# **S.** 65

An act relating to energy efficiency utility jurisdiction



### **DPS**

Alek Antczak

Director, Efficiency and Energy Resources



Support urgency of climate action

Agree EVT has role to play in GHG emissions reduction efforts

#### Intro

Do not support 65

increase electric rates

increase heating costs for most Vermonters



# Agenda

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Affordability

Weatherization vs. GHG Reductions

The Grid

**Energy Investments** 

Cost-Effectiveness

Questions



	Unclear what the limits are	CHS potential study identified program achievable potential ~\$1 billion annual
		VT all-in electric costs ~\$950 million annually
S 65	No language about affordability	23% for low income is a spending requirement only
	_	fuel switching + higher electric rates = increased energy burden
	De-prioritize weatherization	GHG reductions are achieved more cost effectively through liquid fuels and fuel switching



# Weatherization Participant benefits Making a home tighter and better insulated will reduce the energy bill Less GHG savings

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GHG	Participant costs  Just because you electrify your space heating doesn't mean your total energy bill goes down (even now, in many cases it goes up)
	More GHG savings



#### **EVT Measure List**

Portfolio	Measure	Lifetime CO2e	Lifetime CO2e
		(metric tons) per \$	Savings per
		of incentive	Measure
Electric	Refrigerant leak repair	1.188	1,188
Electric	Custom refrigeration	1.05	1,574
Thermal	Biogas Heating Fuel Switch	0.2664	3,996
Thermal	Industrial Process Heating Efficiency	0.26	1,755
Thermal	Automated Feed Pusher (agriculture)	0.1433	1,433
Thermal	Fuel switch- space heater- wood pellet	0.1319	56
Thermal	Fuel switch- space heater- wood	0.1209	56
Electric	Permanent Refrigerant Leak Detection	0.1188	1,188
Electric	System  Variable frequency drive motor control	0.0965	289
Thermal	Biomass Fuel Switch	0.053	530
Electric	Industrial Process Efficient Chiller	0.039	976
Thermal	Unmatched Air Source Heat Pump (TEPF	0.0368	12.6
	Savings)		
Electric	Efficient Refrigeration Rack - Natural	0.0336	3,363
	Refrigerant		
Thermal	Biomass Fuel Switch	0.0323	109
Thermal	Whole-building insulation	0.0213	54
Electric	Ductless variable speed heat pump	0.0202	3.2
Electric	Ducted variable speed heat pump	0.0159	6.3
Thermal	Insulate and air seal	0.0149	38
Electric	Efficient Refrigeration Rack	0.0132	1,316
Electric	Heat Pump Water Heater	0.007	3.6
Thermal	HPwES - 6036HPES (Market Rate)	0.0033	13.4

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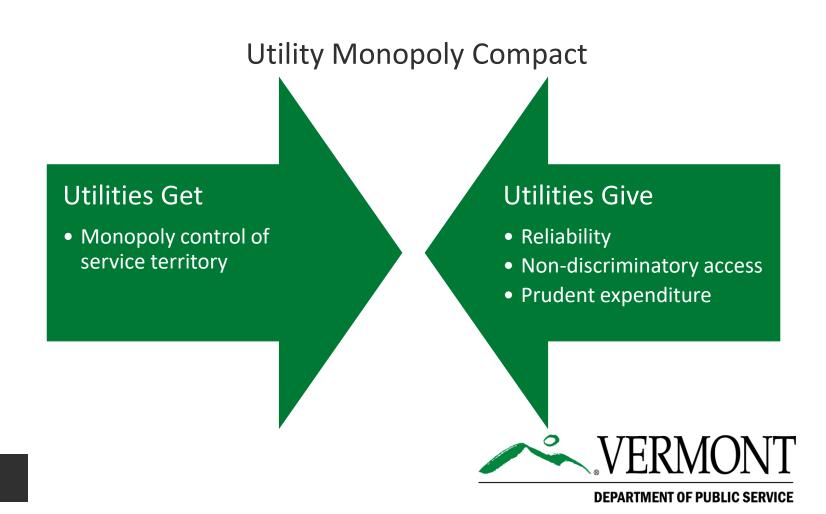
Prioritizing GHG reductions will divert EEC to non-electric efficiency	Force Vermont utilities to procure additional supply at higher cost
ciccine emercincy	Put upward pressure on rates, increase costs for all Vermonters
Prioritizing cost- effective GHG will promote fuel	Concerns about access and equity
switching and low - CI liquid fuels, and deprioritize Weatherization	Build load, force Vermont utilities to procure additional supply at even higher cost and build expensive infrastructure (no efficiency to mitigate)
	High electric rates improves economics of fossil fuel



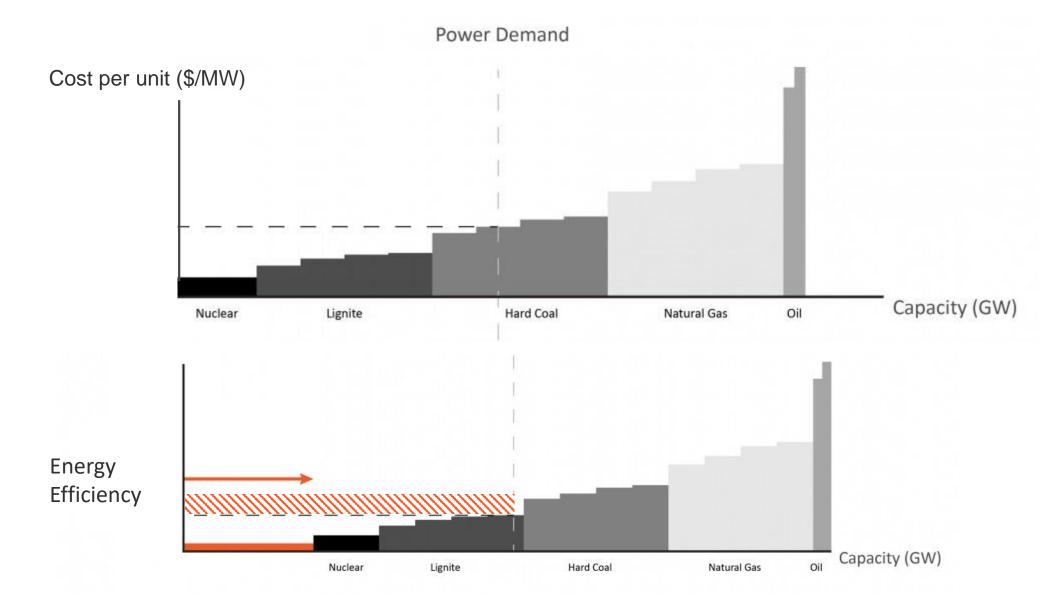
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#### The grid is expensive...

# The Grid



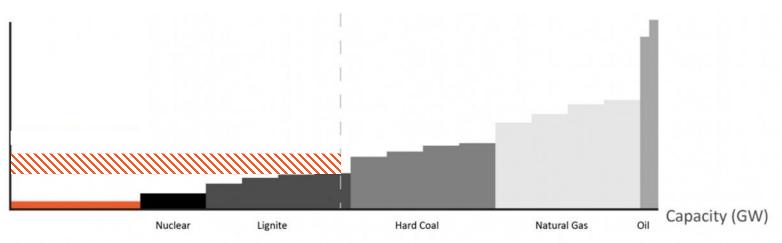
# The Grid





#### Cost per unit (\$/MW)



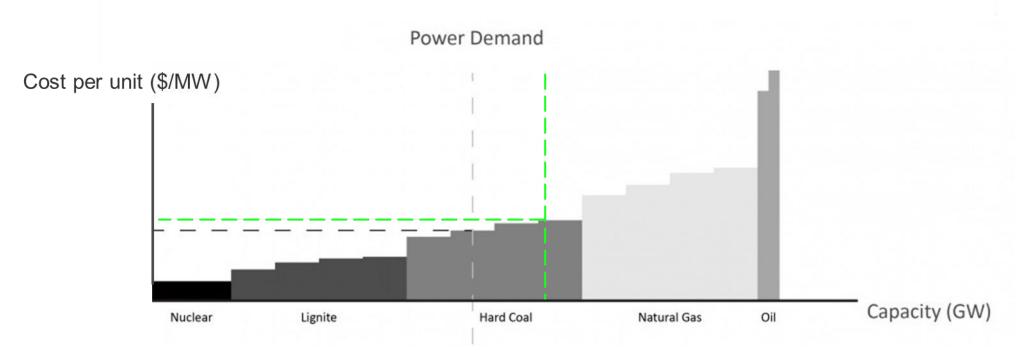


Electric efficiency \$ < reduction in supply cost, then it's cost-effective

Downward pressure on electric rates (base rates)



# The Grid



Diversion of EEC to non-electric efficiency increases supply need and cost

Electrification drives load building

Upward pressure on rates (base rates)



## Unintended Consequences

Unnecessarily drives costs up for all Vermonters, particularly for the most vulnerable Vermonters

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Making electrification more expensive contravenes purpose of bill



#### Questions?

