STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 7970

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 Counties, approximately 5 miles of new distribution mainlines in Addison County, together with three new gate stations in Williston, New Haven and Middlebury, Vermont	)))))))))))

VERMONT GAS SYSTEMS, INC.'S
REPLY BRIEF

NOW COMES Vermont Gas Systems, Inc. ("Vermont Gas," "VGS," or the "Company") and respectfully replies[1] to proposed findings and briefs submitted by the following Non-Petitioners: (1) Vermont Agency of Natural Resources ("ANR"); (2) Conservation Law Foundation ("CLF"); (3) Vermont Department of Public Service ("DPS"); (4) Nathan Palmer; (5) Michael Hurlburt; (6) Town of New Haven; and (7) Vermont Fuel Dealers Association ("VFDA").[2]

1. Reply to ANR

In its Brief, ANR agrees that the Project will not result in an undue adverse impact on the natural environment, based on the mitigation measures and terms and conditions set forth in the MOU between VGS and ANR.[3] ANR also recommends that the Board condition VGS'

[1] VGS filed a substantial Proposed Decision on October 11, 2013 ("VGS Proposed Decision"). For purposes of efficiency, VGS does not repeat here facts and analysis already detailed in its direct submittal that are responsive to Non-Petitioners' proposed decisions.
[2] Capitalized terms and acronyms not otherwise defined herein shall have the meaning set forth in the VGS Proposed Decision.
[3] ANR also mentions "other recommendations of ANR" (ANR brief at 38). VGS understands that there are no other ANR conditions other than those in the MOU and ANR will be clarifying this statement.

commencement of construction and ground clearing on receipt of all necessary state and federal collateral permits.[4]

VGS does not object to ANR's proposed condition, but requests that it be appropriately tailored to the specific activities that are the subject of the collateral permits, as follows:

> Prior to proceeding with construction in any given area, the Petitioner shall obtain all necessary permits and approvals, as required for the proposed construction activities in that area. Construction, operation and maintenance of the proposed Project shall be in accordance with such permits and approvals, and with all other applicable regulations, including those of the Vermont Agency of Natural Resources and the U.S. Army Corps of Engineers.[5]

VGS respectfully submits that this clarification is needed to ensure timely and efficient Project construction. With a linear project that spans multiple towns and counties, not all portions of the project may be subject to the same set of collateral permits. Broadly conditioning VGS' ability to commence any construction on its receipt of all collateral permits would therefore unduly delay Project construction[6] without any commensurate benefit. VGS also submits that the Board has previously imposed similar activity-specific conditions in other Dockets.[7] For clarity, it should be noted that VGS is not proposing that its collateral permits be issued for specific portions of the Project at a time, only that if a specific permit is not yet issued, for example a municipal road crossing permit, that it not limit VGS' ability to construct in areas where the permit is not applicable.

2. Reply to CLF

2.1. VGS Has Met its Burden of Proof; There is Substantial Evidence to Support Each of the Substantive Criteria of Section 248

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[4] ANR Brief at 38. The Project activities require that VGS obtain four collateral state permits from ANR (an Individual Construction Stormwater Discharge Permit, a Stream Alteration Permit, a Wetlands Permit, and a 401 Water Quality Certification) and a federal Department of the Army Section 404 permit. In addition, VGS will require highway construction permits from the Agency of Transportation and local municipalities for work in state and local roadways.

[5] VGS Proposed Order at ¶ 2.

[6] *See* fn. 42, *infra,* for a discussion of the adverse consequences to the general good of the state if the Project is unnecessarily delayed. VGS notes that CLF's Reply Brief cites *Energy Conservation Council of Pennsylvania v. Pub. Util. Comm'n*, 25 A.3d 440, 452 (Pa. Commw. Ct. 2011), as another instance where a statutory commission has permitted construction to commence on sections of a project prior to obtaining permits for all segments of a linear utility project. CLF Brief at 10.

[7] *See, e.g.*, Docket 7628, *In re: Joint Petition of Green Mountain Power Corporation, Vermont Electric Cooperative, Inc. and Vermont Electric Power Company, Inc ("Lowell Mountain Wind)"*, Order of 5/31/11 at 176 ¶¶ 29, 32.

CLF's Brief makes the blanket assertion that VGS has not met its burden of proof to meet the requirements of 30 V.S.A. § 248(b).[8] This is incorrect.

As the Board has previously observed:

> A petitioner has the burden of proof to provide sufficient evidence to satisfy the substantive criteria of Section 248. A petitioner's burden of proof involves two concepts—the burden of production and the burden of persuasion. Once a petitioner carries its initial burden of production by presenting credible evidence for each of the substantive criteria of Section 248, it could receive a favorable decision from the Board. If a petitioner has thus carried its burden, the burden of production then shifts to the non-petitioner party to present evidence which calls into question a petitioner's ability to satisfy a substantive criterion of Section 248.[9]

While the burden of persuasion remains with a petitioner, once the petitioner has carried its initial burden of production, then the non-petitioner parties must present evidence showing that the petitioner does not meet the Section 248 criterion at issue.[10]

CLF's arguments go to the weight of the evidence, not the burden of proof.[11] As shown below and in VGS' Proposed Decision, CLF's arguments are unavailing. While VGS has provided substantial evidence to support the Section 248 criteria, CLF's evidence was largely unsupported and flawed.

2.2 Greenhouse Gas Impacts

CLF asserts that VGS failed to demonstrate that the Project will not have an undue adverse impact on air quality under 30 V.S.A. § 248(b)(5) and "provided far too limited evaluation of the proposed project's greenhouse gas emissions impacts."[12] As a threshold issue,

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[8] CLF Brief at 2, 6-7. In addition to the points rebutted herein, CLF also claims that VGS failed to satisfy the 30 V.S.A. § 248(b)(2) least-cost planning requirement (CLF Brief at 12-13) and that the Project is inconsistent with the Vermont Comprehensive Energy Plan ("CEP") (CLF Brief at 13-14). VGS fully addresses these points in its Proposed Decision at pages 83–85.

[9] Docket No. 7508, *In re: Petition of Georgia Mountain Community Wind, LLC*, Order of 9/1/2011 at 3–4.

[10] *Id.* at 3, n.4.

[11] *See, e.g.*, CLF Brief at 7, which challenges the VGS assumption that natural gas will displace oil and propane in Addison County. CLF claims that this is a flawed assumption that undercuts the VGS lifecycle GHG analysis. This challenge goes to the weight of the evidence, not to the burden of proof. Moreover, CLF's unsupported claim is contradicted by empirical data from recent VGS expansions. Over the past 6 years, Vermont Gas has expanded natural gas service to four new communities in Vermont—Jericho (2007), Underhill (2008), Hinesburg (2009), and Richmond (2012). Today, almost 70% of homes and businesses with access to natural gas service in those new communities are now using natural gas, lowering their fuel costs by an estimated $2.5 million per year. Gilbert 12/20/12 pf. at 7; Lyons 12/20/12 pf. at 3, 6.

[12] CLF Brief at 7.

CLF's arguments are undermined by its failure to analyze the issue of GHG impacts in the context of the statutory standard set forth in Section 248(b)(5).[13]

Under Section 248(b)(5), the Board must find that the Project "will not have an undue adverse effect on esthetics, historic sites, air and water purity, the natural environment, the use of natural resources, and the public health and safety, *with due consideration having been given* to the criteria specified in 10 V.S.A. §§ 1424a(d) and 6086(a)(1) through (8) and (9)(K) and *greenhouse gas impacts*".[14] Pursuant to the plain language of Section 248(b)(5), greenhouse gas impacts are not controlling in the Board's determination of whether a project will not have an undue adverse effect on air purity.[15] Nor does the statute set forth a quantifiable standard for GHG emissions.

Of note, however, is the fact that VGS, DPS, ANR and CLF (as corrected) all provided analyses that showed that the Project is expected to result in a net reduction in greenhouse gas emissions, with CLF showing a net reduction of 220,439 tons of CO_2e over 20 years, and 1,138,851 tons CO_2e over 100 years.[16] In addition, during the week of technical hearings in this matter, the University of Texas released an important study undertaken by researchers at the University of Texas in conjunction with the Environmental Defense Fund that reported natural gas production methane leakage rate of only 0.42 %, based upon direct measurements of methane emissions for the production sector.[17] The use of direct measurements, as in the Texas study, is something that CLF's witness, Dr. Stanton, suggested was important to validate lifecycle GHG emissions calculations, such as those presented by VGS.[18] The 0.42% methane leak rate reported by the University of Texas is in line with inventory estimates from the EPA, which are lower than the 3% methane leak rate used by DPS, VGS, and CLF for their respective

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[13] CLF's brief also relies upon a draft of the 5th Assessment of the International Panel on Climate Change ("IPCC"), suggesting that IPCC has increased the value for the global warming potential ("GWP") of methane. CLF Brief at 8. This document was not admitted into evidence and therefore is not properly before the Board. *In re Twenty-Four Vt. Utilities*, 158 Vt. 339, 349-50, 618 A.2d 1295 (1992) (while noting that "the rules of evidence are relaxed in Board proceedings so that evidence not admissible on court is admissible by the Board if it may 'illuminate the case[,]'" the Court emphasizes that "[t]here is no relaxation of the requirement ... that evidence must be admitted before it is relied upon by the Board"). Regardless, the IPCC has not finalized its review of the GWP of methane, and thus no determination has been made regarding the value to be included in the final version of its 5th Assessment.

[14] 30 V.S.A. § 248(b)(5) (emphasis added).

[15] Docket No. 7508, *In re: Petition of Georgia Mountain Community Wind, LLC*, Order of 6/10/11 at 28-29 (reaching same conclusion in construing Section 248(b)(5) with respect to Act 250 criteria).

[16] Stanton surr. pf. at 4.

[17] Exh. Pet. Surr. JLB-1.

[18] Stanton. reb. pf. at 8-9.

calculations in this case, suggesting that the net reductions in greenhouse gases resulting from this Project may be greater than estimated by the parties.[19]

Moreover, much of the testimony and analysis offered by Dr. Stanton was open to doubt and should be carefully evaluated by this Board. Dr. Stanton lacks any experience in conducting lifecycle analysis,[20] and she did not read, nor was she familiar with, the lifecycle studies that she used to develop her own methane leak rate.[21] As noted by the DPS in its brief, Dr. Stanton inappropriately modeled the impact of lifecycle greenhouse gas emissions from the Project by comparing them to only a portion of the lifecycle for other fuels. The greenhouse gas emissions attributable to the Project must be compared with a counter scenario in which customers are served by some other fuel source. When such an analysis was conducted, by CLF's witness' own admission, the Project reduces GHG emissions.[22] CLF next posited a hypothetical future whereby the Project's excess capacity would be used by a future facility and attributed all incremental GHG emissions from this facility to the Project.[23] To attribute all emissions of this hypothetical future facility to the Project, as CLF attempted to do, without any comparison to the alternatives (e.g. fuel oil), is not sound analysis.[24] Dr. Stanton also used the wrong density of methane for her initial calculations[25] because she had no previous experience with calculating the density of methane,[26] a fundamental part of calculating methane emissions.[27] Once she corrected her error, Dr. Stanton admitted that her calculations resulted in a net decrease in GHG emissions associated with the Project.[28]

Dr. Stanton also took completely out-of-context an Office of Inspector General ("OIG") February 2013 report, to support her contention that there is significant uncertainty in the data regarding methane leak rates from natural gas systems.[29] The OIG report addressed uncertainty and data gaps in the EPA's National Emissions Inventory ("NEI"), not the EPA GHG Inventory.

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[19] *See* Tr. 9/20/13 at 65–66 (Bluestein).
[20] Tr. 9/20/13 at 100 (Stanton).
[21] Tr. 9/20/13 at 101– 02 (Stanton).
[22] Tr. 9/20/13 at 124 (Stanton); *see also* Stanton surr. pf. at 7; exh. CLF-EAS-12.
[23] Stanton surr. pf. at 6-7; *see also* tr. 9/20/13 at 125-6 (Stanton).
[24] Poor pf. at 3; DPS Brief at 25-26.
[25] Stanton pf. at 14–5; Stanton surr. pf. at 5; tr. 9/20/13 at 99 (Stanton).
[26] Tr. 9/20/16 at 97 (Stanton).
[27] The density of methane at normal temperature and pressure is 42 lb/mcf. This is the appropriate density of methane to use for such an analysis based upon the EPA's greenhouse gas regulations. This conversion factor is critical in order to translate volumetric sales information into mass for understanding carbon equivalent emissions impacts. Bluestein 6/28/13 reb. at 9; Poor 8/15/13 reb. at 5; Stanton surr. pf. at 3.
[28] Stanton pf. at 14–15; Stanton surr. pf. at 5; tr. 9/20/13 at 99 (Stanton).
[29] Stanton reb. pf. at 6.

The NEI does not include data regarding methane leak rates from natural gas systems or GHG emissions, but rather provides data on criteria and toxic pollutants.[30] The NEI is an entirely different inventory than the GHG inventory, and as such, the OIG statements regarding uncertainty have no bearing on GHG emissions rates from natural gas systems.

Another questionable source of data relied upon by Dr. Stanton to support her assertions of uncertainty is a recent Utah study that calculated methane emissions taken from air samples from a plane during a fly-over of a large oil and gas basin in Uintah, Utah, on a single day in February of 2012.[31] The Uintah basin contains 1000 oil wells, 4500 gas wells and an estimated 44,000 head of cattle, and thus the air samples collected reflected methane from all of these sources, not just natural gas production.[32] The supporting workpapers published with the Uintah report included a detailed uncertainty analysis that identified numerous uncertainties in the analysis, disclosing an overall uncertainty around its estimates at +/-27%.[33] The study itself cautioned that it was not a definitive data source, noting that "[f]urther measurements over several days and different months and seasons would be necessary to evaluate the variability of emissions in Uintah County, because our result represents a snapshot of emissions from this region."[34]

Unlike the Uintah flyover study, the Texas study mentioned above, as well as the 2013 World Resources Institute workpaper referenced by Dr. Stanton (the "WRI Report")[35], provide much more substantial and reliable evidence. Although not mentioned by Dr. Stanton, a key finding of the WRI report is that cutting the methane leakage rate from natural gas systems to less than 1% can be achieved through the widespread use of proven, cost-effective technologies.[36] WRI also estimates that new regulations under the EPA's New Source Performance Standards ("NSPS") for so-called "green completions" will reduce methane emissions from the flow-back stage of all U.S. hydraulic fracturing operations, and are expected to reduce methane emissions enough to reduce all U.S. upstream GHG from shale gas operations

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[30] Exh. Pet. CLF Cross-33 at 3–4, 19–20; tr. 9/20/13 at 115–117 (Stanton).
[31] Exh. Pet. Cross CLF-27.
[32] Exh. Pet. Cross CLF-27 at 2; exh. Pet. Cross CLF-28 at 11.
[33] Exh. Pet. Cross CLF-27 at 3. The supporting workpaper is replete with the word "uncertainty", using it over 32 times to describe the uncertainty in the underlying analysis, calculations and final result.
[34] *Id.* at 4-5.
[35] Exh. CLF EAS-6.
[36] *Id.* at 5.

by 30% beginning in 2013, and by 46% by 2035.[37] To the extent that this Project brings VGS closer to interconnecting with the U.S. interstate gas pipeline system, these estimates are promising.

2.3. VGS' Energy Efficiency Programs Should be Addressed in Docket No. 7676

CLF makes a number of proposals regarding the use of VGS funds to support energy efficiency programs in Addison County, and also suggests revisions to VGS energy efficiency programs. VGS concurs with DPS that Vermont Gas's obligations as an energy efficiency utility are under investigation in another pending docket—Docket 7676—and the manner and extent of the efficiency services Vermont Gas should provide in Addison County are best addressed there.[38]

3. Response to DPS

3.1 Response to DPS Regarding a Proposed Rotax Road Alternative Route

In this case, DPS acknowledges that the Project will not have an undue adverse impact upon Public Health and Safety, because public safety is protected by the design, construction and operational requirements set forth by the federal Pipeline Safety Code.[39] DPS further agrees that the Project as proposed, including the route crossing the Palmers' land, is consistent with Orderly Development of the Region and otherwise satisfies the other substantive criteria of Section 248.[40]

Nevertheless, DPS suggests that the CPG be conditioned upon a requirement that VGS submit plans and testimony evaluating an alternative placement of the Project in the VELCO corridor in the area of Rotax Road in Monkton, rather than on the Palmers' land, citing Board precedent favoring co-location of utility infrastructure in existing utility corridors.[41] However, as noted by DPS, this general policy goal favoring co-location must be weighed against the incremental burden on the existing corridor[42] and, as discussed below, should also take into consideration other factors that inform whether any such alternative placement would be

[37] *Id.* at 15, 23–24.
[38] DPS Brief at 10-11.
[39] *Id.* at 21–22.
[40] *Id.* at 2.
[41] DPS Brief at 4.
[42] *Id. (citing Petition of Green Mountain Power Corp.*, Docket No. 7349, Order of 6/1 0/08, at 3, 8-9, 12).

consistent with the substantive criteria of Section 248(b) and would be in the general good of the state as required by Section 248(a).

In this case, the additional process suggested by DPS would not further, but instead would obstruct the general good of the state, for the following reasons:

- failure to take into consideration additional property owner impacts;[43]
- increased Project cost; [44]
- potential delay in provision of natural gas service and the associated economic benefits to Addison County customers;
- inconsistency with the MOU between Vermont Gas and the Town of Monkton, which represents a legitimate expression of the Town's official goals and recommendations in this proceeding; [45] and
- impact on VELCO's ability to add new lines in the right-of-way.[46]

In contrast to these significant adverse consequence of a re-route, Vermont Gas has proposed an alternative that better addresses all parties' concerns, and that is HDD on a portion

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[43] If the Project is relocated from the Palmer property back into the VELCO right of way, potentially four additional property owners will be involuntarily impacted by having the transmission pipeline on their property, and in some locations the pipeline will be significantly closer than 300' to their residences and/or wells. Tr. 9/20/13 at p. 31-41(Heintz); exh. Pet. EMS-Supp.-1. If the pipe were installed 10 feet within the west side of the VELCO corridor, it would be within approximately 85 feet of one residence and 110 feet of another residence, and close to a residential well. Tr. 9/16/13 at 111, 141 (Simollardes); exh. Pet. Reb. EMS-1. If it were located on the east side of the VELCO corridor, 10 feet inside the corridor, the pipeline would be even closer to two residences, approximately 45 feet from one residence and 25 feet from another residence. Tr. 9/16/13 at 142 (Simollardes); tr. 9/20/13 at 35 (Heintz); exh. Pet. Reb. EMS-1. These landowners have not participated in the proceeding, nor do their easements with VELCO place them on notice or authorize a natural gas pipeline to be placed within the existing VELCO corridor. Monkton Brief at 6; tr. 9/17 /13 at 34 (Pilcher); tr. 9/20/13 at 28-29 (Heintz).

[44] The VELCO corridor would be a more expensive alignment to build than the route proposed through the Palmer parcel, under any of the three scenarios reviewed during the hearings (east, west and middle of the corridor). Tr. 9/20/13 at 54 (Heintz). Even if the entire Palmer parcel were constructed using HDD, the VELCO alignment would still be more expensive by between approximately $300,000 to $1 million in incremental costs, depending on the alignment chosen. *Id. See also* VGS Proposed Decision at pages 16-17. Not only is the proposed location along the Palmer parcel the least costly alternative from a construction perspective, but if the line is re-routed to the VELCO corridor, VGS, and ultimately VGS customers, would incur additional engineering, permitting and developments costs. Constructing this segment out of sequence would also likely lead to an increase of construction costs.

[45] Monkton Brief at 6. The Chair of the Monkton Selectboard testified that the MOU substantially addresses the Town's concerns with the Project. When the Town Selectboard negotiated the re-routes for Monkton that were ultimately reflected in the VGS 2/28/13 Alignment, the Town understood that ultimately some landowners, such as the Palmers, would be required to bear the burden of having the pipeline on their land. Tr. 9/17/13 at 40–42 (Pilcher); Pilcher pf. at 4-5. Under Section 248(b)(1), the Board is required to give due consideration to the Town's recommendations. As explained in Section 5.1 of this Brief, however, the Board is not permitted to consider individual property rights when making a decision under Section 248.

[46] VGS Brief at 16-17; *see also* VELCO Brief.

of the Palmer property.[47] VGS has offered relevant, substantial evidence supporting that the Project as proposed best satisfies each of the applicable substantive criteria of Section 248.[48]

Should the Board adopt the Department's recommendation, VGS recommends that any review of alternatives be conducted as part of a post-CPG review process so that such review does not delay the issuance of a CPG for the entire Project. A delay in permitting this segment of the Project will of necessity delay final permitting and testing of the pipeline before it can be placed into service.[49] Unless a CPG is issued for this segment by February, 2014, due to the necessity of also amending collateral permits and possible condemnation proceedings (which will likely take several months) associated with this segment, VGS does not believe it could complete Project construction, testing and commissioning by Fall of 2014. This would deprive prospective Vermont Gas customers of the benefits of energy savings in the 2014-15 heating season. As such, VGS recommends that the post-CPG review process for an alternative VELCO route filed by VGS be completed by February, 2014. This will necessitate that comments be submitted on any alternative route shortly after the VGS filing, and that the Board expeditiously conduct a hearing in January to evaluate the merits of the alternative as compared to the currently proposed route.[50]

3.2 Response to DPS regarding timing of post-CPG aesthetic review

At page 32 of its brief, DPS suggests the following condition:

> Within thirty days of the completion of construction of the Project (inclusive of landscaping plans), Vermont Gas shall coordinate a post-construction assessment with the Department of all landscape mitigation to confirm that the installations are completed as envisioned and are sufficient to effectively mitigate the specific locations they are intended to address. Vermont Gas shall use reasonable efforts

[47] Tr. 9/16/13 at 111 (Simollardes). This would avoid impacts to the soils, a concern of the Palmers, and would also allow VGS to move the pipeline approximately another 40 feet away from the Palmer residence, such that the distance between the pipeline and the residence would be about 160 feet, at an additional cost of about $250,000–$300,000. It would also allow VGS to avoid cutting trees adjacent to the Palmer residence. *Id.*

[48] *See, e.g., OMYA, Inc. v. Town of Middlebury*, 171 Vt. 532; 758 A.2d 777 (2000), citing 167 Vt. 75, 80, 702 A.2d 397, 401 (1997). "Substantial evidence ... means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion." *Consolidated Edison Co. v. NLRB,* 305 U.S. 197, 229 (1938); *NLRB v. Columbian Enameling & Stamping Co.,*306 U.S. 292, 229-300 (1939) (citations omitted); *Brault v. SSA*, 683 F.3d 443-447 (2d Cir. 2012).

[49] The pipe will be hydrostatically tested at a pressure of at least 2,160 psi for a minimum of eight hours before being placed in service. Teixeira 12/20/12 pf. at 16.

[50] *See, e.g., In re Joint Petition of Green Mt. Power Corp.,* 2012 VT 89, ¶ 82, ¶ 97, *citing In re D.B.,* 161 Vt. 217, 222 (1993) (holding that V.R.C.P. 78(b)(2), which gives trial courts discretion whether to hold hearings on written motions, provides trial courts, and therefore this Board, with broad discretion concerning hearings on post-trial motions)).

to consider and incorporate reasonable suggestions for additional mitigation presented by the Department.[51]

While VGS supports post-CPG aesthetic review, given that this is a 41 mile-project to be built over multiple months likely spanning into late fall, landscape plantings and a post-CPG review will need to take into consideration seasonal limitations. VGS recommends that this condition be tied to completion of construction and that the review occur within 120 days of completion of construction, including post-construction landscaping, unless the DPS and VGS agree a longer review period is appropriate.

4. Response to the Palmers

The Palmers claim that their witness, Heather Darby, "dispelled" the notion that harm to agricultural soils can be mitigated by soil separation techniques.[52] Ms. Darby, however, admittedly has no experience with projects that examine the impact of pipelines on agricultural soils in Vermont,[53] and she and the Palmers were not able to offer any direct testimony or evidence on the impact of the Project on primary agricultural soils or the effect of pipelines on organic certification. Ms. Darby's opinion rests solely on non-admitted reports and conversations with people who have dealt with pipeline construction in other states.[54] Notably, she stated that these reports were old and that she assumes that practices have since changed.[55]

Ms. Darby testified that the optimal depth of soil for most farming purposes is six to twelve inches.[56] This testimony is consistent with VGS' plans for pipeline placement and construction in agricultural areas. As demonstrated by the evidence before this Board, Vermont Gas will bury the pipeline four feet below the surface in areas of farming and primary

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[51] DPS Brief at 32.
[52] Palmer Brief at 4.
[53] Tr. 9/18/13 at 151–152 (Darby).
[54] Ms. Darby cited extensively to a Cornell study in her live testimony on the impacts of pipeline construction on soil health. Despite Petitioner's requests, this study was not admitted into evidence. While the rules of evidence are relaxed in Board proceedings, there is no relaxation of the requirement that evidence must be admitted before it is relied upon by the Board. Because the Cornell study was not admitted into the record evidence, and was not tested through cross examination, the weight accorded Ms. Darby's testimony is substantially diminished.
[55] Tr. 9/18/13 at 152 (Darby). Additionally, while her knowledge of organic certification was limited, Ms. Darby stated that a condition of USDA organic certification was that a farmer cannot apply any prohibited substances to its crops. She went on to testify that she did not think a pipeline constituted a prohibited substance. Tr. 9/18/13 at 160 (Darby).
[56] Tr. 9/18/13 at 158-159 (Darby). Further, Ms. Darby affirmed that most of the microbial populations in soil exist in the top six inches and, at most, the top twelve inches. Thus, if horizontal directional drilling techniques are employed, which drill 10 to 15 feet below the surface, only subsoil would be impacted, therefore avoiding any adverse biological impacts on topsoil. Tr. 9/18/13 at 164 (Darby).

agricultural soils to avoid any permanent disturbance to agricultural soils.[57] Additionally, with respect to soil disturbance during construction, Vermont Gas will employ construction methodologies which involve the segregation of soils so that the topsoil is placed back at the ground surface and subsoil placed beneath as the pipeline trench is refilled.[58] In addition, the construction protocols advocated by the Palmers are consistent with the measures already proposed by Vermont Gas in its EPSC plan and Vegetation Management Plan.[59]

5. Reply to Michael Hurlburt

5.1 Alignment Near the Hurlburt Property at Old Stage Road

Mr. Hurlburt expresses a preference that the pipeline be placed entirely in the VELCO corridor to avoid a "sugarbush" on his property on the east side of Old Stage Road.[60] First, Mr. Hurlburt offered no testimony or evidence that the trees in this location are an active sugarbush.[61] Regardless, VGS will compensate landowners, including Mr. Hurlburt, for loss of crops and timber.[62]

Moreover, individual landowner interests are not at issue in Section 248 proceedings, as recently confirmed by this Board in 2011 when it denied a landowner request in a Section 248 proceeding to order a setback distance between commercial wind turbines and their property boundary equal to or greater than the height of the turbines:

> In its *Bandel* decision, the Vermont Supreme Court stated that in a Section 248 proceeding, 'The sole issue is the determination of whether or not under the criteria set forth in the statute the proposal for which a certificate is sought advances the public interest.' The Court continued: ***'Individual property rights not being at issue, they are not a basis for any special recognition of the property owners, nor do they support any special consideration for their***

[57] Nelson 2/28/13 pf. at 35; exh. Pet. Supp. JAN-11 (2/28/13); tr. 9/18/13 at 73 (Nelson); tr. 9/17/13 at 175 (Jensen); exh. Agricultural Interests Group 1-AAFM-1 at 3.
[58] Nelson 2/28/13 pf. at 35; tr. 9/18/13 at 81 (Nelson).
[59] Tr. 9/19/13 at 101–103 (Nelson); Palmer Rebuttal-2. Energy projects in Vermont have routinely employed similar soils protection and reclamation measures to protect agricultural soils from construction impacts. For example, in Docket No. 7632, this Board approved a CPG for the Williamstown Solar Farm. In its Section 248 application, the petitioner provided a "Plan for Reclamation of Primary Agricultural Soils," which provided pre-extraction, extraction, and reclamation procedures to maintain and restore the quality of the agricultural soils. Similarly, here, VGS has developed comprehensive procedures to ensure that agricultural lands are not unduly adversely impacted by the proposed Project.
[60] Hurlburt pf. at 3; Hurlburt Brief at 2.
[61] Tr. 9/17/13 at 152 (Hurlburt) (describing the trees as "some maple and Shagbark Hickory").
[62] Tr. 9/16/13 at 177 (Simollardes).

protection in these proceedings.' Any development will have some impact on nearby landowners, and this project is no exception.[63]

The *Bandel* Court's proscription against basing Section 248 decisions upon individual property interests was recently re-confirmed by the Vermont Supreme Court in its 2012 ruling in *In re Petition of New Cingular Wireless.*[64] In that case, adjacent landowners opposed the installation of a monopine telecommunications tower and associated facilities, arguing, amongst other things, that the project would result in undue aesthetic impacts on their views and might adversely impact streams and wetlands on particular properties.[65] After a failed motion to alter the Board's Order, the landowners appealed to the Vermont Supreme Court, arguing that the Board violated their procedural due process rights by failing to inform them of deadlines and denying them a meaningful opportunity to participate in the proceedings.[66] The Court, finding that Section 248 does not require the Board to consider the specific interests of individual landowners, held that the landowners did not have a constitutionally protected property interest and therefore, were not denied procedural due process.[67] The Court confirmed that "CPG proceedings pursuant to … 30 V.S.A. § 248 … relate only to the issues of public good, not to the interests of private landowners who are or may be involved," emphasizing that "[a]s this Court concluded in *Bandel*, because the sole issue was whether the requested certificate advanced the public interest, . . . property owners were not entitled to any special recognition or consideration."[68]

In the route that is before the Board, the pipeline would be placed in the VELCO corridor for a stretch leading up to pipeline mile marker 28.9.[69] Where the VELCO corridor intersects with Old Stage Road (after mile marker 28.8 and just before 28.9), the pipeline would diverge from the VELCO corridor and continue along the east side of Old Stage Road until reaching a point at approximately mile marker 29.7, where it would then cross the road and return to the VELCO corridor.[70] The decision to make a detour from the VELCO corridor in the section was made for a number of reasons. Notably, in this section of the VELCO corridor, which runs

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[63] *Id.* at 5 (emphasis added).
[64] 2012 VT 46 at ¶ 15.
[65] *Id.* at ¶ 3.
[66] *Id.* at ¶ 7–10.
[67] *Id.* at ¶ 13–19.
[68] *Id. (citing Vt. Elec. Power Co. v. Bandel,* 135 Vt. 141, 145, 375 A.2d 975, 978 (1977)).
[69] Tr. 9/17/13 at 81 (Heintz); exh. Pet. Surr. JH-1.
[70] *Id.* at 81, 105; exh. Pet. Surr. JH-1.

parallel to the west side of Old Stage Road in this area, constructability is extremely challenging.[71] This is due to natural features such as a meandering stream, a wetland, exposed rock ledges, and very steep slopes.[72] The testimony and evidence reinforced that the limitations described above necessitate that the pipe divert from the VELCO corridor near Mr. Hurlburt's property.

Mr. Hurlburt's brief also suggests that Vermont Gas has "been working on a new route along Old Stage Road to propose to the board for filing . . . ."[73] Vermont Gas did prepare, at the Board's request, Exhibit Petitioner Surrebuttal JH-1, an aerial plan view showing the proposed route and a potential alignment along the west side of Old Stage Road.[74] This alignment is not preferable because it would impact at least two new property owners and would also require more trees to be cleared than the option proposed by Vermont Gas.[75] In addition, this reroute raises the same concerns regarding the potential for delay as previously described.

5.2. Stream Crossings

Mr. Hurlburt also expressed concern about the method and procedures to be used to cross the streams on his property.[76] The Project requires a stream alteration permit from ANR.[77] The application for that permit has been submitted and will incorporate measures and conditions to ensure that the Project does not unduly adversely impact any streams.[78] Furthermore, on Mr. Hurlburt's property at proposed stream crossing 2012-TB-JB-7, depicted on Exhibit Petitioner Surrebuttal JH-1, Vermont Gas specifically located the pipeline as close as possible to the existing road crossing, where the stream has already been impacted by the road crossing, to avoid new impacts to the channel of the stream.[79] Additionally, in that location, the pipeline will be concrete-coated where it passes under the stream, and therefore is not expected to have any impact on the stream.[80]

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[71] *Id.* at 82; exh. Pet. Surr. JH-1.
[72] Tr. 9/17/13 at 81–82 (Heintz).
[73] Hurlburt Brief at 2.
[74] Tr. 9/17/13 at 79–87 (Heintz).
[75] *Id.* at 83-84; exh. Pet. Surr. JH-1.
[76] Hurlburt Brief at 2.
[77] Tr. 9/18/13 at 96 (Nelson).
[78] *Id.* at 96.
[79] *Id.* at 95.
[80] *Id.* at 97.

6. Response to the Town of New Haven

The Town of New Haven's brief recommends a noise standard of 50 dB at the fence line of the Gate Station. While there has been some confusion on the record on this point, Vermont Gas concurs with the New Haven recommendation; it is consistent with Vermont Gas' testimony[81] and is a reasonable CPG condition.

New Haven also urges this Board to order VGS to obtain a local subdivision permit from the Town of New Haven to subdivide the parcel of land on which the New Haven Gate Station will be placed.[82] The Town's analysis is misguided. The Public Service Board's authority under 30 V.S.A § 248 does not empower it to direct VGS to obtain local permits.[83] Even if it did, municipal regulation of natural gas facilities is limited by 24 V.S.A. Ch. 24, as acknowledged by the Town's brief, as well as by 30 V.S.A. § 248(b)(1).

Both the Vermont Supreme Court and this Board have previously construed 30 V.S.A. § 248(b)(1) to give the Board exclusive jurisdiction over in-state electric and natural gas facilities subject to Section 248 review.[84] In *City of South Burlington v. VELCO*, 133 Vt. 438 (1975), the Court held that the legislature's use of the phrase "due consideration" "at least impliedly postulates that municipal enactments, in the specific area, are advisory rather than controlling."[85] The Court further stated that, without a "clear and explicit legislative pronouncement" it would not construe Vermont's statutes "in any manner giving single municipalities the power to subvert utility projects statewide in scope and broadly entrusted to a single planning and supervisory agency."[86]

New Haven's attempt to regulate the land use for the parcel on which VGS' Gate Station will be built, by asking this Board to condition the VGS Section 248 CPG, is misplaced. The Board has the exclusive jurisdiction over the land use and the VGS facilities.

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[81] Heintz 2/28/13 pf. at 39.
[82] New Haven Brief at 12–13.
[83] It has long been established that the Board is a body of limited jurisdiction. Dockets Nos. 7678 & 7679, *Petitions of Beaver Wood Energy Pownal, LLC, and Beaver Wood Energy Fair Haven, LLC*, Order of 4/1/11 at 7 (*citing Trybulski v. Bellows Falls Hydro-Electric Corp.*, 112 Vt. 1, 7 (1941)).
[84] *See* Docket No. 6860, *In re: Northwest Vt. Reliability Project*, Order of 1/28/05 at 200-01; *City of South Burlington v. VELCO*, 133 Vt. 438 (1975).
[85] *City of South Burlington v. VELCO,* 133 Vt. 438 at 447.
[86] *Id.* at 447-48, *quoted in In re: Northwest Vt. Reliability Project*, Docket No. 6860, Order of 1/28/05 at 200-01. *See also* Docket #234-11-05 Vtec, *Glebe Mtn. Wind Energy, LLC*, Revised Decision on Cross Motions for Summary Judgment, at 14-15 (Aug. 3, 2006) (affirming PSB's Section 248 jurisdiction superseded Act 250 review, citing concerns regarding overlapping and inconsistent permit requirements for energy projects).

7. The Operations Of VGS' Out-of-State Suppliers Will Not Materially Affect the State of Vermont

CLF and VFDA claim that VGS has an obligation to address the environmental externalities of hydraulic fracturing operations of VGS' suppliers.[87] This is incorrect. As explained below, the Board's authority in this proceeding to evaluate the impacts of out-of-state natural gas providers is limited to those impacts where there is a clear "but for" relationship between the Project and the out-of-state operations, and the resultant impacts "materially affect the state of Vermont."[88]

This originates from Docket No. 5330. There, the Board addressed whether its authority under Section 248 to review a long-term power contract between Vermont utilities and Hydro-Quebec ("HQ") under Section 248 extended to evaluation of the environmental impacts of the power generated by HQ in Canada. Using rules of statutory construction, the Board found that the reference to "an in-state facility" in subsections 248(b)(1) and (b)(5)[89] limited the Board from direct review of out-of-state impacts under those criteria.[90] However, the Board clarified that "in the case of power purchases from facilities outside of the State" the proposed contracts' environmental and economic effects, to the extent that they *"materially affect the state of Vermont"* are properly within the scope of the Board's Section 248 review.[91] The Board further defined the scope of what constitutes material impacts in Vermont, specifying that "the Vermont legislature sought to follow traditional principals of law and to limit us to cases with 'proximate'

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[87] CLF Brief at 10–12; VFDA Brief at 2–5.

[88] *In re Twenty-Four Vermont Utilities*, 158 Vt. 339, 353, 618 A.2d 1295 (1992); Docket 5330, Order of 9/21/89 at 4; Docket 7670, Order of 4/15/11 at 48-49 & n. 32.

[89] Section 248(b)(1) and (b)(5) provide, in relevant part:

> Before the public service board issues a certificate of public good as required under subsection (a) of this section, it shall find that the purchase, investment or construction:
>
> > (b)(1) ***with respect to an in-state facility***, will not unduly interfere with the orderly development of the region with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of the municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality;
> >
> > ***
> >
> > (b)(5) ***with respect to an in-state facility***, will not have an undue adverse effect on esthetics, historic sites, air and water purity, the natural environment and the public health and safety, with due consideration having been given to the criteria specified in subsection 1424a(d) and subdivisions 6086(a)(1) through (8) and (9)(K) of Title 10 and greenhouse gas impacts;

(emphasis added).

[90] Docket No. 5330, Order Re: Scope, Intervention and Motion to Dismiss, 8/21/89 at 4.

[91] *Id.* at 4 (emphasis added).

effects upon Vermont, rather than to all causes that possibly could affect Vermont [such that] the legislature intended to stop at the level of demonstrable effects upon Vermont."[92]

In reaching this conclusion, the Board acknowledged the complicated policy issues surrounding the prospect of evaluating out-of-state environmental effects, such as the difficulty of conducting a detailed Section 248 permit review for every facility that may be operated or constructed by Vermont's out-of-state suppliers:

> [W]e cannot accept the broad utility argument that all environmental consequences of out-of-state projects are irrelevant. Nor can we accept the broad intervenor argument that we must independently evaluate the local effects of projects in areas where we can neither enter onto land, nor subpoena witnesses, nor independently re-assess the analyses of closer governmental bodies.
>
> A close reading of Section 248 of Title 30 suggests that a middle ground was intended by the Vermont legislature – this Board must consider all the environmental effects of facilities within the state, and it must also consider the environmental (and other) consequences of projects beyond the state to the extent that they affect "the general good of the state." We also conclude that neither federal nor international law conflicts with this, more limited, reading of the General Assembly's mandate.
>
> Thus, we have concluded that the scope of this proceeding should include consideration of the proposed contracts' environmental and economic effects, to the extent that they "materially affect the state of Vermont."[93]

The Vermont Supreme Court affirmed the Board's ruling.[94] In doing so, the Court observed that "only the broadest understanding of causation could attribute the immense dam construction projects planned by HQ to the relatively minute Vermont power purchase," and affirmed the Board's determination of "the point at which there was no 'but for' relationship between the power purchase and the facilities construction."[95] The Board relied on this same rationale in Docket 7670, in declining to consider the out-of-state environmental impacts of the successor HQ power contract under Section 248.[96]

Accordingly, in this Docket, the Board's consideration of the impacts of the operations of Vermont Gas' out of state suppliers is limited to those operations that only would be undertaken

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[92] *Id.* at 14.
[93] *Id.*
[94] *In re Twenty-Four Vermont Utilities*, 158 Vt. 339, 353, 618 A.2d 1295 (1992).
[95] *Id.* at 354. Unlike HQ, this case does not involve review of VGS purchase contracts. Therefore, arguably, it is inappropriate to extend the scope of this proceeding to include consideration of environmental consequences outside of Vermont, simply because VGS purchases natural gas from outside of the state.
[96] Docket 7670, Order of 4/15/11 at 48-49 & n. 32.

but for the Project. Given the relatively modest size of this Project, there is no basis for such a finding. Moreover, even if it did result in additional natural gas production, this would be offset by a reduction in other fossil fuel production, since natural gas service will replace other fossil fuels. CLF's and VFDA's arguments regarding the operations of Vermont Gas' suppliers should therefore be disregarded.

8. Response to VFDA

In addition to its arguments regarding natural gas production, VFDA's brief suggests that "market forces are likely to result in little or no savings to customers from the switch to natural gas".[97] It then goes on to cite a number of anecdotal observations made by its witness, Eugene A. Guilford. VFDA's arguments are wholly without merit or support.

As a preliminary matter, Mr. Guilford failed to offer or establish any education, training or experience that would qualify him to provide economic forecasting expertise in the area of natural gas and oil supply and price forecasts. His experience for the past 10 years involved acting as the president of the Connecticut Energy Marketers Association ("CEMA"), formerly called the Independent Connecticut Petroleum Association[98], and prior to that as president of Maine Oil Dealers Association. He is better characterized as an advocate of petroleum dealers, not an economic expert with training or experience to offer informed opinions about economic forecasts for oil and natural gas supply or prices.

The primary evidence Mr. Guilford cited to support his claim that oil prices could go down relative to natural gas prices, was referenced in a U.S. Energy Information Administration ("EIA") statement regarding an observed increase in U.S. oil rig counts relative to natural gas rig counts.[99] Mr. Guilford suggested that such an increase in oil rigs will translate into a decrease in oil prices relative to natural gas.[100] However, he offered no proof that EIA predicts such a trend nor did he produce any evidence or analysis supporting his hypothesis.

In fact, according to EIA's most recent Annual Energy Outlook, the compound annual growth rate ("CAGR") increases in prices for oil and natural gas are expected to be similar over the next 20 years.[101] Recent EIA pricing information reveals that U.S. natural gas prices remain

[97] VFDA Brief at 5.
[98] Guilford pf. at 4.
[99] See Guilford pf. at 9; exhs. Pet. Cross VFDA-3, -4 and -5.
[100] Tr. 9/16/13 at 262 (Guilford).
[101] Carr reb. pf. at 3-4; exh. Pet. Reb. JC-1.

two-thirds lower than oil and propane prices.[102] In addition, as of August, 2013, EIA reported that monthly average crude oil prices had increased for the fourth consecutive month as supply disruptions in Libya increased and concerns over the conflict in Syria intensified.[103] These developments, together with the long term EIA forecast,[104] fully refute Mr. Guilford's claims and support the economic analysis offered by VGS.

9. Conclusion

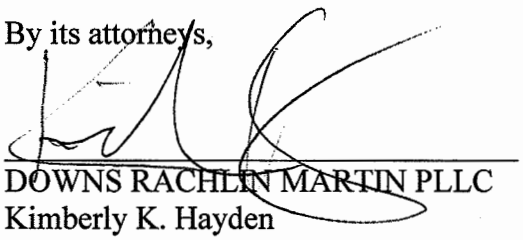
Based upon the foregoing and the reasons set forth in VGS' Proposed Findings, VGS respectfully asks the Board to approve the project as proposed by VGS, and issue a proposed decision, Order and CPG substantially in the form reflected in VGS' Proposed Decision, dated October 11, 2013.

[102] Exh. Pet. Cross VFDA-6, -7.
[103] Exh. Pet. Cross VFDA-15 at 1; exh. Pet. Cross VFDA-16.
[104] Exh. Pet. Reb. JC-1.

DATED at Burlington, Vermont, this 25th day of October, 2013.

VERMONT GAS SYSTEMS, INC.

By its attorneys,



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