PREFILED TESTIMONY OF MATTHEW COTA

Q What is your name?

A My name is Matthew Cota. I go by Matt.

Q What is your occupation and business address?

A I am the Executive Director of the Vermont Fuel Dealers Association (“VFDA”). My business address is 963 Paine Turnpike North, Berlin, Vermont.

Q What is your education?

A I have a Master’s Degree in Public Policy from California State University Northridge and a Bachelor of Arts in Political Communication from The George Washington University.

Q What is your employment history?

A I have been the Executive Director of VFDA since 2007. Prior to working at VFDA, I was a journalist and a school teacher.

Q What is VFDA?
A VFDA is a trade association with a diverse membership of more than 230 companies doing business in Vermont. In addition to legislative advocacy and regulatory oversight, VFDA trains approximately 1000 students every year in the heating, electrical, and plumbing trades.

Q What is an example of legislative advocacy and regulatory oversight provided by VFDA?
A VFDA successfully advocated for a provision in the 2011 Vermont Energy Act that required a timeline and a trigger for an ultra-low sulfur renewable oilheat mandate in Vermont.¹

Q What do VFDA member companies sell?
A VFDA members include companies that retail, wholesale, and transport oilheat, propane, gasoline, diesel, biodiesel, natural gas, wood pellets, and coal. VFDA members also include service companies that install and repair heating systems.

Q What is your experience in discussing the environmental attributes of various energy sources in the United States?
A I am a frequent guest lecturer at the University Vermont for an alternative energy course taught by Dr. Anju Dahiya. I have also written a chapter in a textbook published by Academic Press in 2014 called “Bioenergy: Biomass to Biofuels.” The chapter, titled “Renewable Oilheat,” describes the transition to low sulfur biodiesel blended oilheat. I have also received a rural development grant on behalf of VFDA from the United States Department of Agriculture to study how to operationalize a biodiesel production facility that can grow oleaginous algae from the nutrient rich, organic carbon waste streams found on Vermont dairy farms and breweries. In 2012, I received an Environmental Excellence Award from Governor Shumlin for my efforts promoting clean and renewable oilheat policies in Vermont. I was also a coordinating committee

member for the Vermont Energy Action Network (EAN) which was created to determine ways for Vermont to reach its renewable energy goals of 90% by 2050.

Q Have you taken courses or had any training with regards to the energy economic policy?
A My graduate coursework at the Tseng College at California State University Northridge focused on urban planning and energy. As a Planning Commissioner for the town of Plainfield, Vermont, I served as secretary and collaboratively wrote the Plainfield Town Plan, which dealt extensively with energy issues. In 2009, I received the Financial Services Champion of the year award by the U.S. Small Business Administration for my efforts assisting heating fuel retailers during the recession. I spent nine years reporting on the environmental and economic issues related to oil and gas exploration as a journalist in Santa Barbara, California.

Q Do your duties at the VFDA include matters having to do with oil prices and the prices of other fuels?
A I follow both oil and other fuel prices daily; I review projections; I read trade publications and publications of the Energy Information Agency; I am in regular contact with my counterparts in other states; I attend meetings and seminars of the National Oilheat Research Alliance. I worked collaboratively with the Agency of Human Services to establish the methodology behind the Vermont Fuel Assistance Rack Price (VFARP). I serve on numerous energy related boards and organizations, including the New England Fuel Institute, the Petroleum Marketers Association of America, the Vermont Petroleum Cleanup Fund Advisory Committee, and the Vermont Home Energy Assistance Task Force. In this capacity, I provide home energy companies information on state and federal regulations. Most home energy marketers are small family businesses that lack the resources to participate in legislative and regulatory proceedings.
Q. What other services do you perform for the VFDA members?

A. In addition to those recited above, I testify frequently before Vermont legislative committees on energy policy and specific bills and I keep our membership abreast of state and national trends, particularly of economic and political matters, through regular written reports and briefings, and make presentations at membership meetings.

Q. Have you ever been employed by a heating fuel and service company?

A. Yes. I worked part time over the course of three years (1989-1991) for a heating fuel and service company in Bellows Falls, Vermont, in which I performed manual labor, working alongside fuel delivery drivers, plumbers, and heating technicians.

Q. Have you previously testified before the Vermont Public Service Board (“PSB”)?

A. I have not formally testified before the PSB but I have participated in numerous PSB workshops that focus on energy efficiency.

Q. What is the purpose of your testimony today?

A. I intend to provide information about the cost of oilheat relative to natural gas, energy conversion costs, and the environmental qualities of oilheat.

Q. During the initial Phase 1 hearing for the Addison County Pipeline expansion in July of 2013, VFDA provided testimony that predicted the cost of oilheat relative to natural gas would narrow. VFDA’s testimony was contrary to testimony presented by VGS in 2013 that claimed the differential would persist. What has happened since then?

A. In 2013, VFDA’s testimony characterized the economic assumptions by VGS as “irresponsible and naive.” In fact, the VFDA analysis has been proven correct, as construction costs for the Addison County natural gas pipeline have nearly doubled while the cost of crude oil...
has dropped by half. The price of a barrel of WTI crude on 7/15/2013 was $106. Testimony provided by VFDA on 7/15/2013 stated, “U.S. crude oil prices could drop as low as $50 a barrel within the next two years.”

In February 2015—eighteen months later—a barrel of WTI crude traded at $48. On May 1, 2015, a barrel of WTI crude traded at $55. This is not surprising that the price difference between oil and gas would close. Just a decade ago, oilheat in the Northeast was cheaper than utility gas.

Q What is the future for oil prices?

A Global oil prices are expected to stay low. Economists from Stanford’s Frank Wolak to those at the Energy Information Administration agree that there is a high probability that crude oil remains in the $50 to $70 per barrel range for the next 25 years. At those prices, oilheat prices would be expected to remain in the $2.65- $3.10 per gallon range for the foreseeable future.

Q Given the lower costs, what economic payback—if any—will be realized by Addison County homeowners that convert from oilheat to utility gas?

A If the cost of the two commodities remains constant, a homeowner in Addison County who converts from oilheat to utility gas in 2016 would have to wait more than three decades for an economic payback—to the year 2049.

---


7 Attachment A
Q  How do you arrive at that year?
A  By using the calculator provided by Vermont Gas Systems on their website (vermontgas.com).

Q  Why do the VGS website— and VGS filings with the PSB— not reach the same conclusion?
A  This is because the website “savings” calculator on the VGS website and the PSB filings fail to account for conversion costs. Determining the economic payback of a heating system conversion is easily obtained by dividing the cost differential between the two fuels by the cost of converting from oilheat to utility gas.

Q  What is the average conversion cost?
A  A full conversion from oilheat to gas can be as high as $18,783. However, an average quote for an oilheat to gas conversion is about $12,000. There are several factors to consider when calculating conversion costs. One of the most important parts of any oilheat to gas conversion is the removal of the oilheat tank, as well as fill and vent pipes. Not doing so would be in violation of regulations established under 10 V.S.A. Chapter 59 Section 1929a and 10 V.S.A. Chapter 159.

Q  What does it cost to remove the oilheat tank?
A  Between $500 and $1500, depending on whether there is product in the tank that needs to be disposed of and whether the tank has to be cut in pieces due to a lack of a basement bulkhead exit. An underground oilheat tank typically costs $2000 or more to remove because it involves heavy equipment.

---

8 Attachment B
Q What does VGS assume is the cost of removing an oilheat tank?

A VGS assumes no cost. Zero. According to Vermont Gas Systems, Inc.’s Response to Vermont Fuel Dealers Association's First Set of Information Requests on Petitioner on April 22, 2015 (“VGS Response”), Ms. Simollardes states that “not all customers will remove their oil heat tank.” Not removing an oilheat tank that has converted to gas in the manner established by the Agency of Natural Resources, Department of Environmental Conservation under the powers given to them by the Vermont Legislature (10 V.S.A. Chapter 59 Section 1929a and 10 V.S.A. Chapter 159) is a violation and is enforced by the Vermont Department of Environmental Conservation Compliance Enforcement Division. According to Vermont AST regulations, the tank must be removed within one year of being put out of service and all fill and vent pipes must be removed.9

Q Are there any other federal or state regulations required of homeowners that convert from oilheat to gas?

A Yes. Lining a chimney is another important safety measure that is required when switching to a different fuel source. The Vermont Department of Public Safety requires installers of gas systems to follow National Fire Prevention Association (NFPA) rules, specifically NFPA 54: National Fuel Gas Code. NFPA 54 (section 12.4.6.2) requires any chimney to be lined if the fuel type is converted.10

Q Why is this required?

---

9 Vermont AST Regulations found here: http://www.anr.state.vt.us/dec/wastediv/ust/regs/ASTRules.pdf

10 Attachment C
A  The exhaust from gas contains moisture that condenses on the walls of the chimney flue during winter. When the moisture is combined with the soot left over from oil combustion it becomes acidic and weakens the mortar holding the flue together. The worst case scenario is that the flue becomes blocked by fallen mortar, which would create a dangerous health hazard.

Q  What is the average cost for lining a chimney?
A  $1500.

Q  What cost does VGS assume for chimney lining?
A  VGS assumes no cost. Zero. According to Ms. Simollardes, Vermont Gas does not have information on how many conversions would require a lined chimney and that chimney lining is not calculated in conversion costs.\(^{11}\)

Q  Is it possible to install a new direct vent and avoid lining the chimney?
A  Yes it is. But according to Ms. Simollardes, VGS expects Addison County homeowners to rent a conversion burner from them for $22 a month.\(^{12}\) This implies using the existing oilheat boiler, furnace, and venting system. Under this scenario, the chimney would still have to be lined and the oilheat tank, fill, and vent removed.

Q  Even with the cost of tank removal and chimney lining, are oil conversion burners the cheapest way to convert to utility gas?
A  Yes. However, it will cost more in the long run because the homeowner will need to burn more gas. The heat exchanger in an oil fired unit is made of much heavier materials in order to withstand the higher temperatures of oil combustion. When the heating equipment is converted

\(^{11}\) Vermont Gas Systems, Inc.'s Response to Vermont Fuel Dealers Association's First Set of Information Requests on Petitioner on April 22, 2015. VFDA:VGS 1-7, VFDA:VGS 1-8

from oilheat to natural gas, it takes longer for the cooler-burning gas to bring the heat exchanger up to temperature. The result is a delay in getting heat to the house and a dramatic loss of efficiency. While the heat exchanger in a gas conversion kit slowly heats up, much of the heat is flying up the chimney.

Q So if Addison County homeowners are encouraged by VGS to undertake cheap gas conversions, VGS will sell more fossil fuels?

A Yes. It is understandable why this method is preferred by VGS. In general, all businesses, even regulated utilities, reap greater profits from increased sales.\(^\text{13}\)

Q What other factors impact the “savings” promised by VGS?

A The percentage of homeowners in Addison County that decide to switch will likely be much lower than VGS anticipates, due to several new market factors that did not exist in 2013. According to “VGS Response,” their savings calculations are based on the assumption that three out of every four homes (1,909) will convert to utility gas and that the average displacement of heating oil will be 724 gallons. This is not accurate.

Q What would be the actual displacement be per home?

A This can be determined by comparing sales of oilheat for residential consumption in Vermont provided by the Energy Information Administration (EIA) to the number of Vermont homes heated with oil. The most recent data available (2007-2013) shows that the annual consumption of oilheat per home in Vermont is 586 gallons.\(^\text{14}\)

Q Why does this matter?

---

\(^{13}\) Attachment \textit{D}

\(^{14}\) Attachment \textit{E}
A The lower the fuel usage, the less likely a homeowner will switch to utility gas, given the high conversion costs.

Q Are the gallons of oilheat consumed per home expected to decrease further?
A Yes. Over the next decade, the number of gallons used per home will decrease substantially due to three factors that have emerged since the initial approval of Phase 1 in 2013.

Q What are those factors?
A Vermont’s new low sulfur mandate, thermal energy efficiency initiatives, and use of cold climate air source electric heat pumps.

Q What is the low sulfur mandate in Vermont?
A The Clean and Green Oilheat Initiative described earlier created a trigger and a timeline for a low sulfur biodiesel blended oilheat standard in Vermont. The first phase of this law (effective 7/1/2014) requires all oilheat sold in Vermont to have a sulfur content lower than 500ppm. As demonstrated by Brookhaven National Laboratories, low sulfur oilheat improves air quality by lowering sulfur dioxide (SO2) and nitrogen oxide (NOX) emissions. The cleaner fuel will also improve both the efficiency and performance of heating systems. Another economic advantage for homeowners is the availability of inexpensive, reliable condensing technology that will increase oilheat’s annual fuel utilization efficiency (AFUE) ratings by the 6.5%, which is currently lost as latent heat.

Q What impact will thermal efficiency initiatives have on reducing the number of oilheat gallons consumed per home?

A The unregulated energy efficiency market is thriving, thanks to a new partnership between VFDA members, Efficiency Vermont, building performance contractors, and the Vermont Public Service Department. The Efficiency Excellence Network (EEN) provides efficiency training and marketing assistance for heating service companies and technicians, as well as financial incentives and low interest loans for homeowners to invest in efficiency measures.

Q What impact will cold climate heat pumps have on the market?

A It will be significant. More than half of all Vermont homes depend on oilheat and a majority of these homes currently utilize hydronic heat. This is particularly true in Addison County which has a high percentage of homes with oilheat boilers. Installing ductwork for central air conditioning these homes is a challenge. The poor efficiency and aesthetics of window air conditioning units have moved the market toward electric heat pumps. New incentives for cold climate heat pumps and marketing by Green Mountain Power and Efficiency Vermont are expected to increase the use of cold climate heat pumps in Vermont. While the reduction of oilheat used by homeowners that install cold climate heat pumps will vary considerably, it will most certainly have the effect of eliminating much of the heating shoulder seasons and reducing the load in the winter. According to a presentation by the Vermont Public Service Department, cold climate heat pumps will reduce oilheat consumption by 60%.18 In this scenario and based

on the current consumption figures, the average Vermont homeowner that installs a cold climate heat pump will see their oilheat usage drop to 244 gallons per year.

Q Would a homeowner likely convert from oilheat to utility gas in homes where a cold climate electric heat pump provides supplemental heat?

A Certainly not for economic reasons. If the cost of the two commodities stayed constant, a homeowner in Addison County would pay more slightly more for utility gas. If a conversion cost is factored, the payback is negative.

Q Are cold climate heat pumps being sold in Addison County?

A Yes. Not only is Green Mountain Power marketing heat pumps to their customers, so are full service oilheat companies as well.

Q Why would full service heating fuel companies sell cold climate heat pumps, if they will reduce the consumption of oilheat?

A Oilheat companies would rather sell fewer gallons to their customers than none at all. Most oilheat companies are small, second or third generation family owned enterprises that have learned to diversify in order to stay in business. This is the reason that the unregulated efficiency industry has emerged over the past several years and why full service oilheat marketers often sell more than one fuel source and provide multiple home energy services.

Q Won’t consumers switch to gas—despite the lack of savings?

A Yes. Some will certainly do so. But few will do so for environmental reasons. Conversions from oilheat to utility gas, especially the switch to inefficient conversion gas burners, is not a net positive for the environment given the displacement of renewable biodiesel.

19 Attachment F
blended oilheat. According to “VGS Response,” the displacement of renewable biodiesel blended oilheat was not considered by VGS.

Q What is renewable biodiesel blended oilheat?

A One of the biggest transitions in oilheat over the last five years has been the blending of biodiesel into the oilheat supply. Biodiesel is a renewable energy resource made domestically from fatty acids found in soy and other vegetable oils, recycled restaurant oils, and other natural sources.

Q Are Vermonters currently using renewable biodiesel blended oilheat?

A Most of Vermont’s oilheat providers are already selling a fuel blended with biodiesel, thanks to a federal energy policy known as the Renewable Fuel Standard (RFS). The RFS requires 9 billion gallons of biofuel to be blended into the downstream supply every year. Biodiesel is blended at various levels into the oilheat distribution system and receives full credits from the EPA under RFS. While some Vermont oilheat retailers are selling higher concentrations of renewable fuel, the upstream supply had been limited to 5% biodiesel blends, which was the standard established by the American Society for Testing and Materials (ASTM). On April 2, 2015, ASTM announced today new performance specifications for fuel oils (D396) that will accommodate blends of 6% to 20% biodiesel in conventional fuels. This means that the upstream supply can be blended with 20% renewable biodiesel and still be sold as oilheat.

Q Why would biodiesel blended into oilheat at such high levels?

---

20 EPA Renewable Fuel Standard: http://www.epa.gov/otaq/fuels/renewablefuels/
A Biodiesel blended with oilheat has been proven to work effectively in existing equipment without modification, thus allowing for a seamless and inexpensive way for consumers to transition to a renewable fuel.

Q What are the environmental advantages of renewable biodiesel blended low sulfur oilheat?

A The end result is that low sulfur oilheat with a 20% blend of renewable biodiesel is cleaner than natural gas with regards to Greenhouse Gas Emissions (GHG). This was established by ICF International and was presented to the Public Service Board by Richard Sweetser in 2013.21

Q Will these blend levels increase?

A The National Oilheat Research Alliance (NORA), has made investing in renewable liquid fuels a top priority with a goal of making oilheat 100% renewable by 2050. NORA is also working to develop a pump and burner that can use up to 100% biodiesel as standard equipment. Displacing renewable biodiesel blended oilheat with utility gas will have negative environmental impacts and reduce the likelihood that Vermont will achieve its renewable energy goals.

Q Does that conclude your testimony?

A Yes.

---

<table>
<thead>
<tr>
<th>Fuel Type</th>
<th>Annual Fuel Cost</th>
<th>Conversion Cost</th>
<th>ROI (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oilheat</td>
<td>$1570.00</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>$1204.00</td>
<td>$12,000.00</td>
<td>33</td>
</tr>
</tbody>
</table>

Source: Screen grab from vermontgas.com on May 3, 2015
**Attachment B: Conversion Cost Estimates**

---

**Estimate**

Date: 4/28/2015  
Estimate # 828105  
Expiration Date: 5/28/2015

Middlebury Resident  
Middlebury, VT 05753  
Customer ID:

<table>
<thead>
<tr>
<th>Job: Full conversion from an oil fired, chimney vented boiler with a tankless coil for domestic hot water to a Natural Gas Heating &amp; Domestic Hot Water System (3 Zone)</th>
<th>Payment Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td><strong>Labor ($65/hr)</strong></td>
</tr>
<tr>
<td>1</td>
<td>Fuel oil tank vent/fill piping removal/disposal/patch holes</td>
</tr>
<tr>
<td>2</td>
<td>Pump Out existing fuel in fuel oil tank (275 gallon) into proper containment barrels and left on site for removal by a certified hazardous waste company</td>
</tr>
<tr>
<td>3</td>
<td>Cut/clean/dispose of fuel oil tank (275 gallon) Waste products from cleaning the fuel oil tank must be left on site to be removed by a hazardous disposal company. This includes removing the oil line from the tank to the burner.</td>
</tr>
<tr>
<td>4</td>
<td>Disconnect/remove/dispose of existing oil fired heating unit</td>
</tr>
<tr>
<td>5</td>
<td>Chimney Liner</td>
</tr>
<tr>
<td>6</td>
<td>Installation of new natural gas heating unit including flushing of the existing hydronic piping and refilling the system with water that has been tested and treated according to the manufacturer recommendation for water quality.</td>
</tr>
<tr>
<td>7</td>
<td>Additional expenses from Sub-Contractors may include: Natural gas piping to the new heating unit, upgrades to bring the electrical supply up to current state code, plumbing permits, etc.</td>
</tr>
</tbody>
</table>

**Job Estimate**  
Labor $5,710.00  
Material $12,925.00

---

The scope of work includes removing the oil tank and oil fired boiler from the basement and installing a natural gas, atmospheric boiler with an indirect water heater and chimney liner. There are several variables that can greatly increase the cost of a conversion to the customer. Access to remove the fuel tank can be extremely limited if no bulkhead entrance is available. Finished living space in the vicinity of the fuel tank and heating equipment to be replaced or poor access will increase the cost to convert to a new system tremendously. Vent and fill piping and oil lines can be inaccessible due to subsequent remodeling after the original equipment was installed. Piping can be buried in concrete or enclosed behind finished walls or ceilings. If the existing system utilizes a masonry chimney, a stainless steel chimney liner will need to be installed for safety and to protect the masonry chimney from decay. This proposal is based on a 1300 sqft home with an existing oil fired, chimney vented boiler that has a tankless coil for domestic hot water and three heating zones.

**PRICE INCLUDES ALL LABOR, MATERIALS AND APPLICABLE TAXES.**

---

Date ________________________  
Authorized Signature
## Table 1 Oil to Natural Gas Conversion Cost Estimates

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost Estimates</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Gas Boiler</td>
<td>$8,000</td>
</tr>
<tr>
<td>Tank removal and remediation</td>
<td>$500</td>
</tr>
<tr>
<td>Chimney upgrades</td>
<td>$1,500</td>
</tr>
<tr>
<td>In house gas piping</td>
<td>$2,000</td>
</tr>
<tr>
<td>DHW indirect HW tank</td>
<td>$2,500</td>
</tr>
<tr>
<td>Gas Service line and meter set</td>
<td>$4,283</td>
</tr>
<tr>
<td><strong>Total Conversion Cost</strong></td>
<td><strong>$18,783</strong></td>
</tr>
</tbody>
</table>

Source: Massachusetts Department of Energy Resources (DOER) Natural Gas Expansion Study: Stakeholder Response. Exergy Partners December 18, 2013
Installation includes:
Buderus boiler (model GA124/30)
Triangle Tube indirect water heater (model Smart-30)
3-Taco circulators.
#30 Expansion tank.
Automatic makeup water feed valve and back flow preventer.
Miscellaneous copper pipe, fittings and valves for the boiler piping.
Miscellaneous steel pipe, copper tubing, fittings and valves for the gas line.
Miscellaneous stainless steel pipe and fittings for the boiler vent.
Wiring materials to connect the new boiler and controls to the existing electrical circuit.
Removal and disposal of the old boiler and water heater.
Pumping the unused fuel oil from the oil tank.
Removal of the oil tank.
Scraping the steel tank.

Materials............................$9,855.38
Labor.................................$2,492.00

Total.................................$12,372.40
### Table 12.5.1 Type of Venting System to Be Used

<table>
<thead>
<tr>
<th>Appliances</th>
<th>Type of Venting System</th>
<th>Location of Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed Category I appliances</td>
<td>Type B gas vent</td>
<td>12.7</td>
</tr>
<tr>
<td>Listed appliances equipped with</td>
<td></td>
<td></td>
</tr>
<tr>
<td>draft hood</td>
<td>Chimney</td>
<td>12.6</td>
</tr>
<tr>
<td>Appliance listed for use with Type B gas vent</td>
<td>Single-wall metal pipe</td>
<td>12.8</td>
</tr>
<tr>
<td></td>
<td>Listed chimney lining system for gas venting</td>
<td>12.6.1.3</td>
</tr>
<tr>
<td></td>
<td>Special gas vent listed for these appliances</td>
<td>12.5.4</td>
</tr>
<tr>
<td>Listed vented wall furnaces</td>
<td>Type B-W gas vent</td>
<td>12.7, 10.27</td>
</tr>
<tr>
<td>Category II appliances</td>
<td>As specified or furnished by manufacturers of listed appliances</td>
<td>12.5.2, 12.5.4</td>
</tr>
<tr>
<td>Category III appliances</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Category IV appliances</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incinerators</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appliances that can be converted to use solid fuel</td>
<td>Chimney</td>
<td>12.6</td>
</tr>
<tr>
<td>Unlisted combination gas- and oil-burning appliances</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Combination gas- and solid fuel-burning appliances</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Appliances listed for use with chimneys only</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Unlisted appliances</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Listed combination gas- and oil-burning appliances</td>
<td>Type L vent</td>
<td>12.7</td>
</tr>
<tr>
<td></td>
<td>Chimney</td>
<td>12.6</td>
</tr>
<tr>
<td>Decorative appliance in vented fireplace</td>
<td>Chimney</td>
<td>10.6.2</td>
</tr>
<tr>
<td>Gas-fired toilets</td>
<td>Single-wall metal pipe</td>
<td>12.8, 10.25.3</td>
</tr>
<tr>
<td>Direct vent appliances</td>
<td>-</td>
<td>12.3.5</td>
</tr>
<tr>
<td>Appliances with integral vents</td>
<td>-</td>
<td>12.3.6</td>
</tr>
</tbody>
</table>

12.6.2.4 Decorative shrouds shall not be installed at the termination of factory-built chimneys except where such shrouds are listed and labeled for use with the specific factory-built chimney system and are installed in accordance with the manufacturers' installation instructions.

12.6.3 Size of Chimneys.

12.6.3.1 The effective area of a chimney venting system serving listed appliances with draft hoods, Category I appliances, and other appliances listed for use with Type B vents shall be in accordance with one of the following methods:

1. Those listed in Chapter 13.
2. For sizing an individual chimney venting system for a single appliance with a draft hood, the effective areas of the vent connector and chimney flue shall be not less than the area of the appliance flue collar or draft hood outlet and the vent connector area is not less than the area of the draft hood outlet and shall be not less than the area of the larger draft hood outlet plus 50 percent of the area of the smaller draft hood outlet or greater than seven times the smaller draft hood outlet area.

3. For sizing a chimney venting system connected to two appliances with draft hoods, the effective area of the chimney flue shall be not less than the area of the larger draft hood outlet plus 50 percent of the area of the smaller draft hood outlet or greater than seven times the smaller draft hood outlet area.

4. Chimney venting systems using mechanical draft shall be sized in accordance with approved engineering methods.
5. Other approved engineering methods.

12.6.4 Inspection of Chimneys.

12.6.4.1 Before replacing an existing appliance or connecting a vent connector to a chimney, the chimney passageway shall be examined to ascertain that it is clear and free of obstructions and shall be cleaned if previously used for venting solid or liquid fuel-burning appliances or fireplaces.

12.6.4.2 Chimneys shall be lined in accordance with NFPA 211, *Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances.*

*Exception: Existing chimneys shall be permitted to have their use continued when an appliance is replaced by an appliance of similar type, input rating, and efficiency, where the chimney complies with 12.6.4 and the sizing of the chimney is in accordance with 12.6.3.*

12.6.4.3 Cleanouts shall be examined to determine that they remain tightly closed when not in use.

12.6.4.4 When inspection reveals that an existing chimney is not safe for the intended application, it shall be repaired, rebuilt, lined, relined, or replaced with a vent or chimney to conform to NFPA 211, *Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances,* and shall be suitable for the appliances to be attached.

12.6.5 Chimney Serving Appliances Burning Other Fuels.

12.6.5.1 An appliance shall not be connected to a chimney flue serving a separate appliance designed to burn solid fuel.

12.6.5.2 Where one chimney serves gas appliances and liquid fuel-burning appliances, the appliances connected through separate openings or connected through a single opening where joined by a suitable fitting located as close as practical to the chimney. Where two or more openings are provided into one chimney flue, they shall be at different levels. Where the gas appliance is automatically controlled, it shall be equipped with a safety shutoff device.
Valener announces its results for the first quarter of fiscal 2015 and raises its dividend by 4%

**Highlights**

- Dividend increased 4% on an annualized basis, ranging from $1.00 to $1.04 per common share ($6.20 per quarter)
- Annual dividend growth targeted at 6% for the next three years
- 44% increase in normalized operating cash flows, ranging from $0.10 to $0.20 per common share
- Segments de Gaz Métro:
  - Wind Farm 4: Start-up on December 1, 2014, on schedule and within budget
  - Wind Farm 2 and 3: Production has exceeded expectations due to favourable winds

**Gaz Métro**

- Liquefied natural gas: Sales growth
- Green Mountain Power: The plan to achieve synergies through the integration of Central Vermont Public Service’s operations is meeting its financial targets and is proceeding according to schedule
- A decrease in net income stemming from lower natural gas deliveries to Quebec’s industrial market caused, among other factors, by warmer temperatures

---

Source: Valener

---

Financial Results

For the first quarter of fiscal 2015, recurring net income attributable to the Partners of Gaz Métro totalled $72.6 million, down $3.2 million from $75.8 million in the first quarter of last year.

The higher net income generated by Gaz Métro LNG upon the performance of short-term LNG supply contracts combined with a favourable exchange rate impact on the net income generated by U.S. business operations were not enough to offset the drop in natural gas and electricity deliveries in Quebec and Vermont resulting particularly from temperatures not as cold as those experienced during the same period last fiscal year.

---

**Gaz Métro’s segment results – Net income attributable to Partners, excluding non-recurring items**

For the first quarter ended December 31

<table>
<thead>
<tr>
<th>(in millions of dollars)</th>
<th>2014</th>
<th>2013</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Energy Distribution</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gaz Métro-QDA</td>
<td>53.0</td>
<td>56.8</td>
<td>(3.8)</td>
</tr>
<tr>
<td>GMP and VGS (1)</td>
<td>15.9</td>
<td>16.1</td>
<td>(0.2)</td>
</tr>
<tr>
<td></td>
<td>68.9</td>
<td>72.9</td>
<td>(4.0)</td>
</tr>
<tr>
<td><strong>Natural Gas Transportation (1)</strong></td>
<td>3.9</td>
<td>4.1</td>
<td>(0.2)</td>
</tr>
<tr>
<td><strong>Energy Production (1)</strong></td>
<td>0.6</td>
<td>0.8</td>
<td>(0.2)</td>
</tr>
<tr>
<td><strong>Energy Services, Storage and Other (1)</strong></td>
<td>1.3</td>
<td>(0.2)</td>
<td>1.5</td>
</tr>
<tr>
<td><strong>Corporate Affairs (1)</strong></td>
<td>(2.1)</td>
<td>(1.8)</td>
<td>(0.3)</td>
</tr>
<tr>
<td><strong>Net income attributable to Partners, excluding non-recurring items (2)</strong></td>
<td>72.6</td>
<td>75.8</td>
<td>(3.2)</td>
</tr>
<tr>
<td><strong>Non-recurring items</strong></td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>Net income attributable to Partners</strong></td>
<td>72.6</td>
<td>75.8</td>
<td>(3.2)</td>
</tr>
</tbody>
</table>

(1) Net of financing costs of investments in this segment. These costs consist of the interest on the long-term debt incurred by Gaz Métro to finance investments in the subsidiaries, joint ventures and entities subject to significant influence of each segment.
(2) This measure is a non-GAAP financial measure.
<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vermont Homes Heated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>with Fuel Oil, Kerosene, etc. (U.S. Census)</td>
<td>139,275</td>
<td>137,711</td>
<td>130,278</td>
<td>127,869</td>
<td>124,474</td>
<td>120,783</td>
<td>116,355</td>
<td></td>
</tr>
<tr>
<td>Residential Distillate Gallons</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sold in VT (EIA)</td>
<td>90,594,000</td>
<td>78,498,000</td>
<td>84,924,000</td>
<td>70,350,000</td>
<td>74,298,000</td>
<td>59,976,000</td>
<td>68,124,000</td>
<td></td>
</tr>
<tr>
<td>Gallons Sold per home</td>
<td>650</td>
<td>570</td>
<td>652</td>
<td>550</td>
<td>597</td>
<td>497</td>
<td>585</td>
<td>586</td>
</tr>
</tbody>
</table>

Sources:
Residential Savings Calculator

How many gallons of oil do you use annually?
Average price of oil per gallon
How many gallons of propane do you use annually?
Average price of propane per gallon

AVERAGE COST PER YEAR
Natural gas: $631 per year
Combined Oil & Propane: $627 per year

AVERAGE SAVINGS
YEAR 1: $0.00
YEAR 5: $0.00
YEAR 10: $0.00

Natural Gas Cost Compiled From:
Natural Gas charge: $0.3989
Distribution charge: $0.5799 (Cost of operating Vermont Gas' pipeline system)
Daily access charge: $0.6602 (Cost to maintain the service line and meter to your home)
Assistance program: $0.78 (A discount program for lower income customers)
Current statewide averages for oil and propane cost is based on information provided by the Vermont Public Service Board's Fuel Price Report.
Oil: $2.68/gallon
Propane: $2.64/gallon

Residential Savings Calculator is based on Vermont Gas Systems proposed rates as of May 6, 2015.