



# ENERGY AND ESSEX IN 2021:

## SCOPE, CHALLENGES, AND RECOMMENDATIONS



# OVERVIEW OF ENERGY COMMITTEE FUNCTIONS & GOALS



## TOWN OF ESSEX VERMONT

81 MAIN STREET, ESSEX JUNCTION, VERMONT 05452  
Fax: 878-1353 • E-mail: [manager@essex.org](mailto:manager@essex.org) • Website: [www.essex.org](http://www.essex.org)

### TOWN OF ESSEX

#### ENERGY COMMITTEE CHARTER

The Town of Essex recognizes that the use and cost of energy is a substantial and increasing municipal expense. The Town acknowledges its ability to provide leadership to its citizens in the conservation, efficiency and conversion to renewable, sustainable sources of energy. Therefore:

1) Pursuant to Section 209(b)(1) of the Charter of the Town of Essex, the Board of Selectmen hereby creates an Energy Committee with the following powers and duties:

- a) To track municipal energy use and recommend to the Selectboard targets and actions for decreasing energy use; and
- b) Research and recommend to the Selectboard opportunities to utilize renewable energy sources and increase the efficient use of energy within town operations; and
- c) Research and recommend to the Selectboard funding options for energy efficiency and renewable energy projects; and
- d) Develop and manage energy efficiency educational programs; and
- e) Create annual reports on energy projects and opportunities.
- f) Assist other Town committees and commissions in areas of related concern, including, but not limited to, the Energy section of the Town Plan.

2) The committee may request appropriations for operating expenses through the Town budget. The committee may request staff support through the Town Manager.

3) The committee may request grant funding, subject to Selectboard approval, to carry out its duties.

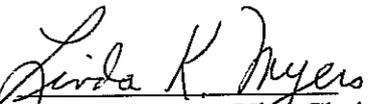
4) The committee shall consist of seven members. The terms of committee members shall be for three years, provided that in creating the first committee, three appointments shall be for one-year terms, two appointments shall be for two-year terms and two appointments shall be for three-year terms.

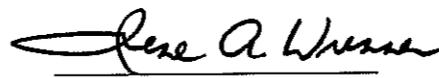
5) The committee shall not be a formal party or representative of the municipality in any venue without prior approval of the Town Manager.

6) At its organizational meeting, the committee shall elect a chairperson, vice-chairperson, and secretary and shall adopt such rules, as it deems necessary for the performance of its functions.

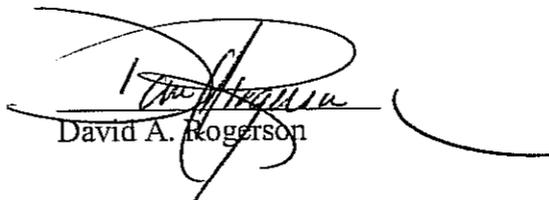
Approved this 19<sup>th</sup> day of May 2008 by the Essex Board of Selectmen.

  
Alan L. Nye, Chair

  
Linda K. Myers, Vice Chair

  
Irene A. Wrenner, Clerk

  
Max G. Levy

  
David A. Rogerson

## Essex Community Enhanced Energy Plan



Prepared by Chittenden County Regional Planning Commission, in coordination with Town and Village Community Development staff, the Essex Energy Committee, the Village of Essex Planning Commission, and the Town of Essex Planning Commission, with support from the Vermont Department of Public Service.

June 7, 2019



### A. **Land Use Goal:**

Development patterns and building energy use that result in efficiency, GHG reductions.

### B. **Transportation Goal:**

Promote EV-based automobile use with increased availability of public transit, sidewalks, and multi-use trails to reduce transportation energy demand.

### C. **Thermal Goal:**

100% residential weatherization, 38% commercial / industrial weatherization, plus conservation, efficiency, and fuel switching.

### D. **Renewable Energy Goal:**

Minimum of 15MW of solar on existing rooftops and paved surfaces.

# I. TOM YANDOW PROJECTS: TOWN FIRE DEPARTMENT BUILDING



Upgraded lights and additional insulation as part of renovation:  
**RESULT:** reduction of utility bills by roughly 50%

---

# I. TOM YANDOW PROJECTS: MEMORIAL HALL WEATHERIZATION



Build upon improvements made: work with VGS on insulation  
Efficiency VT only providing \$2500 — more \$\$\$ needed.  
**POTENTIAL RESULT:** Better community space, less GHGs

---

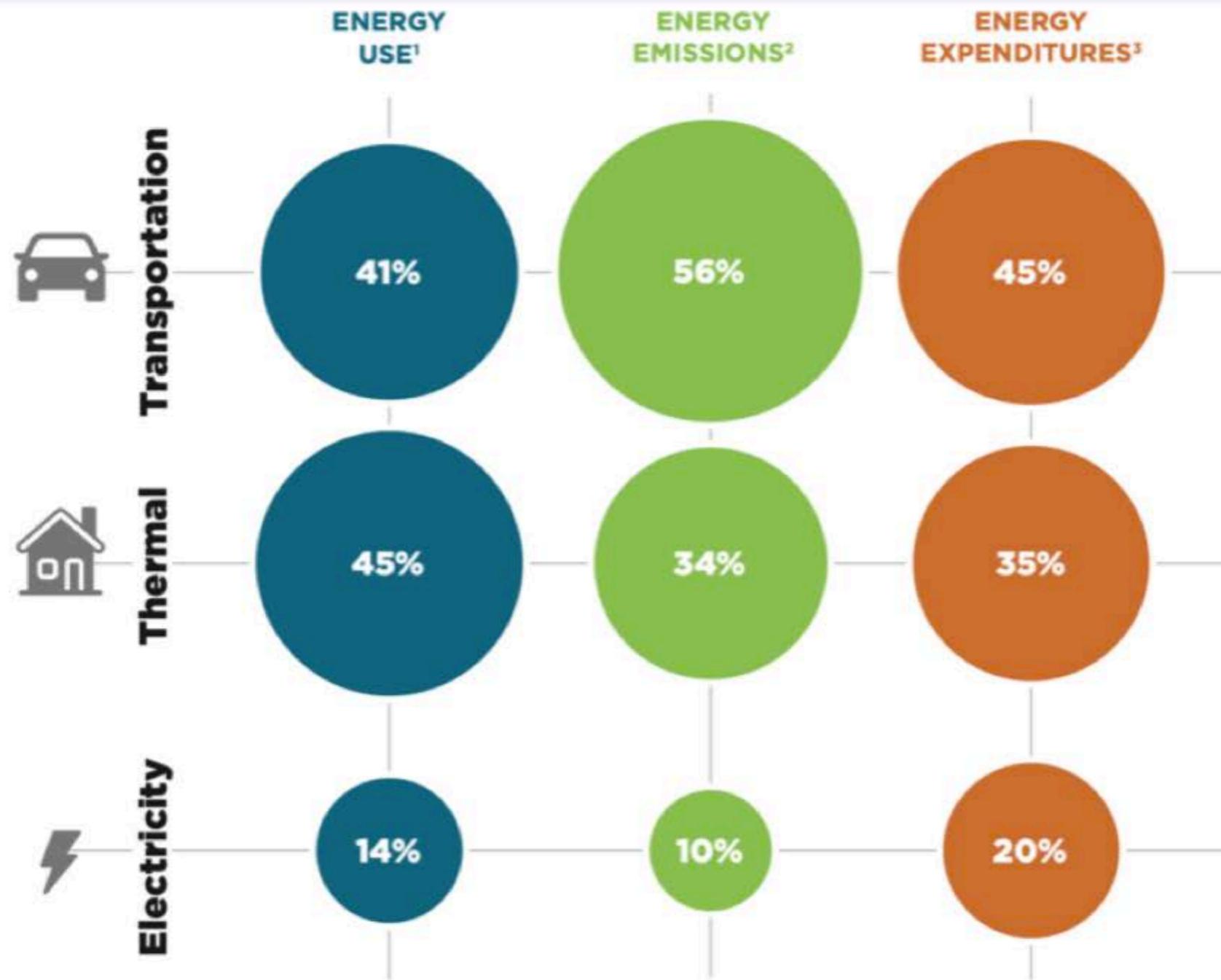
# I.TOM YANDOW PROJECTS: 81 MAIN STREET LIGHTING



Replacing fluorescent light fixtures with dimmable LED lighting  
**RESULT:** Less strain on the eyes, less \$\$\$, nicer workspace

---

## II. WEATHERIZATION / TRANSPORTATION EFFORTS IN ESSEX



**The Thermal Sector produces the second highest GHG emissions and is the highest energy user in Vermont**

From: DPS 2019 Annual Energy Report

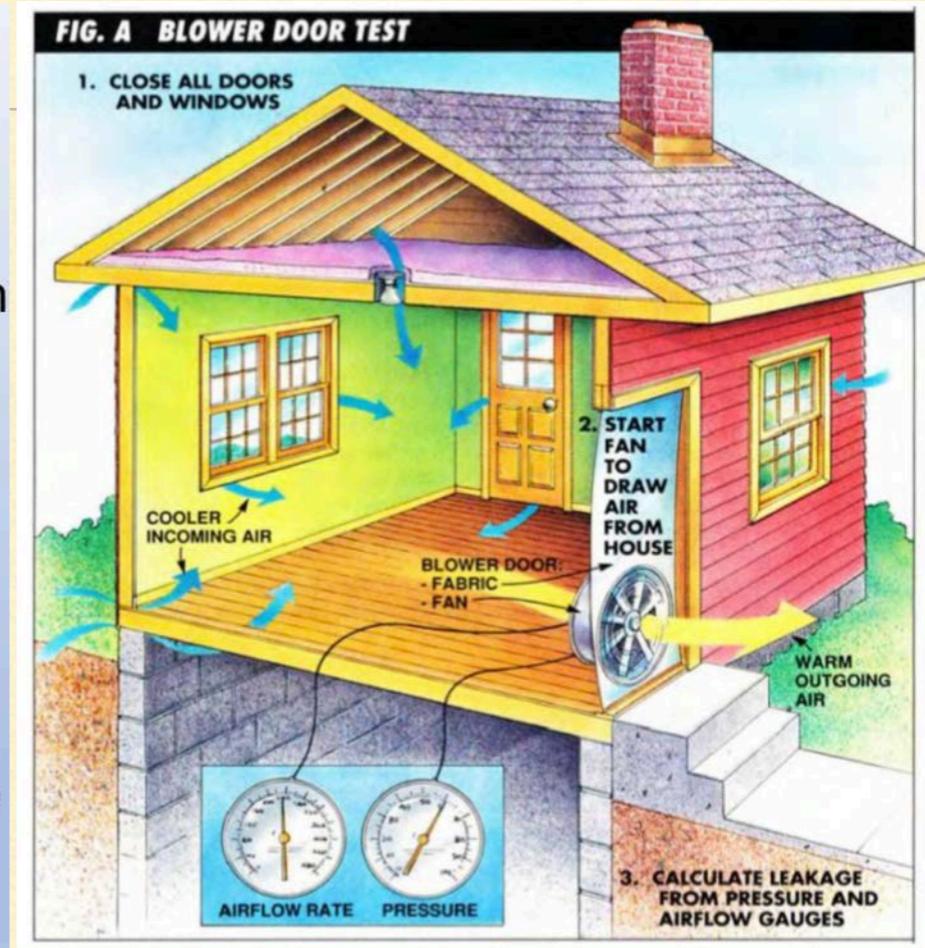
1. Thermal and transportation based on EIA 2017 site energy; electricity based on Department of Public Service 2018 site energy after accounting for RECs. 2. Vermont Agency of Natural Resources. January 2020. 3. Efficiency Vermont. October 2019. Vermont Energy Burden Report.

<https://www.essexvt.org/DocumentCenter/View/6383/Residential-Weatherization-in-Vermont-PP-presentation-on-03-10-2021>

## II. WEATHERIZATION EFFORTS IN ESSEX

### Results of EVT's weatherization projects in Essex in 2019

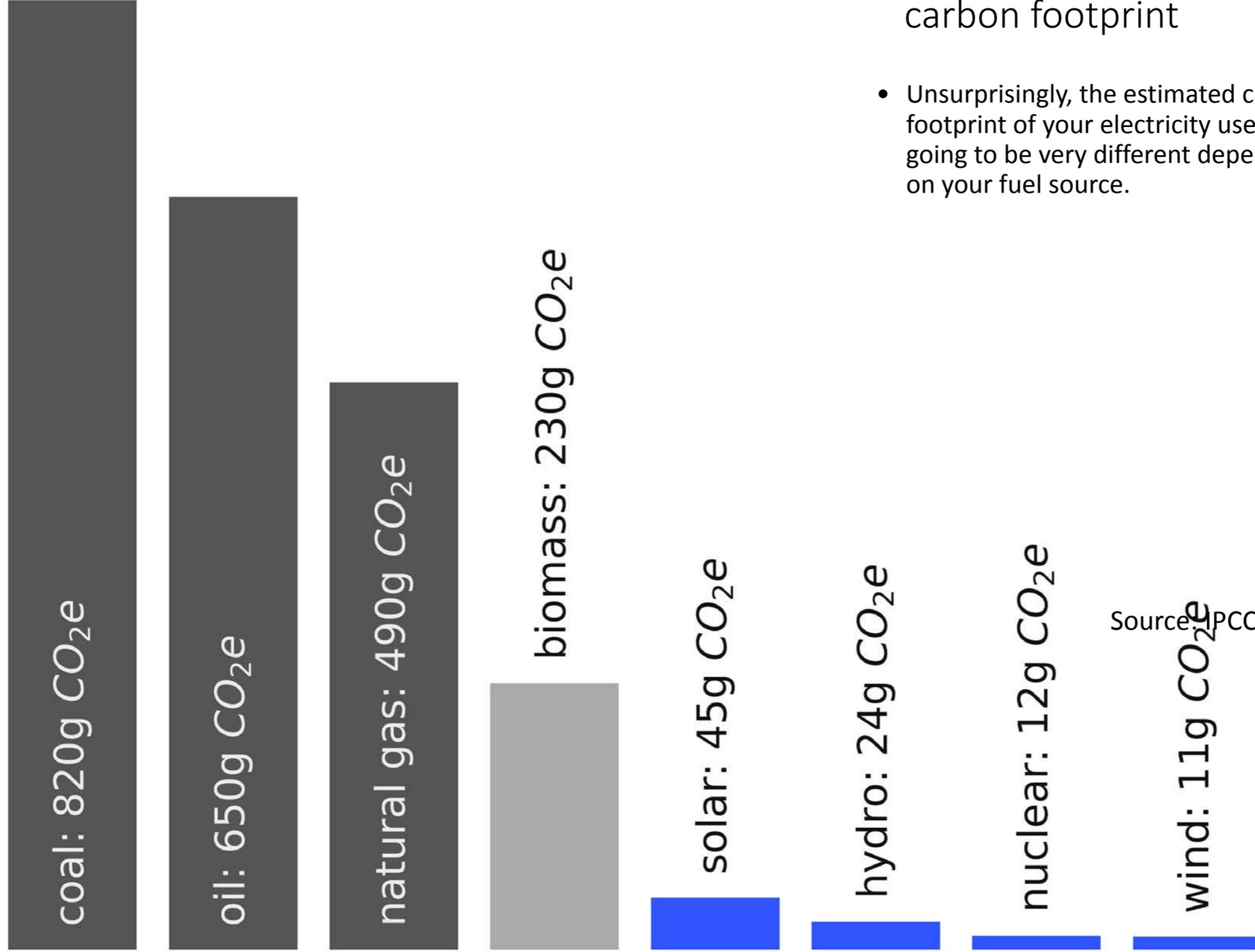
- Requested weatherization measures done and blower door test results from all homes that were “comprehensively” weatherized in 2019
- 15 homes (5 Button up and 10 non-Button up) were weatherized according to EVT's HPwES criteria
  - Audits with very weak requirements (blower door test was enough)
  - Work done satisfied requirements as long as 10% reduction in air leakage
  - Some homes had minimal shell work done
- Baseline (pre-work) blower door tests showed that 6 out of 15 homes were ‘tight’ or only slightly leaky before any work was done
  - 6 were moderately leaky
  - 3 were very leaky



From: 2020 BestLife52.com, "Lower Fuel Bills with a Blower Door Test", Aug. 8, 2020

<https://www.essexvt.org/DocumentCenter/View/6383/Residential-Weatherization-in-Vermont-PP-presentation-on-03-10-2021>

## II. WEATHERIZATION / TRANSPORTATION EFFORTS IN ESSEX

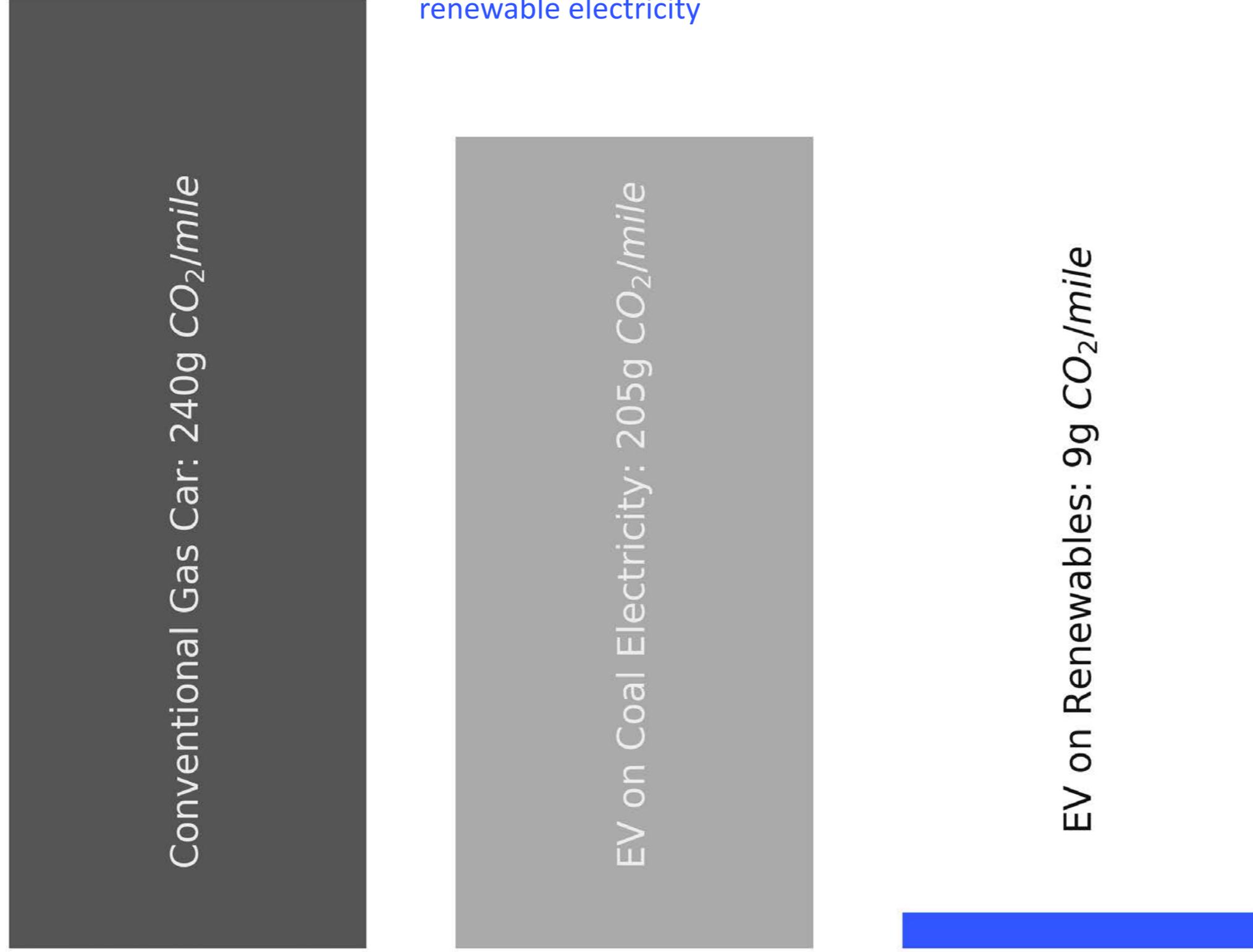


### Estimating your electric carbon footprint

- Unsurprisingly, the estimated carbon footprint of your electricity use is going to be very different depending on your fuel source.

Source: PCC 2014

## II. WEATHERIZATION / TRANSPORTATION EFFORTS IN ESSEX





# IV. THE CLIMATE EMERGENCY

- HEALTH & THE ENVIRONMENT
- ASBESTOS & LEAD IN BUILDINGS
- CHILDREN'S ENVIRONMENTAL HEALTH
- CLIMATE & HEALTH
- DRINKING WATER
- ENVIRONMENTAL CHEMICALS & POLLUTANTS
- ENVIRONMENTAL PUBLIC HEALTH TRACKING

QUICK LINKS

[COVID-19 VACCINE](#)

[GET HELP NOW](#)

[COVID-19 IN VERMONT](#)

SEARCH



@VTafterschool works with partners to ensure that quality summer opportunities are available to children and youth in every #Vermont community. Find information about summer camp and employment opportunities here: <https://t.co/blloqGa5JR> #covidsupportVT <https://t.co/zmd0zSaaku> [Read More](#)



HOME / HEALTH & THE ENVIRONMENT / CLIMATE & HEALTH /

## EXTREME WEATHER EVENTS AND HEALTH IMPACTS



Climate change is already affecting weather patterns in Vermont. Since 1965, annual precipitation has increased by 7 inches, and the number of days per year with precipitation of 1 inch or more has nearly doubled. These trends are expected to continue. Heavy rainfall events are expected to occur more often, which increases risk of flooding, damage to transportation infrastructure and buildings, water and crop contamination, wind damage, and power outages.

[LEARN MORE](#)





Where do I  
start?

# IV. THE CLIMATE EMERGENCY: TEACHING AND FACILITATING



# IV. THE CLIMATE EMERGENCY: TEACHING AND FACILITATING



## It pays to Button Up.

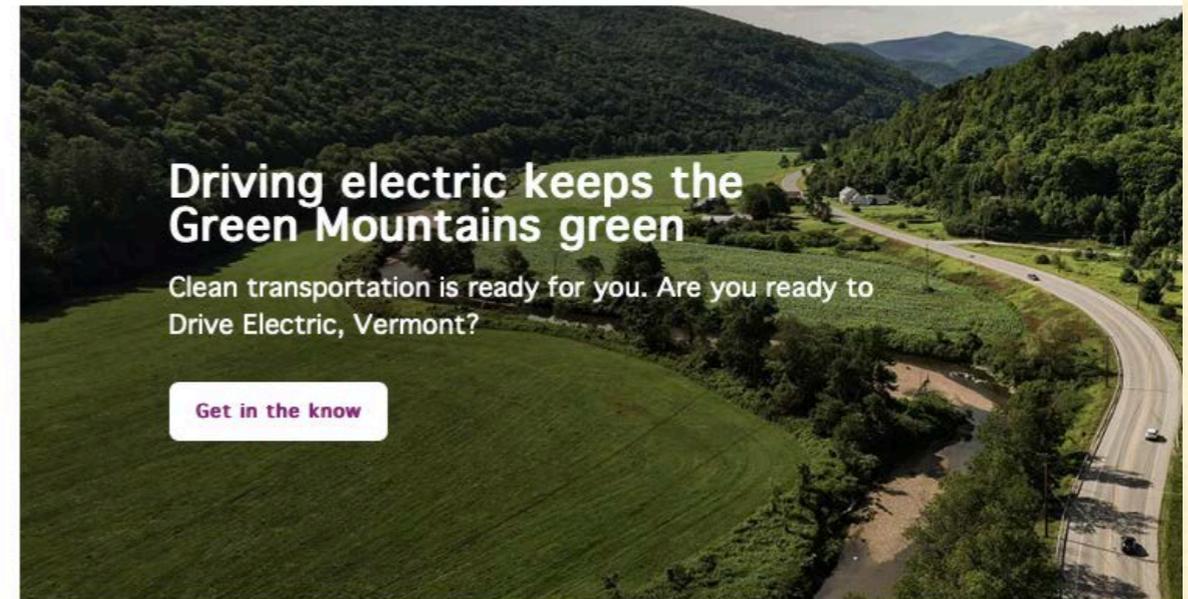
Take advantage of Efficiency Vermont offers to save even more:

- ▶ Get \$100 back for materials when you complete three qualifying DIY projects
- ▶ Up to \$3,000 off comprehensive weatherization projects
- ▶ Up to \$650 off ductless heat pumps
- ▶ Financing options starting at 0% interest
- ▶ Additional offers may be available from your electric utility



[Incentives](#) [About EVs](#) ▾

search...



# V. COMMITTEE REQUESTS FOR SELECTBOARD CONSIDERATION



## 1. Solar at Sand Hill Park & Bldg

4. Explore possible municipally owned sites for renewable energy generation, such as the Town landfill, rooftop solar on municipal buildings, and parking lot canopies on public lots.

## 2. Electric Vehicles and Electric Maintenance Tools

9. Lead by example by replacing the Town's vehicle fleet with electric or biodiesel fuel vehicles as fossil fuel-burning vehicles reach the end of their useful life.

## 3. Net-Metering Investigation for Use of 650 kW Capacity

### Renewable Energy

**Goal:** Generate 183,587 -325,830 MWh of new renewable energy by 2050.



# V. COMMITTEE REQUESTS FOR SELECTBOARD CONSIDERATION

---

## 4. Weatherization Promotion with CDO for 2021

3. Host education programs and collaborate with Efficiency Vermont, utilities, and energy vendors to encourage energy efficiency in existing residential and commercial buildings and to educate residents and businesses about heating pumps, advanced wood heating, geothermal heating, renewable natural gas, and other renewable technologies. Provide residents with information on heating assistance programs on an annual basis to make those in need aware of the programs.
- 

## 5. \*\*\* Energy Coordinator Position \*\*\*

1. Fund an Energy Coordinator position to develop energy implementation plans, coordinate efforts for both the Town and the Village and encourage residential and commercial energy conservation. As an initial step, make this goal a priority for the new Building Manager.
  1. Consider including the Vermont Building Energy Stretch Code to cover all development in the Zoning Regulations for the Town (including the ETC Next Plan) and in the Village of Essex Junction Land Development Code.
  2. Consider implementing a time of sale policy to ensure existing buildings, especially older rental housing, are in compliance with the State of Vermont Building Energy Code.

## 6. \*\*\* Annual Budget for Energy Committee \*\*\*

- 2) The committee may request appropriations for operating expenses through the Town budget. The committee may request staff support through the Town Manager.
- 3) The committee may request grant funding, subject to Selectboard approval, to carry out its duties.

6. Evaluate a process for incentivizing the creation of energy efficient buildings in the Essex Community.
7. Explore the idea of an energy fee or revolving loan fund that would fund public improvements to renewable energy infrastructure, such as rooftop solar and electric vehicle charging stations, with waivers for development that meets energy goals, such as installing electric vehicle charging infrastructure and providing ride-sharing options.

## 7. Regularize “Check-Ins” on Energy Plan Implementation with Committees

---

# THANK YOU!



## **ENERGY COMMITTEE MEMBERS:**

WILL DODGE, NATALEE BRAUN, DAVID SKOPIN, IRENE WRENNER, PHIL MARCH, MICHAEL FINK, DOTTIE BERGAND AHL