

# Energy Efficiency and Electric Infrastructure in the State of North Carolina

The simple choice for energy efficiency.



In any given state, there are a range of stakeholders well-positioned to contribute to the design and delivery of effective energy efficiency programming. This factsheet provides an overview of relevant entities in the state of North Carolina, along with highlights of state policies and practices related to energy efficiency. The entity types described and highlighted below are typically involved in electricity and/or energy efficiency related matters in states. Other important stakeholders such as trade associations, industry, and local businesses are not included as they vary significantly from state to state.

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## Electric Market Overview

### Electric Utilities

Privately- and publicly-owned electric utilities generate, transmit, distribute, and/or sell electricity primarily for use by the public. These include investor-owned electric utilities, municipal and state utilities, Federal electric utilities, and rural electric cooperatives.<sup>1</sup> The following summarizes electric utilities in North Carolina by type:

- *Investor-Owned Electric Utilities:*  
Duke Energy: <https://www.duke-energy.com>  
Duke Progress: <https://www.progress-energy.com/>  
Dominion NC Power: <https://www.dom.com/residential/dominion-north-carolina-power>
- *Member-Owned (Electric Cooperative):* North Carolina has 27 electric membership corporations (EMCs).
- *Municipally-Owned/Publicly Owned Utilities:* North Carolina has 34 municipally- or publicly-owned electric systems in the state.
- *Other:* 2 Municipal Marketing Authority; 8 Retail Power Marketers; 1 State-Owned<sup>2</sup>
- *Tennessee Valley Authority in North Carolina:* <https://www.tva.gov/About-TVA/TVA-in-North-Carolina>

*Electric utility service areas (as available):*

<http://www.infrastructureusa.org/north-carolina-the-impact-of-electric-choices-on-rates-bills/>

<http://www.ncemcs.com/downloads/territoryMap.pdf>

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### Status of Electric Industry Restructuring

Vertically integrated utilities are responsible for generation, transmission and distribution of power to customers. In the 1990's, many states began to unbundle the electricity supply and distribution functions of investor-owned utilities on the theory that only the wires (the fixed network system) constituted a natural monopoly, while the generation of power did not. In states that have undergone restructuring, individual retail customers can choose their supplier but still receive delivery over the power lines of the local utility.<sup>3</sup>

- North Carolina does not have a restructured electric industry.  
[http://www.eia.gov/electricity/policies/restructuring/north\\_carolina.html](http://www.eia.gov/electricity/policies/restructuring/north_carolina.html)

<sup>1</sup> Source: EIA

<sup>2</sup> Sources: EIA 2013 Form EIA-861 Utility Data (<http://www.eia.gov/electricity/data/eia861/>) and North Carolina Public Service Commission (<http://www.ncuc.commerce.state.nc.us/>)

<sup>3</sup> Source: The Regulatory Assistance Project (RAP)

## Regional Transmission Organization (RTO)/Independent System Operator(ISO)

About 60% of U.S. electric power supply is managed by RTOs or ISOs: independent, membership-based organizations that ensure reliability and usually manage the regional electric supply market for wholesale electric power. In the rest of the country, electricity systems are operated by individual utilities or utility holding companies. RTOs/ISOs engage in long-term planning that involves identifying effective, cost-efficient ways to ensure grid reliability and system-wide benefits. Coordination and cooperation between utilities, state PUCs and RTOs/ISOs is often required to advance energy efficiency goals.<sup>4</sup>

- A portion of North Carolina is part of the part of PJM: <http://www.pjm.com/>

## Utility Oversight and Planning

### Utility Oversight

Public utility commissions (PUCs) oversee goals, investments, and ratemaking for investor-owned electric utilities. Most of this oversight is conducted via specific regulatory proceedings. Municipally-owned utilities are governed by a local city council or an elected commission, and member-owned/cooperative utilities are governed by a board elected by members. In a few states, PUCs have oversight over some aspects of municipally and member-owned utility performance such as energy efficiency resource standards.<sup>5</sup>

- The North Carolina Utility Commission regulates electric, telephone, natural gas, water, wastewater, water resale, household goods transportation, busses, brokers, and ferryboats. To a limited degree, the NCUC regulates electric membership corporations, small power producers, and electric merchant plants.  
<http://www.ncuc.commerce.state.nc.us/overview/ucdesc.htm>

### Integrated Resource/Procurement Planning

Integrated resource plans (IRPs) are utility plans for meeting forecasted annual peak and energy demand through a portfolio of supply-side and demand-side resources over a specified future period. As of early 2015, integrated resource planning is required or present in more than 30 states, including most vertically integrated/non restructured states. In states that are restructured, regulated distribution only utilities may be required to develop procurement plans to service customers that do not choose a competitive retail supplier. Energy efficiency is considered as a demand-side resource but the degree to which it is included in resource/procurement planning is influenced by other factors including policies such as energy efficiency resource standards or requirements that all cost effective energy efficiency be considered.<sup>6</sup>

- Duke Energy's most recent IRP 2014: <http://starw1.ncuc.net/NCUC/ViewFile.aspx?id=c3c5cbb5-51f2-423a-9dfc-a43ec559d307SEEA>:
- Dominion NC Power's most recent IRP 2015: <https://www.dom.com/library/domcom/pdfs/electric-generation/2015-irp-final-public-version-internal-cover.pdf>

### Statewide Planning Process

States sometimes undertake executive or legislatively driven statewide energy planning processes. These plans may be completely independent of utilities or may explicitly engage utilities.

- North Carolina does not have a state energy plan. <http://www.naseo.org/stateenergyplans>
- North Carolina is working on a plan with South Carolina on a multi-state energy plan. <http://energy.gov/eere/wipo/state-energy-program-2014-competitive-solicitation-awardees>

### Energy Efficiency Potential Studies

Energy efficiency potential studies determine the amount of technical, economic, and achievable potential for energy efficiency in a region, state, or utility service territory. Energy efficiency potential studies may be undertaken by state agencies or energy efficiency

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<sup>4</sup> Source: [EPA Energy and Environment Guide to Action](#)

<sup>5</sup> Sources: [EPA Energy and Environment Guide to Action](#) and RAP

<sup>6</sup> Source: [EPA Energy and Environment Guide to Action](#)

advocacy organizations, or by utilities as part of or to inform compliance with a regulatory requirement. The following are recent energy efficiency potential studies:

- North Carolina's Energy Future: Electricity, Water and Transportation Efficiency (2010): <http://www.aceee.org/research-report/e102>
- Estimating the Energy-Efficiency Potential in the Eastern Interconnection (2013): <http://info.ornl.gov/sites/publications/files/Pub40408.pdf>

## Energy Efficiency Policies/Activities

### Statewide Clean Energy Policy/Energy Efficiency Energy Resource Standard(s)

Energy efficiency resource standards (EERSs) require obligated parties—usually regulated retail distributors of electricity—to meet a specific portion of their electricity demand through energy efficiency. As of March 2015, 27 states have some type of energy efficiency requirement or goal.<sup>7</sup>

- North Carolina does not have a mandatory energy efficiency resource standard. They have a voluntary combined EERS/Renewable Energy Standard (RES). Energy efficiency can meet up to 25% of requirements towards North Carolina RPS to 2018 and 40% of the 2021 targets.

### Current Utility-Administered Energy Efficiency Programs

Energy efficiency is regarded as an important utility resource with co-benefits that include reducing air pollution, saving customers on utility bills, and creating local jobs. While the majority of large-scale energy efficiency programs are funded by utility ratepayers, program administration may be by the utility, the state, an independently awarded program administrator or a combination of entities. Below are available links related to ratepayer-funded energy efficiency programs offered in the state<sup>8</sup>:

- *Program Administrator:* Duke Energy: <https://www.duke-energy.com/north-carolina/savings.asp>  
Most recent program filing: <http://starw1.ncuc.net/NCUC/portal/ncuc/PSC/DocketDetails.aspx?DocketId=0373f92d-06e5-4256-97a0-0638d7b677d5>  
ENERGY STAR Partner since 2001
- *Program Administrator:* Dominion: <https://www.dom.com/residential/dominion-north-carolina-power/ways-to-save/energy-conservation-programs>  
Most recent program filing: <http://starw1.ncuc.net/NCUC/ViewFile.aspx?Id=0135eaf8-fd76-4e56-8b20-302d965f6b3e>
- *Program Administrator:* Fayetteville Public Works: <http://www.faypwc.com/residential-programs/>  
Most recent program filing: N/A  
ENERGY STAR Partner since 2013
- *Program Administrator:* Carteret Craven Electric Cooperative: <http://www.carteretcravenelectric.coop/EnergyEfficiency>  
Most recent program filing: N/A  
ENERGY STAR Partner since 2008

## Other Key Stakeholders

### State Air Office:

- State Air Office – Division of Air Quality: <http://daq.state.nc.us/>

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<sup>7</sup> Ibid.

<sup>8</sup> For other energy efficiency program offerings in the state, visit: <http://programs.dsireusa.org/system/program?state=NC>

## State Energy Office:

- NC Department of Environmental Quality: <http://portal.ncdenr.org/web/guest>

## Consumer Advocate(s)

Most states also have one or more consumer advocacy organizations. Consumer Advocates are often concerned with maintaining low rates and ensuring equitable treatment of all customer classes.<sup>9</sup>

- North Carolina Department of Justice: <http://www.ncdoj.gov/Consumer/Energy-and-Utilities.aspx>

## Others Public Interest Groups

Groups representing environmental and other public interests are often involved in providing public input or technical expertise during regulatory proceedings or stakeholder processes. The following energy efficiency organizations/nonprofits are active in the state or region:

- Southeast Energy Efficiency Alliance: <http://www.seeaalliance.org>
- Southern Alliance for Clean Energy (SACE): <http://www.cleanenergy.org/>
- Sierra Club: <http://nc2.sierraclub.org/>
- NC WARN: <http://www.ncwarn.org/>
- North Carolina Sustainable Energy Association (NCSEA): <http://www.energync.org/>

ENERGY STAR is the simple choice for energy efficiency. For more than 20 years, EPA's ENERGY STAR program has been America's resource for saving energy and protecting the environment. Join the millions making a difference at [energystar.gov](http://energystar.gov)

\* Revised December 21, 2015. To alert the U.S. EPA of substantial policy changes or program updates, please contact [eeaccountmanager@icfi.com](mailto:eeaccountmanager@icfi.com)

<sup>9</sup> Source: [EPA Energy and Environment Guide to Action](#)