



THERMAL EFFICIENCY TASK FORCE – HOW TO PAY FOR IT?

VECAN CONFERENCE

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Overview

1. Current Situation in Vermont
2. Financing Options
3. Funding Options
 - ▣ Draft Funding Principles
 - ▣ Quantification of Each Funding Option
4. The Benefits – Economic Impacts
5. Q&A

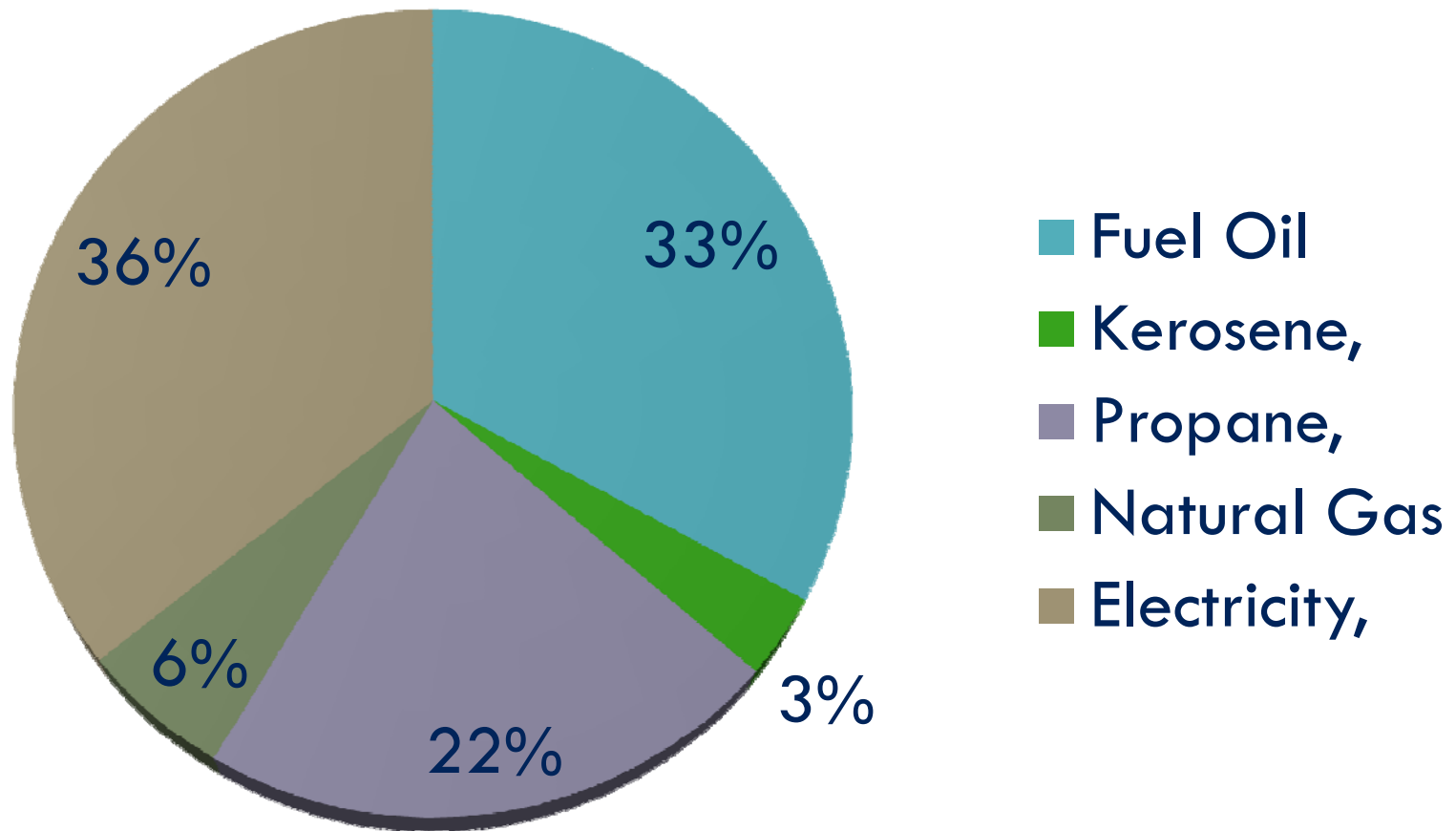
Residential Energy Sales in VT

3

Fuel	Residential Sales	Percent
Fuel Oil	\$ 276,410,999	33%
Kerosene	\$ 27,672,035	3%
Propane	\$ 184,213,974	22%
Natural Gas	\$ 47,740,000	6%
Electricity	\$ 299,531,067	36%
Wood	?	
Pellets	?	
Total	\$ 835,568,074	100%

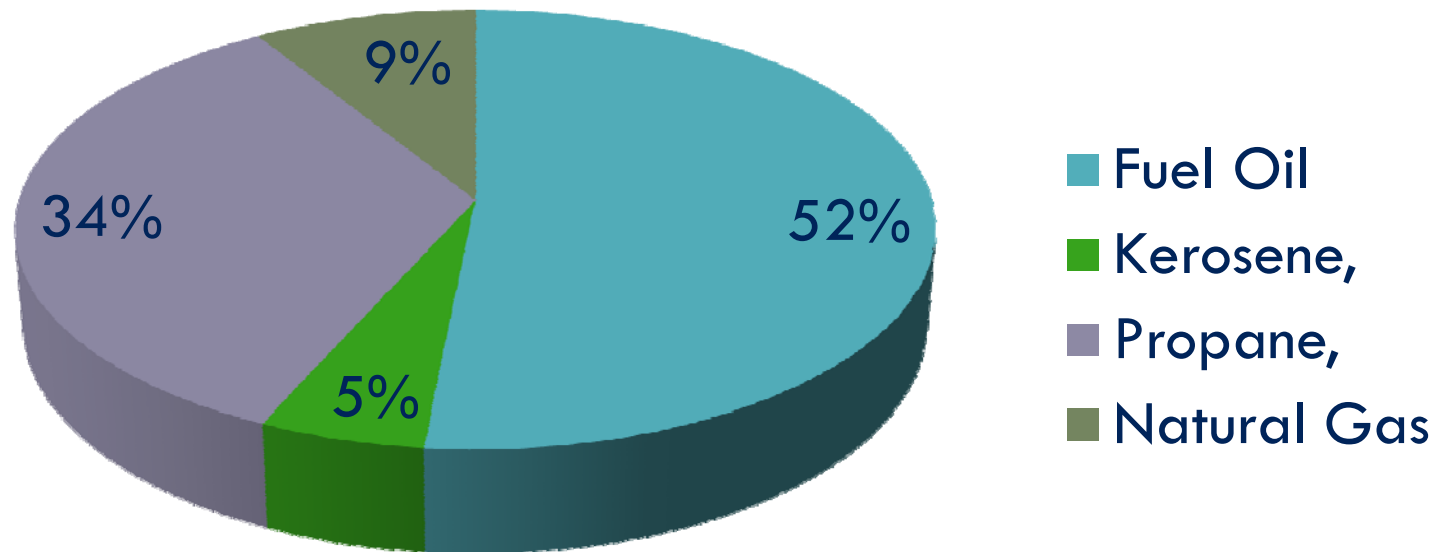
Residential Energy Sales in VT

4



Residential Non-Electric Sales

5



Current Thermal Efficiency Programs

6

Sector	Amount
Residential – Market	\$3,600,000
Residential – Low Income	\$5,00,000
Multifamily	\$2,310,000
Commercial	\$1,560,000
Total	\$12,470,000

Cost to Meet the Goals

7

Category	2014	2020
Participant costs (financed and self-funded)	\$ 72,000,000	\$251,000,000
Currently available program funding	\$ 12,500,000	\$13,000,000
Incremental funding needed	\$ 26,000,000	\$45,000,000
Total	\$ 111,000,000	\$309,000,000

8

So, where do we get the funds?

Financing Needs

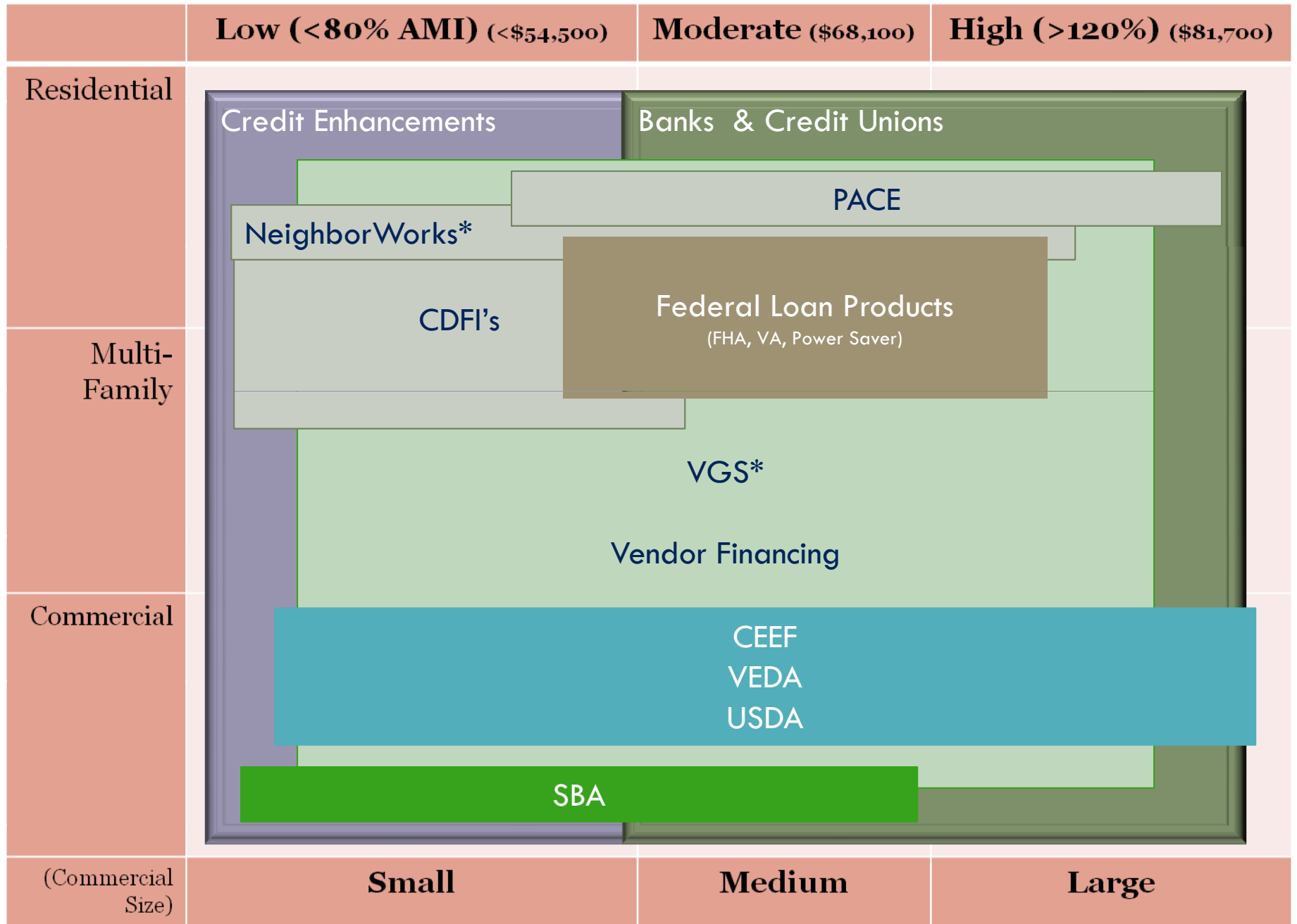
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- 2014: \$72 million

Ramping up to...

- 2020: \$251 million

Financing Options for Thermal Efficiency



* Vermont Gas Systems and NeighborWorks of Western Vermont service only limited portions of the state

DRAFT v2	Low (<80% AMI) (<\$54,500)	Moderate (\$68,100)	High (>120% AMI) (>\$81,700)
Residential	<ul style="list-style-type: none"> • Subsidized Loans (e.g., IRBD) • Secured Loans • PACE Program Loans • CDFI Loans • Vendor Financing (may be limited) 	<ul style="list-style-type: none"> • Subsidized Loans (e.g., IRBD) • Secured & Unsecured Conventional Loans • Home Mortgages • Energy Specific Loans • PACE Program Loans • Energy Efficient Mortgages • Power Saver Loans • CDFI Loans • Vendor Financing 	<ul style="list-style-type: none"> • Subsidized Loans (e.g., IRBD) • Secured & Unsecured Conventional Loans • Home Mortgages • Energy Specific Loans • PACE Program Loans • Energy Efficient Mortgages • Power Saver Loans • Vendor Financing
Multi-Family (2+ units; Owners of rental properties but not renters)	<ul style="list-style-type: none"> • Subsidized Loans (e.g., IRBD) • Secured Loans • CDFI Loans • Vendor Financing (may be limited) • Municipal Revolving Loan Funds 	<ul style="list-style-type: none"> • Subsidized Loans (e.g., IRBD) • Secured & Unsecured Conventional Loans • Energy Specific Loans • Energy Efficient Mortgages • Power Saver Loans • Municipal Revolving Loan Funds • CDFI Loans • Vendor Financing • Municipal Revolving Loan Funds 	<ul style="list-style-type: none"> • Subsidized Loans (e.g., IRBD) • Secured & Unsecured Conventional Loans • Energy Specific Loans • Energy Efficient Mortgages • Power Saver Loans • Municipal Revolving Loan Funds • CDFI Loans • Vendor Financing • Municipal Revolving Loan Funds
Commercial	<ul style="list-style-type: none"> • Subsidized Loans (e.g., IRBD) • Commercial Loans • VEDA Loans & Guarantees • USDA Loan Guarantee Program • CDFI Loans • SBA Loan Guarantee Program • Vendor Financing • Leasing • Municipal Revolving Loan Funds 	<ul style="list-style-type: none"> • Commercial Loans • VEDA Loans & Guarantees • USDA Loan Guarantee Program • CDFI Loans • SBA Loan Guarantee Program • Vendor Financing • Leasing • Municipal Revolving Loan Funds 	<ul style="list-style-type: none"> • Commercial Loans • VEDA Loans & Guarantees • USDA Loan Guarantee Program • Energy Service Companies • Vendor Financing • Leasing • Municipal Revolving Loan Funds • Private Capital Markets (e.g., tax equity, bonding)
(Commercial Size)	Small	Medium	Large

12

Funding

- Needs
- Principles
- Options

Funding Needs

13

- 2014: \$26 million

Ramping up to...

- 2020: \$45 million



Draft Funding Principles

Draft Principles - 1

- a) Funding is robust and sustainable.
- b) Funding provided is sufficient to meet the state's mandated goals.
- c) Funding levels are also dynamic and ramp up and down over time as needed.
- d) The level of funding balances short-term costs with the benefits of providing long-term affordability to all Vermonters, particularly those families struggling to make ends meet.
- e) Funding source, like program delivery, is equitable across fuels and by customer classes (residential, commercial, etc.); cross-subsidization between fuels and customer classes is minimized; equitable treatment for in-state and out-of-state fuel providers is addressed.

Draft Principles - 2

- f) Mechanisms that are administratively efficient to create and implement, pre-existing, simple, and auditable are preferred.
- g) The collection mechanism, sources, and uses of public funding are transparent.
- h) Price signals should support state energy policy goals.
- i) Support the vibrancy of Vermont communities and competitiveness of Vermont businesses.
- j) Public funding is used in ways that leverage private sources of capital where possible, in order to get the best return on each public dollar invested.
- k) Public funding is used only to the extent that it is needed to mobilize capital and meet private market shortcomings.
- l) Mechanisms will be put in place to minimize negative financial impacts on low income Vermonters



Funding Options

Funding Options

□ High Preference

- Energy Efficiency Excise Tax
- Tax Credit

□ Medium Preference

- Gross Receipts Tax (GRT) Increase
- Remove Sales Tax Exemption
- Ceiling Mechanism
- Energy Efficiency Resource Standard (EERS):

□ Low Preference

- General Fund
- Federal Funding

Current EE Funding

Source	\$	To
Natural Gas	\$2,200,000	VGS
Electricity	\$40,000,000*	EVT
Regional Greenhouse Gas Initiative	\$1,500,000	EVT
Forward Capacity Market	\$3,700,000	EVT
Gross Receipts Tax	\$7,900,000	LI WAP & LIHEAP
Clean Energy Development Fund	\$0	RERC/VEIC
GMP CEED Fund	\$21,000,000*	TBD

* Most funding directed to electrical, not thermal efficiency

20

High Priority

Energy Efficiency Excise Tax

21

- An excise tax is an “indirect tax on listed items”
 - Fuel oil
 - Propane
 - Kerosene
 - Natural Gas
- Not including electricity; already covered
- Small difference in terms of whether based on Btus or CO₂
- Exempt biomass
- “Site” not “source” based

EE Excise Tax – Btu-Based

22

Fuel	Unit	Tax/Unit		
		To Raise \$10,000,000	To Raise \$20,000,000	To Raise \$30,000,000
Fuel Oil	gallon	\$0.030	\$0.060	\$0.090
Kerosene	gallon	\$0.030	\$0.060	\$0.089
Propane	gallon	\$0.020	\$0.040	\$0.060
Natural Gas	therm	\$0.022	\$0.044	\$0.065

EE Excise Tax – CO₂-Based

23

Fuel	Unit	Tax/Unit		
		To Raise \$10,000,000	To Raise \$20,000,000	To Raise \$30,000,000
Fuel Oil	gallon	\$0.033	\$0.065	\$0.098
Kerosene	gallon	\$0.032	\$0.064	\$0.096
Propane	gallon	\$0.019	\$0.037	\$0.056
Natural Gas	therm	\$0.017	\$0.034	\$0.051

EE Tax Credits

24

- Bring private investment directly into projects or programs that support the EE goals
- Supplement other successful Vermont tax credit programs
 - ▣ Housing Tax Credit
 - ▣ Downtown Tax Credit
 - ▣ Federal tax credit sources
 - ▣ Low Income Housing Tax Credit
 - ▣ Reinvestment (Historic) Tax Credit
- A vehicle to support deeper energy retrofits and
- Biomass, solar and other renewables installations

25

Medium Priority

Gross Receipts Tax

Amount	Raises
0.50%	\$ 7,900,000
1%	\$ 15,800,000
1.5%	\$ 23,700,000
2%	\$ 31,600,000

- Any changes to fund non-low income TETF efforts would need to be determined.
- Potential resistance to opening this discussion and possibly jeopardizing the primary low income funding source.
- Lack of transparency
- Lack of equity (because a significant share of the GRT is collected from sales of electricity)

Remove Sales Tax Exemption

Fuel	Total Residential Sales	6% Sales Tax
Fuel Oil	\$ 276,410,999	\$ 16,584,659.91
Kerosene	\$ 27,672,035	\$ 1,660,322.11
Propane	\$ 184,213,974	\$ 11,052,838.43
Natural Gas	\$ 47,740,000	\$ 2,864,400.00
Electricity	\$ 299,531,067	\$ 17,971,864.01

- Without electricity: about \$30 million
- Exemption for electricity, fuel oil, natural gas, propane and other fuels sold for use in manufacturing – \$13.7 million
- Funds end up in General Fund and would need annual allocation

“Ceiling Mechanism”

28

- Only impose this “excise-type” tax when fuel prices drop below a certain “ceiling” rate, and the increment is then captured
- For example: if the ceiling is set at \$4.25/gallon and market prices go down to \$4.00/gallon, then the customer continues to pay \$4.25, with the \$0.25 increment going to efficiency.
- Only works if fuel prices drop
- Revenues in any given year would be unpredictable and variable, which would make long-term planning and implementation very challenging

EE Resource Standard

29

- Energy efficiency obligation on all suppliers of unregulated fuels
- Each fuel dealer would be required to achieve savings of X% per year (1% or 1.5% or some other required amount, with some ramping up over time) of their previous year's sales (weather normalized).
- This mechanism would give fuel dealers control and a means to change their business model
- Those that don't like it or don't want to get into the efficiency business (even through partnerships) could opt out of acquiring those savings by paying a fixed \$ per MMBtu of obligation to another entity to essentially acquire it for them.
- Needs some more thought and development

30

Low Priority

Low Priority

31

- **General Fund:** Include funding in the annual budget as part of the regular legislative appropriation process.
 - ▣ Would not provide a reliable or sustainable source of funding.
- **Federal Funding:** Ask the federal government to fund Vermont's TETF efforts.
 - ▣ Would not provide a reliable or sustainable source of funding.

32

What about the benefits?

Optimal Energy Study

33

- Economic Impact of EE Investment in Vermont
 - ▣ August 2011 report

Table 2: Leverage of Program Spending

Program Spending Metric	Electric	HPF	All
Total Budget (million, 2011\$)	\$39.1	\$5.3	\$44.4
Job-years per million	46	16	43
\$GSP/\$Budget	5.5	0.9	5.0
\$Personal Income/\$Budget	2.5	0.4	2.2
\$Energy Savings/\$Budget ¹⁰	6.6	2.7	6.1

34

Q&A

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