AppalachianVoices.org
outreach@appvoices.org

BOONE
589 West King Street
Boone, NC 28607
828.262.1500

CHARLOTTESVILLE
812 East High Street
Charlottesville, VA 22902
434.293.6373

KNOXVILLE
2507 Mineral Springs Ave.
Suite D
Knoxville, TN 37917
865.291.0083 ext. 700

NORTON
816 Park Avenue NW
Norton, VA 24273
276.679.1691

September 9th, 2019

To: Sushma Masemore
State Energy Director
NC Department of Environmental Quality

From: Rory McIlmoil
Senior Energy Analyst
Appalachian Voices
Rory@AppVoices.org

RE: Comments on North Carolina's Clean Energy Plan

I submit these comments on behalf of Appalachian Voices, a non-profit environmental advocacy organization based in Boone. I myself am also a resident of Deep Gap in Watauga County, and a member-owner of Blue Ridge Energy, an electric cooperative ("co-op") serving more than 60,000 residential properties in western North Carolina.

Appalachian Voices applauds the NC Department of Environmental Quality on drafting a strong Clean Energy Plan, in accordance with Governor Roy Cooper's Executive Order 80, "North Carolina's Commitment to Address Climate Change and Transition to a Clean Energy Economy," that aims to put the state on a path to achieving 60-70 percent reductions in greenhouse gas emissions below 2005 levels from the state's electricity sector by 2030.

There are a lot of excellent and strong recommendations in the draft Plan, including many pertaining to the state's 26 rural electric cooperatives that would expand access to energy efficiency and renewable energy for their members while alleviating the energy burden crisis for low-income residents. Specifically, we strongly support the recommendation for the state to implement an Energy Efficiency Resource Standard that would set strong but reasonable requirements for both co-ops and municipal electric utilities, the recommendation for all utilities to adopt and implement Pay-As-You-Save™ tariffed on-bill finance programs, and the recommendation for the state to explore a ratepayer-funded Percentage of Income Payment Program modeled on the program in place in Ohio.

However, beyond these recommendations, the draft Plan falls far short of achieving its equity goals by failing to address some of the more fundamental problems which underpin the lack of equity, access, and energy efficiency and renewable energy investments by most co-ops and muni's serving the state. Our comments contained herein detail these issues and provide some additional policy recommendations that we request be added to the final Plan.

We call on Governor Cooper and state government agencies to do more to ensure that rural areas in North Carolina are set more squarely at the center of the final Plan. If equity is a central focus of the Plan, it can't just be a plan for Duke Energy customers, for urban areas, and for the affluent. But to achieve that goal, we need to address the significant barriers to expanding clean energy opportunities for rural and low-income communities.

Any new policies or actions in the final Plan must require compliance by electric co-ops and municipal utilities. They must address inequitable and harmful rate structures being imposed by co-ops. They must address the lack of regulation of, and lack of transparency by co-ops. And they must commit a substantial amount of dedicated resources and administrative support associated with the Plan's implementation to rural communities. Otherwise, the final Clean Energy Plan won't be a plan for all North Carolinians.

Thank you for your consideration,

Rory McIlmoil

Senior Energy Analyst

Appalachian Voices

Table of Contents

Executive Summary

The draft Clean Energy Plan aims to put the state on a path to achieving 60-70 percent reductions in greenhouse gas emissions below 2005 levels from the state's electricity sector by 2030. There are many strong recommendations in the draft Plan pertaining to the state's twenty-six rural electric cooperatives that would expand access to energy efficiency and renewable energy for their members while alleviating the energy burden crisis for rural low-income residents. These include, among others, an Energy Efficiency Resource Standard that would set strong but reasonable requirements for both electric cooperatives and municipal electric utilities, the adoption and implementation of Pay-As-You-Save™ tariffed on-bill finance programs by all utilities, and the exploration/implementation of a ratepayer-funded Percentage of Income Payment Program modeled on the program in place in Ohio.

Beyond these recommendations, the draft Plan falls far short of achieving its equity goals by failing to address some of the more fundamental problems which underpin the lack of equity, access, and energy efficiency and renewable energy investments by most electric cooperatives and municipal electric utilities serving the state. This is problematic given that electric cooperatives alone account for fourteen percent of all electricity sold in the state (and associated pollution and environmental impacts). This is substantial, and yet, despite this, state utility regulation and energy policy have largely ignored electric cooperatives, and this has had a negative impact on the households and communities they serve.

As detailed in this document, the fundamental problems that have resulted in rural communities across North Carolina largely being left out of the benefits of the clean energy growth in North Carolina over the past decade include, but are not limited to, the following:

1. While electric cooperatives enjoy monopoly control over the sale of electricity in their respective service areas, the state has effectively deregulated these utilities (which were only partially regulated to begin with), leaving the regulation and oversight of the cooperative's governance, rates and rate structures, renewable energy policies, and investments up to the cooperative boards of directors.
2. The deregulation of electric cooperatives was based on the false notion that, because members of electric cooperatives elect their boards of directors, which in turn hire management and set policies for the cooperative, members effectively regulate their cooperatives. However, in practice, North Carolina's electric cooperatives actively suppress member participation in decision-making through various means (see the section on electric cooperative governance), withhold information to members that would be necessary for members to play an active and informed role in key decision-making, and experience less than ten percent of members participating in board elections, which in many cases involve one or more sitting directors running unopposed. As a result, and given that electric cooperative members have no path for redress of violations or grievances through the state, harmful policies and practices employed by electric cooperatives continue unabated.
3. Key renewable energy policies enacted in the state have either allowed electric cooperatives to do the bare minimum to comply – such as with the Renewable Energy and Energy Efficiency Portfolio Standard, or have exempted cooperatives from having to comply altogether – such as with the Competitive Energy Solutions for North Carolina Act of 2017. As a result, rural communities have largely been left out of the benefits of public energy policy that could have stabilized and lowered energy costs, created jobs, generated new local tax revenues and improved the quality of life for rural communities.

4. Nearly 35 percent of all households (more than 1.3 million households) in the state, each falling under 200 percent of the federal poverty level (FPL) – experienced an energy cost burden equal to or greater than 6 percent in 2016 (the level at which energy costs become unaffordable).[1] The most impoverished households (less than 100 percent of FPL) had an average energy burden of 17 percent. Energy burdens are most concentrated, for the most part, in communities served by the state's electric cooperatives. Yet, despite their purported "commitment" to operating in accordance with the Seven Cooperative Principles, most notably the "Concern for Community" principle, North Carolina's electric cooperatives have shown no commitment to addressing the deep and persistent problem of home energy cost burdens that exist in the communities they serve, and in fact, through their high fixed charges and harmful net metering/billing policies, the cooperatives have made it harder for member households to reduce that burden on their own.
5. The state's electric cooperatives impose monthly fixed fees ("facilities charges") that range between $12 and $35 per month, with an average of more than $25 per month. That average is more than five times what is considered reasonable by national experts, nearly double the fixed charges approved for the two Duke Energy companies operating in the state, and nearly triple the national average. For instance, following strong opposition from consumer and low-income advocates, Duke Energy's fixed charge was increased to $14 a month just last year in North Carolina. In South Carolina, recognizing the impact that high fixed charges have on low- and fixed-income ratepayers, as well as on the cost-effectiveness of renewable energy investments, regulators recently rejected Duke Energy's request to increase their fixed charge to $28 a month, instead approving a fee of just under $12.
6. In addition to imposing high monthly fixed charges, most of North Carolina's electric cooperatives actively, and intentionally, discourage household and business investment in distributed generation by implementing harmful and even punitive net metering and net billing rates. Nearly every single such policy implemented by cooperatives throughout the state render the large majority of those investments non-cost effective. As a result, as of 2018 there were less than 17 cumulative megawatts of distributed solar capacity installed in the service areas of electric cooperatives. This represented less than one-tenth of the capacity installed in the service areas of the two Duke Energy companies, despite the fact that cooperatives serve over one-third of the meters that the Duke companies do.
7. The electric cooperatives are also not – for various reasons, including restrictive contract limitations imposed by their electricity provider (e.g. Duke Energy) – investing in utility-scale solar, with little more than 30 megawatts installed in 2018. This compares to the more than 2,900 megawatts installed by the two Duke Energy companies. This trend is not projected to change in the next several years.

[1] Ma, Ookie, Krystal Laymon, Megan Day, Ricardo Oliveira, Jon Weers, and Aaron Vimont. 2019. Low-Income Energy Affordability Data (LEAD) Tool Methodology. Golden, CO: National Renewable Energy Laboratory. NREL/TP-6A20-74249. https://www.nrel.gov/docs/fy19osti/74249.pdf.

8. Despite now having two low-cost federal loan guarantee programs available to capitalize energy efficiency and renewable energy programs, the availability of third-party program operator options, and the example and experience from which to adopt and build upon of other cooperatives that are implementing strong energy efficiency programs, the large majority of North Carolina's cooperatives are doing little to nothing to invest in energy efficiency or help their members do the same. As a result, as of 2017, the state's cooperatives had only reduced energy use by 0.21 percent of their retail sales. Eleven of the state's 26 co-ops were at 0 percent, and another six at less than 0.1 percent.

To address these problems and trends, the final Clean Energy Plan must reflect a greater focus on removing barriers and expanding access to energy efficiency and renewable energy for rural communities served by the state's electric cooperatives. Any new policies or actions in the final Plan must include compliance by electric cooperatives, address inequitable and harmful rate structures imposed by the cooperatives, address the lack of regulation of, and lack of transparency by cooperatives, and commit a substantial amount of resources and administrative support associated with the Plan's implementation to rural communities. Otherwise, the final Clean Energy Plan won't be a plan for all North Carolinians.

To achieve this, we offer the following recommendations for the final Clean Energy Plan:

1. Enact an executive policy, and/or propose/advance legislation which prohibits generator utilities, such as Duke Energy and the NC Electric Membership Corporation, from limiting the amount of solar or demand-side management their customer distributor utilities (co-ops and muni's) can develop or implement.
2. Enact an executive policy, and/or propose/advance legislation requiring co-ops and muni's to develop Integrated Distribution Plans that align with the final Clean Energy Plan and its associated social, economic and environmental goals.
3. Enact an executive policy, and/or propose/advance legislation requiring co-ops and muni's to offer direct net metering, and/or net metering that values the cost-savings of solar for the grid (demand savings) and utility (wholesale power and admin/grid maintenance).
4. Develop a state loss reserve fund, workforce development program, program operator network and finance agency to facilitate the adoption and implementation of co-op and muni energy efficiency programs, specifically Pay-As-You-Save™ tariffed on-bill finance (PAYS TOB) programs.
5. Develop a statewide network of co-ops, muni's, and local weatherization, housing and economic development agencies to combine resources and enhance outreach and uptake for energy efficiency programming benefitting rural and/or low-income residents.
6. Enact an executive policy, and/or propose/advance legislation placing co-ops and muni rates, rate structures (including net metering/net billing and other rates for distributed generation, battery storage, etc) and investments under the purview of the NC Utilities Commission, and requiring the Commission to set a clear policy as to how co-ops, and indeed all of the state's electric utilities, may calculate "fixed" versus "variable" costs in a manner that reflects the "Basic Customer Method" of accounting.

Additional reforms are required that may not be appropriate for the final Clean Energy Plan, but which should be addressed in order to fix more fundamental problems related to electric co-op and muni governance and transparency.

Electric Cooperatives by the Numbers

North Carolina's electric cooperatives (co-ops) served nearly 1.1 million residential, commercial and industrial meters in 2017 (and 2.5 million total energy users), representing more than 20 percent of all properties served by electric utilities across the state.[2] The large majority of the meters served by co-ops (91 percent) are residential, and co-ops serve all or part of 93 of the state's 100 counties.

In terms of electricity sales, co-ops accounted for approximately 18.2 million megawatt-hours of electricity sold to end-users, with 71 percent of those being to residential households. This amounted to 14 percent of all electricity sold by electric utilities in North Carolina in 2017. By comparison, municipal utilities (muni's) and other publicly-owned utilities accounted for another 12 percent of sales, and investor-owned utilities – primarily Duke Energy Progress and Duke Energy Carolina – accounted for the remaining 74 percent.

In other words, electric co-ops and their members account for one out of every seven units of electricity sold in the state (and all associated pollution and environmental impacts associated with energy demand). ***This is substantial, and yet, despite this, state utility regulation and energy policy have largely ignored electric co-ops, and this has had a negative impact on the households and communities they serve.***

The "De-Regulation" of Electric Cooperatives in North Carolina

There are generally two types of state utility markets in the US: regulated monopoly markets and deregulated, or "restructured" markets. In deregulated markets, the sale of electricity is competitive, meaning multiple retail electricity providers compete in an open market to sell electricity to end users. The structure of these markets varies, but using Texas as a model example, monopolies on the generation and sale of electricity are banned, but monopoly control over the transmission and distribution infrastructure (the "wires and poles") are still allowed. This results in competition and, ideally, price controls in the generation and retail sales markets, while ensuring efficiency of operation for the wires aspect of the business.

In "regulated monopoly" states, utilities are allowed monopoly control over the sale of electricity in their designated service areas ***in exchange for having their investments, and the rates they charge in order to recoup those investments, subject to public scrutiny and oversight ("regulation")***. Vertically integrated monopolies such as Duke Energy, which own and control the generation, transmission, distribution and sale of electricity in their service areas, are also allowed. The role of state utility regulators is to make sure that utility investments are not excessive and are limited to infrastructure that is "used and useful" in the provision of electric service, and that the rates and rate structures are fair and justified in order to ensure the recovery of approved costs/investments plus a return on equity for investor-owned utilities.

North Carolina is a regulated monopoly state, so all investor-owned, municipal and rural electric cooperative utilities maintain monopoly control over the sale of electricity in their respective and designated service areas. ***However, the associated oversight and regulation by the North Carolina Utilities Commission (NCUC) only applies to the investor-owned electric utilities***.

[2] US Department of Energy, Energy Information Administration. Form 861 (2017). https://www.eia.gov/electricity/data/eia861/

In the case of muni's, the state has conferred the powers of regulation and oversight onto local elected officials. For electric co-ops, those powers have been conferred to the board directors "elected" by the co-op member-owners. In other words, the investments, rates, rate structures and other policies approved and implemented by the boards and management of electric co-ops are decided upon by the co-op itself, and, by extension, legitimized by the fact that the co-op member-owners elect the Board of Directors (see following section).

This transfer of co-op oversight away from the NCUC and to the member-owners and boards has occurred over time since the formation of co-ops was authorized and encoded in state law in 1935 via the "Electric Membership Corporation Act."[3] That law, among other things: (a) formed the NC Rural Electrification Authority (NCREA); (b) authorized the formation of electric co-ops; (c) established the powers of the Board of Directors; (d) established the right of membership and member voting for directors; and, (e) prohibited discrimination by co-ops in the setting of rates or provision of services.

On the issue of discrimination, the Act states that "No electric membership corporation shall, as to rates or services, make or grant any unreasonable preference or advantage to any member or subject any member to any unreasonable prejudice or disadvantage," and that "No electric membership corporation may…mislead or deceive its members in any manner as to rates charged for the services of such electric membership corporation."4

These two points will be referenced again in later sections on high fixed charges and punitive solar net metering/net billing rates and fees. But it is important to note here that these two provisions of state law directly apply to those charges, rates and fees, but are not being enforced due to the lack of state regulation and oversight of co-op rates and rate structures.

Per NC Statutes Chapter 62 ("Public Utilities"), electric co-ops (and muni's) were never considered "public utilities" for the purposes of full regulation by the state, but were instead considered as public utilities in the same chapter, and regulated as such by the NCUC, for the purposes of requiring, among other things, adequate, sufficient ***and non-discriminatory service***.[5]

In other words, the NCUC, at one point, ***had*** the authority to receive, investigate and act on complaints submitted by members of electric co-ops, whether in relation to rates, rate structures, investments, or other services. The same chapter also required co-ops to submit an Integrated Resource Plan, which may not have been necessary in the past, but may require reconsideration in a future where, for instance, Integrated Distribution Planning may be necessary to "modernize" the distribution grid.

Even that slight but important state oversight of electric co-ops was removed in 2013 with the passage of House Bill 223, tellingly named *"An Act Exempting Electric Membership Corporations From Integrated Resource Planning* ***and Service Regulations Requirements Established By The Utilities Commission****,* ***Returning Oversight Of The Corporations To Their Member Board of Directors,*** *And Clarifying The Authority Of The North Carolina Rural Electrification Authority To Receive And Investigate Complaints From Members Of Electric Membership Corporations."* (bold emphasis added)

---

[3] NC Statute, Chapter 117, Article 2 (1935). https://www.ncleg.gov/EnactedLegislation/Statutes/HTML/ByChapter/Chapter_117.html

[4] NC § 117-16.1.

[5] NC § 62-42(a) and (b)

As indicated in the title, the 2013 law did the following:

1. Removed the requirement for electric co-ops to develop and submit Integrated Resource Plans, which describe how electric utilities will meet projected electricity demand over the planning period -- using what resources (coal, nuclear, natural gas, renewables, etc) and at what estimated cost.
2. Transferred all oversight and responsibility for reviewing and assessing the impact of, receiving public comment on, and approving or rejecting electric co-op rate changes, rate structures, net metering policies and related proposals to the co-op boards of directors, under the assumption that the boards, as elected by the member-owners, serve as the most direct and appropriate regulator for the state's electric co-ops.
3. Added a new responsibility and authority for the NC Rural Electrification Authority to accept and review complaints from co-op member-owners – ***without giving the NCREA the power to enforce any penalties or changes in rates, etc***.[6]

On the last point, Appalachian Voices contacted NCREA to get clarification on the process by which the agency performs the function of "receiving and investigating complaints" from co-op members. NCREA stated that they are a last resource for co-op members, and encourage all complaints to be resolved directly through the processes set forth by the electric co-op (addressed in the following section).[7] NCREA further stated that the agency can only offer "suggestions" for complaint resolution and policy changes to the co-op, ***but they cannot compel co-ops to make any changes.***

How Electric Cooperatives Are Actually "Governed"

The US Department of Agriculture clearly states that cooperatives, of all kinds, shall be governed by the "User-Control Principle," meaning that the people who use the cooperative are those who control it, and that members can/should exercise that control by (1) voting at annual and membership meetings, (2) electing the Board of Directors, **and (3) making decisions on major cooperative issues.**

This principle of User-Control is how North Carolina should view whether the state's 26 electric co-ops are being governed by their member-owners. Unfortunately, there are some general and disturbing trends, as well as practices employed by most co-ops, that belie the state's current assumption, as well as claims made by co-ops themselves, that the member-owners of the co-ops are provided sufficient opportunity to democratically participate in the governance and operation of their co-op. These include, but are not limited to, the following:

1. **Member participation in board elections is less than 10 percent in most cases.** Research has shown that 72 percent of electric co-ops in the United States had less than 10 percent of their members voting in their board elections from 2006-2011.[8] Blue Ridge Energy, serving 70,000+ members in western North Carolina, has had less than 10 percent turnout in the last four years (at least), despite the co-op's relatively good marketing and outreach efforts to increase voting participation. The low level of participation in voting is a clear indication that the member-owners by and large are not actively involved in the governance of their co-op.

---

[6] NC Session Law 2013-187. HB 223. https://www.ncleg.net/EnactedLegislation/SessionLaws/HTML/2013-2014/SL2013-187.html
[7] Personal communication with NCREA representatives. October 2018.
[8] Institute for Local Self-Reliance. Just How Democratic are Rural Electric Cooperatives? January 2016. https://ilsr.org/just-how-democratic-are-rural-electric-cooperatives/

2. **Nomination processes and requirements for Director elections are cumbersome and controlled by the existing board.** In many cases, including in Blue Ridge Energy's case, the co-op exerts strong control over the nominating process, including by putting forth preferred nominees selected by the co-op, and requiring independent nominees to go through a strict vetting process before being approved, or not approved, by the Nominating Committee. Such a process discourages many members from seeking election to the board. As a result, in most elections, at least one, if not more sitting directors run for re-election unopposed.
3. **Monthly board meetings are closed to attendance by members, and meeting agendas and minutes are not made public.** A survey of co-op transparency practices conducted for the purposes of these comments showed that most of the state's co-ops do not allow their members to attend monthly board meetings, do not post meeting agendas and key decisions to be made in advance, and do not post or provide meeting minutes. Some co-ops do allow members to attend the monthly meetings after submitting a request to do so, but such policies are not clearly stated online, and approval of those requests is still up to the discretion of the co-op. *Because it directly prevents members from "making decisions on major cooperative issues," this may be the single most important way in which the co-ops are actively suppressing member participation in the democratic governance of their co-op.*
4. **Co-ops intentionally insulate Directors from the membership.** A scan of the websites of electric co-ops shows that even basic contact information, such as an email address, is not provided to members to directly contact the Director representing their district if they have a question or issue they would like resolved. In some cases, a map of the Director districts is not provided either, meaning that members might not even know who is representing them. Some co-ops take that insulation further by minimizing opportunities for direct contact between members and their directors. For instance, Blue Ridge has done away with their public Annual Meeting picnic-style event, which for other co-ops provided members an opportunity to talk and mingle directly with co-op management and the board, and instead holds a "business meeting" at their headquarters (located outside of the co-op's service area), on a Thursday (rather than a Saturday when people aren't working), during working hours (when people aren't able to attend even if they wanted to).

These represent just some of the more significant issues, each of which demonstrate that the state's co-ops aren't merely not governed/regulated by their members, but in fact are actively discouraging or preventing their member-owners from participating in governance and decision-making. Others include the egregious use of proxy voting to ensure that the co-op's preferred director nominees are elected, the lack of clear guidelines and pathways for member-owners to introduce and have bylaw amendments voted on, and behind-closed-doors changing of the nomination requirements in order to suppress the ability of members to be eligible for election as a director.

Such practices are a direct violation of the User-Control principle and demonstrate that some co-ops are intentionally gaming the system and/or excluding members from exercising their rights and responsibilities as co-op member-owners, much less from being informed about key decisions being made by the co-op regarding governance, rates, rate structures, and energy efficiency and renewable energy policies and rates.

As a result, and given that co-op member-owners have no path for redress of violations or grievances through the NCUC or the NCREA, harmful policies and practices employed by electric co-ops are continuing unabated.

What has resulted from this state-sanctioned self-governance by electric co-ops (which continue to enjoy monopoly control over electricity sales in their service areas, despite being effectively deregulated by the state) are: (1) the exemption of co-ops from any meaningful participation in or obligation to adhere to state clean energy policies; (2) high and persistent energy cost burdens; (3) high monthly fixed charges; and, (4) paltry to non-existent investments by co-ops in energy efficiency and renewable energy sources for and on behalf of their members.

The Exemption of Electric Cooperatives from Clean Energy Policy

Prior to the 2013 law, the other main law affecting electric co-ops was Senate Bill 3 in 2007, known generally as the Renewable Energy and Energy Efficiency Portfolio Standard (REPS). That law, while it did not "exempt" co-ops from being affected by the law (as suggested in the title of this section), did implement much more lax requirements for co-ops and muni's and exempted those utilities from having to make those investments themselves, in their own service territory. While the law requires larger investor-owned utilities to achieve 12.5 percent of their retail sales from renewable energy resources by 2021 – as well as up to 25 percent of those requirements from energy efficiency investments, should those utilities choose to use that allocation – it only required co-ops and muni's to achieve a 10 percent target by 2018, from any mix of renewables and efficiency they chose.[9]

Perhaps more importantly, the law allowed those utilities to pay a third party to obtain the Renewable Energy Credits on their behalf, ***which resulted in most of the small utility targets being achieved with little to no direct impact for their members/ratepayers or the communities they serve***. In effect, as explained in following sections, by making it so easy for co-ops and muni's to comply with the law, the REPS law did nothing to ensure the equitable distribution of economic, social and environmental benefits of the clean energy growth that has resulted since the law's passage.

The second main law that could have generated those benefits for small and rural communities across the state was House Bill 589 in 2017, the "Competitive Energy Solutions for North Carolina" Act. While the implementation of that law has received much criticism, its intent was to, among other things, ensure and facilitate the growth of renewable energy resources such as utility and distributed solar by requiring electric utilities ***to which the law applied*** to (a) create a competitive procurement process for independently owned renewable energy systems, (b) create a program for large energy users to directly procure renewable energy, (c) offer rebates for up to 20 megawatts of distributed clean energy, and (d) develop a community/shared solar program to offer to ratepayers.[10] While the law ***should*** have created greater opportunities for the growth of solar and other renewable energy resources across the state, the law effectively exempted – ***at their request*** – co-ops and muni's from having to comply. Once again, rural and small municipal communities were left out of the benefits of public policy that could have stabilized and lowered energy costs, created jobs, generated new local tax revenues and improved the quality of life for those communities.

[9] NC Session Law 2007-397. SB 3. https://www.ncleg.net/Sessions/2007/Bills/Senate/HTML/S3v6.html
[10] NC Session Law 2017-192. HB 589. https://www.ncleg.gov/Sessions/2017/Bills/House/PDF/H589v6.pdf

Home Energy Burdens in Electric Cooperative Service Areas

The fact that the state provides electric co-ops (and muni's) the same monopoly control over the sale of electricity in their service territories, but does not consider these utilities to be "public utilities" when it comes to regulation, oversight and clean energy policy has direct and profound negative impacts on the communities they serve. One such impact, which can and should be considered an economic and social crisis for the state, is that home energy cost burdens experienced by rural, low-income, minority and other disadvantaged households across the state are not being addressed, either by local and state governments or by the electric utilities that serve those sectors of the population.

"Home energy cost burden" is defined as the percent of *gross* (pre-tax) household income spent on energy costs (not including transportation). This includes both electric and non-electric costs. Researchers have concluded that the break point for what is considered an affordable energy burden is 6 percent of gross household income.[11]

As shown in the following table, nearly 35 percent of all households (more than 1.3 million households), each falling under 200 percent of the federal poverty level (FPL) – experienced an energy cost burden equal to or greater than 6 percent in 2016.[12] The most impoverished households (less than 100 percent of FPL) had an average energy burden of 17 percent.

It is important to note that these are annual averages, and depending on the geographic location, energy cost burdens are much higher in the summer months in warmer regions of the state, and much higher in the winter months in cooler regions. For instance, a survey of more than 40 members of Blue Ridge Energy showed that winter home energy costs for many residents exceeded 40 percent and even 50 percent of household income.

Energy Cost Burdens for Low-Income Households in North Carolina (2016)

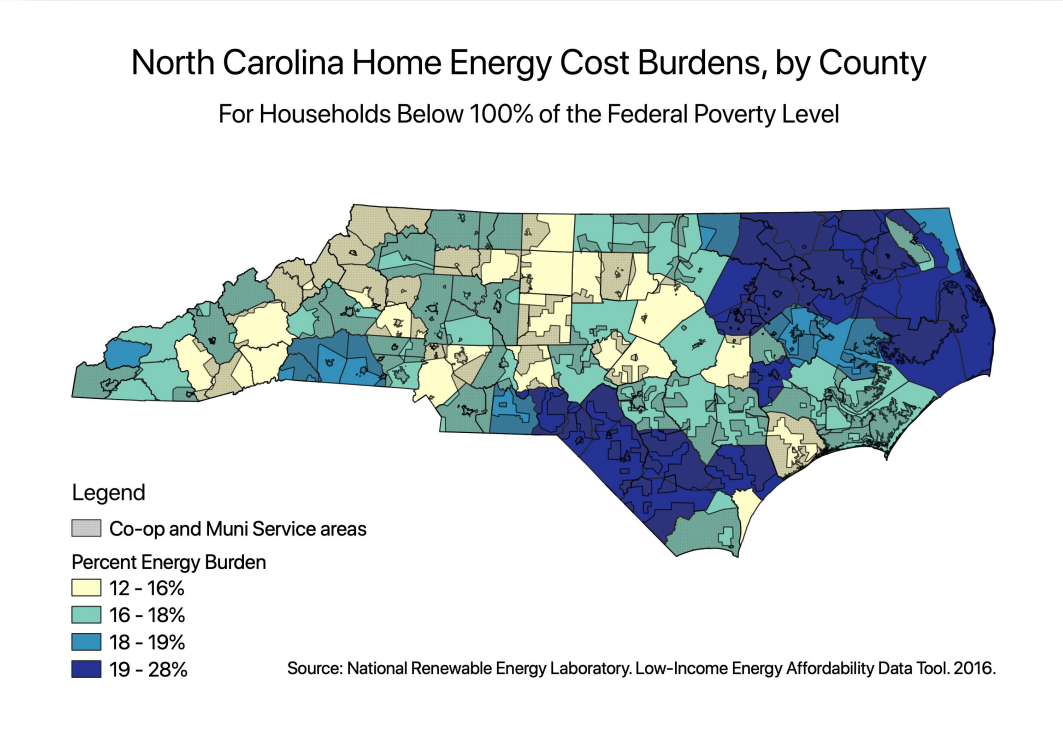
% Federal Poverty Level	# Households	Min	Max	State Avg.
< 100%	553,239	12%	28%	17%
100-150%	397,964	6%	12%	8%
150-200%	377,396	4%	8%	6%
Total > 6% energy burden	1,328,598	4%	28%	9%
Total NC households	3,815,392			
Percent energy burdened	35%			

While energy burdens affect all areas of the state, the burden for households below 100 percent FPL is most pronounced in many counties served by rural electric co-ops. This is in part due to higher rates of poverty and lower median incomes, but is perhaps more directly attributable to the older and more inefficient housing that exists. As such, rural families, served by co-ops, that are experiencing persistently high energy burdens could significantly benefit from more equitable rate structures as well as energy efficiency and renewable energy programs and investments that are accessible to low-income residents.

---

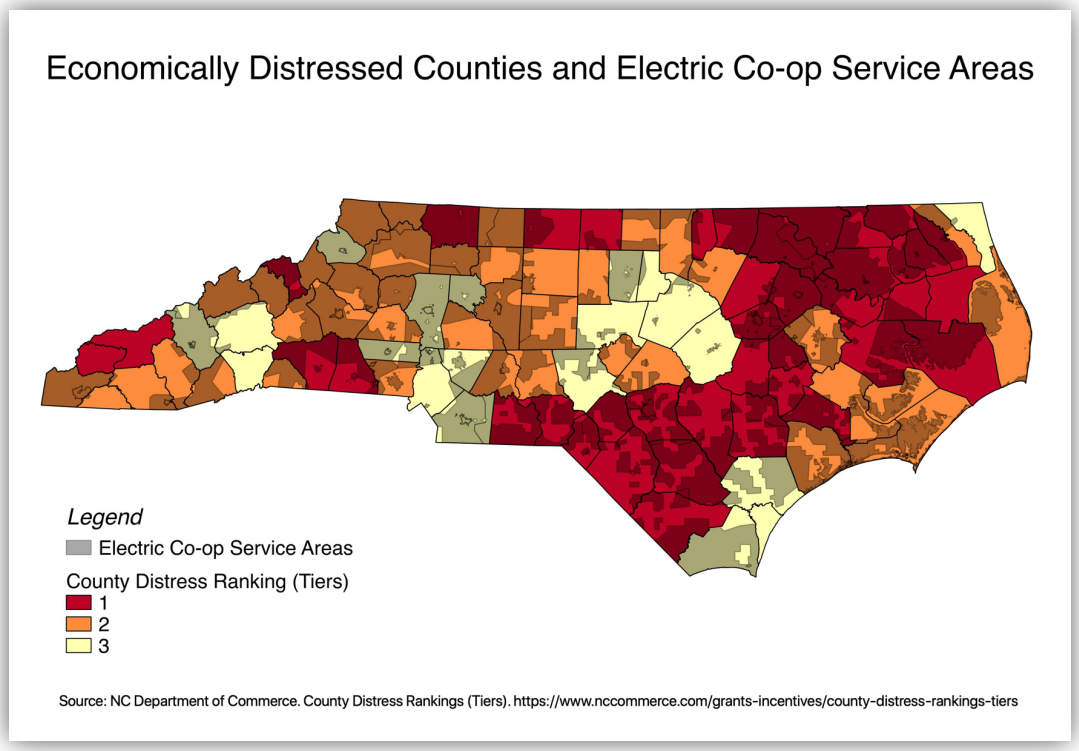
[11] Fisher, Sheehan and Colton. Home Energy Affordability Gap. http://www.homeenergyaffordabilitygap.com/01_whatIsHEAG2.html

[12] Ma, Ookie, Krystal Laymon, Megan Day, Ricardo Oliveira, Jon Weers, and Aaron Vimont. 2019. Low-Income Energy Affordability Data (LEAD) Tool Methodology. Golden, CO: National Renewable Energy Laboratory. NREL/TP-6A20-74249. https://www.nrel.gov/docs/fy19osti/74249.pdf.



The following map provides an additional perspective on the connection between electric co-ops and the economic health of the communities they serve. As shown in the map, co-ops serve many of the most economically distressed (Tier 1 and 2) areas of the state, as defined by the NC Department of Commerce.

Given that the Tier designations are based on unemployment rates, median household income, population growth and per-capita property tax revenues, it is clear that because of the jobs and increased property tax revenues generated by clean energy investments, expanding such investments in rural communities served by electric co-ops would not only help households but indeed the economic and social health of the counties as a whole.



Unfortunately, as explained in the following sections, North Carolina's electric co-ops have done little to address the economic crisis of energy cost burdens in the communities they serve, have made paltry investments at best in energy efficiency and renewable energy resources, and have in fact made it ***harder*** for their member-owners – especially low-income households – to control their own energy costs and invest in solar and energy efficiency.

High Fixed Charges Imposed by Electric Cooperatives

Electric utilities generally recover their costs for providing electric service to residents (and, for regulated investor-owned utilities, their allowed profits) through a combination of two different kinds of charges on the electric bill:

1. a **monthly fixed charge** that is the same for all ratepayers regardless of the amount of energy used (this is commonly termed a "customer charge" or "facilities charge"). This is a basic monthly service fee that you must pay even if you use no electricity at all. It is like a cover charge that you must pay at a bar regardless of whether you like the band or order any drinks at the club.
2. a **volumetric or energy charge** that is based on a customer's actual energy usage and the "rate" (in cents per kilowatt-hour) charged for electricity by the utility. These rates vary for different kinds of customers, and usually are larger for residential customers than for industrial customers. Volumetric charges are like the price per drink at the club.

Historically, because energy demand was growing and utilities' revenues were also growing, most cost-recovery was achieved through the volumetric rate, resulting in a relatively low fixed charge (or no charge at all). However, in recent years that demand has flattened or declined, and electric utilities – especially electric co-ops – are responding by changing how they charge customers for power with the goal of guaranteeing that they generate a minimum level of revenue per customer. To do so, they are rolling a greater portion of their cost-recovery into the monthly fixed charge, leading to substantial increases in the fixed charge component of the bill.

The Argument For and Against High Fixed Fees

The main utility argument ***for*** imposing high fixed charges is that electric utilities want to ensure that enough revenue is generated to recover their costs. They argue that a lot of those costs are "fixed" and so should be recovered through a fixed fee rather than the volumetric rate. According to how utilities calculate their costs, such "fixed" costs include salaries, taxes, administration, customer service, transmission and distribution infrastructure, maintenance, etc. To some extent this is true and justified, but in the end, almost all utility investments are driven by how much electricity their customers actually use. This is the root of the debate between utilities arguing for high fixed fees, and regulators and public advocates who view high utility fixed fees as excessive, unjustified and having a negative impact on low-income customers.

The main argument ***against*** increasing fixed charges, and the way that utilities perceive what is a "fixed" cost and what is a "variable" cost, is that electric utilities are a business, and as such, the "fixed" costs related to infrastructure, operations, maintenance, taxes and other expenses are related to the ***amount of energy used***, and not the number of customers served. Costs that increase with usage should not be recovered through a fixed fee.

The infrastructure and expenses associated with running the business in order to provide a product (electricity) should be recovered through the price of the product, and not through what is essentially an "entry fee" for accessing the product. Imagine if Starbucks were to start charging an entry fee -- a cover charge -- just to enter the store. Even if they offered a discount on each cup of coffee, most people (assuming they have a choice) would find another place to buy their morning coffee. This is just not how utility rate structures and fixed charges are supposed to work. If the current model does not work for utilities because they are spending a lot on infrastructure or otherwise, the answer is not high monthly fixed charges, but to find innovative ways to reduce costs and empower customers. If an electric utility can't survive otherwise, then it should not be in the business of selling electricity.

Regulators and public advocates tend to agree with utilities that there are indeed some fixed, customer-related costs that can justifiably be recovered through a monthly fixed fee. These include the cost of maintaining the line that runs from the distribution network to the home, and some of the cost of operating and maintaining the electric meter, billing, and direct customer service. These are the costs to connect the customer to the grid and provide direct customer service. Everything else -- the grid, fleet, staff, salaries, taxes, etc -- are the costs of doing business. Many of these costs are directly related to the volume of electricity sold -- meaning they're variable rather than fixed -- and so should only be recovered through a variable/volumetric charge based on actual energy use.

The Impacts of a High Fixed Charge

High fixed charges and artificially low electricity rates mean:

1. **Unfair bill increases for low energy users.** By increasing the portion of the electric bill that is not related to actual energy consumption, high fixed charges artificially increase electricity bills for low energy users. Many of these customers are low- and/or fixed-income residents living in apartments or shared housing, residents who conserve or have invested in energy efficiency, or those who have installed solar panels on their homes to offset a portion of their electricity costs. In essence, rather than rewarding customers for saving the utility money by placing less strain on the grid and administrative resources, utilities imposing high fixed charges effectively penalize those who use less of the utility's product. High fixed charges also make it more difficult for families experiencing a financial shock to manage their finances by reducing energy use.
2. **With high fixed costs and low energy costs, why bother using energy more efficiently?** People invest in home energy efficiency improvements to (1) enhance the comfort and safety of the home, and (2) lower their energy bills. For the latter, the value of the savings gained from efficiency improvements depends on the electricity rate (cents per kilowatt-hour). The higher the rate, the greater the savings, and the shorter the payback period for the investment. While payback period is not the only factor driving efficiency investment decisions, it is certainly a strong consideration.

As utilities shift their cost recovery more into monthly fixed charges and (presumably) lower their electricity rate as a result, they effectively lower the value of the savings achieved through efficiency improvements, and therefore lengthen the payback period of those improvements. Should the payback period extend beyond the useful life of the improvement, then investing in such improvements will no longer be cost-effective. The same impact holds true for customer investments in on-site solar energy systems.

What's Wrong With High Fixed Charges, and What They Should Be

The Regulatory Assistance Project (RAP), a leading national research and consulting firm with expertise in electric utility markets and regulation, utility business models, rate structures, energy policy and other areas, asserts that the monthly fixed charge for any electric utility should only reflect the Basic Customer Method of cost allocation.

The Basic Customer Method assumes that only those direct customer-related costs described earlier (feeder line, metering, billing, customer service) are "customer-related" costs, with all else being business-related costs. This method results in the lowest monthly fixed charge and a higher electricity rate, and serves as the basis for RAP's proposed "Smart Rate Design."

The other two methods in use by electric utilities today for calculating customer-related costs are the Minimum Systems Method (used by Duke Energy) and the Straight Fixed/Variable Method, which is used by the majority of North Carolina's electric co-ops and serves as the least accepted method by regulators and public advocates in the field today. The Straight Fixed/Variable Method assumes that all of the utility's non-power costs are customer-related, meaning that the utility believes that everything from distribution system operation and maintenance, to taxes, depreciation, salaries, bonuses and incentives are necessary costs to serve each individual customer.

To calculate a monthly fixed cost using the Straight Fixed/Variable Method, the utility adds up all of those business-related, non-power costs, apportions those costs to each customer class (residential, commercial, industrial), divides the cost by the number of members served for each sector, and divides that by 12 months. The end result is what the utility perceives as being its minimum necessary revenue requirement, per customer and per month.

Using Blue Ridge Energy as an example, this value for residents – as shared and confirmed with Appalachian Voices by Blue Ridge Energy executives and staff on multiple occasions – is $53 per month (this value also underpins the co-op's net metering rate structure -- see the Solar and Net Metering section). Using this value, Blue Ridge then determines how much of that $53 "revenue requirement" they can reasonably expect to recover through the "distribution charge" portion of their volumetric electricity rate, and they charge the remainder as the monthly, fixed "Basic Facilities Charge (BFC)," which is currently $24.17.

That is an extremely high monthly fixed charge and not at all justified on principle. For example, RAP asserts that using the more appropriate and justifiable Basic Customer Method of cost allocation, an electric utility's monthly fixed charge should be no more than $5 to $10 a month. By this measure, Blue Ridge's BFC is as much as five times higher than it should be based on the RAP guidance and recommendations.

Electric Cooperative Fixed Charges in North Carolina

The average residential monthly fixed charge imposed by electric co-ops in North Carolina (as of the submission of these comments) is more than $25/month – or $300/year, with such charges ranging from $12/month (Jones-Onslow EMC) to $35/month (Piedmont EMC). Sixteen of the state's 26 co-ops charge $25/month or more, and six charge $30/month or more.[13,14]

To put these values in more direct context, a survey conducted by the national utility rate structure research and advocacy group "Nix the Fix" shows that the median monthly fixed charge for 140 electric utilities nationwide was $8.94 in 2017. Additionally, until Duke Energy Carolina's 2018 rate case, which raised Duke's monthly fixed charge to $14, its fixed charge was $11 per month -- or less than half the average fixed charge for co-ops.

In other words, the average co-op in North Carolina collects a monthly fixed charge that is more than 2.5 times greater than the median fixed charge for 140 electric utilities nationwide, and is $11 a month higher than that charged by Duke Energy.

The high fixed charges imposed by the state's electric co-ops are the direct result of the fact that co-ops in the state are no longer regulated by the NC Utilities Commission, and other than the co-op boards of directors there is no direct, independent oversight of co-op rates or rate structures in the state. The effect is that the co-ops can impose whatever fixed fees they'd like without having to submit those rate structures for public or regulatory scrutiny and approval. And indeed they have done just that.

As previously noted, high fixed charges exacerbate high energy burdens – especially for low-income households, erode people's control over their energy bills, and reduce the impact and cost-effectiveness of household investments in energy efficiency and distributed solar.

---

[13] Data taken from current residential rate schedules posted on electric co-op websites.

[14] A handful of co-ops surveyed had both the fixed (or "customer") charge and a "minimum monthly bill" listed in their rate structures. In these cases, the latter value was used given that it reflects the average monthly cost per meter the co-op has calculated that it needs to recover in order to achieve its revenue requirement.

High Monthly Fixed Charges Are Discriminatory

Referring back to the discrimination provision in the 1935 "Electric Membership Corporation Act," that provision states that: "*No electric membership corporation shall, as to rates or services, make or grant any unreasonable preference or advantage to any member or subject any member to any unreasonable prejudice or disadvantage*." Because all residents pay the same monthly fixed charge, and those charges are calculated based in large part on the average "costs" associated with serving each household – including demand-related costs such as demand charges the co-op pays and grid costs for supporting that demand – fixed charges are inherently discriminatory. This results from the fact that not all properties and residents impose the same demand/costs on the system.

For instance, a 3,000 foot house with a 2.5-ton heating and cooling system will place greater demand on the grid in the middle of the summer than an 800 foot apartment with a window air conditioning unit. While in this example the larger home imposes a greater cost for the co-op for demand charges and grid maintenance, the smaller apartment pays the same monthly fixed charge as the larger home. In other words, assuming (correctly) that the cost to serve the larger home exceeds the monthly fixed charge, and that the cost to serve the apartment falls below that fixed charge, the apartment is in effect subsidizing the cost that the larger home places on the system and the co-op. ***In effect, the fixed charge is unreasonably advantaging the larger home and disadvantaging the tenant of the apartment, thereby violating the discrimination provision.***

Secondly, the law also states that: "No electric membership corporation may…mislead or deceive its members in any manner as to rates charged for the services of such electric membership corporation." A survey of sample co-op electric bills in the state suggests that many, if not most co-ops do not list the fixed charge as a separate line item on the electric bill. Instead, they roll that value into the total charge for energy, without explaining or disclosing that they did so, or why. While this may not be a clear violation of the discrimination provision of the law, as any co-op could argue that the separate charges are detailed in the rate schedules, it does borderline being deceitful, especially at a time when members should be more informed about the structure of their rates and electric bills, not less. If members are not aware that the fixed charge exists, or even more, what it means and how it is calculated, they cannot make an informed case against the current and future fixed charges, and uninformed co-op members cannot then "regulate" their co-op in regards to rate structures and fixed charges.

Electric Cooperatives Discourage Member Investment in Solar

North Carolina's electric co-ops actively, and intentionally, discourage household and business investment in distributed generation such as rooftop solar in two main ways: (1) by imposing high monthly fixed charges (and in many cases, subsequently keeping rates lower than they otherwise should be); and, (2) implementing harmful and even punitive net metering and net billing rate structures.

Regarding the former, which is discussed in great detail in the previous section, high fixed charges and associated rate suppression devalue the economic benefits of distributed solar. As a result, if a member's motivation for investing in their own solar system is to save money, either immediately or over the life of the system, then the high fixed charges imposed by the large majority of the state's co-ops render those investments less cost-effective for members.

Regarding the latter, almost no single co-op in the state implements net metering or net billing (also known as "buy all, sell all") policies that encourage member investment in distributed generation. On the contrary, nearly every single such policy renders the large majority of those investments non-cost effective. For instance, there are 20 co-ops in North Carolina that purchase their electricity from NCEMC through a declining block rate, with the last block costing the co-op 2.87 cents-per-kilowatt-hour (kWh). Rather than setting their credit value for members who invest in on-site solar generation at either the retail rate charged to their members, or even at a wholesale-plus-"value of solar" rate that recognizes the *average* wholesale cost savings as well as the demand-savings and system benefits of having that distributed generation on the grid, many of those co-ops set their credit at their "avoided cost" of 2.87 cents/kWh (some co-ops do offer direct net metering at the retail rate).

Using an example where a co-op member pays 10 cents/kWh for electricity, consumes 2,000 kWh/month on average, and installs a 4 kW rooftop solar system for $12,000, and assuming that the system would offset 25 percent of their usage, under a direct net metering option that resident would pay off their investment in 20 years. Meaning they would at least break even, if not realize $600 in annual savings for the following 5-10 years. Under an "avoided cost" rate of 2.87 cents/kWh, the simple payback for the same system would extend to 70 years. This is a theoretical example but it illustrates the impact of a co-op reducing the credit they offer members down to such a low avoided cost rate.

There are also six electric co-ops that purchase their electricity from Duke Energy before selling it to end-users. The net metering/billing options offered by those co-ops varies, but there is one co-op's policy worth highlighting. Blue Ridge Energy offers a "net billing" rate where they credit members 5 cents/kWh for electricity sold to the grid and tack on a supplemental $2.91/month fixed charge to go on top of their $24.17 Basic Facilities charge imposed on all residential members.[15] That rate has a similar, yet less dramatic impact on the cost-effectiveness of member investments in solar as the example provided above.

However, Blue Ridge also "offers" a net metering rate that stands as one of the most punitive net metering policies in the state. Under this policy, a member wanting to interconnect a distributed generation/solar system would see their monthly fixed charge increased to $36/month, as well as be required to pay a new distribution energy charge of 2.73 cents/kWh, which is applied to the net energy use. And while the member is credited at the co-op's wholesale rate of approximately 6 cents/kWh (not bad, but not good), the co-op has structured their policy so that the minimum bill that the net-metered member would pay, even if they zeroed out their energy use with their solar system, is $53/month, no matter what.[16]

This policy was (per the co-op itself) admittedly structured so that the co-op would recover what it has calculated (without any regulatory or member knowledge or oversight) to be its per-residential-member monthly revenue requirement. The effect of the policy on the cost-effectiveness of member investments is such that virtually no member can save money over the life of their investment by installing and interconnecting an on-site solar system, and in fact will likely lose money on that investment. The ***only*** members who could save money under this policy are those that consume a large amount of energy and install a large solar system. In other words, the only members that can potentially benefit from such investments are affluent households with a large energy appetite.

---

[15] Blue Ridge Energy. Rider NB. Accessed 9/6/19. https://www.blueridgeenergy.com/residential/help-faqs/electric/understanding-my-bill/rate-schedules

[16] Blue Ridge Energy. Schedule R-NM. Accessed 9/6/19. https://brenergy.s3.amazonaws.com/files/1/residential/2018/rate-sch-rev/1.1.1_NMNetMetering%20Updated%2008%2023%2018.pdf

Blue Ridge's argument, ironically, is that their net metering policy is justified in order to prevent non-solar members from subsidizing the "fixed" costs for those that go solar. This is ironic because their Basic Facilities Charge, imposed equally among all households, already results in low energy users subsidizing high energy users. However, in regards to members installing solar, Blue Ridge is failing to recognize, at least publicly, that (a) their purported fixed costs and associated revenue requirement do not represent actual customer- or energy-related costs, (b) that their policy assumes that all members who go solar will zero out their energy use, and (c) that the addition of those distributed resources, specifically solar resources, actually save the co-op and therefore the rest of the membership money on demand costs the co-op pays to Duke Energy, as well as on grid investments and maintenance. To date, despite requests by Appalachian Voices and some of the co-op's members to improve their net metering policy for these reasons, the co-op refuses to do so.

As illustrated in the following table, the result of the net metering/billing policies implemented by co-ops in North Carolina are discouraging member investments in on-site, distributed solar relative to the state's two largest utilities, Duke Energy Progress and Duke Energy Carolinas. While ratepayers served by the two Duke companies had installed a total of 180 megawatts (MW) of solar as of 2018, co-op members statewide had only installed 17 MW. ***To put that discrepancy in perspective, despite serving only three times more total customers than electric co-ops, the customers of the two Duke companies have installed more than ten times more solar (in terms of capacity) than have members of co-ops.*** Those ratios are expected to improve only slightly by 2022.[17]

Current and Projected Distributed Solar Capacity, By Utility Group (2018)

Utility	2018 (MW)	2022 (MW)
Duke Energy Progress	75	140
Duke Energy Carolinas	105	198
Electric Cooperatives	17	33
Municipal Utilities	1.7	4.3

By discouraging member investments in on-site solar and other distributed generation, the state's co-ops are harming the broader co-op membership (by preventing cost reductions for the co-op), and harming local economies by suppressing the economic development potential that distributed generation offers. Further, for the same reasoning as applied to high monthly fixed charges, and in light of the Blue Ridge Energy net metering example, some of those policies may also be considered to be in violation of the discrimination provision of the 1935 Electric Membership Corporation Act. And in addition to suppressing member investments, co-ops themselves have historically underperformed in terms of making those investments on the utility-scale, in large part due to the weak application of REPS to co-ops and the exemption of co-ops from being obligated to the provisions of HB 589.

[17] Southern Alliance for Clean Energy. Solar in the Southeast, 2018 Annual Report. 2019. https://cleanenergy.org/wp-content/uploads/2018-SE-Solar-Report-FINAL.pdf

The Lack of Solar Investment By Electric Cooperatives

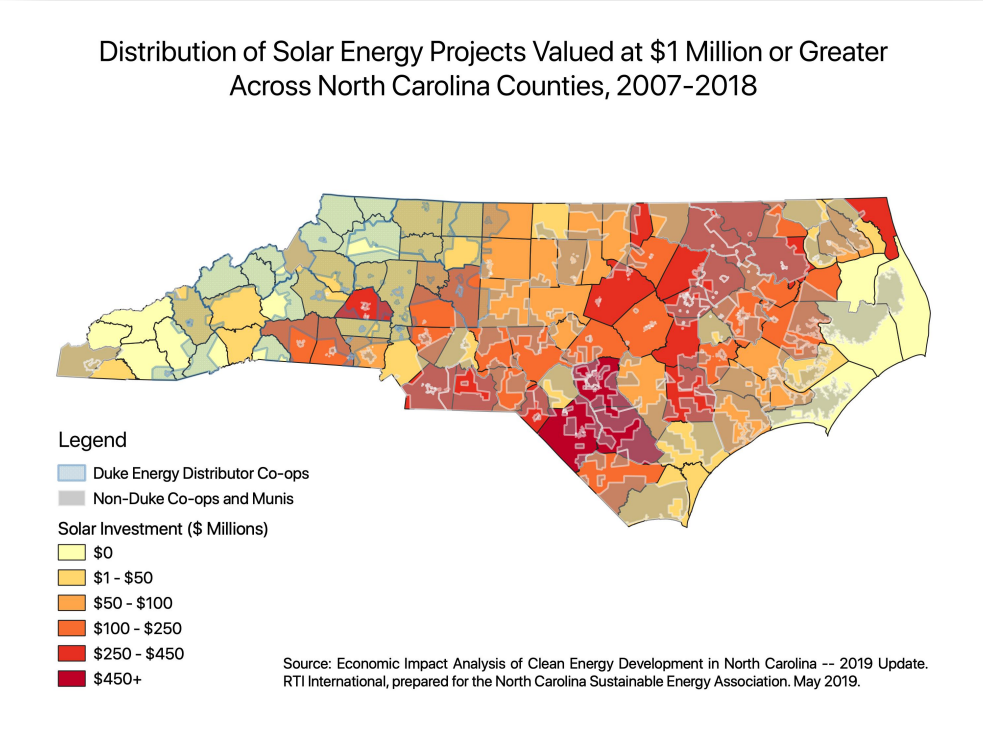
For all of the reasons noted throughout this document, but also due to the fact that co-ops have not taken advantage of federal loan guarantee programs available through the US Department of Agriculture's (USDA's) Rural Utilities Service (RUS), electric co-ops in North Carolina are grossly underperforming in terms of developing even utility-scale solar. As shown in the following table, the amount of utility-scale solar developed by co-ops is only twice that as developed by their members (see previous table), with that ratio expected to be cut in half by 2022. Even worse, while serving one-third of the customers as the Duke Energy companies serve, the co-ops are being out-performed 100-to-1 by Duke's companies in terms of installed solar capacity. That ratio is only projected to worsen by 2022.[18]

Current and Projected Utility-Owned Solar Capacity, by Utility Group (2018)

Utility	2018 (MW)	2022 (MW)
Duke Energy Progress	2,072	3,304
Duke Energy Carolinas	884	1,572
Electric Cooperatives	31	43
Municipal Utilities	63	63

While many co-ops may be starting to develop, or explore the development of utility-scale solar projects – including Blue Ridge Energy – one major barrier to some co-ops, particularly those who have exclusive "all requirements" purchasing contracts with Duke Energy, is that those contracts specifically limit the amount of "demand side management," including solar, that the co-ops can develop. This, combined with the solar policies implemented by these co-ops, has resulted in a large number of western counties losing out on the local investment in, and associated economic benefits of large solar investments that numerous other counties, particularly in the eastern part of the state, have benefitted from since the REPS law came into effect. The following map illustrates this large discrepancy in county-level solar investments across the state.

[18] Ibid.



The impacts of the resistance to utility-owned solar by the state's co-ops are the same as described in the previous section. That resistance extends to energy efficiency as well, as the level of investment by co-ops in energy efficiency remain as miniscule as for distributed generation, again despite available low-cost funding, resources, and the experience of other co-ops in North Carolina and other Southeast states.

The Lack of Energy Efficiency Investments by Electric Cooperatives

While the cost of solar energy may have been a significant barrier to both co-ops and their members in the past, the value and cost of energy efficiency improvements have always been pretty much the same. However, other barriers have existed for co-ops, including the availability of low-cost capital, the lack of third-party program operator support (required for co-ops lacking internal administrative capacity), a dearth of "best practices" to adopt and build upon (aside from rebates and other incentives), a clear business case for adopting comprehensive energy efficiency programs, and in some cases a lack of qualified local workforce.

Most of these barriers no longer exist for co-ops, and haven't for several years. For instance, the USDA has offered two low-cost loan guarantee programs in recent years specifically to support energy efficiency, conservation and renewable energy programs and investments. The Energy Efficiency and Conservation Loan Program (EECLP), in place since 2013, offers all rural utilities Treasury-rate (around 3% interest) loan guarantees as part of their multi-billion dollar loan pool. Unfortunately, only a single co-op in North Carolina – Roanoke Electric – has taken advantage of the program, while the other twenty-five co-ops have left that money on the table rather than using it to the benefit of their members and communities.

The second program available to co-ops has been the Rural Energy Savings Program (RESP). Authorized through the 2015 Farm Bill, RESP has provided $50-100 million a year in zero-percent financing to rural utilities specifically for the development and implementation of "re-lending" programs for energy efficiency. That program has now been expanded to include financing for renewable energy, as well as for programs that finance the replacement of old, inefficient manufactured housing. While RESP has been used by a handful of co-ops in the state, those loan packages have been small, and in our understanding, only one has been approved for an energy efficiency loan program.

There are also now proven financing models that North Carolina's co-ops can adopt that exist in the state and throughout the Southeast. Specifically, the "tariffed on-bill (TOB" financing model based on the Pay-As-You-Save™ (PAYS) system is being implemented by numerous co-ops in South Carolina, eastern Kentucky, Arkansas, North Carolina (Roanoke Electric Co-op), and now Tennessee (Appalachian Electric Co-op). These programs have resulted in the successful retrofit of more than 2,000 homes (5,000+ if Kansas is included), have achieved 20-30% energy savings for participating homes, and have seen less than a 1 percent default rate on the investments. Four of these programs have been financed through either EECLP or RESP. *[Note: we applaud the draft Clean Energy Plan for recommending PAYS as a key solution for all of the state's electric utilities to expand access to energy efficiency and distributed generation.]*

Additionally, there is now an experienced third-party program operator, EEtility, willing to expand their business to any co-op. EEtility is currently operating Ouachita Electric Co-op's HELP PAYS (AR), Roanoke's Upgrade to $ave program (NC), and Appalachian's U-SAVE Advantage program (TN). The company offers everything from contractor training and coordination, to staff training, modeling and verification, and marketing.

Given all of this, there is no reason why any co-op is not already offering inclusive TOB financing to their residential and business members, for energy efficiency ***and*** distributed generation (or even electric vehicles). The only argument co-ops are now making is that (a) they do not have the legal authority in North Carolina to transfer the tariff for cost-recovery among successive customers at a particular house, apartment or business (yet Roanoke Electric has been doing this for five years now); (b) that they don't want to be in the lending businesses (they already are, essentially, by paying for and then recovering the costs of meters, poles, lines, etc); or (c) that they can't afford to lose revenue.

On this latter point, we understand this concern. However, it is up to the utilities to revise their business model in order to achieve the goals of the draft Plan, and thus far they are resistant to even recognizing the financial benefits that energy efficiency can generate for the utilities and their members/customers. The "co-op of the future" could offer a variety of revenue-generating services (e.g., broadband), and, if regulated, can be incentivized through performance-based ratemaking to achieve the state's clean energy goals.

The following table illustrates how little co-ops have achieved in helping their members reduce their energy use and associated energy costs. As the table shows, electric co-ops have achieved far less in energy savings (as a percent of retail sales) than the state's regulated investor-owned utilities – which themselves are underperforming in this regard compared to the cost-effective energy efficiency potential that exists in the state. As of 2017, co-ops had only reduced energy use by 0.21 percent of their retail sales. Eleven of the state's 26 co-ops were at 0 percent, and another six at less than 0.1 percent.[19]

[19] Southern Alliance for Clean Energy. Energy Efficiency in the Southeast, 2018 Annual Report. 2018. https://cleanenergy.org/wp-content/uploads/2018-Energy-Efficiency-in-the-Southeast-SACE-2.pdf

Energy Saved by North Carolina's Electric Utilities, by Utility Group (2017)

Utility	EE as percent of energy sales
Duke Energy Carolinas	1.10%
Duke Energy Progress	0.80%
Electric Co-ops	0.21%
Municipal electric utilities	< 0.1%
State Average	0.75%
Southeast Regional Average	0.30%

The state's electric co-ops must do more to reduce energy use for their members, alleviate rural energy cost burdens and enhance quality of life, and capitalize on the economic potential of energy efficiency investment opportunities for the rural communities they serve. Thus far they have achieved very little in this regard despite the experience, capital and resources available to them. If necessary, the state should enact stronger policies requiring all electric utilities, including both co-ops and muni's, that obligate the utilities to achieve strong energy efficiency requirements over the next decade. However, as member-owned electric utilities purportedly committed to operating on the seven cooperative principles, the co-ops should already be doing this themselves.

Recommendations for the Final Clean Energy Plan

Appalachian Voices applauds the Governor and the NC Department of Environmental Quality on drafting a strong Clean Energy Plan that aims to put the state on a path to achieving 60-70 percent reductions in greenhouse gas emissions below 2005 levels from the state's electricity sector by 2030. There are a lot of excellent recommendations in the draft Plan, including many pertaining to the state's 26 rural electric cooperatives that would expand access to energy efficiency and renewable energy for their members while alleviating the energy burden crisis for low-income residents. Specifically, we strongly support the recommendation for the state to implement an Energy Efficiency Resource Standard that would set strong but reasonable requirements for both co-ops and municipal electric utilities, the recommendation for all utilities to adopt and implement Pay-As-You-Save™ tariffed on-bill finance programs, and the recommendation for the state to explore a ratepayer-funded Percentage of Income Payment Program modeled on the program in place in Ohio.

However, despite these recommendations, the draft Plan falls far short of achieving its purported equity goals. Specifically, the draft Plan does not address: (a) the effective deregulation of co-op and muni governance, rates and investments by the state; (b) the allowance in the state REPS for co-ops and muni's to outsource the attainment of Renewable Energy Credits in order to meet their REPS requirement; or, (c) the exemption of co-ops (and muni's) from HB 589 (2017) and associated solar energy policies and program requirements. The deregulation of and policy exemptions/exceptions for co-ops and muni's have led in most cases to extremely high monthly fixed charges, punitive and/or ineffective net metering/billing policies and rates, miniscule energy efficiency and renewable energy investments, and the persistence of high energy cost burdens for rural households.

The draft Plan does little to address these problems and barriers. As such, we recommend the following be added to the final Clean Energy Plan:

7. Enact an executive policy, and/or propose/advance legislation which prohibits generator utilities, such as Duke Energy and the NC Electric Membership Corporation, from limiting the amount of solar or demand-side management their customer distributor utilities (co-ops and muni's) can develop or implement.
8. Enact an executive policy, and/or propose/advance legislation requiring co-ops and muni's to develop Integrated Distribution Plans that align with the final Clean Energy Plan and its associated social, economic and environmental goals.
9. Enact an executive policy, and/or propose/advance legislation requiring co-ops and muni's to offer direct net metering, and/or net metering that values the cost-savings of solar for the grid (demand savings) and utility (wholesale power and admin/grid maintenance).
10. Develop a state loss reserve fund, workforce development program, program operator network and finance agency to facilitate the adoption and implementation of co-op and muni energy efficiency programs, specifically Pay-As-You-Save™ tariffed on-bill finance (PAYS TOB) programs.
11. Develop a statewide network of co-ops, muni's, and local weatherization, housing and economic development agencies to combine resources and enhance outreach and uptake for energy efficiency programming benefitting rural and/or low-income residents.
12. Enact an executive policy, and/or propose/advance legislation placing co-ops and muni rates, rate structures (including net metering/net billing and other rates for distributed generation, battery storage, etc) and investments under the purview of the NC Utilities Commission, and requiring the Commission to set a clear policy as to how co-ops, and indeed all of the state's electric utilities, may calculate "fixed" versus "variable" costs in a manner that reflects the "Basic Customer Method" of accounting.

Additional reforms are required that may not be appropriate for the final Clean Energy Plan, but which should be addressed in order to fix more fundamental problems related to electric co-op and muni governance and transparency. To that end, we also call on the Governor to:

1. Propose/advance legislation similar to Colorado's 2010 Act "Concerning Increased Transparency in the Governance of Cooperative Electric Associations," which, among other things, requires meetings of Boards of Directors to be open to member attendance, the timely posting of meeting agendas prior to each meeting as well as the meeting minutes following each board meeting, and the establishment and publication of clear nomination and election policies and procedures.[20]
2. Enact an executive policy, and/or advance/propose legislation providing co-op and muni members/ratepayers a direct pathway for the review and resolution of grievances related to governance, board elections, executive compensation, bylaws and bylaw amendments, rates, investments, policies, or otherwise proposed or implemented by their electric cooperative and/or municipal utility.

[20] Colorado House Bill 1098 (2010). "An Act Concerning Increased Transparency in the Governance of Cooperative Electric Associations." http://www.leg.state.co.us/clics/clics2010a/csl.nsf/fsbillcont2/6650D96F9A335967872576A8002A2C7E?Open

(cont'd from previous page) This could be either through the North Carolina Rural Electrification Authority or the NC Utilities Commission, but whichever agency it is, that agency must be given clear authority to hold co-ops and muni's accountable, require the issue to be addressed and enact penalties for any failure in that regard.

3. Enact an executive policy, and/or advance/propose legislation requiring electric co-ops to provide their Cost of Service studies and related documentation used to calculate electricity rates and fixed charges to members and member-appointed representatives upon request.

Thank you for your consideration of our comments, and for all you are doing to move North Carolina toward a cleaner, more sustainable, and more equitable energy future.