



Two Years In: A Progress Update on the North Carolina Energy Efficiency Roadmap

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Summary

Energy efficiency provides a least-cost option for meeting energy demand while also lowering energy bills and reducing greenhouse gas emissions. In 2019, the Nicholas Institute for Environmental Policy Solutions published the North Carolina Energy Efficiency Roadmap outlining 32 recommendations for enhancing energy efficiency in the state of North Carolina. This policy brief provides a two-year update on the status of those recommendations.

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INTRODUCTION

Energy efficiency provides a least-cost option for meeting energy demand while also lowering energy bills and reducing greenhouse gas emissions. In 2019, the Nicholas Institute for Environmental Policy Solutions convened a series of meetings with academic experts, consumer advocates, environmental nonprofits, commercial entities, state agencies, and utilities to identify opportunities and strategies for increased energy efficiency (EE) deployment in North Carolina. This culminated in a comprehensive report, the North Carolina Energy Efficiency Roadmap,¹ mapping out 32 recommendations across 10 focus areas:

- (1) Regulatory studies/changes
- (2) Enhanced data tracking
- (3) Increased efficacy of existing EE programs
- (4) Improved technical assistance for utilities and state agencies
- (5) Energy Efficiency Advisory Council (EEAC)
- (6) Statewide Clean Energy Fund
- (7) Opportunities for new program development
- (8) Building code improvements
- (9) Education and awareness
- (10) Workforce and economic development

Since the purpose of the EE Roadmap is to encourage and catalyze action, we decided to check on the status of these recommendations, two years out. This brief identifies notable progress on several of the recommendations while also reminding us of the work left to be done. As we move from the strategy phase to on-the-ground implementation, concrete actions will be necessary to fulfill North Carolina's EE potential.

UPDATES

Create a North Carolina–Based Clean Energy Fund (Rec. 18)

Status: Complete

Establishing a “green bank” to align financing with market demand for EE and clean energy was among the top recommendations in the EE Roadmap. The North Carolina Clean Energy Fund (NCCEF)² was successfully launched in 2020 as a nonprofit financial institution operating on the same green bank model³ pioneered by numerous other states across the country. The fund will use public and private capital to catalyze investments in clean energy and energy efficient solutions across the state, particularly for the benefit of low- and moderate-income consumers. The NCCEF is currently working to raise initial capital and operating funds.

Provide “Download My Data” Functionality for All Utility Data (Rec. 27)

Status: Complete for Investor Owned Utilities; In Progress for Other Utilities

The EE Roadmap recommends that utilities expand data access by providing all customer classes with the ability to download 24 months-worth of consumption data in a standardized format. This would enable customers and approved third parties to better analyze energy efficiency and demand reduction opportunities. As of January

1. Weiss, Jennifer. North Carolina Energy Efficiency Roadmap (Durham, NC: Nicholas Institute for Environmental Policy Solutions, Duke University, 2019). <https://nicholasinstitute.duke.edu/publications/north-carolina-energy-efficiency-roadmap>.

2. North Carolina Clean Energy Fund. “North Carolina Clean Energy Fund.” Accessed February 27, 2022. <https://www.nccleanenergyfund.com/>.

3. North Carolina Clean Energy Fund. “Green Banks 1010.” Accessed February 27, 2022, <https://www.nccleanenergyfund.com/greenbanks101>.

2022, Duke Energy had a Download My Data function up and running for both its Duke Energy Carolinas and Duke Energy Progress customers.

Collect Existing Data on EE Metrics (Rec. 30)

Status: In Progress

Current information on energy efficiency in the state is collected in different formats and housed in different locations, limiting the ability of statewide or sector analyses. The EE Roadmap recommends that information on all types of energy (electricity, natural gas, fuel) be collected in one place to ease analysis. The Nicholas Institute has made significant progress on this recommendation by creating a dashboard⁴ that enables users to view aggregated, nonattributable data about energy use and intensity in North Carolina. However, the dashboard needs to be updated to reflect the most current data, and it would be helpful to incorporate data from the EPA Portfolio Manager and other nonresidential energy efficiency data sources. To ensure that the dashboard remains up to date, an administrator should be identified to manage the database long term.

Support Expanded Access to Creative Utility Financing Programs (Rec. 19)

Status: In Progress

The EE Roadmap recommends improving the effectiveness and accessibility of creative EE financing programs—including “Pay as You Save” (PAYS), on-bill tariffs, or the use of third-party providers—across multiple sectors. These types of programs would make it easier for low- and moderate-income customers, who are more likely to lack the needed upfront capital, to access much-needed EE upgrades.

As part of a 2021 rate case settlement,⁵ Duke Energy agreed to work with the settling parties (North Carolina Sustainable Energy Association, NC Justice Center, and Southern Environmental Law Center) to design a tariffed on-bill pilot program by September 2022, and the North Carolina Utilities Commission (NCUC) approved that agreement. NCSEA is currently leading a working group that involves settling parties and other North Carolina stakeholders to design program requirements for this program in anticipation of the filing next September. In addition, House Bill 951⁶ directed the NCUC to “establish an on-utility-bill repayment program related to energy efficiency investments” as part of an effort to reduce North Carolina’s carbon emissions by 70% by 2030.⁷

In Summer 2021, the state legislature introduced Senate Bill 358⁸ to establish a statewide commercial property assessed clean energy (C-PACE) program,⁹ which would make it easier for business owners to get energy retrofits. The bill was designed in consultation with experts who have written other C-PACE bills around the country and has obtained five legislative sponsors. The bill is currently sitting in committee, however there is hope that it may be taken up and debated during the Spring 2022 short session.

Match Energy Efficiency Opportunities to Unique Sector Needs (Rec. 13)

Status: In Progress

The EE Roadmap highlights the need to better address underserved and disproportionately energy-burdened groups—including low-income populations, multifamily units, mobile homes, and the agricultural sector—

4. Duke Nicholas Institute for Environmental Policy Solutions. “North Carolina Energy Efficiency Dashboard.” Accessed February 27, 2022. <https://nicholasinstitute.duke.edu/project/north-carolina-energy-efficiency-roadmap/north-carolina-energy-efficiency-dashboard>.

5. State of North Carolina Utilities Commission. DOCKET NO. E-7, SUB 1213; DOCKET NO. E-7, SUB 1214; DOCKET NO. E-7, SUB 1187. Raleigh, NC. January 15–16, 2020; January 29–30, 2020. <https://starw1.ncuc.net/NCUC/ViewFile.aspx?Id=b7bfd96b-6df7-4013-9054-d1ff7242588a>.

6. Energy Solutions for North Carolina, H.B. 591, North Carolina General Assembly (2021–2022 Session), <https://www.ncleg.gov/BillLookup/2021/H951>.

7. North Carolina Governor Roy Cooper. “Governor Cooper Signs Energy Bill Including Carbon Reduction Goals into Law.” October 13, 2021. <https://governor.nc.gov/news/press-releases/2021/10/13/governor-cooper-signs-energy-bill-including-carbon-reduction-goals-law>.

8. C-PACE Program, S.B. 358, North Carolina General Assembly (2021–2022 Session), <https://www.ncleg.gov/BillLookup/2021/s358>.

9. U.S. Department of Energy, Office of Energy Efficiency & Renewable Energy. 2017. Commercial Property Assessed Clean Energy (C-PACE): A Fact Sheet for State and Local Governments. https://www.energy.gov/sites/prod/files/2017/10/f39/FL1710_WIP_CPACEv2.PDF.

through improved EE rebates, incentives, and program offerings. The NCUC has encouraged some movement on this front. In April 2021, the NCUC directed Duke Energy to convene an independently facilitated stakeholder group to “develop a set of recommendations for a suite of energy affordability program options to address the affordability of electric service for low-income customers.”¹⁰ The Low Income Affordability Collaborative, which includes utility, nonprofit, government, and university members, met for its first workshop in July 2021 and is convening over 18 months through four subteams. Its final recommendations will be submitted to the NCUC.

In addition to spurring action on Rec. 13, the Low Income Affordability Collaborative could also provide support for Rec. 14 (Evaluate the Inclusion of New Criteria to EE Program Approval Process at NCUC) and Rec. 15 (Utilize Utility Demand-Side Management Savings for Low-Income Energy Efficiency Programs) of the EE Roadmap.

Establish a Pathway to Net-Zero Energy-Ready New Buildings (Rec. 7)

Status: In Progress

The EE Roadmap recommends establishing a defined pathway to net-zero energy ready new buildings and more energy efficient existing buildings by 2042. This pathway includes requiring all new buildings to receive an inspection and verification of energy code compliance and ensuring that all code stakeholders understand and act on increasing energy efficiency in the state’s codes. It could also involve updating the building code on a more regular basis. Currently, ad hoc committees are in the process of reviewing the latest national building codes (2018 and 2021 editions), including the energy conservation code relating to energy efficiency. The committees will submit their recommendations to the North Carolina Building Code Council in Q3/4 of 2022 or Q1/2 of 2023 for consideration. Should the Council vote in favor of those recommendations, there will be a year-long rule making process before they become law. If approved, these codes would go into effect January 1, 2025.

CONCLUSION

Important progress is being made on several of the recommendations in the EE Roadmap. One major accomplishment was the establishment of a North Carolina “green bank.” Relatedly, the NCUC is encouraging Duke Energy to consider creative financing options to reach more low- and moderate-income customers. There are also efforts underway to expand EE data collection and availability.

However, our review suggests that there is more work to be done. For example, there is still a great need for education and workforce development. Furthermore, new pilot programs could help realize growing interest in streamlining weatherization programs and leveraging demand-side management savings. As we continue to work together to achieve our shared objectives, it would be useful to identify a permanent “home” for the EE Roadmap’s recommendations. South Carolina’s Energy Office, for instance, has developed a portal¹¹ to share information about opportunities for energy efficiency improvements. North Carolina might consider creating its own official clearinghouse. Going forward it is important that the state continues using the EE Roadmap to inform legislative, regulatory, and programmatic change.

10. Kendrick C. Fentress to Ms. A. Shonta Dunston, Chief Clerk North Carolina Utilities Commission, “Duke Energy Progress, LLC and Public Staff’s North Carolina Low Income Affordability Collaborative 180-day Progress Report Docket Nos. E-2, Sub 1219 and E-2, Sub 1193,” September 27, 2021, <https://starw1.ncuc.net/NCUC/ViewFile.aspx?Id=d94abced-f0bf-44b9-bdc3-4b4f5154ef27>.

11. South Carolina Energy Office. “Energy Saver.” Accessed March 2, 2022. <https://energysaver.sc.gov/>.