

ENERGY CO-OP OF VERMONT

Use less. Save more.

**Affordable Heat Act Testimony
February 3rd, 2023**

Who we are?



Experience

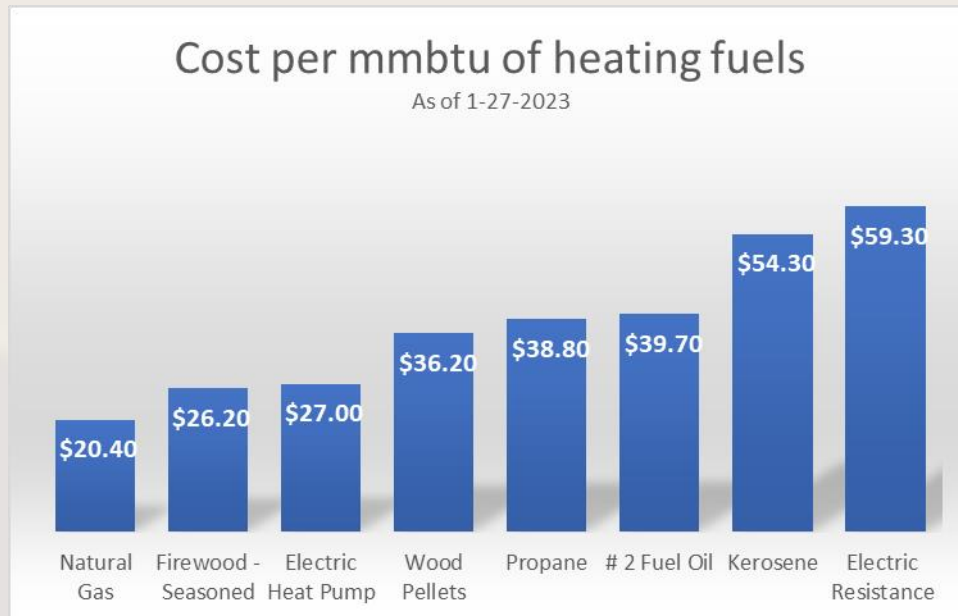


How will the Affordable Heat Act affect our company?

- HVAC and Weatherization Revenue is currently 45% of our total revenues. We expect with the right incentives, more homeowners will be adopting heat pump technology and weatherizing homes at a rapid pace. This will allow the Energy Co-op to continue to grow and expand our services in these areas if the workforce is available.
- With anticipated credits generated by the heat pump and weatherization business we hope to be able to discount the fossil fuel delivered to our customers.
- With the anticipated ramping down of carbon intensity values for clean biodiesel, our company will need to reevaluate if the up-front capital infrastructure costs as well as anticipated customer demand will make it feasible to offer this heating option.
- We do anticipate more accounting requirements and government oversight/registration which will add to our expenses.

How will the Affordable Heat Act affect our members and customers?

- Most early adopters will save money per mmbtu when heating their homes at today's fuel costs when switching to heat pumps or wood.



	Current Avg Price	Unit	Energy Per Unit Btus	Efficeicny	Cost Per MMBTU
Natural Gas	\$ 16.70	mcf	100,037	85%	\$ 20.40
Firewood - Seasoned	\$ 375.00	Cord	22,000,000	65.0%	\$ 26.20
Electric Heat Pump	\$ 20.24	KWH	3,413	240%	\$ 27.00
Wood Pellets	\$ 400.00	Ton	17,000,000	75.0%	\$ 36.20
Propane	\$ 3.03	Gallon	91,800	85%	\$ 38.80
# 2 Fuel Oil	\$ 4.40	Gallon	138,700	85%	\$ 39.70
Kerosene	\$ 5.86	Gallon	135,000	85%	\$ 54.30
Electric Resistance	\$ 20.24	KWH	3,413	100%	\$ 59.30

How will the Affordable Heat Act affect our members and customers?

- Heat Pumps adoption started 15 years ago by homeowners who valued the environmental benefits.
- Over the past 5 years, heat pump adoption has been led by homeowners looking for the air conditioning aspect. Especially through the “work from home” covid period.
- In the last year with the high price of fossil fuels, homeowners are looking to the financial benefit of heating with heat pumps.
- In all cases of early adoption, **the homeowner had the disposable income** to absorb the up-front costs of installing a heat pump or weatherizing their homes.

How will the Affordable Heat Act affect our members and customers?

Today's market for heat pumps and weatherization has slowed down due to:

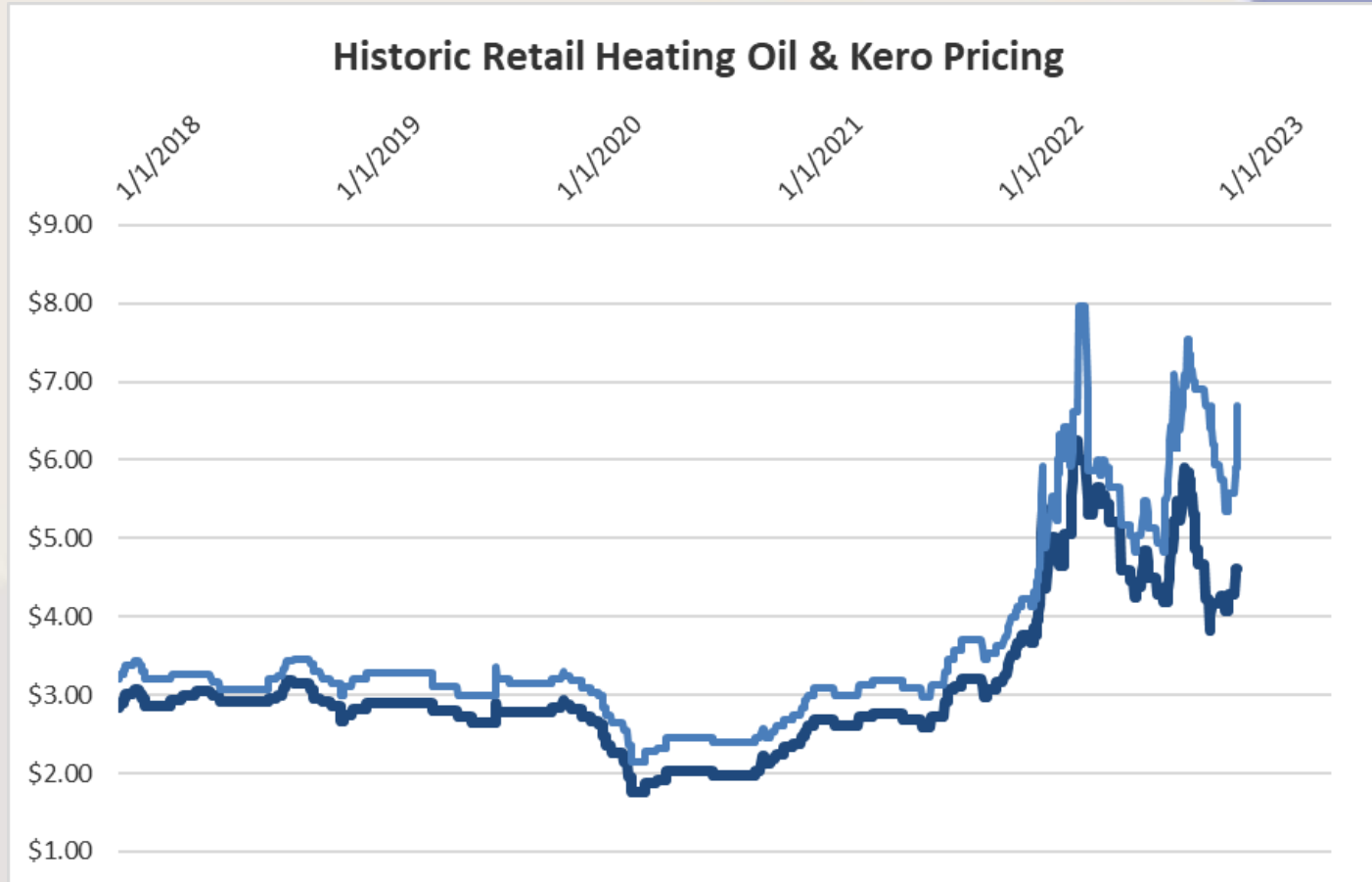
- Early adopters have already installed systems leaving smaller pools.
- Disposable income has shrunk considerably due to significant cost of living increases.
- The federal Inflation Reduction Act (IRA) has caused some buyers to delay purchasing until new rebates are understood and in place.

How will the Affordable Heat Act affect our members and customers?

Upfront costs of heat pumps and weatherizing a home is a significant obstacle for our customers.

- Heat Pumps - \$5,000 to \$20,000
- Weatherizing a home - \$5,500 to \$15,000
- Payback periods are long
- Disposable/Available income for these items are out of reach for most Vermont households.

Heating Oil & Kerosene Pricing



Average Fuel Pricing

2018-2021

Heating Oil	\$2.68
Kerosene	\$3.05

2022 to present

Heating Oil	\$4.78
Kerosene	\$5.81

% Change

Heating Oil	+ 44%
Kerosene	+ 48%

Points to Ponder

- Steep incentives and readily available financing for homeowners for heat pumps and weatherization is imperative to defeat the upfront cost obstacle.
- Delivery of incentives must be streamlined and made easy. Searching and compiling rebates from Federal, State, Tier III Programs, Efficiency Utilities, and other entities and then figuring out income thresholds or preexisting conditions is enough to make consumers give up.
- The Cold Climate heat pumps we install are tested to function down to an ambient temperature of -13 degrees. Vermont historically will reach this temperature multiple times in a typical winter. We never recommend removing an existing central heating system unless the homeowner has an alternative heat backup to the heat pumps.
- As fossil fuel demand is reduced, the cost per gallon to deliver the fuel to the homeowner will increase and be passed on to the customer thus adding to the .70 cent increased cost estimate.
- With the ratcheting down of the carbon intensity values for clean biodiesel this will most likely cause more supply issues on top of what is already a small pool of available supply. It appears that there will be a very limited future for delivered liquid fuels in Vermont.



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Questions??