the region, and to help insure that the New England portion of the power system is not negatively impacting the larger eastern interconnection, of which it is a part. The needs and solutions for the Project were developed pursuant to a process approved by the Federal Energy Regulatory

[2] *Investigation by the Department of Public Utilities on its own motion into the need for additional capacity in NEMA/Boston within the next ten years, pursuant to Chapter 209, Section 40 of the Acts of 2012 "An Act Relative to Competitively Priced Electricity in the Commonwealth" and pursuant to G.L. c. 164 § 76.* Mr. Rourke also provided a written response on October 22, 2012 to a letter from the D.P.U. in that proceeding.

Commission ("FERC") for transmission system planning, a process led by ISO New England as the independent, not-for-profit Regional Transmission Organization. The Needs Assessment and solutions process extended over a period of several years, starting in 2008, but the substantive results regarding the system needs addressed by MVRP are captured by the Updated Needs Assessment submitted by National Grid as part of their siting application in this proceeding. The Updated Needs Assessment materials were prepared under the oversight of myself and Mr. Oberlin and we adopt those materials as our own for the purpose of the record in this proceeding.

The ISO strongly supports the Project as critical to New England electric system reliability.

III. ISO's Mission and Responsibilities

Q5. WHY WAS THE ISO ESTABLISHED?

A5. The "Independent System Operator" concept was developed by FERC in the mid 1990s to support open access to the bulk electric system on a non-discriminatory basis. In 1996, FERC established the principles of ISO operation and governance in its Order No. 888.[3] FERC identified Independent System Operator principles as: providing independent, open and fair access to the region's transmission system; establishing a non-discriminatory governance structure; facilitating marked based wholesale electricity rates;

[3] *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities*, Order No. 888, FERC Stats. & Regs. ¶ 31,036 (1996), *order on reh'g*, Order No. 888-A, FERC Stats. & Regs. ¶ 31,048, *order on reh'g*, Order No. 888-B, 81 FERC ¶ 61,248 (1997), *order on reh'g*, Order No. 888-C, 82 FERC ¶ 61,046 (1998), *aff'd in relevant part sub nom. Transmission Access Policy Study Group v. FERC*, 225 F.3d 667 (D.C. Cir. 2000), *aff'd sub nom. New York v. FERC*, 535 U.S. 1 (2002).

and ensuring the efficient management and reliable operation of the regional power system.

The ISO was established as the Independent System Operator of the New England power grid on July 1, 1997,[4] and it assumed certain operating and transmission reservation responsibilities that had previously been carried out by the tight power pool formed jointly by the region's utilities.

In May 1999, the ISO commenced administration of the restructured wholesale electricity marketplace for the region. In June 2001, FERC conferred authority on the ISO to be the entity responsible for the regional transmission planning process.[5]

In March 2004, FERC approved the ISO's status as the Regional Transmission Organization, or "RTO",[6] the status it operates under to this day.

Q6. DOES THE ISO MAKE ANY PROFIT FROM ITS ROLE AS THE INDEPENDENT SYSTEM OPERATOR?

A6. No. The ISO is an independent, private, non-profit, non-stock company. The ISO has no shareholders, and its Board of Directors and employees are barred from owning shares in any Market Participant or Transmission Owner. The ISO's budget is reviewed and approved annually by FERC, and the ISO only recoups its annual expenses.

Q7. WHAT ARE THE ISO'S MISSION AND RESPONSIBILITIES?

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[4] *New England Power Pool*, 79 FERC ¶ 61,374 (1997).
[5] *ISO New England Inc., et al.* 95 FERC ¶ 61,384 (2001) (Order granting "exclusive responsibility for the planning process to ISO-NE").
[6] *Regional Transmission Organizations*, Order No. 2000, 89 FERC ¶ 61,285 (1999)("We reaffirm the NOPR proposal that the RTO must have ultimate responsibility for both transmission planning and expansion within its region… ."). The ISO was approved as an RTO by FERC in *ISO New England Inc.*, 106 FERC ¶ 61,280 (2004).

A7. The ISO manages the New England region's electric power system, designs, operates, and settles the wholesale electricity markets, administers the region's Open Access Transmission Tariff, and is responsible for the planning of the regional electric transmission system. More specifically, the ISO's responsibilities include independently operating and planning a reliable transmission system, promoting efficient wholesale markets, and working collaboratively and proactively with state and federal regulators, participants, and other stakeholder in pursuit of these goals.

IV. Testimony Regarding the Electric System Need for the Merrimack Valley Reliability Project

Q8. PLEASE BRIEFLY DESCRIBE THE HISTORY OF THE NEEDS ASSESSMENT AND SOLUTIONS STUDY WORK THAT LEAD TO THE MVRP?

A8. The need for the Project was studied over several years as part of the Greater Boston area study. Briefly, the effort began in 2008 with the Needs Assessment scope of work and was brought to the Planning Advisory Committee ("PAC"). Steady state needs were presented to the PAC, with the original Needs Assessment report being issued in July 2010.

In July 2013, the Needs Assessment was updated to reflect data from the 2013 CELT, FCA 7, and updated cable ratings. Alternatives were considered at length and the ISO identified the group of regional transmission projects that includes the MVRP as the most cost effective regulated transmission alternatives to address the identified needs in early 2015.

The final Updated Needs Assessment was posted by the ISO in January of 2015 and was submitted by the Applicant in this docket in support of their siting application. The MVRP is a component of the identified preferred solution that addresses the needs identified in the Updated Needs Assessment.

Q9. ARE YOU ADOPTING THE CONTENT OF THAT UPDATED NEEDS ASSESSMENT IN THIS TESTIMONY FOR PURPOSES OF THE RECORD IN THIS PROCEEDING?

A9. *Mr. Rourke.* Yes, I am.

Mr. Oberlin. Yes, I am.

Q10. PLEASE PROVIDE AN OVERVIEW OF THE MASSACHUSETTS PORTION OF THE MVRP AT ISSUE IN THIS SITING PROCEEDING.

A10. The Project is part of the larger Merrimack Valley Reliability Project that includes the Project and the 17.9-mile long continuation of the proposed 345 kV 3124 Line in New Hampshire, terminating at Public Service of New Hampshire's d/b/a Eversource ("Eversource") Scobie Pond Substation in Londonderry, New Hampshire. The MVRP also includes reconductoring of the Y-151 Line with larger capacity conductors between a location just north of Wheeler Road in Dracut, Massachusetts, referred to as Dracut Junction, and the point of ownership transfer between the Company and Eversource in Hudson, New Hampshire.

The Project at issue for siting in this proceeding is a new 345-kilovolt electric transmission line (the "3124 Line") to be constructed within 6.5 miles of existing right-of-way between the Tewksbury 22A Substation in Tewksbury, Massachusetts and the Massachusetts/New Hampshire border.

Q11. CAN YOU BRIEFLY DESCRIBE THE RELIABILTY NEEDS ADDRESSED BY THE MVRP?

A11. Yes. The MVRP is specifically designed to address needs on the 115 kV, 230 kV, and 345 kV ties between Massachusetts and New Hampshire, and also a 345 kV line located solely within Massachusetts. As documented in the Updated Needs Assessment, these ties overload under several N-1 and N-1-1 contingencies at existing peak load levels. The Updated Needs Assessment documents that existing ties currently do not provide sufficient capacity to reliably serve northeastern Massachusetts and southern New Hampshire. In the updated needs assessment the northern ties into the Greater Boston study area are called "Subarea A." A majority of the Subarea A violations are observed with high transfers across the North-South interface with varying conditions in the greater Boston Study Area. The violations are observed for both one critical unit out of service ("OOS") and two critical units OOS in the Greater Boston study area. Under contingency conditions, overloads can occur on the 345, 230 and 115 kV lines in the sub-area. In short, the Updated Needs Assessment documents that existing ties currently do not provide sufficient capacity to reliably serve northeastern Massachusetts and southern New Hampshire.

The MVRP addresses these needs through the construction of an additional transmission path in the area, and at the same time increases the load-serving capability for the Greater Boston area.

A detailed discussion is included in the Updated Needs Assessment, which we are adopting for the record in this proceeding with our testimony today.

Q12. WHAT IS THE YEAR OF NEED FOR THE UPGRADES THAT COMPRISE THE MVRP?

A12. As discussed in the Updated Needs Assessment, the reliability criteria issues occur at today's system load levels.

Q13. DOES THIS CONCLUDE YOUR TESTIMONY?

A13. Yes it does.

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THE COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF PUBLIC UTILITIES

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CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon all parties of record in this proceeding in accordance with the requirements of 220 CMR 1.05(1) (Department's Rules of Practice and Procedure).

Dated at Holyoke, MA this 20th day of October, 2015.

Theodore J. Paradise, Esq.

Counsel for ISO New England Inc.