

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

**VALLEY GREEN NATURAL GAS, LLC**

**Petition for Franchise in the City of Lebanon and Town of Hanover**

**DW 15-**

**Direct Pre-filed Testimony of Jonathan W. Carroll**

May 15, 2015

1 Q. Please state your name and business address.

2 A. My name is Jonathan W. Carroll. My business address is 100 Crossing Blvd.,  
3 Framingham, MA 01702.

4 Q. By whom are you employed and what position do you hold?

5 A. I am Senior Director of Marketing and Business Development at Gulf Oil Limited  
6 Partnership ("Gulf").

7 Q. Please describe your educational background and professional experience.

8 A. I graduated from the University of New Hampshire with a Master of Science degree in  
9 Management of Technology in 2004. Later that year I began my career at Distrigas of  
10 Massachusetts, which is the longest operating liquefied natural gas ("LNG") import terminal in  
11 the U.S. Over nine years, I progressed through a series of assignments in the Sales & Marketing  
12 group and managed LNG supply accounts across many different industries. In 2013, I joined  
13 Global Partners LP as a Business Development Manager where I was responsible for the  
14 expansion of the company's inaugural compressed natural gas ("CNG") business unit. At the  
15 beginning of 2014, I was hired as the Senior Director of Marketing and Business Development at  
16 Gulf. In this capacity, I am responsible for securing LNG supply, storage and transportation for  
17 Gulf's fleet operations and for expanding access to natural gas for Gulf's customers.

18 Q. Please describe Gulf and its operations.

19 A. Gulf has been a recognized brand in energy since 1901. Currently Gulf is headquartered  
20 in Framingham, MA with operations in 31 states and the Caribbean. Among Gulf activities is  
21 the distribution of quality motor fuels, both gasoline and diesel, to over 2,300 branded outlets as  
22 well as 1,000 private label retail outlets. The company also supplies heating oil, lubricants, bio-  
23 fuels and LNG. Gulf owns and operates 12 proprietary terminals as well as supplies wholesale

1 product through 75 third-party terminals. Gulf dispatches through its parent company's fleet of  
2 almost 200 trucks, 44 of which are fueled by LNG. In addition to using LNG as a transportation  
3 fuel, Gulf is also transporting LNG from third-party terminals in Massachusetts, Pennsylvania,  
4 and Quebec to multiple locations throughout the northeast. In 2014, Gulf safely delivered over 5  
5 million gallons of LNG and is on track to deliver over 12 million gallons of LNG in 2015. In  
6 order to expand its LNG services further, Gulf has plans to build a liquefaction facility in the  
7 Marcellus Shale Region. This location was selected because it is home to some of the cheapest  
8 natural gas in the country. We currently anticipate that roughly 30% of the capacity of the  
9 facility will be dedicated to the Valley Green local distribution system.

10 Q. What is the purpose of your testimony?

11 A. I will be providing an overview of gas supply and pricing. I will also provide an  
12 overview of Gulf's expected operation and maintenance of the storage and regasification facility.  
13 Finally, I will provide an overview of the vehicle supply depot that Gulf may operate on the site.

14 Q. Please describe the relationship between Gulf and Valley Green Natural Gas, LLC  
15 ("Valley Green").

16 A. Gulf and Valley Green are parties to a Memorandum of Understanding, which  
17 contemplates the execution of final LNG supply agreements, as well as Gulf's operation and  
18 maintenance of Valley Green's storage and regasification facilities, as well as the possibility  
19 Gulf's lease of storage from Valley Green, and the siting of Gulf's fuel depot facility at Valley  
20 Green's site.

21 **Gas Supply**

22 Q. Please describe the type of gas Gulf will be providing Valley Green.

1 A. LNG, which is predominantly methane that has been converted to liquid form for ease of  
2 storage and transport. It takes up 1/600<sup>th</sup> the volume of natural gas in the gaseous state. It is  
3 odorless, colorless, and non-corrosive.

4 Q. Please describe the terms of Valley Green's agreement with Gulf to provide gas supply.

5 A. The MOU between Gulf and Valley Green anticipates a "Retail Supply Service" through  
6 which Valley Green purchases LNG from Gulf and resells it to customers and a "Tolling  
7 Service" through which the customer purchases LNG directly from Gulf and pays VGNG to  
8 provide storage and delivery services. Gulf and Valley Green are negotiating a final, binding  
9 agreement encompassing the terms of these arrangements.

10 Q. Please describe how Gulf will meet the supply needs of Valley Green.

11 A. At full build-out of the Valley Green distribution system, it is Gulf's understanding that  
12 Valley Green anticipates customers will consume up to 60,000 gallons of LNG per day at peak in  
13 the winter and up to 30,000 gallons of LNG per day in the summer. Gulf will be responsible for  
14 sourcing sufficient LNG to meet Valley Green's serviced obligations. Gulf will transport the  
15 LNG in trailers that can carry up to 10,000 gallons of LNG onboard. Gulf will dedicate as many  
16 trailers as Valley Green deems necessary for storage inventory, to be designated in the final  
17 contract.

18 Q. What portion of that gas supply will be provided to Valley Green on a firm basis?

19 A. The parties contemplate the final contract will require 100% of gas supply to be provided  
20 on a firm basis.

21 Q. Please describe any price hedging activities Gulf will be involved with regarding the  
22 Valley Green gas supply.

1 A. To the extent that it is necessary, Gulf will offer Valley Green or its Tolling Service  
2 customers a mix of financial risk management tools approved by the Commission in order to  
3 minimize natural gas price volatility. We expect gas price volatility at Gulf's liquefaction  
4 facility to be minimal, but customers may be interested to purchase physical fixed basis supply  
5 contracts or hedge NYMEX Henry Hub futures for budgeting purposes.

6 Q. Does Gulf have a gas procurement policy? If so, please explain.

7 A. In order to balance the liquefaction schedule with storage levels and customer demand  
8 requirements, Gulf anticipates it will purchase natural gas feedstock through a combination of  
9 long term base load supply contracts and seasonal and daily purchases. Gulf will work with  
10 Valley Green to forecast customer demand as the distribution system develops.

11 Q. Will Gulf be conducting least-cost planning for its supplies to Valley Green?

12 A. Gulf anticipates that it will produce and deliver very competitively-priced LNG supply  
13 available in the market place due to the price of natural gas feedstock at its liquefaction facility,  
14 the efficient liquefaction technology it selected to drive the process, and the transport of the fuel  
15 using LNG-powered tractors. Gulf has taken steps to streamline the supply chain as much as  
16 possible and to minimize any inefficiency. Furthermore, Gulf's liquefaction facility will be a  
17 merchant, domestically sourced LNG supply point. Other utility-owned liquefaction facilities do  
18 not offer long-term, firm LNG supply and the import terminals are typically linked to global  
19 market price fluctuations. In the event a cheaper alternative becomes available, Gulf will work  
20 with Valley Green to provide competitively-priced natural gas to Valley Green customers.

21 Q. Please describe the state of natural gas supply in New England generally.

22 A. Areas of New England that are served by natural gas experience much more price  
23 volatility than other parts of the country because New England is at the end of the interstate

1 pipeline system. New England has no natural gas resources of its own, and there is limited  
2 pipeline capacity into New England. When it gets cold and the demand for natural gas creates  
3 scarcity, prices spike. While there are various proposals to build new pipelines into New  
4 England, it is expensive to build such pipelines and difficult to site them.

5 Q. Please describe the state of natural gas supply in the Upper Valley.

6 A. The Upper Valley area is not served by or close to any natural gas pipelines, so area  
7 consumers do not have natural gas as a fuel option at the present time.

8 Q. Please describe how Gulf's relationship with Valley Green alleviates some of the cost  
9 and supply concerns you have described.

10 A. Gulf's supply of LNG to Valley Green brings the fuel option of natural gas to Upper  
11 Valley consumers for the first time. Because Gulf is supplying LNG via trucks, it is a virtual gas  
12 pipeline and the price volatility caused by pipeline constraints experienced elsewhere in New  
13 England is not a concern.

14 **Operation and Maintenance of Storage and Liquefaction Facilities**

15 Q. Please describe the arrangement between Gulf and Valley Green with respect to Gulf's  
16 involvement with operating and maintaining Valley Green's facilities.

17 A. As also described in the testimony of James Campion, Valley Green and Gulf are  
18 negotiating final terms whereby Gulf would provide all essential operation and maintenance  
19 services for the Valley Green storage and regasification facility. Gulf's operations and  
20 maintenance agreement would be coterminous with its supply contract with Valley Green. Gulf  
21 would provide: scheduled maintenance; daily operations; provision of on-site, qualified  
22 operational staff; and compilation and submission of all routine reports to regulatory agencies,  
23 facility lenders, and insurers.

1 Q. Please describe how gas safety will be addressed in the operation of the Valley Green  
2 storage and regasification facilities.

3 A. Safety precautions shall be as stated by NFPA 59A, 49 CFR 193 and as the facility safety  
4 officer or the NH PUC Safety Division may direct.

5 **Vehicle Refueling Depot/Storage Lease**

6 Q. Please describe other non-regulated activities Gulf plans to be involved with at the Valley  
7 Green site.

8 A. Gulf and Valley Green intend to enter into a lease whereby Gulf would lease a space  
9 adjacent to Valley Green's facility for a CNG/LNG refueling depot to service fleet vehicles in  
10 the area. Gulf is reviewing site conditions for this option. Gulf also intends to lease LNG  
11 storage space in Valley Green's storage tanks, to the extent space is available. In connection  
12 with this lease of storage space, this arrangement is a cost-effective way for Valley Green's  
13 Tolling Service customers to purchase LNG directly from Gulf and use Valley Green for  
14 distribution services.

15 Q. Do you have anything else you would like to add to your testimony?

16 A. Not at this time.

17 Q. Does that complete your testimony?

18 A. Yes.