

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

Docket No. 7970

ANR's Second Set of Information Requests

The Agency of Natural Resources ("Agency" or "ANR") by undersigned counsel, hereby serves the following Second Set of Information Requests upon Petitioner Vermont Gas Systems, Inc. in accordance with Public Service Board Rule 2.214 and V.R.C.P. 33, 34, and 36 and requests that Petitioner answer the requests in accordance with V.R.C.P. 33, 34, and 36 and deliver its answers and all requested documents and materials to the Agency's offices as soon as possible but in no case later than June 3, 2013. Petitioner is requested to provide a copy of its answers in electronic format, that is, Word or other format readable by the Agency. Please produce two copies of your responses.

INSTRUCTIONS AND DEFINITIONS

1. Reproduce the request being responded to before the response. Provide two complete hard copies of your responses and an electronic copy on disk. Provide two complete copies of all documents produced. All spreadsheets and computer data should also be provided on disk.
2. Responses to any and all Agency requests that are contained herein or that may be filed later should be supplied to the Agency as soon as they become available to PETITIONER. That is, PETITIONER should not hold answers to any requests for which it does have responsive data, documents, etc., until responses to any or all other requests are compiled.
3. The response to each request should be made under oath by a person competent to testify concerning the response and all documents and exhibits produced as part of the response. With respect to each request, please state (1) the name(s) and title(s) of the person or persons responsible for preparing the response; and (2) the administrative unit which maintains the records being produced or maintains the data from which the answer was prepared; and (3) the date on which each question was answered.
4. Where information requested is not available in the precise form described in the question or is not available for all years (or other periods or classifications) indicated in a series of years (or other periods or classifications), please provide all information with respect to the subject matter of the question that can be identified in PETITIONER work papers and files or that is otherwise available.
5. These requests shall be deemed continuing. PETITIONER is directed to change, supplement and correct its answers to conform to all information as it becomes available, including the substitution of actual data for estimated data. Responses to requests for information covering a period not entirely in the past (or for which complete actual data are not yet available) should include all actual data available at that time and supplementary data as it becomes available.

6. Wherever responses include estimated information, include an explanation (or reference to a previous explanation) of the methods and calculations used to derive the estimates.
7. Some of the Agency's requests may make particular reference to a portion of a filing in this matter. Notwithstanding this specific direction, these items should be understood to seek discovery of all information available to PETITIONER that is responsive to the questions stated.
8. "Identify," when used in connection with natural person(s) or legal entities, shall mean the full name and current business address of the person or entity.
9. "Document," as used herein, shall be construed as broadly as possible to include any and all means and media, by which information can be recorded, transmitted, stored, retrieved or memorialized in any form, and shall also include all drafts, versions or copies which differ in any respect from the original. The term specifically includes and is not limited to written communications such as letters and e-mails.
10. Documents produced pursuant to these requests shall be organized and labeled in correspondence with the paragraph number to which they are alleged to respond. With respect to each document produced by PETITIONER, identify the person who prepared the document and the date on which the document was prepared.
11. If in response to any request for information, the responding party asserts attorney client privilege, attorney work product, or any other privilege, please provide in addition to the basis of the privilege the date of the allegedly privileged communication(s), the identity of all persons who were party to the allegedly privileged communication(s) or who received photocopies of such communication(s), and the subject matter of the allegedly privileged communication.
12. If any request to admit is responded to by a denial or an objection, explain in detail the reason for such denial or objection.

13. If any interrogatory or request is objected to in whole or in part, please describe the complete legal and factual basis for the objection, and respond to all parts of the interrogatory or request to the extent it is not objected to. If an objection is interposed as to any requested documents, please identify the document by author, title, date and recipient(s), and generally describe the nature and subject matter of the document as well as the complete legal and factual basis for the objection.

14. "Project" "project site" "project area" means the 1MW solar electric generation facility described in Petitioner's filings in this docket.

15. "You" or "Your" refers to Petitioner.

16. "Petitioner" refers to Vermont Gas Systems, Inc., and any of its agents, employees, or consultants working on its behalf in connection with the above captioned matter.

17. The Agency reserves the right to submit additional information requests to Petitioner.

18. Alternative 5a shall mean and refer to the proposed alignment represented and included as part of the December 20, 2012 Petition and supporting testimony and evidence.

19. Alternative 5b shall mean and refer to the proposed alignment represented and included with the February 28, 2012 supplemental Prefiled Testimony.

INTERROGATORIES, REQUESTS TO PRODUCE, AND REQUESTS TO ADMIT

1. Please identify the person responsible for responding to each interrogatory and identify any person who assisted in providing the response. For each person identified who has not previously been identified in responses to ANR, please provide a curriculum vitae or resume indicating that person's employment, education and work experience history.
2. On page 5 of Mr. Nelson's testimony, he states that the purpose of the testimony "is to replace the testimony filed on December 20, 2012." What is the meaning of this phrase? What does Vermont Gas plan to do with Mr. Nelson's December 20, 2012 testimony?

3. Admit that the project purpose is contained in section 1.2 of Exhibit Petitioner Supp. JAN-13 (2/28/13). If your response is anything other than an unqualified admission, please explain in detail the reasons for any qualifications or denial.
4. Supp. JAN-13, page 26, states that “[t]he total distance over which the transmission pipeline was been [sic] realigned to avoid roadway right-of-way is 10.1 miles. Please identify the two references for this statement. Does this distance represent the change from Alternative 5 to 5b or from alternative 5a to 5b?
5. What is the total distance over which the transmission pipeline has been realigned from alternative 5a to alternative 5b?
6. Supp. JAN-13 identifies stakeholder comments, see page 27, and please identify all groups, organizations, individuals, or agencies that comprise the term “stakeholder” as used in section 2.3.7.3.
7. Admit that the project is not water dependent? If your response is anything other than an unqualified admission, please explain in detail the reasons for any qualifications or denial.
8. Admit that alternative 5a, otherwise known as the proposal submitted as part of the December 21, 2012 filing, is less environmentally damaging to aquatic resources? If your response is anything other than an unqualified admission, please explain in detail the reasons for any qualifications or denial.
9. Admit that JAN-13 does not contain a practicability analysis? If the request is denied, please identify where in the analysis the practicability of alternative 51 is discussed.
10. Please identify where you have included a practicability analysis in Supp. JAN-13.
11. Please identify those RTE species that were avoided with alternative 5a that now may be subject to an impact under alternative 5b. Please identify the location of the RTE and the proximity of the species occurrence to the project limits of disturbance.
12. Admit that avoiding impacts to RTE species to the greatest extent practicable was not the purpose or reason for changing the alignment from alternative 5a to alternative 5b. If your response is anything other than an unqualified admission, please explain in detail the reasons for any qualifications or denial.
13. Admit that avoiding impacts to significant wetlands was not the purpose or reason for changing the alignment from alternative 5a to alternative 5b. If your response is anything other than an unqualified admission, please explain in detail the reasons for any qualifications or denial.

14. Please produce shapefiles and rare plant forms for all plants identified in the Gilman Report, Appendix 6.

15. Please confirm the date the Gilman Report, Appendix 6 to JAN-2, was prepared?
16. Please identify the "Project" to which the Gilman Report, Appendix 6 to JAN-2, refers and is the basis of the study, is it the project proposed in December 2012, Alternative 5a or the project proposed in February 2013, alternative 5b?
17. The testimony of Jeff Nelson and the Gilman Report, appear to provide inconsistent information. The Nelson testimony states that
18. The Gilman Report, Appendix 6 to Jan-2, on page 3, lists "seven(7) protected plants . . . encountered within the study areas but outside the current proposed alignment and workspaces:
 - a. For each species listed on pages 3 and 5, please provide the distance from the species to the limits of disturbance for the project.
 - b. Please provide the number of plants contained in each species population
 - c. Please provide the approximate percentage of plants that are likely to be impacted by the project, project construction, and project maintenance
19. The Gilman Report, Appendix 6 to JAN-2, pages 5-6 identified rare plant populations that were encountered in the study area, but outside of and remote from the final alignment.
 - a. For each species listed on pages 3 and 5, please provide the distance from the species to the limits of disturbance for the project.
 - b. Please provide the number of plants contained in each species population
 - c. Please provide the approximate percentage of plants that are likely to be impacted by the project, project construction, and project maintenance.

20. The Conclusion to the Gilman report, Appendix 6 of JAN-2, states that four protected plants "occur near and just outside of the final alignment such that protective measures, fencing, and appropriate signage are recommended to avoid any inadvertent taking." Please explain what is meant by "any inadvertent taking." Please identify all activities that could result in an inadvertent taking. Please identify and describe all avoidance measures to be utilized or employed while engaged in these activities to ensure that there will be no taking of protected species protective measures that will be employed to minimize or eliminate the risk of these activities to avoid a taking.
 - a. For each species listed on pages 3 and 5, please provide the distance from the species to the limits of disturbance for the project.
 - b. Please provide the number of plants contained in each species population

- c. Please provide the approximate percentage of plants that are likely to be impacted by the project, project construction, and project maintenance
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21. Will Petitioner incorporate mitigation measures for impacts to rare species? If so, please identify any and all mitigation measures upon which Petitioner will rely for impacts on rare plants.
 22. In "Non-impacted natural communities" and Conclusions sections of the Gilman report Mr. Gilman describes how the project has avoided impacts to the Mt. Florona Swamp Cattail Marsh, Monkton Northern White Cedar Swamp, and New Haven Red Maple-Green Ash Swamp by the December 2012 VT Gas alignment plan to have roadside construction in the vicinity of these natural communities. He states that impacts to other natural communities are significantly minimized by co-locating the pipeline along road margins. Now that the project alignment (January 28, 2013) will impact these same natural communities, how can Mr. Gilman and Petitioner state that impacts have been avoided or minimized?
 23. Does Petitioner contend that any impacts to rare plants will be insignificant?
 24. Will Petitioner agree to a condition in the Certificate of Public Good requiring a Plan to monitor and control for invasive species. If so, is Petitioner willing to agree to accept the recommendations of the Agency of Natural Resources or any successor organization/agency regarding the types of species to be excluded from colonizing any disturbed areas.
 25. Is it possible to assess and inspect the pipeline right of way from the ground?
 26. Please describe the method by which the Pipeline will be inspected and maintained.
 27. On page 44, Mr. Nelson states that the pipeline crossing of the Red maple-Green Ash Swamp will not be expected to "change the formative nature of the community (the wet hydrology, which is driven by periodic surface inundation), and impacts should therefore not be considered undue."
 - a. Please explain the basis for that statement and provide all facts supporting this conclusion.
 - b. Please explain how pipeline construction in deep peat soils will be accomplished without altering wetland hydrology or requiring a wide construction trench.
 - c. Please identify and explain the purpose for clearing and maintaining a clearing along the pipeline right of way.
 28. Please identify and explain why it is necessary to maintain a clearing and the width of the clearing to assess the condition of the pipeline.
 29. Please explain why it is not possible to inspect the pipeline from the ground where it crosses significant natural communities, rare, threatened or endangered plants, or wetlands.

30. Please identify the "Preferred Alternative" as that term is used in Supp. JAN-13.
31. On page 27, of Supp. JAN-13, it states that "By relocating the transmission pipeline from the public rights-of-way to the VELCO corridor, the acres of significant wetlands intersected by the proposed construction area increases from 10 acres for Alternative 51 to 21 acres for Alternative 5b.
 - a. Does this relocation also incorporate those segments of the project in Addison County that deviate from the VELCO corridor, for example the deviation onto Palmer and Latreille properties?
32. On Page 27-28 of Supp. JAN 13- the report states "However, this number is 11 acres less than the acreage for the Preferred Alternative (32 acres). Please identify the route or alternative to which "Preferred Alternative" refers.
33. Please explain the difference or distinction between the "Preferred Alternative" referenced on Page 28 and the route selected as the Preferred Alternative in Section 2.4.
34. Admit that reduction of aquatic resource impacts was not the cause for the change in realignment from Alternative 5a to alternative 5b.
35. Admit that the Army Corps of Engineers has expressed concern with the ability of alternative 5b to satisfy the LEDPA determination of the 404(1) analysis.
36. Admit that avoidance of wetlands and other aquatic resources was not the primary driver in the realignment from alternative 5a to 5b.
37. Please identify the reason and need for widening the existing cleared VELCO corridor, as referenced on page 28 of JAN-13.
 - a. Please identify all efforts to avoid and minimize the forest clearing
 - b. Please identify the route distance over which the area will be cleared.
 - c. Please provide all factors supporting the need to clear this area
 - d. Can Petitioner inspect the pipeline without maintaining a strip of clearance?
 - e. Can Petitioner walk the right of way in order to inspect
 - f. Explain why Petitioner does not limit the maintenance clearing over the areas of significant natural communities, rare and threatened or endangered plants, or forested area.
38. Please explain the reasons why the realignment cannot remain within the VELCO right of way and provide all facts and information supporting the deviation from the VELCO right of Way.
39. Please identify and provide the width of any project clearing required to construct or facilitate the horizontal directional boring?
40. Please identify the amount of construction impacts that will take place in the sand plain forest.
41. Has the Army Corps of Engineers accepted or adopted the Project Purpose that has been listed in Section 1.2 of JAN-13 (2/28/13).

42. Please identify any and all additional natural resource inventories that had yet to be conducted at the time Exhibit Petitioner Supp. JAN-2 was prepared. If any of these inventories have since been completed, please identify the date of completion and please provide any data, information, analysis, report, or other documentation detailing or recording the inventory. If any of these inventories have yet to be conducted, please provide the anticipated date the inventory will be conducted.
43. Admit that alternative 5a is the least environmentally damaging alternative? If your response is anything other than an unqualified admission, please explain in detail the reasons for any qualifications or denial.
44. Please explain why it is necessary to increase the amount of impacts to wetlands, state significant natural communities, and rare species by changing the alignment from alternative 5a to 5b.
45. Admit that alternative 5a is the least environmentally damaging practicable alternative. If your response is anything other than an unqualified admission, please explain in detail the reasons for any qualifications or denial.
46. Please explain and describe how the Project complies with Section 9.5 of the Vermont Wetland Rules.
47. Please explain and define the use of the term "feasible" as that term is used in response to Palmer:VGS,1-1.
48. Please identify all existing and planned VELCO infrastructure that would prohibit or prevent the use of the VELCO corridor as described in A.PALMER:VGS1-1.
49. Please explain how an increase in the amount of wetland impacts from alternative 5a to 5b, avoids wetland impacts or satisfies the requirement that the project is the least environmentally damaging practicable alternative as required under 404(b)(1). Please provide all facts, rules, regulations, rules, other standards and any other information that supports this response.
50. Please identify the widths of any clearing required for construction, maintenance and operation of the project and gas line that cuts through or abuts the following:
 - a. any significant natural community
 - b. Any wetland
 - c. Any rare, threatened, or endangered plant
 - d. Any necessary wildlife habitat
51. With respect to the new alignment, 5b, please identify and explain all efforts to avoid impacts to the following:
 - a. Any significant natural community
 - b. Any wetland
 - c. Any rare, threatened, or endangered plant

- d. Any necessary wildlife habitat
52. Please explain the reason for and the methodology used to determine the transmission line path through the following:
- a. Any significant natural community
 - b. Any wetland
 - c. Any rare, threatened, or endangered plant
 - d. Any necessary wildlife habitat
53. What is the total amount of rock, bedrock, or ledge that is expected to be excavated through the use of explosives?
54. Please explain and provide all reasons for why blasting is necessary.
55. Please provide a list of proposed explosives that will be used, including:
- (i) Type of explosive and how much will be used;
 - (ii) Type of detonator; and
 - (iii) MSDS sheets for all materials relating to explosives.
56. Please provide a map or maps of areas that will be impacted by blasting which includes the following:
- (a) The area where the proposed blasting will occur;
 - (b) A fracture trace map of the area where blasting will occur
 - (c) water resources within 2,000 feet of the proposed blasting including:
 - (1) A delineation of the watershed where the proposed blasting will occur.
 - (2) Streams, ponds, or other surface water body;
 - (3) Seeps or springs;
 - (4) Wetlands;

(5) Public and potable groundwater wells including drillers' well logs when they are available.

(6) Available copies of well logs for public and potable water supplies.

57. Please provide a description of the geology where blasting will occur including whether there is Karst in the area that could be affected by blasting and identify potential hazards that may exist from the blast impact upon the geology (e.g. the blast opens a drainage pathway to a cave).

58. Does Petitioner plan to conduct any pre and post blast monitoring to assess the possible impact to water sources and water supplies from the blasting activity? If so, please produce the monitoring plan.

59. If Petitioner does not intend to conduct any pre and post blast monitoring to assess the possible impact to water sources and water supplies from blasting activity, please describe the method by which Petitioner will demonstrate that the project blasting activities will not have an undue adverse impact on groundwater, surface waters, water sources and the water supply?

60. Exhibit EMS-1 shows the estimated GHG reductions per year and for the period 2016-2034 for the proposed project. Annual reductions range from 13,000 tons/year in 2016 to 15,700 tons/year in 2034. Total GHG reductions for the 19-year period are calculated to be 292,000 tons. Is this analysis limited to combustion of fuels by consumers?

61. Admit that the analysis contained in EMS-1 does not account for GHG releases during extraction and production of the fuel (e.g., fugitive methane emissions at the wellhead. If your response is anything other than an unqualified admission, please explain in detail the reasons for any qualifications or denial.

62. Admit that the analysis contained in EMS-1 does not account for GHG releases for fugitive natural gas leakage from transmission and distribution pipes and other system components such as gate stations, residential / commercial distribution hookups, etc. If your response is anything other than an unqualified admission, please explain in detail the reasons for any qualifications or denial.

63. Admit that the analysis contained in EMS-1 does not account for GHG releases natural gas releases from scheduled maintenance and new construction activities (e.g., purging, pressure

testing, relief valve testing). If your response is anything other than an unqualified admission, please explain in detail the reasons for any qualifications or denial.

64. Admit that the analysis contained in EMS-1 does not account for GHG releases for natural gas releases from unscheduled events (e.g., historical estimate of accidental releases, relief valve releases due to overpressure events, etc.). If your response is anything other than an unqualified admission, please explain in detail the reasons for any qualifications or denial.

65. Will VGS provide an analysis of the GHG emissions for the baseline and the presented future scenario using this broader lifecycle approach that includes the activities listed above? If VGS is unable to provide data or estimates for any of the above potential GHG emissions sources, please explain why.

66. Regarding Exhibit EMS-1, please clarify the following:

- A. What are the data sources / references for the various assumptions used to produce the 2016, 2034 and 2016-2034 estimates?
- B. What is the forecasted schedule for annual conversions? What is the total number of households in the Vergennes and Middlebury area and the forecasted conversion rate as a percentage of all households? Please include a row for number of residences converted per year as well as the forecast natural gas sales per year for each year from 2016 to 2034
- C. How many new natural gas customers are expected to be utilizing new "high efficiency" appliances (i.e., furnaces, boilers, etc.) vs. conventional lower efficiency units (e.g., conversion of an existing older propane unit to combust natural gas)?
- D. Does VGS have any additional information on the actual current fuel oil and propane use per household and the forecasted annual natural gas use per household in the prospective service area, plus any commercial or industrial customer usage? If so, please provide.
- E. Please perform a sensitivity analysis that includes at least two household natural gas conversion rate scenarios – one optimistic (this may be the existing analysis) and one pessimistic

67. Regarding Exhibit EMS-1, admit that the baseline assumes that in the absence of natural gas, all customers now using fuel oil or propane will continue to do so through 2034. If your response is anything other than an unqualified admission, please explain in detail the reasons for any qualifications or denial.

68. Admit that the assumption that in the absence of natural gas, all customers now using fuel oil or propane will continue to do so through 2034 maximizes the forecasted GHG benefit of the

project. If your response is anything other than an unqualified admission, please explain in detail the reasons for any qualifications or denial.

69. Is it reasonable to expect that some percentage of these customers would convert to a different, less GHG-intensive energy source (e.g., conversion from fuel oil to geothermal heat pumps) in the absence of natural gas service?

70. If the answer to the preceding question is yes, admit that the GHG reductions resulting from the project would be less than that projected by VG? . If your response is anything other than an unqualified admission, please explain in detail the reasons for any qualifications or denial.

71. The forecast assumes that the GHG benefits of the project remain constant over the 19-year period. Is it reasonable to expect that GHG emissions will increase over time as the system ages (e.g., leaks from component wear or failure)? If YES, please provide an estimate of these emissions. If NO, please explain why.

72. The 2011 Comprehensive Energy Plan sets a goal of having 90% of the state's energy come from renewable sources by 2050. How much of the 10% non-renewable portfolio would be allocated to homes served by this project?

73. Please provide the amount of "TOTAL GAS UNACCOUNTED FOR" as represented by Vermont Gas to FERC and explain the standard for measurement and the amount of "TOTAL GAS DELIVERIES" that amount represents for existing infrastructure.

74. Please provide any and all documentation, information, and data that quantify the contribution from each of the various "system losses" including measurement / meter error, accounting inaccuracies, gas theft, pipe/valve leaks, internal gas use by VGS (e.g., combustion of gas at compressor stations to maintain pipeline temperatures), consumption on an inactive meter, third party damages, scheduled maintenance gas releases, accidental and other gas leaks/releases?

75. If there is no such data, documentation, or information, please explain why.

76. What is the limit of precision of the VGS inventory system?

77. Please confirm whether VGS reports gas inventory and loss to FERC to the dekatherm? Please identify and indicate whether there is a higher measure of accuracy available.

78. Please explain and describe how leaks are detected and how describe how often monitoring is performed and the method for monitoring.
79. Please describe the leak monitoring protocol(s) currently used by VG its agents, employees, and contractors, and indicate whether this protocol will be used to detect leaking infrastructure in the proposed VGS project.
80. If a different monitoring protocol is to be implemented, please describe this protocol and explain why a different protocol is being used for this project?
81. How many leaks are detected annually by VGS?
82. How many of these leaks are repaired, and what is the average amount of time that elapses between leak detection and leak repair?
83. Does VGS have a "Purging and Interconnection" written procedure to address natural gas releases from these activities? If YES, please describe the procedure and provide a copy of the procedure. If NO, please explain why.
84. Will VGS participate as a partner in the U.S. Environmental Protection Agency's Natural Gas STAR Program (<http://www.epa.gov/gasstar/>)? If NO, please explain why.
85. On page 3, of Exhibit Petitioner Supp.JAN-4 (2/28/13), the report states "the Project's 2/28/13 Alignment would involve the following unavoidable impacts to Class II wetlands or buffers, as approximated based on conservative estimates" The 2/28/13 alignment increases the amount of significant wetlands impacted from 10 acres for alternative 5a (the 12/21/12 alignment) to 21 acres for alternative 5b (the 2/28/13 alignment), please explain the basis for the claim that this increase in wetland impacts is "unavoidable."

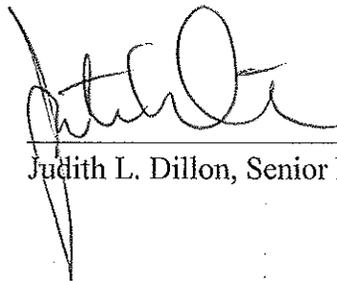
REQUESTS TO PRODUCE

1. Please produce all documents referenced, referred to, or relied upon in responding to these information requests.

DATED at Montpelier, Vermont this 21st day of May, 2013

VERMONT AGENCY OF NATURAL RESOURCES

BY:



Judith L. Dillon, Senior Legal Counsel