

STATE OF VERMONT  
PUBLIC SERVICE BOARD

Petition of Vermont Gas Systems, Inc.,	)	
requesting a Certificate of Public Good pursuant	)	
to 30 V.S.A. § 248, authorizing the construction	)	
of the “Addison Natural Gas Project” consisting	)	
of approximately 43 miles of new natural gas	)	
transmission pipeline in Chittenden and Addison	)	Docket No. 7970
Counties, approximately 5 miles of new	)	
distribution mainlines in Addison County,	)	
together with three new gate stations in	)	
Williston, New Haven and Middlebury,	)	
Vermont	)	

RESPONSE OF PETITIONER TO THE PUBLIC SERVICE DEPARTMENT’S  
FIRST SET OF INFORMATION REQUESTS ON PETITIONER

This is the response of Vermont Gas Systems, Inc. (“VGS” or “Petitioner”) to the First Set of Discovery Requests (“Discovery Requests”) of The Public Service Department (“PSD”). Petitioner is filing one complete hard copy of its responses with the Public Service Board (“Board”), with two copies served on the PSD and a copy served on each other party of record.

**General Objections:**

1. Petitioner objects to any instructions contained in the Discovery Requests to the extent such instructions purport to place on Petitioner greater requirements or reserve greater rights to PSD than are permitted by the Vermont Rules of Civil Procedure as made applicable to Board proceedings through Board Rule 2.214 (A).

2. Petitioner objects to any request for information or production of document(s) that is (or are) subject to the attorney-client privilege, constitute work product, are protected under state or federal law or are proprietary, competitively sensitive or confidential.

3. Petitioner objects to requests to the extent that they (a) are overbroad or unduly burdensome; (b) are cumulative; (c) call for the production of documents not in the possession, custody or control of Petitioner; (d) call for the review, compilation, or production of publicly-available documents that could be obtained by the requesting party in a less burdensome manner; (e) are vague and/or ambiguous; (f) seek information not reasonably calculated to lead to the discovery of admissible evidence; or (g) call for the review, compilation, or production of a voluminous number of documents at great expense to Petitioner.

4. Petitioner does not hereby waive any objections, and it reserves the right to later raise any additional, available objections.

5. Responses and objections indicated herein reflect the position of the individual specified by Petitioner and not the other respondents unless specifically stated otherwise.

**Q.PSD:VGS.1-1:** In pre-filed testimony, Mr. Heintz states the normal transmission line pressure is 400 psi at the inlet to a distribution regulator station. Pre-filed Testimony of John Heinz at p. 19. Will that be the normal maximum operating pressure (MOP) for the transmission line?

a. Will the normal MOP change between winter and summer and if so what are the typical pressures for each season?

b. If there is further expansion of the gas transmission system, will the MOP be changed?

c. If the MOP is changed on further expansion, what will be the new normal MOP in the summer and in the winter?

**A.PSD:VGS.1-1:** No. The MOP (maximum operating pressure) will be 1440. Note: VGS normally uses the acronym MAOP, or Maximum Allowable Operating Pressure (MAOP) rather than MOP as used in Mr. Heintz's testimony. Both mean the maximum pressure at which the line could be safely operated. Normal operating pressure is the pressure a line is expected to operate at under normal operating conditions.

a. The normal maximum operating pressure is expected to be approximately 600 psi. The range of normal operating pressure is between 250 psi and 600 psi.

b. No. The MAOP of 1440 will not change.

c. See A.PSD:VGS.1-1b.

Person Responsible for Response: Jean-Marc Teixeira  
Title: Vice President of Operations, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-2:** Are there any High Concentration [sic] Areas (HCA) on the transmission line?

- a. If yes, where are they located by mile post and description?
- b. If there are HCAs on the transmission line, what method was used to identify them?

**A.PSD:VGS.1-2:** We do not know. A High Consequence Area study is completed after the pipeline is constructed.

- a. See above answer.
- b. See above answer.

Person Responsible for Response: Jean-Marc Teixeira, Christopher LeForce  
Title: Vice President of Operations, Vermont Gas Systems, Inc.; Engineering Supervisor,  
Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-3:** Are there are any hard to evacuate locations (such as schools, licensed day care, licensed elder care, prisons, hospitals, etc.) along the transmission line?

a. If yes, what is the distance from the centerline of the pipeline to each identified site and what is the location of each by both mile post and description?

b. If no, how far on both sides of the pipeline did VGS check for these identified sites?

**A.PSD:VGS.1-3:** Hard to evacuate locations are considered HCA's. As noted in A.PSD:VGS.1-2, the HCA's will be identified after the pipeline is constructed and incorporated into VGS' Integrity Management Plan (IMP). A copy of Vermont Gas's current IMP is included as **Attachment A.ANR:VGS.RTP.1-3 (Teixeira)**. In accordance with Title 49 of the Code of Federal Regulations Part 192, Subpart O, Vermont Gas will be updating its IMP once the Project has been constructed and is in service.

a. See above.

b. See above.

Person Responsible for Response: Jean-Marc Teixeira  
Title: Vice President of Operations, Vermont Gas Systems, Inc  
Date: May 3, 2013

**Q.PSD:VGS.1-4:** Is VGS planning to do anything to reduce the likelihood and/or consequences of an incident near a hard to evacuate location or in an HCA?

- a. If so, what are the actions being taken to reduce the likelihood and/or consequences of an incident?
- b. If not, why not?

**A.PSD:VGS.1-4:** Yes. As explained in Messrs. Teixeira and Heintz's testimonies, VGS will design, construct and operate the Project in accordance with Title 49 of the Code of Federal Regulations Part 192 and in many cases will exceed code.

- a. See above.
- b. See above.

Person Responsible for Response: Jean-Marc Teixeira, John Heintz  
Title: Vice President of Operations, Vermont Gas Systems, Inc.; Project Manager  
Date: May 3, 2013

**Q.PSD:VGS. 1-5:** In pre-filed testimony, Mr. Heintz states that either fusion bonded epoxy (FBE) or Pritec coating will be used. Pre-filed Testimony of John Heinz at p. 11. Has VGS decided which will be used? If only FBE was selected, please provide the basis for the selection.

**A.PSD:VGS. 1-5:** VGS has not decided.

Person Responsible for Response: John Heintz  
Title: Project Manager  
Date: May 3, 2013

**Q.PSD:VGS. 1-6:** Are there going to be any cased crossings on the transmission main other than those noted at railroad crossings in Mr. Heintz's testimony at pp. 33 and 34?

- a. Did VGS attempt to eliminate these cased crossings?
- b. If VGS tried to eliminate the cased crossings, what did VGS propose to the railroad?
- c. If not, why did VGS not attempt to eliminate this potential source of integrity issues?

**A.PSD:VGS. 1-6:** No.

- a. No.
- b. VGS did not attempt to eliminate the cased crossings at railroad crossings.
- c. VGS plans to deploy in-line inspection devices ("SMART PIG", "ILI" or "tool") every seven years as explained in the testimony of Mr. Teixeira at Answer 21. The railroads' current construction standards require cased crossings.

Person Responsible for Response: Jean-Marc Teixeira, John Heintz  
Title: Vice President of Operations, Vermont Gas Systems, Inc.; Project Manager  
Date: May 3, 2013

**Q.PSD:VGS.1-7:** Are there going to be any locations other than main line valves or gate stations where the transmission main will be above grade, such as on bridges? If yes, where are they located both by mile post and description?

**A.PSD:VGS. 1-7:** No. For clarity, please note that the main line valves are below ground. The structures above ground at the valve stations are the blow downs and bridges.

Person Responsible for Response: John Heintz  
Title: Project Manager  
Date: May 3, 2013

**Q.PSD:VGS.1-8:** Has VGS checked to determine if any farms that it plans to cross are currently using deep tilling equipment and/or plan to use such equipment?

a. If yes, did VGS find any such farms and where is their location by both mile post and description? What is the depth of cover for farms that use deep tilling techniques?

b. If no, why not since the normal depth of cover may not provide sufficient clearance to farm equipment?

**A.PSD:VGS.1-8:** Consistent with VGS' experience in agricultural fields in Franklin County, VGS plans to install the pipe in agricultural fields at a minimum depth that allows for 4 feet of cover. On a case by case basis VGS will modify this depth to accommodate farmers using deep tilling equipment, if requested.

Person Responsible for Response: John Heintz  
Title: Project Manager  
Date: May 3, 2013

**Q.PSD:VGS.1-9:** What are the quality control procedures that VGS is using to procure the steel for the pipe, the manufacture of the steel into pipe, and the coating of the pipe?

**A.PSD:VGS.1-9:** VGS will be developing quality control protocol which will be developed prior to procurement. Based on past practice, it is anticipated that this will include inspecting the pipe at the factory during manufacturing. VGS will use a NACE qualified inspector. See also A.PSD:VGS.1-11.

Person Responsible for Response: John Heintz  
Title: Project Manager  
Date: May 3, 2013

**Q.PSD:VGS.1-10:** Is VGS planning to hire an inspection service to visit the pipe mill and the coating mill when the pipe is being produced?

a. If yes, which service does VGS plan to use and to what specifications criteria will the facilities be inspected?

b. If no, why not?

**A.PSD:VGS.1-10:** Yes.

a. VGS has not selected the inspection service company yet and will develop the protocol prior to procurement.

b. See above.

Person Responsible for Response: John Heintz  
Title: Project Manager  
Date: May 3, 2013

**Q.PSD:VGS.1-11:** How is VGS preventing low yield strength steel from being used on this pipeline?

**A.PSD:VGS.1-11:** As part of its quality assurance/quality control(QA/QC), VGS will develop an inspection and monitoring protocol, including specifications, which will be adopted by the mill to prevent low-yield strength steel from being used. VGS will only use steel rolled in North America and will have representatives/inspectors on site during the making of the steel to be sure that the steel mill is complying with the QA/QC procedures.

Person Responsible for Response: John Heintz  
Title: Project Manager  
Date: May 3, 2013

**Q.PSD:VGS.1-12:** Is VGS going to use a caliper ILI device to check for out of round and expansion of the pipe after the post construction Subpart J hydrostatic test?

**A.PSD:VGS.1-12:** Yes.

Person Responsible for Response: John Heintz  
Title: Project Manager  
Date: May 3, 2013

**Q.PSD:VGS.1-13:** How many cathodic protection rectifiers is VGS going to use on the transmission pipeline, where are they located, and where are the ground beds (by mile post and description)?

**A.PSD:VGS.1-13:** The cathodic protection (CP) system is currently in development.

Person Responsible for Response: John Heintz

Title: Project Manager

Date: May 3, 2013

**Q.PSD:VGS.1-14:** What type of ground bed(s) is VGS going to use for the cathodic protection system?

**A.PSD:VGS.1-14:** The cathodic protection system is currently in development.

Person Responsible for Response: John Heintz  
Title: Project Manager  
Date: May 3, 2013

**Q.PSD:VGS.1-15:** What is the distance between electrical isolation points on the pipeline?

**A.PSD:VGS.1-15:** The cathodic protection system and mitigation for induced voltage for existing structures are currently in development.

Person Responsible for Response: John Heintz

Title: Project Manager

Date: May 3, 2013

**Q.PSD:VGS.1-16:** Are horizontal directional drill (HDD) sections going to be electrically isolated sections?

**A.PSD:VGS.1-16:** The cathodic protection system and mitigation for induced voltage for existing structures are currently in development.

Person Responsible for Response: John Heintz

Title: Project Manager

Date: May 3, 2013

**Q.PSD:VGS.1-17:** Are permanent or temporary ILI launchers and receivers going to be installed at each end of the expansion?

**A.PSD:VGS.1-17:** At the Colchester tie-in VGS will have a launcher, riser and valve to mount a rented launcher barrel. At the Middlebury gate station, VGS will have a receiver, riser and valve to mount a rented receiver barrel.

Person Responsible for Response: John Heintz  
Title: Project Manager  
Date: May 3, 2013

**Q.PSD:VGS.1-18:** What testing is VGS going to perform to assure that all of its specifications were followed during construction?

**A.PSD:VGS.1-18:** VGS will have inspectors on site during construction, will radiographically inspect every weld, will hydrostatically test the pipeline to 150% of the MAOP, and will perform a caliper ILI following the hydrostatic test.

Person Responsible for Response: John Heintz  
Title: Project Manager  
Date: May 3, 2013

**Q.PSD:VGS.1-19:** How is VGS going to determine that no coating damage occurred during HDD operations?

**A.PSD:VGS.1-19:** On sections of the pipe using HDD an overcoating of abrasive resistant material will be placed over the existing coating in order to prevent damage to the pipe during HDD installation. Following installation of the HDD section, VGS will conduct a visual inspection of the lead joint of pipe pulled through the HDD.

The pipe will be inspected after it is installed at the exit point to determine if there was any damage during pullback.

Person Responsible for Response: John Heintz  
Title: Project Manager  
Date: May 3, 2013

**Q.PSD:VGS.1-20:** Has VGS taken into account the proposed new regulations in the 2011 Advance Notice of Proposed Rule Making PHMSA issued for Part 192 of the Code of Federal Regulations (Docket No. PHMSA 2011-0023)?

a. If so, what changes did VGS incorporate into its design and construction specifications?

b. If not, why not?

**A.PSD:VGS.1-20:** Yes. VGS has taken into consideration elements of the Advance Notice of Proposed Rule Making that apply to new pipeline construction. As stated in Answer 21 to Mr. Teixeira's testimony, VGS proposes to perform an ILI every 7 years for the entire pipeline, as opposed to just HCA locations. VGS has committed to installing all mainline valves with remote control operators.

a. See above

b. See above

Person Responsible for Response: Jean-Marc Teixeira  
Title: Vice President of Operations, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-21:** With the pipeline crossing under the HVAC towers multiple times, what is the AC corrosion mitigation plan and is VGS going to test for AC interference currents on the pipeline?

**A.PSD:VGS.1-21:** VGS will test for AC interference currents and the mitigation for induced voltage and stray current is currently being developed. The cathodic protection system design will account for AC interference currents.

Person Responsible for Response: John Heintz  
Title: Project Manager  
Date: May 3, 2013

**Q.PSD:VGS.1-22:** Is there any plan to periodically test the pipeline for AC and DC interference currents?

**A.PSD:VGS.1-22:** Yes.

Person Responsible for Response: Jean-Marc Teixeira  
Title: Vice President of Operations, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-23:** Will VGS be performing a coating holiday inspection on the pipeline after it is installed?

**A.PSD:VGS.1-23:** VGS will perform a coating holiday inspection before installation.

Person Responsible for Response: Jean-Marc Teixeira  
Title: Vice President of Operations, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-24:** Does VGS plan to do acceptance testing of the cathodic protection system and any other facilities after installation?

**A.PSD:VGS.1-24:** Yes.

Person Responsible for Response: John Heintz  
Title: Project Manager  
Date: May 3, 2013

**Q.PSD:VGS.1-25:** Is VGS performing any actions or design criteria that exceed either Vermont or PHMSA (Part 192) minimum safety standards besides using higher safety factors in Class 1 and Class 2 areas? In answering this question, please refer to the pre-filed testimony of John Heinz at p. 11 and Jean-Marc Teixeira at p. 15.

**A.PSD:VGS.1-25:** Yes. For example, VGS will radiographically (xray) inspect every weld, which exceeds Code. See Heintz 2/28/13 supplemental prefiled at page 17. Also, the spacing of valves is consistent with Class 3 requirements for the entire pipeline even though the pipeline passes through Class 1, Class 2 and Class 3 areas. VGS will use remotely controlled valves. At gate stations VGS will use secondary relief valves, which also exceeds Code. See Teixeira 12/20/12 prefiled at pages 15-16. In addition, the commitment to use ILI every 7 years for the entire pipeline exceeds Code requirements.

Person Responsible for Response: John Heintz; Jean-Marc Teixeira  
Title: Project Manager; Vice President of Operations, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-26:** In pre-filed testimony, Mr. Teixeira states that VGS will be running an internal inspection device (ILI) every seven years on the entire Addison Expansion pipeline. Pre-filed testimony of Jean-Marc Teixeira at p. 20, lns. 17-21. What type(s) of ILI inspection devices does VGS plan to use?

**A.PSD:VGS.1-26:** VGS has not yet selected an ILI device or company. However, the ILI device will examine integrity issues such as pipe wall thickness, internal corrosion, out-of-round defects, and dents.

Person Responsible for Response: Jean-Marc Teixeira  
Title: Vice President of Operations, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-27:** Please provide a schematic of the piping, valve locations, the control lines, and devices for each of the regulator or gate stations (if the stations are identical, state so and only one need be furnished).

**A.PSD:VGS.1-27:** VGS has developed preliminary schematics. See **Attachments**  
**A.PSD:VGS.1-27.1 – 27.5.**

Person Responsible for Response: John Heintz  
Title: Project Manager  
Date: May 3, 2013

**Q.PSD:VGS.1-28:** Does VGS plan to take intermediate pressure reduction before the final regulator in each gate station?

**A.PSD:VGS.1-28:** No.

Person Responsible for Response: John Heintz, Jean-Marc Teixeira  
Title: Project Manager; Vice President of Operations, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-29:** Are automatic or remote control valves being installed at each gate station and, if so, which valves are these? If the gate station valves are automated, what is the failure mode on loss of power or communications?

**A.PSD:VGS.1-29:** No. On the main line valves within the gate stations, there will be remote control devices. If power is lost, the valve will stay at the condition prior to power loss.

Person Responsible for Response: Marc Teixeira  
Title: Vice President - Operation  
Date: May 3, 2013

**Q.PSD:VGS.1-30:** What method of communication between the gate stations and a control room is VGS going to use (dedicated phone, cell, satellite, etc.)?

- a. Are there any provisions for a back-up if the primary communications method fails?
- b. If so, what is it and why was it chosen?

**A.PSD:VGS.1-30:** The method of communication has not been decided. Vermont Gas' existing control communications are dedicated land lines.

- a. See above
- b. See above

Person Responsible for Response: Jean-Marc Teixeira  
Title: Vice President of Operations, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-31:** Please provide the O&M procedures for the gate station regulators and associated control equipment. How often are internal inspections going to be performed on the regulators?

**A.PSD:VGS.1-31:** See A.CSWD:VGS.RTP.1-12. Gate station regulators are inspected on an annual basis. VGS follows the procedures set forth in 49 CFR § 192.739, Pressure limiting and regulating stations: Inspection and testing.

Person Responsible for Response: Jean-Marc Teixeira  
Title: Vice President of Operations, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-32:** How is VGS going to prevent the regulator control systems from freezing in the winter?

**A.PSD:VGS.1-32:** The gas is heated before entering the regulator control systems.

Person Responsible for Response: Jean-Marc Teixeira  
Title: Vice President of Operations, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-33:** What happens when a heater goes down in the winter?

**A.PSD:VGS.1-33:** VGS will install an alarm system that will be monitored by the control center in South Burlington.

Person Responsible for Response: Jean-Marc Teixeira  
Title: Vice President of Operations, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-34:** Has VGS considered installing “farm taps” or “baby gates” along the transmission route to serve additional customers?

- a. If yes, why are they not being used to supply customers along the route?
- b. If no, why not?

**A.PSD:VGS.1-34:** Yes. VGS is still in the process of evaluating potential service areas along the route, however VGS and Monkton have been in conversations regarding the location of a gate station to serve portions of Monkton, including the school. In addition, Vermont Gas will be serving St. George after working with the town to identify an appropriate location for the gate station. With the addition of these gate stations, all communities along the route that do not have access to natural gas service today, will have access to natural gas service as a result of the project.

- a. See above.
- b. See above. In addition, a VGS does not install “farm taps” for individual customers.

Person Responsible for Response: Jean-Marc Teixeira, Timothy S. Lyons  
Title: Vice President of Operations, Vermont Gas Systems, Inc.; Vice President of Sales and Marketing, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-35** What is the MOP of the distribution systems being installed? Will there be a summer and a winter MOP and if so what are the pressures?

**A.PSD:VGS.1-35:** The distribution system is being designed for a future maximum allowable operating pressure of 125 psi, but will be operated at 100 psi initially. There will be a normal summer and winter operating pressure, equal to or less than the MAOP, but that analysis has not been completed.

Person Responsible for Response: Jean-Marc Teixeira  
Title: Vice President of Operations, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-36:** What are the low temperature limits on the distribution mains from the gate stations?

**A.PSD:VGS.1-36:** The outlet gas temperature from the gate stations will be set at 40 degrees.

Person Responsible for Response: Jean-Marc Teixeira  
Title: Vice President of Operations, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-37:** What method of joining is going to be used on the mains, on the services, and on the risers to the meter bar?

**A.PSD:VGS.1-37:** The joining methods have not yet been determined but will likely be either butt fusion or electrofusion, as the situation warrants for both mains and services.

Person Responsible for Response: Marc Teixeira  
Title: Vice President Operations  
Date: May 3, 2013

**Q.PSD:VGS.1-38:** Will excess flow valves be used on the new systems?

**A.PSD:VGS.1-38:** All residential customers will have excess flow valves. Commercial and industrial customers will have excess flow valves when the size of the load permits.

Person Responsible for Response: Jean-Marc Teixeira  
Title: Vice President of Operations, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-39:** What methods of installation is VGS planning to use, open trench, HDD, boring, etc. or a combination and what is the criteria for determining which method of installation is being used?

**A.PSD:VGS.1-39:** Please refer to Exhibit Petitioner Supp. JH-3 and JH-5 (2/28/13), which specify the methods of installation for the pipe. The decision about which method of installation includes considerations of resource impacts, costs and constructability

Person Responsible for Response: John Heintz  
Title: Project Manager  
Date: May 3, 2013

**Q.PSD:VGS.1-40:** Will each customer have a separate service connection?

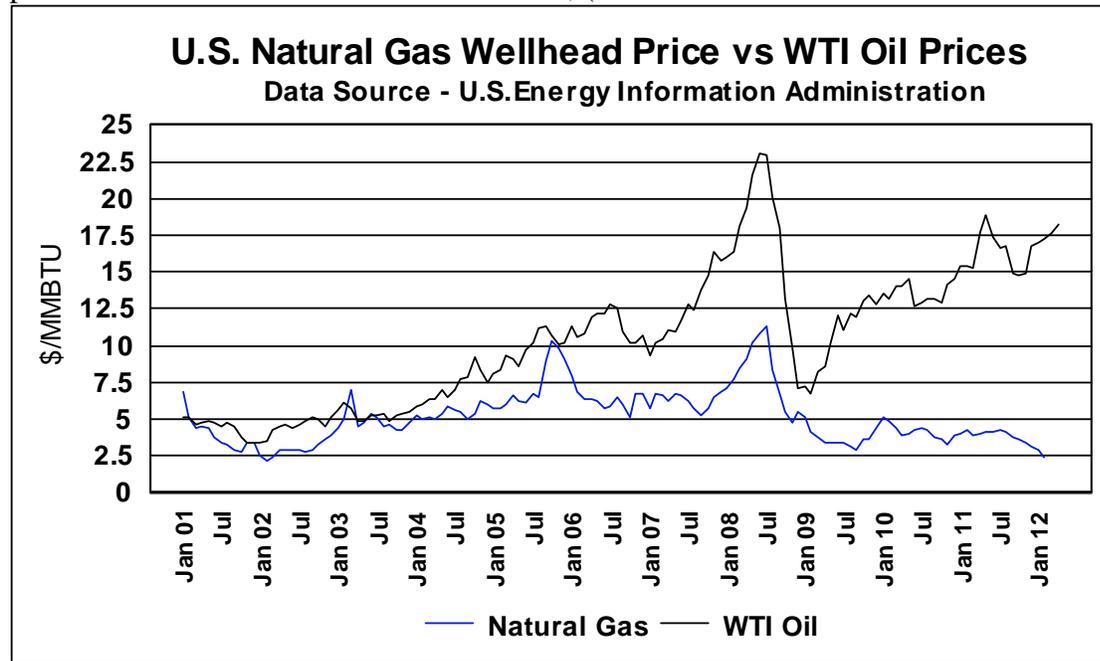
**A.PSD:VGS.1-40:** No. Generally speaking each building will have a separate service connection but in areas such as an office complex with multiple customers, or apartment buildings, one service line could have multiple meters.

Person Responsible for Response: Jean-Marc Teixeira  
Title: Vice President of Operations, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-41:** In pre-filed testimony, Mr. Gilbert states: "A major increase in the North American supply of natural gas has driven natural gas prices down while the prices of alternative fuels like oil and propane have continued to increase, presenting the opportunity to lower Vermonters' fuel costs." Pre-filed Testimony of A. Donald Gilbert at p. 3, Ins. 18-21. Please provide support for this statement, including any studies, reports, and/or VGS estimates related to the availability of gas supplies to VGS customers, as well as any studies, reports, or information related to gas, propane and fuel oil prices on long term basis.

**A.PSD:VGS.1-41:** Mr. Gilbert relied on independent statistics and analysis from the US Energy Information Administration to compare natural gas prices to alternative fuel prices. He utilized the following web sites:

<http://tonto.eia.doe.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=RWTC&f=M> ; and <http://tonto.eia.doe.gov/dnav/ng/hist/n9190us3m.htm> to develop the graph below which compares natural gas wellhead pricing to WTI oil prices. The data supporting this graph is provided as **Attachment A.PSD:VGS.1-41**, (NATURAL GAS SPOT PRICES 2000 TO 2011).



Person Responsible for Response: A. Donald Gilbert, Jr.  
Title: President and Chief Executive Officer, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-42:** In pre-filed testimony, Mr. Gilbert relies on a November 2012 Department of Public Service report to claim that “[n]atural gas is significantly less expensive than other fuels.” Pre-filed Testimony of A. Donald Gilbert at p. 4, Ins. 12-15. Please provide any and all studies, reports, or other information consulted discussing the cost comparison of gas, fuel oil and propane on a long-term basis. Please indicate how long VGS expects the natural gas price advantage would last, and explain the reasoning for this expectation.

**A.PSD:VGS.1-42:** Mr. Gilbert has attended numerous regulatory and natural gas industry conferences at which forecast of natural gas supply and pricing are presented. Examples of the information from these meetings which support his statements include the following:

**Attachment A.ANR:VGS.RTP.1-3 (Gilbert)** - Bruce B. Henning's presentation at the AGA Leadership Council meeting on March 29, 2011 where he concluded on page 13 that “Sufficient natural gas resources are available to supply gas at competitive prices for decades to come.”

**Attachment A.ANR:VGS.RTP.1-3 (Gilbert)** - A Wood Mackenzie presentation at NECPUC on May 22, 2012 in which they explained on page 13 that the divergence between natural gas and oil prices was projected to remain well out into the future.

VGS does not have a specific length of time it expects the price advantage to last but believes it will be for at least the next 20 years based on the price forecasts prepared by the energy information administration found at:

<http://www.eia.gov/oiaf/aeo/tablebrowser/#release=AEO2012&subject=3-AEO2012&table=3-AEO2012&region=1-1&cases=full2011ref-d020911a,ref2012-d020112c>.

Person Responsible for Response: A. Donald Gilbert, Jr., Eileen Simollardes  
Title: President and Chief Executive Officer, Vermont Gas Systems, Inc.; Vice President,  
Supply and Regulatory Affairs, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-43:** In pre-filed testimony, Mr. Gilbert states: “[S]upply reserves are running over 100 years greater than the demand.” Pre-filed Testimony of A. Donald Gilbert at p. 5, Ins. 11-12. Please provide support for this statement and include in such support the forecasted incremental cost of extracting these reserves on an annual basis, as well as the natural gas price needed to make such extractions economical.

**A.PSD:VGS.1-43:**

The specific incremental cost analysis requested has not been performed. However, in addition to the sources cited in response to the previous interrogatories, Mr. Gilbert attended a meeting of the AGA Leadership Council in Washington DC on March 29, 2011 at which Bruce B. Henning, the Vice President, Energy Regulatory and Market Analysis for ICF International presented a report (on page 9) that “The North American Natural Gas Resource Base Could Support Current Levels of Gas Use for Almost 140 Years” provided as **Attachment A.ANR:VGS.RTP.1-3 (Gilbert)**.

**The North American Natural Gas Resource Base Could Support Current Levels of Gas Use for Almost 140 Years** 

- In total, the U.S. and Canada have over 3,700 Tcf of resource that can be economically recovered using current exploration and production (E&P) technologies.
  - At current levels of consumption, this is enough resource for almost 140 years.
  - As technologies improve and new discoveries are made, the total gas resource is likely to grow over time.
- Over 50% of the assumed resource is shale gas.

**U.S. and Canada Natural Gas Resource Base**  
 (Tcf of Economically Recoverable Resource, Assuming Current E&P Technologies)

	Proven Reserves	Unproved Plus Discovered Undeveloped	Total Remaining Resource	Shale Resource <sup>1</sup>
Alaska	7.7	153.6	161.3	0
West Coast Onshore	2.3	24.6	27	0.3
Rockies & Great Basin	66.7	388.3	454.9	37.9
West Texas	27.6	47.7	75.3	17.5
Gulf Coast Onshore	70.1	684.7	754.8	476.9
Mid-continent	37	205	241.9	133.9
Eastern Interior <sup>2</sup>	18.6	795.7	814.3	728.1
Gulf of Mexico	14	238.6	252.5	0
U.S. Atlantic Offshore	0	32.8	32.8	0
U.S. Pacific Offshore	0.8	31.7	32.5	0
WCSB	60.4	664	724.4	508.8
Arctic Canada	0.4	45	45.4	0
Eastern Canada Onshore	0.4	15.9	16.3	10.3
Eastern Canada Offshore	0.5	71.8	72.3	0
Western British Columbia	0	10.9	10.9	0
<b>US Total</b>	<b>244.8</b>	<b>2602.7</b>	<b>2847.3</b>	<b>1394.6</b>
<b>Canada Total</b>	<b>61.7</b>	<b>807.6</b>	<b>869.3</b>	<b>519.1</b>
<b>US and Canada Total</b>	<b>306.5</b>	<b>3410.3</b>	<b>3716.6</b>	<b>1913.7</b>

1. Shale Resource is a subset of Total Remaining Resource  
 2. Reference case assumes drilling levels are constant at today's level over time, reflecting restricted access to the full resource development.

Person Responsible for Response: A. Donald Gilbert, Jr.  
 Title: President and Chief Executive Officer, Vermont Gas Systems, Inc.  
 Date: May 3, 2013

**Q.PSD:VGS.1-44:** In pre-filed testimony, Mr. Gilbert sets forth the economic benefits of building an eight-mile distribution main extension to serve customers in Jericho, Vermont. Pre-filed Testimony of A. Donald Gilbert at p. 7, lns. 18-22. Please provide complete support and detailed calculations for these asserted benefits, including:

- a. The fiscal year-by-fiscal year numbers on which the asserted benefits are based;
- b. All assumptions made and relied on in calculating the listed savings;
- c. The expected costs to customers of taking gas service from VGS, as well as the estimated costs of converting appliances from oil and propane to natural gas;
- d. The actual or estimated impact on the VGS rates to other customers caused by the extension of service to Jericho.

**A.PSD:VGS.1-44:**

a. Vermont Gas does not have the benefit numbers by fiscal year. The figures cited in Mr. Gilbert's testimony at p. 7 lines 19-21 are annual figures based on Vermont Gas's rates as of November 2012 and the November, 2012 Department of Public Service Fuel Price Report for the price of propane and fuel oil. **Attachment A.PSD:VGS.1-44** provides the calculation supporting the savings figures cited. The property tax payments (based on tax bills from Jericho) are:

2010	\$38,407
2011	\$37,462
2012	\$36,054

- b. See A.PSD:VGS.1-44a.
- c. See **Attachment A.PSD:VGS.1-44** "Jericho Number Backup". Vermont Gas does not have the cost of conversion for Jericho customers.
- d. VGS has not performed this calculation. By way of background, Vermont Gas evaluates its line extensions on a blended basis. All main extensions constructed in a given year, when added to in-fill customer growth, must yield VGS' authorized rate of return over a 10-year period. This ensures that in aggregate, growth does not put upward pressure on rates. In the case of Jericho, the estimated blended return was 12%. Jericho was estimated to have a first year rate impact of approximately \$240,000 improving to break-even in 2018. However, the actual loads added in Jericho as of November 2012 were significantly higher than the planning assumptions so the actual impact on rates would be improved from the planning assumption.

Person Responsible for Response: A. Donald Gilbert, Jr., Eileen Simollardes, Tim Lyons

Title: President and Chief Executive Officer, Vermont Gas Systems, Inc.; Vice President,  
Supply and Regulatory Affairs, Vermont Gas Systems, Inc., Vice-President –Sales and  
Marketing

Date: May 3, 2013

**Q.PSD:VGS.1-45:** In pre-filed testimony, Mr. Gilbert sets forth the environmental benefits of building an eight-mile distribution main extension to serve customers in Jericho, Vermont. Pre-filed Testimony of A. Donald Gilbert at p. 8, lns. 3-4. Please provide complete support and detailed calculations, along with all assumptions, in support of the asserted reductions in emissions.

**A.PSD:VGS.1-45:** See **Attachment A.PSD:VGS.1-44.**

Person Responsible for Response: A. Donald Gilbert, Jr., Eileen Simollardes  
Title: President and Chief Executive Officer, Vermont Gas Systems, Inc.; Vice President,  
Supply and Regulatory Affairs, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-46:** In pre-filed testimony, Mr. Gilbert discusses the benefits of ultimately providing service to International Paper, claiming that this Project will reduce the mill's energy costs, improve its economic vitality, and support over 1,200 jobs in the region. Pre-filed Testimony of A. Donald Gilbert at p. 10, lns. 7-8.

- a. Please describe the extent to which such benefits can be attributed solely to this Project.
- b. Please describe the extent to which such benefits would rely on potential future pipeline expansions.
- c. Taking into account the uncertainty of a potential future pipeline expansion, please provide a detailed breakdown of asserted benefits to International Paper from this Project as compared to any future projects.
- d. Please indicate how many of the 1,200 jobs supported by this Project are or will be in Vermont or are currently held by Vermont residents.

**A.PSD:VGS.1-46:**

a. Natural gas service to International Paper's Ticonderoga Mill requires completion of two phases of the Project. Phase I consists of the permitting of the facilities and construction referred to in the Vermont Gas testimony as the "Addison Upgrade." Phase II of the permitting process consists of approval of the construction of the facilities referred to in testimony as the "Addison Extension" and "IP Lateral," which will be the subject of a subsequent Section 248 filing. Consequently, the benefits described in Mr. Gilbert's testimony can only be achieved by completion of both Phase I and Phase II of the Project, so no benefits of providing service to International Paper can be attributed solely to the Project now under consideration.

b. Such benefits would require both the completion of this Project and the subsequent permitting and completion of Phase II that will be the subject of a subsequent Section 248 filing. Please refer to the Company's response to Q.PSD:VGS.1-46(a).

c. Such benefits would require both the completion of this Project and the subsequent permitting and completion of Phase II that will be the subject of a subsequent Section 248 filing. Please refer to the Company's response to Q.PSD:VGS.1-46(a).

d. It is presently unknown how many of the 1,200 jobs are or will be in Vermont or are held by Vermont residents. However, fifteen to twenty percent of the wood used at the Mill comes from Vermont. In comments submitted to the Public Service Board are several references to the benefits to Vermont of the mill and the agreement and evidence of the employment of Vermont workers. See **Attachment A.PSD:VGS1-46d**.

Person Responsible for Response: A. Donald Gilbert, Jr. and Timothy S. Lyons  
Title: President and Chief Executive Officer; Vice President of Sales and Marketing, Vermont  
Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-47:** In pre-filed testimony, Mr. Gilbert states that VGS is proposing to use a larger and longer pipe than would otherwise be needed for this Project in order to serve International Paper in the future. Pre-filed Testimony of A. Donald Gilbert at p. 11, lns. 9-10.

a. Please provide detailed cost data showing the increase in overall Project cost resulting from the use of the larger/longer pipe than would otherwise be necessary.

b. Please indicate how this incremental cost will be paid for in advance of service to International Paper and identify who will pay such costs.

c. Please explain how this incremental cost will be paid for in the event that VGS does not complete future sections of pipeline to connect with International Paper.

d. Please set forth all contingencies, including time constraints, that VGS must meet in this proceeding and in any future proceeding to satisfy the terms of any and all contracts or agreements with International Paper. To the extent VGS has entered into any agreements regarding the development of pipeline infrastructure and/or cost sharing that have not been submitted in this proceeding, please provide them.

**A.PSD:VGS.1-47:**

a. Objection calls for Highly Confidential and sensitive proprietary information. See **HIGHLY CONFIDENTIAL Attachment A.PSD:VGS.1-47** which is being provided under seal to the Department of Public Service and the Public Service Board. The cost resulting from use of a larger and longer pipe is the entire cost of the Addison Upgrade, which is estimated at approximately \$20 million.

b. In advance of service to International Paper, these costs are expected to be recovered by the System Expansion and Reliability Fund until commencement of service to IP, at which time International Paper will pay them as set forth in prefiled testimony of Timothy Lyons at page 15.

c. Specific to the Addison Upgrade, in such event, Vermont Gas would be responsible for 100% of the costs because these facilities would ultimately be used to serve Vermont customers.

d. All contingencies are included in Exhibit Petitioner TSL-7, the Facilities Development Agreement, and Exhibit Petitioner TSL-8, the Interruptible Transportation Agreement. The contingencies regarding time and budget constraints are located in Section 8.0 of Exhibit Petitioner TSL-8, the Facilities Development Agreement. There are no other agreements with International Paper regarding the development of pipeline infrastructure and/or cost sharing that have not been incorporated into the Facilities Development Agreement or the Interruptible Transportation Agreement.

Person Responsible for Response: Timothy S. Lyons  
Title: Vice President of Sales and Marketing, Vermont Gas Systems, Inc  
Date: May 3, 2013

**Q.PSD:VGS.1-48:** In pre-filed testimony, Mr. Gilbert asserts that the Project will save Addison County homes and businesses \$200 million over the next 20 years. Pre-filed Testimony of A. Donald Gilbert at p. 12, Ins. 12-13.

a. Please provide detailed calculations, along with assumptions, in support of this assertion. In doing so, please provide all "business-as-usual" and alternative scenarios considered, with associated data and analysis.

b. Please provide, and to the extent possible quantify, the anticipated benefits/costs to Chittenden and Rutland Counties associated with the Project.

c. Please provide, and to the extent possible quantify, the anticipated overall benefits/costs to the State of Vermont associated with the Project.

**A.PSD:VGS.1-48:**

a. See **HIGHLY CONFIDENTIAL Attachment A.ANR:VGS.RTP.1-3 (Simollardes)**. See also Exhibit Petitioner JC-2 and JC-3. See also **HIGHLY CONFIDENTIAL Attachment A.PSD:VGS.1-48.1 (Base Case with IP)** and **HIGHLY CONFIDENTIAL Attachment A.PSD:VGS.1-48.2 (Base Case without IP)**.

b. The direct benefits to Chittenden County include increased reliability of the transmission system as described in Mr. Teixeira's testimony, enabling the extension of natural gas service to St. George, and the increased property tax revenue from the portion of the project located in Chittenden County. Indirect benefits to Chittenden County include the ripple effect of the net economic benefit described in Mr. Carr's testimony and the reduced greenhouse gas emissions associated with the conversion to natural gas by Addison County customers. The cost to Chittenden County is the foregone rate reduction associated with the establishment of the System Expansion and Reliability Fund. The net present value of the Chittenden County (and Franklin County) payments into the Fund over 20 years is \$69.7 million.

The benefits to Rutland County from the Project are all indirect. Rutland County accrues the same indirect benefits as Chittenden County. In addition the Project brings natural gas service 41 miles closer to Rutland County. There is no direct cost to Rutland County associated with the Project.

c. The overall economic benefits to the state are described in Mr. Carr's testimony. In addition, the state benefits from a reduction in greenhouse gas emissions as described in Ms. Simollardes' testimony and by increasing the reliability of the transmission system as described in Mr. Teixeira's testimony. Finally, this project is the first phase of a longer term objective to bring natural gas service further south to the Rutland area. The Rutland area views the availability of natural gas as critical to the economic development of the area as evidenced by Exhibit Petitioner SW-4.11 and comments made by Rutland officials at the March 21, 2013 public hearing, provided as **Attachment A.PSD:VGS.1-48.3** (March 19, 2013 Letter from Rutland Economic Development Corp. to the PSB) and **Attachment A.PSD:VGS.1-48.4** (Notes from Rutland City Mayor re: comments to the Public Service Board.)

Person Responsible for Response: Eileen M. Simollardes  
Title: Vice President, Supply and Regulatory Affairs, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-49:** In pre-filed testimony, Mr. Carr states that based on a prior Board order, he uses a 3.0 percent discount rate to quantify direct benefits (fuel bill savings) in present value terms. Pre-filed Testimony of Jeffrey Carr at p. 20, lns. 18-21.

a. Please explain why the discount rate used in the case cited (which pertained to an energy-efficiency cost-effectiveness screening tool) should be used to calculate benefits in the instant case.

b. Please provide any and all independent studies and analyses used or consulted by Mr. Carr in support of his use of a 3.0 percent discount rate.

c. What is the range of discount rates that Mr. Carr considers to be reasonable to calculate present value of future benefits?

**A.PSD:VGS.1-49:**

a. The instant case concerns efficiency improvements to the domestic and commercial energy requirements of persons and businesses in Addison County. Consumers and businesses will be enabled to provide their energy requirements with a more cost effective primary fuel following the completion of the expansion project.

b. Mr. Carr is generally familiar with the cost of capital as employed in financial analysis and routinely employs discount rates to value future costs and benefits. Mr. Carr did not undertake any independent studies on this subject as part of his engagement in the subject matter. Mr. Carr did compare the selected 3.0% discount rate with long-term capital rates for low risk U.S. government instruments. See the work-paper from Mr. Carr's file included below.

**30 Year Treasury Yield Rates Work-paper**

**Ref: VTGas**

<u>Year</u>	<u>January 1</u>	<u>July 1</u>
2010	4.6612%	3.8651%
2011	4.3942%	4.3970%
2012	2.9930%	2.6830%

Notes:

1. Yield rates on United State Treasury securities as reported by *The Wall Street Journal* .

c. The question asked is purely hypothetical without context and cannot be answered without that context.

Person Responsible for Response: Jeffrey B. Carr  
Title: President and Senior Economist, Economic and Policy Resources, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-50:** In pre-filed testimony, Mr. Carr states that his analysis of the Project assumes service to International Paper and would therefore have “no additional rate impact.” Pre-filed Testimony of Jeffrey Carr at p. 12, lns. 20-22. Please explain this statement and provide all analyses in support of this conclusion. Please also explain the time horizon evaluated in making this statement.

**A.PSD:VGS.1-50:** The statement referenced on page 12, lines 20-22 refers to the Reference Case scenario examined in the EPR analysis. The statement means that IP would contribute to the cost of the system expansion, and that those costs of the Project would not be borne by the future customers in Addison County or the current customers in the existing Vermont Gas Systems, Inc. service territory.

EPR did not undertake any analysis with regard to the rate impact of IP. EPR relied upon information provided by VGS. Please refer to **HIGHLY CONFIDENTIAL Attachment A.ANR:VGS.RTP.1-3 (Simollardes)**.

The time horizon for both analyses was from 2011 through 2031.

Person Responsible for Response: Jeffrey B. Carr, Eileen Simollardes  
Title: President and Senior Economist, Economic and Policy Resources, Inc.; Vice President, Supply and Regulatory Affairs, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-51:** In pre-filed testimony, Mr. Carr states that VGS ran a scenario in which service to International Paper does not occur, International Paper does not contribute to Project costs, and the resulting impact would be a 2.6 to 4.5 percent rate increase in 2015. Pre-filed Testimony of Jeffrey Carr at p. 13, lns. 1-6. Please provide the analysis in support of these estimated rate increases.

**A.PSD:VGS.1-51:** The estimated rate impact as a result of service to International Paper not occurring and the subsequent lack of a contribution to project costs from International Paper were provided to EPR by VGS. Please refer to **HIGHLY CONFIDENTIAL Attachment A.ANR:VGS.RTP.1-3 (Simollardes)**.

Person Responsible for Response: Jeffrey B. Carr, Eileen Simollardes  
Title: President and Senior Economist, Economic and Policy Resources, Inc.; Vice President,  
Supply and Regulatory Affairs, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-52:** Please provide the following information supporting the data and calculations contained in Exh. Petitioner JC-2 and JC-3:

a. Please provide all the data and assumptions used in conducting the Present Value (PV) analysis.

b. Did Mr. Carr conduct the PV analysis based on different cost assumptions? If yes, please explain and provide a copy of the summary of such analysis along with all data and assumptions. If no, please explain the reasons for not doing so.

c. Do Exh. Petitioner JC-2 and JC-3 include the impact of job losses and negative economic impact Mr. Carr discussed on Page 11 of his testimony? If yes, please indicate where and how these factors have been included in Exh. JC-2. If no, please explain the reasons for not doing so and provide a PV analysis incorporating the job losses and negative economic impact.

d. Do Exh. Petitioner JC-2 and JC-3 include the customers' cost to convert to gas, need for increased system capacity to serve new loads, the amounts which International Paper is not required to pay as per the Facility Development Agreement, and the potential of non-recovery of costs from International Paper due to financial issues and/or bankruptcy protection? If yes, please explain and provide all supporting data and assumptions. If no, please explain the reason for not doing so.

**A.PSD:VGS.1-52:**

a. See attached work-paper identified as "Background Notes: Vermont Gas Systems Addison County Expansion, Construction and Operations Phases," included as **CONFIDENTIAL Attachment A.ANR:VGS.RTP.1-3 (Carr)**.

b. No.

c. Exhibit Petitioner JC-2 does include the impact of job losses and negative economic impact discussed on page 11 of my pre-filed testimony. These factors are displayed as Item D Substitution Impact in JC Table 3. These factors have been included in the summation of Items A through D displayed in Item E of JC Table 3, which is the total job and economic impact associated with the Project in the Reference Case.

Exhibit Petitioner JC-3 does include the impact of job losses and negative economic impact discussed on page 11 of my pre-filed testimony. These factors are displayed as Item D Substitution Impact in JC Table 6. These factors have been included in the summation of Items A through D displayed in Item E of JC Table 6, which is the total job and economic impact associated with the Project in the Alternative Case.

d. Exhibit Petitioner JC-2 does include the customers' cost to convert to gas. These costs are included in Item D Expanded Service Territory Conversion Costs Forecast – Reference Case of JC Table 2, which is also displayed on JC Table 1. These costs are also included in Item H

Present Value Calculations – Reference Case of JC Table 2. This figure is displayed on JC Table 1. Furthermore, they are included in Item A Construction + Conversion Expenditures in Addison County of JC Table 3. Construction costs include all system expansion costs included in engineering and construction estimates provided to EPR by VGS.

Exhibit Petitioner JC-2 has inherent assumptions as to the division of the contribution to the costs of the Project between the various potential customers as provided by VGS.

Exhibit Petitioner JC-2 does not include the potential of non-recovery of costs from International Paper due to financial issues and/or bankruptcy protection. The Alternate Case summarized in Exhibit Petitioner JC-3 includes the potential of non-recovery of any and all costs that International Paper may contribute. Therefore, the two scenarios represent a range of the impacts given full recovery of the International Paper contribution to no contribution from International Paper.

Copies of the supporting data and assumptions are attached.

Exhibit Petitioner JC-3 does include the customers' cost to convert to gas. These costs are included in Item D Expanded Service Territory Conversion Costs Forecast – Alternate Case of JC Table 5, which is also displayed on JC Table 4. These costs are also included in Item H Present Value Calculations – Alternate Case of JC Table 5 (Item H in JC Table 5 is incorrectly titled as the Reference Case). This figure is displayed on JC Table 4. Furthermore, these are included in Item A Construction + Conversion Expenditures in Addison County of JC Table 6. Construction costs include all system expansion costs included in engineering and construction estimates provided to EPR by VGS.

Exhibit Petitioner JC-3 assumes that no contributions are received from International Paper.

Copies of the supporting data and assumptions are **HIGHLY CONFIDENTIAL Attachment A.ANR:VGS.RTP.1-3 (Carr)**.

Person Responsible for Response: Jeffrey B. Carr  
Title: President and Senior Economist, Economic and Policy Resources, Inc  
Date: May 3, 2013

**Q.PSD:VGS.1-53:** Mr. Teixeira refers to an analysis of market demand in Addison County and beyond, as well as an assessment of that analysis by Clough Harbour & Associates. Pre-filed Testimony of Jean-Marc Teixeira at p. 4-7.

a. Please provide Mr. Teixeira's design-day methodology and analysis, including support and underlying data and analysis of his determination of 93 effective degree-days (EDD).

b. Please provide the basis for Mr. Teixeira's assumption that peak hour load is 5 percent of the peak day load, and supporting documentation for his assertion that such an assumption is common in the industry.

c. Are the projected peak day demands based on 93 EDD? If not, at what EDD are these loads computed?

d. Please provide the actual peak day demands for VGS's existing system for the years 2007 through 2012. Also please provide all the peak day demand forecasts made for the years 2007 through 2012. Please provide actual and projected peak day demands with and without interruptible loads.

e. Please provide VGS's current and projected peak day capabilities.

**A.PSD:VGS.1-53:**

a. Please see the Integrated Resource Plan, **Attachment A.ANR:VGS.RTP.1-3 (Teixiera)**.

b. Industry knowledge and experience.

c. Yes.

d. Objection, overly broad and unduly burdensome. Notwithstanding the objection, see **Attachment A PSD:VGS.1-53d.1** containing VGS' actual peak day demands for 2007 through 2012. See **Attachment A PSD:VGS.1-53d.2** containing VGS forecasts of peak day demand for the years 2007 through 2012. VGS does not have projected peak day demands including interruptible loads.

e. Please see page 10 of Mr. Teixeira's testimony.

Person Responsible for Response: Marc Teixeira and Eileen Simollardes  
Title: Vice President – Operations, Vermont Gas Systems; Vice President – Supply and Regulatory Affairs, Vermont Gas Systems  
Date: May 3, 2013

**Q.PSD:VGS.1-54:** In pre-filed testimony, Mr. Lyons refers to the usage by International Paper of approximately 2.5 Bcf, which represents a 30 percent increase over VGS's current sales volumes. Pre-filed Testimony of Timothy S. Lyons at p. 5, lns. 17-21.

- a. Please provide the detailed data and calculations that support these figures.
- b. Please calculate the estimated increase in the Peak-Day Demand that will result from the addition of the International Paper load.
- c. Please reconcile and explain these figures with:
  - i. the limits placed on International Paper service in its Interruptible Sales Agreement at section 3 (Exh. Petitioner TSL-8), and
  - ii. the VGS 2013 Peak-Day Demand of 65,367 Mcf as shown on Table 1, page 7 in pre-filed testimony of Mr. Teixeira.
- d. Is it correct that the forecasted Total Peak Day Demands in Table 2, page 7 in pre-filed testimony of Mr. Teixeira do not include the International Paper load?
  - i. If yes, please explain the reasons for not including the International Paper loads. Also, please provide the forecasted Peak Hour and Peak Day Demands that would include the International Paper loads.
  - ii. If no, please explain how much the International Paper loads are included for each of the Years 2013-2017 in Table 2.
  - iii. Do the Total Peak Day Demands include all the new communities to be served by the Project as explained on Pages 4-6 of Mr. Lyons' pre-filed testimony? If not, please provide the estimated Peak Day Demand that include these loads on a community-by-community basis.

**A.PSD:VGS.1-54:** Mr. Lyons relied upon **HIGHLY CONFIDENTIAL Attachment A.PSD:VGS.1-54a** prepared by International Paper and does not have the data and calculations on which it relied. 30% is the quotient of the Mill's expected use of 2.5 Bcf and Vermont Gas' annual sales in 2012 of 7.9 Bcf.

- b. There will be no increase in peak day demand that will result from the addition of the International Paper load as International Paper is an interruptible customer and will be curtailed on a peak day.
- c. There is no such figure to use as a comparison. Please refer to the Company's response to Q.PSD:VGS.1-54 (b.), above.

d. Yes.

i. Please refer to the Company's response to Q.PSD:VGS.1-54 (b.)

ii. Please refer to the Company's response to Q.PSD:VGS.1-54 (b.)

iii. Table 2 includes peak day estimates for Vergennes and Middlebury. VGS intends to also serve Monkton, New Haven, Bristol, and St. George. The peak day estimates for these communities have not yet been calculated.

Person Responsible for Response: Timothy Lyons, Marc Teixeira  
Title: Vice President of Sales and Marketing, Vermont Gas Systems, Inc.; Vice President of Operations, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-55:** In pre-filed testimony, Mr. Teixeira describes how VGS determined the appropriate piping configurations for the Project. Pre-filed Testimony of Jean-Marc Teixeira at pp. 8-9.

a. Given these criteria, will VGS have sufficient contracted capacity on its transmission system to serve the increased loads resulting from this Project alone? Will VGS have sufficient contracted capacity on its transmission system to serve the increased loads resulting from this Project as well as the subsequent extension to International Paper? Please provide analysis in support of the response.

b. If the answer to one or both of these questions is no, please explain how VGS plans to acquire additional transmission capacity. In the event additional transmission capacity is needed, did Mr. Carr incorporate that cost in his present value analysis?

**A.PSD:VGS.1-55:**

a. . Yes, assuming the construction of transmission system looping that is the subject of Docket No. 7929, VGS will have adequate capacity on its transmission system for this project. See the testimony of Mr. Howe regarding the capacity for this project. VGS will need to increase the capacity on its transmission system to accommodate the IP loads as described in Mr. Lyon's testimony. These flow analyses will be provided in the subsequent 248 application for the facilities required to serve IP.

b. VGS will acquire additional transmission capacity by constructing additional facilities. No, Mr. Carr did not include the additional costs since they will be fully borne by IP.

Person Responsible for Response: Jean-Marc Teixeira  
Title: Vice President of Operations, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-56:** In pre-filed testimony, Mr. Teixeira asserts that VGS will have sufficient capacity to meet projected system peak-day demand. Pre-filed Testimony of Jean-Marc Teixeira at p. 10, Ins. 13-15 and table 3.

a. If the Estimated Peak-Day Send Out is increased to include the International Paper load, will Total System capacity be sufficient to meet the Estimated Peak-Day Demands? If not, please explain how the Total System Capacity presented in Table 3 would be sufficient to meet the Estimated Peak-Day Demand which includes the International Paper load.

b. If the International Paper loads result in acquiring additional system capacity, what type of capacity does VGS plan to add? Please provide all the analyses related to the cost/benefit of different options of additional system capacity.

c. Please provide VGS's current pipeline capacity.

d. Please explain the reasons for adding 4,325 Mcf in 2014 while VGS is projecting an increase of only 768 Mcf in its Peak Day Send Out in 2014.

**A.PSD:VGS.1-56:**

a. See A.PSD:VGS.1-54(b).

b. The additional capacity required to serve International Paper will be included in the "Addison Extension" and be part of the subsequent 248 proceeding for Phase II.

c. Please refer to page 10 of Mr. Teixeira's testimony.

d. Please refer to the testimony and Exhibits in Docket No. 7929

Person Responsible for Response: Jean-Marc Teixeira  
Title: Vice President of Operations, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-57:** In pre-filed testimony, Mr. Lyons refers to incentives offered by the Petitioner to customers who purchase new heating systems. Pre-filed testimony of Timothy S. Lyons at p. 9, lns. 8-11.

- a. Please provide the details with respect to the referenced incentives.
- b. Please provide the actual costs related to each category of incentives offered during the Years 2010, 2011 and 2012. Also, please provide the projected amounts for each category for the Years 2013-2017.
- c. Please describe how the costs related to these incentives have been recovered in the past.

**A.PSD:VGS.1-57:**

- a. Vermont Gas has equipment replacement programs for customers, new and existing, who are replacing failed or end-of-life equipment with new natural gas-fired equipment. **Attachment A.PSD:VGS.1-57a** provides information on the rebate programs.
- b. See **Attachment A.PSD:VGS.1-57b**.
- c. Energy efficiency incentives are deferred between rate proceedings and then, after regulatory review, amortized over three years in the next base filing.

Person Responsible for Response: Timothy S. Lyons, Eileen Simollardes  
Title: Vice President of Sales and Marketing, Vermont Gas Systems, Inc., Vice President –  
Supply and Regulatory Affairs  
Date: May 3, 2013

**Q.PSD:VGS.1-58:**

a. Please describe who will be responsible for any actual costs in excess of the estimated costs set forth in Exhibit C of the FDA.

b. Section 8.1.4(ii) requires VGS to pay International Paper for its costs related to the Mill improvements. In the event VGS pays for such costs, would VGS recover such costs from its customers?

c. Exhibit E of the FDA provides that, in the event of the termination of the FDA by VGS or International Paper, International Paper only pays 50 percent of the Addison Extension Cost. In this event, would VGS recover 50 percent of the Addison Extension Cost from its customers?

d. Exhibit E of the FDA does not contain any provision for the recovery of the Addison Upgrade Facilities cost of \$20 million from International Paper. How is VGS planning to recover this cost?

e. In the event of the default on the part of VGS without any fault on the part of International Paper, what is International Paper's cost responsibility and would VGS recover costs not recovered from International Paper from its customers?

f. Exhibit D of the FDA refers to the Company's Carrying Costs. Please describe the computation of the Company's Carrying Costs.

g. Exhibit F provides for the recovery of the unrecovered portion of 25 percent of the Addison Upgrade and the Addison Expansion Costs if the gas service is terminated prior to 13 years and nine months after the gas service to International Paper commences.

i. Would VGS recover the remaining costs from its customers?

ii. If the Service is terminated after 13 years and 9 months, does International Paper pay any amount related to the Addison Upgrade and Addison Expansion? If no, why not and would VGS recover unrecovered costs from its customers? If yes, how much would International Paper pay for such costs?

**A.PSD:VGS.1-58:**

a. International Paper is responsible for the actual costs of facilities development. Please see Exhibit Petitioner TSL – 7, the Facilities Development Agreement, Exhibit D.

b. Objection. The question is vague and ambiguous, overly broad and/or unduly burdensome and calls for Vermont Gas to speculate based on incomplete hypothetical facts and

necessary assumptions. Notwithstanding and without waiver of the objection, the answer is currently unknown. It could depend on the rationale for the termination. In the event that the Facilities Development Agreement is terminated for convenience, in accordance with Section 8.1.4 (ii), Vermont Gas would pay IP for costs actually incurred for Mill improvements. The recovery mechanism for such payments could include recovery from customers under certain circumstances, such as, for example, a customer benefit flowing from a termination.

c. Yes.

d. In the event of pre-service termination as described in Exhibit E to the Facilities Development Agreement, the costs related to the Addison Upgrade would be recovered from Vermont customers as such facilities would be used solely to serve Vermont customers.

e. Objection calls for a legal conclusion.

f. Please see Exhibit Petitioner TSL – 7, the Facilities Development Agreement, Exhibit D, items 1 and 2. Carrying Cost is equivalent to the Company's pre-tax weighted cost of capital as approved by the Vermont Public Service Board.

g.

i. Yes. Vermont Gas would recover from its customers the remaining 75 percent of the cost of the Addison Upgrade and Addison Extension since those facilities would be used to serve Vermont customers.

ii. International Paper would have already paid 25% of the Addison Upgrade and Addison Extension and therefore not pay any additional amount related to the cost of the Addison Upgrade or Addison Extension as those facilities would be used to serve Vermont customers.

Person Responsible for Response: Timothy S. Lyons  
Title: Vice President of Sales and Marketing, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-59:** In her testimony, Ms. Simollardes asserts a number of economic benefits that will result from the Project. Pre-filed Testimony of Eileen Simollardes at p. 3. Please provide data and workpapers, along with any analyses, assumptions, and computations, supporting the asserted savings set forth in lines 1-2, 13, 14 and 15 of page 3 of Ms. Simollardes' testimony.

**A.PSD:VGS.1-59:** See **HIGHLY CONFIDENTIAL Attachment A.ANR:VGS.RTP.1-3 (Simollardes)**.

Person Responsible for Response: Eileen Simollardes  
Title: Vice President, Supply and Regulatory Affairs, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-60:** In pre-filed testimony, Ms. Simollardes describes how VGS proposes to use the System Expansion and Reliability Fund (Fund) to supplement revenues generated from the new markets to cover the cost-of-service associated with serving the Addison market. Pre-filed Testimony of Eileen Simollardes at p. 8-9.

- a. Please provide data and workpapers used in support of the estimated Fund deposits, withdrawals, and balances contained in Exh. Petitioner EMS-2.
- b. Please provide and fully explain the method VGS proposes for determining each withdrawal and for seeking Board approval for each withdrawal.
- c. Please provide the per-unit gas cost assumed for each of the years in Exh. Petitioner EMS-2 and the per-unit gas cost recovered from ratepayers. Please provide the basis and analysis that support these per unit costs.
- d. Please provide actual customer deposits to the Fund for 2012 and to-date for 2013.
- e. The total withdrawal from the Fund shown in Exh. Petitioner EMS-2 is approximately \$55.0 million. How does VGS plan to finance the additional Project cost and at what cost is this financing is expected? Also, please describe how the additional cost would be recovered by VGS.

**A.PSD:VGS.1-60:**

- a. See A.ANR:VGS.RTP.1-3 (Simollardes) and **Attachments A.PSD:VGS.1-60.1** and **A.PSD:VGS.1-60.2**.
- b. Vermont Gas proposes to file a cost of service with and without the Project and the Addison market. Vermont Gas will seek Board approval to use withdrawals from the Fund to cover the difference in the cost of service.
- c. See **Attachment A.PSD:VGS.1-60.3** containing the per-unit gas cost assumed for each year as shown in Exhibit Petitioner EMS-2. Note for modeling purposes, and consistent with VGS Alternative Regulation Plan, gas costs are assumed to be fully recovered by the natural gas charge, e.g., natural gas costs and natural gas revenues are equal and therefore have no impact on the fund deposits or withdrawals shown on Exhibit Petitioner EMS-2. The gas costs calculation is shown in **HIGHLY CONFIDENTIAL Attachment A.ANR:VGS.RTP.1-3 (Simollardes)**.
- e. The Project is intended to be funded with 55% equity and 45% debt. VGS intends to do a long-term bond issuance for the debt portion of the Project. For purposes of the developing EMS-2 a cost of debt of 5.20% was assumed. The Fund is not used to finance the Project but rather is used to cover the shortfall in the cost of service associated with construction of the Project.

Person Responsible for Response: Eileen Simollardes  
Title: Vice President, Supply and Regulatory Affairs, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-61:** Is Ms. Simollardes testimony on page 9, Ins. 16-20 intended to represent an official request for approval to use the Fund to “supplement the revenues that will be generated from the new markets, including IP, necessary to cover the cost-of-service associated with serving the Addison market?” If so, what alternatives, if any, has VGS considered in using the Fund?

a. Please describe the alternatives considered and explain fully with supporting detail why the options considered were not selected and the advantages of the option selected.

b. Under each alternative, including the selected option, please describe how the use of the Fund would be accounted for and how it would be reflected in a cost of service

**A.PSD:VGS.1-61:**

No. Ms. Simollardes testimony is not intended to represent an official request for approval to use the Fund.

a. N/A

b. N/A

Person Responsible for Response: Eileen Simollardes  
Title: Vice President, Supply and Regulatory Affairs, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**Q.PSD:VGS.1-62:** Is Ms. Simollardes testimony on page 9, lns. 16-20 intended to represent an official request for approval to withdraw funds from the Fund as shown in Exh. Petitioner EMS-2?

**A.PSD:VGS.1-62:** No.

Person Responsible for Response: Eileen Simollardes  
Title: Vice President, Supply and Regulatory Affairs, Vermont Gas Systems, Inc.  
Date: May 3, 2013

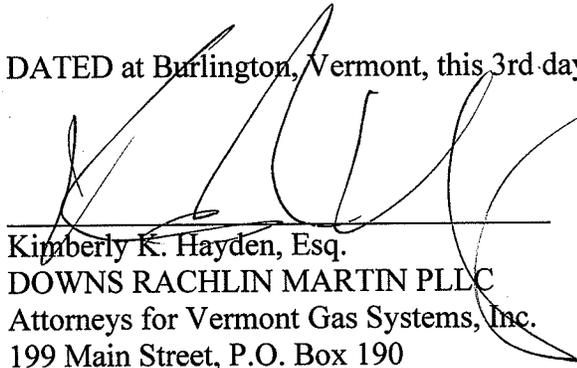
**Q.PSD:VGS.1-63:** In pre-filed testimony, Ms. Simollardes states that if the expansion to International Paper does not occur, the Project would require between a 2.7 and 4.5 percent rate increase in 2015. Pre-filed Testimony of Eileen Simollardes at p. 8, Ins. 7-8. Please provide all data, information and worksheets that were relied upon to support of these percentage rate increases.

**A.PSD:VGS.1-63:** See **HIGHLY CONFIDENTIAL Attachment.A.ANR:VGS.RTP.1-3 (Simollardes)**.

Person Responsible for Response: Eileen Simollardes  
Title: Vice President, Supply and Regulatory Affairs, Vermont Gas Systems, Inc.  
Date: May 3, 2013

**As to objections: Kimberly K. Hayden, Esq.**

DATED at Burlington, Vermont, this 3rd day of May, 2013.



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