# THERMAL EFFICIENCY TASK FORCE – HOW TO PAY FOR IT?

## VECAN CONFERENCE

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Richard Faesy, Energy Futures Group

# 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

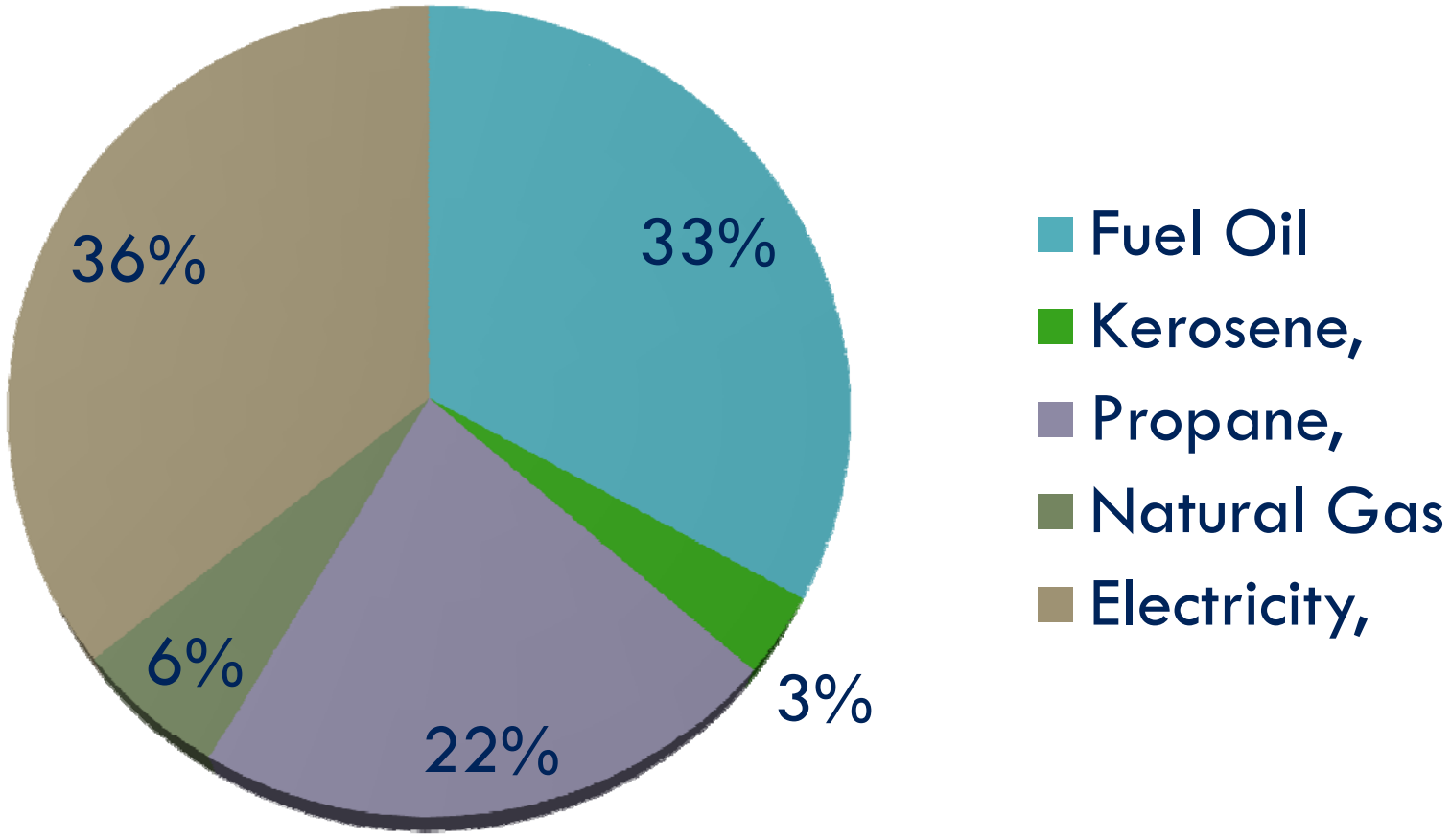
# Residential Energy Sales in VT



| 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% |

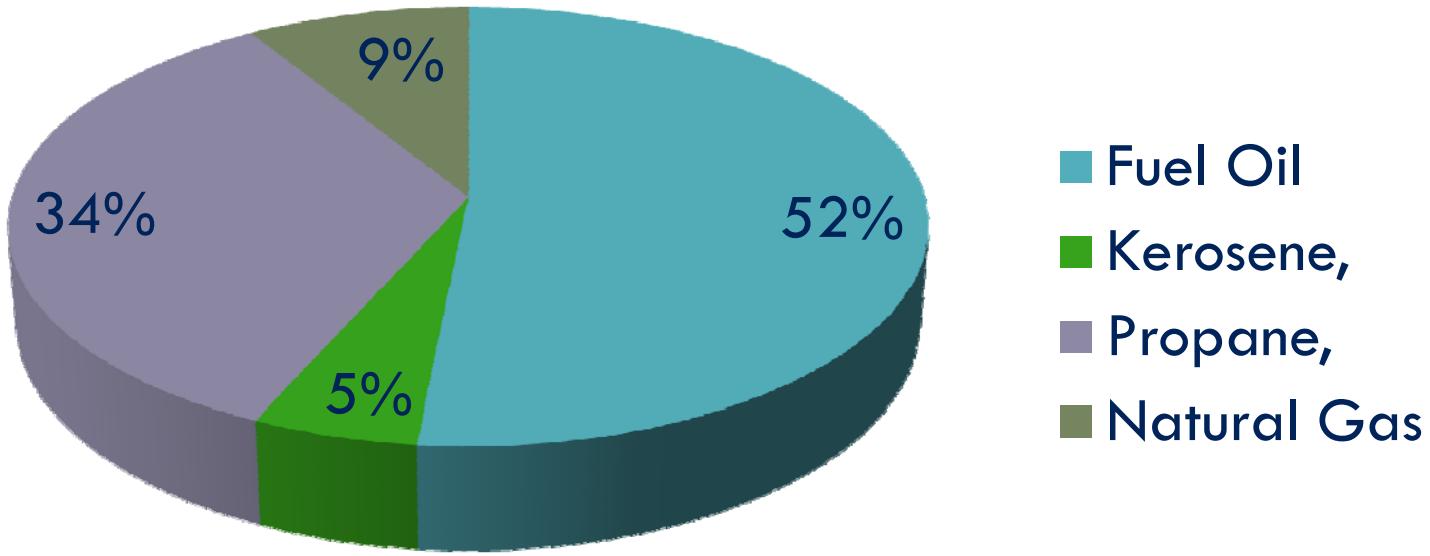
# Residential Energy Sales in VT





# Residential Non-Electric Sales





# Current Thermal Efficiency Programs



| 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



| 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** |

# So, where do we get the funds?

# Financing Needs

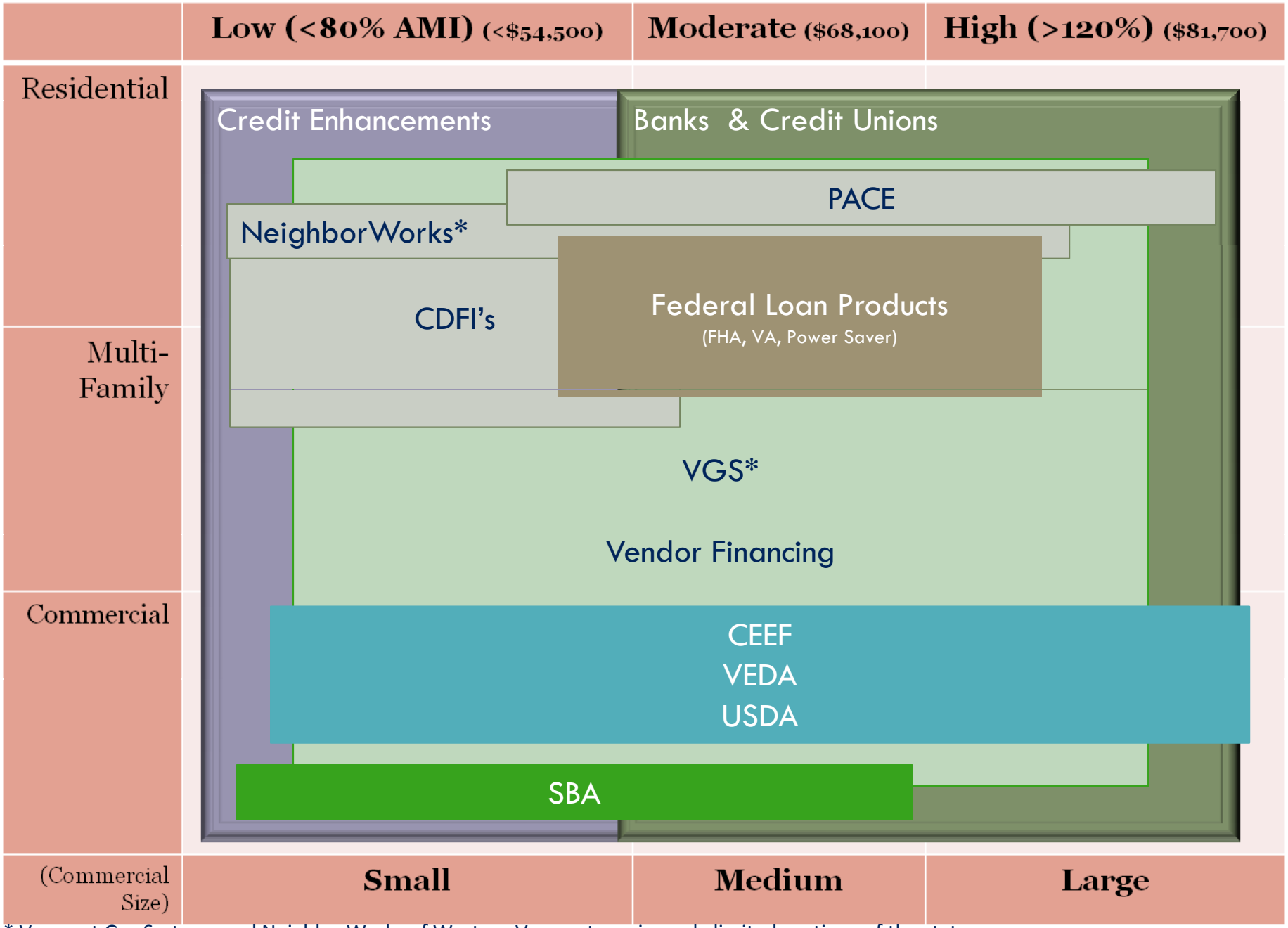


- 2014: $72 million

  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 | • Subsidized Loans (e.g., IRBD)<br>• Secured Loans<br>• PACE Program Loans<br>• CDFI Loans<br>• Vendor Financing (may be limited)<br>• Credit Enhancements (e.g., LLRs) | • Subsidized Loans (e.g., IRBD)<br>• Secured & Unsecured Conventional Loans<br>• Home Mortgages<br>•Energy Specific Loans<br>• PACE Program Loans<br>• Energy Efficient Mortgages<br>• Power Saver Loans<br>• CDFI Loans<br>•Vendor Financing | • Subsidized Loans (e.g., IRBD)<br>• Secured & Unsecured Conventional Loans<br>• Home Mortgages<br>• Energy Specific Loans<br>• PACE Program Loans<br>• Energy Efficient Mortgages<br>• Power Saver Loans<br>• Vendor Financing |
| Multi-Family (2+ units; Owners of rental properties but not renters) | • Subsidized Loans (e.g., IRBD)<br>• Secured Loans<br>• CDFI Loans<br>• Vendor Financing (may be limited)<br>• Municipal Revolving Loan Funds<br>• Credit Enhancements (e.g., LLRs) | • Subsidized Loans (e.g., IRBD)<br>•Secured & Unsecured Conventional Loans<br>• Energy Specific Loans<br>• Energy Efficient Mortgages<br>• Power Saver Loans<br>• Municipal Revolving Loan Funds<br>• CDFI Loans<br>• Vendor Financing<br>• Municipal Revolving Loan Funds | • Subsidized Loans (e.g., IRBD)<br>• Secured & Unsecured Conventional Loans<br>• Energy Specific Loans<br>• Energy Efficient Mortgages<br>• Power Saver Loans<br>• Municipal Revolving Loan Funds<br>• CDFI Loans<br>• Vendor Financing<br>• Municipal Revolving Loan Funds |
| Commercial | • Subsidized Loans (e.g., IRBD)<br>•Commercial Loans<br>• VEDA Loans & Guarantees<br>• USDA Loan Guarantee Program<br>• CDFI Loans<br>• SBA Loan Guarantee Program<br>• Vendor Financing<br>• Leasing<br>• Municipal Revolving Loan Funds | • Commercial Loans<br>• VEDA Loans & Guarantees<br>• USDA Loan Guarantee Program<br>• CDFI Loans<br>• SBA Loan Guarantee Program<br>• Vendor Financing<br>• Leasing<br>• Municipal Revolving Loan Funds | • Commercial Loans<br>• VEDA Loans & Guarantees<br>• USDA Loan Guarantee Program<br>• Energy Service Companies<br>• Vendor Financing<br>• Leasing<br>• Municipal Revolving Loan Funds<br>• Private Capital Markets (e.g., tax equity, bonding) |
| (Commercial Size) | **Small** | **Medium** | **Large** |

# Funding

- Needs
- Principles
- Options

# Funding Needs



- 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

# High Priority

# Energy Efficiency Excise Tax



- 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



| 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



| 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



- 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

# 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"



- 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



- 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

# Low Priority

# Low Priority



- **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.

# What about the benefits?

# Optimal Energy Study



- 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 |

# Q&A

Richard Faesy
Energy Futures Group
rfaesy@energyfuturesgroup.com
Phone: 802-482-5001
Cell: 802-355-9153