



Cape & Vineyard Electric Cooperative

Annual Report FY 2020

FY 20 HIGHLIGHTS



Savings to date of over \$16.9 M to participating Cape & Islands Towns, Counties & Districts



By 2023, CVEC renewables to total ~ 54MW



Critical carbon offsets for a climate-challenged region



CVEC PROVIDES



Solar Photovoltaics (PV)



Battery storage



Assistance with Electric Vehicles & Stations



Electric Account & NMC Management





Cape & Vineyard Electric Cooperative, Inc.
ANNUAL REPORT FISCAL YEAR 2020
July 1, 2019 - June 30, 2020

Prepared September 2020

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Table of Contents

<u>I. EXECUTIVE SUMMARY.....</u>	1
<u>II. INTRODUCTION.....</u>	1
A. Cape & Vineyard Electric Cooperative Organizational History; Achievements.....	1
B. Current Cape & Vineyard Electric Cooperative, Inc. Members.....	2
<u>III. OFFICERS, BOARD OF DIRECTORS AND STAFF.....</u>	2
A. Officers.....	2
B. Board of Directors.....	2
C. Executive Committee.....	3
D. Finance Committee.....	3
E. Staff.....	3
<u>IV. FISCAL YEAR 2020 ACCOMPLISHMENTS.....</u>	4
A. CVEC's Initial Initiative, Round 1, Round 2 and Round 3.....	4
B. CVEC's PV/Storage Initiative Round 4.....	5
C. CVEC's PV/Storage Initiative Round 5.....	5
D. CVEC's PV/Storage Initiative Round 6.....	5
E. CVEC's Sharing of Net Metering Credits.....	5
F. CVEC's Purchase of Net Metered Power.....	6
G. Battery Storage.....	7
H. CVEC Consultant Services & Training.....	8
I. CVEC's Electric Car Initiative.....	9
J. CVEC Operational Administrative Adder.....	10
K. CVEC's Legislative Actions.....	11
L. Business Activities.....	11
M. Outreach Activities.....	14
<u>V. DATA REVIEW: PREVIOUS YEARS & FY19 REVIEW.....</u>	15
A. Energy Benefits.....	15
B. Environmental Benefits.....	16
<u>VI. SUMMARY.....</u>	17
A. CVEC Projects in Review.....	18
<u>VII. FISCAL YEAR 2020 FINANCIALS.....</u>	20
A. CVEC Preliminary Balance Sheet.....	20
B. CVEC Preliminary Income Statement for Fiscal Year 2020.....	21
<u>ATTACHMENTS</u>	
Attachment A: ConEdison Solutions CVEC-7 Details.....	22

Attachment B: PV Initiative Round 1 Details.....	23
Attachment C: PV Initiative Round 2 Details.....	24
Attachment D: FY20 Participant Net Benefit Totals Report.....	25
Attachment E: Annual Comparisons; Net Benefits by System and Participant.....	26

I. EXECUTIVE SUMMARY

Since its organization in 2007, the Cape & Vineyard Electric Cooperative, Inc. (“CVEC” or the “Cooperative”) has worked to develop renewable energy projects in support of CVEC’s goals and objectives of developing and/or owning renewable electric generation facilities and procuring and/or selling long-term electric supply or other energy-related goods or services at competitive prices to help stabilize electric rates for CVEC member communities. This Annual Report summarizes CVEC’s activities and operations in fiscal year (“FY”) 2020.

II. INTRODUCTION

A. Organizational History

CVEC was formed out of a strategic planning process commissioned and undertaken by the Cape Light Compact (“CLC”). CVEC was organized in 2007 with three members: CLC, Barnstable County, and the Town of Barnstable. Currently, CVEC has 24 members consisting of 21 towns, Nantucket, Barnstable and Dukes County, and the CLC. CVEC was formed under Massachusetts General Laws Chapter 164, §136. This statute provides for the establishment of energy cooperatives. Section 136 cooperatives can, among other things: (1) purchase and own generation, transmission and other projects and property; (2) enter into contracts and incur liabilities; (3) borrow money, issue notes and bonds; (4) enter into private/public collaboration (contractual); (5) purchase, sell and distribute energy; and (6) sell electricity to any consumer within CVEC member communities.

CVEC’s goals and objectives include developing and/or owning renewable electric generation facilities and procuring and/or selling long term electric supply or other energy-related goods or services including renewable energy certificate contracts at competitive prices to member communities.

A SAMPLING OF CVEC ACHIEVEMENTS OVER THE YEARS

2013	Awarded Outstanding Environmental Achievement by the Environmental Business Council (EBC) for CVEC’s capped landfill PV
2014	Awarded \$1.4M Community Clean Energy Resilience Initiative grant from DOER
2018	As Rate Case Intervenor, averted utility devaluation of Net Metering Credit value
2019	Produced Cape Cod’s first Electric Car Show at Hyannis Airport with CapeAir
2020	Provided cumulative to-date savings of \$16.9M to participating towns, schools, counties and districts



B. Current CVEC Members

Since its inception CVEC has grown from its three founding members (County of Barnstable, Cape Light Compact, and Town of Barnstable) to its 24 members as of June 30, 2020. The subsequent CVEC members include Dukes County, and the Towns of Aquinnah, Bourne, Brewster, Chatham, Chilmark, Dennis, Eastham, Edgartown, Falmouth, Harwich, Oak Bluffs, Orleans, Marion, Mashpee, Nantucket, Provincetown, Sandwich, Tisbury, West Tisbury, and Yarmouth.

III. OFFICERS, BOARD OF DIRECTORS AND STAFF

Listed below are the Directors and Staff as of the end of FY20, June 30, 2020. Directors who joined CVEC during the course of FY20 are so noted with an asterisk (*).

A. Officers (As of June 30, 2020)

Leo Cakounes, Harwich, President
 Jennifer Rand, West Tisbury, Vice-President
 Robert Wirtshafter, Chatham, Treasurer
 Charles Hanson, Brewster, Clerk

B. Board of Directors (As of June 30, 2020)

Austin Brandt, Cape Light Compact
 William Lake, Aquinnah*
 Stephen Lewenberg, Chilmark
 Rosemary Dreger-Carey, Falmouth
 Ron Collins, Orleans
 Wayne Taylor, Mashpee*
 Lauren Sinatra, Nantucket*
 Bill Saltonstall, Marion*
 Steve Gavin, Yarmouth
 Vacant, Dennis
 Robert Wirtshafter, Chatham
 Vacant, Tisbury
 Richard Toole, Oak Bluffs
 Tain Leonard-Peck, Duke's County
 Lydia Hamnquist, Provincetown
 Vacant, Sandwich
 Adam Prince, Eastham



Alan Strahler, Edgartown*
 Ron Beaty, Barnstable County*
 Janice Marks, Bourne

C. Executive Committee (As of June 30, 2020)

Leo Cakounes, Harwich
 Charles McLaughlin, Barnstable
 Ron Beatty, Barnstable County
 Austin Brandt, Cape Light Compact
 Jennifer Rand, West Tisbury

D. Finance Committee (As of June 30, 2020)

Charles McLaughlin, Barnstable
 Leo Cakounes, Barnstable County
 Bob Wirtshafter, Chatham
 Steve Gavin, Yarmouth
 Chuck Hanson, Brewster

E. Staff (As of June 30, 2020)

Liz Argo, Executive Director



Figure 1. CVEC Board Meeting September 2019. Left to right. Lydia Hamnquist, Bill Saltonstall, Wayne Taylor, Ron Collins, Charles McLaughlin, Jr., Leo Cakounes, CVEC Exec Dir, Liz Argo, Ron Bergstrom, Austin Brandt, Greg Rounseville, Bob Wirtshafter, Office Services Administrator, Tatsiana Nickinello, and Lauren Sinatra

IV. FISCAL YEAR 2020 ACCOMPLISHMENTS

A. CVEC's Initial Initiative, Round 1, Round 2 and Round 3

CVEC continues to manage its portfolio of photovoltaic (PV) renewable energy projects built through direct CVEC efforts. At the end of FY20, CVEC's renewable energy projects had provided \$16,911,987 in savings to its towns and governmental participants. The commensurate greenhouse gas reduction of 140,353 metric tons is significant as well as critical to a region already impacted by climate change.

Thirty-two projects are now in service as a result of CVEC's 2010 Initial Round, CVEC's 2013 Round 1, CVEC's 2014 Round 2 PV, and CVEC's 2019 Round 3 Initiatives. Together the installations have a capacity of 29.5 megawatts (MW). The total net metered energy value in FY20 from the Initial Round (CVEC-7) and CVEC's Rounds 1 through 3 is \$3,099,143, slightly below last year's savings of \$3,378,807. The decrease is attributable to weather and a decline in the net metering credit value in FY20. These savings and earnings from CVEC's 30.5 MW portfolio benefitted 21 governmental entities located on Cape Cod and Martha's Vineyard, including nineteen municipalities, one water district and two school districts.



Figure 2. The Provincetown Veterans Memorial Community Center PV installed under CVEC R3 PV Initiative. *Photo courtesy of Maxwell Wagner. 2020*

B. CVEC's Round 4 PV/Storage Initiative

In the winter of 2019, CVEC advertised its Round 4 PV/Storage Initiative. By April, three developers had been selected from the nineteen respondents, and contracting was completed over the summer of 2019. Round 4 will consist of seventeen photovoltaic installations ranging from capped landfill installations to solar canopies to roof mounted installations. Nine of the seventeen projects are to have battery storage included as part of the energy system. Round 4 is estimated to have a total capacity of 12 megawatts. As of the close of FY20, all seventeen CVEC projects had been registered in the state's incentive program called the Solar Massachusetts Renewable Target (SMART). The first project, which is to be installed on the roof of Monomoy High School, is slated for ground breaking in September 2020.

C. CVEC's Round 5 PV/Storage Initiative

Building on the success of CVEC's PV/Storage Initiative Round 4, CVEC advertised its Round 5 PV/Storage Initiative Request for Proposals in December 2019. Four developers responded and three developers were selected to develop twenty-two photovoltaic projects, thirteen of which will include battery storage. The Round 5 projects include a landfill project, a dual-use agricultural solar ground mount, twelve parking lot solar canopies, and eight roof mounted photovoltaic projects. Contracting is well underway with completion expected before the end of 2020.

D. CVEC's Round 6 PV/Storage Initiative

CVEC is now collecting PV/Storage installation proposals from regional governmental entities and, after assessment, will package and advertise a CVEC PV/Storage Initiative Round 6 in late 2020/early 2021.

E. CVEC's Sharing of Net Metering Credits

In addition to providing renewable energy for Cape Cod and Martha's Vineyard's municipalities through project development, CVEC further supports its communities through a unique net metered energy revenue sharing mechanism developed by CVEC to

allow shared benefits. For example, the CVEC Harwich Capped Landfill PV project was built to its fullest capacity with the knowledge that total PV production would exceed Harwich's total kilowatt hour ("kWh") usage. Through the Cooperative, the Harwich Capped Landfill PV project's excess energy is allocated to off-taker participants like Barnstable County and the Town of Provincetown. In this way, Cooperative participants, unable to host large renewable energy projects on their own municipal lands, can lower their electric costs through the purchase of excess net metering credits from their neighbors.

The list of towns or other governmental entities participating as off-takers of CVEC's net metered energy are Barnstable County, Dukes County, Brewster, Chatham, Chilmark, Oak Bluffs, Monomoy Regional School District, Provincetown and Yarmouth.

F. CVEC's Purchase of Net Metered Power

On behalf of CVEC's pool of off-takers, CVEC has leveraged its position as an energy cooperative by contracting to purchase net metering credits from various off-Cape non-CVEC projects. The purchases include 3 MW of net metered energy from an 8MW wind project known as Future Generation Wind ("FGW") located in Plymouth County. Participation in the wind project brought the Cooperative closer to its goal of managing a diversified portfolio of distributed generation projects on behalf of its member towns.



Figure 3. Photo of FGW wind turbines in Plymouth, MA.
Photo courtesy of Future Generation Wind

In FY17, FY18, and FY19 CVEC negotiated five additional Power Purchase Agreement (PPA) contracts with two off-Cape developers to bring added net metering credits to Cape & Vineyard governmental entities. CVEC's three contracts with Nexamp, LLC for net metering credits from its 6-megawatt solar farm located in Dartmouth, Massachusetts will allow CVEC to distribute over 4,236,953 kilowatt hours of net metering credits to CVEC's pool of offtakers as well as to three new beneficiaries; the Sandwich Water

District, the Harwich Water Department, and the Upper Cape Regional Water Cooperative.



Figure 4. Photo of anchors being installed in preparation for solar racking installation at Dartmouth Farms Solar. Photo courtesy of Nexamp LLC.

CVEC's FY17 contract with Syncarpha LLC on behalf of two additional regional governmental offtakers, the Centerville, Osterville, Marson Mills Fire District (COMM), and the Cotuit Fire District Water Department, allows CVEC to distribute net metering credits to those entities, with cumulative savings to them of \$469,098 as of the end of FY20.

G. Battery Storage

As noted, where appropriate, CVEC's PV/Storage Initiatives Rounds 4 and 5 will include battery storage systems.

In addition, CVEC continues to move forward on a battery back-up system to be located at the Dennis Yarmouth ("DY") High School Regional Emergency Shelter in conjunction with existing PV installed in 2015. The energy storage system will utilize a \$1.4 million grant awarded to CVEC in 2014 by the Massachusetts Department of Energy Resources under the Community Clean Energy Resilience Initiative ("CCERI").

CVEC, in partnership with Clean Energy States Alliance ("CESA") and Sandia National Laboratories, completed a Request for Proposals in FY18. In early 2019 CVEC selected Massachusetts developer, Ameresco, as the winning developer to, first, provide an economic analysis of their proposed battery design, and second, to contract for the proposed turn-key system for DY High's Emergency Shelter.

In February 2020, CVEC and Ameresco completed the Feasibility Study for the Dennis-Yarmouth High School Battery Energy Storage System, which can be found along with the study supplements on CVEC's website at <http://www.cvecinc.org/wordpress/cvec-bess-at-dy-high-school/>.

H. CVEC Consultant Services and Training Sessions

The Town of Dennis, a CVEC member, continues to use CVEC's net metering expertise and services to manage the distribution of the Town's net metering credits from their Dennis capped landfill PV system, a PV system not installed under CVEC management.

Another CVEC member, the Town of Provincetown, also utilizes CVEC's management services to delineate benefits from their Transfer Station PV system, a system installed by CVEC to operate both Behind-the-Meter and as a net metering credit exporter.

In FY18, the Town of Sandwich contracted with CVEC to utilize CVEC's administrative services to manage the transactions relative to a Town of Sandwich 4 megawatt PV system not installed under CVEC management.

In FY19, the Town of Yarmouth also engaged CVEC's management services. The Yarmouth management is extensive, with CVEC responsible for payment of all electric charges through the town's MUNIS platform, review and analysis of electric charges, and a full accounting of all net metering credit transactions.

The Cooperative invites all members and participants to use CVEC's management services to aid their processes.

In addition to offering CVEC management services, CVEC seeks to aid town staff, board members and town administrators understand the complexities of net metering credit transactions, by providing training sessions with CVEC staff. The sessions offer opportunity to get answers to specific questions. The annual training sessions are coined "Celebrations" and result in attendees receiving CVEC "Survivor's Awards".



Figure 5. CVEC Survivors Celebration Training event. August 2019



I. CVEC's Electric Car Initiative

Recognizing that 40% of greenhouse gas emissions is attributable to the transportation sector, in March of 2019, CVEC initiated its Electric Car Initiative in association with the Cape Light Compact.



Figure 6. Chatham's administrator's electric vehicle parked under the CVEC-installed PV on the Fire Station roof. From left to right, Chief Dave DePasquale, CVEC Executive Director, Liz Argo, Chatham Principal Projects and Operations Administrator, Terry Whalen, Chief Peter Connick, and the CVEC Representative from Chatham, Robert Wirtshafter. September 2019.

Through the efforts of CVEC's Project Coordinator, Evan Melillo, the towns of Aquinnah, Bourne, Chatham, Oak Bluffs, Yarmouth, as well as Barnstable County and Nauset Regional School District submitted applications to the MassEVIP grant program and received grants for electric cars and charging stations.

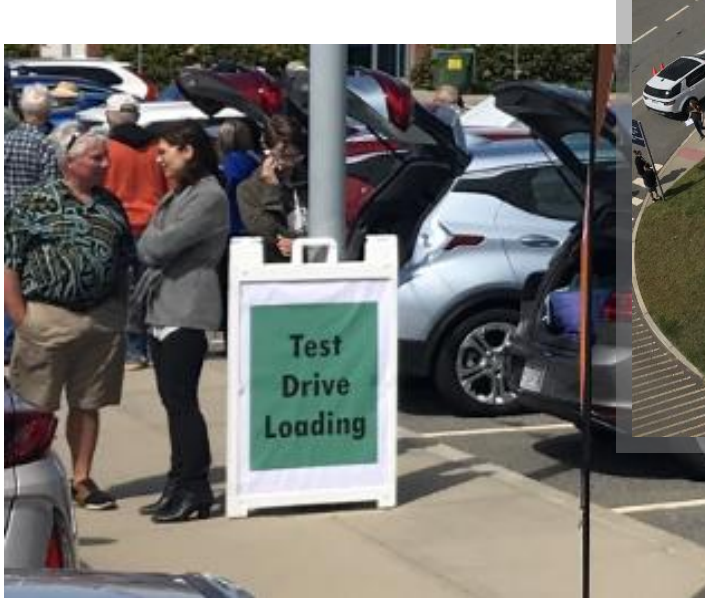
In September 2019, CVEC combined forces with Cape Air to stage the Cape's first Electric Vehicle (EV) Show. Sponsors included the Cape Light Compact, the Cape Cod Chamber of Commerce, and Green Energy Consumers Alliance.

The EV Car Show was hosted at the Hyannis Barnstable Municipal Airport and was organized as the premier regional event for National Drive Electric Week. Cape Cod auto dealers showcased their electric and plug-in hybrid models and offered test drives of nine

different EVs to the several hundred attendees. Private owners also brought an additional 22 EVs in 13 different makes and models.



Figure 7. Cape Cod's First Electric Vehicle Car Show, produced by CVEC and Cape Air. September 2019.



J. CVEC Operational Administrative Adder

To support CVEC's operations, CVEC routinely imposes a CVEC Operational Administrative Adder. The Adder is included in costs collected to pay project developers' Power Purchase Agreement (PPA) fees. The Adder ranges from \$0.015 to \$0.005 per kilowatt hour.

In one case, however, no Adder existed. Eight Round 1 PV Initiative projects were

designated to go operational with no Adder imposed. In late 2014 CVEC recognized it could not maintain financial and operational services for all participants at the current level without an Adder also collected on the Round 1 projects. After two years of negotiations, in early 2017, CVEC reached agreements with all Round 1 participants on an Adder of \$0.005 (half a penny) per kilowatt hour of production with all fifteen participants in the Round 1 projects. The income from the Round 1 Adder of just over \$100,000 eliminated a previous gap between CVEC income and expenses.

In 2019 CVEC lowered the Round 1 Adder to \$0.0025 (a quarter penny) per kilowatt hour of production. Thanks to the support from all fifteen towns and participants benefitting from the Round 1 projects, the Round 1 Adder at the reduced rate was extended through FY21.

K. Legislative Action

In FY19, Charles McLaughlin, Esq., the CVEC Director representing the Town of Barnstable, led a critical effort on behalf of CVEC to file legislative relief for CVEC ground-mounted projects burdened by the collection, and then prompt reimbursement, of property taxes. As a result, Senator Julian Cyr filed Senate Bill 1632, a bill seeking to give a property tax exemption directly for projects within Dukes and Barnstable Counties on the basis that “it is foolish for a municipality to tax a solar installation when it is receiving the substantial benefits of that clean energy”.

In June 2020, however, H Bill 1632 was abandoned in favor of adding language to House Bill 1763. H Bill 1732 seeks to impose property taxes on ground-mounted solar projects. With the addition of the CVEC language, “A municipality may opt out of the provisions of this clause by an affirmative vote of their chief executive authority”, municipalities will have the option as to taxing their public solar installations.

While House Bill 1763 was not taken up in the legislative session that closed at the end of July 2020, CVEC is working to have the bill taken up by the legislature in the near future.

L. Business Activities

In business news, CVEC renewed its contract for another year of energy consultant services provided by Peregrine Energy Group of Boston, Massachusetts and another year of accounting services provided by Glivinski and Associates of South Yarmouth, Massachusetts.



As expected, the Corona virus crisis affected CVEC in FY20 as it did every organization across the globe. CVEC's Executive Director and CVEC's Office Services Administrator moved to work out of their home locations in March, 2020. On July 1st, the work returned to the CVEC office space.

Following a Board vote to hire a CVEC Deputy Director, in June of 2020, Maria Marasco, Esq. joined the CVEC staff. Maria previously led the Fall River Redevelopment Authority. Having additional staff will allow CVEC to further expand its efforts to bring forward additional renewable energy and storage as well as to focus on the development of electric vehicle resources for our members.

In January 2020, the firm Clifton Larsen Allen (CLA) completed CVEC's FY19 audit. The conclusions from CLA included the following comments: "We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion. In our opinion, the financial statements referred to...present fairly, in all material aspects, the financial position of the Cape & Vineyard Electric Cooperative, Inc. as of June 30, 2019." The Statement of Net Position as per the CLA audit is below.

**CAPE & VINEYARD ELECTRIC COOPERATIVE, INC.
STATEMENT OF NET POSITION
JUNE 30, 2019**

ASSETS

CURRENT ASSETS

Cash	\$ 572,180
Restricted Cash	100,239
Investments	150,000
Accounts Receivable:	
Members - Energy Sales	435,585
Prepaid Expenses	9,697
Total Current Assets	<u>1,267,701</u>

LIABILITIES

CURRENT LIABILITIES

Accounts Payable and Accrued Expenses	503,956
NMC Pass-Through	93,743
Other Liabilities	140,699
Total Current Liabilities	<u>738,398</u>

NET POSITION

Unrestricted	<u>\$ 529,303</u>
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In other business news, as a member of the Cooperative Finance Corporation (CFC), CVEC was invited to attend the CFC annual forum held in New York City in June of 2019. CFC provides financing and industry-leading financial products to America's 900-plus local, not-for-profit, consumer-owned electric cooperatives and rural utility systems in 49 states, the District of Columbia and two U.S. territories. CVEC's Executive Director, Liz Argo, spent 4 days in intensive training alongside members of CFC attending from around the country.



Figure 8. The Cooperative Finance Corporation Forum 2019. From left to right. Former White House Press Secretary Ari Fleischer and former White House Chief of Staff and Homeland Security Secretary Gen. John F. Kelly. NYC, July 2020.

M. Outreach Activities

CVEC continues to contribute to the Cape Climate Change Collaborative as an Advisory Committee member. Other organizations participating in the Cape Cod Climate Change Collaborative include the Cape Light Compact, the Center for Coastal Studies, the Association to Preserve Cape Cod, Cape Cod 350.org, and the Cape Cod Commission.

Also in FY20, CVEC continued its spearheading of the bi-annual “Energy Committees of the Cape & Islands” meetings. Twenty-five energy committee members from twelve towns, including the town of Nantucket, assembled at the Cape Light Compact offices for updates from CVEC, the Cape Cod Climate Change Collaborative, the Cape Cod Commission and the Cape Light Compact. Attendees then networked, discussed prospects, coordinated efforts and compared accomplishments.

Due to the Corona Virus crisis, the usual meeting in June was cancelled with hopes that meetings will be resumed in FY21.



Figure 9. Energy Committees of the Cape & Islands Meeting. November 2019

Following another invitation, CVEC's Executive Director, Liz Argo, again participated as a panelist in the 10th Massachusetts Sustainable Communities and Campuses Conference held on Friday June 26, 2020. This was the third year that CVEC was invited to present.

Finally, as previously reported in the FY20 Annual Report, CVEC's annual Survivor's Meeting, an opportunity for town staff and CVEC members to learn everything and more about Net Metering Credits and renewable energy, took place again at the SeaDog in Yarmouth in June FY20 with 8 training session "Survivors" awarded their certificates.

V. DATA REVIEW: PREVIOUS YEARS & FY19 REVIEW

A. Energy Benefits

Annual production from CVEC's 39 existing PV projects continues to exceed contracted guaranteed annual outputs. FY20 production totaled 33,888,147 kWh, slightly over the FY19 kWh total of 33,682,311. For further details see Attachments A – E at the rear of the FY20 Annual Report.

At the end of FY20, total to date savings from all 39 CVEC-installed projects totaled \$15,942,317 with FY20 savings from CVEC-installed projects alone totaling \$2,836,593.

In addition to CVEC's project benefits, FY20 saw benefits from the off-Cape projects from which CVEC buys net metering credits in the amount of \$262,550. Participating entities receiving benefits from the Future Generation Wind Project, the Syncarpha Marie's Way project and the Nexamp Dartmouth 1 project include fourteen CVEC town members, as well as the Barnstable Fire District, the Monomoy School District, the Dennis-Yarmouth Regional School District ("DYRSD"), the Centerville, Osterville, Marston Mills Fire District (COMM) and the Cotuit Fire District Water Department.

With the addition of purchased Net Metering Credits from the above named off-Cape developments, total to date savings to CVEC participants in FY20 equaled \$16,911,987 with FY20 savings alone totaling \$3,099,143.



B. Environmental Benefits

CVEC's projects, both those CVEC has installed and those from which CVEC purchases net metering credits, deliver 35.4 MW of renewable power. The renewable energy from CVEC's PV Initiatives provides not only financial benefits but educational and environmental benefits to the 21 participating municipal and governmental hosts and off-takers.

Environmental benefits from the 35.4 MW of solar energy are estimated to offset over 60 million pounds of carbon equivalent annually. A carbon offset of this size is equal to eliminating 363 tanker trucks of gasoline or 67million miles driven by a passenger vehicle or taking 5,825 cars off the road each year. It is also equal to powering 4,784 homes every year.

FY20 Carbon Offsets Equal

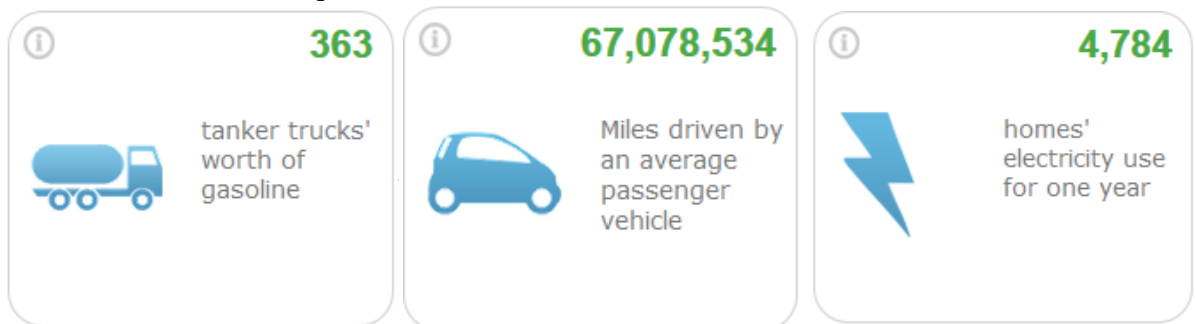


Figure 10. Equivalency calculations from EPA Energy Resources Calculator

* <http://www.epa.gov/cleanenergy/energy-resources/calculator.html#results>

VI. SUMMARY

In FY20 CVEC delivered over \$3,099,143 in savings and earnings to CVEC members and participants. When CVEC's Rounds 4 and 5 go online over the course of the next three years, CVEC will double its existing project portfolio and add battery storage, critical to grid stabilization with additional associated benefits to the ratepayers in the communities CVEC serves.



Figure 11. Group Photo at Earth Day 2015 Celebration for Completion of CVEC Round 1 & 2 Initiatives held at the CVEC Barnstable Municipal Airport PV installation. Photo courtesy of Sarah Coleman and Amar Rambhadjan

CVEC Projects in Review

Table 1. CVEC Project FY19 Benefits (using a NMC value of ~ \$0.17 or cost of electricity of \$0.20) * Equivalency calculation from EPA Energy

Initiative Project Group	Name Plate Rating for Initiative	kWh Production in FY20	kWh Production in FY19	Net Savings in FY20**	Net Savings in FY19
Round 1 (8 projects)	16,205 kW (16 MW)	18,808,248	19,261,806	\$1,511,020	\$1,681,260
Round 2 (6 projects)	9,453 kW (9.5 MW)	11,500,647	10,535,967	\$984,315	\$1,003,456
Round 2 Small BTM (11 projects)	2,144 kW (2.14 MW)	2,244,149	2,874,132	\$234,858	\$298,782
ConEdison Solutions (7 projects)	760.67 kW (.76 MW)	988,032	891,321	\$64,716 (\$0.20**)	\$58,380 (\$0.20**)
Round 3 (7 projects)	948 kW (.95 MW)	347,071		\$41,683 (\$0.20**)	
Future Generation Wind (4 turbines)	3,000 kW (3MW)	2,205,358	2,194,648	\$86,474	\$110,443
Syncarpha - Marie's Way (1 project)	2,176 kW (2.18 MW)	2,657,652	2,292,594	\$134,495	\$139,908
Nexamp Dartmouth 1 (1 project)	717 kW (.717 MW)	832,118	746,225	\$41,581	\$45,289
FY20 TOTALS (32 CVEC Projects)	34.5 MW	39,583,275 kWh in FY20	39,492,292 kWh in FY19	\$3,099,143 Savings in FY20	\$3,378,807 Savings in FY19
TOTALS to DATE	34.5 MW	198,507,216 kWh to date		\$16,911,987 to date	



Resources Calculator: <http://www.epa.gov/cleanenergy/energy-resources/calculator.html#results>
**(using cost of electricity for BTM or annual NMC for Virtual Metering)



Photo courtesy of Sandy Cashen

Figure 12. Station Avenue School Children pose with CVEC PV installation at DY High School Ground Mount.

VII. FISCAL YEAR 2020 FINANCIALS

A. CVEC Unaudited Preliminary Balance Sheet for FY 2020

	<u>Jun 30, 20</u>
ASSETS	
Current Assets	
Checking/Savings	
10006 - TD Bank- LOC Account	100,306.32
10005 - TD Money Market	25.00
10000 - Clearing	(140,699.17)
10001 - Century Control 7499	405,680.68
10002 - Century Checking 1992	96,696.73
10004 - CC5 Checking 6865	<u>327,934.28</u>
Total Checking/Savings	789,943.84
Accounts Receivable	
11000 - Accounts Receivable	106,485.50
11100 - Accounts Rec - Pass-through	<u>687,585.00</u>
Total Accounts Receivable	794,070.50
Other Current Assets	
12200 - CFC Commercial Paper Investment	150,000.00
12800 - Rent Deposit	1,500.00
12000 - Undeposited Funds	83,996.10
12500 - Accrued Revenue	9,571.00
12700 - Prepaid Insurance	7,533.96
12710 - Prepaid Expenses	<u>650.02</u>
Total Other Current Assets	<u>253,251.08</u>
Total Current Assets	<u>1,837,265.42</u>
TOTAL ASSETS	<u><u>1,837,265.42</u></u>
LIABILITIES & EQUITY	
Liabilities	
Current Liabilities	
Accounts Payable	
20000 - Accounts Payable	281,368.82
21000 - Accounts Payable - Pass through	<u>781,329.00</u>
Total Accounts Payable	1,062,697.82
Credit Cards	
20100 - Century Bank Credit Card	134.06
20200 - US Bank CC	<u>19.93</u>
Total Credit Cards	153.99
Other Current Liabilities	
21001 - Other Accd Exp & AP	9,570.00
22000 - Accrued Liabilities	<u>7,595.20</u>
Total Other Current Liabilities	<u>17,165.20</u>
Total Current Liabilities	<u>1,080,017.01</u>
Total Liabilities	1,080,017.01
Equity	
32000 - Unrestricted Net Assets	529,303.62
Net Income	<u>227,944.79</u>
Total Equity	<u>757,248.41</u>
TOTAL LIABILITIES & EQUITY	<u><u>1,837,265.42</u></u>



B. CVEC Unaudited Income & Expenses for FY 2020

Ordinary Income/Expense

Income

44451 • Forward Capacity Market	145,683.56
40000 • Project Income	4,407,757.04
44100 • Membership Fees	100.00
44300 • Services Income	31,930.00
44450 • On Peak Hours Resources Income	32,314.42
45000 • Operational Adders	251,380.35
45100 • Electric Vehicle Initiative	1,200.00

Total Income	4,870,365.37
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Gross Profit	4,870,365.37
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Expense

6732 • Forward Capacity Market Expense	25,000.00
63800 • Food (Board lunches, etc.)	739.27
63750 • Internet, Telephone & IT	3,203.29
64500 • One Time Non-Recurring Expenses	3,500.00
63790 • CCERI Grant Expense Acct	27,863.68
60000 • Project Expense	4,407,757.04
62790 • Payroll Expenses	96,904.15
62710 • Legal Fees	(23,308.37)
62700 • Audit Fees	16,000.00
62720 • Consultant Costs	59,181.26
62730 • Bank Fees	1,890.88
62735 • Conference Expense	45.00
62744 • Filing Fees	110.00
62750 • Insurance Expense	13,896.98
62760 • Travel Expense	4,817.14
63000 • Misc. Office Operating Expenses	(3,750.43)
63600 • Office Rental	9,720.00
64000 • Professional Development	455.34

Total Expense	4,644,025.23
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Net Ordinary Income	226,340.14
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Other Income/Expense

Other Income

44500 • Interest Income	1,154.26
31200 • Other Income	906.39

Total Other Income	2,060.65
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Other Expense

81000 • State Income Tax	456.00
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Total Other Expense	456.00
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Net Other Income	1,604.65
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Net Income	227,944.79
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Attachment A

CVEC INITIAL INITIATIVE (CVEC-7) PROJECTS' DETAILS

SITE	Name plate in Kilowatts	Output in Kilowatt hours FY20	Commercial Operation Date	Estimated Behind the Meter Savings since 2010
Barnstable High School	131	175,229	August 23, 2010	\$ 70,317
Eddy Elementary School (Brewster)	100.98	137,895	July 16, 2010	\$ 54,303
Stoney Brook Elementary School (Brewster)	100.98	134,563	July 16, 2010	\$ 54,969
Eastham Elementary School	100.8	122,066	February 27, 2010	\$ 50,623
Eastham DPW	80.4	92,083	February 25, 2010	\$ 40,607
Bourne Middle School	142.56	187,975	April 30, 2010	\$ 79,702
Harwich Elementary School	103.95	138,221	July 22, 2010	\$ 56,577
TOTAL	760.67	988,032		\$ 407,097

Table 1. Table Describing CVEC Solar PV Initial Initiative



Attachment B

CVEC ROUND 1 PROJECTS' DETAILS

SITE	Name plate in Kilowatts	Estimated Annual Output in Kilowatt hours (EAO)*	Commercial Operation Date	Savings FY20 (NMC \$\$ less Costs)	Savings to Date
Barnstable Landfill	4,171	4,814,040	September 15, 2014	\$ 415,250	\$ 2,143,839
Brewster Landfill	1,231	1,364,580	September 15, 2014	\$ 106,104	\$ 529,995
Chatham Landfill	1,837	1,749,600	September 29, 2014	\$ 192,064	\$ 898,425
Eastham Landfill	587	563,876	April 23, 2014	\$ 41,102	\$ 436,376
Edgartown's Nunnepog	1,442	1,459,802	June 6, 2014	\$ 75,827	\$ 628,014
Edgartown's Katama Farm	1,271	988,020	June 6, 2014	\$ 93,877	\$ 728,993
Harwich Landfill	4,492	5,265,717	August 1, 2014	\$ 499,701	\$ 2,452,179
Tisbury Landfill	1,174	1,217,332	July 29, 2014	\$ 87,096	\$ 544,243
TOTAL	16,205	17,422,967		\$ 1,511,020	\$ 8,852,176

Table 2. Table Describing CVEC Solar PV Initiative Round 1

* Estimated Annual Outputs ("EAOs") as per recent project owner calculations (not per contractual obligations)



Attachment C

CVEC ROUND 2 PROJECTS' DETAILS

*(BTM stands for Behind the Meter)

SITE	Name plate in Kilowatts	Estimated Annual Output in Kilowatt hours (EAO)**	Commercial Operation Date	Savings FY20 (NMC \$\$ less Costs)	Savings to Date (Estimates for BTM projects)
Barnstable Airport	5,735	6,968,400	April 3, 2015	\$ 623,591	\$ 2,863,572
Barnstable Fire District	934	1,098,478	April 21, 2015	\$ 83,874	\$ 422,540
Barnstable Senior Center (BTM)*	136	163,206	December 2, 2014	\$ 15,219	\$ 78,393
Barnstable High School (BTM)*	463	417,578	October 8, 2014	\$ 46,617	\$ 205,275
West Villages Elementary School, Barnstable (BTM)*	39	44,538	October 8, 2014	\$ 4,209	\$ 18,989
Bourne Community Center (BTM)*	37	40,732	August 30, 2014	\$ 5,312	\$ 21,719
Chatham Police Station (BTM)*	22	27,417	August 30, 2014	\$ 3,431	\$ 13,762
Chatham Town Hall Annex (BTM)*	22	28,953	August 30, 2014	\$ 3,475	\$ 14,646
DY High School Roof, Yarmouth	590	513,808	March 6, 2015	\$ 47,743	\$ 227,915
DY High School Ground, Yarmouth	690	815,444	April 14, 2015	\$ 63,796	\$ 294,032
Ezra Baker School, Dennis (BTM)*	71	68,647	August 30, 2014	\$ 8,569	\$ 35,470
M.E. Small School Ground, Yarmouth	832	991,740	February 27, 2015	\$ 94,056	\$ 422,618
Mattacheese School Roof, Yarmouth (BTM)*	209	227,225	December 16, 2014	\$ 24,715	\$ 123,558
Wixon School Ground, Dennis (BTM)*	403	458,335	December 8, 2014	\$ 51,471	\$ 232,704
Orleans Capped Landfill	554	697,104	May 15, 2015	\$52,240	\$ 230,797
Provincetown Transfer Station (BTM)*	152	214,667	December 15, 2014	\$24,099	\$ 110,104
West Tisbury Capped Landfill	708	897,661	January 5, 2015	\$66,758	\$ 337,452
TOTAL	11,597	13,673,933		\$ 1,219,173	\$ 5,653,545

Table 3. Table Describing CVEC Solar PV Initiative Round 2 (*BTM stands for Behind the Meter)

** Estimated Annual Outputs ("EAOs") as per recent project owner calculations, (not per contractual obligations).



Attachment D

PARTICIPANT REPORT FOR ALL CVEC INITIATIVES & POWER PURCHASES

(Participants are both Offtakers and Hosts)

CVEC Net Metering: FY 2020 Report

Totals by Year

	kWh	Avg NMC Rate	NMC / BTM credit	Developer Cost	CVEC Admin Cost	Net Benefit
FY 2017	38,621,219	\$0.15	\$5,902,115	(\$2,972,222)	(\$188,134)	\$2,741,759
FY 2018	37,226,654	\$0.17	\$6,213,182	(\$2,905,677)	(\$280,157)	\$3,026,954
FY 2019	39,586,723	\$0.17	\$6,796,549	(\$3,103,004)	(\$306,105)	\$3,387,441
FY 2020	39,583,274	\$0.16	\$6,456,440	(\$3,093,060)	(\$263,293)	\$3,099,143

FY 2020 by Participant

Participant	kWh	NMC / BTM credit	Developer Cost	CVEC Admin Cost	Revenue Sharing	Net Benefit	
Airport	1,364,243	\$219,415	(\$85,197)	(\$14,488)	\$251,931	\$371,666	Host with Offtaker (Barnstable)
Barnstable	11,373,120	\$1,853,708	(\$778,084)	(\$78,991)	(\$251,931)	\$744,702	Host and Offtaker from Airport
Barnstable County	1,176,817	\$188,351	(\$102,616)	(\$5,764)	(\$32,648)	\$47,322	Offtaker
Barnstable Fire Dist..	359,876	\$57,737	(\$21,977)	(\$5,733)	\$26,923	\$56,951	Host with Offtakers
Bourne	232,900	\$46,580	(\$28,486)	(\$469)	\$0	\$17,625	Host
Brewster	2,493,854	\$410,532	(\$228,457)	(\$7,402)	(\$19,953)	\$154,720	Host and Offtaker
Chatham	2,735,846	\$443,909	(\$202,908)	(\$8,905)	(\$8,613)	\$222,531	Host and Offtaker
Chilmark	62,427	\$10,005	(\$5,161)	(\$422)	(\$1,721)	\$2,701	Offtaker
COMM FD	2,253,689	\$361,958	(\$225,369)	(\$22,537)	\$0	\$114,052	Offtaker
Cotuit	403,963	\$64,879	(\$40,396)	(\$4,040)	\$0	\$20,443	Offtaker
Dukes County	71,821	\$11,516	(\$5,374)	(\$369)	(\$2,887)	\$2,887	Offtaker
DYRSD	1,324,236	\$239,007	(\$92,733)	(\$20,772)	\$82,424	\$207,922	Host with Offtaker (Yarmouth)
Eastham	634,636	\$110,823	(\$58,766)	(\$1,191)	\$5,481	\$56,341	Host with Offtakers
Edgartown	1,998,077	\$318,609	(\$185,493)	(\$4,995)	\$20,792	\$148,911	Host with Offtakers
Harwich	3,523,373	\$567,633	(\$250,160)	(\$8,808)	\$95,518	\$404,183	Host with Offtakers
Monomoy Schools	1,479,827	\$241,539	(\$156,587)	(\$9,025)	(\$13,065)	\$62,862	Offtaker
Oak Bluffs	456,643	\$75,716	(\$39,431)	(\$2,402)	(\$9,943)	\$23,941	Offtaker
Orleans	646,224	\$102,794	(\$43,691)	(\$6,863)	\$0	\$52,240	Host
Provincetown	1,383,171	\$230,646	(\$118,720)	(\$8,436)	(\$25,965)	\$77,525	Host and Offtaker
Tisbury	1,148,585	\$184,172	(\$104,866)	(\$2,871)	\$5,330	\$81,765	Host with Offtakers
West Tisbury	696,525	\$110,369	(\$45,086)	(\$7,397)	\$4,436	\$62,322	Host with Offtakers
Yarmouth	3,763,421	\$606,542	(\$273,500)	(\$41,413)	(\$126,111)	\$165,519	Offtaker
Grand Total	39,583,274	\$6,456,440	(\$3,093,060)	(\$263,293)		\$3,099,143	

Participants include hosts of solar projects and offtakers of net metering credits from solar projects hosted by others.



Attachment E

ANNUAL COMPARISONS FOR ALL CVEC INITIATIVES & POWER PURCHASES

Net Benefits By System

Round	System Name	FY 2017	FY 2018	FY 2019	FY 2020
1	Barnstable Landfill 1	\$225,650	\$242,036	\$244,589	\$255,892
	Barnstable Landfill 2	\$156,955	\$175,911	\$196,612	\$159,358
	Brewster Landfill	\$97,612	\$97,469	\$117,366	\$106,104
	Chatham Landfill	\$183,613	\$145,561	\$208,398	\$192,064
	Eastham Landfill	\$43,694	\$48,518	\$66,588	\$41,102
	Harwich Landfill	\$451,160	\$459,819	\$545,486	\$499,701
	Katama Farm	\$73,385	\$69,101	\$105,585	\$93,877
	Nunnepeg Well	\$77,176	\$86,611	\$92,002	\$75,827
	Tisbury Landfill	\$189,267	\$161,552	\$104,634	\$87,096
	2	\$541,007	\$631,446	\$686,062	\$623,591
	Airport - Section 2	\$79,598	\$95,397	\$102,502	\$83,874
	Barnstable Fire District	\$39,901	\$42,450	\$51,454	\$46,617
	Barnstable HS	\$19,447	\$19,428	\$22,028	\$15,219
	Bourne Community Ctr	\$4,203	\$4,217	\$5,035	\$5,312
	Chatham Annex	\$2,173	\$2,853	\$3,570	\$3,475
	Chatham Police Station	\$2,726	\$2,702	\$3,031	\$3,431
	DY High Roof Mount	\$59,026	\$39,401	\$53,268	\$47,743
	DYHS Ground Mount	\$53,760	\$64,854	\$68,957	\$63,796
	Ezra Baker School	\$7,039	\$6,761	\$8,285	\$8,569
	Marguerite Small School	\$81,318	\$88,508	\$94,767	\$94,056
	Mattacheese School	\$21,872	\$21,950	\$25,081	\$24,715
	Orleans Landfill	\$50,524	\$57,879	\$48,907	\$52,240
	Provincetown Transfer ..	\$24,744	\$23,175	\$22,510	\$24,099
	West Tisbury Landfill	\$62,479	\$78,054	\$65,146	\$66,758
	West Villages School	\$3,695	\$4,527	\$3,620	\$4,209
	Wixon School	\$40,510	\$41,217	\$55,448	\$51,471
	3				
	Chatham Fire Station				\$6,253
	Eastham Library				\$6,700
	Oak Bluffs Fire Station				\$7,918
	Provincetown Water Tr..				\$6,111
	Yarmouth Fire Station 1				\$4,647
	Yarmouth Fire Station 3				\$10,053
CVEC-7	Barnstable HS (CVEC-7)	\$8,637	\$8,097	\$10,582	\$11,478
	Bourne MS (CVEC-7)	\$8,206	\$8,724	\$11,664	\$12,312
	Eastham DPW (CVEC-7)	\$4,193	\$4,473	\$5,942	\$6,032
	Eastham ES (CVEC-7)	\$5,333	\$5,760	\$7,551	\$7,995
	Eddy School (CVEC-7)	\$5,514	\$5,846	\$8,587	\$9,032
	Harwich ES (CVEC-7)	\$6,101	\$6,346	\$8,750	\$9,053
	Stoney Brook School (C..	\$4,638	\$6,243	\$8,267	\$8,814
Other	First Generation Wind	\$57,768	\$110,960	\$124,569	\$86,474
	Nexamp		\$25,151	\$49,180	\$41,581
	Syncarpha	\$48,837	\$133,955	\$151,415	\$134,495
Grand Total		\$2,741,759	\$3,026,954	\$3,387,441	\$3,099,143

Net Benefits By Participant

Participant	FY 2017	FY 2018	FY 2019	FY 2020
Airport	\$322,440	\$376,342	\$408,893	\$371,661
Barnstable	\$672,852	\$747,552	\$806,055	\$744,703
Barnstable County	\$40,539	\$51,741	\$58,090	\$47,323
Barnstable Fire District	\$54,047	\$64,775	\$69,599	\$56,950
Bourne	\$12,409	\$12,942	\$16,700	\$17,625
Brewster	\$133,771	\$143,548	\$172,380	\$154,720
Chatham	\$199,212	\$167,690	\$236,037	\$222,538
Chilmark	\$1,625	\$2,341	\$3,114	\$2,702
COMM FD	\$41,418	\$113,607	\$128,400	\$114,052
Cotuit	\$7,418	\$20,348	\$23,015	\$20,443
Dukes County	\$2,739	\$2,954	\$3,293	\$2,887
DYRSD	\$194,002	\$184,388	\$221,347	\$207,925
Eastham	\$50,359	\$52,282	\$71,201	\$56,348
Edgartown	\$129,399	\$131,963	\$172,359	\$148,912
Harwich	\$364,921	\$371,925	\$441,216	\$404,183
Monomoy Schools	\$38,808	\$65,942	\$80,439	\$62,862
Oak Bluffs	\$12,359	\$16,749	\$19,607	\$23,941
Orleans	\$50,524	\$57,879	\$48,907	\$52,240
Provincetown	\$59,346	\$72,577	\$81,063	\$77,524
Tisbury	\$177,684	\$151,665	\$98,231	\$81,765
West Tisbury	\$58,327	\$72,867	\$60,817	\$62,322
Yarmouth	\$117,561	\$144,878	\$166,677	\$165,518
Grand Total	\$2,741,759	\$3,026,954	\$3,387,441	\$3,099,143

There was a modest decline in net benefits in FY 2020 compared to FY 2019 due to a slight decline in kWh production (for most systems) and a decline in the average net metering rate from \$0.17 to \$0.16 per kWh.



Thank You.

