VERMONT CRAFT BREWERS CONFERENCE

A Strange Brew in the Boiler Room

Building a More Energy Efficient Brewery: Opportunities & Incentives

Serving Franklin, Chittenden, and Addison Counties

Ben Rich & Charlie Carpenter · VGS Commercial Energy Services

vgs
VERMONT GAS SERVICES





COLD OPEN · 1983

Two hosers walk into a brewery

Bob and Doug McKenzie talked their way into Elsinore Brewery with a mouse in a bottle and walked out as bottle inspectors.

Every brewery has something going on where nobody's looking.

At Elsinore, it was Brewmeister Smith's scheme. In yours, it's probably heat loss.

THE BUSINESS YOU'RE ALSO IN

Every pint starts with heat

1. **Hot liquor and mash**
   Water heated before anything else happens

2. **The boil**
   An hour or more of rolling heat, every batch

3. **Cleaning**
   CIP and keg washing run on hot water, every day

4. **The taproom**
   Space heat, hot water, and often a kitchen

Your product is beer. Your process is a heat business.



VGS + VERMONT CRAFT BEVERAGE PRODUCERS

The receipts

12
producers: breweries, cideries, a meadery, and a distillery

39
energy-efficiency upgrades installed

10
years of program results, 2016–2025

Every number in this talk comes from real upgrades implemented with help from VGS.



EVERY YEAR, ONGOING

Yearly Savings equivalent to

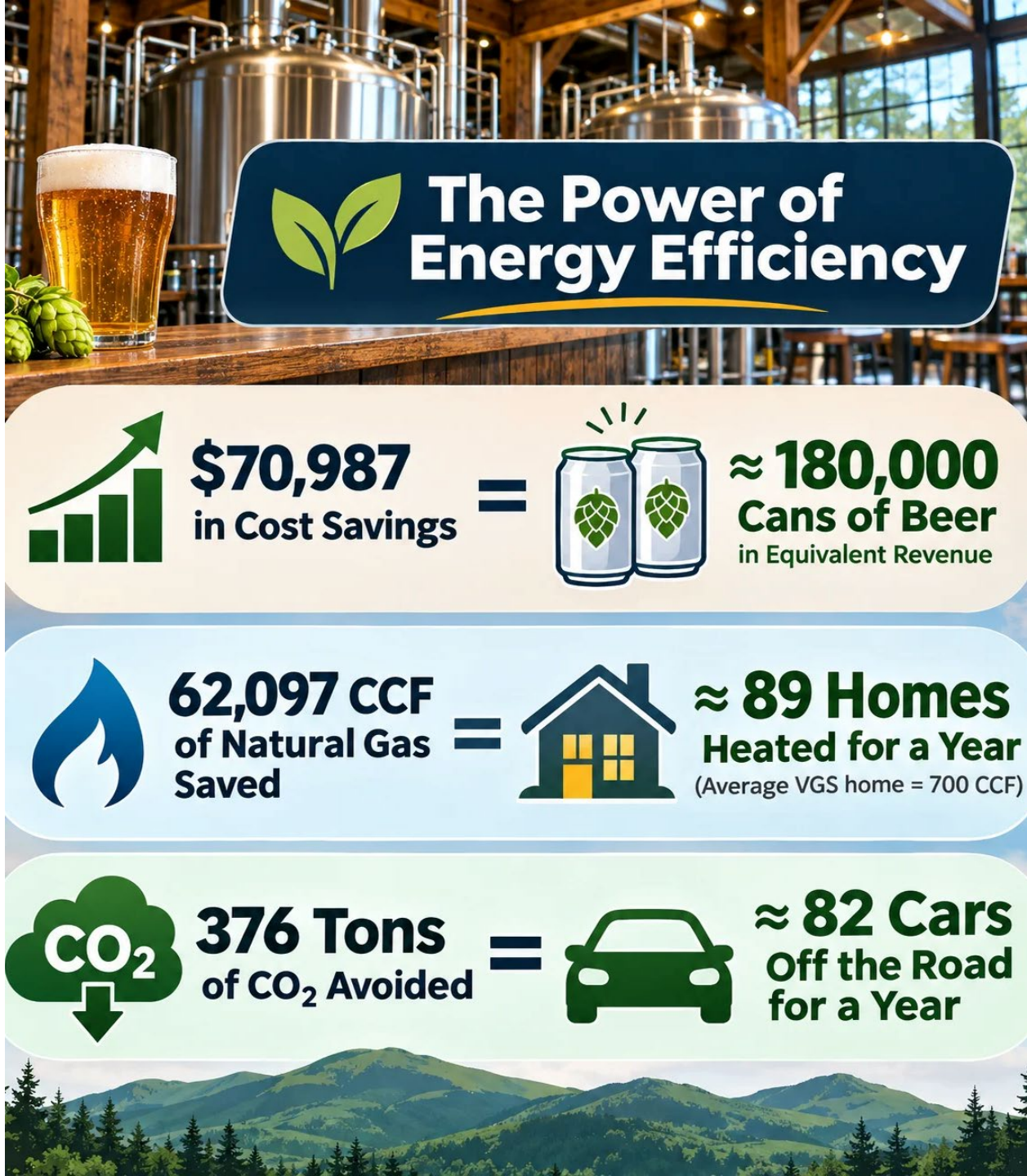
$70,987

in combined gas-cost savings for those 12 producers, every year

62,097 CCF

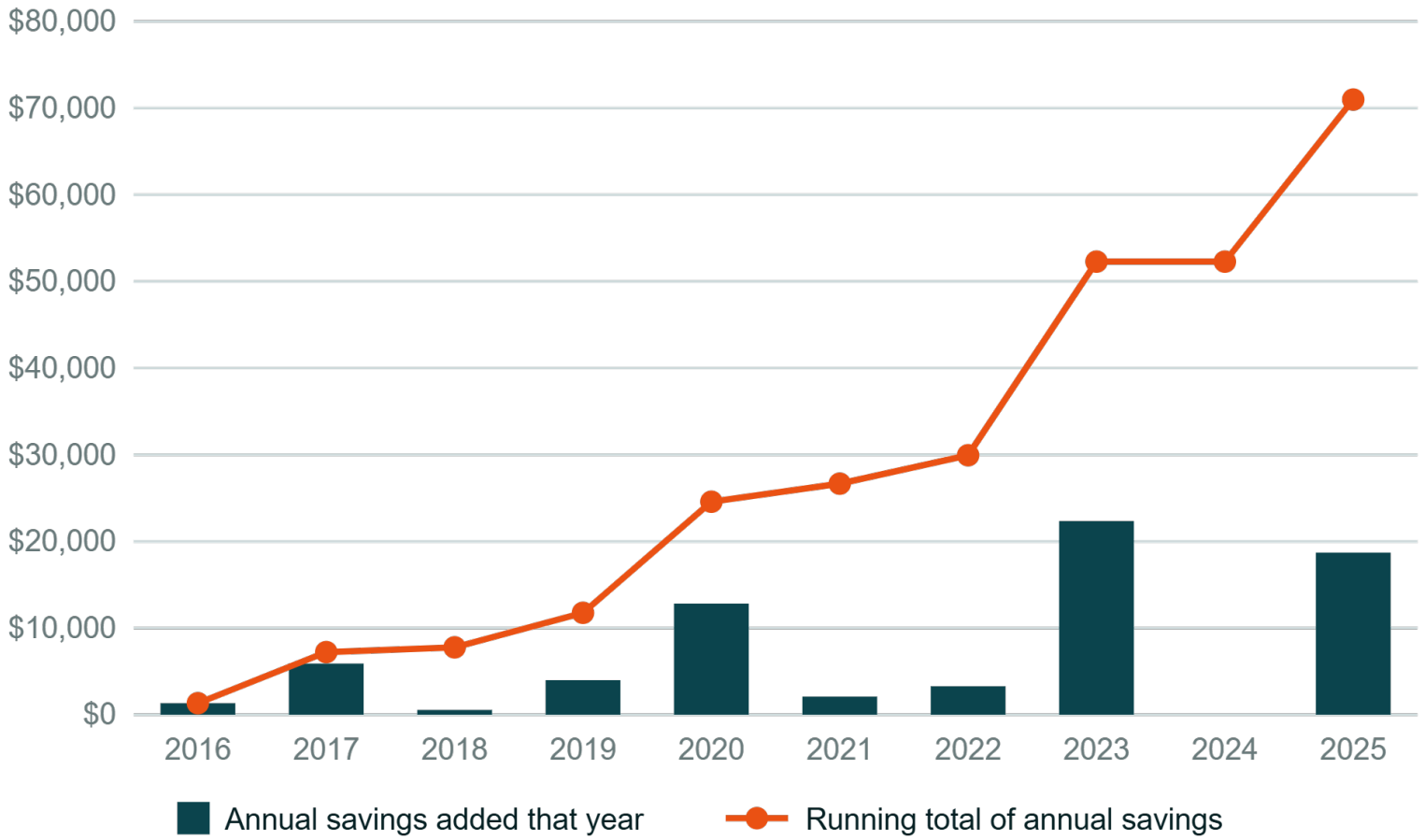
of natural gas **not burned**, each year

That's a lot of two-fours, eh.



ANNUAL SAVINGS ADDED VS. RUNNING TOTAL

The savings stack up, year after year



2020

21 upgrades came online in one coordinated push across five producers.

2023 + 2025

Two steam-pipe insulation projects added $39,616 a year, lifting the total to $70,987.



OVER THE LIFE OF THE EQUIPMENT

The long pour

$1,133,415

in lifetime savings from those 39 measures

Most measure lives run 12 to 25 years. A pipe wrapped in 2025 is still paying out in 2040.

THE LEGIT WAY TO GET A FREE CASE

No mouse in the bottle required

$108,425

in VGS rebates paid directly to these 12 producers

1.5 years shaved off the average payback 4.1 to 2.6 yrs





CASE STUDY · ZERO GRAVITY · RETROFIT · 2023

Pipe Insulation Project

ZERO GRAVITY
BURLINGTON·VERMONT

Pipes that carry steam or hot water release energy you paid for all day and night. Insulate them to keep that energy in the pipes.

1,650 ft

of bare steam pipe, insulated, plus 495 sq ft of blanket insulation

ZERO GRAVITY · PIPE INSULATION PROJECT

Paid back in under a year

$56,375

project cost

$35,000

VGS incentive

$22,347

saved per year

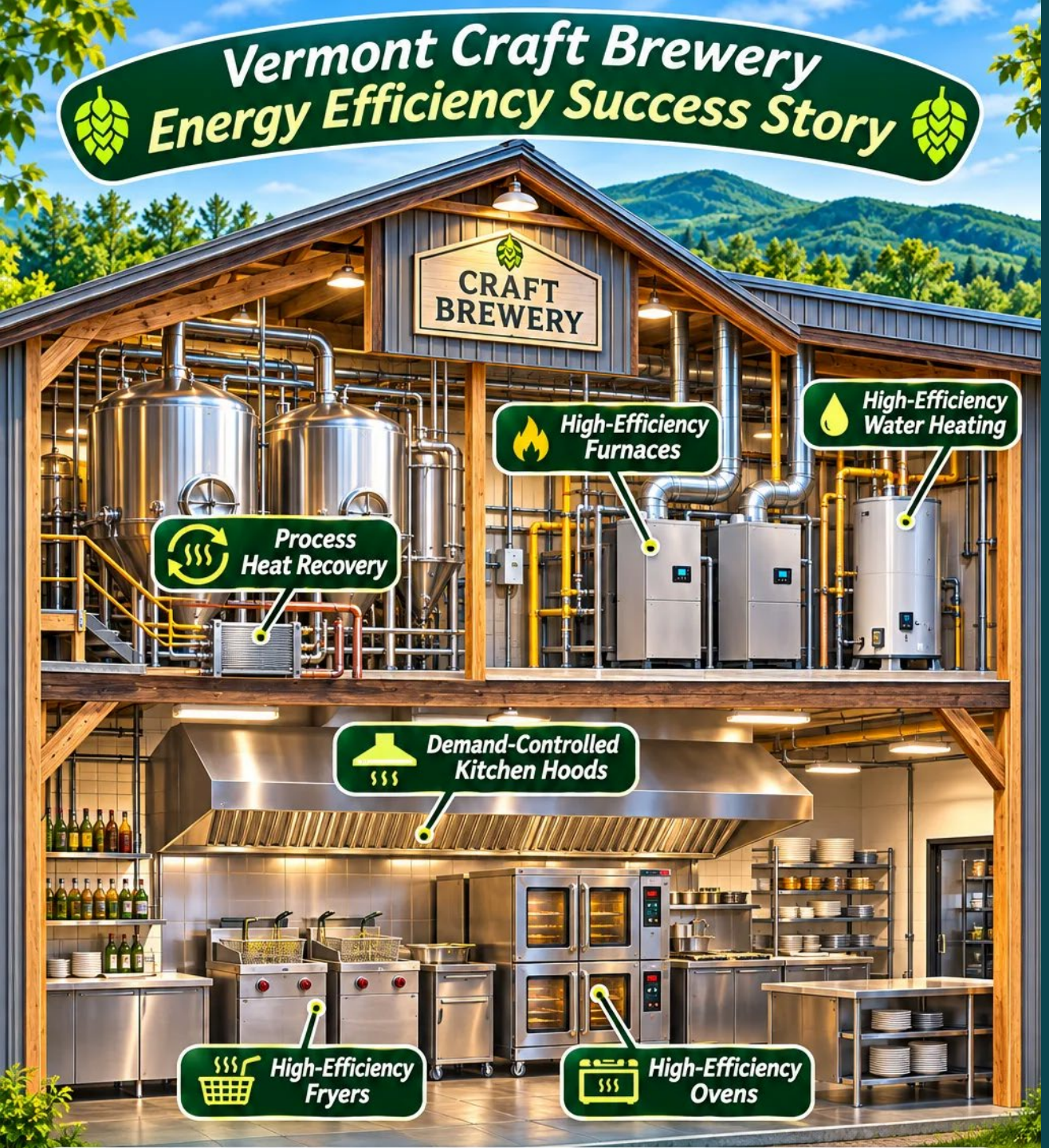
$335,205

saved over 15 years

Simple payback







BLACK FLANNEL · NEW CONSTRUCTION · 2020

The whole building, all at once

Black Flannel

12 upgrades: furnaces, fryers, ovens, water heating, demand-controlled kitchen hoods, and process heat recovery.

$9,600 saved per year

$204,000 saved over equipment life

$16,700 in VGS incentives

BLACK FLANNEL · THE STANDOUT MEASURE

Your hood is a heat chimney



Demand control ventilation slows the exhaust fan when the line isn't cooking, so the building stops blowing heated air out the roof.

$4,419	$110,475	$14,000	$7,000
saved per year	saved over 25 years	controls cost	VGS rebate

One controls project produced more than half of Black Flannel's lifetime savings.



YOUR ASSIGNMENT

Schedule an Energy Assessment

1 **We have heat sensing cameras**

Bare steam and hot-water pipe is money you can see.

2 **Watch the hood at 3 p.m.**

If it runs full speed with an idle line, it’s venting heat you paid for.

3 **Call before you build, expand, or replace**

Design and rebates are easiest to change on paper.

Just a phone call.



VGS COMMERCIAL REBATES 2026

Commercial rebates at a glance

Instant rebates, applied when your contractor buys from a participating distributor

Equipment	Required efficiency	Rebate
Boiler (<300 MBH)	90–94% / 95%+ AFUE	$1,000 / $1,200
Furnace	95–96% / 97%+ AFUE	$500 / $800
Tanked water heater (75–200 MBH)	0.90+ UEF	$600
Tankless water heater (<200 MBH)	0.90–0.94 / 0.95+ UEF	$600 / $1,000
Unit heater	90%+ TE	$1,500
Infrared heater	Low-intensity tube	$1,000
Demand controlled ventilation	CO_2 sensor control	$250 per sensor
Smart thermostat	ENERGY STAR	$150
Unit Heater	90%+	$1,500+

PROCESSED THROUGH VGS

$5,000

Boiler, 500–800 MBH, 94%+ TE

$2,500

Boiler, 300–499 MBH, 94%+ TE

Call before you buy or install, so we can confirm eligibility.

Most of these come off the price at the counter and should be on your contractor's invoice.

VGS COMMERCIAL REBATES

High-efficiency unit heaters

$1,500+

per qualifying unit heater rated 90%+ thermal efficiency, applied instantly through participating distributors

The plus: help with the condensate drain

Condensing units pull extra heat out of the exhaust, which makes condensate that needs a drain. VGS helps cover some of that plumbing cost.



COMMERCIAL KITCHENS

Pre-rinse spray valves

7,000+ gallons of water saved per year in a commercial kitchen going from 1.3gpm-0.7gpm



- **Same cleaning power:** high-velocity spray clears baked-on food.
- **Lower gas bills:** less hot water to heat means less gas burned.
- **Lower sewer fees:** less water down the drain costs
- **Lower water bills: less water used.**
- **Instant payback: the valve is free, so savings start day one.**

VGS will give you one for free. Just ask!

(802) 951-0321 · Efficiency@vermontgas.com

FREE ENERGY ASSESSMENTS

Take off, eh. To the boiler room.

802-735-4833
efficiency@vermontgas.com
vgsvt.com/commercial

Franklin, Chittenden, and Addison counties

vgs
VERMONT GAS SERVICES



Vermont Brewers Conference 2026

How can you build a more resilient brewery?

Combating Rising Uncertainty through strategic upgrades



Abby Wiseman

Senior Engineering Consultant

Efficiency Vermont

Agenda

- Background
- Ultra-low GWP Refrigeration and Chillers
- Cold Liquor Tanks
- CO2 Reclamation

Efficiency Vermont

Rising Costs and Uncertain Demand

- Growing strain on the grid during peak times
- Increased costs
  - Shipping
  - Raw Ingredients
  - Labor
  - Electricity
  - Equipment Costs

Efficiency Vermont



Refrigeration Future-Proofing: CO2 and Propane Chillers

Regulation Supports

AIM Act

Greater Heat Recovery

Non-Toxic

CO2 already on site

Same CO2 used in Brite tanks



Cold Liquor Tanks

- Add chiller capacity without needing to upsize
- Helpful with increasingly hot and humid summers
- Can build system resiliency



Image Shows
10 BBL Vessel

Efficiency Vermont



CO2 Recovery

Turning a bi-product into a necessary ingredient

- Limit supply disruptions
- Combat rising transportation costs

Other Efficiency Projects

- New Efficient Brewhouse- Condensate Return
- Pipe Insulation
- New Efficient Centrifuge
- Steam Trap audit and repair
- Lighting
- Circ Pump Controls
- Taproom building envelope upgrades
- Walk-in Cooler evaporators and condensing units

Have another idea? Come and talk to us at our booth!

Questions?

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