

2021



**FISCAL YEAR 2021 ANNUAL
PROGRAM PLAN & BUDGET**

FOR THE YEAR JULY 1, 2012 to JUNE 30, 2021

EXECUTIVE SUMMARY

The fiscal year (FY) 2021 (July 1, 2020 through June 30, 2021) plan and budget for the Clean Energy Development Fund (CEDF or Fund) is a continuation of existing programs and grants from prior fiscal years. There will be a couple changes in the design of existing programs, but CEDF's focus will remain on promoting advanced wood heating in homes and larger buildings across the state.

As described in CEDF's annual plan and in the multi-year Strategic Plan of 2018, without any new funds allocated to the CEDF it will continue to implement a controlled winding-down of all CEDF programs. When the current CEDF funds are expended the Public Service Department (PSD) will end the Fund's operations but preserve the CEDF in order to meet the statutory requirements of the CEDF as well as to maintain the option of reviving incentive programs if funding for the CEDF is secured. The Fund Manager, in consultation with the PSD, the CEDF board and the public, will lead an investigation of what changes may be advisable to CEDF's statutory language and potential future given its funding trajectory.

The CEDF continues to fulfil its mission and follow its strategic plan with the funds it still has available. In fiscal year 2020 the CEDF expended just over \$1.1 million to advance Vermont's clean energy sector, with the bulk of those dollars working to build the local advanced wood heating market.

For FY 2021, the CEDF budgets its remaining \$1.7 million on existing programs and grants that continue to grow Vermont's advanced wood heating market, specifically for local bulk wood pellets and chips. Maturing and expanding the local wood heating market will help strengthen Vermont's sustainable forest products and clean energy industries by helping to create new employment, decrease the use of fossil fuels, build demand for low grade wood products from local forests, and keep heating dollars local.

This FY 2021 plan includes the use of approximately \$1.6 million of federal American Recovery and Reinvestment Act (ARRA) funds. These monies will continue to support low/moderate-income Vermonters with grants and interest rate buy-downs for residential pellet heating, thermal energy efficiency measures, and wood stove change-outs for cleaner more energy efficient pellet stoves. In addition, new for this year, the CEDF is will include an ARRA funded adder to the advanced wood heating incentives to support the change-out of old coal heating systems still in use in Vermonter's homes and businesses for advanced pellet or (for non-residential applications) dried wood chips.

An important aspect of this year's plan is the incorporation of recommendations from a thorough third-party evaluation of the CEDF and its programs completed at the end of 2019. The evaluation was conducted by Cadmus Consulting. Amongst the conclusions and recommendations of Cadmus' evaluation report was:

“Conclusion: If the priority is to offset the greatest amount of fossil fuels, then pellet boilers (both residential and nonresidential) are the primary measure to achieve that goal. In addition, the pellet manufacturing and distribution market experiences the greatest benefit.

Recommendation: To meaningfully drive down the payback period of residential pellet boiler systems, the program may want to consider increasing the incentive.”

The CEDF agrees with the conclusion and will be continuing to focus on increasing the use of pellet boilers in Vermont. However, with the amount of funds available and an interest in maintaining a steady incentive over a longer period, the CEDF is only partially following the recommendation to increase the incentive. The added incentives for those that change-out coal heating systems for pellet systems will achieve this recommendation for some customers.

The evaluation also included conclusions and recommendations regarding CEDF’s incomplete data collection and the lack of consistent tracking of key performance indicators (KPIs).

The CEDF will identify KPIs for the VT bulk pellet market and will regularly track them, so that it can more easily identify and report year-over-year program accomplishments, adjust the program focus to target specific equipment, or redirect its funding to areas of the market requiring additional support. The CEDF will also implement better standardized data collection practices and consistently require grantees to submit complete data to receive funding.

The CEDF budget for FY 2021 is comprised of Federal ARRA and State funds carried forward from prior fiscal years. State CEDF funds for the FY 2021 budget derive from loan principle and interest being paid back to the CEDF on loans the CEDF issued for clean energy projects in years past. No new appropriations were made to the CEDF for FY 2021.

PURPOSE OF THE ANNUAL PROGRAM PLAN and BUDGET

The purpose of the Annual Program Plan is to describe the initiatives and programs that the CEDF will pursue during the fiscal year and to establish an annual budget for the expenditure of CEDF and federal funds under CEDF control.

The Annual Program Plan and associated budget represent CEDF’s efforts to effectively use its funds to meet the legislated purpose of the CEDF as embodied in CEDF’s goals and objectives, and as outlined in the CEDF’s multi-year strategic plan.

MANAGEMENT & GOVERNANCE

In accordance with 30 V.S.A. § 8015, the CEDF is administered by the Department of Public Service (PSD) with oversight by the Clean Energy Development Board (Board). A Fund Manager hired by the PSD, with assistance from other PSD staff, manages the day-to-day operations of the Fund and coordinates with the Clean Energy Development Board. Since 2009 the Fund Manager has been Andrew Perchlik.

The Board’s role is to review the CEDF’s Annual Program Plan & Budget, program designs, as well as any changes to programs that the PSD may propose during the year. The Board provides guidance and advice to the PSD regarding the programs of the Fund. The PSD/CEDF cannot proceed with the Annual Plan, Budget, or program designs unless approved by the Board.

The Board consists of seven persons, three appointed by the PSD Commissioner, two by the Chair of the Senate Committee on Natural Resources and Energy, and two by the Chair of the House Committee on Energy and Technology. Board member terms are four years in length.

The current Board members, the authority that appointed each member, and the year (*terms end on June 30th*) each member's term expires are:

- Kate Desrochers, House Energy & Technology Committee, 2023
- Jared Duval, Co-Chair, PSD Commissioner, 2023
- David Farnsworth, PSD Commissioner, 2021
- Johanna Miller, House Energy & Technology Committee, 2021
- Paul Zabriskie, Senate Energy Committee Chair, 2023
- Sam Swanson, Co-Chair, Senate Energy Committee Chair, 2023
- Ken Jones, Senate Energy Committee Chair, 2021

PLANNING FRAMEWORK

While this annual plan focuses on the programs and spending of one year, CEDF's planning decisions are based on a framework that assumes multiple years of programmatic activity. The CEDF decided, for FY 2021, to maintain the programs and a focus on advanced wood heating. The CEDF made this decision after examining: the program data collected, the level of market development achieved in the targeted advanced wood heating sector, progress made towards CEDF goals, other options for the funds, and the funding available.

VISION, GOALS AND OBJECTIVES

To guide CEDF decisions, a multi-year strategic plan was developed in 2018. The strategic plan was built to advance the statutory purpose of the CEDF to promote the development and installation of cost-effective and environmentally sustainable renewable energy resources for the long-term benefit of Vermonters. To prevent the strategic plan from becoming stagnant and forgotten until the next five-year plan is written, and to ensure that annual plans are aligned with the strategic plan, the CEDF reviews the strategic plan each year when creating its annual plan. For the FY 2021 Plan and Budget the vision and goals of the 2018 multi-year strategic plan are maintained, as described in Figure 1 below.

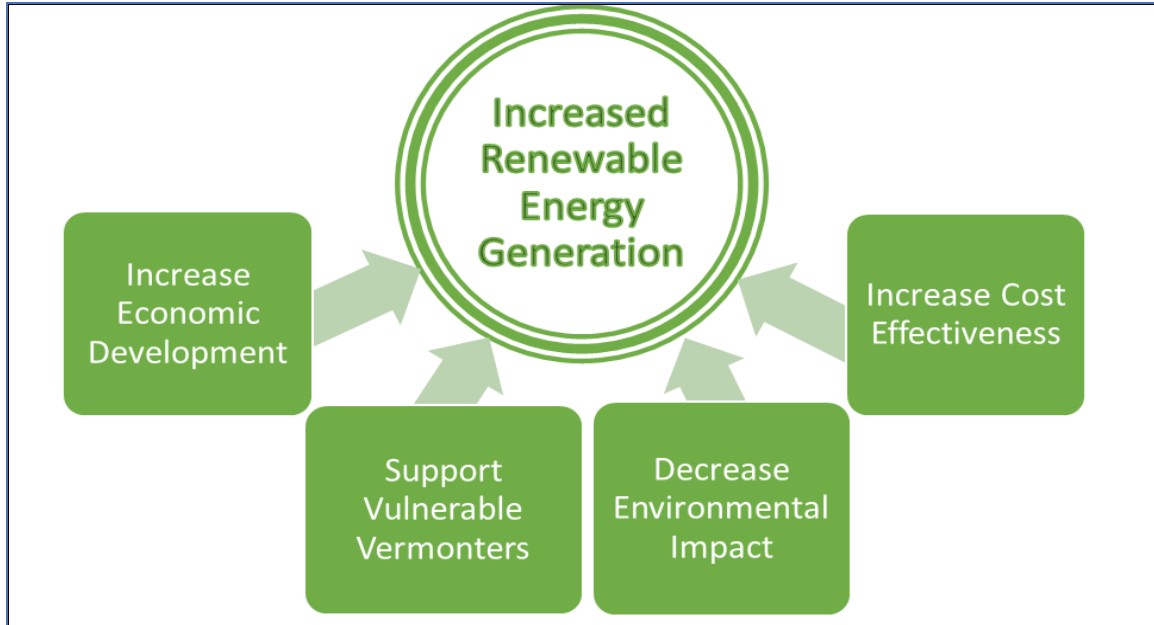


Figure 1. CEDF's four goals in support of its vision of increased Renewable Energy Generation.

BUDGETED FY 2021 REVENUES

The CEDF budget for FY 2021 includes \$30,000 of interest income, and \$100,000 of loan principal and interest payments from loans CEDF made in the past. See Appendix A for the FY 2021 budget for the CEDF funds.

Separately, the CEDF continues to manage a renewable energy loan fund created in 2009 with American Recovery and Reconstruction Act (ARRA) funds. These loans are administered by the Vermont Economic Development Authority (VEDA). Principal and interest payments from these ARRA loans are budgeted to be \$100,000 during FY 2021. These funds, as well as funds carried forward from prior fiscal years, will be redeployed as detailed in the ARRA fund section below. See Appendix B for the FY 2021 budget for the ARRA funds.

OVERVIEW OF PLAN & BUDGET

The CEDF will continue to strategically focus on the development of the advanced wood heating market in Vermont. The CEDF has chosen advanced wood heating as its focus due to its many benefits that support the CEDF's four goals. Specifically, advanced wood heating:

- Keeps dollars spent on heating fuel in the local economy
- Reduces the use of fossil fuel
- Supports and builds local businesses and a wood heating economic sector in VT
- Supports maintaining forests as forests and Vermont's working landscape
- Creates and maintains a diverse set of jobs ranging from those working in the forest to those selling pellets and installing heating systems
- Builds on Vermont's traditional wood heating manufacturing base and rich wood heating history
- Improves the quality and effectiveness of wood heating, a fuel system that serves the needs of many low to moderate income families in Vermont

- Improves heating resiliency
- Lowers heating costs

The CEDF defines advanced wood heating as wood heating that: 1) utilizes highly efficient combustion technology, 2) produces low levels of emissions, 3) supports healthy forest ecosystems, and 4) consumes local wood. For the CEDF to meet its goals it is important that all four of these conditions of advanced wood heating are built into program designs.

What is considered “highly efficient”, a “low level of emissions”, a “healthy forest ecosystem”, and/or “local wood” will evolve with technology improvements and the CEDF’s program requirements will be adaptive in order that its programs are always leading the wood energy market to improve its performance.

For CEDF’s pellet heating programs systems receiving incentives will be required to meet a 85% efficiency standard (80% for wood chip systems) and have best available emission control technologies that limit particulates to no more than a 0.1 lb./MMBtu output. The CEDF believes that wood heating can have a positive carbon emission impact through sustainable forest management practices that ensure long-term forest health, biodiversity, carbon storage, and reduction of fossil fuel use. To help ensure this is the case, the CEDF will emphasize the use of local wood, such as wood primarily coming from a fifty-mile radius woodshed from where it is consumed. Using local wood makes it possible for the State to sufficiently monitor and manage the forest resource used for wood heat. The CEDF is committed to working with the Vermont Department of Forest and Parks (and other stakeholders) to promote sustainable harvesting guidelines for forest management.

CEDF will continue to work with Efficiency Vermont (EVT) on coordinated incentives for advanced wood heating. Specifically, the CEDF will be working with EVT’s co-op marketing incentive to build consumers’ awareness of advanced wood heating options and local wood heating businesses.

CEDF’s work building the advanced wood heating market in FY 2021 builds on its foundational work completed over the prior five years. Vermont is seeing slow but continued increases in advanced wood heating installations and progress towards the goal of a self-sustaining market of equipment providers and local fuel suppliers for advanced wood heating in Vermont.

The Fund will continue the Small-Scale Renewable Energy Incentive (SSREI) Program as the primary program to promote advanced wood heating. The CEDF will use \$550,000 of returned ARRA loan funds to add incentives to the SSREI Program to grow the bulk pellet sector in Vermont by continuing to incentivize bulk pellet bins for homeowners with pellet stoves. These funds, together with CEDF funds will be used to provide an additional incentive to home and business owners that change-out a coal fueled heating system for a pellet or dried chip system.

The CEDF will continue to administer the three grants issued in FY 2020 as part of the grant solicitation to expand and strengthen the supply side of the Vermont pellet and dry wood chip market. All three projects granted funds were delayed and will be completed in FY 2021.

The Windham Wood Heat Initiative that started in 2015 and a separate Windham County renewable energy sub-grant program that started in 2017 will continue in FY 2021. Both grant

programs are administered by the Windham Regional Commission and will continue to support advanced wood and possibly other renewable energy projects in Windham County.

The CEDF discontinued its state-wide wood stove change-out and pellet stove program in FY 2020 after meeting its legislatively directed obligations. CEDF still believes stove change-outs are a valuable tool to obtain air quality and other benefits but didn't see a need for CEDF to offer an incentive in addition to the one offered state-wide by Efficiency Vermont. CEDF will continue its existing grants that support stove change-outs for low-income households that need a higher incentive to afford a new stove and that might also need repairs to their chimney or stove ventilation system. These programs are being administered by the Vermont Office of Economic Opportunity and the regional Weatherization Assistance Programs and NeighborWorks of Western Vermont that operates a program just in Rutland and Bennington counties.

The CEDF will continue to collaborate with and leverage the projects of the many organizations working on promoting wood heating in Vermont and New England such as the State Wood Energy Team, the Biomass Energy Resource Center, the Vermont Sustainable Jobs Fund, and the Northern Forest Center. The CEDF will also continue to collaborate across State Government to promote advanced wood heating.

DESCRIPTION OF PROGRAMS & BUDGET

The programs described below provide details on the Fund's planned programs for one year and provide a narrative for the budgeted line items in Appendixes A and B. The CEDF anticipates that by the end of FY 2021 changes to CEDF's operations and statutory structure should be considered. As part of its plan for powering-down the Fund the PSD will investigate possible changes to CEDF's structure, with input and collaboration with the CED Board and the public. The CEDF was created in statute when millions of dollars were allocated to the CEDF annually from Entergy Vermont Yankee payments. Without new funds being allocated to the CEDF, the CED Board is recommending that the PSD investigate a restructuring of the CEDF. The PSD will look into how the CEDF might be preserved to meet its obligations to receive remaining loan repayments, and be the recipient for any alternative compliance payments to meet the Renewable Energy Standard in the years beyond FY 2021, or if these obligations could be met differently.

Windham County Programs

For FY 2021 over \$700,000 is budgeted for the three renewable energy programs in Windham County. All three programs were operational in FY 2020 will continue in FY 2021:

1. The Windham Wood Heat Initiative
2. The Renewable Energy Competitive Grant Program
3. Low-income Residential Pellet Heating Program

Windham Wood Heat Initiative: For several years there has been a continuing collaborative effort to build an advanced wood heating market in Windham County from the ground up. The program is administered by the Windham Regional Commission. While progress has been slower than wished for, the CEDF is confident that the slow and steady up-take of advanced wood heating systems is providing positive long-term economic benefits for the County and a

lasting transformation of the local heating markets. The approximately \$583,000 of remaining funds available in FY 2021 will be granted in support of schools, other public serving institutions, and businesses installing advanced wood heating systems, with a an emphasis on semi-dry wood chips.

The Renewable Energy Competitive Grant Program: The WRC also manages this program. The remaining \$100,000 of this program is from previously granted projects that were not able to be completed and the allocated funds returned to the WRC. The WRC will be issuing new grants (or a grant) in FY 2021.

Low-income Residential Pellet Heating Program: Approximately \$32,000 remains of Windham County funds for Windham and Windsor Housing Trust’s program targeted to low-income residents. This program is leveraging State and County funds and outreach/education efforts to build the emerging advanced wood energy economy in Windham County and to help lower particulate emissions and increase heating efficiency by exchanging non-EPA compliant wood stoves for cleaner burning EPA-certified stoves.

Windham County Program Evaluation: Given that Windham County programs will continue to expend funds in FY 2021, the funds reserved for an evaluation of the Windham County programs in FY 2020 will be carried forward and expended in FY 2021. This evaluation will provide recommendations for future investments in Windham County’s clean energy sector.

Small Scale Renewable Energy Incentive (SSREI) Program

The SSREI Program will continue in FY 2021 with an allocation of just over \$450,000.

The SSREI Program has proven to be an effective policy tool to grow the residential and small commercial small-scale renewable energy technologies in a widely distributed and accessible manner. Given the program’s advantages of being market-based, cost effective, and simple, with open and transparent access, the CEDF will continue to fund this program.

The funds budgeted for the SSREI Program support program administration, incentives for the installation of residential and commercial pellet boilers, maple sap evaporators fueled with wood pellets, and an additional incentive for businesses that heat with coal to switch to pellets.

The SSREI Program will continue to be administered by the Renewable Energy Resource Center (www.nerc-vt.org) for at least the first half of FY 2021. The RERC is a division of the Vermont Energy Investment Corporation which was awarded the contract as part of competitive bid process in 2018. The contract was extended until December 31st, 2020.

Competitive Grant Awards for Bulk Pellet Infrastructure

The following three bulk pellet infrastructure grants were issued in FY 2020 and the projects will be built and the grant funds spent in FY 2021:

Grantee	Project	Total Project Cost \$	Grant Award Amount \$
Bourne’s Energy	Quonset Hut and equipment for Bulk Pellet storage	\$128,697	\$51,479

Lyme Green Heat	Pneumatic pellet delivery truck and pup trailer	\$325,000	\$130,000
Vermont Energy Systems	Bulk pellet storage and loading facility	\$375,000	\$150,000

Clean Energy Finance and Clean Energy Industry Reports

The Fund will provide support for the development and management of the eighth annual Vermont Clean Energy Industry/jobs Report.

The CEDF has budgeted \$20,000 to continue the annual Clean Energy Industry Report for another year. Over the past seven years the report's data and analysis of Vermont's Clean Energy Industry provided specific market information that was helpful to the Fund, State agencies, and the Vermont legislature, to gauge the effectiveness of state clean energy policies and incentives designed for growing this sector of the economy.

Solar Permitting Training

In 2013 the CEDF acquired \$14,000 from a Public Utility Commission issued fine for an environmental violation committed during the installation of a solar project. The funds are required to be spent on environmental permitting training of solar PV installers in consultation with the Agency of Natural Resources (ANR). As net metering and solar permitting has changed over the past several years the training has been postponed numerous times. As the permitting process for solar PV has settled the hope is that ANR will be able to hold a training and expend these funds in coming fiscal year.

CEDF Administration & Program Management

In FY 2021 the budget for program administration and management is \$150,000. These funds will cover the salary and benefit of the CEDF Fund Manager, as well the costs incurred by the PSD for the administration of CEDF programs.

In addition, a portion of these funds may be used to pay the CEDF Fund Manager for hours worked on non-CEDF clean energy programs and planning activities at the PSD. As the CEDF programs and grants end and there is less CEDF work for the Fund Manager the PSD may assign clean energy tasks to the CEDF Fund Manager. These tasks could include writing and planning work on the PSD's Comprehensive Energy and Electric Plans, the PSD's Annual Energy Report, development of an energy dashboard, review of regulated utilities' clean energy programs, and other clean energy reports and writing required of the PSD.

The PSD will also use up to \$20,000 of ARRA funds to help cover the PSD and CEDF administrative costs associated with administrating ARRA funded programs.

Loan Servicing Fees

The CEDF has budgeted \$9,000 for payment to Vermont Economic Development Authority (VEDA) to service existing CEDF loans. The fees are based on a \$900 per quarter flat fee plus 1% of the outstanding balance of all CEDF loans VEDA is servicing.

American Recovery and Reinvestment Act (ARRA) Revolving Loan Funds

As part of the ARRA funded programs the CEDF created a \$3.8 million revolving loan fund in 2010, administered by VEDA. In 2012 the Fund ended this loan program. Loan principle and interest that borrowers pay back to the CEDF are being re-deployed to other financial incentive programs. The CEDF continues to believe the greatest benefit of these ARRA funds is to leverage other financial products and private capital available and not through direct loans. Approximately \$1.6 million of the ARRA funds repaid are available to the CEDF in FY 2021.

In FY 2021 the CEDF will continue to administer the two ARRA funded grants issued in prior fiscal years. One is NeighborWorks of Western Vermont's wood stove change-out program to low-income residents of Rutland and Bennington County. This program is increasing the use of bulk pellet heating, decreasing particulate emissions, and, in some cases, increasing the thermal energy efficiency of the participating homes. The second grant is with the Vermont Office of Economic Opportunity (OEO). OEO sub-grants funds to the regional Community Action Programs to provide wood stove change-outs to low-income Weatherization program eligible Vermonters.

The CEDF will also continue to fund the incentive started at the end of FY 2020 to encourage the installation of bulk pellet bins for Vermonters heating with pellet stoves, so they don't have to buy, carry, and store pellets in forty-pound sacks. This incentive program is part of the SSREI Program and is designed to support the bulk pellet delivery market in Vermont.

ACTIVITIES AS PART OF THE PUBLIC SERVICE DEPARTMENT

As part of the PSD, the CEDF will continue to be a resource for the PSD on renewable energy matters. The CEDF will build upon its current role as a virtual clearinghouse for state government of information about renewable energy technologies and funding options. In doing so, the CEDF strengthens interagency relationships, coordination, and program leveraging to help generate collective benefits from increased renewable energy such as economic development, affordability, and the reduction of energy poverty.

In addition, as mentioned above in the CEDF Administration section, CEDF funds may be used to pay the CEDF Fund Manager for time spent working on PSD renewable energy related tasks.

DRAFT Fiscal Year 2021 CEDF Budget	
CEDF Carry Forward and Estimated Revenue	\$
CEDF Carry Forward	1,772,923
CEDF Loan Repayments (P&I)	100,000
Interest	30,000
TOTAL FY '21 Revenue & Carry Forward	1,902,923
DRAFT FY 21 Program Allocations & Expenses	
Programs	FY 2021 Budget \$
Windham County Programs (RE Grants, <i>Wood Heat Initiative, Low-income stoves</i>)	716,524
Small-Scale Incentive Program (Program contract & Incentives)	451,883
Advanced Wood Heat - Competitive Grants for Supply	331,479
Low Income Community Solar Pilot Project	62,204
Rutland County Low-income Stove Change-out and Advanced Wood Heating Program	43,169
Farm Energy-Compost Heat Recovery	25,800
Clean Energy Industry Survey	23,840
Solar Permitting Training	14,000
Program Management and Administration	150,000
Loan Servicing Fees	9,000
TOTAL	1,827,899

APPENDIX B	
Fiscal Year 2021 ARRA-CEDF Budget	
ARRA-CEDF FY 2020 Carry Forward and Estimated Revenue in FY '21	\$
ARRA-CEDF Carry Forward	858,697
ARRA Funds at VEDA	635,264
Loan Repayments (P&I)	100,000
Interest on Cash	11,000
TOTAL ARRA Funds	1,604,961
FY '21 Allocation of ARRA Funds	
Programs	FY 2021 Allocattions \$
Residential Low Income Pellet-stove IRB and Grant Program (NeighborWorks)	325,946
Weatherization Wood Stove Change-out, and Pellet Stove Program (via OEO grant)	264,978
SEMP Expansion Grant to BGS (\$150K/yr for 2 years)	300,000
Expansion of SSREI Program to include funds for additional incentives for bulk pellet bins, and coal heating change-out incentive. Also funds to help promote the program.	550,000
Advanced Wood Heating Grants	133,037
CEDF Administration of ARRA Grants	20,000
ARRA Loan Administration Fees	11,000
TOTAL ARRA \$ ALLOCATIONS	1,604,961