



North Carolina

State Guide to
Utility Energy
Efficiency Planning



State Guide to Utility Energy Efficiency Planning: North Carolina

I. North Carolina Utility Landscape

A. Utilities in North Carolina

In North Carolina, three types of electricity providers sell electric power to retail customers: **Investor-owned utilities (IOUs)**, **electric membership corporations (cooperatives)**, and **municipally-owned utilities**.¹ The following chart shows the number of each of these types of providers, along with the percentage of North Carolina's electricity customers served by each:

Electric Utilities in North Carolina

Type of Provider	Quantity	Percentage of NC Customers Served
Investor-Owned Utilities	3	68.27%
Electric Membership Corporations	32	21.22%
Municipal Utilities	33	10.51%

Source: U.S. Energy Information Administration, Form EIA-861, "[Annual Electric Power Industry Report](#)" 2018.

Approximately 3.5 million North Carolina electricity customers are served by three vertically integrated IOUs—**Duke Energy Carolinas**, **Duke Energy Progress**, and **Dominion North Carolina Power (also known as Virginia Electric and Power Co.)**. These three IOUs are the largest utilities in the state in terms of customers served, amount of electricity sold, and revenue. Information on the five largest utilities in North Carolina is provided in the chart below:

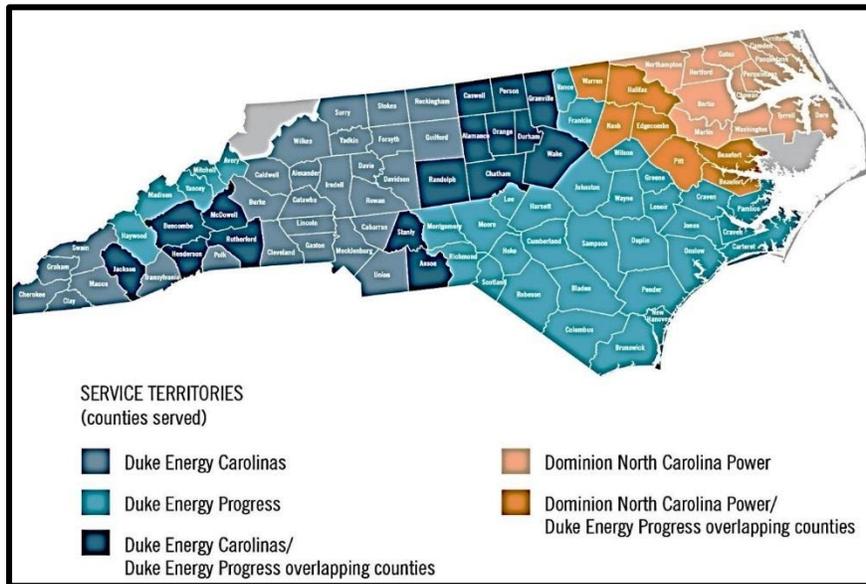
Five Largest Utilities in North Carolina

Utility Name	Type of Provider	Revenue (Thousand USD)	Sales (MWh)	Number of Customers	Average Price (cents/kWh)
Duke Energy Carolinas	IOU	4,868,514.4	59,210,842	2,005,333	8.22
Duke Energy Progress (NC)	IOU	3,575,788.0	38,361,581	1,411,441	9.32
Dominion North Carolina Power	IOU	389,688.0	4,400,786	121,085	8.85
EnergyUnited	Coop.	269,841.0	2,723,294	129,872	9.91
Fayetteville Public Works Commission	Municipal	215,894.0	2,082,629	81,991	10.37

Source: U.S. Energy Information Administration, Form EIA-861, "[Annual Electric Power Industry Report](#)" 2018.

¹ Tennessee Valley Authority sells power to four N.C. municipal and cooperative utilities, but directly serves only one retail customer in the state. [TVA in North Carolina](#).

The figure below shows each of the IOU service territories in North Carolina:²



B. General Information

The **North Carolina Utilities Commission (NCUC)** is the state administrative agency charged with regulating North Carolina’s public utilities.³ As the oldest regulatory body in North Carolina, the NCUC’s purpose is to “ensure that public utilities provide their customers with safe and reliable service at reasonable rates.”⁴ Functionally, the NCUC is comprised of a **seven-member** Commission and its support staff, as well as the Public Staff, a separate and independent agency housed within the NCUC that advocates on behalf of consumers in all NCUC proceedings.

C. Relationship with State Legislature

The NCUC derives its authority from an enabling statute passed by the North Carolina General Assembly. Under the **North Carolina Public Utilities Act**, the General Assembly granted the NCUC with broad authority to regulate the rates, services, and operations of the three IOUs operating in the state.⁵ The General Assembly may expand, limit, or alter the NCUC’s authority by statute. The NCUC’s activities are also **subject to oversight by several legislative committees**, including the House Committee on Public

² N.C. Utils. Comm’n, [Overview of the Commission](#).

³ N.C. Gen. Stat. §62-2(b). This profile focuses only on the electricity sector, though the NCUC also regulates natural gas, telecommunications, transportation, water, and wastewater utilities.

⁴ Public Staff Comments, supra note 3, at 3.

⁵ N.C. Gen. Stat. §§ 62-30 to -32 (noting that the Commission has “general power and authority” over public utilities, and is vested with “all power necessary to require and compel” any public utility to provide reasonable service). The Commission has much more limited authority over the state’s electric membership corporations (cooperatives) and municipally-owned utilities; for the purposes of this profile, we will focus on the Commission’s regulation of IOUs. N.C. Utils. Comm’n, [North Carolina’s Public Utility Infrastructure & Regulatory Climate](#) at 17.

Utilities, the Senate Committee on Commerce, and the Joint Legislative Commission on Governmental Operations.⁶

D. Commission Structure

The NCUC is comprised of **seven Commissioners that are appointed by the Governor**, subject to confirmation by the General Assembly. Commissioners serve for **six-year terms**, with **no limit on the number of consecutive terms** a Commissioner may serve. The NCUC neither **requires bipartisan representation** on the Commission **nor requires that Commissioners meet any specified pre-qualifications**. The Governor also designates one Commissioner to act as **Chairman for a four-year term**; the Chairman acts as the chief executive and administrative officer of the Commission. The Commission maintains a support staff of approximately fifty-six employees that work in three divisions: **Legal and Administration, Operations, and Fiscal Management**. The table below lists North Carolina’s current Utility Commissioners:

Name	Appointed By	Term Start	Term End	Contact
Chair				
Edward S. Finley, Jr. (D)	Gov. Easley (D)	01/23/2007	06/30/2019	919-733-6067 finley@ncuc.net
Commissioners				
Daniel G. Clodfelter (D)	Gov. Cooper (D)	07/01/2017	06/30/2023	919-733-6050 dclodfelter@ncuc.net
ToNola D. Brown-Bland (D)	Gov. Perdue (D)	07/01/2009	06/30/2023	919-733-6060 tbrownbland@ncuc.net
Charlotte A. Mitchell (Nonpartisan)	Gov. Cooper (D)	02/27/2013	06/30/2023	919-733-6064 cmitchell@ncuc.net
James Patterson (Nonpartisan)	Gov. McCrory (R)	07/01/2013	06/30/2019	919-733-4072 jpatterson@ncuc.net
Jerry Dockham (R)	Gov. McCrory (R)	07/01/2013	06/30/2019	919-733-6053 jdockham@ncuc.net
Lyons Gray (R)	Gov. McCrory (R)	01/26/2016	06/30/2021	919-733-6056 lgray@ncuc.net

E. Overview of Commission Proceedings

As noted above, the NCUC regulates nearly all aspects of service for the three IOUs in North Carolina. In exercising this authority, the NCUC regulates utilities individually, such as fixing rates or approving specific utility investments, and collectively, by setting policies that apply across all regulated utilities. The Commission is a quasi-judicial and quasi-legislative body and thus uses both formal administrative proceedings and more informal notice-and-comment rulemakings to make its regulatory decisions.

⁶ N.C. Utils. Comm’n, [North Carolina’s Public Utility Infrastructure & Regulatory Climate](#) at 6.

Formal proceedings often resemble a trial, in which parties to the proceeding—including utilities and other stakeholders who decide to intervene—offer testimony, submit evidence, and cross-examine opposing parties. **Commissioners and members of the NCUC staff act as Hearing Examiners**, and are authorized to administer oaths and hear and take evidence.⁷ **The Chairman determines whether matters pending before the NCUC will be considered or heard initially by the full Commission, a panel of three Commissioners, a hearing Commissioner, or a hearing examiner.**⁸ For matters heard by the full Commission, a simple majority is required for the Commission to issue an official order or decision; in the case of a three-member panel, a unanimous decision is required.⁹ The Commission and its staff are prohibited by law from engaging in ex parte communications with parties to contested cases.¹⁰

F. Public Staff

In 1977, the N.C. General Assembly created the Public Staff, an independent agency housed within the Commission, to act as consumer advocate in NCUC proceedings.¹¹ The Public Staff's role is to "review, investigate, and make appropriate recommendations to the [Commission] with respect to the reasonableness of utility rates charged and adequacy of service provided by any public utility" in North Carolina.¹² The Public Staff intervenes on behalf of consumers in Commission proceedings affecting utility rates or service, investigates consumer complaints, and makes policy recommendations to the Commission.¹³

The head of the Public Staff is the Executive Director, who is appointed by the Governor for a six-year term.¹⁴ The Executive Director hires and supervises all Public Staff personnel, and sets guidelines to ensure that the Public Staff presents a uniform position in the best interest of ratepayers in Commission proceedings.¹⁵ Importantly, while the Public Staff is housed within the Commission, it is not subject to the control or direction of the Commission, the Chairman, or the members of the Commission.¹⁶ In Commission proceedings, the Public Staff has the same rights as any other party.¹⁷

The Public Staff is organized into operating divisions, including, most applicably, the Electric Division, which evaluates and makes recommendations to the Commission regarding issues related to electric IOUs, including their energy efficiency programs.¹⁸ The table below shows the contact information for the current Executive Director of the Public Staff and the Electric Division:

⁷ N.C. Gen. Stat. §62-60.

⁸ N.C. Gen. Stat. §62-13(b).

⁹ N.C. Gen. Stat. § 62-60 & 60.1. Orders or decisions issued by a three-member panel may be stayed and reviewed by the full Commission upon motion of three Commissioners not included on the panel who issued the decision. Id. at §62-60.1(b).

¹⁰ Ex parte communications are prohibited when the communications pertain to the merits of the proceedings.

¹¹ The Attorney General's office may also intervene in a proceeding before the Commission as an additional consumer advocate.

¹² N.C. Gen. Stat. § 62-15(d)(1).

¹³ Public Staff, North Carolina Utils. Comm'n, http://www.pubstaff.commerce.state.nc.us/index_files/Page380.htm.

¹⁴ N.C. Gen. Stat. § 62-15(a). The Executive Director's appointment is subject to confirmation by the General Assembly by joint resolution.

¹⁵ N.C. Gen. Stat. § 62-15(a).

¹⁶ N.C. Gen. Stat. § 62-15(b).

¹⁷ N.C. Gen. Stat. § 62-15(f).

¹⁸ Elec. Div., N.C. Utils. Comm'n Public Staff, <http://www.pubstaff.commerce.state.nc.us/pselec/index.html>.

North Carolina Public Staff Contact Information

Public Staff - Executive Director	Public Staff - Electric Division
Christopher Ayers Appointed by: Governor Pat McCrory Term Start: July 1, 2013 Telephone: (919)733-2435 Fax: (919)733-9565 E-mail: chris.ayers@psncuc.nc.gov	4326 Mail Service Center Raleigh, NC 27699-4300 Phone: (919) 733-2267 Fax: (919) 733-4744 Email: electric@psncuc.nc.gov

II. Existing State Policies for Energy Efficiency

A. Incentives for Energy Efficiency

1. Energy Efficiency Target

In 2007, the North Carolina General Assembly enacted the first **Renewable Energy and Energy Efficiency Portfolio Standard (REPS)** in the Southeast.¹⁹ The REPS requires that IOUs in North Carolina meet 12.5% of their retail electricity needs through either renewable energy or energy efficiency by 2021. IOUs may use **energy efficiency to satisfy up to 25% of their target, and 40% of the target after 2021**. However, the REPS does not require that utilities meet specific efficiency targets; **utilities could choose to satisfy the target using renewable energy alone**. The NCUC is responsible for administering the REPS and may **adjust or modify the REPS schedule or requirements** if it deems those modifications to be in the public interest. In 2008, the NCUC issued an order adopting final rules to implement the REPS.

2. Cost Recovery and Performance Incentives

By statute, the NCUC is authorized to approve an annual rider to the rates of electric public utilities, outside of a general rate case, for the recovery of all reasonable and prudent costs incurred for the adoption and implementation or new demand-side management (DSM) and energy efficiency (EE) measures.²⁰ The NCUC is also **authorized to award incentives** for public utilities adopting and implementing new programs. Cost recovery mechanisms for each of North Carolina's IOUs are outlined in the table below:

¹⁹ N.C. Gen. Stat. § 62-133.8.

²⁰ N.C. Gen Stat § 62-133.9.

Utility	Description of Cost Recovery Mechanism	NCUC Docket
Duke Energy Carolinas	<ul style="list-style-type: none"> Shared savings model Allows for recovery of direct program costs and net lost revenues for a period up to 36 months Includes an 11.5% portfolio performance incentive 	No. E-7, Sub 1032 (Oct. 2013)
Duke Energy Progress	<ul style="list-style-type: none"> Shared savings model Allows for recovery of direct program costs and net lost revenues for a period up to 36 months Includes an 11.75% portfolio performance incentive 	No. E-2, Sub 931 (Jan. 2015)
Dominion North Carolina Power	<ul style="list-style-type: none"> Provides for recovery of direct program costs and up to 36 months of net lost revenues Includes an 8% performance incentive for DSM programs and a 13% incentive for EE programs 	No. E-22, Sub 464 (May 2015)

3. Cost-Effectiveness Testing

NCUC regulations require utilities to submit cost-benefit analyses and cost-effectiveness evaluations for all proposed energy efficiency and DSM programs and measures.²¹ The NCUC does not specifically direct how utilities should conduct cost-effectiveness evaluations and does not currently require the use of a Technical Reference Manual (TRM). But, regulations require cost-effectiveness evaluations to be “based on direct or quantifiable costs and benefits and should include, at a minimum, an analysis of the Total Resource Cost [TRC] Test, the Participant Test [PCT], the Utility Cost Test [UCT], and the Ratepayer Impact Measure [RIM] Test.”²²

The utility must submit these evaluations to the NCUC for purposes of program approval and for cost recovery. In practice, the NCUC primarily relies on the TRC for purposes of program approval, and the UCT to determine the utility’s performance incentive.

4. Program Participation

Under the REPS statute, **industrial customers and large commercial customers may opt-out** of utility energy efficiency programs and thus exempt themselves from the EE rider.²³ To do so, the customer must provide notification to the utility and demonstrate that it has implemented or will implement alternative DSM or EE measures in accordance with quantifiable goals. If a customer that opts out subsequently decides to participate in a new utility-provided DSM or EE program, they lose the right to be exempt from payment of the rider for five years or the life of the measure or program, whichever is longer.²⁴ Both Duke Energy Progress and Duke Energy Carolinas have received waivers from this

²¹ 4 N.C. Admin. Code r. 11.R08-68(c)(2)(5).

²² 4 N.C. Admin. Code r. 11.R08-68(c)(2)(5).

²³ N.C. Gen. Stat. 62-133.9(f); 4 N.C. Admin. Code r. 11.R08-69(d)(1). Large commercial customers are defined as “any commercial customer that has an annual energy usage of not less than 1,000,000 kilowatt-hours (kWh), measured in the same manner as the electric public utility that serves the commercial customer measures energy for billing purposes.” 4 N.C. Admin. Code r. 11.R08-68(a)(3).

²⁴ 4 N.C. Admin. Code r. 11.R08-69(d)(3).

requirement; DEC customers only have to opt in for one year, and DEP customers have to opt in for three years.

III. Utility Energy Efficiency Planning Process

Section 62-2 of North Carolina’s statutory code declares that, as a matter of state policy, “reliable utility service include[s] use of the entire spectrum of demand-side options, including but not limited to conservation, load management and efficiency programs.”²⁵ As a result, utilities in North Carolina are required to include energy efficiency and DSM in their short- and long-term planning processes, and these programs come up in several types of proceedings before the NCUC.²⁶

This section will provide an overview of the process and timeline by which utilities develop, obtain regulatory approval for, and administer their energy efficiency programs. It will also discuss the requirements and opportunities for third party stakeholders to intervene or otherwise engage in each part of this planning process.²⁷

A. Formal Proceedings Before the NCUC

1. Integrated Resource Planning

In North Carolina, utility energy efficiency programs are largely developed through the mandatory Integrated Resource Planning process. The NCUC requires utilities to file “least cost integrated resource plans” (IRPs) **every two years, with annual updates required in between.**²⁸

IRPs must include a **fifteen-year forecast** of the utility’s expected load requirements and a comprehensive analysis of resource options that could satisfy those load requirements, considering, among other things, cost, applicable environmental regulations, system operational needs, and environmental impacts.²⁹ Utilities are required to **include energy efficiency and DSM programs** in this analysis, including an assessment of all current, potential, discontinued, and even rejected programs. For each program, the utility must include detailed information on its “costs, benefits, risks, uncertainties, reliability and customer acceptance.”³⁰ Along with their IRPs, utilities are also required to file **REPS Compliance Plans** that demonstrate how the utilities’ projected plans will satisfy their obligations under the North Carolina REPS.

²⁵ N.C. Gen. Stat. 62-2(3a)). Biennial IRPs are filed in even-numbered years, and updates in odd-numbered years.

²⁶ In North Carolina, demand-side management consists of demand response programs and energy efficiency and conservation programs. 4 N.C. Admin. Code r. 11.R8-60

²⁷ Other NCUC proceedings can also affect utility EE programs. For instance, as part of the merger of Duke Energy Carolinas and Progress Energy in 2011, the South Carolina PSC approved a settlement agreement between the utility and clean energy groups that requires the utility to increase its EE investments through 2018.

²⁸ 4 N.C. Admin Code r. 11.R8-60, <http://www.ncuc.net/ncrules/Chapter08.pdf>.

²⁹ 4 N.C. Admin Code r. 11.R8-60(f); N.C. Gen. Stat. 62-2(3a).

³⁰ 4 N.C. Admin Code r. 11.R8-60(c), R8-60(f).

The bulk of each utility's EE portfolio is identified in or developed through the IRP process, which the NCUC reviews based on whether they propose "the least cost combination (on a long-term basis) of reliable resource options for meeting the anticipated needs of the system."³¹ Based on the utilities' most recent IRP filings, Dominion N.C. Power typically files its IRP in May, while Duke Energy Carolinas and Duke Energy Progress typically file in September each year.

2. Approval of New DSM/EE Programs

Utilities must obtain approval from the NCUC before implementing any new or modified DSM or EE program or measure. Most of these programs are approved through the IRP process, but utilities may also file applications seeking NCUC approval of individual programs or modifications.³²

3. Cost Recovery Rider for Demand-Side Management and Energy Efficiency Measures

The NCUC conducts an annual proceeding for each electric utility to establish its annual DSM/EE rider; this DSM/EE rider proceeding is conducted separately from the IRP proceeding, and follows a similar adjudicatory process to that of the IRP.³³

B. Opportunities for Third-Party Engagement

1. Formal Proceedings

Generally, the only way that third parties can engage in formal proceedings before the NCUC is to **intervene in the proceedings**. Any person "having an interest in" the subject matter of a Commission proceeding may file a petition with the NCUC requesting status as an intervenor.³⁴ Each proceeding has different deadlines by which petitions for intervention must be filed, but all such petitions must include a statement of the petitioner's interest and a statement of the exact relief desired.³⁵

- **IRP Proceedings:** For IRP proceedings, intervenors have **150 days after the filing of a biennial IRP** (or 60 days after an annual report filing) to file comments on or an evaluation of the IRP submitted by the utility, or to file their own IRP (which will be considered by the Commission in the proceeding). IRP proceedings before the NCUC are quasi-judicial in nature. The NCUC also holds at least one public hearing during each IRP proceeding to gather testimony from interested members of the public.
- **Approvals of DSM/EE Programs:** Interested persons have **30 days after the utility files its application for approval** of a measure or program to petition for intervention or file comments on the proposed measure or program.³⁶ In comments, an intervenor may

³¹ 4 N.C. Admin. Code r. 11.R8.60(g); N.C. Gen. Stat. 62-2(3a)).

³² See N.C. Utils. Comm'n, [Biennial Report on Electric Utility Energy Efficiency and DSM Programs, Cost Recovery Incentives](#) at (Aug. 30, 2013).

³³ 4 N.C. Admin. Code r. 11.R8-69(b)(1).

³⁴ 4 N.C. Admin. Code r. 11.R1-19.

³⁵ 4 N.C. Admin. Code r. 11.R1-19.

³⁶ 4 N.C. Admin Code. r. 11.R8-68(d).

recommend that the NCUC approve or disapprove of the proposed measure or program or identify issues that may need further investigation.

- **DSM/EE Cost Recovery Rider Proceedings**: Interested persons must file petitions for intervention **at least 15 days prior to the hearing date for the proceeding**.³⁷ the utility files its application for approval of a measure or program to petition for intervention or file comments on the proposed measure or program.³⁸ Intervenors may submit direct testimony and exhibits from expert witnesses during the hearing.

2. Other Means of Engagement

Provided a person or group is not party to a proceeding before the Commission, ex parte rules do not generally prohibit third parties from directly engaging with Commissioners, NCUC staff, Public Staff members, or utilities on matters of interest to them. Contact information for the Public Staff and North Carolina's current Utility Commission are located on pages 4 and 5 of this profile.

In addition, both Duke Energy Progress and Duke Energy Carolinas convene stakeholder meetings to discuss the progress and status of their DSM and energy efficiency programs.

³⁷ 4 N.C. Admin Code. r. 11.R8-69(f)(4).

³⁸ 4 N.C. Admin Code. r. 11.R8-68(d).