

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

**DG 15-155**

**Valley Green Natural Gas, LLC**

**Petition for Franchise Approval**

**Joint Direct Testimony**

**of**

**Randall S. Knepper**  
**Director – Safety Division**  
**Robert Wyatt**  
**Assistant Director – Safety Division**

**January 15, 2016**

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**Q. Mr. Knepper, please state your name, occupation and business address.**

A. My Name is Randall S. Knepper. I am employed as the Director of the Safety Division for the New Hampshire Public Utilities Commission. My business address is 21 S. Fruit Street, Suite 10, Concord, New Hampshire 03301.

**Q. Mr. Knepper, please summarize your education and professional work experience.**

A. I received a Bachelor of Science in Mechanical Engineering from University of Rochester and a Master of Science in Civil Engineering from the University of Massachusetts. I am a licensed Professional Engineer in the State of New Hampshire, License No. 9272. I have been the Director of Safety for the New Hampshire Public Utilities Commission since December 2004. Prior to that I was an Environmental Consultant and Business Development Manager at The Smart Associates, Environmental Consultants, Inc., located in Concord, New Hampshire. My prior work experience includes a number of Business and Operations roles at Keyspan Energy Delivery New England and EnergyNorth Natural Gas Inc. (Keyspan, EnergyNorth), including Key Account Executive, Commercial & Industrial Sales Manager, Sales Engineer, Senior Engineer, Staff Engineer, and CAD Supervisor. For many of those years, I designed natural gas distribution systems, recommended capital improvement projects, recommended system expansions, wrote Operations and Maintenance procedures, and oversaw construction projects. While performing the duties of each of these occupations I was responsible for compliance related to applicable Local, State, and Federal Codes. I worked at Westinghouse Electric designing high voltage transmission lines as a Project Engineer. I have completed 20 Technical Training Sessions and 21 Online Training Sessions provided by the Training and Qualification Center of the Pipeline and Hazardous Materials Safety Administration (PHMSA). See RSK Attachment 1. I serve as Staff Engineer for the New Hampshire Site Evaluation Committee and as subject matter expert for the New

Hampshire Advisory Council on Emergency Preparedness and Security. My professional work experience spans approximately 30 years.

**Q. Mr. Knepper, are you affiliated with any professional organizations?**

A. Yes. I am a member of the Association of Energy Engineers (AEE). I serve on multiple committees of the National Association of Pipeline Safety Representatives (NAPSR) including positions of Chair and Past Chair. I served as editor of each of the biennial editions of NAPSR's Compendium of State Pipeline Safety Requirements & Initiatives Providing Increased Public Safety Levels Compared to Code of Federal Regulations. I chair the Staff Pipeline Safety subcommittee of the National Association of Regulatory Commissioners (NARUC), serve on the Common Ground Alliance Technology committee, and I am a board member of the New Hampshire Public Works Standards and Training Council. Finally, I have testified before the United States Congress on pipeline safety issues.

**Q. Mr. Wyatt, please summarize your education and professional work experience.**

A. Please refer to RJW Attachment 2.

**Q. What is the purpose of your testimony in this proceeding?**

A. The purpose is to provide the Commission with our comments specific to the engineering, operations, safety and security matters related to the proposed Valley Green Natural Gas, LLC (VGNG) project.

**Q. Please provide us with a brief overview of the VGNG intent to become a regulated utility providing natural gas service to the City of Lebanon and the Town of Hanover, NH?**

A. VGNG expects to offer competitively priced natural gas as an alternative clean fuel energy supply to these entities, convincing as many as possible to switch to its regulated and distributed pipeline natural gas.

## **I. VGNG PROJECT ENGINEERING**

**Q. Please provide us with an overview of the design, engineering and construction of VGNG proposal required to become a regulated utility providing natural gas service to the City of Lebanon and the Town of Hanover, NH?**

A. The Lebanon-Hanover, NH area has no access to traditional natural gas sources from interstate or intrastate natural gas pipelines or storage facilities. As an alternative to receiving natural gas from an interstate pipeline, the VGNG proposal is to contract with Tri-Mont Engineering, LLC, to provide :

1) design, engineering and construction oversight of a liquefied natural gas (LNG) storage and regasification facility (plant) to be the source of natural gas supply; and

2) design, engineering and construction oversight of a natural gas distribution system to be able to deliver the natural gas supply from the LNG storage and regasification facility (plant) initially to a limited area of customers.

The LNG will be sourced primarily from the supply-rich Marcellus region of Pennsylvania and transported to NH via 10,000 gallon, double-walled, insulated, tractor trailers specifically designed to transport LNG. The plant initially was proposed as having a storage capacity of 300,000 gallons of LNG using five 60,000 gallon horizontal prefabricated storage tanks.

1 **Q. Would you please provide us with your understanding of the proposed plan for VGNG**  
2 **constructing the LNG storage and regasification facility?**

3 Yes. The LNG plant will be located on an approximate six-to-twelve acre site within a 182-  
4 acre parcel of land located in Lebanon, NH. This parcel is identified on Lebanon Tax Map  
5 26, Lot 17. The land is owned by Choice Storage, LLC (Choice). Choice is owned by James  
6 Campion, who is also president of VGNG. VGNG, or its affiliate Valley Gas Energy  
7 Services, plans to sign a long-term lease with Choice to locate its gas facilities on the 6-12  
8 acres (site) of the 182 acre parcel. The site is attractive to VGNG and its LNG supplier and  
9 LNG storage/regasification facility operator, Gulf Oil Limited Partnership (Gulf) because it  
10 is located in close proximity to two interstate highways, I-89 and I-91; the site is located in  
11 an area of commercial and light industrial development with no residential properties in the  
12 immediate area; and the site is within a reasonable distance to several potential commercial,  
13 industrial and institutional natural gas energy consumers. The site where the LNG storage  
14 and regasification facility will be located is near the junction of Etna Road and Labombard  
15 Road in Lebanon. The zoning is for light industrial.

16 **Q. How does this site compare to other LNG facilities within the State in terms of location?**

17 A. There are only three other locations within New Hampshire that have LNG Storage and  
18 regasification. They are considered satellite facilities used primarily for peakshaving and  
19 supplementing natural gas supplied via pipelines. The Etna Rd site is comparable to all three  
20 locations. It is located approximately 1.6 miles from Interstate 89. The Rte 140, Tilton plant  
21 is located very near an interstate (within 0.56 mile) with direct access off state road NH  
22 Route 140. There are commercial businesses such as fast food establishments, retail and  
23 other restaurants that are across the street and in the nearby vicinity. The 130 Elm St,

1 Manchester plant is located within 1.4 miles from Interstate 293 in a downtown, urban  
2 environment surrounded by many businesses. It is near the Northeast Delta Dental  
3 Professional Baseball Stadium. The Broken Bridge plant in Concord is located off Integra  
4 Drive, within 2.0 miles of Interstate 93 in a commercially zoned area that has office and  
5 commercial buildings. All of these facilities mentioned above are owned by Liberty Utilities.  
6 The largest difference is that VGNG's Lebanon Facility will have more storage tanks and it  
7 will be used year round and not as a supplemental supply in the winter.

8 **Q. Based on the information that you have been able to review from this proceeding, Mr.**  
9 **Knepper would you please share your professional judgment of Tri-Mont's capabilities**  
10 **to design and build this proposed LNG storage and regasification facility?**

11 A. Tri-Mont Engineering is an engineering consulting firm with offices in Plymouth,  
12 Massachusetts and Dayton, Ohio. The engineering firm has been in business for  
13 approximately 30 years with experience in energy related systems, including bulk fuel  
14 storage and natural gas infrastructure. In both pre-filed testimony, as well as in the discovery  
15 responses of Kenneth H. Stanley, President, explains how his company, Tri-Mont, is fully  
16 capable in all phases of project support, including design, analysis, cost estimating,  
17 permitting and licensing, contractor solicitation, construction oversight, system start-up and  
18 testing, as well as operations and maintenance of its energy systems projects. Mr. Stanley's  
19 testimony notes that Tri-Mont currently supports several natural gas infrastructure projects in  
20 New England as well as projects in Ohio and Texas. Based on the information provided in  
21 the VGNG filing, as well as in the discovery responses, I see no apparent concern of Tri-  
22 Mont's capabilities to adequately design and build the LNG plant.

**Q. What are some of the federal, state and local requirements that you expect to be addressed by Tri-Mont in the design of this LNG Storage and regasification facility?**

A. Beginning on page 4 of his testimony, Mr. Stanley affirms that Tri-Mont's conceptual design of the LNG storage facility address the requirements of NH PUC Chapter 500 Rules, National Fire Protection Association (NFPA) 59A Standards, and 49 CFR 193 and 49 CFR 192 Regulations. At a minimum, the Puc 500 Rules For Gas Service, require all gas utilities to be in compliance with the federal pipeline safety regulations that are set forth in 49 CFR Parts 192 and 193. Where Puc 500 or Puc 800 rules establish more stringent safety-related requirements than those of the federal requirements, the Puc requirements shall apply. The minimum federal safety standards that are addressed in 49 CFR Part 192 pertain to the distribution system (mains and services portion of the project). The minimum federal safety standards that are addressed in 49 CFR Part 193 pertain to Liquefied Natural Gas Facilities at the plant itself.

The NFPA standard for the production, storage and handling of LNG is NFPA 59A, which is applicable to VGNG's proposed LNG storage and regasification facility. NFPA 59A is incorporated by reference within Part 193.2013 and the plant must comply with the siting, design, construction, equipment, operations, maintenance, personnel qualifications, fire protections, and security of both NFPA 59 A and Part 193. Two potential unregulated aspects of the LNG site will be the operation of a LNG transfer terminal or depot and a fleet vehicle refueling operation using compressed natural gas (CNG) or LNG. These design, permitting, construction and operations are not within the jurisdiction of the PUC and would not be reviewed by the Safety Division. The proposal includes a plan for a third party lease to service fleet vehicles in the area. NFPA 59A does not apply to vehicular applications,



1 including fueling of LNG vehicles. For the LNG plant, the City of Lebanon's fire  
2 department may impose local requirements as long as they don't conflict with the overall  
3 supply requirements. The Safety Division recognizes that City of Lebanon has experience in  
4 placing conditions that may ensure local considerations are also included with VGNG siting  
5 review. The Safety Division's experience is this does not add a layer of complexity or  
6 encroach upon authorities but to the contrary fills in any gaps that state regulations do not  
7 address.

8 **Q. Mr. Knepper, would you please share your professional assessment of Tri-Mont's**  
9 **capabilities to design and build this proposed natural gas distribution system?**

10 A. Based on my review of the information provided in the VGNG filing, as well as that which  
11 was provided in responses to discovery questions, and for the reasons I have provided above,  
12 I have no reason to believe Tri-Mont has not demonstrated that it can adequately design and  
13 build the natural gas distribution system as proposed in this project. The information  
14 presented shows have limited experience in designing and operating distribution systems. I  
15 am concerned that within the framework presented is one where VGNG has ultimate  
16 responsibility for the operations and maintenance of the distribution system, it alludes that it  
17 may in turn contract with Trimont who in turn will contract with another person. My  
18 experience has been the further removed the responsible party from the day to day operations  
19 often leads to breakdowns in communications, trainings, regulatory compliance which can  
20 affect safety. Ultimately VGNG will be responsible for compliance with demonstrating all  
21 record keeping requirements, personnel qualifications, operations, maintenance, integrity  
22 management, public awareness, underground damage prevention, security, emergency  
23 response and other requirements for ensuring regulations regarding safety are met.

1 **Q. Mr. Knepper, do you have any other comments related to Tri-Mont's engineering**  
2 **expertise that it will provide to VGNG?**

3 I will be providing additional comments related to other Tri-Mont services that will be  
4 provided to VGNG later in this testimony. Some of these other services correlate with Tri-  
5 Mont's engineering capabilities. I will also call attention to certain specific requirements  
6 from the various sources of federal, state or local rules and requirements broadly referenced  
7 earlier in my testimony.

8 **II. VGNG OPERATIONS**

9 **Q. Would you please describe from your perspective, what the important operations issues**  
10 **will be, as they relate to the LNG storage and regasification facility proposed by**  
11 **VGNG?**

12 A. Yes. First, VGNG will supply natural gas to its customers through its PUC-regulated  
13 distribution system. The natural gas will be sourced from the LNG storage and regasification  
14 facility. VGNG will be responsible for the physical assets of the LNG storage and  
15 regasification facility. Those assets will include the LNG storage tanks, the gas vaporizers,  
16 odorant tank, LNG fueling station equipment (unregulated), buildings, piping, and LNG  
17 loading and unloading equipment. The PUC will have regulatory jurisdiction over the LNG  
18 storage and regasification facility. An example would be the requirements of Puc 504.07  
19 Emergency Response, as described in greater detail later in this testimony, will apply the  
20 VGNG for LNG facility emergencies. Another expectation would be that during loading and  
21 unloading transfer operations at least one qualified, regulated, utility operations person must  
22 be present in addition to the Gulf LNG transporters (drivers of the LNG trailers).

**Q. Would you please describe the project proposal for contractual agreements between VGNG and its LNG supplier for both its LNG supply and its LNG storage facility operator services?**

**A.** In its filing, VGNG proposes to contract for its supply of LNG from Gulf, an experienced bulk fuel terminal operator and logistical services company based in Massachusetts that is expanding its product portfolio to include LNG as a motor fuel and as a wholesale bulk energy supplier. On its web page, Gulf describes itself as a “fuel agnostic” wholesaler, which means they sell whichever fuels their customers and distributors demand. Gulf describes LNG as a more environmentally friendly, cost effective, alternative (to petroleum based) energy product that is in demand as a motor fuel as well as for use as a bulk wholesale energy supply.

**Q. Do you have any other comments related to Gulf role in providing VGNG’s LNG supply?**

Yes. First, Gulf has been active in transporting LNG to fifteen LNG storage and regasification facilities in New England, including three utility-owned facilities in New Hampshire that are regulated by the PUC. The PUC safety division is not aware of any problems or other issues related to Gulf’s LNG deliveries to NH LNG facilities. Additionally, during our research of Gulf, Staff discovered that on December 29, 2015, ArcLight Capital Partners, LLC (ArcLight), a private equity and energy-focused investment firm, announced that Chelsea Petroleum Products Holdings, LLC, an affiliate of ArcLight, completed the purchase of Gulf Oil Limited Partnership from Cumberland Farms, Inc. In a December 29, 2015, press release related to this acquisition, ArcLight indicates that Gulf will maintain its headquarters in Massachusetts, that it will retain its name and limited partnership

1 structure and that the transaction is not expected to disrupt existing practices or agreements.

2 Staff expects VGNG will be following this development closely as it continues to establish  
3 its business relationship with Gulf. If there are noteworthy changes in what has been  
4 presented to the Commission resulting from this acquisition, we expect VGNG to inform the  
5 Commission of those developments in a timely manner.

6 **A. Please describe the significance to VGNG of the Gulf liquefaction and storage project**  
7 **that is underway in Pennsylvania?**

8 A. Information we have received from the filing, the direct testimony of Jonathan Carroll,  
9 discovery, as well as what is available on the Gulf web page indicate that in order to meet  
10 increasing demand by its customers, Gulf has embarked on a project to build one of the first  
11 merchant, domestic natural gas liquefaction facilities in the northeast. Once completed, Gulf  
12 will be able to utilize this new facility located in Great Bend, Pennsylvania, as the primary,  
13 but not necessarily the only source of LNG product to meet 100% of Valley Green's  
14 requirements on a firm basis. The Great Bend facility will have an initial liquefaction  
15 capacity of 100,000 gallons per day (equivalent to approximately 8,500 MMbtu per day) and  
16 LNG storage capacity of 600,000 gallons. The Great Bend facility is approximately 350  
17 miles of mostly interstate highway from the proposed site of the VGNG Storage and  
18 regasification facility. Gulf describes their operation of LNG transport service between  
19 sources and VGNG as a "virtual pipeline operation" that will not be impacted by interstate  
20 pipeline capacity constraints. This also is not dependent upon the outcome or approval of  
21 interstate pipelines being certificated and constructed.

22 **Q. Are there any other operations related services that Gulf will be providing to VGNG?**

1 A. Yes. VGNG will enter into an agreement where Gulf will provide qualified personnel to  
2 perform full operations and maintenance services at the VGNG LNG plant. Based on Gulf's  
3 operations background in bulk fuel terminal and logistics, and its desire to expand the  
4 availability of LNG as a motor fuel throughout the northeast, VGNG selected Gulf to be able  
5 to provide qualified operational and maintenance services and personnel to the VGNG LNG  
6 plant. The Safety Division could not find within the testimony submitted support for Gulf's  
7 prior experience of providing such operations and maintenance services within a regulated  
8 environment such a state public utility commission or federal agency. Every year the Safety  
9 Division inspects the operations, maintenance, qualifications, security and fire protection of  
10 regulated LNG facilities. These inspections include review of procedures and record keeping  
11 for other LNG operators within the state and VGNG must be aware of the frequency of  
12 review and level of scrutiny necessary for compliance.

13 **Q. Would you please provide a similar description, from your perspective, what the**  
14 **important operations issues will be related to the gas distribution system, as proposed**  
15 **by VGNG?**

16 A. Yes. VGNG plans to enter into an agreement with Tri-Mont to provide all operations and  
17 maintenance services on the distribution system. Tri-Mont will know this system better than  
18 any other entity because it is a system that they were involved with from the initial design to  
19 construction oversight to final testing. Tri-Mont has is aware of the federal pipeline safety  
20 requirements and Staff expects their distribution system personnel to be well versed in New  
21 Hampshire's Statutes, the PUC's Chapter 500 Gas Utility and Chapter 800 Pipeline Safety  
22 rules by the time VGNG becomes operational. New Hampshire PUC has 78 more stringent  
23 requirements than the federal regulations as found:

1 [http://www.puc.nh.gov/Safety/Compendium/Pages%20from%20Compendium%20NAPSR%](http://www.puc.nh.gov/Safety/Compendium/Pages%20from%20Compendium%20NAPSR%20Second%20Edition%20NH%20only%20121113%20with%20NH%20rules%20linked.pdf)  
2 [20Second%20Edition%20NH%20only%20121113%20with%20NH%20rules%20linked.pdf](http://www.puc.nh.gov/Safety/Compendium/Pages%20from%20Compendium%20NAPSR%20Second%20Edition%20NH%20only%20121113%20with%20NH%20rules%20linked.pdf)

3 **Q. Has Tri-Mont discussed the PUC's seven-day storage requirement with Staff?**

4 A. Yes. As a follow up to an early meeting with Staff and OCA, Tri-Mont received some  
5 general guidance from Staff as to one or more examples for calculating a seven-day demand  
6 forecast using the coldest seven-day period from historical degree day data.

7 **Q. Has Tri-Mont or VGNG provided PUC Staff with a preliminary copy of its forecast**  
8 **seven-day storage report?**

9 A. No, but it is not necessary that the company file this forecast until it begins operations.

10 **Q. What is the normal Safety Division Staff process to assess the adequacy of a gas utility's**  
11 **peak seven-day on-site storage requirements?**

12 A. In accordance with the requirements of Puc 509.16(b), VGNG, as well as the other regulated  
13 gas utilities, are required to file Annual Peak Shaving Storage Capability Reports (aka "the  
14 seven-day storage requirement") with the Safety Division. These reports must be filed no  
15 later than October 1 for gas utility companies that will be supplying customers in the  
16 subsequent December 1 to April 1 period. Staff will review the calculations, firm gas supply  
17 resources and on-site storage capabilities in order to determine conformance with Puc 506.03  
18 and Puc 509.16. Additionally, a related PUC requirement for the period December 1 to April  
19 1 each year, regulated gas utilities are required to file Weekly Gas Storage Reports with the  
20 PUC Safety Division, in accordance with Puc 509.17. Safety Division Staff will review

1 these weekly inventory reports to determine each gas utility is in compliance with the  
2 applicable requirements of Puc 506.03(e), (f) or (g).

3 The seven-day storage requirement came about at a time when NH gas utilities relied heavily  
4 on LNG and LPG liquid gas supplies that were transported via 9,000-10,000 gallon tractor-  
5 trailer trucks into gas utility storage and vaporization facilities from regional suppliers. These  
6 liquid gas supplies supplemented pipeline natural gas at peak day percentages sometimes  
7 greater than 35% of the daily supply mix. With peak gas demand days occurring in the cold  
8 and unpredictable winter weather, the seven-day storage requirement provides the  
9 commission with a level of assurance that gas utilities will have enough liquid gas storage  
10 capacity and inventory on-site to meet the supplemental liquids requirements of the historical  
11 seven coldest day period in the previous twenty to thirty year period. Puc 506.03 provides  
12 for an additional amount of gas supply that is transported in company-owned transports, or  
13 through contractual arrangements with a third party firm gas supplier that can be included as  
14 part of the onsite storage requirement. Staff will be looking at VGNG's regulated utility  
15 operation's on-site storage capacity plus its firm contractual access to additional LNG from  
16 Gulf's on-site storage inventory in Lebanon that will be necessary to meet VGNG's seven-  
17 day storage requirement.

18 **Q. Will VGNG be required to file an emergency response plan?**

19 A. Yes. VGNG will actually be required to develop two emergency response plans (ERP). One  
20 ERP will be required for the VGNG natural gas distribution system operations and a second  
21 ERP will be for the LNG storage and regasification. They are allowed to combine the two  
22 under one plan but the Safety Division recommends because these duties are split between

Gulf and Tri-Mont that it would be preferable to keep them separate. Within code requirements of Part 192 and Part 193 there are separate meanings for similar terms.

**Q. What other reporting requirements will VGNG be subject to when it becomes operational?**

A. VGNG will be subject to the requirements of a distribution system integrity management plan. VGNG will need to have adequate physical security of its LNG storage and vaporization assets in Lebanon. VGNG will need to have an Operator Qualifications Plan, Public Awareness Plan, Construction Quality Assurance Plan, in addition to Operations and Maintenance Plan to assure that operators have been trained to operate and maintain their gas systems. The State Fire Marshal and local Fire Department(s) may also have reporting requirements for VGNG.

**III. SAFETY AND SECURITY RELATED ISSUES**

**Q. Are there other specific safety or security related requirements that you would like to call attention to, as related to the proposed LNG storage, regasification and distribution systems?**

A. Yes. VGNG will be subject to the requirements of Part Puc 504 Quality of Gas Service. For example, under Puc 504.07 Emergency Response -VGNG will be required to respond to an emergency, such as a report of a gas odor, within 30 minutes. Puc 504.07 has monthly reporting requirements for the number of gas odors responded to and detailed explanations for responses that exceeded the 30 minute requirement. VGNG will need to take into consideration during the hiring of personnel and proximity required to meet the desired response times.

Another example, Puc 506.02(s) is the requirements for physical and cyber security. VGNG will be required to develop and maintain a written security plan outlining actions necessary to protect the utility's facilities from breaches of security or sabotage. This includes any



1 outlining actions to be taken as required by Homeland Security Presidential Directive-3 and  
2 any subsequent modifications. The written security plan should include preventive measures  
3 that address supervisory control and data acquisition (SCADA) systems, control centers and  
4 systems, and critical supply locations, as well as cyber security considerations. VGNG will  
5 provide the commission's Safety Division the written security plan to review on utility  
6 premises. The utility shall provide the commission with a confidential copy of the security  
7 plan upon request.

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

9 **A. Yes.**