

**2020**



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**FISCAL YEAR 2020 ANNUAL  
PROGRAM PLAN & BUDGET**

FOR THE YEAR JULY 1, 2019 TO JUNE 30, 2020

## **EXECUTIVE SUMMARY**

The fiscal year (FY) 2020 (July 1, 2019 through June 30, 2020) plan and budget for the Clean Energy Development Fund (CEDF or Fund) is primarily a continuation of existing programs and grants from FY 2019 or before. There are a couple new programs for the year that maintain CEDF's focus on promoting advanced wood heating in homes and larger buildings across the state.

As mentioned in the FY 2019 annual plan and in the multi-year Strategic Plan of 2018, the CEDF is implementing a controlled winding down of all CEDF programs without plans for new income during FY 2020. Once the CEDF programs end, the Public Service Department (PSD) will preserve the CEDF in order to fulfill the statutory requirements of the CEDF as well as to maintain the option of reviving incentive programs if funding for the CEDF is secured.

Over the last twelve months the CEDF invested over \$1.6 million into Vermont's clean energy sector, with the bulk of those dollars helping to build the advanced wood heating market. The CEDF has played a central role in helping to build new employment and adding value to Vermont's traditional wood heating sector.

In FY 2020, the CEDF is budgeting \$3.2 million to build on past programmatic support for the Fund's principle programmatic goal for the year: continue to grow the Vermont market for advanced wood heating, specifically with local bulk wood pellets and chips. Maturing the local wood heating market will help strengthen Vermont's sustainable forest products and clean energy industries.

This FY2020 plan continues investing CEDF's American Recovery and Reinvestment Act (ARRA) funds in support of 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 wood and pellet stoves. In addition, new for this year, the CEDF will develop several ARRA funded adders to the advanced wood heating incentives to support the installation of the best-in-class bulk pellet heating systems in Vermont.

This year, the CEDF will issue a new solicitation for \$350,000 to support commercial bulk pellet (or dry chip) supply projects. New grants from this solicitation could support the creation of a pellet mill or other infrastructure in support of the bulk pellet supply chain in Vermont.

The CEDF budget for FY2020 is comprised of Federal ARRA and State funds carried forward from FY 2019 and funds being paid back on loans issued by the CEDF in years past. No new state appropriations were made to the CEDF for FY 2020.

## **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 funds.

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

## **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.

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

At the end of FY 2019 the PSD Commissioner Tierney re-appointed Jared Duval and Sam Swanson to new terms to begin July 1<sup>st</sup>, 2019. Janice St. Onge and Gaye Symington completed their terms on June 30<sup>th</sup> 2019 and did not seek re-appointment to new terms. PSD Commissioner Tierney thanks Ms. St. Onge and Ms. Symington for their years of dedicated service on the CED Board. The House and Senate Energy Committee Chairs each appointed a new member to the Board for terms starting on July 1, 2019.

## **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 2020, to maintain the programs and advanced wood heating focus developed in previous CEDF plans. The CEDF and the Board 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, 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 2020 Plan and Budget the vision and goals of the 2018 multi-year strategic plan are maintained, as described in Figure 1 below.

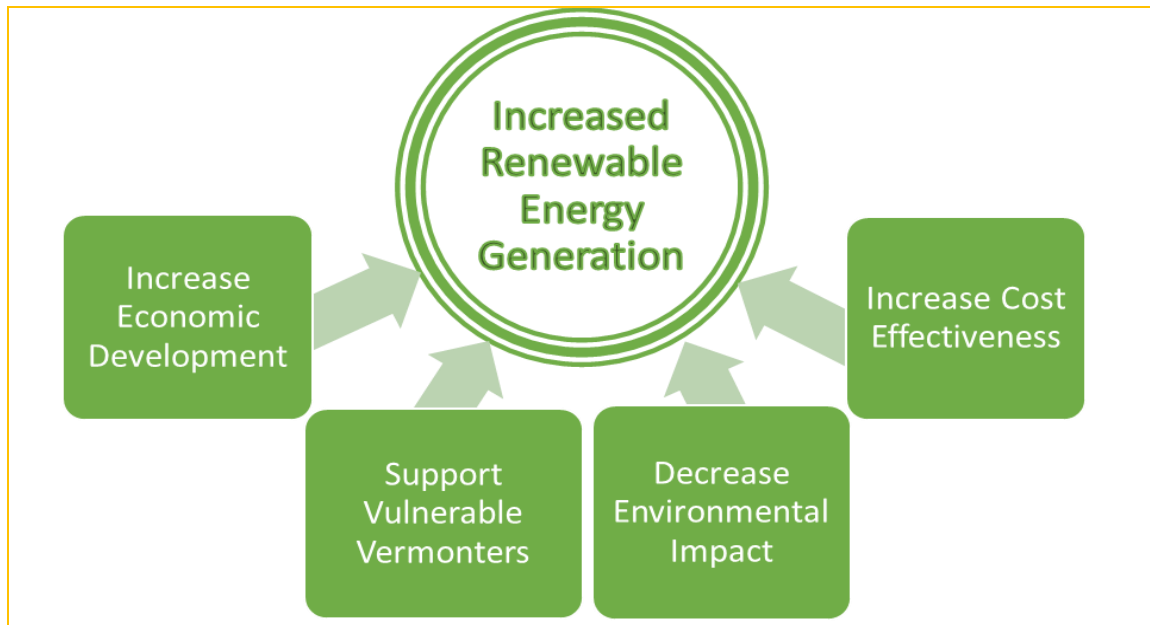


Figure 1. CEDF's four goals in support of its vision, from the 2018 Strategic Plan

### **BUDGETED FY 2020 REVENUES**

The CEDF budget for FY 2020 includes \$40,000 of interest income, and \$115,000 of loan principal and interest payments from outstanding loans CEDF made in the past. The CEDF is also budgeting \$235,000 of grant income from the U.S. Forest Service, via an MOU with the Vermont Department of Forest, Parks, and Recreation. Even though all the funds are budgeted in FY 2020 the grant will likely last beyond FY 2020. See Appendix A for the FY 2020 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. This ARRA loan fund is administered by the Vermont Economic Development Authority (VEDA). Principal and interest payments from the ARRA loans are budgeted to be \$110,000 during FY 2020. These funds, as well as funds paid back but not granted out in prior fiscal years, will be redeployed as detailed in the ARRA fund section below. See Appendix B for the FY 2020 budget for the ARRA funds.

## **OVERVIEW OF PLAN & BUDGET**

The CEDF will continue to focus on advanced wood heating as its strategic clean energy technological focus. 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
- Lowers carbon emissions
- Supports the local forest products industry
- 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

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 modern 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 the purposes of programs developed under this annual plan the CEDF will require that modern wood heating systems 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, and carbon storage. To help ensure this is the case, the CEDF will emphasize the use of local wood, for example wood primarily coming from a fifty-mile radius woodshed from where it is consumed. Using local wood also 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.

The Fund's focus on wood heating was established in FY 2015, at which point the Fund began to build its knowledge of Vermont's wood heating market. In FY 2016 through FY 2019 the Fund established programs and awarded grants to grow the Vermont advanced wood heating market. The FY 2020 plan and budget are a continuation of some of those programs and grants.

Growth of advanced wood systems installations and transformation of the heating market has been slow compared to the dramatic rise in solar systems installed in the last several years. Continued low prices for fossil heating fuels and low public awareness of advanced wood

heating opportunities make the transition to wood heat from fossil fuels difficult even with cash incentives. Despite the difficulties and slow growth of the sector the CEDF continues to be optimistic that the market for advanced wood heating in Vermont and the Northeast will grow significantly over the next few years and will supply great economic and environmental benefit to Vermont.

CEDF will continue to work with Efficiency Vermont (EVT) on coordinated incentives for advanced wood heating. In FY 2020 the CEDF will also be coordinating with the Vermont Department of Forest, Parks, and Recreation on a \$250,000 multi-year US Forest Service grant that will support pellet heating systems installed in newly constructed commercial buildings.

The CEDF FY2020 Plan includes efforts to build consumers' awareness of advanced wood heating options. The CEDF will continue to collaborate with organizations across the Northeast to promote local, sustainable, pellet heating. As part of this effort the Fund will work with the Champlain Maker Faire Innovations organization to sponsor school 'maker' teams to build a low-cost residential bulk pellet handling system.

With CEDF's foundational work completed over the prior five years Vermont should continue to observe a notable increase 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 reach CEDF's goals and objectives. The CEDF will continue to work with the Vermont Department of Environmental Conservation on the wood stove change-out program, as a component of the SSREI Program. The CEDF will use \$550,000 of returned ARRA loan funds to add incentives to the SSREI Program in order to grow the bulk pellet sector in Vermont. Additional rebates will be designed to encourage the use of bulk pellets instead of bagged pellets for those that have pellet stoves and to encourage the installation of larger pellet storage bins for those that install pellet boilers/furnaces.

While the SSREI Program will continue to build demand for bulk pellets, the CEDF will release a grant solicitation for proposals to expand and strengthen the supply side of the Vermont pellet and dry wood chip market.

In FY 2020 the CEDF will continue the Windham Wood Heat Initiative that started in 2015. A separate Windham County program that started in FY17, the Renewable Energy Grant Program, is also administered by the Windham Regional Commission and will continue into FY 2020 as the projects that were awarded grants are completed and grant funds are dispersed to recipients.

Federal ARRA loans issued during 2010 to 2012 provide revenue to the CEDF as the borrowers pay back the loan principal and interest. In FY 2020 \$300,000 of these returned ARRA funds will enable the CEDF to expand a residential low-income pellet stove program in Rutland County to Bennington County.

The CEDF will continue the \$500,000 state-wide wood stove change-out and pellet stove program that was started at the end of FY 2019. That program is for Vermonters who are eligible

for free Weatherization services and is being administered by the Vermont Office of Economic Opportunity and the regional Weatherization Assistance Programs.

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 FY2020 will be the last year that the CEDF operates under its current structure. During the year the CEDF will develop a multi-year plan for powering down the Fund that includes preserving its ability to receive funds and continue meeting its few remaining obligations in fiscal year 2021 and beyond.

### **Windham County Programs**

For FY 2020 just over \$1 million is budgeted for the three renewable energy programs in Windham County. All three programs were operational in FY 2019 will continue in FY 2020:

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 the past several years there has been a continuing collaborative effort to build an advanced wood heating market in Windham County from the ground up. 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 better for the long-term economic prosperity of the County and the lasting transformation of the local heating market than trying to expend the grant funds quickly with unnecessarily high incentives. The approximately \$600,000 of remaining funds available in FY 2020 will be granted in support of schools, other public serving institutions, and businesses installing advanced wood heating systems, with a particular focus on semi-dry wood chips.

**The Renewable Energy Competitive Grant Program:** The remaining \$220,000 of the \$700,000 program will be drawn down as the previously granted projects from FY19 reach completion. The program plans to release an RFP for new projects if funded projects cancel their grant awards.

**Low-income Residential Pellet Heating Program:** Approximately \$130,000 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 2020, the funds reserved for an evaluation of the Windham County programs in FY 2019 will be carried forward and expended in FY 2020. 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 2020 with an allocation of just over \$1 million. This total includes up to \$235,000 of US Forest Service grant funds. The CEDF, in partnership with the Vermont Department of Forest, Parks, and Recreation, will use these grant funds to support the installations of pellet heating systems in newly constructed commercial buildings.

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 the program.

The \$200,000 that the CEDF allocated toward a state-wide, wood stove change-out program as a component of the SSREI Program did not get expended in FY2019 and thus will be added to the FY 2020 budget for this program.

The remainder of the SSREI Program funds support program administration, and incentives for maple sap evaporators fueled with wood pellets.

The SSREI Program will continue to be administered by the Renewable Energy Resource Center ([www.nerc-vt.org](http://www.nerc-vt.org)) for FY 2020. The RERC is a division of the Vermont Energy Investment Corporation which was awarded the contract as part of competitive bid process in 2018.

### **Competitive Grant Solicitation for Bulk Pellet Infrastructure**

A competitive grant of \$250,000 in support of bulk pellet supply in the Northeast Kingdom of Vermont that was extended into FY 2019 was canceled by the grantee. The grantee, Kingdom Pellet, had to abandon plans for a new mill in Lunenburg, VT.

The CEDF is re-deploying the \$250,000 plus an additional \$100,000 for a \$350,000 competitive grant solicitation for projects that build and/or strengthen the supply side of the bulk pellet market in Vermont.

### **Program Evaluation**

The CEDF has contracted with Cadmus for a third-party professional evaluation of CEDF's programs, with a focus on the Fund's efforts to promote and transform the advanced wood energy market in Vermont. The final report/evaluation will be issued at the beginning of FY 2020.

While the CEDF has effectively tracked progress made toward increasing the installation of new renewable energy capacity in Vermont, a more comprehensive assessment of program effectiveness including a continuous learning cycle consisting of planning, action and reflection, is warranted. Data gleaned from the evaluation would enable the CEDF to improve program performance and help the Fund to communicate its successes and difficulties, for the benefit of similar efforts.



**Clean Energy Finance and Clean Energy Industry Reports**

The Fund will provide support for the development and management of the seventh annual Vermont Clean Energy Industry/jobs Report, as well as the Vermont Clean Energy Finance report.

The CEDF will have budgeted \$20,000 to continue the annual Clean Energy Industry Report for one more year. Over the past six 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. As the CEDF is not expecting to have sufficient funding to continue the report beyond fiscal year 2020 the Fund will work to develop a new funding source for the report past 2020 in order to continue the collection and dissemination of this valuable data.

The Fund has budgeted just over \$11,000 for the 3<sup>rd</sup> and final year of the annual Vermont Clean Energy Finance Report.

**Forest, Parks, & Recreation (FPR) Wood Energy Coordinator**

The CEDF will provide the final \$10,000 under a three-year MOU with Vermont FPR to support of a Wood Energy Coordinator staff position at FPR that was hired in FY18 as part of a three-year grant from the US Forest Service. The PSD, Agency of Commerce and Community Development, and FPR are all contributing funds for this position to reach the matching funds necessary to secure the federal US Forest Service grant in support of the position.

For FY 2020 the Wood Energy Coordinator secured a Wood Innovations Grant from the U.S. Forest Service for \$250,000. The funds will be used to make up a gap in rebate funding for commercial and institutional (C&I) advanced wood heat projects. Currently, existing C&I buildings converting to wood heat receive \$1.25/sq. ft. up to \$50,000 from Efficiency Vermont, but new construction is only eligible for \$0.20/sq. ft. The new grant will supplement Efficiency Vermont's \$0.20/sq. ft. and the \$3,000 incentive from the Clean Energy Development Fund to make the overall incentive equal to \$1.25/sq. ft. up to \$50,000. The grant is expected to fund ~20 new advanced wood heating projects over the length of the grant. The bulk of the grant funds (\$235,000) will be granted to the CEDF for distribution through the Small Scale Renewable Energy Incentive Program.

**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 CEDF and ANR will finally hold the training and expend these funds in fiscal year 2020.

**CEDF Administration & Program Management**

In FY 2020 the budget for program administration and management is \$125,000. These funds will cover the salary and benefit costs of PSD staff, including the CEDF Fund Manager, managing CEDF programs as well as CEDF related administrative costs incurred by the PSD.

The CEDF will also use up to \$25,000 of ARRA funds to help cover the additional PSD and CEDF administrative costs associated with ARRA funded programs.

### **Loan Servicing Fees**

The CEDF has budgeted \$10,000 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 its 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 \$1.5 million of the ARRA funds loaned out that have been repaid are available to the CEDF in FY 2020.

In FY 2020 the CEDF will use \$300,000 of the returned ARRA loan funds to expand a currently CEDF-ARRA funded program administered by NeighborWorks of Western Vermont. The current program is limited to Rutland County. The new \$300,000 will be used to expand the residential wood stove change-out program to low-income residents of Bennington County. The program will increase the use of bulk pellet heating, decrease particulate emissions, and increase the thermal energy efficiency of the participating homes.

The CEDF will expend the \$500,000 for wood stove change-out program set up in FY2019 with the State Weatherization Program. This program allows Weatherization Assistance Programs to replace dangerous and polluting wood stoves with new safe, efficient, and cleaner EPA-certified pellet or cord wood stoves.

The CEDF will develop a new incentive to encourage the installation of bulk pellet bin for Vermonters heating with pellet stoves as well as to encourage homes and businesses heating with pellet boilers to install larger pellet bins. This new incentive program will be 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 for information about renewable energy technology and funding options. By doing so, the CEDF strengthens interagency relationships, coordination, and program leverage to help generate collective benefits from increased renewable energy such as economic development, affordability, and the reduction of energy poverty.

<b>APPENDIX A</b>	
<b>Fiscal Year 2020 CEDF Budget</b>	
<b>Funds Carried Forward from FY 2019 and FY 20 Estimated Revenue</b>	<b>\$</b>
Estimated CEDF Carry Forward	2,826,264
CEDF Loan Repayments (P&I)	115,000
Interest	40,000
Grants	235,000
<b>TOTAL FY '20 Revenue &amp; Carry Forward</b>	<b>3,216,264</b>
<b>Program Allocations &amp; Expenses</b>	
	<b>\$</b>
Windham County Programs ( <i>Wood Heat Initiative, RE Grants, Low-income stoves</i> )	1,030,495
Small-Scale Incentive Program (Program contract & Incentives)	1,111,479
Advanced Wood Heat - Competitive Grants in support of Bulk Pellet and Chip Supply	350,000
Advanced Wood Heat Sales Tax Exemption	200,000
Low Income Community Solar	150,000
Rutland County Low-income Stove Change-out and Advanced Wood Heating Program	43,983
Program Evaluation by Cadmus	66,223
Farm Energy-Compost Heat Recovery	53,000
Clean Energy Industry Survey	20,000
Clean Energy Finance Report	11,490
Grant to FP&R for Wood Energy Coordinator	10,000
Bulk Pellet Maker Faire Sponsorship	8,000
Solar Permitting Training	14,000
Program Management and Administration	125,000
Loan Servicing Fees	10,000
<b>TOTAL</b>	<b>3,203,670</b>

<b>APPENDIX B</b>	
<b>CEDF-ARRA Fiscal Year 2020 Budget</b>	
<b>FY 2019 Carry Forward and Estimated Revenue</b>	<b>\$</b>
ARRA-CEDF Carry Forward	1,438,294
Loan Repayments (P&I)	95,000
Interest on Cash Balance	15,000
<b>TOTAL ARRA Funds</b>	<b>1,548,294</b>
<b>FY '20 ARRA Funds Allocation &amp; Expenses</b>	
<b>Programs</b>	<b>\$</b>
Residential Low Income Pellet-stove IRB and Grant Program	371,333
Weatherization Wood Stove Change-out, and Pellet Stove Program	500,000
Expansion of SSREI Program to include funds to promote the program and additional incentives for bulk pellet bins.	550,000
CEDF Administration of ARRA Grants	25,000
Additional Advanced Wood Heating Grants	85,000
ARRA Loan Administration Fees	13,000
<b>TOTAL ARRA \$ ALLOCATIONS</b>	<b>1,544,333</b>