Report to the House and Senate Committees on Natural Resources and Energy, the House Committee on Commerce and Economic Development, and the Senate Committee on Finance on the Efficient Use of Unregulated Fuels

Prepared by the Public Service Board
Pursuant to Section 29 of Act 89

December 15, 2013

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I. Introduction

Section 29 of Public Act No. 89[1] (the "Act") requires the Public Service Board ("Board") to conduct a public process and submit a report on or before December 15, 2013, to the House and Senate Committees on Natural Resources and Energy, the House Committee on Commerce and Economic Development, and the Senate Committee on Finance on the efficient use of unregulated fuels. Section 29(b) of the Act states:

> During the process and in the report required by this section, the Board shall evaluate whether there are barriers or inefficiencies in the markets for unregulated fuels that inhibit the efficient use of such fuels.

The following report is submitted in fulfillment of that mandate and addresses the statutory considerations of the Act.

A. Executive Summary

The Board is a quasi-judicial agency that may be called upon in the future to adjudicate such legal and policy issues that may arise from the implementation of any statutes enacted to promote the State's building efficiency goals. Because of this role, and because the Board lacks jurisdiction over the markets for unregulated fuels, the Board has refrained from advocating for any particular thermal efficiency policy options. Accordingly, this report does not contain any specific Board recommendations for legislative action. Instead, the Board has endeavored to meet the mandate of the Act by evaluating whether there are barriers or inefficiencies in the markets for unregulated fuels that inhibit their efficient use, and including descriptions of policy options identified by stakeholders that may prove useful to the Legislature in its consideration of building efficiency policies that would facilitate the attainment of Vermont's building energy goals.

Pursuant to 10 V.S.A. § 581, the State has established building efficiency goals to: (1) improve substantially the energy fitness of at least 20 percent of the State's housing stock by 2017 (more than 60,000 housing units), and 25 percent of the State's housing stock by 2020 (approximately 80,000 housing units); (2) reduce annual fuel needs and fuel bills by an average of 25 percent in the housing units served; (3) reduce total fossil fuel consumption across all buildings by an additional one-half percent each year, leading to a total reduction of six percent annually by 2017 and 10 percent annually by

1. Public Act 89, § 29 (2013 Bien. Sess.)

2025; (4) save Vermont families and businesses a total of $1.5 billion on their fuel bills over the lifetimes of the improvements and measures installed between 2008 and 2017; and (5) increase weatherization services to low-income Vermonters by expanding the number of units weatherized, or the scope of services provided, or both, as revenue becomes available in the Home Weatherization Assistance Fund. It is within the context of these goals that the Board has evaluated the question of whether there are barriers or inefficiencies in the markets for unregulated fuels.

This report has been drafted with the understanding that the Legislature is familiar with the content of the Thermal Efficiency Task Force Report[2] ("TETF Report") filed with the Legislature on January 15, 2013.[3] Accordingly, the Board has assumed that the Legislature did not intend for the Board to duplicate the work already completed by the TETF, or to reiterate the TETF Report's findings, conclusions and recommendations when it enacted Section 29. On that basis, the Board has determined that it is suitable to summarize those findings, conclusions, and recommendations here, as appropriate, and to refer the reader to the full TETF report for full information.

Based on the information and stakeholder input reviewed in this proceeding, and the modest progress that has been achieved towards the State's building efficiency goals[4], the Board concludes that there are barriers and inefficiencies in the markets for unregulated fuels that inhibit the efficient use of such fuels.

The major such barrier identified in the TETF Report is the lack of sufficient public funding, as recognized by the Legislature itself when it stated in Act 89 that "substantial public investment would be necessary to meet the State's statutory goals for improving the energy fitness of its homes and buildings."[5] Many stakeholders in the proceeding underlying this report provided comments on public

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2. The Thermal Efficiency Task Force was created and facilitated by the Vermont Department of Public Service to ensure an integrated and comprehensive statewide whole-building approach to thermal efficiency that would put Vermont on a path toward meeting the state building efficiency goals. The Thermal Efficiency Task Force issued a report to the Legislature that recommended specific actions and initiatives that would guide the state in meeting its building efficiency goals. The Department of Public Service has created a web page for the Thermal Efficiency Task Force—http://publicservice.vermont.gov/topics/energy_efficiency/tetf—where a copy of the report can be found.

3. *See* Section 1, Findings 4 through 8 of the Act.

4. According to the TETF Report, current programs and funding were estimated to be sufficient to improve the energy efficiency in approximately 18,000 housing units by the end of 2013, leaving an additional 62,000 housing units to complete by 2020. TETF Report at ES-3.

5. Public Act No. 89, § 1 (2013 Vt., Bien. Sess.).

funding policy alternatives that could be considered by the Legislature. In addition, the TETF Report comprehensively examined this issue and identified funding alternatives. This report includes a description of those comments; however, the Board refrains from recommending any particular one of these funding alternatives or policy options, as taxation and policy creation fall within the jurisdiction of the Legislature and not the Board.

The Board notes that the lack of sufficient public funding is not the only barrier in the markets for unregulated fuels. Therefore, if the Legislature chooses to consider adopting policies that would permit the State to achieve the building efficiency goals of Act 92[6], it would appear that a multi-pronged approach to addressing the barriers and inefficiencies would be preferable to a "one-size-fits-all" method. Consideration of a comprehensive set of policy options would recognize that unregulated fuel providers and customers are each heterogeneous groups, therefore, the barriers and inefficiencies identified here and in the TETF Report may not be applicable to all customer classes, or even all customers within a given customer class.

B. Language of Section 29

Section 29 of the Act states:

> (a) On or before December 15, 2013, the Public Service Board shall conduct and complete a public process and submit a report to the House and Senate Committees on Natural Resources and Energy, the House Committee on Commerce and Economic Development, and the Senate Committee on Finance on the efficient use of unregulated fuels. In this section:
>
> (1) "Regulated fuels" means electricity and natural gas delivered by a regulated utility.
>
> (2) "Unregulated fuels" means all fuels used for heating and process fuel customers other than electricity and natural gas delivered by a regulated utility.
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> (b) During the process and in the report required by this section, the Board shall evaluate whether there are barriers or inefficiencies in the markets for unregulated fuels that inhibit the efficient use of such fuels.

6. Public Act No. 92, § 6 (2008 Vt., Adj. Sess.).

(c) The Board need not conduct the public process under this section as a contested case under 3 V.S.A. chapter 25 but shall provide notice and an opportunity for written and oral comments to the public and affected parties and state agencies.

C. Procedural History

In conducting the proceeding underlying this report, the Board has endeavored to be as inclusive as possible in seeking stakeholder input. On August 29, 2013, a memorandum was issued to a number of stakeholders and state agencies seeking written comments on the statutory considerations, and providing notification that a workshop would be convened on October 10, 2013, at which time stakeholders would be afforded an opportunity for oral comment.[7] Following the duly convened October 10 workshop, stakeholders were afforded opportunities to file additional comments on November 1, and reply comments on November 8, 2013. A web page on the Board's web site was created for this proceeding, where official correspondence and copies of stakeholder comments could be reviewed. While not all stakeholder input was ultimately adopted in this report, the Board has included an appendix for the Legislature's consideration which contains all of the comments received from stakeholders.[8]

In addition to the requirements of Section 29 of the Act, Section 27a of the Act requires the Department of Public Service ("Department") and the Board to coordinate, to the extent possible, the total energy study and report to be prepared by the Department under 2012 Acts and Resolves No. 170 Sec. 13, as amended by Sec. 27 of Act 89, and the current Board public process and report. To that end, Board and Department staff attended workshops convened in each proceeding, and the Department filed information that was considered in the Board's process. In addition, it bears noting that many of the market barriers and inefficiencies presented in this report do not appear to be unique to the unregulated fuels market, and are likely to be addressed by the Department in its consideration of total energy

7. A complete list of those stakeholders and state agencies that received the August 29, 2013, memorandum can be found in Appendix C.

8. *See* Appendix A, where stakeholder comments have been included in full.

policies. Finally, because the topic of an Energy Efficiency Resource Standard will be among the considerations in the Department's report, that topic has not been evaluated by the Board.

II. Identification of Barriers or Inefficiencies in the Markets for Unregulated Fuels that Inhibit the Efficient Use of Such Fuels

A. Summary of Stakeholder Comments

Nine stakeholders provided written and/or oral comments regarding the identification of barriers or inefficiencies in the markets for unregulated fuels.

The Building Performance Professionals Association of Vermont ("BPPA-VT") argued that the language of the Act indicates that the Board should identify what market devices might be implemented to overcome barriers to improve thermal efficiencies. As such, BPPA-VT suggested that there are two means to achieve this goal: (1) improve building efficiency through weatherization and increased appliance efficiency; and (2) establish and enforce energy codes.[9]

The Department of Public Service ("Department") focused its comments on the TETF Report and identified as a market barrier the lack of a statewide program requiring building energy disclosure and labeling at time of sale, which would make energy efficiency visible in the marketplace. Additionally, the Department noted the importance of improving the accuracy of energy savings estimates as a means to build consumer confidence in the value of completing a retrofit.[10]

Energy Futures Group ("EFG") stated that a key barrier for thermal efficiency is insufficient funding and recommended that the Board consider the funding recommendations in the TETF Report.[11]

Vermont Energy Investment Corporation ("VEIC") suggested that market barriers include but are not limited to: (1) insufficient trustworthy information about energy efficient products and policies; (2) the complexity of required decisions encompassing technology, building science and economics; (3) efficiency measures containing invisible benefits that are difficult to discern; (4) inaction resulting from

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9. Letter from Jonathan Dancing, BPPA-VT, to James Volz, Chairman of the Vermont Public Service Board, dated September 24, 2013, ("BPPA-VT September 24 Letter").

10. Letter from Brian Cotterill and Timothy M. Duggan, Esq., Department, to Susan M. Hudson, Clerk of the Board, dated September 25, 2013, ("Department September 25 Letter").

11. Letter from Richard Faesy, EFG, to James Volz, Chairman of the Public Service Board, dated September 25, 2013, ("EFG September 25 Letter").

split incentives in ownership models by which the investor does not reap the direct benefits (e.g., landlord/tenant); and (5) the variability of funding from the Forward Capacity Market and Regional Greenhouse Gas Initiative sources. VEIC contended that market inefficiencies exist because the true long-term benefits of making energy efficiency improvements are not being priced into the market. VEIC maintained that the pervasive failure to account for the total long-term cost of energy use keeps the price of unregulated fuels artificially low which tends to depress demand for taking steps to reduce fuel use.[12] In addition, VEIC agreed that the specific barriers identified in the TETF report exist. VEIC argued that barriers to efficiency in delivered fossil fuels are very similar to those that existed for regulated fuels prior to the establishment of the electric Energy Efficiency Utility structure in Docket 5980.[13] Burlington Electric Department ("BED") filed comments which supported the comments filed in the VEIC September 25 Letter.[14]

International Business Machines Corporation ("IBM") observed that VEIC's list of potential barriers has not inhibited IBM's efficient use of either regulated or unregulated fuels, but rather, IBM has invested in thermal efficiency for reasons of environmental stewardship and sound business management.[15]

The Vermont Fuel Dealers Association ("VFDA") argued that there are no impediments to the efficient use of deliverable fuels in Vermont. VFDA noted that while more than half of Vermonters choose #2 fuel oil as a heating fuel, average per-home consumption has declined by 61% over the last 40 years due to efficiency measures, high-performance heating equipment, and advances in building design.[16] VFDA argued that, given improvements in home building and remodeling techniques, higher-performance heating equipment, and economic factors in the independent fuel market, the barriers or inefficiencies that may have existed in the markets for unregulated fuels have been largely overcome.

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12. Letter from Michael Wickenden, Director of Regulatory Affairs, VEIC, to Susan Hudson, Clerk of the Board, dated September 25, 2013, ("VEIC September 25 Letter").

13. Letter from Michael Wickenden, Director of Regulatory Affairs, VEIC, to Ms. Susan Hudson, Clerk of the Board, dated November 1, 2013, ("VEIC November 1 Letter").

14. Letter from Thomas A. Buckley, BED, to Ms. Susan M. Hudson, Clerk of the Board, dated September 25, 2013, ("BED September 25 Letter").

15. Letter from Janet Doyle, Senior Engineer, IBM, to Mrs. Susan M. Hudson, Clerk of the Board, dated November 11, 2013, ("IBM November 11 Letter").

16. Letter from Matt Cota, VFDA, to Susan Hudson, Clerk of the Board, dated September 25, 2013, ("VFDA September 25 Letter").

VFDA urged the Board to report to the Legislature that a relatively barrier-free market exists for energy efficiency measures undertaken voluntarily by motivated customers of heating oil and propane companies.[17] VFDA acknowledged that there are inefficiencies in delivering energy efficiency services, but maintained that there are not barriers that prohibit a customer from utilizing efficiency services.[18]

The Vermont Natural Resources Council ("VNRC") requested that the Board use the TETF Report as a guiding framework for exploring the issues, barriers, and potential solutions.[19] The Vermont Public Interest Research Group ("VPIRG") observed that the TETF Report highlighted insufficient funding as a barrier to meeting the state's thermal energy goals.[20]

The Vermont Superintendents Association ("VSA") stated that the highly fluctuating price of unregulated fuels creates risk and makes it difficult to plan effectively for long-term investments in efficiency measures or conversions to renewable energy sources. VSA contended that if a mechanism were in place to stabilize the price of unregulated fuels or create a floor price below which the fuel price would not fall, the risk would be mitigated and more projects would be implemented.[21]

B. Barriers or Inefficiencies Identified in the Thermal Efficiency Task Force Report

Section 3 of the TETF Report contains a market sector analysis for unregulated fuels that is divided into three components: residential single-family, multifamily, and commercial and industrial.

For Vermont's existing single-family programs and services, the TETF Report describes the following customer barriers and program gaps.

Customer Barriers:
1. Initial costs (first costs) are perceived to be too high to undertake comprehensive energy improvements.

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17. Letter from Richard H. Saudek, Esq., Cheney Saudek & Grayck PC, for VFDA, to Susan M. Hudson, Clerk of the Board, dated November 1, 2013, ("VFDA November 1 Letter").

18. Tr. 10/10/13 at 26 (Cota).

19. Letter from Johanna Miller, VNRC, to Chairman James Volz, Vermont Public Service Board, dated September 24, 2013, ("VNRC September 24 Letter").

20. Email of September 25, 2013, 2:59 pm, from Ben Walsh, VPIRG, to Susan Hudson, re: VPIRG Comments on PSB Report on Efficient Use of Unregulated Fuels (Act 89, Section 29), ("VPIRG September 25 Email").

21. Letter from Norm Etkind, VSA, to Susan M. Hudson, Clerk of the Board, dated September 24, 2013, ("VSA September 24 Letter").

2. Many Vermonters do not understand what is involved with the retrofit process, how much money they could save, or that they could be more comfortable in their homes following the implementation of weatherization services.
3. Customers lack sufficient knowledge to prioritize steps and actions for effective retrofits because they must choose from competing (and sometimes conflicting) measures.
4. Program services do not provide an appealing customer value proposition. Even households where homeowners understand the benefits and have adequate financial means do not undertake comprehensive energy improvements in high numbers.
5. Customers can be frustrated by the fact that some efficiency measures are not addressed by existing retrofit programs. For example, there are no state rebates or incentives for efficient oil, propane, or kerosene-fired heating equipment or for high-efficiency windows.

Program Gaps:
1. The 60-80% median income customer segment is not served by either market rate programs or low-income programs, which serve customers earning less than 60% of median income.[22]
2. WAP (Weatherization Assistance Program) has a 2-year waiting list, indicating more need than available resources.
3. The middle-income customer segment (80-120% of median income) is not targeted or well served by existing programs, with the exception of the NWWVT (Neighborworks of Western Vermont) H.E.A.T. Squad program in Rutland County.[23]
4. Funding to support market rate retrofits is insufficient; the HPwES (Home Performance with Energy Star) program budget is insufficient to meet the demand for services.
5. Customers in residential market segments such as mobile homes, condos, and homes with elderly residents are participating at noticeably low levels.
6. State funding for biomass incentives is limited and is primarily for larger, centralized systems.
7. Insulation contractors and do-it-yourself homeowners undertake a significant amount of insulation activity outside of existing programs; much of this work is of low quality and when not coupled with air-sealing, yields poor results for the investment.
8. The current trained workforce is not large enough to support retrofitting 8,800 units/year.

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22. Subsequent to the TETF Report's issuance, Act 89 modified 33 V.S.A. § 2502(b)(3)(C) such that eligibility for Vermont's Home Weatherization Assistance Program was increased to 80% of the State median income. Nevertheless, because of statutory guidance regarding prioritization of eligible customers, it is likely that customers near the upper end of that income range will not be served as quickly as customers with lower incomes.

23. The Board is aware that federal stimulus funds played a significant role in NWWVT's success in Rutland County.

For Vermont's existing multi-family programs and services, the TETF report highlights the following barriers.

1. There is a split incentive to invest in efficiency between tenants and property owners, depending upon which entity is responsible for utility costs. There is a significant disincentive for property owners to invest in efficiency if they do not realize the economic benefits of efficiency savings.
2. Property owners have little incentive to invest in energy efficiency improvements due to the tight supply and high demand for existing apartment stock. Low vacancy rates create housing demand regardless of a unit's energy efficiency attributes.
3. A majority of private rental property owners view energy efficiency investments as an unnecessary economic burden added to the already challenging obligations of rental property ownership. Non-profit owners often lack the capacity and resources to manage property improvements that are not related to regulatory compliance, health, or safety.
4. Multifamily renovation projects require overcoming significant logistical hurdles, including tenant notification, unit entry, and conducting work in tenant living spaces.
5. Rental property owners and managers do not possess the technical knowledge needed to identify, prioritize, and implement energy efficiency improvements consistent with professional building science standards.

For Vermont's existing commercial and industrial ("C&I") programs and services, the TETF Report identifies the following market gaps that are barriers to investment in energy efficiency.

1. Customers who use fuel oil, propane, kerosene, or wood as their primary heating source have very limited opportunity to avail themselves of a comprehensive retrofit program;
2. A lack of customer, contractor, and trade ally education and awareness creates a barrier to transforming the market. Many C&I customers have a limited understanding of their building and its energy usage, including the potential benefits for completing such work, such as increased worker productivity, decreased operation and maintenance costs, better employee health, and increased property value. There is a limited number of knowledgeable, trained commercial auditors and contractors who can comprehensively address commercial building systems;
3. There is limited access to capital for up-front costs of efficiency improvements. Large customers may have the capital but desire a fast return on their energy investments;
4. Limited mechanisms exist to reduce the timeframe for a return on energy investment costs.
5. Limited private investment options, lack of access to capital, and long payback periods dissuade many building owners from completing energy efficiency work;

6. There is limited motivation for tenants to improve buildings that they do not own. Tenants often look only at the short-term energy saving solutions.
7. Commercial sector building occupants do not have the knowledge-base to make carefully considered efficiency decisions. Facility staff generally do not have the authority to choose long-term investments. Lack of comprehensive staff knowledge results in inefficient building system maintenance.

C. Barriers or Inefficiencies Identified in Other Sources

Several other sources confirm the existence of barriers and inefficiencies in the markets for energy efficiency in general. For instance, the Regulatory Assistance Project ("RAP") concluded in a June 2011 report, "Affordable Heat: Whole-Building Efficiency Services for Vermont Families and Businesses" that the potential for cost-effective fuel savings in Vermont buildings far exceeds the rate of investment. RAP identified a number of persistent customer, contractor, and lender barriers in Vermont, including: (1) split incentives; (2) poor customer understanding of or confidence in realizing efficiency benefits; (3) high up-front costs and the inability or unwillingness to raise capital or take on debt; (4) lack of information about efficiency and quality contractors; (5) piecemeal approach to efficiency improvements; (6) timing of home improvements (home improvements and equipment upgrades often take place when a home reaches a certain age, in the first few years after a home has been purchased by a new owner, or when existing equipment fails; (7) inconvenience and inertia; (8) contractor education and training; (9) perception by lenders of a lack of customer demand; (10) potential lender unwillingness to take on additional risk; and (11) lack of a one-stop shop to manage the entire process.[24] Many of these barriers and inefficiencies echo the findings of the TETF Report.

Another report, "Financing Residential Energy Efficiency in Vermont" by the Institute for Energy and the Environment ("IEE") at Vermont Law School, identified many of the same factors leading to a lack of demand for energy efficiency upgrades, including: (1) debt aversion; (2) split incentives; (3) disbelief or discounting of savings to be realized; (4) long payback horizons; (5) perceived financing and efficiency upgrade transaction costs; and (6) lack of monetization of full public benefits. IEE concluded that the fundamental reason more Vermonters have not engaged in home energy efficiency improvements is not related to financing as much as it is to general lack of demand for energy efficiency

24. "AFFORDABLE HEAT: Whole-Building Efficiency Services For Vermont Families and Businesses", The Regulatory Assistance Project, June 2011, at 37.

upgrades. As such, IEE states that the most important aim for credit-worthy Vermonters is to drive action through a strong marketing campaign.[25]

In a paper titled "Is There an Energy Efficiency Gap?", Hunt Allcott and Michael Greenstone observed that imperfect information may cause consumers and firms not to undertake privately profitable investments in energy efficiency. Imperfect information is perhaps the most important form of investment inefficiency; for example, homeowners may not know how poorly insulated their home is and may not be aware of the opportunity to weatherize. In addition, Allcott and Greenstone argued that small- and medium-sized enterprises do not invest due to opportunity costs, such as lack of staff for analysis/implementation, risk of inconvenience to personnel, or suspected risk of a problem with equipment.[26]

D. Board Comment

Based on a review of the findings of the TETF Report, the support of those findings by many of the participants in this proceeding, and the similar findings found in the other sources noted above, the Board concludes that there are barriers and inefficiencies in the markets for unregulated fuels that inhibit their efficient use. The Board acknowledges the comments of VFDA, above, and Agri-Mark, Inc. ("Agri-Mark") and Omya, Inc. ("Omya"), below, that investments in thermal energy and process-fuel efficiency improvements are now taking place absent State intervention. However, within the context of the State's building energy goals as codified in 10 V.S.A. § 581, and the Board's charge under 30 V.S.A. §§ Section 209(d)(2)(B)[27] and Section 209(f)(15)[28], the data examined in this report suggest that on its

25. "Financing Residential Energy Efficiency in Vermont", Institute for Energy and the Environment at Vermont Law School, July 2011, at 9, 15.

26. "Is There an Energy Efficiency Gap?", Hunt Allcott and Michael Greenstone, Journal of Economic Perspectives—Volume 26, Number 1—Winter 2012—Pages 3-28.

27. 30 V.S.A. Section 209(d)(2)(B) requires the Board to "provide for the coordinated development, implementation, and monitoring of cost-effective efficiency and conservation programs to thermal energy and process-fuels customers on a whole buildings basis".

28. 30 V.S.A. Section 209(f)(15) requires the Board to "[e]nsure that the energy efficiency programs . . . are designed to make continuous and proportional progress toward attaining the overall State building efficiency goals established by 10 V.S.A. § 581, by promoting all forms of energy end-use efficiency and comprehensive sustainable building design."

current course the State will not achieve its building efficiency targets.[29] Therefore, it would appear that market barriers and inefficiencies in the markets for unregulated fuels persist.

III. Thermal Efficiency Public Funding Alternatives

A number of stakeholders identified a lack of sufficient public funding as a principal barrier to the efficient use of unregulated fuels. Therefore, the Board has included in this report a description of public funding and other policy options mentioned by stakeholders and identified in the literature.

A. Identification of Thermal Efficiency Public Funding Alternatives

The TETF Report identified a number of funding principles and options, and categorized the options into three categories of preference: High, Medium, and Low.

High preference:

1. Fossil fuel excise tax to fund energy efficiency.[30]
2. Energy efficiency tax credit.

Medium preference:

1. Increase in the Gross Receipts Tax.
2. Removal of sales tax exemption on residential or manufacturing fuels.
3. Ceiling mechanism.[31]
4. Energy efficiency resource standard.

Due to the fact that the TETF categorized certain funding options as Low preference, and no stakeholder in this proceeding has raised them for consideration by the Board, those options have been excluded from this summary. The TETF Report also identified several principles for public funding that were considered in analyzing the funding options. The TETF Report's principles for public funding are listed below.

1. Funding is sustainable and sufficient to meet the state's mandated goals.
2. Funding levels are also dynamic to ramp up and down over time as needed.

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29. TETF Report, Figure ES-1.

30. Also referred to as a systems benefit charge. Stakeholders in this proceeding have used these terms interchangeably.

31. The idea of a "ceiling mechanism" is to impose an energy efficiency excise tax only when fuel prices drop below a certain rate, and the increment is captured for efficiency programs. For example: if the ceiling is set at $4.25/gallon for a certain fuel, and the market price for that fuel goes down to $4.00/gallon, a customer would continue to pay $4.25/gallon, with the incremental $0.25 above market price directed toward efficiency programs. TETF Report at 105.

3. The level of funding balances short-term costs with the benefits of providing long-term affordability to all Vermonters; mechanisms will be put in place to minimize negative financial impacts to low-income Vermonters.
4. Funding source, like program delivery, is equitable across non-electric fuels and by customer classes (residential, commercial, etc.); cross-subsidization between fuels and customer classes is minimized; equitable treatment of in-state and out-of-state fuel providers is addressed.
5. Mechanisms that are administratively efficient to create and implement, simple, and auditable are preferred.
6. The collection mechanism, sources, and uses of public funding are transparent.
7. Price signals support state energy policy goals.
8. The vibrancy of Vermont communities and competitiveness of Vermont businesses are supported.

B. Summary of Stakeholder Comments

Thirteen stakeholders offered written and oral comments on thermal efficiency public funding alternatives.

Agri-Mark suggested that a growing number of businesses are making significant investments in thermal efficiency, such as fuel conversions, and that the Board should consider how an excise tax or systems benefit charge, as advocated by others, would negatively impact these investments. Agri-Mark believed that companies that have made such investments should be exempted from any new tax or charge, or should be credited for efficiency investments being made. Agri-Mark offered no opinion on the merits of a funding mechanism to improve the thermal efficiency of Vermont's commercial and industrial sector.[32]

Associated Industries of Vermont ("AIV") argued that advocacy for the creation of a new tax or other charge on unregulated fuels is inappropriate and ill-advised, and that the Board should not make such a recommendation in its report. AIV suggested that a broad-based charge would create additional, burdensome costs to businesses and residents which would not be recouped by those customers. Additionally, AIV reasoned that a systems benefit charge is not justifiable given the nature of unregulated fuel markets and prices which do not react to customer efficiency projects. AIV encouraged the consideration of other funding mechanisms such as tax incentives, loan guarantees, and other

32. Letter from Robert D. Wellington, Senior Vice-President, Agri-Mark, to James Volz, Chairman, Public Service Board, dated November 8, 2013, ("Agri-Mark November 8 Letter").

financing mechanisms that are repaid directly from the savings generated by individual investments, rather than broad-based customer charges.[33]

BPPA-VT argued that consumer education and a tax on fossil fuels are important strategies to attaining Vermont's efficiency goals. BPPA-VT also supported the implementation of a systems benefit charge on unregulated fuels.[34]

BED commented that it supports the recommendations contained in the TETF report. Specifically, BED believed that either an expansion of the current gross receipts tax on heating fuels or an energy efficiency charge levied on non-regulated fuels should be considered as a funding source for publicly-provided thermal efficiency services to consumers of non-regulated fuels.[35]

Common Sense Energy ("CSE") offered a list of recommendations to support thermal efficiency efforts including: funding to support energy upgrades on State buildings; implementation of increased equipment efficiency mandates for manufacturers and vendors; equipment labeling; code enforcement; time-of-sale building efficiency disclosures; implementation of a fuel oil tax and a luxury tax on new homes larger than 5000 square feet.[36]

Conservation Law Foundation ("CLF") remarked that the Board should consider broadening the systems benefit charge to include a charge on unregulated fuels and a broader benefit charge on all fossil fuel infrastructures.[37] CLF suggested that given the Board's experience overseeing electrical systems benefit charges, the Board is uniquely positioned to consider extending the same model to unregulated fuels.[38]

EFG contended that a fossil fuel excise tax should be implemented based upon the Btu content of fossil fuels and that this would potentially provide a stable and adjustable funding source for systematic efficiency investments. As with CLF, EFG maintained that a systems benefit charge on unregulated

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33. Letter from William Driscoll, AIV, to Susan Hudson, Clerk, Public Service Board, dated November 8, 2013, ("AIV November 8 Letter").

34. BPPA-VT September 24 Letter.

35. Email of October 31, 2013, 2:18 pm, from Tom Buckley, BED, to Judith Whitney and EEU-2013-06 service list, re: EEU-2013-06 - Public Act 89, Section 29-Thermal Efficiency, ("BED October 31 Email").

36. Letter from Allan Bullis, CSE, to Chairman Volz, dated September 25, 2013, ("CSE September 24 Letter").

37. Letter from Sandra Levine, Esq., CLF, to Vermont Public Service Board, dated November 1, 2013, ("CLF November 1 Letter").

38. Letter from Sandra Levine, Esq., CLF, to James Volz, Chairman of the Public Service Board, dated September 25, 2013, ("CLF September 24 Letter").

fuels would be an appropriate mechanism for funding efficiency improvements. It also advocated for a broader benefit charge on all fossil fuel infrastructure, including pipelines and fossil-fuel-based power plants. EFG suggested that funds should not only be targeted at building shell efficiency but also at improved building equipment.[39]

Omya submitted comments that were similar to comments filed by Agri-Mark, raising concerns about how an excise tax or systems benefit charge, as advocated by others, would negatively impact Omya's fuel conversion investments. Omya similarly argued that companies should be exempted from any new tax or charge, or should be credited for efficiency investments being made.[40]

IBM's comments concurred with the comments of Omya and Agri-Mark. IBM argued that the centralized collection, control, and disbursement of funds through the electric EEU structure has created its own barriers to the timely and cost-effective implementation of efficiency measures due to the negative impact on cash flow. IBM stated that it would be very concerned about the imposition of a system benefits charge or additional taxes on unregulated fuels and maintained that any such funding options must address the potential negative impacts on fuel customers, especially those already making efficiency investments. IBM noted that it is already committed to sustained efficiency investments and should not be subject to additional taxes or fees.

VEIC argued that the creation of a revenue stream comparable to the energy efficiency charge—regulated by the Board and derived from the sale of unregulated fuels—should be used to support the efficient use of those fuels. VEIC stated that expansion of the energy efficiency charge to encompass unregulated fuels could provide the resources needed to overcome the identified barriers and inefficiencies, and would provide a level playing field for all fuels. In order to accomplish this, VEIC recommended that the Legislature grant Board authority under Section 209(e)(1) to collect a volumetric charge on unregulated fuels, with biomass and biofuels exempt. VEIC supported the conceptual framework of pairing a fossil fuel excise tax with an energy efficiency tax credit. VEIC emphasized the TETF report finding that a significant majority of resources for funding thermal efficiency will come from private rather than public sources. VEIC noted that one practical implication of this approach

39. EFG September 26 Letter.

40. Letter from James B. Stewart, Plant Manager, Omya, to James Volz, Chairman, Vermont Public Service Board, dated November 8, 2013, ("Omya November 8 Letter").

would be difficulty in performing the calculation of the funding necessary to achieve the goals set forth in 10 V.S.A. § 581.

VEIC argued that the use of Regional Greenhouse Gas Initiative and Forward Capacity Market funding for thermal efficiency is, in essence, a tax assessment on the fuel (electricity) that is already doing the most to reduce its own usage and economic and environmental profile and thus subsidizes the use of fuels that are not paying their own way. VEIC described this as an issue of economic fairness.[41] VEIC maintained that it would be preferable to maximize the alignment of the costs to the benefits, and that a volumetric charge on fossil fuels, similar to the volumetric charge on electricity, would achieve this outcome. Further, VEIC stated that a volumetric charge on fossil fuels would address the market inefficiency of fossil fuel pricing not reflecting the total cost to society.[42]

VFDA noted that VEIC has raised the issue of funding, and that by alluding to 30 V.S.A. § 209, VEIC is seeking to direct more funds into its program. VFDA contended that this is not what Act 89 asked the Board to investigate, and therefore a discussion of funding should not be part of the Board's report.[43] VFDA argued that increasing fees or taxes to further incentivize energy efficiency should be discussed in the Legislature.

VFDA suggested that the Board should not construct a new area of regulation that would result in a surcharge on oil and propane customers. VFDA noted that many of its member fuel dealers are ill-equipped to make regulatory filings, even on a limited basis. It stated that there are approximately 300 heating fuel and heating service providers in Vermont that compete directly with each other and, in some cases, with out-of-state providers. VFDA observed that these providers do not have franchised service territories, do not have regulated rates, and vary greatly in size. Further, VFDA stated that unregulated fuels are paid and accounted for in a way that is fundamentally different from a regulated utility model. From a practical implementation standpoint, VFDA observed that historically, not all fuel dealers have collected or paid required taxes.[44]

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41. Tr. 10/10/13 at 63-64 (Parker).

42. Tr. 10/10/13 at 70-71 (Wickenden).

43. Letter from Matt Cota, Executive Director, VFDA, to Ms. Susan Hudson, Clerk of the Board, dated November 8, 2013, ("VFDA November 8 Letter").

44. Tr. 10/10/13 at 71-72 (Cota); VFDA November 1 Letter.

VNRC stated that the Board should analyze the feasibility of a systems benefit charge or similar charge to fund systematic efficiency investments. VNRC also maintained that an expansion of the efficiency surcharge should be considered as a viable funding source, and suggested that the Board provide an outline to the Legislature that would include an assurance that funds generated from such a charge would not be considered general revenues, but dedicated resources for thermal energy investment.[45]

VPIRG encouraged the Board to explore the possibility of applying an energy efficiency charge to unregulated fossil fuels and consider how the implementation of such a charge could be implemented.[46]

C. Additional Thermal Efficiency Policy Considerations

In its report, IEE observed that existing financing products are capable of funding energy efficiency improvements for credit-worthy Vermonters, but that a different borrowing process is necessary to spur energy efficiency improvement borrowing to overcome the debt-aversion issue. IEE concluded that non-debt financing options, such as PACE and/or on-bill tariffed financing, could stimulate demand from otherwise latent interest.[47]

For less credit-worthy Vermonters, IEE noted that home energy upgrades will either continue to rely on WAP, or will require significant financial incentives coupled with loan risk mitigation, such as a loan-loss reserve pool or loan guarantees, or non-debt-based financing solutions.[48]

In their paper, Allcott and Greenstone concluded that if energy use externalities, such as air pollution, are the only market failure, then the social optimum is obtained with Pigouvian taxes[49] or equivalent cap-and-trade programs that internalize these externalities into energy prices, and that substitute policies are often much less economically efficient. Further, they stated that if investment inefficiencies also exist, the first-best policy is to address the inefficiency directly: for example, by providing information to imperfectly informed consumers. When these interventions are not fully

45. VNRC September 26 Letter.
46. VPIRG September 25 Email.
47. IEE Report at 31.
48. *Id*. at 32-33.
49. A Pigouvian tax is a tax applied to a market activity that is generating negative externalities (for instance, air pollution).

effective and investment inefficiencies remain, Allcott and Greenstone concluded that policies that subsidize or mandate energy efficiency might generate welfare gains.[50] Allcott and Greenstone cautioned that energy efficiency subsidies might decrease total welfare if they are largely taken up by environmentalists and homeowners, who are more likely to be well-informed about energy efficiency and are not subject to a "landlord-tenant" agency problem. They contended that energy efficiency policies are more likely to increase welfare if they target agents subject to the largest investment inefficiencies.[51] Due to the likelihood of substantial heterogeneity in investment inefficiencies across the population, Allcott and Greenstone concluded that targeted policies have the potential to generate larger welfare gains than general subsidies or mandates.

IV. Conclusion

Vermont faces multiple barriers and inefficiencies in many of its energy markets, especially the markets for unregulated fuels. There are currently few programs directed at overcoming those barriers and inefficiencies, and significantly less public funding available than would be necessary for the achievement of the State's building energy goals, as articulated in 10 V.S.A. § 581. There are a number of policy alternatives, including raising additional public funds, that the Legislature could consider to facilitate achievement of the State's building energy goals. A comprehensive set of policies would be advantageous in addressing the barriers and inefficiencies faced by different unregulated fuels' customers and customer classes.

50. Allcott and Greenstone at 4.
51. *Id*. at 24.

Appendix A - Copy of Stakeholder Comments as Received by the Board[1]

1. Vermont Energy Investment Corporation submitted several documents as attachments to its comments. Due to their volume, those documents have not been appended to this report. However, the documents are available on the Board's web page for this proceeding. http://psb.vermont.gov/docketsandprojects/eeu/Act89Section29

Comments Received on September 24-25, 2013

Building Performance Professionals
Association of Vermont

BPPA-VT

Vermont's Authorities on Energy Efficiency

PO Box 8125, Brattleboro, VT 05304 • 802-522-4677 • www.BPPA-VT.org

September 24, 2013

James Volz, Chairman
Vermont Public Service Board
112 State St., Drawer 20
Montpelier, VT 05620-2701
psb.clerk@state.vt.us

Re: Public Act 89, Section 29 Thermal Efficiency Report

Dear Chairman Volz,

In response to the Public Service Board's call for comments regarding Public Act 89, Section 29, the Building Performance Professionals Association of Vermont offers the following:

The wording of Section 29, we believe, is meant to convey to the Board a request to investigate what market devices might be implemented to overcome barriers to improving thermal efficiencies where unregulated fossil fuels are used and to report these findings to the State Legislature. The goal is to reduce the harmful impact of fossil fuel emissions and the skyrocketing cost of heating Vermont's buildings.

There are currently two practical means available to us for achieving large-scale improvement of thermal efficiencies where fossil fuels are used.

1. Improve the overall efficiency of the buildings for which fossil fuels are used for heat. This is commonly achieved in 2 parts.
    a. Implementation of a weatherization process that includes air sealing and the improvement of insulation values.
    b. Improving the efficiency of the appliances that use these fuels.
2. Establish and enforce energy codes for new buildings. In existing buildings, reduce the use of fossil fuels by converting to less polluting and ideally, less expensive forms of energy.

In making a commitment to achieving market transformation in fuel use we must look beyond the necessary disruption that will accompany this transformation. Moving from our current supply system that insures continued dependency on highly-polluting imported oil and gas will require considerable fortitude on the part of our State Administration, Legislators and truly all Vermonters. It may be the lack of a sense of urgency that is the single most significant barrier to achieving Vermont's energy efficiency/clean energy goals.

We believe that a combination of strategies will be necessary to achieve these goal within the time frames set forth in the State's Energy Plan.

1. **Education**
   Although difficult to quantify, the educational aspect of market transformation is nonetheless critical. People are generally unaware of or unable to facedown the immediacy of the stakes

involved in the continued use of gas, oil and coal as our primary fuels. Change on the scale that we believe is necessary is extremely difficult and expensive, and fossil fuels appear to be "affordable" to most. However, the costs associated with the degradation of the Earth's climate are incalculable. Additionally, the societal, economic and security benefits of creating a locally or regionally maintainable energy infrastructure are undeniable.

We need to be very clear with ourselves that the current system of fueling our lives is unsustainable in any rational sense and we need to institute a comprehensive educational plan for Vermont that ultimately empowers people to act.

2. **Taxing Fossil Fuels**

This will achieve two critical objectives

a. Clarify the actual full costs of using fossil fuels
b. Provide a dependable, adjustable, equitable source of funding for supporting us through this transformation.

Richard Fasey, Chair of the Finance and Funding Subcommittee of the Thermal Efficiency Task Force (TETF) and a board member of BPPA-VT offers an excellent articulation in his comments of the necessity of identifying and implementing the use an effective and dependable funding source for achieving our goals.

"A key barrier identified by the TETF was a lack of funding for thermal efficiency. While the TETF considered many options for funding, the one that rose to the top of the list was a "fossil fuel excise tax" based on the Btu content of fossil fuels. This charge on unregulated fuels could serve as a potential stable and adjustable funding source for systematic efficiency investments.

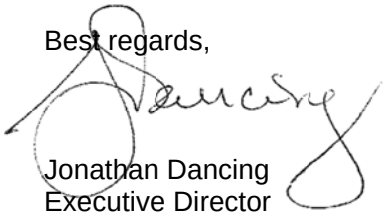
The system benefit charge (SBC) for energy efficiency has a proven track record in Vermont and nationally for funding efficiency improvements, achieving cost-effective savings and transforming markets. Given the PSB's experience overseeing the electrical SBC, the Board is uniquely positioned to consider extending a similar model to unregulated fuels. We encourage the Board to include a fossil fuel excise tax in its review of barriers to efficiency and solutions in the unregulated fuels market.

Beyond including unregulated fuels in the systems benefit charge mix, we also encourage the Board to evaluate a broader benefit charge on all fossil fuel infrastructure, including pipelines and fossil fuel-based poawer plants. Such a charge based on the capacity of all fossil fuel infrastructure regulated by the Board could fund broader statewide efficiency and begin to reduce fossil fuel use from heating statewide.

Expanding our funding sources while providing a disincentive to use more of those fuels through a charge on them will begin reducing the barriers to broader efficiency investments and will help Vermont achieve its clean energy goals."

Thank you for considering these comments in your efforts to identify barriers to achieving Vermont's energy goals. Please do not hesitate to be in touch if we can be of assistance in any way.

Best regards,



Jonathan Dancing
Executive Director
Building Performance Professionals Association of Vermont

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September 25, 2013

Ms. Susan M. Hudson, Clerk of the Board
Vermont Public Service Board
112 State Street, Drawer 20
Montpelier, Vermont 05601-2701

Re: BED Comments on Provisions of Public Act 89;
Section 29: Thermal Efficiency Report

Dear Ms. Hudson:

BED supports the comments filed in this matter today by the Vermont Energy Investment Corporation.

Thank you for the opportunity. BED looks forward to discussing these issues further with the Board and other interested parties at the upcoming workshop.

Please feel free to contact me with any questions.

Sincerely,

BURLINGTON ELECTRIC DEPARTMENT

TABuckley

Thomas A. Buckley
Manager, Customer and Energy Services

CC: Public Act No. 89 E-mail Service List

12 North St., Suite 4, Burlington, VT 05401
Phone: 802.846.7592
Web: CSEnergyVt.com
Email: info@csenergyvt.com

To: Chairman Volz

From: Allan Bullis

Date: 25 September 2013

Subject: Comments on Public Act 89, Sec 29

Mr. Volz

I am pleased to have the opportunity to provide my comments for your consideration. BPPA of which I am a board member and a member of the Thermal Energy Task Force (C&I) so beyond a Vermonter interested in energy issues I have been a participant to the maximum extent possible. A year ago in the energy circles there was a palpable feeling of excitement as we felt the momentum to real and positive change was inevitable. To be honest I was disappointed in the lack of action on the recommendations during the previous session. I sincerely hope that this year we can have more movement than that of last year.

I have the sense that there is little backbone to back up the rhetoric on energy with funding so I offer up some ideas In addition to the comments provided by BPPA. I offer the following ideas:

- Provide BGS some funding to perform energy upgrades on buildings. As a consultant for BGS I have seen many energy wasting practices and equipment. BGS can lead by example to perform all cost effective energy upgrades with a 5 year pay back. The energy savings could then go into a revolving fund to work towards items with longer paybacks.
- Pass some no cost measures mandating certain energy items meet efficient criteria far enough in the future to allow manufactures and vendors to comply. Some of the following items may want to be done with other states to help sway the entire US market
    - Mandate that all single lever faucets provide only cold water when in the middle position instead of 50% hot water as they currently do.
    - Mandate that the default water temperature for washing machines is cold. (I have a new energy star washer and it defaults to warm as most do)
    - Require a warning label on all roof snow melt devices stating something like: “Ice damming problems can usually be solved by performing an energy audit, sealing air leakage pathways from inside to the attic and adding insulation. This work should be performed by a certified contractor. See Efficiency VT web site for a list of contractors.”
    - Require a label on de-humidifiers stating that they use significant amount of energy and that setting below 50% is usually not needed.
    - Post a warning label on humidifiers stating that they are not needed in a building that has been weatherized. Suggest they have the building air sealed by a certified contractor. See Efficiency VT web site for a list of contractors. The air sealing would help hold in air which also helps

retain the moisture that also reduces heat loss and eliminates the chance of mold and mildew entering the house from improperly maintained humidifier.
    - Post warning label on heat trace stating that heat trace inside a building would not be needed if building is weatherized. Qualified contractors can be found at efficiency VT.
- Provide a means for enforcing energy code compliance and posting of certificate of compliance. A fine for non-compliance would be good to get people's attention until it becomes the norm. Best route would be to eliminate self-compliance by builder. Could be done by energy auditors at a fraction of the cost of using EVT or state employees to perform inspections.
- Push for time of sale disclosure on the energy rating for the building. Should also do something for rental units to include commercial spaces. Recent options for such a rating are geared to single family homes but a tweaking could be done for commercial spaces.
- Require all new walk in coolers to have equipment like 'Freeair' (http://freeaire.com/how-it-works/) for providing free cooling during the heating season if near an exterior wall or flat roof.
- Require all new or rehabilitated restaurants; markets over xxx square feet install a heat recovery unit that takes waste heat from the refrigeration equipment and use that heat to provide domestic hot water. It typically has a very short payback. For more info check out: http://www.hotspotenergy.com/commercial-heat-recovery/ Similar units are available for pool heaters to connect to AC units or refrigeration equipment which could also be required to use this heat recovery equipment where pools are heated.
- Reinstate the fuel oil tax suspended during the Arab oil embargo for non-regulated fuels and put toward energy efficiency. The % amount could be less than what it was in 1973 so law makers can claim to have cut taxes thereby providing some political cover.
- Put a luxury tax on new homes greater than 5000 SF (The tax not only could raise funds, but dissuade people from building homes over 5000 SF which is happening too often)

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conservation law foundation

For a thriving New England

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September 25, 2013

By email and first-class mail

James Volz, *Chairman*
Public Service Board
112 State St., Drawer 20
Montpelier, VT 05620-2701
psb.clerk@state.vt.us

Re: Act 89 Thermal Efficiency Report

Dear Chairman Volz,

Conservation Law Foundation (CLF) offers these comments regarding the report that the Vermont Public Service Board will submit on the efficient use of unregulated fuels. We thank the Board for the opportunity to provide public comment.

The General Assembly has asked the Board to consider "whether there are barriers or inefficiencies in the markets for unregulated fuels that inhibit the efficient use of such fuels." We encourage the Board to build on the work of the Thermal Efficiency Task Force (TETF). The TETF was a varied group of over 60 stakeholders whose charge it was "to ensure an integrated and comprehensive statewide whole-building approach to thermal energy efficiency that will put Vermont on the path toward meeting the goals set forth in statute," including the legislative goal of weatherizing 80,000 homes. Part of this work was identifying existing barriers to efficient use of fuels. CLF recommends that the Board first look at the barriers the TETF identified and build on those in its report.

A key barrier identified by the TETF was a lack of funding for thermal efficiency. While the TETF considered many options for funding, one additional option that should be considered is broadening the systems benefit charge to include a charge on unregulated fuels. The system benefit charge for electrical efficiency has a proven and impressive track record for funding efficiency improvements and achieving meaningful savings. Given the PSB's experience overseeing the electrical SBC, the Board is uniquely positioned to consider extending the same model to unregulated fuels. We encourage the Board to include this measure in its review of barriers to efficiency in the unregulated fuels market.

CLF also encourages the Board to evaluate a broader benefit charge on all fossil fuel infrastructure, including pipelines and fossil fuel-based power plants. A charge based on the capacity of all fossil fuel infrastructure regulated by the Board could fund broader statewide efficiency and begin to reduce fossil fuel use from heating statewide. Just as Vermont's electrical

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conservation law foundation

efficiency programs aim to ensure that lower cost electrical demand resources are utilized before more expensive electrical supply resources, a broader benefit charge on all fossil fuel infrastructure, with revenue targeted toward thermal efficiency, would tie thermal demand resources into the delivery and development of supply resources.

Looking to existing fossil fuel use to begin reducing the barriers to broader efficiency investments will help Vermont achieve its goals to reduce fossil fuel use, reduce emissions, reduce reliance on dwindling LIHEAP dollars, increase local jobs, leave more money in the pockets of Vermonters and leave our homes and businesses more comfortable. As funding for efficiency from other sources, such as the American Recovery and Reinvestment Act and the Green Mountain Power and Central Vermont Public Service merger, is declining, it is even more important to develop a sustainable mechanism that will address the barriers and provide thermal efficiency resources to all Vermonters.

Thank you for your consideration of these comments. CLF looks forward to working with the Board and other stakeholders in advancing the efficient use of energy throughout Vermont.

Sincerely,

Sandra Levine
Senior Attorney
Conservation Law Foundation
slevine@clf.org

Diana Chace
Conservation Law Foundation
dchace@clf.org

VERMONT

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September 25, 2013

Susan M. Hudson, Clerk
Vermont Public Service Board
112 State Street
Montpelier, VT 05620-2701

Re: Public Act 89, Section 29 – Thermal Efficiency Report – Department of Public Service Comments

Dear Mrs. Hudson:

On August 29, 2013, the Public Service Board ("Board") requested comments on "whether there are barriers or inefficiencies in the market for unregulated fuels that inhibit the efficient use of such fuels."

In anticipation of the Board workshop scheduled for October 10, 2013, the Department of Public Service ("Department") offers the following web-link to the Department's website where an electronic version of the Thermal Efficiency Task Force (TETF) report is posted.

http://publicservice.vermont.gov/topics/energy_efficiency/tetf

The Department notes that stakeholders may be interested in the following sections of the TETF report that pertain to program gaps, customer barriers and market gaps in the unregulated thermal energy efficiency market:

- Residential Single Family
  - Section 3.1.4 (page 36) – *Analysis of program gaps and customer barriers to participation*
- Commercial and Industrial Market Sector
  - Section 3.3.2 (page 68) – *Analysis of market gaps*

In addition, a Building Energy Disclosure working group was convened to study whether and how to require disclosure of the energy efficiency of commercial and residential buildings in order to make data on building energy performance visible in the marketplace for real property and to inform the choices of those who may purchase or rent such property. Building energy disclosure in the form of "labeling" is referenced as a recommendation for overcoming market

barriers in the TETF report. The Building Energy Disclosure working group report, which is posted on the Department's web-link below, provides additional context related to the Board's inquiry into whether there are barriers or inefficiencies in the market for unregulated fuels that inhibit the efficient use of such fuels.

http://publicservice.vermont.gov/topics/energy_efficiency/bedwg

Finally, the Department evaluated the impact and processes of Efficiency Vermont's Home Performance with Energy Star program and Vermont Gas's residential program.[1] A process evaluation of the two programs was also conducted to assess customer awareness, participation motivations, barriers to participation, and overall participant satisfaction. Process evaluation results for both programs are reported in one final report on the Department's web page located at the web-link below under the heading "Process Evaluation – Vermont Gas and Efficiency Vermont."

http://publicservice.vermont.gov/topics/energy_efficiency/eeu_evaluation

The process evaluation findings cite additional context related to the Boards question. The report also offers programmatic recommendations for overcoming customer barriers. Including but not limited to *Recommendation 1*, cited on page ES-3 of the report related to the importance of improving the accuracy of energy savings estimates in order to build consumer confidence in the value of completing a retrofit.

> ***Recommendation 1:*** *Improve and maintain tracking of energy savings estimates and project cost estimates. These factors are important components of comprehensive home upgrades and provide the information required to build consumer confidence and increase the conversion rate of energy audit to retrofit project.*

The Department has no further comments at this time.

For the Department of Public Service

Brian Cotterill
Energy Program Specialist

Timothy M. Duggan
Special Counsel

cc: Service List

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[1] Impact evaluations were conducted on two distinct tracks yielding two separate final reports. Due to differences in program design, markets served, and fuel types, impact evaluation results from the two programs are not directly comparable.

September 25, 2013

By email and first-class mail
James Volz, Chairman
Public Service Board
112 State St., Drawer 20
Montpelier, VT 05620-2701
psb.clerk@state.vt.us

Re: Act 89 Thermal Efficiency Report

Dear Chairman Volz:

Energy Futures Group (EFG) is pleased to provide comments regarding the report that the Vermont Public Service Board will submit on the efficient use of unregulated fuels. We thank the Board for the opportunity to provide public comment.

EFG is an energy consulting firm located in Hinesburg (see www.energyfuturesgroup.com). As individuals, we have been involved in Vermont energy clean energy programs and policies for decades, and, as a firm, have been supporting the state's energy goals since 2010. I served as the Chair of the Finance and Funding Subcommittee of the Thermal Efficiency Task Force (TETF) over the course of 2012.

The General Assembly has asked the Board to consider "whether there are barriers or inefficiencies in the markets for unregulated fuels that inhibit the efficient use of such fuels." This was one of the key questions addressed by the 60+ person TETF and covered in much detail in our report to the Legislature earlier this year. We encourage the Board to refer to and build on that work and use the TETF report as a guiding framework for exploring the issues and potential solutions.

Specifically, we recommend that the PSB look at the barriers the TETF identified and build on those in its report. A key barrier identified by the TETF was a lack of funding for thermal efficiency. While the TETF considered many options for funding, the one that rose to the top of the list was a "fossil fuel excise tax"[1] based on the Btu content of fossil fuels. This charge on unregulated fuels could serve as a potential stable and adjustable funding source for systematic efficiency investments.

[1] http://publicservice.vermont.gov/sites/psd/files/Topics/Energy_Efficiency/TETF/TETF%20Report%20to%20the%20Legislature_FINAL_1_15_13_2.pdf, page 100

The system benefit charge (SBC) for energy efficiency has a proven track record in Vermont and nationally for funding efficiency improvements, achieving cost-effective savings and transforming markets. Given the PSB's experience overseeing the electrical SBC, the Board is uniquely positioned to consider extending a similar model to unregulated fuels. We encourage the Board to include a fossil fuel excise tax in its review of barriers to efficiency and solutions in the unregulated fuels market.

Having worked closely with the Vermont Fuel Dealers Association members both throughout the TETF process and subsequently, we support their position on the following points as they relate to a charge on unregulated fuels:

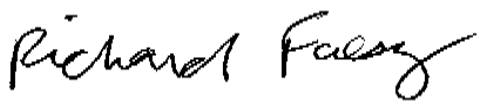
- Any funds raised from unregulated fuels for efficiency purposes should be targeted not only at building shell efficiency, but should also be used for improved equipment in buildings; and
- Decisions about any program design and administration should include the input and involvement of representatives from the unregulated fuels industry.

Beyond including unregulated fuels in the systems benefit charge mix, we also encourages the Board to evaluate a broader benefit charge on all fossil fuel infrastructure, including pipelines and fossil fuel-based power plants. Such a charge based on the capacity of all fossil fuel infrastructure regulated by the Board could fund broader statewide efficiency and begin to reduce fossil fuel use from heating statewide.

Expanding our funding sources while providing a disincentive to use more of those fuels through a charge on them will begin reducing the barriers to broader efficiency investments and will help Vermont achieve its clean energy goals.

Thank you for your consideration of these comments. EFG looks forward to continuing to work with the Board and others to move Vermont to a clean energy future.

Sincerely,



Richard Faesy
Principal

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Vermont Energy Investment Corporation

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September 25, 2013

Ms. Susan Hudson, Clerk
Vermont Public Service Board
112 State Street
Montpelier, VT 05620-2701

Re: Public Act 89, Section 29: Thermal Efficiency Report

Dear Ms. Hudson,

In its memorandum of August 29, 2013, the Public Service Board ("Board") requested comments on "the statutory inquiry of 'whether there are barriers or inefficiencies in the market for unregulated fuels that inhibit the efficient use of such fuels.'" This request encompasses two separate but related concepts: market barriers, and market inefficiencies. VEIC presents these comments to address each of these concepts below.

Market Barriers

The market barriers related to the efficient use of unregulated fuels (e.g., oil, propane, wood) are in large part similar to those that are encountered with regard to regulated fuels such as electricity and natural gas. According to a study commissioned by the International Energy Agency,

> Market barriers in the end-use of energy are defined as forces or mechanisms that can be observed to operate in specific markets in such a way as to inhibit behaviors or investments that would increase the efficiency of energy use. Classical economics considers that market failures occur when barriers are found to inhibit actions that would increase both energy efficiency and economic efficiency. In this context, if a barrier is found to inhibit investments that would be cost-effective in a generally accepted economic framework, it would be termed a market failure. Some barriers may be observed to inhibit investments in energy efficiency, but unless these investments would be economically efficient, they cannot be termed market failures. Another way to view this issue is that an energy efficiency policy

> invention is economically efficient if its benefits to the economy or society as a whole outweigh the costs of intervention.[1]

Market barriers to economically optimal energy efficiency resource allocation originate from the fact that energy efficiency typically requires a capital investment, i.e., an up-front cash outlay that must be incurred in exchange for a future stream of cash inflows over time. Economic theory recognizes three types of market barriers that can impede cost-effective energy-efficiency investment and thereby result in the market's failure to achieve economically efficient resource allocation:

1. Principal agent barriers (aka split incentives)
2. Information/transaction cost barriers
3. Externality cost barriers

The international study of market barriers quoted above defines and describes these market barriers to energy efficiency investment as follows:

> *1. Principal-agent barriers.* Stemming from classical concepts of agency theory and asymmetric information, the principal-agent problem occurs when one party makes decisions affecting end- use energy efficiency in a given market, and a different party bears the consequences of those decisions….The agency problem would not exist, in classical theoretical terms, if the "principals" had perfect information, and if capital markets were perfect….The prevalence of the principal-agent problem emerges from analysis of actual rather than theoretical markets, because real markets are frequently found to show "asymmetric" information and capital flows. Asymmetry in this context means that one set of market participants possesses better access to information or capital than others.
>
> *2. Information cost barriers.* Energy efficiency at the end-use level in a given market is an aggregate function of many small decisions. Thousands or millions of decisions may be made in a given market and time period for such end-uses as home appliances, vehicles, or commercial equipment. In many cases, the decision-maker in these small investments lacks the information or expertise to make a decision that would maximize both energy efficiency and

[1] Prindle, et al., *Quantifying the Effects of Market Failures in the End-Use of Energy,* American Council for an Energy-Efficient Economy, February 2007, ACEEE Report No. EO71.

> economic efficiency. By contrast, energy supply investments, which typically occur in fewer and larger projects, are usually large enough to bear the cost of obtaining the expertise and information needed to make well-informed decisions. In this sense, the information costs attached to end-use efficiency decisions can lead to market failures.
> *3. Externality cost barriers.* Economists acknowledge that when the nominal market price for energy does not reflect its full cost to society as a whole, market failures can result. Environmental impacts, health impacts, and other "externality costs" are widely recognized as imposing indirect costs on society for the direct use of energy.

The international study examined the prevalence of these efficiency market barriers and the scope of the resulting market failure in the U.S., Australia, Japan, the Netherlands, and Norway. According to the report,

> The overriding finding from these case studies is that large fractions—up to 90%—of the energy use in many major markets is affected by the principal-agent market barrier. This does not mean that 90% of the energy in such end-use markets can be saved cost-effectively; that would require additional analysis, based on technology and cost-effectiveness estimates. However, there is a wealth of analytical experience quantifying the size of cost-effective energy efficiency potential in many markets. The objective of this study is to quantify the magnitude of market barrier effects; the additional analysis needed to estimate the magnitude of market failures in these markets would be straightforward.[2]

The full report is submitted as **Appendix A**.

From VEIC's experience, these barriers include, but are not limited to:

- Lack of trustworthy information: If consumers lack objective information regarding energy efficient products and policies, they are less likely to take advantage of them. A simple example of this barrier would be an appliance like an oil heating system or a refrigerator; consumers require objective

[2] Prindle, et al., *Quantifying the Effects of Market Failures in the End-Use of Energy,* American Council for an Energy-Efficient Economy, February 2007, ACEEE Report No. EO71. pp. iii-iv.

information on the energy performance of those devices to be able to choose the more efficient one.

- Complexity: Energy efficiency can involve complex decisions that encompass technology, building science, and economics. Without technical assistance, few consumers are well-equipped to navigate those complexities on their own.
- Invisible benefits: Energy efficiency investments provide benefits that tend to be difficult to discern. Financial benefits are tangible, but may only accrue over time and be distorted by changes in fuel prices. Environmental benefits (e.g., greenhouse gas emissions) are intangible to individual consumers. The measures themselves, unlike renewable energy measures, are physically undistinguished for the most part.
- Split incentives: Just as with electricity, complex ownership models may create either disincentives for efficiency investments or a complex set of relationships that result in inaction.
- Funding Uncertainty: Current EEU thermal efficiency funding is variable because it comes from either Forward Capacity Market (FCM) or the Regional Greenhouse Gas Initiative (RGGI). Customers are less likely to participate in energy efficiency programs with varying incentive levels or inconsistent program offerings.

The Thermal Efficiency Task Force (TETF) convened by the Public Service Department ("Department") examined this issue in detail over the course of 2012, culminating in a report provided to the Vermont Legislature in early 2013[3]. The TETF, a broad stakeholder group that included energy efficiency providers, fuel dealers, environmental advocates, bankers, and others, was commissioned to provide a roadmap for how the state could meet the building efficiency goals set out in 10 VSA 581. The best-known of these goals is to improve the energy fitness of 25% of the state's building stock by the year 2020 (approximately 80,000 housing units). As the TETF found, the chronic under-investment in this sector means that the state is on track to miss this goal by about 50% under a business as usual scenario.

Through the course of its deliberations, the TETF identified a number of market barriers in the unregulated fuels market. The TETF examined these barriers in the context of specific market sectors (e.g., residential, commercial). In the residential market, those barriers were identified as:

[3] Information about the work of the TETF, including its final report, can be found at http://publicservice.vermont.gov/topics/energy_efficiency/tetf.

- Initial costs (*first costs)* are perceived to be too high to undertake comprehensive energy improvements.
- Many Vermonters do not understand what is involved with the retrofit process, how much money they could save, or that they could be more comfortable in their homes after weatherization.
- Customers lack sufficient knowledge to prioritize steps and action for effective retrofits, because they must choose from competing (and sometimes conflicting) measures.
- Program services do not provide an appealing customer value proposition. Even households where homeowners understand the benefits and have adequate financial means do not undertake comprehensive energy improvements in high numbers.
- Customers can be frustrated by the fact that some efficiency measures are not addressed by existing retrofit programs. For example, there are no state rebates or incentives for oil, propane, or kerosene-fired heating equipment or high-efficiency windows."[4]

The TETF analysis of the commercial sector identified a similar set of barriers (described in the report as "gaps"):

- Geographic and fuel type inequities in available services (i.e., businesses in Vermont Gas Systems territory had access to significantly higher levels of service than did the vast majority of businesses outside VGS territory).
- Customer, contractor, and trade ally education and awareness.
- Access to capital.
- Limited mechanisms to reduce timeframe for return on investments (largely due to lack of incentive funding).
- Limited private investment options (i.e., most Vermont businesses are too small to make use of financing tools such as energy service contracting (ESCO)).
- Limited motivation for tenants to improve buildings (the well-known phenomenon of split incentives where neither the building owner nor the tenant has the proper incentive for making energy efficiency investment).
- Employee time/authority to be able to understand and pursue energy efficiency improvements.[5]

[4] Thermal Efficiency Task Force Analysis and Recommendations, page 36. http://publicservice.vermont.gov/topics/energy_efficiency/tetf.
[5] Thermal Efficiency Task Force Analysis and Recommendations, page 70. http://publicservice.vermont.gov/topics/energy_efficiency/tetf.

These and similar barriers are well-known to the Board through prior proceedings related to electric energy efficiency, specifically the establishment of the Energy Efficiency Utility (EEU) structure in Docket 5980. In that proceeding, the Board established a number of objectives in its establishment of the EEU:

- "To ensure that all Vermont consumers are given the opportunity to participate in and benefit from a comprehensive set of cost-effective energy efficiency programs and initiatives designed to overcome barriers to implementation;
- "To improve the delivery of services in areas where programs have not served consumers well;
- "To improve the effectiveness of the delivery of energy efficiency services by eliminating redundant administrative functions in the many separate utilities; and
- "To make it easier for energy efficiency businesses to market their services, by eliminating the many different program requirements of the many different utilities that serve Vermont consumers"[6]

The market conditions that the Board sought to address in its Docket 5980 Order were a product of the types of barriers described above. These same conditions largely characterize the unregulated fuels energy efficiency market in Vermont today. Lacking a statewide service delivery structure with sufficient resources to serve the needs of this market, the current state could fairly be described as one of chronic under-investment in cost-effective energy efficiency measures that would reduce the use of unregulated fuels. This under-investment carries with it associated lost opportunities for economic and environmental benefits.

As will be discussed later in our comments, creation of a revenue stream comparable to the energy efficiency charge, regulated by the Board, derived from the sale of unregulated fuels, and used to support efficient use of those fuels, is an approach that has proven successful in overcoming market barriers related to the efficient use of electricity.

Market inefficiencies

In general terms, "market inefficiency" is a specific economic term that refers to a situation in which a financial market does not operate as well as it should, for

[6] Vermont Public Service Board Docket 5980 (Board Order Dated 9/30/1999 at 10-11).

example where customers do not have enough information about products or prices are not related to supply and demand.[7]

In the case of unregulated fuel efficiency, there is clear evidence of market inefficiency. This is most obvious when examining the gap between cost-effective energy efficiency potential in this market and the degree to which that potential has or has not been reached. The vast majority of Vermont homes and businesses served by unregulated fuels could enjoy significant net economic benefits through cost-effective efficiency improvements to their buildings. This is to some extent a product of the market barriers described previously, but it is also a product of market inefficiencies because the true long-term benefits of making these improvements are not being priced into the market. Said another way, the real long-term costs of the energy use are not being accounted for in the price that the customer pays. Since the true costs of continued use of unregulated fuels are not being entirely captured, the market operates inefficiently. The environmental costs of burning unregulated fuels are not fully captured. This includes carbon emissions and some of the still-unrecognized compliance costs (or non-compliance impacts) of being found to be in non-attainment of air quality standards for criteria pollutants, and for carbon emissions. The economic impact of different energy use patterns represents another generally un-quantified dimension of energy use. This pervasive failure to account for the total costs keeps the price of these fuels artificially low, which tends to depress demand for taking steps to reduce their use and cost.

Unregulated fuel prices are also being artificially depressed by the fact that to the extent there are efficiency programs in place to serve this market, they are largely funded by charges assessed on regulated fuels, particularly electricity. Efficiency Vermont is authorized by statute to provide unregulated fuel services using a combination of Regional Greenhouse Gas Initiative (RGGI) and Forward Capacity Market (FCM) revenues. Both of these revenue sources are generated through costs that are imposed on electricity, but not on unregulated fuels. In essence, electricity costs are being increased due to the redirection of RGGI and FCM funds to unregulated fuels efficiency services. While this may have been a reasonable policy choice for the Legislature to make, and one that VEIC supported, it does have the practical effect of creating a market inefficiency by assessing a cost on electricity that should more properly be imposed on unregulated fuels. A more rational policy would fund efficiency services through charges imposed on the sale of the fuel that they are targeted to reduce. This would also provide an appropriate price signal to the market.

[7] http://dictionary.cambridge.org/us/dictionary/business-english/market-inefficiency

Recommendations

Going forward, it will largely be up to the Legislature to make policy determinations as to how these market barriers and inefficiencies should best be addressed. In its report to the Legislature, the Thermal Efficiency Task Force made numerous recommendations in this area. At a high level, the TETF offered a number of guiding principles for its recommendations:

1. Recommendations should include voluntary, mandatory, and celebratory approaches.
2. Recommendations should balance maximizing the societal net benefits of energy savings at the least cost with the delivery of equitable benefits to all Vermonters.
3. Recommendations should coordinate seamlessly with programs serving the new construction sector.
4. Recommendations should include strategies to ensure that customers receive consistent, consumer-friendly service that leads to comprehensive improvements.
5. Recommendations for achieving the building goals articulated in Act 92 [10 VSA 581] should also lay the foundation for achieving the State's long-term goals for energy and greenhouse gas emissions.

VEIC believes these recommendations were sound at the time they were made, and would urge consideration of them in this and future deliberations regarding how best to provide services for unregulated fuels energy efficiency.

Lastly, VEIC would urge the Board to explore one specific issue that was not considered by the TETF: a system under which the regulatory authority of the Board is extended to encompass the establishment and collection of a volumetric charge on unregulated fuels in a fashion comparable to the electric energy efficiency charge. This proposal is consistent with language adopted by the Vermont House of Representatives, which is provided as **Appendix B** to this letter.

While this expansion of authority would require legislative approval, VEIC believes that the Legislature would benefit from having the Board's perspective on how such an expansion would be implemented. The language in **Appendix B** provides an overview of the types of issues that the Board might comment on in this regard.

Expansion of the energy efficiency charge to encompass unregulated fuels could provide the resources needed to overcome the market barriers identified earlier, and also help address market inefficiencies. It would provide a level playing field for all fuels, while also creating an opportunity for all Vermonters to reap the financial and environmental benefits of energy efficiency equitably, regardless of their fuel source.

This is an approach that has proven highly successful with electrical energy efficiency implementation, and which has the potential to provide significant additional thermal and process fuel benefits to Vermont families and businesses.

Thank you for the opportunity to provide these comments.

Sincerely yours,

Michael Wickenden
Director of Regulatory Affairs

VFDA
Vermont Fuel Dealers Association
www.vermontfuel.com

Ms. Susan Hudson, Clerk
Vermont Public Service Board
112 State Street
Montpelier, VT 05620-2710

September 25, 2013

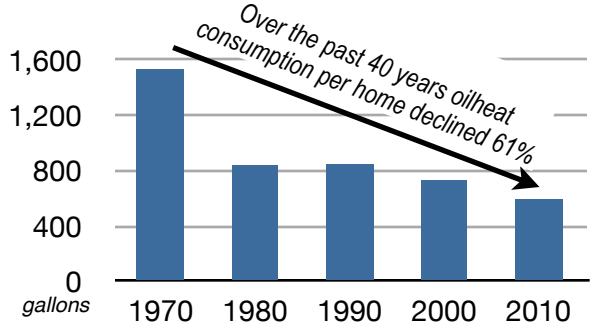
Re: THERMAL EFFICIENCY REPORT

Dear Ms. Hudson:

The comments that follow are in response to Public Act 89, Section 29, Thermal Efficiency Report and the workshop planned for October 10, 2013. The Public Service Board has been asked to evaluate whether there are barriers or inefficiencies in the markets for unregulated fuels that inhibit the efficient use of such fuels.

It is the opinion of VFDA that there are no such impediments to the efficient use of deliverable fuels in Vermont.

More than half of Vermonters choose #2 fuel oil to heat their homes. Over the past forty years, both the total consumption and per home consumption of this fuel has decreased dramatically. Vermonter's use nearly 100 million gallons less fuel than they did forty years ago. In 1970, the average Vermont home consumed 1531 gallons of heating oil, according data from the U.S. Census and the Energy Information Administration.[1] Over the past four decades, the average per home consumption in Vermont dropped 45% by 1990, 52% by 2000 and 61% by 2010.



[1] *Energy Information Administration (EIA) http://www.eia.gov/beta/state/seds/data.cfm?incfile=/state/seds/sep_use/res/use_res_VT.html&sid=VT & U.S. Census Data: http://www.census.gov/hhes/www/housing/census/historic/fuels.html*

These remarkable reductions are happening due to efficiency measures that are widely available to all Vermonters— cleaner fuel, high performance heating equipment, and modern advances in building design. There is a growing industry of certified Building Performance Institute (BPI) contractors that are highly skilled at air sealing homes to make them more energy efficient.[2] There are more than a thousand oilheat and propane technicians certified by the Vermont Department of Public Safety to install and service high efficiency heating equipment.[3]

While the gains made in this competitive marketplace are remarkable, those in the business of delivering energy to homeowners continue to push the envelope. In a program that is the first of its kind in the nation, the Vermont Fuel Dealers Association has teamed up with Efficiency Vermont to build the Efficiency Excellence Network (EEN). This innovative new program is designed to encourage homeowners to reduce consumption of heating fuel through weatherization and heating equipment upgrades by building partnerships between the heating service providers and Building Performance Contractors. Over the past three years, more than 70 heating technicians have successfully completed VFDA's Energy Efficiency and NORA Gold Certification course and nearly a dozen heating fuel companies have signed up for the EEN.

It has often been asked why energy companies would implement programs that result in them selling less of their core product. The reality for the deliverable fuels industry is that their customers are highly motivated to use less. If a heating fuel dealer does not provide opportunities for customers to become more energy efficient, the customer will seek out another service company, another fuel dealer, and quite possibly, a different source of heating fuel.

Finally, there have been efforts by some advocacy organizations to increase the cost of heating fuel through fees or taxes in order to further incentivize energy efficiency among consumers. VFDA believes that the Legislature is the appropriate venue for that discussion.

Thank you for your consideration.

Sincerely,

Matt Cota
Executive Director
Vermont Fuel Dealers Association (VFDA)

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[2] Building Performance Professionals Association: http://www.bppa-vt.org

[3] Vermont Department of Public Safety: http://firesafety.vermont.gov/sites/firesafety/files/pdf/License%20&%20TQP/License/OilInstallers.pdf

VNRC Vermont Natural Resources Council

Celebrating 50 years

September 24, 2013

Chairman James Volz
Vermont Public Service Board
112 State Street
Montpelier, Vermont 05620

RE: EEU-2013-06 — Report on "Efficient Use of Unregulated Fuels"

Dear Chairman Volz,

The State of Vermont has set statutory goals to weatherize 80,000 homes by 2020 and reduce the use of fossil fuels in all buildings by 7.5% by 2020 (Act 92; 10 VSA 581). The State set this goal because of the tremendous energy-saving, money-saving and greenhouse gas reducing benefits efficiency provides homeowners and the State of Vermont. Along our current trajectory, Vermont is poised to fall far short of these important goals unless there is far greater investment in and action on heating efficiency.

To address this likely shortfall, the Vermont Public Service Department convened a set of stakeholders in 2012 and charged this group with exploring the issues and opportunities around making more efficient use of unregulated fuels. Representing VNRC, I was one of over 60 members of this "Thermal Efficiency Task Force." We were a diverse group, and we undertook a comprehensive analysis of thermal efficiency issues, challenges and potential opportunities. In the end, the TETF's report laid out many well-considered potential program, policy, financing and funding solutions for the state to consider.

As the PSB responds to Public Act 89, Section 29, and undertakes its work on a new Thermal Efficiency Report and a workshop on the "Efficient Use of Unregulated Fuels," VNRC respectfully requests the Public Service Board to use the TETF report as a guiding framework for exploring the issues, barriers and potential solutions.

VNRC also requests the PSB to analyze the feasibility of applying a "system benefits charge" or similar charge to currently unregulated fuels as a potential stable and adjustable funding source for systematic efficiency investments.

Of the many potential funding mechanisms the TETF explored, expanding the energy efficiency surcharge was not considered. We believe such an analysis would round out the TETF's work as well as potentially highlight a viable funding source for heating efficiency investments. Because upfront costs are one of the primary barriers to consumer investments in home heating efficiency, the State must find a fair and sustainable way to fund and finance thermal efficiency projects. The PSB is uniquely positioned to examine the methods, benefits, drawbacks etc. of expanding the state's EE surcharge to unregulated fuels.

Specifically, we request the PSB to evaluate and make specific recommendations on:

- Whether there are barriers or inefficiencies in the markets for unregulated fuels that inhibit the efficient use of such fuels and would justify implementation of a system benefits charge or similar charge to support delivery of energy efficiency services to those markets.
- Identify those barriers or inefficiencies and explain how they may or may not justify implementation of such a charge.
- Identify how a potential system benefits charge could be assessed and administered and what legislative action would be required to implement the charge.
- Outline, if such a charge were imposed, the manner in which the General Assembly could ensure that funds generated from such a charge are not funds of the State and are exclusively reserved for investment in energy efficiency on behalf of customers.

VNRC looks forward to working with the PSB and other stakeholders in promoting and implementing solutions to make the efficient use of energy in Vermont.

Thank you for your consideration of this request and for all you do.

Sincerely,

Johanna Miller, *VNRC Energy Program Director*

Knauer, Thomas

From: Hudson, Susan
Sent: Wednesday, September 25, 2013 3:09 PM
To: Knauer, Thomas
Subject: FW: VPIRG Comments on PSB Report on Efficient Use of Unregulated Fuels (Act 29, Section 29)

From: bwalsh@vpirg.org [mailto:bwalsh@vpirg.org]
Sent: Wednesday, September 25, 2013 2:59 PM
To: Hudson, Susan
Subject: VPIRG Comments on PSB Report on Efficient Use of Unregulated Fuels (Act 29, Section 29)

To the Public Service Board:

The Public Service Board, through Act 89, has been asked to examine and report on barriers and inefficiencies that are slowing down the state's transition to the more efficient use of unregulated thermal fuels. VPIRG strongly encourages the Board, in this examination and report, to build on the work done by the State-convened Thermal Efficiency Task Force. The 60-plus members of the Task Force spent thousands of hours delving into these and related issues, and VPIRG believes the end product will be a valuable starting place for the Board in its work.

One barrier highlighted by the Task Force to increasing the efficiency of the use of unregulated thermal fuels in Vermont and ultimately meeting the state's thermal energy goals was the lack of necessary efficiency funding in the unregulated sector. While both electricity and gas have systems benefit charges that provide substantial funding for efficiency within those sectors, there is no equivalent funding source for efficiency work for oil, propane, kerosene, etc. The Task Force made clear that there must be, and while its final report examined a number of potential funding sources, one that was not examined is the implementation of an energy efficiency charge on unregulated fossil fuels. We strongly encourage the Board to explore that possibility, and lay out in its report how implementation of such a charge could be executed.

Ben Walsh
Clean Energy Advocate, VPIRG
(802) 223-5221 ext 23

From: Hudson, Susan [mailto:Susan.Hudson@state.vt.us]
Sent: Friday, June 21, 2013 1:32 PM
To: Baechle, Tim; Bailey, Melissa - VPPSA; Baker, Charlie - Chitt Cty Reg Plng Comm; Bang-Jensen, Lars; Behrns, Ronald; Bentley, Bruce - GMP; Bishop, Ann; Blair, Steve - IBM; Bradley, Jo; Buckley, Tom - BED; Burns, Christopher - BED; Burt, Ellen - Stowe; Callnan, Brian - VPPSA; Camisa, Tim - VOR, Inc.; Cater, Jim - CVPS; Cawley, David; PSB - Clerk; Cohen, Andrea; Cotterill, Brian; Couture, Ken - GMP; Cutler, Dave; Davis, Cathy; DeVarney, Ed - Gas-Watt Energy; Diamond, Joshua R., Esq. - WEC; Doyle, Janet - IBM; Driscoll, William - AIV; Dudley, Jay; Dworkin, Michael H. - VT Institute for Energy&theEnvirnoment; Elias, Jeanne; Ellis, William F., Esq. - BED; Emerson, Elijah D., Esq. - VPPSA ; Errecart, Joyce; Fay, Jim; Flagg, Andrew; Foley, Sean; Francis, Dawn; Frankel, Deena - VELCO; French, Edward B., Esq.; Gram, Dave; Grimason, Dave - Grimason Associates, LLC; Gulkis, Amelia; Hakstian, Carole - VEIC; Hallquist, David - VEC; Harrington, Scott - VGS; Hopkins, Asa; Howland, Robert; Huber, Jeffrey; Hulbert, John - PBM Nutritionals; Jagielski, Thom; Johnstone, Scott - VEIC; Keenan, Kathy; Klein, Tony-VT House Representative; Knauer, Thomas; Krolewski, Mary-Jo; Launder, Kelly; Leban, Donna; Leriche, Lucy; Levine, Sandra E., Esq. - CLF; Lyons, Alyx - VEIC; Maddox, Doug; Malmgren, Ingrid - VEIC; Martin, Dave - GMP; Massie, James - EVT; Metz, Craig - EnSave; Miller, Johanna - VNRC; Miller, Lawrence; Mongeon-Evans, Brian - Utility Svcs; Moore, Pamela - Jacksonville; Moser, Mike; Mullett, David, Esq. - VPPSA ;

Murphy, Barry; Myotte, Craig - Morrisville; Necrason, Adam - Sirotkin & Necrason plc; Orost, Katie L. - VEC; Pallotta, James - Ludlow Elec ; Pedrotty, Tim; Piper, William B., Esq. - VPPSA; Plunkett, John - EVT; Poor, Walter; Powell, Bill - WEC; Pratt, Randy - VEC; Pritchard, Kim - VELCO ; Rawls, Tom - THR Associates; Reed, Doug - Northfield; Richardson, Cort; Riehle, Parker - Vermont Ski Association; Rosenblum, Dan; Schwiebert, Edward V., Esq. - UTVT Holdings, Inc.; Sciarrotta, S. Mark, Esq. - VELCO; Scott, Albert; Shlatz, Brandon - DPS; Silver, Morris L., Esq.; Slote, Stu - Summit Blue; Smith, Dan; Smith, Doug - GMP; Spellman, Richard; Spencer, John - VEPP Inc.; St. Hilaire, John - VGS; Steinhurst, William - Synapse Energy; Taormina, Philene; Turgeon, Al - UVM; Twigg, George - VEIC; Ventriss, Lisa; Volz, James; Walker, Matthew; Ben Walsh; Werner, Eric - Hardwick Electric; Wescom, Karen - Hyde Park; Wickenden, Michael J. - VEIC; Wolbach, Rich; Wood, Jennifer - CVOEO; Wyatt, Francis - GEEG; Yanulavich, Jake
Cc: Ogrady, Elaine
Subject: EEU-2013-03 (Implementastion of Act 89)

Dear Participants:

Enclosed is a memorandum that the Public Service Board issued today, requesting comments on the implementation of certain provisions of Public Act No. 89.

Sincerely,

Susan M. Hudson
Clerk of the Board
802-828-2358
e-mail reply: psb.clerk@state.v.tus

Susan M. Hudson, Clerk of the Board
Vermont Public Service Board
Montpelier, Vermont

Re: Thermal Efficiency Report

September 24, 2013

To the Public Service Board:

In response to the request for written comments Re: Public Act 89 Section 29, we offer the following:

The highly fluctuating price of unregulated fuels makes it difficult to plan effectively for long-term investments in efficiency measures or conversions to renewables.

Using the Vermont Buildings and General Services website as a source for weekly rack pricing for the approximately six year period beginning on 9/2/07 and ending on 9/22/13 we have the following[1]:

#2 Oil Price - - High of $4.20 per gallon on 7/6/08 or $30.39 per MMBtu and a low of $1.30 per gallon on 3/15/09 or $9.40/MMBtu. Current price is $3.09 per gallon or $22.36/MMBtu.

Propane Price - - High $2.10 per gallon on 7/20/08 or $22.93/MMBtu, low of $0.74 per gallon or $8.07/MMBtu on 12/14/08. Current price is $1.35 per gallon or $14.74/MMBtu.

In the period above, the high price of oil was a multiple of 3.23 of the low price and the high price of propane was a multiple of 2.83 of the low price[2].

The financial evaluation of long-term investments in building envelopes and heating plants as well as potential conversions to alternative fuels begins with a value for current fuel price and then relies upon assumptions for future fuel prices. A typical life cycle cost evaluation for major projects would be for a 20-30 year period. Not only is it hard to predict future fuel pricing, but it is difficult to select a representative current price when that price varies significantly over just a short period of time.

1 (http://www.bgs.state.vt.us/fuel/weekly_rack_pricing.php)
2 These are rack prices, delivery cost is extra.

Norm Etkind, CEM, MCEA, CBCP, CSDP Program Director 2 Prospect Street, Montpelier, VT 05602
Phone: (802) 229 – 1017 E-mail: SEMP@vtvsa.org Fax: (802) 229 - 4739

Many long-term projects would show a good return at the high price of fuel but would not be cost effective at the low price. This represents a large risk factor and an impediment to these projects going forward.

By way of example, a generic $1.3 million dollar conversion from oil to wood chips for a 100,000 square foot school building would yield an attractive 30 year life cycle savings of $3.4 million at the high price of oil and a negative $390 thousand life cycle cost at the low price (other assumptions remaining the same).

If a mechanism were put into place to stabilize the price of unregulated fuels or to create a floor price below which the fuel price would not fall, this risk would be mitigated and more projects would go forward.

Norm Etkind
Program Director

Cc: Jeff Francis, Executive Director, Vermont Superintendents Association

Norm Etkind, CEM, MCEA, CBCP, CSDP Program Director 2 Prospect Street, Montpelier, VT 05602
Phone: (802) 229 – 1017 E-mail: SEMP@vtvsa.org Fax: (802) 229 - 4739

Comments Received on November 1, 2013

Knauer, Thomas

From: Buckley, Tom <TBuckley@burlingtonelectric.com>
Sent: Thursday, October 31, 2013 2:18 PM
To: Whitney, Judith; Ancell, Charlotte; Bang-Jensen, Lars; Berliner, Eric - IBM; Bishop, Ann; Bourne, Peter - Bourne's Energy; Burns, Chris; Callahan, Candice - IBM; Campbell, Scott - VFEP; Cecchini, Philip ; Cota, Matt - VFDA; Cotterill, Brian; DePillis, Alex; Doyle, Janet - IBM; Dudley, Jay; Elias, Jeanne; Ellis, William - BED; Etkind, Norm - USA-SEMP; Fiske, Nathan - IBM; Flagg, Andy - PSB; Galvin, Toben; Goodrich, Steve; Granda, Chris; Grimason, Dave - Grimason Associates, LLC; Harrington, Scott; Hedden, Bob - NORA; Hopkins, Asa; Knauer, Thomas; Krolewski, Mary-Jo; Launder, Kelly; Levine, Sandra E., Esq. - CLF; Malmgren, Ingrid - VEIC; Massey, James; Miller, Johanna - VNRC; Parker, Scudder; Powell, Bill - WEC; PSB - Clerk; Simollardes, Eileen; Symington, Gaye; Tousley, Michael; Tukey, Dan - IBM; Twigg, George - VEIC; Wickenden, Michael J. - VEIC
Subject: RE: EEU-2013-06 - Public Act 89, Section 29 - Thermal Efficiency

In the memorandum from the PSB dated October 24, 2013 (referenced below), the Board invited participants to comment on matters under consideration in this proceeding by November 1st. At the workshop on October 10th the hearing examiner specifically invited written comments from participants on potential funding sources for publicly-provided thermal energy efficiency services to consumers of non-regulated fuels.

BED generally supports the recommendations of the Thermal Energy Task Force in this regard. Specifically, during the last legislative session, BED supported either of two such potential funding mechanisms that were debated: First discussed was an expansion of the current gross receipts tax on heating fuels to provide services to the entire population of those served by non-regulated fuels, not only the low-income community. The second discussed was some form of an EEC structured in roughly similar fashion to that levied now on retail electric sales. In either case, it seemed appropriate to levy that expanded tax or new EEC only on non-regulated fuels, as regulated fuels are currently tapped to fund publicly-provided energy efficiency services to a broad base of customers, regardless of income level, and non-regulated fuels are not. BED continues to support these concepts.

Thank you for the opportunity to comment.

From: Whitney, Judith [mailto:Judith.Whitney@state.vt.us]
Sent: Thursday, October 24, 2013 4:49 PM
To: Ancell, Charlotte; Bang-Jensen, Lars; Berliner, Eric - IBM; Bishop, Ann; Bourne, Peter - Bourne's Energy; Buckley, Tom; Burns, Chris; Callahan, Candice - IBM; Campbell, Scott - VFEP; Cecchini, Philip ; Cota, Matt - VFDA; Cotterill, Brian; DePillis, Alex; Doyle, Janet - IBM; Dudley, Jay; Elias, Jeanne; Ellis, William - BED; Etkind, Norm - USA-SEMP; Fiske, Nathan - IBM; Flagg, Andy - PSB; Galvin, Toben; Goodrich, Steve; Granda, Chris; Grimason, Dave - Grimason Associates, LLC; Harrington, Scott; Hedden, Bob - NORA; Hopkins, Asa; Knauer, Thomas; Krolewski, Mary-Jo; Launder, Kelly; Levine, Sandra E., Esq. - CLF; Malmgren, Ingrid - VEIC; Massey, James; Miller, Johanna - VNRC; Parker, Scudder; Powell, Bill - WEC; PSB - Clerk; Simollardes, Eileen; Symington, Gaye; Tousley, Michael; Tukey, Dan - IBM; Twigg, George - VEIC; Wickenden, Michael J. - VEIC
Subject: EEU-2013-06 - Public Act 89, Section 29 - Thermal Efficiency

Enclosed is a Memorandum being issued today by the Public Service Board relative to the above-referenced subject matter.

Thank you.

Sincerely,

Judith C. Whitney
Deputy Clerk of the Board
Vermont Public Service Board

112 State Street
Montpelier, VT 05620-2701
802-828-2358
judith.whitney@state.vt.us

clf
conservation law foundation

For a thriving New England

CLF Vermont
15 East State Street, Suite 4
Montpelier, VT 05602
P: 802.223.5992
F: 802.223.0060
www.clf.org

November 1, 2013

By email and first-class mail

Vermont Public Service Board
112 State St., Drawer 20
Montpelier, VT 05620-2701
psb.clerk@state.vt.us

Re: EEU-2013-06
Act 89 Thermal Efficiency Report

Dear Vermont Public Service Board Members:

Conservation Law Foundation (CLF) offers the following additional comments regarding the report that the Vermont Public Service Board (Board) will submit to the Vermont Legislature, pursuant to Section 29 of Public Act No. 89, on the efficient use of unregulated fuels.

Evaluation of Funding for Thermal Efficiency

Conservation Law Foundation encourages the Board to include both identification and an evaluation of funding sources for increased thermal efficiency as part of its report. As noted in CLF's previous comments, the Thermal Efficiency Task Force identified a lack of funding for thermal efficiency as a key barrier. The Board, through its Thermal Efficiency Report, has the opportunity to explore this issue further and provide the Legislature with an evaluation of this key barrier.

The Board has authority to evaluate reducing barriers and funding

Based on the legislation passed, the Board has the authority to evaluate funding mechanisms as a means to reduce barriers as part of its report.

Section 29 of Act 89 states:

> (a) On or before December 15, 2013, the Public Service Board shall conduct and complete a public process and submit a report to the House and Senate Committees on Natural Resources and Energy, the House Committee on Commerce and Economic Development, and the Senate Committee on Finance on the efficient use of unregulated fuels. In this section:
>
> (1) "Regulated fuels" means electricity and natural gas delivered by a regulated utility.

clf

conservation law foundation

(2) "Unregulated fuels" means all fuels used for heating and process fuel customers other than electricity and natural gas delivered by a regulated utility.

(b) During the process and in the report required by this section, the Board shall evaluate whether there are barriers or inefficiencies in the markets for unregulated fuels that inhibit the efficient use of such fuels.

(c) The Board need not conduct the public process under this section as a contested case under 3 V.S.A. chapter 25 but shall provide notice and an opportunity for written and oral comments to the public and affected parties and state agencies.

Public Act No. 89, Section 29 (2013 Vt. Bien. Sess.)

The statutory directive is written broadly and directs the Board in Section (a) to "submit a report … on the efficient use of unregulated fuels." This language does not in any way limit the scope of issues for the Board to address in its report. Had the Legislature wanted to limit the scope of the report it would have identified those limitations in the Act. Absent any limitation, the Board cannot determine that its authority is limited in a way that precludes it from evaluating funding as part of the report.

In Section (b), the Act describes some specific issues that "shall" be evaluated. These include "whether there are barriers or inefficiencies in the markets for unregulated fuels that inhibit the efficient use of such fuels." Section (b) does not limit Section (a) but adds specific issues that "shall" be included in the Board's evaluation.

The fact that an earlier version of the bill had additional specific language that was later removed, does not limit the Board's authority. The Board's authority is based on the language of the statute that was passed. The removal of additional specific language regarding funding simply reduces the issues the Board is required to evaluate. Based on the language of the statute that was passed, the Legislature wanted to make sure that the Board evaluates whether there are barriers or inefficiencies in the markets, but based on the language of Section (a), the Legislature did not want to limit the Board to *only* addressing the existence of the barriers.

This interpretation of the clear statutory language is supported by the fact that the Legislature had in front of it the Thermal Efficiency Task Force report when it passed this Act. The Legislature did not want the Board to simply re-do the work of the Thermal Efficiency Task Force. That report itself evaluated barriers. It would make no sense for the Legislature to ask the Board to do something that had already been done. Instead, the Legislature must have meant for

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the Board to evaluate something more or different. Based on the language of Section 29 as a whole, the Board has clear authority to evaluate funding and other means to reduce barriers as part of its report.

The Board should evaluate funding mechanisms as a means to address barriers

A Board evaluation of the means to address the identified barriers would be a helpful part of the analysis of "the efficient use of unregulated fuels." As identified in the Task Force Report, lack of funding was identified as a key barrier. An evaluation by the Board of some means to address this barrier would be useful. This is an area over which the Board has specific experience and expertise, beyond that of the Legislature, and insight from the Board on funding issues would be useful. Additionally, a number of stakeholders recommended the Board evaluate funding as part of its report since this would build on the work of the Task Force.

Evaluation of funding in the form of a system benefit charge or fossil fuel fee

The Board's evaluation of additional funding mechanisms to reduce barriers would be helpful. CLF identified the additional option of broadening the systems benefit charge to include a charge on unregulated fuels. Based on the Board's experience in developing and implementing the system benefit charge for electrical efficiency, an evaluation of a similar benefit charge for unregulated fuels makes sense. Similarly, the evaluation of a broader benefit charge on all fossil fuel infrastructures, including pipelines and fossil fuel-based power plants, would be helpful as it would tie efficiency funding to broader fossil fuel use.

The Board has authority to evaluate means to reduce barriers, including funding mechanisms as part of its report on the efficient use of unregulated fuels. Evaluating the means to reduce barriers, including funding mechanisms for unregulated fuel efficiency would build on the work of the Thermal Efficiency Task Force and provide helpful evaluations as the Vermont Legislature considers how to meet the statewide goals of weatherizing 80,000 homes.

Thank you for your consideration of these comments. CLF looks forward to working with the Board and other stakeholders in advancing the efficient use of energy throughout Vermont.

Sincerely,

Sandra Levine
Senior Attorney
Conservation Law Foundation
slevine@clf.org

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State of Vermont
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November 01, 2013

Susan M. Hudson, Clerk
Vermont Public Service Board
112 State Street
Montpelier, VT 05620-2701

Re: EEU 2013-06 Public Act 89, Section 29 -Thermal Efficiency Report – Department of Public Service Comments

Dear Mrs. Hudson:

In a Memorandum dated October 24, 2013 the Public Service Board ("Board"), as a follow up to the workshop held on the above referenced proceeding held on October 10, 2013, set a deadline for comments of November 1, 2013, with a reply comment deadline of November 8, 2013. The Department of Public Service ("Department") will not be filing comments at this time, and will review any comments filed by other stakeholders to determine whether we wish to file reply comments next week. Thank you.

For the Department of Public Service

Brian Cotterill
Energy Program Specialist

Jeanne Elias
Special Counsel

Vermont Energy Investment Corporation

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Tel: (802) 658-6060
Toll-free: (800) 639-6069
veic.org

November 1, 2013

Ms. Susan Hudson, Clerk
Vermont Public Service Board
112 State Street
Montpelier, VT 05620-2701

Re: Docket EEU-2013-06 Additional Substantive Comments on the Thermal Efficiency Report

Dear Ms. Hudson,

In its memorandum dated October 24, 2013, the Public Service Board ("Board") scheduled November 1, 2013 as the deadline for parties wishing to file additional substantive comments in EEU-2013-06. The Board's memo included a draft outline of the Board's Thermal Efficiency Funding and Savings Report ("Report"). VEIC filed its original comments on September 25, 2013. Please accept the following as VEIC's additional substantive comments.

I. Identification of market barriers or inefficiencies in the markets for unregulated fuels that inhibit the efficient use of such fuels.

In its September 25, 2013 filing in this proceeding, VEIC presented comments on market barriers and market inefficiencies associated with the efficient use of unregulated fuels. VEIC continues to supports the identification of specific barriers as outlined in its earlier filing as well the more comprehensive listing in the Thermal Efficiency Task Force Report. In addition, VEIC provides the attachment, **VEIC – EEU Framework.pdf** which contains a further discussion of VEIC's position that the barriers to efficiency in delivered fossil fuels are very similar to those for electricity and natural gas.

II. Practical and jurisdictional issues related to thermal efficiency public funding alternatives.

Practical issues related to thermal efficiency public funding alternatives include the calculation of the funding necessary to achieve the goals set forth in 10 V.S.A. § 581and further outlined in the Thermal Efficiency Task Force Report to improve the energy fitness of 25% of the State's

housing stock by 2020. VEIC supports the analysis as detailed in Table 9 and Table 10 on pages 84 and 85 of the Thermal Efficiency Task Force Report.

Another practical issue related to thermal efficiency public funding alternatives is the identification of a reliable funding source. VEIC supports the general recommendation of the Thermal Efficiency Task Force that the solution to funding Vermont's Thermal Efficiency Goals lies in a combination of "…funding and financing tools along with appropriate risk mitigation features, with an assumption that a significant majority of resources will come from private, not public, sources."[1] In addition, VEIC supports the conceptual framework of the Thermal Efficiency Task Force "high preference public funding options" that include a fossil fuel excise tax combined with an energy efficiency tax credit.[2] These options best promote the alignment of the costs and benefits of public thermal efficiency funding.

With regard to jurisdictional issues related to thermal efficiency public funding alternatives, VEIC presents the following comments. In Section 29 of Public Act 89, the Vermont Legislature tasks the Vermont Public Service Board with an assignment to "conduct and complete a public process and submit a report to the House and Senate Committees on Natural Resources and Energy, the House Committee on Commerce and Economic Development, and the Senate Committee on Finance on the efficient use of unregulated fuels," evaluating, "whether there are barriers or inefficiencies in the markets for unregulated fuels that inhibit the efficient use of such fuels."[3] This language in Act 89 effectively transfers jurisdiction from the Legislature to the Board to examine this issue and report findings to the Legislature. Indeed, the language *requires* the Board to reach out to the "public, affected parties and state agencies" to research efficiency of unregulated fuels.

This situation is not a historical departure from the existing jurisdiction of the Public Service Board. In 2008, the Vermont Legislature granted authority to the Public Service Board to:

> Ensure that all retail consumers, regardless of retail electricity, gas, or *heating or process fuel provider*, will have an opportunity to participate in and benefit from a comprehensive set of cost-effective energy efficiency programs and initiatives designed to overcome barriers to participation. (italics added).[4]

[1] TETF p. 79
[2] See section 4.7 of the TETF
[3] Act 89 Section 29
[4] 30 V.S.A. § 209(e)(1)

The establishment of the fuel efficiency fund under the authority of the Board in 30 V.S.A. § 203a further illustrates the Legislature's intent to grant the Board jurisdiction over the efficiency of unregulated fuel use. A comprehensive policy and operational history of Least-Cost Integrated Planning in Vermont is included with this filing[5].

In order for the Board to be able to fulfil the obligation mandated by the Legislature in 30 V.S.A. § 209(e)(1), VEIC reiterates its September 25, 2013 comments that the Legislature should grant the Board the authority to collect a volumetric charge on unregulated fuels (with the exemption of biomass and biofuels as recommended in the TETF Report[6]).[7]

VEIC appreciates the opportunity to participate in this proceeding which challenges the Board, the Legislature, and Stakeholders to respond to the comprehensiveness of 30 V.S.A. § 202(a)(2):

> To identify and evaluate on an ongoing basis, resources that will meet Vermont's energy service needs in accordance with the principles of least cost integrated planning; including efficiency, conservation and load management alternatives, wise use of renewable resources and environmentally sound energy supply.

Sincerely yours,

Michael Wickenden
Director of Regulatory Affairs

[5] Please see attached file; **Vermont Least-Cost Integrated Planning February 2012.pdf**
[6] TETF page 101.
[7] Please see attached file; **VEIC EEU Framework.pdf** for a more expansive discussion of the rationale, legal context, and proposed mechanism for funding a least cost approach to delivered fossil fuels.

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November 1, 2013

Susan M. Hudson, Clerk
Vermont Public Service Board
112 State Street, Drawer 20
Montpelier, VT 05620

Re: EEU 2013-6: Supplemental Comments of Vermont Fuel Dealers Association in the Inquiry and Report of the Public Service Board Pursuant to Act 89 of the 2013 Legislature

Dear Mrs. Hudson:

The Vermont Fuel Dealers Association ("VFDA") appreciates the opportunity to make further comments on the issues raised by Section 29 of Act 89 of the 2013 Legislative Session. These comments will supplement those in the letter of September 25, 2013 to the Board from Matt Cota, the VFDA Executive Director.

This letter will address the directive put to the Board by Section 29, as articulated in Section 29(b):

> During the process and in the report required by this section, the Board shall evaluate whether there are barriers or inefficiencies in the markets for unregulated fuels that inhibit the efficient use of such fuels.

The approximately 300 heating fuel and heating service providers in Vermont are in direct competition with each other. They are not protected by franchised territories; their rates aren't determined and guaranteed by a regulatory authority; many are in competition with companies literally hundreds of times their size. The challenges of this competition require

them to be directly accountable to the needs of their customers, which in turn has come to mean offering services and advice that increase the efficiency of their customers' systems. As Mr. Cota noted, more than 1,000 Vermont oil heat technicians are certified to install high efficiency heating equipment.

The Thermal Efficiency Task Force Report discusses a survey taken of Vermonters who had *not* participated in a retrofit program, which revealed that "more than 70% of non-participants [those who are not participating in designated programs] have completed some type of home improvement project for the purpose of lowering energy costs... The most frequently reported upgrades were adding insulation, replacing windows, and replacing heating equipment." [1]

Furthermore, recent legislation makes it certain that due to increased biofuel mixes, the carbon emissions associated with oil heat will be sharply reduced over the next five years, which in turn will lead to a substantial reduction in greenhouse gas emissions.

Given the economic forces at work on the independent fuel market and the steps undertaken by fuel dealers and their customers, it should come as no surprise that annual per-home consumption of fuel oil in Vermont *fell roughly 19 %* in the first decade of this century. And the downward trend is continuing. No other energy source available to Vermonters approaches this record.

For these reasons, and those recited in Mr. Cota's September 25 letter (particularly the availability of constantly improving techniques in home building and remodeling), the VFDA submits that whatever barriers or inefficiencies may have existed in Vermont in the markets for unregulated fuels have been largely overcome.

The Intent of the Legislature and the Systems Benefit Charge

The legislative history of Act 89 shows that the bill (H. 520) passed the House with language that specified that the Board was to report on whether the imposition of a "systems benefits charge or similar charge" on customers of unregulated fuel companies would be justified, how such a charge should be administered and what legislation would be necessary to effect it.[2] However, the Senate voted to amend the bill to *delete all references in Section 29 to*

[1] T.E.T.F. Report, page 37
[2] H. 520, as passed by House, page 54

a systems benefit charge. The Act as finally passed and signed into law adopted the Senate version of Section 29 and contained no references to a system benefits charge. In short, the question of a new type of systems benefits charge was directly addressed and explicitly rejected in the bill as passed by both Houses and signed into law.

Positions of the Other Participants

Nonetheless, knowing that the Legislature had specifically rejected the Board's consideration of this charge, several participants in the Board's workshops have used the workshop sessions and their comments to change the subject. Instead of addressing the questions posed, these folks argue that Public Service Board jurisdiction should be expanded so that the Board will impose a systems benefit charge on customers of unregulated fuel companies. These surcharges would, of course, be in addition to charges these customers already pay on their electric bills. Not surprisingly, advocates of this position from the Vermont Energy Investment Corporation believe that these required payments should be added to the millions of dollars that Vermonters already pay to sustain that corporation's program, Efficiency Vermont.

The Role of the Public Service Board

Stretching the Public Service Board's jurisdiction to cover unregulated purveyors of oil and propane is a poor idea. The Board has developed a vast body of rules, case law and practices to perform its core function of regulating monopoly companies with franchised territories. Virtually every decision it makes directly or indirectly affects the rates those companies charge for their products. And it has a work load of scores of complex cases and hundreds of decisions a year. Its powers include the ability to inspect utility books and records, to require utilities to undertake studies and to fine utilities if they violate Board orders.

The proponents of a systems benefits charge argue that it could be devised, calculated, required and enforced by the Board without a significant broadening of the Board's powers or jurisdiction. They fail to take into account that scores of the fuel dealers are very small and ill-equipped to make regulatory filings, even on a limited basis. And they clearly have in mind

that the Board will direct the money to the coffers of the Vermont Energy Investment Corporation or its related entities, rather than leaving the money in customers' pockets so they can continue to retrofit their own homes. They see the Board as being more flexible than the Legislature and therefore more likely to increase the payments in the future.[3]

Conclusion

The VFDA urges the Board to report to the Legislature that a motivated populace and a relatively barrier – free and efficient market exists for energy efficiency measures, undertaken voluntarily by customers of heating oil and propane companies. These measures have already resulted in sizeable energy savings and will likely continue to do so. We also urge the Board to avoid answering questions that were not posed in Act 89, including constructing a whole new area of regulation that results in a surcharge on hard-pressed oil and propane customers.

Thank you for the opportunity to submit these comments.

Very truly yours,
VERMONT FUEL DEALERS ASSOCIATION

By _____
Richard H. Saudek, Its Attorney

[3] For a discussion by the Vermont Energy Investment Corporation's lobbyist of how this scheme would work, see "How Vermont Can Get to Yes on Comprehensive Building Efficiency" by Scudder Parker and Frances Huessy, March 13, 2013, which recommends that money be taken from oil customers and turned over to the Energy Efficiency Utility to further fund its programs. The memorandum doesn't give a nod to customers' own voluntary efficiency efforts. It is ironic that a program that touts efficiency would take customers' money to fund a program that purports to do what the customers are already doing.

Comments Received on November 8, 2013

Agri-Mark, Inc.

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agrimark.coop

P. 978.689.4442

November 8, 2013

By email and first-class mail

James Volz, Chairman
Public Service Board
112 State St., Drawer 20
Montpelier, VT 05620-2701
psb.clerk@state.vt.us

Re: Act 89 Thermal Efficiency Report

Dear Chairman Volz,

I am writing in response to comments filed by participants in the existing workshop being conducted by the Public Service Board (PSB) in fulfillment of its obligations under Act 89, Section 29: Thermal Efficiency Report. It appears from the email service list that commercial and industrial users were not made aware of the workshop or earlier opportunities to file comments. Nevertheless, please accept these comments filed in response to those already filed by other participants.

Agri-Mark, Inc. (DBA Cabot Creamery Cooperative) is beginning the process of moving forward with two Fuel Conversion Projects to replace using #6 fuel oil as a primary fuel source with Compressed Natural Gas (CNG) at its Cabot and Middlebury, Vermont facilities. Agri-Mark's investment for these projects is approximately 5 million dollars. These projects will significantly reduce our operating costs and reduce greenhouse gas emissions. The switch to CNG is primarily for process energy used to make dairy products, such as cheese, sour cream, yogurt, and whey powder, from fresh milk. Agri-Mark is also considering including a fueling station as part of the project design at the Cabot plant to facilitate the replacement and/or conversion of our trucking fleet to CNG.

Agri-Mark hopes that the PSB and others consider that a growing number of businesses are making significant investments in fuel conversions away from #6 fuel and #2 fuel oil toward cleaner and more economical fuels as a result of good business decisions and market forces. Agri-Mark has read the comments filed by participants, and they clearly indicate an interest in either creating an excise tax on unregulated fuels or the creation of a systems benefit charge on these unregulated fuels in order to fund thermal efficiency efforts in Vermont.[1] The PSB should strongly consider how such new tax or charge would impact a company like Agri-Mark that is

[1]Agri-Mark would note that Act 89, Section 29 did not ask the PSB to solicit input on the creation of a tax or systems benefit charge on unregulated fuels. However, many participants' comments have focused on this issue, thus prompting the need for our response.

considering making significant investments in upgrading its fuel technology. A new tax or charge would potentially alter our decision to make this investment because it could alter the payback period for Agri-Mark.

If the PSB or legislature considers either a tax on unregulated fuels or a systems benefit charge, an integral part of that discussion should be the treatment of businesses like Agri-Mark that are in the midst of making the switch over to these fuels without the kind of assistance or support contemplated by the creation of new funding sources to help finance such projects. Agri-Mark should not be penalized for making this investment, but rather should be applauded. That could come in the form of an exemption from a new tax or charge, or a credit for the investment being made, or some other mechanism that respects that investment and does not penalize Agri-Mark for being early adopters of better fuel technology.

Agri-Mark offers no opinion at this time about the relative merits of creating a funding mechanism to improve the thermal efficiency of Vermont's commercial and industrial sector. Agri-Mark has taken on that responsibility because of market forces, business competitiveness, and environmental stewardship. In addition, Agri-Mark invested the internal resources to educate itself on the available technological alternatives in order to make what we it believes is a sound business and environmentally beneficial decision. It realizes that other business may lack the financial and internal resources to undertake similar project investigations and investments. The mechanisms to make these improvements more widely available to the commercial and industrial sector are beyond the scope of our comments at this time. We would be happy to share our experience with the PSB, the legislature, or others at any time.

We appreciate the opportunity to offer our response to some of the comments already filed with the PSB and trust that as this issue moves forward at the legislature that our concerns will receive thoughtful discussion and consideration.

Sincerely,

Robert D. Wellington
Senior Vice President
Economics, Communications & Legislative Affairs

ASSOCIATED INDUSTRIES OF VERMONT

REPRESENTING THE VERMONT INDUSTRIAL AND BUSINESS COMMUNITY SINCE 1920

November 8, 2013

Susan Hudson
Clerk, Public Service Board
112 State Street, Drawer 20
Montpelier, VT 05602

RE: EEU-2013-06 Reply Comments regarding the Inquiry and Report of the Public Service Board Pursuant to Act 89

Dear Ms. Hudson:

The following are AIV's reply comments in the above referenced proceeding.

A number of comments submitted in this proceeding to date have advocated for the creation of a new tax or other charge on unregulated fuels to help finance efficiency projects and programs. This is entirely inappropriate and ill advised, and the Board should make no such recommendation in its report.

A broad-based charge on unregulated fuel customers would create additional, burdensome costs that would not necessarily be recouped by those costumers – an unwarranted result for residents seeking to manage fuel costs and, particularly, for businesses struggling to compete in a high-cost environment. A customer might have already made investments that increased efficiency prior to the assessment of new charges, which would then represent an unmitigated cost burden. A customer might not have available options for investments that could generate savings sufficient to offset the ongoing cost of new charges over time, or a customer might make investments, the actual up front cost of which is less than the ongoing cost of the new charges. In either of these latter scenarios, the new charges would undermine the value of the investments and create lost opportunity costs relative to the status quo.

Moreover, a broad-based tax or charge mechanism, often referred to as a "systems benefit charge", is not justifiable given the nature of unregulated fuel markets. A nominal justification for a "systems benefit charge" on electricity, which is used as a model for one on unregulated fuels, is that efficiency investments by given customers help reduce prices for everyone. In reality, the ultimate rate impacts of Vermont's electric efficiency programs and financing mechanisms do not bear this argument out. With regard to unregulated fuels, however, this argument is even more baseless because unregulated fuel prices do not react to customer efficiency projects in a manner necessary to back up such a rationale.

Should the Legislature seek to address issues of cost and education related to promoting and facilitating efficiency investments for unregulated fuels, AIV would encourage legislators to consider more efficient and less burdensome funding mechanisms, such as tax incentives, loan guarantees and other financing mechanisms that are repaid directly from the savings generated by individual investments rather than broad customer charges, and simple public databases for best practices and service provider references.

We very much appreciate the Board's consideration of these comments and recommendations.

Sincerely,

/s/

William Driscoll
Vice President

cc: Service List via email

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November 08, 2013

Susan M. Hudson, Clerk
Vermont Public Service Board
112 State Street
Montpelier, VT 05620-2701

Re: EEU 2013-06 Public Act 89, Section 29 -Thermal Efficiency Report – Department of Public Service Reply Comments

Dear Mrs. Hudson:

The Department of Public Service ("Department") will not be filing reply comments in this proceeding. Thank you.

For the Department of Public Service

Brian Cotterill
Energy Program Specialist

Jeanne Elias
Special Counsel

1000 River Street
Mail Stop 966A
Essex Junction, VT 05452

VIA E-MAIL

November 11, 2013

Mrs. Susan M. Hudson, Clerk
Public Service Board
112 State Street
Post Office Drawer 20
Montpelier, VT 05620-2701

Re: EEU 2013-06, Public Act 89, Section 29 –Thermal Efficiency Report – IBM Reply Comments

Dear Mrs. Hudson:

On October 24, 2013, the Public Service Board issued a memorandum in the above referenced proceeding, setting a comment deadline of November 1, 2013, and a reply comment deadline of November 8, 2013. IBM was unable to submit comments on November 8, and respectfully requests consideration by the Board of the following reply comments, being transmitted before the next business day.

As the largest manufacturer in Vermont, IBM uses electrical and thermal energy both for manufacturing processes and for space heating and cooling. IBM's primary thermal fuel is natural gas, supplied by Vermont Gas Systems (VGS). However, as an interruptible customer, IBM is subject to curtailment events during periods of high demand. During interruptions, IBM must switch to its auxiliary fuel, #6 fuel oil. This approach serves to benefit all ratepayers through peak demand reduction, averting or deferring the need for costly infrastructure upgrades. Since IBM's central utility plant uses dual fuel systems, our thermal efficiency measures generally reduce both regulated and unregulated fuel usage.

IBM has operated a comprehensive energy efficiency and conservation program in Vermont for well over 20 years. In the decade before the creation of the statewide Energy Efficiency Utility (EEU), IBM completed 865 thermal and electrical efficiency projects. While participating in the Customer Credit Program of the electrical EEU, IBM continued to invest in thermal efficiency projects, including some executed in partnership with the VGS demand side management program. More recently, IBM has participated in the Self Managed Energy Efficiency Program (SMEEP), which incorporates both thermal and electrical efficiency in a consolidated alternative to the utility efficiency programs. In the first three years of SMEEP, IBM completed efficiency projects with lifetime thermal savings of over 1.7 million MMBTUs in regulated and unregulated fuels. Since 2002, IBM's energy management program has produced a 20% reduction in total energy use, while our manufacturing capability has simultaneously increased upwards of 45%.

IBM supports the comments of Omya and Agri-Mark. Like those commenters, IBM has invested in thermal efficiency for reasons of environmental stewardship and sound business management. While VEIC has listed potential barriers in its comments, IBM has not found these factors to inhibit our efficient use of either regulated or unregulated fuels.

IBM did, however, find that the centralized collection, control, and disbursement of funds through the electric EEU structure created its own barrier to the timely and cost effective implementation of efficiency measures due to the negative impact on cash flow. Up front payment of the energy efficiency charge (EEC) to the EEU reduced available cash, making it more difficult to obtain resources to invest in efficiency projects. Each project had to be fully funded by IBM, implemented, then verified and approved by the EEU before partial recovery of the investment could be obtained from the EEC paid in. This process could take several months. Under the Customer Credit Program, the maximum recovery of EEC funds paid in was limited -- initially to 75%, then later modified to 90%. Although IBM has its own efficiency expertise and was not relying on the EEU for technical assistance, 10% to 25% of the EEC we paid was not available to us to actually implement efficiency measures. IBM asked the legislature to authorize SMEEP in part to address this concern.

IBM would be very concerned about how this model might be applied to thermal efficiency through the imposition of a system benefit charge or additional taxes on unregulated fuels. The Vermont Fuel Dealers Association correctly points out that the Legislature explicitly removed all reference to a system benefit charge or similar fee from the scope of its direction to the Board in Section 29 before passing Act 89. Any assessment that the Board may nonetheless undertake of thermal efficiency public funding options must address the potential negative impacts upon fuel customers, particularly those that are already making efficiency investments. A survey of over 600 Vermonters who had not participated in designated weatherization programs found that more than 70% had completed home-energy cost-saving projects.[1] As a SMEEP participant, IBM is already committed to sustained efficiency investments and should not be subject to additional taxes or fees.

IBM appreciates the Board's thoughtful consideration of these comments and recommendations.

Sincerely,

Janet Doyle

Janet Doyle
Senior Engineer, Site Operations
Government Affairs Program Manager
IBM Vermont

[1] The Thermal Efficiency Task Force Report, page 37.

PO Box 10
Florence VT 05744

November 8, 2013

James Volz, Chairman
Public Service Board
112 State St., Drawer 20
Montpelier, VT 05620-2701
psb.clerk@state.vt.us

Re: Act 89 Thermal Efficiency Report

Dear Chairman Volz,

I am writing in response to comments filed by participants in the existing workshop being conducted by the Public Service Board (PSB) in fulfillment of its obligations under Act 89, Section 29: Thermal Efficiency Report. It appears from the email service list that commercial and industrial users were not made aware of the workshop or earlier opportunities to file comments. Nevertheless, please accept these comments filed in response to those already filed by other participants.

As you know, Omya recently received a Certificate of Public Good and is moving forward with a Fuel Conversion Project to replace using #2 fuel oil with Liquefied Natural Gas (LNG) at our Pittsford, Vermont facility.[1] Omya's investment for this project is 10 million dollars. This project will significantly reduce our operating costs and reduce greenhouse gas emissions. The switch to LNG is both for our production of calcium carbonate (where we operate six large dryers) as well as the production of heat for our buildings with three existing boilers that utilize #2 fuel oil. Omya has also included a fueling station as part of the project design to facilitate the replacement and/or conversion of our trucking fleet to LNG or Compressed Natural Gas. More details of our project are clearly set forth at our project web site[2] and in the PSB Order and CPG.

Omya hopes that the PSB and others consider that a growing number of businesses are making significant investments in fuel conversions away from #2 fuel oil or other fuels (e.g. #6 fuel oil) toward cleaner and more economical fuels as a result of good business decisions and market forces. Omya has read the comments filed by participants, and they clearly indicate an interest in either creating an excise tax on unregulated fuels or the creation of a systems benefit charge on these unregulated fuels in order to fund thermal efficiency efforts in Vermont.[3] The PSB should strongly consider how such new tax or charge would impact a company like Omya

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[1] Docket No. 7869 (Petition of Omya, Inc., for a certificate of public good, pursuant to 30 V.S.A. Section 248, authorizing the construction and operation of a liquefied natural gas facility at its existing plant in Pittsford, Vermont).

[2] http://www.omyainvermont.com/internet/us_vermont/q2wcontent.nsf/04fa7deb65dc84f9c1256a6200552c10/52fbbdbc6b124d93c125799c00540d0d?OpenDocument

[3] Omya would note that Act 89, Section 29 did not ask the PSB to solicit input on the creation of a tax or systems benefit charge on unregulated fuels. However, many participants' comments have focused on this issue, thus prompting the need for our response.

that has already made significant investments that should be applauded or at the very least recognized and not penalized. A new tax or charge would erode some of the economic benefit that Omya hopes to recoup from its investment that makes it more competitive in the global market where it operates.

If the PSB or legislature considers either a tax on unregulated fuels or a systems benefit charge, an integral part of that discussion should be the treatment of businesses like Omya that have already made the switch over to these fuels without the kind of assistance or support contemplated by the creation of new funding sources to help finance such projects. Omya should not be penalized for making this investment, but rather should be applauded. That could come in the form of an exemption from a new tax or charge, or a credit for the investment already made, or some other mechanism that respects that investment and does not penalize Omya for being early adopters of better fuel technology.

Omya offers no opinion at this time about the relative merits of creating a funding mechanism to improve the thermal efficiency of Vermont's commercial and industrial sector. Omya has taken on that responsibility because of market forces, business competitiveness, and environmental stewardship. In addition, Omya invested the internal resources to educate itself on the available technological alternatives in order to make what it believes is a sound business and environmentally beneficial decision. It realizes that other business may lack the financial and internal resources to undertake similar project investigations and investments. The mechanisms to make these improvements more widely available to the commercial and industrial sector are beyond the scope of our comments at this time. We would be happy to share our experience with the PSB, the legislature, or others at any time.

We appreciate the opportunity to offer our response to some of the comments already filed with the PSB and trust that as this issue moves forward at the legislature that our concerns will receive thoughtful discussion.

Sincerely,

James B. Stewart

James B. Stewart
Plant Manager
Omya, Inc
PO Box 10
Florence, Vermont 05744

(jim.stewart@omya.com)

Vermont Energy Investment Corporation

128 Lakeside Avenue, Suite 401
Burlington, VT 05401 USA
Tel: (802) 658-6060
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veic.org

November 8, 2013

Ms. Susan Hudson, Clerk
Vermont Public Service Board
112 State Street
Montpelier, VT 05620-2701

Re: EEU-2013-06 VEIC Reply Comments: Thermal Efficiency Report

Dear Ms. Hudson,

In a Memorandum dated October 24, 2013, the Public Service Board ("Board") allowed parties to file additional substantive comments in this proceeding on November 1, 2013. In the same Memo, the Board scheduled November 8, 2013 as the deadline for parties in this proceeding to file reply comments based on that initial filing.

VEIC submits the following reply comments in support of issues addressed in Conservation Law Foundation's (CLF) November 1, 2013 filing.

- VEIC supports CLF's analysis and conclusion that the Board's authority is not "limited in a way that precludes it from evaluating funding as part of the report."[1]
- VEIC also supports CLF's recommendation that the Board should evaluate funding mechanisms as a means to address barriers.

Both of these positions are consistent with the Board's mandate as articulated in Vermont Statue 209 (e) (1) and (15):

§ 209 (e) The Board shall:

[1] EEU-2013-06 Act 89 Thermal Efficiency Report. Comments dated Nov. 1, 2013 by Sandra Levine, Conservation Law Foundation at 2.
http://psb.vermont.gov/sites/psb/files/publications/Reports%20to%20legislature/EEU/Act89Sec29Report/CLF%20comments%20EEU-2013-06%2011-1-13.pdf

(1) Ensure that all retail consumers, regardless of retail electricity, gas, or heating or process fuel provider, will have an opportunity to participate in and benefit from a comprehensive set of cost-effective energy efficiency programs and initiatives designed to overcome barriers to participation.[2]

(15) Ensure that the energy efficiency programs implemented under this section are designed to make continuous and proportional progress toward attaining the overall state building efficiency goals established by 10 V.S.A. § 581, by promoting all forms of energy end-use efficiency and comprehensive sustainable building design. The funds made available under subdivision (d)(7) of this section may be used by an efficiency entity appointed under subdivision (2) of this section to deliver fossil fuel energy efficiency services to Vermont heating and process-fuel consumers on a whole-building basis.[3]

VEIC appreciates the opportunity to participate in this proceeding. Please do not hesitate to contact me if you have any questions regarding these reply comments.

Sincerely yours,

Michael Wickenden
Director of Regulatory Affairs

[2] V.S.A. §209 (e) (1)
http://www.leg.state.vt.us/statutes/fullsection.cfm?Title=30&Chapter=005&Section=00209
[3] V.S.A. §209 (e) (15)
http://www.leg.state.vt.us/statutes/fullsection.cfm?Title=30&Chapter=005&Section=00209

VFDA
Vermont Fuel Dealers Association
www.vermontfuel.com

November 8, 2013

Ms. Susan Hudson, Clerk
Vermont Public Service Board
112 State Street
Montpelier, VT 05620-2701

Re: EEU-2013-06 VEIC Reply Comments: Thermal Efficiency Report

Dear Ms. Hudson,

As we noted in our comments filed on November 1, Act 89 was enacted after the Legislature had intentionally deleted any reference to funding in the nature of a surcharge on the bills of customers of unregulated energy suppliers. The VEIC is seeking not only to inject the issue of funding into this inquiry, but by alluding to 30 V.S.A. §209 [cited by the VEIC as "Vermont Statue 209(e)(1) and (15)"], it is seeking to direct the money to its program. This is not what Act 89 asked the Board to investigate and it should not be a part of the Board's report.

In its eagerness to obtain more funding for itself, the VEIC has not provided insight into the question the Legislature directed the Board to evaluate: "…whether there are barriers or inefficiencies in the markets for unregulated fuels that inhibit the efficient use of such fuels."

Sincerely,

Matt Cota
Executive Director
Vermont Fuel Dealers Association (VFDA)

Vermont Fuel Dealers Association — 963 Paine Turnpike North, Berlin, VT 05602
802-230-4722 — info@vermontfuel.com — www.vermontfuel.com

Appendix B - Section 29 of Act 89, Statutory Mandate for the Report

Appendix C - Stakeholders and State Agencies that received August 29, 2013, memorandum

INTERESTED PERSONS

Ajith Rao	Regulatory Assistance Project
Allan Bullis	Common Sense Energy
Andrea Colnes	Energy Action Network
Andrew Boutin	Pellergy LLC
Baechle, Tim	International Business Machines
Bailey, Melissa	Vermont Public Power Supply Authority
Baker, Charlie	Chittenden County Regional Planning Commission
Bang-Jensen, Lars	Public Service Board
Barry Hulce	Efficiency Vermont
Behrns, Ronald	Department of Public Service
Bentley, Bruce	Green Mountain Power
Bill Root	GWR Engineering
Bishop, Ann	Public Service Board
Blair, Steve	International Business Machines
Bob Hedden	Hedden Co./Oilheat Associates
Bradley, Jo	Vermont Economic Development Authority
Bret Hamilton	Shelter Analytics, LLC
Brian Fisher	Vermont Gas Systems
Buckley, Tom	Burlington Electric Department
Burns, Christopher	Burlington Electric Department
Burt, Ellen	Town of Stowe Electric Department
Callnan, Brian	Vermont Public Power Supply Authority
Camisa, Tim	VOR, Inc.
Cater, Jim	Green Mountain Power
Cawley, David	Vermont Energy Investment Corporation
Chris D'Elia	Vermont Bankers Association, Inc.
Chris Granda	Grasteua Associates
Chris West	Eco Houses of Vermont
Chuck Reiss	Reiss Building and Renovation
Clerk	Public Service Board
Cohen, Andrea	Vermont Businesses for Social Responsibility
Cotterill, Brian	Department of Public Service
Couture, Ken	Green Mountain Power
Craig Peltier	Vermont Housing and Conservation Board
Cutler, Dave	St. Michael's College
Davis, Catherine Z.	Lake Champlain Regional Chamber of Commerce
Deb Baslow	Vermont Buildings and General Services
DeVarney, Ed	Gas-Watt Energy
Diamond, Joshua R., Esq.	Diamond and Robinson, P.C.
Diana Chace	Conservation Law Foundation
Doyle, Janet	International Business Machines
Driscoll, William	Associated Industries of Vermont
Dudley, Jay	Public Service Board
Dworkin, Michael H.	Vermont Institute for Energy and the Environment
Ed Delhagen	Department of Public Service
Eileen Simollardes	Vermont Gas Systems

Elias, Jeanne, Esq.	Department of Public Service
Ellis, William F., Esq.	Burlington Electric Department
Emerson, Elijah D., Esq.	Green Mountain Power
Emily Levin	Vermont Energy Investment Corporation
Errecart, Joyce	
Fay, Jim	Champlain Water District
Flagg, Andrew	Public Service Board
Foley, Sean	Department of Public Service
Frankel, Deena	Vermont Electric Power Company
French, Edward B., Esq.	Stackpole and French Law Offices
Gabrielle Stebbins	Renewable Energy Vermont
Gaye Symington	High Meadows Fund
Geoff Wilcox	Vermont Office of Economic Opportunity
Gram, Dave	Associated Press
Grimason, Dave	Grimason Associates, LLC
Gulkis, Amelia	Ensave
Gus Seelig	Vermont Housing and Conservation Board
Hakstian, Carole	Vermont Energy Investment Corporation
Hallquist, David	Vermont Electric Cooperative
Harald Schmidtke	SEVCA
Harrington, Scott	Vermont Gas Systems
Hopkins, Asa	Department of Public Service
Howland, Robert	
Huber, Jeffrey	GDS Associates
Hulbert, John	PBM Nutritionals
Jagielski, Thom	International Business Machines
Jay Pilliod	Efficiency Vermont
Jeremy King	Vermont Gas Systems
Jim Merriam	Efficiency Vermont
John Lincoln	Burlington Electric Department
John Quinney	Energy Co-op of Vermont
Johnstone, Scott	Vermont Energy Investment Corporation
Joseph Bergeron	Association of Vermont Credit Unions
Karen Horne	Vermont Gas Systems
Kathy Beyer	Housing Vermont
Keenan, Kathy	Vermont House Representative
Klein, Tony	Vermont House Representative
Knauer, Thomas	Public Service Board
Krolewski, Mary Jo	Public Service Board
Launder, Kelly	Department of Public Service
Leban, Donna	Light/Space/Design
Leriche, Lucy	Vermont Agency of Commerce and Community Development
Levine, Sandra E., Esq.	Conservation Law Foundation
Ludy Biddle	NeighborWorks of Western Vermont
Lyons, Alyx	Vermont Energy Investment Corporation
Maddox, Doug	
Malcolm Gray	Montpelier Construction, LLC

Malmgren, Ingrid	Vermont Energy Investment Corporation
Martin, Dave	Green Mountain Power
Massie, James	Vermont Energy Investment Corporation
Matt Cota	Vermont Fuel Dealers Association
Metz, Craig	Ensave
Miller, Johanna	Vermont Natural Resources Council
Miller, Lawrence	Vermont Agency of Commerce and Community Development
Mongeon-Evans, Brian	Utility Services
Moore, Pamela	Village of Jacksonville Electric Company
Moser, Mike	Middlebury College
Mullett, David, Esq.	Vermont Public Power Supply Authority
Murphy, Barry	Department of Public Service
Myotte, Craig	Morrisville Water and Light
Necrason, Adam	Sirotkin and Necrason PLC
Neil Curtis	Efficiency Vermont
Norm Etkind	School Energy Management Program
Orost, Katie L.	Vermont Electric Cooperative
Pallotta, James	Village of Ludlow Electric Light Department
Paul Zabriskie	Central Vermont Community Action Council
Phil Cecchini	Central Vermont Community Action Council
Piper, William B., Esq.	Primmer Piper Eggleston and Cramer PC
Pittsley, Susan	Department of Public Service
Plunkett, John	Green Energy Economics Group
Poor, Walter	Department of Public Service
Powell, Bill	Washington Electric Cooperative
Pritchard, Kim	Vermont Electric Power Company
Rawls, Tom	THR Associates
Ray Keller	Vermont Gas Systems
Reed, Doug	Village of Northfield Electric Department
Richard Faesy	Energy Futures Group
Richardson, Cort	Council of State Governments
Riehle, Parker	Vermont Ski Areas Association
Rosenblum, Dan	
Sarah Simonds	High Meadows Fund
Schwiebert, Edward V., Esq.	Kenlan Schwiebert Facey and Goss PC
Sciarrotta, S. Mark, Esq.	Vermont Electric Power Company
Scott Campbell	Central Vermont Community Action Council
Scott, Albert	GDS Associates
Silver, Morris L., Esq.	Law Offices of Morris L. Silver, Esq.
Slote, Stu	Navigant Consulting
Smith, Dan	Northeast Dairy Compact Commission
Smith, Doug	Green Mountain Power
Spellman, Richard	GDS Associates
Spencer, John	VEPP Inc.
St. Hilaire, John	Vermont Gas Systems
Steinhurst, William	Synapse Energy Economics
Sullivan, Mike	Town of Hardwick Electric Department

Taormina, Philene	AARP
Thomas Anderson	
Thomas Wood	
Tom Thacker	BROC
Turgeon, Al	University of Vermont
Twigg, George	Vermont Energy Investment Corporation
Volz, James	Public Service Board
Walker, Matthew	Department of Public Service
Walsh, Ben	Vermont Public Interest Research Group
Ward Smyth	Turtle Creek Builders
Wayne Nelson	LN Consulting
Weigel, Brent	Cx Associates
Wescom, Karen	Village of Hyde Park Electric Department
Wickenden, Michael J.	Vermont Energy Investment Corporation
Wolbach, Rich	University of Vermont
Wood, Jennifer	Champlain Valley Office of Economic Opportunity
Wyatt, Francis	Green Energy Economics Group
Yanulavich, Jake	Burlington Electric Department

STATE AGENCIES

Vermont Agency of Agriculture, Food and Markets
Vermont Department of Buildings and General Services
Vermont Department of Children and Families
Vermont Agency of Commerce and Community Development
Vermont Economic Development Authority
Vermont Office of Economic Opportunity
Vermont Department of Environmental Conservation
Vermont Housing and Conservation Board
Vermont State Housing Authority
Vermont Housing Finance Agency
Vermont Department of Taxes