



AGRICULTURE ENERGY PROJECT FUNDING MATRIX

How to use this tool

This tool is a guide to available funding for on-farm energy projects. The organizations included in this resource have project-type dependent funding and technical resources available that can be combined to best serve your energy project.

STEP ONE: Identify organizations in Summary

STEP TWO: Read the description of each relevant organization

STEP THREE: Check which organizations line up with your Project Type

- If your project type is not found, please contact the organizations in the Summary to inquire about custom projects and special circumstances

STEP FOUR: Reach out to the contacts listed for each organization

STEP FIVE: Read summaries of available financing options and reach out to listed contacts

STEP ONE: Summary

Please see **attached list of Project Types** to determine if your project is a good fit for each organization's different offers.

Contact organization representatives to find out more and receive one on one assistance.

	Efficiency Vermont	NE Dairy Business Innovation Center	NRCS	VHCB REDI	VHCB Farm & Forest Viability	VHCB Water Quality Grant	Working Lands Enterprise Initiative	VAAFM Water Quality Division	VT FPR Forest Economy Program	NRCD
Maple Equipment	X		X				X		X	
Dairy Equipment	X	X	X				X	X	X	
Greenhouse Equipment	X		X				X		X	
Water Management			X			X		X		
Manure Management	X		X			X		X		
Technical and/or Grant Writing Assistance	X		X	X	X			X		X

STEP TWO: Organizations

Efficiency Vermont: Provides free on-farm energy assessments, technical assistance, custom project incentives, and equipment rebates.

Northeast (NE) Dairy Business Innovation Center: Supports dairy farmers and processors through grants, access to technical services, education, and events that promote the development, production, marketing, and distribution of regional dairy products.

Natural Resources Conservation Service (NRCS): Offers technical and financial assistance to producers/landowners for conservation practices on their land and to address resource concerns/issues. Producer would receive a cost-share contract, where payment per practice is calculated to 75% of what typical practices would cost. For historically underserved producers, the cost would be up to 90%.

Vermont Housing and Conservation Board (VHCB) Rural Economic Development Initiative (REDI): Provides grant writing assistance to farm, food, and forest businesses based in communities of less than 5,000 people. Focused on grant applications of approximately \$40,000; can also fund other forms of technical assistance required to submit a grant application.

Vermont Housing and Conservation Board (VHCB) Farm and Forest Viability: Offers business planning and technical assistance to commercial scale farm, food, and forest businesses through a 1:1 business advising program; up to two years of assistance; \$75 enrollment fee.

Vermont Housing and Conservation Board (VHCB) Water Quality Grant: Competitive annual grant program that provides up to \$50,000 in grants to farms for on-farm water quality improvement projects. Please note that this grant is continuously updated based on Vermont legislative approval and allocations.

Working Lands Enterprise Initiative (WLEI): Provides grants and contracts, ranging from \$5,000 to \$250,000, to support enterprises and service providers across the farm, forest, and food sectors in Vermont. Please note that this grant is continuously updated based on Vermont legislative approval and allocations.

Vermont Agency of Agriculture, Food and Markets (VAAFM) Water Quality Division: Provides technical and financial assistance programs for farmers to improve and protect water quality.

Vermont Department of Forests, Parks and Recreation (VT FPR): Administers the Wood Innovation Grant which provides up to \$25,000 per project for both installation and repair costs for advanced wood heating systems.

Natural Resources Conservation Districts (NRCD): Vermont's 14 NRCDs connect landowners, farmers, and local partners with technical, financial, and educational resources needed to protect natural resources and to implement conservation solutions.

STEP THREE: Project types

Maple Equipment

	Efficiency Vermont	NRCS * Exact dollar amounts are determined by annual federal funding cycles and subject to change.	Working Lands Enterprise Initiative	VT FPR - Forest Economy Program
LED Lighting	While funding lasts: Full project cost up to \$250 per qualifying LED fixture.		Business Enhancement Grant *WLEI can fund most types of energy efficiency projects. WLEI strongly recommends that anyone needing energy efficiency upgrades or projects specifically focused on renewable energy should first explore and apply for other programs because WLEI grants are typically very competitive and not specifically focused on energy efficiency. WLEI grants may be able to supplement other funding sources for energy-related projects	
First Time RO System	Up to \$3,250 rebate	372- Combustion System Improvement: Custom Analysis including base cost (\$3,073.41 or \$3,688.09) and implementation cost (\$14.93 or \$17.91 gal/hr		
High Brix RO System	Custom Incentive Analysis and Technical Assistance			
Vacuum Pump	Custom Incentive Analysis and Technical Assistance	533 - Pumping plant, consult Efficiency Vermont for technical assistance & analysis		
Advanced Wood Heating	- Primary Heating Pellet Stove (new), up to \$6,000 rebate - Wood/Pellet Stove, \$400 discount at time of purchase with participating retailers			- Wood Innovation Grant - Installation/Repairs \$25,000 per project
Efficient Evaporator	Custom Incentive Analysis and Technical Assistance	Varies depending on system		
Variable Frequency Drives	\$420 rebate for 24hr run time during maple season			
Custom Project - Fossil Fuel Reduction	Custom Incentive Analysis and Technical Assistance			
Custom Project - Energy Efficiency Upgrade	Custom Incentive Analysis and Technical Assistance	CEMA 228 - Agricultural Energy Audit, Technical Assistance for an Energy Audit		
Replacement RO System		372 - Combustion System Improvement		
Solar Panels				
Wind Power				
Preheaters		372 - Combustion System Improvement: Steam Enhanced Pre-heater Base \$8,807.73 or \$10,569.28) Implementation \$277.91 or \$333.49 / SF or Heat Recovery Pre-heater \$2,241.99, or \$2,690.39		

Dairy Equipment

	Efficiency Vermont	NE Dairy Business Innovation Center	NRCS * Exact dollar amounts are determined by annual federal funding cycles and subject to change.	Working Lands Enterprise Initiative	VT FPR - Forest Economy Program
Advanced Wood Heating	Primary Heating Pellet Stove (new), up to \$6,000 rebate Wood/Pellet Stove, \$400 discount at time of purchase with participating retailers			Business Enhancement Grant *WLEI can fund most types of energy efficiency projects. WLEI strongly recommends that anyone needing energy efficiency upgrades or projects specifically focused on renewable energy should first explore and apply for other programs because WLEI grants are typically very competitive and not specifically focused on energy efficiency. WLEI grants may be able to supplement other funding sources for energy-related projects.	• Wood Innovation Grant • Installation/Repairs • \$25,000 per project
Bulk Storage Tanks	Custom Incentive Analysis and Technical Assistance	Dairy Farm Improvement and Modernization Grant (when tied to a systems-level upgrade)			
Variable Speed Pumps	Custom Incentive Analysis and Technical Assistance	Dairy Farm Improvement and Modernization Grant (when tied to a systems-level upgrade)	Varies depending on system		
New Plate Coolers	Minimum of 35 milking heads, Up to \$4,200 rebate	Dairy Farm Improvement and Modernization Grant (when tied to a systems-level upgrade)	374 - Energy Efficient Agricultural Operation: \$4,452.37 or \$5,342.84		
LED Lighting	While funding lasts: Full project cost up to \$250 per qualifying LED fixture.	Dairy Farm Improvement and Modernization Grant (when tied to a systems-level upgrade)	670 - Energy Efficient Lighting System: Varies Depending on System		
Variable Frequency Drives on Vacuum Pump	\$1,575 rebate	Dairy Farm Improvement and Modernization Grant (when tied to a systems-level upgrade)	Varies depending on system		
Ventilation Fans	While funding lasts: \$800 per ECM fan Base rebate on website for VFD controlled fan	Dairy Farm Improvement and Modernization Grant (when tied to a systems-level upgrade)			
Food Safety Flooring					
Automatic Push Feeder	Custom Incentive Analysis and Technical Assistance	Dairy Farm Improvement and Modernization Grant (when tied to a systems-level upgrade)			
Anaerobic Digester Heat Recovery	Custom Incentive Analysis and Technical Assistance				
Solar Panels					
Wind Power					
Solar Thermal Heat	Custom Incentive Analysis and Technical Assistance				
Refrigeration - Condensing Units - Compressors - Other	Custom Incentive Analysis and Technical Assistance for comprehensive refrigeration operation and individual pieces of equipment	Dairy Farm Improvement and Modernization Grant (when tied to a systems-level upgrade)	374 - Energy Efficient Agricultural Operation: Scroll Compressor \$3,234.01 or \$3,880.81		
Custom Project - Energy Efficiency Upgrade	Custom Incentive Analysis and Technical Assistance	Dairy Farm Improvement and Modernization Grant (when tied to a systems-level upgrade)	CEMA 228 - Agricultural Energy Audit: TA available for audit		
Heat Recovery Units	Minimum 25 milking heads, up to \$2,625 rebate	Dairy Farm Improvement and Modernization Grant (when tied to a systems-level upgrade)			
Wash Systems	If switching from oil to electric hot water heater, Custom Incentive Analysis and Technical Assistance	Dairy Farm Improvement and Modernization Grant (when tied to a systems-level upgrade)			

Dairy Equipment (continued)

	Efficiency Vermont	NE Dairy Business Innovation Center	NRCS * Exact dollar amounts are determined by annual federal funding cycles and subject to change.	Working Lands Enterprise Initiative	VT FPR - Forest Economy Program
Grain Driers	Custom Incentive Analysis and Technical Assistance		372 - Combustion System Base Cost \$45,708.16 or \$54,849.79 Implementation Cost \$74.93 or \$89.91 BU/HR	Business Enhancement Grant *WLEI can fund most types of energy efficiency projects. WLEI strongly recommends that anyone needing energy efficiency upgrades or projects specifically focused on renewable energy should first explore and apply for other programs because WLEI grants are typically very competitive and not specifically focused on energy efficiency. WLEI grants may be able to supplement other funding sources for energy-related projects.	
Air to Water Heat Pumps	For new heat pump \$1,000/ton up to 6 tons in coordination with your Distribution Utility	Dairy Farm Improvement and Modernization Grant (when tied to a systems-level upgrade)			
Ground Source Heat Pumps	Tiered rebate based on system tonnage: less than ten 2100/ton, 10-20 tons 1500/ton, 20-50 1000/ton, Contact Efficiency Vermont for Additional Assistance				
Robotic Milkers		Dairy Farm Improvement and Modernization Grant (when tied to a systems-level upgrade)			
Vat Pasteurizers		Dairy Processor Modernization Grant (when tied to a systems-level upgrade)			
Bottlers/Fillers		Dairy Processor Modernization Grant (when tied to a systems-level upgrade)			
Weatherization	Contact Efficiency Vermont for Worker Housing Weatherization Assistance, 75% cost up to \$5,000 in non-rent payment based existing conditioned space		Attic Insulation: \$0.69-0.83/sf Wall Insulation: \$2.02-2.43/sf		
3-Phase Conversion	If purchasing new equipment along with phase conversion Contact Efficiency Vermont for Custom Incentive Analysis and Technical Assistance				
Replacement of Internal Combustion Engine with Electric Engine (Tractor, Other Mobile Equipment)			Contact for detailed information on a variety of qualifying products		
Automatic Controller System			374 - Energy Efficient Agriculture Operation & 670 - Energy Efficient Lighting System: Varies depending on project needs		

Greenhouse Equipment

	Efficiency Vermont	NRCS * Exact dollar amounts are determined by annual federal funding cycles and subject to change.	Working Lands Enterprise Initiative	VT FPR - Forest Economy Program
Advanced Wood Heating	- Primary Heating Pellet Stove (new), up to \$6,000 rebate - Wood/Pellet Stove, \$400 discount at time of purchase with participating retailers		Business Enhancement Grant *WLEI can fund most types of energy efficiency projects. WLEI strongly recommends that anyone needing energy efficiency upgrades or projects specifically focused on renewable energy should first explore and apply for other programs because WLEI grants are typically very competitive and not specifically focused on energy efficiency. WLEI grants may be able to supplement other funding sources for energy-related projects.	- Wood Innovation Grant - Installation/Repairs \$25,000 per project
LED Lighting	Up to 30% cash back	670 - Energy Efficient Lighting Systems: Varies depending on project		
Thermal and Shade Curtains (Greenhouse Screens)	Up to 50 cents/sq ft	374 - Energy Efficient Agriculture Operation: Mechanical screens varies depending on project size		
Solar Panels				
Wind Power				
Solar Thermal Heat	Custom Incentive Analysis and Technical Assistance			
Full Structure Energy Modeling	For new greenhouse construction			
Controller	Up to 10 cents/sq ft			
Polyethylene Upgrade	With IR film, Contact Efficiency Vermont for Custom Incentive Analysis and Technical Assistance	374 - Energy Efficient Agricultural Operation: IR Glazing \$0.15 or \$0.18/sf		
Exhaust/Circulation Fans	Custom Incentive Analysis and Technical Assistance	Varies depending on system		
Polycarbonate or Glass Panel Upgrades	Custom Incentive Analysis and Technical Assistance			
Variable Frequency Drives	\$200/HP rebate for 2-5 HP motors or pumps \$150/HP rebate for 7.5-100 HP motors or pumps			
Greenhouse Roof Vent		374 - Energy Efficient Agriculture Operation: \$66.72 or \$80.06/FT		\$57.45-68.93/ft
Greenhouse Step Controller System				\$907.77-\$1089.32
Heating (Building/small room)				\$22.05-47.83/kBTU/Hr
High Efficiency Hot Water Heater		374 - Energy Efficient Agricultural Operation: \$2,877.55 or \$3,435.06		\$2578.58-3094.29
Root Zone Heating		374 - Energy Efficient Agriculture Operation: \$2.57 or \$3.09/Lnft		\$3.34-4.01/ft
Ventilation		374 - Energy Efficient Building Envelope Varies depending on system		\$350.68-2017.43
Attic Insulation		374 - Energy Efficient Building Envelope: \$0.09 or \$0.11/sf		\$0.69-0.83/sf
Bubble Insulation		374 - Energy Efficient Agricultural Operation: \$0.54 or \$0.64 /sf		\$0.48-0.58/sf
Greenhouse Solid Insulation				\$1.07-1.29/sf
Sealant		374 - Energy Efficient Agriculture Operation: \$3.69 or \$4.42/ft		\$1.35-1.62/ft
Wall Insulation		374 - Energy Efficient Building Envelope: Varies depending on project		\$2.02-2.43/sf

Water Management

	Efficiency Vermont	NRCS * Exact dollar amounts are determined by annual federal funding cycles and subject to change. Assistance varies by system for irrigation systems with a documented history to show efficiency upgrades	VHCB Water Quality Grant	Working Lands Enterprise Initiative	VAAFM Water Quality Division
Irrigation Lines	If results in decreased use of tractor Contact Efficiency Vermont for Custom Incentive Analysis and Technical Assistance	430 - Irrigation Pipeline: Varies depending on the system		Business Enhancement Grant *WLEI can fund most types of energy efficiency projects. WLEI strongly recommends that anyone needing energy efficiency upgrades or projects specifically focused on renewable energy should first explore and apply for other programs because WLEI grants are typically very competitive and not specifically focused on energy efficiency. WLEI grants may be able to supplement other funding sources for energy-related projects.	
Pond		436 - Irrigation Reservoir: Varies depending on the system - <i>No TA will be provided, hiring a private engineer required</i>	Discuss project with staff		
Irrigation Reservoir		436 - Irrigation Reservoir: Varies depending on the system			
Irrigation System, Microirrigation		441 - Irrigation System, Microirrigation: Varies depending on the system			
Sprinkler System		442 - Sprinkler System: Varies depending on the system			
Irrigation System, Surface and Subsurface		443 - Irrigation System, Surface and Subsurface: Varies depending on the system			
Irrigation Water Management		449 - Irrigation Water Management: Varies depending on the system			
Pond Sealing or Lining		521 - Pond Sealing or lining Geo-synthetic: Varies depending on the system	Discuss project with staff		BMP Program
Pumping Plant		533 - Pumping Plant: Varies depending on the system	Discuss project with staff		- BMP Program - Pasture & Surface Water Fencing Program
Spring Development		574 - Spring Development: Varies depending on the system			Pasture & Surface Water Fencing Program
Wastewater Irrigation Systems					CEAP

Manure Management

	Efficiency Vermont	NRCS * Exact dollar amounts are determined by annual federal funding cycles and subject to change.	VHCB Water Quality Grant	Working Lands Enterprise Initiative	VAAFM Water Quality
Roofed Concrete Structures				Business Enhancement Grant	BMP- if tied to waste management
Separators Waste Separation Facility	Custom Incentive Analysis and Technical Assistance	632 - Waste Separation Facility Varies depending on system	Discuss project with staff	*WLEI can fund most types of energy efficiency projects. WLEI strongly recommends that anyone needing energy efficiency upgrades or projects specifically focused on renewable energy should first explore and apply for other programs because WLEI grants are typically very competitive and not specifically focused on energy efficiency. WLEI grants may be able to supplement other funding sources for energy-related projects.	BMP Program
Manure Pit Covers	Custom Incentive Analysis and Technical Assistance	367 - Roofs and Covers Varies depending on system			BMP – Technical Assistance Only
Draglining	Custom Incentive Analysis and Technical Assistance	634 - Manure Transfer Varies depending on system			- BMP Program - CEAP
Pump Motors	Custom Incentive Analysis and Technical Assistance	533 - Pumping Plant Varies depending on system			
Manure Scrapers	Custom Incentive Analysis and Technical Assistance	374 - Alley Scraper System Varies depending on system	Discuss project with staff		
Digestors		366 - Anaerobic Digester Varies depending on system			BMP – Technical Assistance Only
Waste Storage Facility		313 - Waste Storage Facility Varies depending on system			BMP Program

Manure Management (continued)

	Efficiency Vermont	NRCS * Exact dollar amounts are determined by annual federal funding cycles and subject to change. Assistance varies by system for irrigation systems with a documented history to show efficiency upgrades	VHCB Water Quality Grant	Working Lands Enterprise Initiative	VAAFM Water Quality Division
Composting Facility		317 - Composting Facility Varies depending on system			BMP Program
Pond Sealing and Lining		520 - Pond Sealing and Lining - Compacted Soil Treatment 521 - Pond Sealing and Lining - Geomembrane or Geosynthetic Clay Liner 522 - Pond Sealing and Lining - Concrete Varies depending on system			BMP Program
Heavy Use Area Protection (Barnyards)		561 - Heavy Use Area Protection Varies depending on system		Business Enhancement Grant	BMP Program
Nutrient Management *also applies to crops and fertilizer		590 - Nutrient Management DIA 101 - CNMP Design & Implementation Activity CPA 102 - Comprehensive Nutrient Management Plan CEMA 217 - Soil & Source Testing for Nutrient Management Varies depending on system	Discuss project with staff	*WLEI can fund most types of energy efficiency projects. WLEI strongly recommends that anyone needing energy efficiency upgrades or projects specifically focused on renewable energy should first explore and apply for other programs because WLEI grants are typically very competitive and not specifically focused on energy efficiency. WLEI grants may be able to supplement other funding sources for energy-related projects.	
Waste Water Treatment Milkhouse		627 - Waste Treatment - Milk House Varies depending on system			BMP Program
Waste Treatment		629- Waste Treatment Varies depending on system			BMP Program
Waste Recycling		633 - Waste Recycling Varies depending on system	Discuss project with staff		
Waste Transfer		634 - Waste Transfer Varies depending on system			BMP Program
Manure Injection or Compost Management Equipment					CEAP

STEP FOUR

Contact organizations

Efficiency Vermont

Jen Severidt, Account Manager (Dairy)
jseveridt@veic.org
802-540-7768

Julia Spelman, Account Manager (Non-Dairy)
jspelman@veic.org
802-540-7834

Northeast Dairy Business Innovation Center

Ali Boochever, Grant Program Manager
ali.boochever@vermont.gov
802-261-5740

Ben Eldredge, Grant Program Manager
Ben.Eldredge@vermont.gov
802-522-9478

NRCDs

Emily Nummer, Agricultural Program Manager
emily.nummer@vacd.org

NRCS

Northwest Zone (Grand Isle, Franklin, Lamoille):
Sarah Larose, Zone District Conservationist
Sarah.larose@usda.gov
802-503-9202

Northeast Zone (Orleans, Essex, Caledonia, Orange):
Dave Blodgett, Zone District Conservationist
David.blodgett@usda.gov
802-624-7013

Central Zone (Chittenden, Washington, Addison):
Marybeth Whitten, Zone District Conservationist
Marybeth.whitten@usda.gov
802-771-3038

South Zone (Rutland, Windsor, Bennington, Windham):
Phylicia J. Moore, Zone District Conservationist
Phylicia.moore@usda.gov
802-774-8034

VAAFM Water Quality Division

AGR.WaterQuality@vermont.gov
802-828-2431

Vermont Department of Forest Parks and Recreation

Molly Willard, Wood Energy and Forest Products Specialist
molly.willard@vermont.gov
802-261-1681

VHCB Farm & Forest Viability Program

Calley Hastings, Program Manager
c.hastings@vhcb.org
802-828-3370

VHCB REDI

Mariah Noth, Program Manager
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802-828-1098

VHCB Water Quality Grants

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802-828-5587

Working Lands Enterprise Initiative

Clare Salerno
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802-917-2637

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To learn more, call 888-921-5990
or visit efficiencyvermont.com



Translation
available

Stay connected



STEP FIVE

Read summaries of available financing options & reach out to contacts

Farm Credit East

Farm Credit East is a specialized lender committed to Vermont agriculture. For more than 100 years, the financial cooperative has provided a full range of credit and financial services to the state’s agricultural producers. Additionally, Farm Credit East’s Country Living Loans program provides financing for land and rural homes. For more information, visit FarmCreditEast.com.

Contact: kristi.wood@farmcrediteast.com | 802-725-9015

USDA Farm Service Agency

FSA offers multiple types of loans to help farmers and ranchers start, expand, or maintain a family agricultural operation. Some of these loans can be leveraged to invest in climate-smart agriculture practices or equipment. Anyone can apply for FSA’s loan programs. Applications will be considered on basic eligibility requirements. To apply for a loan, you must be a U.S. citizen or qualified alien, operator of a family farm or ranch, have a satisfactory credit history, be unable to obtain credit elsewhere at reasonable rates and terms to meet actual needs, and not be delinquent on any federal debts.

Contact: jill.thomas@usda.gov | 802-658-2803

Vermont Community Loan Fund

VCLF offers financing for start-up or existing farms, food producers, incubators, CSA’s, farmers markets, forestry and forest product enterprises, & stewardship and other natural resources organizations. Eligible uses are farmland acquisition, facility construction or improvement, equipment, inventory/livestock, or working capital. Priority will be given to projects that increase acres under farm or forest management, or projects that increase the amount of local food produced. A variety of loan terms are available from 5-20 years, depending on the business cashflow and collateral available.

Contact: admin@vclf.org | 802-223-1448

Vermont Economic Development Authority

Vermont Economic Development Authority’s agricultural loans are available to farm, forest product-based and related businesses to finance early-stage businesses as well as existing operations. The loans are used to strengthen and expand businesses, encourage diversification, and encourage marketing and processing of Vermont agricultural and forestry products. Agricultural energy loans and bridge financing for a variety of grants are available to qualifying renewable energy generation and energy efficiency improvement projects and related technologies. Please see our website at www.veda.org for further information.

Contact: awood@veda.org | 802-828-5839

Vermont Farm Fund

The Vermont Farm (VFF) is a program of the Center for an Agricultural Economy that provides low-interest, friendly-term loans to Vermont farmers and food producers. As a non-profit revolving loan fund, the VFF uses payments from one generation of loans to finance the next. As the community of borrowers repay their loans, funds are replenished for the next cycle of loan recipients. Loans support Vermont food producers who have suffered a devastating loss to their business due to a natural disaster. Business Builder Loans are for established Vermont farm/food enterprises seeking to grow or innovate. New Producer Loans help finance the launch of a new or beginning Vermont farm/food enterprise. Loan applications are available on the VFF website and are accepted on a rolling basis.

Contact: kristin@caevt.org | 802-560-3099