



EXHIBIT C

**THE STATE OF NEW HAMPSHIRE
BEFORE THE NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION**

Docket No. DE 15-xxx

PETITION FOR APPROVAL OF LEASE AGREEMENT BETWEEN
PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
D/B/A EVERSOURCE ENERGY AND NORTHERN PASS TRANSMISSION LLC

PRE-FILED TESTIMONY OF JAMES J. JIOTTIS

October 19, 2015

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7 AND NORTHERN PASS TRANSMISSION, LLC
8

9
10 **Q. Please state your name, title and business address.**

11 A. My name is James J. Jiottis. I am employed as the Manager of Transmission
12 Engineering for Public Service Company of New Hampshire, d/b/a Eversource Energy
13 ("PSNH"), and my business address is 13 Legends Drive, Hooksett, New Hampshire
14 03106.

15
16 **Q. What are your duties and responsibilities in your position at PSNH?**

17 A. I am responsible for overseeing the technical aspects of PSNH's transmission system,
18 comprised of its transmission lines and transmission substations, and related facilities.
19 My responsibilities include the design and engineering of PSNH's transmission projects.
20 I have also been responsible for the engineering assessment of other projects similar to
21 the Northern Pass transmission project and for assessing the technical impact or effect
22 of those projects on the PSNH transmission system.

23
24 **Q. Please summarize your educational background and work experience.**

25 A. I hold an Associate's Degree in Industrial Electricity from New Hampshire Technical
26 College, a Bachelor of Science in Electrical Engineering Technology from Northeastern
27 University, and a Master of Business Administration from Suffolk University. I have over

1 30 years of experience in the electric utility and utility related industry. During my
2 career, I have been involved with leadership and technical responsibilities in the areas of
3 engineering, transmission operations and maintenance.

4 My resume is attached as Exhibit JJJ-1.

5

6 **Q. Have you previously testified before the New Hampshire Public Utilities**
7 **Commission?**

8 A. No, I have not.

9

10 **Q. What is the purpose of your testimony?**

11 A. My testimony is submitted to support the petition for approval of the proposed Lease
12 Agreement between PSNH and NPT (the "Lease"), in connection with the Northern Pass
13 transmission project in New Hampshire. The purpose of my testimony is to describe
14 PSNH Transmission Engineering's review and approval of the proposed location and
15 design of the Northern Pass transmission line facilities within the PSNH power line rights
16 of way (ROW) which are being leased to NPT under the Lease, and also to provide my
17 opinion that those facilities, as located, designed and proposed to be operated and
18 maintained, will not interfere with PSNH's continued use of PSNH's power line right of
19 way corridors and substation parcels affected by the Lease.

20

21 **Q. Please describe your familiarity with the Lease.**

22 A. I am familiar with the leased properties and other terms and conditions of the proposed
23 Lease, and those provisions of the Lease relating to the use by NPT of ROWs currently
24 in use by PSNH for its power lines. These provisions include, among others: Article 1.2

1 of the Lease, which provides that the location and design of the NPT project line and
2 facilities on the leased properties are subject to the prior engineering review and
3 approval of PSNH; Article 1.9, which mandates that there be no interference with
4 PSNH's present or future use for the operation and maintenance of PSNH's
5 transmission, distribution or telecommunication lines, facilities or equipment; and Article
6 4.4 of the Lease which requires NPT to bear the entire cost of relocating and rebuilding
7 PSNH lines and facilities to accommodate the project and to prevent any such
8 interference, in accordance with PSNH's reasonable requirements and good utility
9 practice.

10
11 **Q. Can you please describe generally what is meant or understood by the use of the**
12 **term "good utility practice"?**

13 A. The term "good utility practice", in the electric power line context, generally refers to the
14 requirement that a particular project be designed, constructed, operated and maintained
15 in accordance with the current guidelines and standards of the National Electrical Safety
16 Code ("NESC"), and of the Independent System Operator-New England ("ISO-NE").
17 NHPUC rules require that utility facilities be constructed, operated and maintained in
18 accordance with "good utility practice", which the rules define as equating to compliance
19 with the NESC and ISO-NE requirements. The NESC establishes standard industry
20 guidelines and specifications which apply to the design, construction, operation and
21 maintenance of utility power line facilities to ensure the safety of workers and the public.
22 ISO-NE guidelines define "good utility practice" to include the use of practices, methods
23 and acts engaged in, or approved by, a significant portion of the electric utility industry or
24 which, in the exercise of reasonable judgment, could be expected to accomplish the

1 desired result at a reasonable cost consistent with good business practices, reliability,
2 safety and expedition.

3
4 **Q. Please explain the process that was followed by PSNH Transmission Engineering**
5 **to review and approve the design and location of the proposed NPT project**
6 **facilities under the Lease?**

7 A. The review and approval of these matters was a coordinated process between PSNH
8 and NPT Project engineering and designers. Initially, NPT was provided with the PSNH
9 guidelines and standards relating to placement of facilities near substations and lines.
10 These guidelines and standards included the Northeast Utilities (now Eversource
11 Energy) ("NU") standard governing the spacing of lines within a right of way, engineering
12 guidelines relating to relocation of existing facilities at the request of others and the NU
13 guidelines for large generator interconnections. NPT then engaged in engineering
14 designed, among other things, to meet these requirements, where applicable. Multiple
15 design review meetings were held between NPT and PSNH engineering to review the
16 proposed NPT design and the proposed locations of NPT's transmission lines within the
17 PSNH ROW. These meetings reviewed the NPT design span by span, in order to insure
18 that the NPT design met PSNH requirements, applicable codes, federal North American
19 Electric Reliability Corporation (NERC) guidelines/requirements, and good utility
20 practice. Where PSNH identified concerns and requested changes, NPT altered its
21 design. In cases where PSNH did not have a specific standard, such as clearances for
22 High Voltage Direct Current facilities, PSNH required NPT to provide calculations
23 governing the design and describing what industry references were used. This
24 information was reviewed by PSNH and eventually approved.

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Q. Can you please explain the process that PSNH Transmission Engineering followed in evaluating whether the NPT project would interfere with the existing and future use of the PSNH ROW?

A. NPT shared its initial design plans with PSNH Engineering, for a preliminary review by PSNH. The initial review identified those areas where NPT proposed to use existing PSNH ROW. That review also identified locations where PSNH facilities would require modification to facilitate NPT's use of the ROW. After PSNH provided comments on the initial design, NPT developed detailed designs for its facilities located on PSNH property and ROW. To facilitate the NPT design, PSNH provided copies of its line and substation standards, interconnection requirements and policies related to use of its ROW. This is standard practice for design of interconnections to and with the PSNH transmission system. These documents allowed NPT to design its facilities according to PSNH requirements.

The resulting detailed NPT designs were then reviewed by PSNH Engineering in a series of meetings beginning in 2010. In these meetings PSNH provided feedback and suggestions to NPT for design modifications. NPT incorporated the suggested design modifications or provided sufficient background information to demonstrate why the design suggestion could not be made or was not required. In February 2011, a representative of PSNH Engineering was specifically assigned to act as a technical liaison between NPT and PSNH. This liaison was charged with review of the NPT design to protect PSNH engineering interests in ensuring compliance with PSNH and NU engineering, interconnection and applicable code standards and guidelines. Following a

1 final design for the NPT project, PSNH Engineering and Operations/Maintenance
2 personnel conducted an additional review. That review made the final determination that
3 the NPT design would not interfere with future maintenance and operation of PSNH's
4 facilities in the ROWs shared with NPT.

5
6 **Q. Did PSNH's Engineering review determine that certain existing PSNH lines and**
7 **facilities needed to be relocated and rebuilt to accommodate the location and**
8 **design of the NPT line on the leased properties?**

9 A. Yes. Due to the proposed configuration of the NPT line within certain ROW locations
10 already occupied by existing PSNH lines, and in order to meet safe line clearance,
11 reliability and other operational considerations, it became apparent that the existing
12 PSNH and the proposed new NPT lines could not safely co-exist within the same ROW
13 without some accommodation. As a result, in a number of locations it was determined
14 that it would be necessary to shift or rebuild the existing PSNH line or lines to another
15 portion of the ROW, in order to accommodate the NPT line. Where such changes were
16 necessary, the resulting design was approved by PSNH engineering with appropriate
17 design and construction practices to be followed in order to assure no adverse impacts
18 to PSNH operations and reliability. The cost of all such shifts or rebuilds will be paid for
19 by NPT.

20
21 **Q. What is your opinion regarding the effect of the proposed NPT project line and**
22 **facilities on PSNH's continued use of the PSNH owned right of way corridors and**
23 **land parcels under the Lease?**

1 A. PSNH Transmission Engineering is satisfied that the proposed NPT location and design
2 meets or exceeds PSNH requirements for location within PSNH's existing ROWs and
3 property. The design is consistent with PSNH standards, good utility practice, applicable
4 NESC requirements, and guidelines and standards provided by ISO-NE and NERC.
5 The location and design as proposed, and with the necessary relocation and rebuild of
6 certain existing PSNH transmission lines, will not interfere with current or future safe and
7 reliable operation of PSNH's electrical system facilities.

8

9 **Q. Does PSNH approve of the location and design of the proposed NPT project**
10 **facilities under the Lease?**

11 A. Yes, the location and design as presented to PSNH by NPT is approved by PSNH.

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13 **Q. Does this conclude your testimony?**

14 A. Yes, it does.

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