



NC CLEAN ENERGY
TECHNOLOGY CENTER

JULY

2020

JUNE

-2021

**ANNUAL
REPORT**



NC STATE UNIVERSITY

MISSION STATEMENT

The N.C. Clean Energy Technology Center advances a sustainable energy economy by educating, demonstrating and providing support for clean energy technologies, practices, and policies.



PROGRAM AREAS

Renewable Energy

Clean Power & Industrial Efficiency

Clean Transportation

Energy Policy & Markets

Training



ENERGY & SUSTAINABILITY SERVICES

NCCETC offers business, industry, government and utilities a suite of services aimed at optimizing sustainability and energy-related objectives:

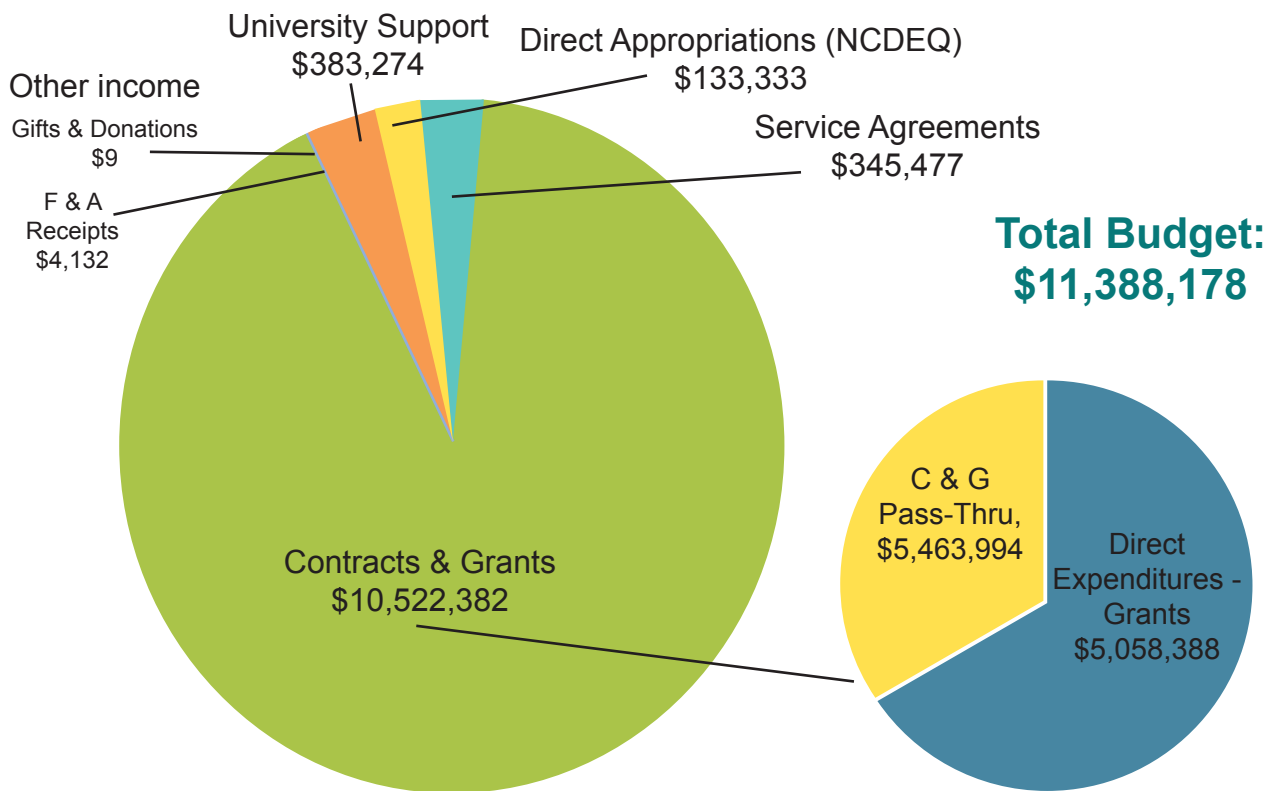
Planning and Guidance

Educational Opportunities, Training and Professional Development

Research and Market Analysis

Technical Assistance

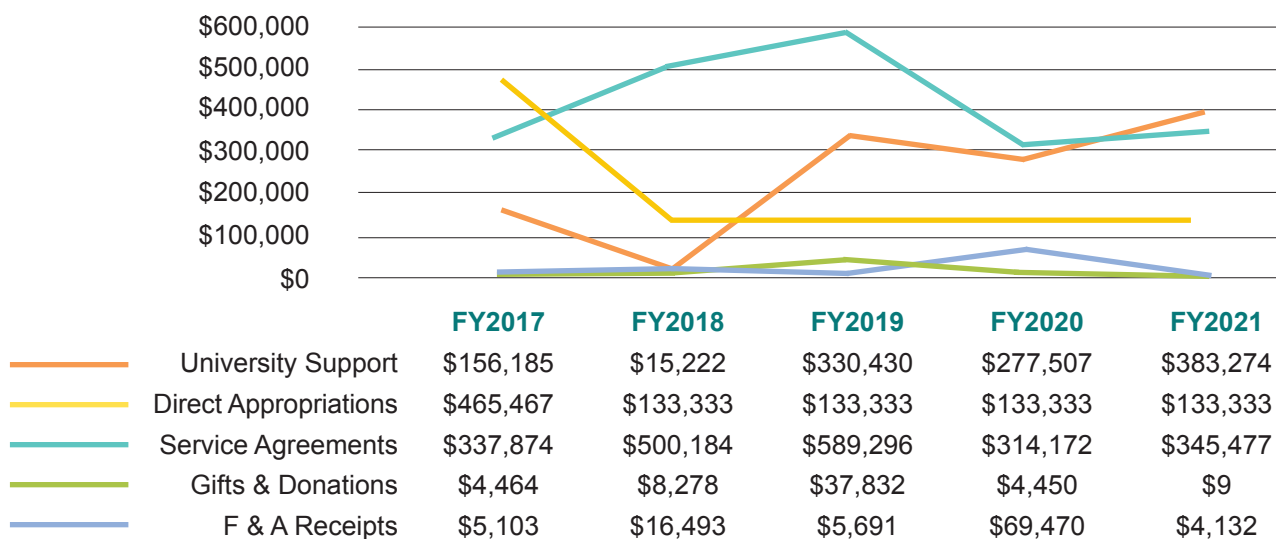




Highlights:

- State Appropriations are comprised of \$133,333 direct allocation from NCDEQ and State funding from University sources; for FY2021, NCCETC received \$383,274 from NC State College of Engineering and the Office of Research Innovation; University support varies each year.
- For FY2021, the NCCETC annual operating budget consists primarily of grant support from DOE, NCDOT, NCDEQ and Private Sector Entities with approximately 48% of grant funds appropriated to subrecipients to broaden the reach of the Center's mission and core programs.
- State Appropriations and revenue from Service Agreements also support the Center's mission and for FY2021, 54% of these funding sources were leveraged for cost share.
- Grant revenues decreased by 9.25% in FY2021, which is attributed to the impact the COVID-19 Pandemic had on the country as a whole and on the clean energy sector more specifically.

FY2021 NCCETC Operating Budget – Non-Grant Sources (5-Year Trends):




- The 5-year trends of non-grant funding sources illustrate how vital grant funds are for the Center.

2020-^{JULY}
2021^{JUNE}

BY
THE
NUMBERS

CELEBRATING
33 YEARS!

 **12**
FACILITY
ENERGY
ASSESSMENTS

1,330 kW
SOLAR PV IDENTIFIED

4 MW
COMBINED HEAT &
POWER IDENTIFIED

\$745.3k
POTENTIAL ENERGY
COST SAVINGS
PER YEAR


HOURS OF
TRAINING
OFFERED **450**

STUDENTS
TRAINED **34**

216 HOURS OF
LIVE, ONLINE
INSTRUCTION

4 DIPLOMA
GRADUATES



20
AVERAGE PUBLIC
ASSISTANCES
GIVEN A WEEK

 **62**
PRESENTATIONS
& WEBINARS GIVEN

WE'RE
TRENDING!

 **3,276**

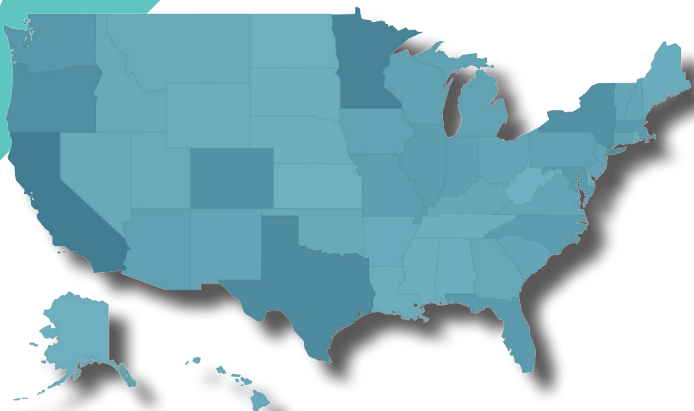
2,797 

 **801**

3,702 

16,000
NEWSLETTER
RECIPIENTS

 **27** EVENTS &
WORKSHOPS
HOSTED BY THE CENTER



DSIRE Insight is an extension of the Database of State Incentives for Renewables and Efficiency (DSIRE), offering policy and regulatory tracking, reports and data related to solar energy, energy storage, grid modernization and electric vehicles. DSIRE Insight research, including the 50 States report series, is intended to keep industry stakeholders informed with comprehensive and unbiased updates from our team of state policy experts. DSIRE Insight continued to evolve this year with the addition of more custom offerings and reports becoming available.

2021 STATE ENERGY CONFERENCE

2021 State Energy Conference of North Carolina

Connecting North Carolina's diverse energy economy



NCCETC held its first virtual State Energy Conference in 2021 with both live and on-demand sessions. Attendees came from a variety of backgrounds, including state and local government, non-profits, startups, academia and corporate organization – under the SEC's theme: "Connecting North Carolina's Diverse Energy Economy." Governor Cooper kicked off the conference by urging conference attendees to add their voice to the discussion of North Carolina's clean energy future. Conference sessions focused on best practices and case studies about current, emerging and innovative technologies, energy policy, commercial, industrial and institutional buildings, grid modernization, residential homes, renewable energy and utilities and infrastructure. Learn more: www.NCEnergyconference.com.

TRAINING GOES VIRTUAL

With in-person courses returning this Fall, NCCETC's training program is using the experience from going virtual during the COVID-19 pandemic to expand virtual course offerings moving forward. Various formats, including live, self-paced and hybrid online options are available to provide flexibility for participants. In fall 2020, NCCETC announced the addition of six online Cyberguardians courses focused on energy storage and distributed energy resources as well as the cybersecurity practices and processes essential to keep them secure. NCCETC expanded its partnership with ed2go in Spring 2021 to offer a total of 14 self-paced and on-demand courses.



SUSTAINABLE FLEET TECHNOLOGY VIRTUAL CONFERENCE 2020



The 2020 Sustainable Fleet Technology Virtual Conference, hosted by the NCCETC, showcased the latest and greatest technologies in the biofuels, electric, natural gas and propane arenas. All 17 sessions focused on best practices to make fleets run more efficiently, with award-winning and expert speakers including fleet managers, technicians, company presidents and CEOs, university professors, researchers, analysts, nonprofit managers and more who highlighted the leading edge of sustainable fleet practices and alternative fuel opportunities. Conference sessions included The Electrification of Transportation featuring a statement from Governor Roy Cooper, Renewable Fuels, Lubricants & Other Biobased Products and Electric Vehicle Options for Fleets. Learn more: www.sustainablefleetexpo.com.

SOLAR-PLUS FOR ELECTRIC CO-OPS

NCCETC partnered with Cliburn and Associates, LLC on the Solar-Plus for Electric Co-ops (SPECs) project to help optimize the procurement and operations of battery storage projects at local cooperatives. Three electric co-ops also joined SPECs to provide case studies of how local co-ops may use storage and solar-plus-storage strategies to achieve high renewable goals. A white paper examined the the state, federal and regional policies that impact solar-plus-storage development. SPECs and other applied research and development projects like it are working to reduce policy barriers to solar-plus-storage projects at electric cooperatives.



PLANNING AN AFFORDABLE, RESILIENT AND SUSTAINABLE GRID IN NORTH CAROLINA

Planning an Affordable, Resilient and Sustainable Grid in North Carolina (PARSG) is a joint project by the NC Department of Environmental Quality, UNC Charlotte's Energy Production Infrastructure Center and NCCETC. PARSG, which began in 2019 after North Carolina received a competitive award from the U.S. Department of Energy, will find the cost and benefits of investing in grid resiliency in North Carolina by examining storm-related impacts from past natural disasters. As part of the project, NCCETC partnered with New Hanover County to conduct resiliency analyses of local facilities.



OTHER MAJOR PROJECTS JULY 2020–JUNE 2021

50 States Reports

Clean Fuel Advanced Technology (CFAT)

Roanoke Electric Cooperative Vehicle-to-Grid Charging Station Study

Solar PV Feasibility Study for NC State's Fitts-Woolard Hall

Sustainable Fleet Technology Webinar Series

U.S. Department of Energy Southeast Combined Heat and Power
Technical Assistance Partnership

A Review of Net Metering Reforms Across Select U.S. Jurisdictions

GET INVOLVED

Achieving a sustainable future requires securing the work done by the Center. Become a Friend of the North Carolina Clean Energy Technology Center and support its mission of advancing clean energy for a sustainable energy economy. Individuals, private firms, and non-profit organizations are invited to support the Center (through the N.C. State Engineering Foundation) and its initiatives.

DONATE

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