



# **Executive Order 80: North Carolina Clean Energy Plan Equity Recommendations and Actions**

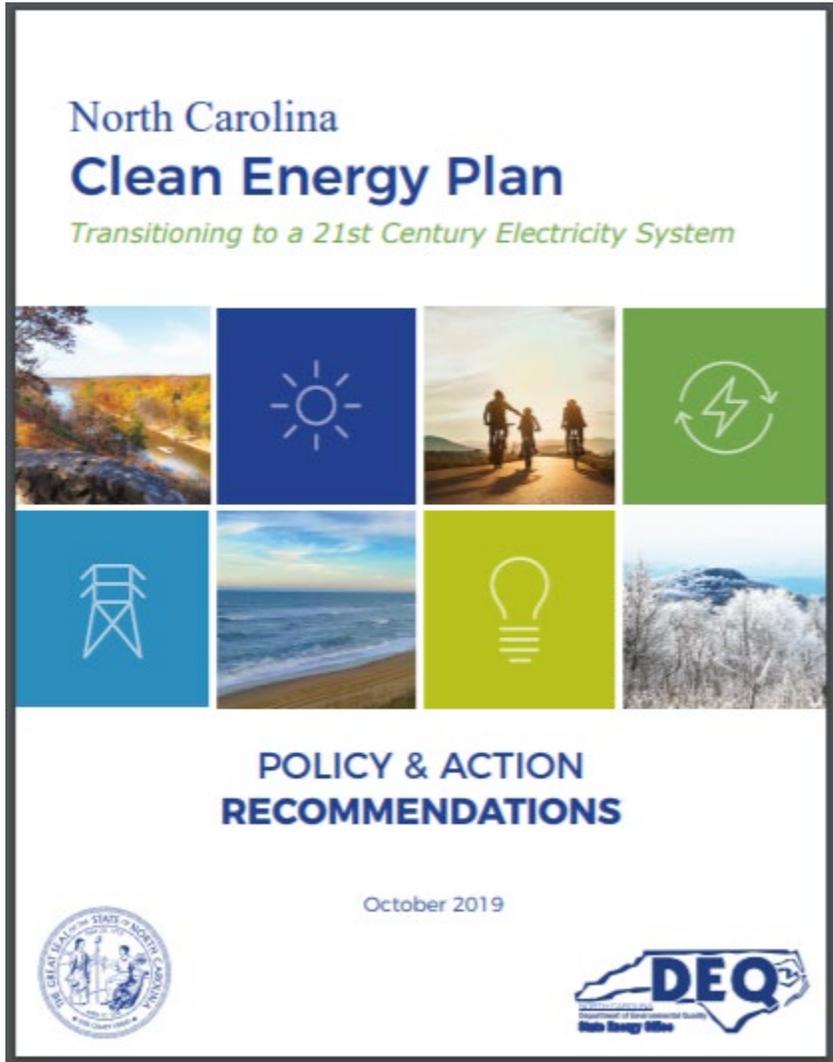
May 18, 2020

EJ Board Meeting

Sushma Masemore, P.E.



# Clean Energy Plan Vision and Goals



Establish a 21<sup>st</sup> century energy system that is **clean, affordable, reliable, and equitable.**

By:

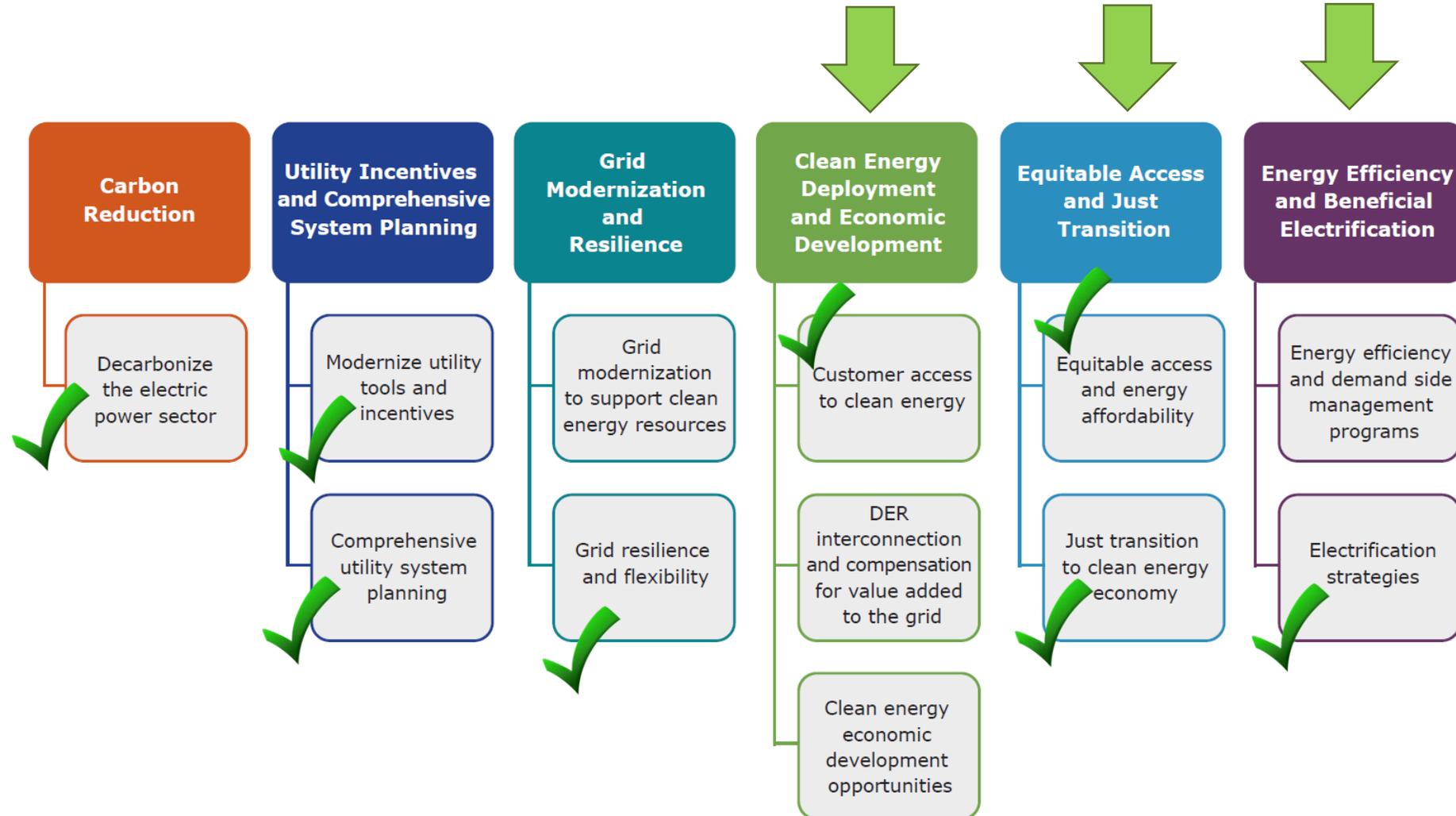
- Increasing the use of solar, wind, energy efficiency, battery storage, and electrification.
- Giving customers more options and control.
- Providing equitable access to clean energy opportunities.
- Helping customers reduce and control energy use at fair rates.

## NORTH CAROLINA CLEAN ENERGY PLAN GOALS

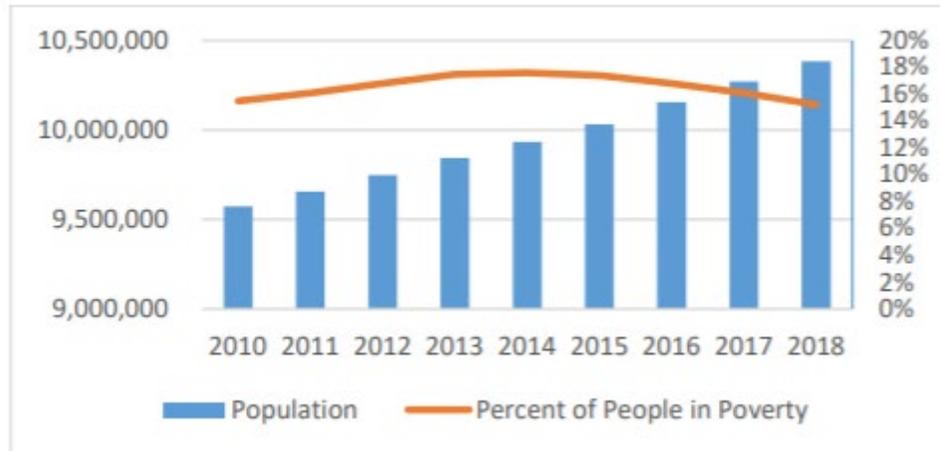
The infographic consists of three vertical panels on a blue background with a blurred image of a forest. Each panel has an icon at the top and a text block below. The first panel features a CO<sub>2</sub> icon and the text: 'Reduce electric power sector greenhouse gas emissions by 70% below 2005 levels by 2030 and attain carbon neutrality by 2050.' The second panel features an icon of three people and the text: 'Foster long-term energy affordability for North Carolina's residents and businesses by modernizing regulatory and planning processes.' The third panel features a bar chart icon and the text: 'Accelerate clean energy innovation, development and deployment to create economic opportunities for both rural and urban areas of the state.'

# Clean Energy Plan Recommendation Areas

*Today's discussion related to equity*



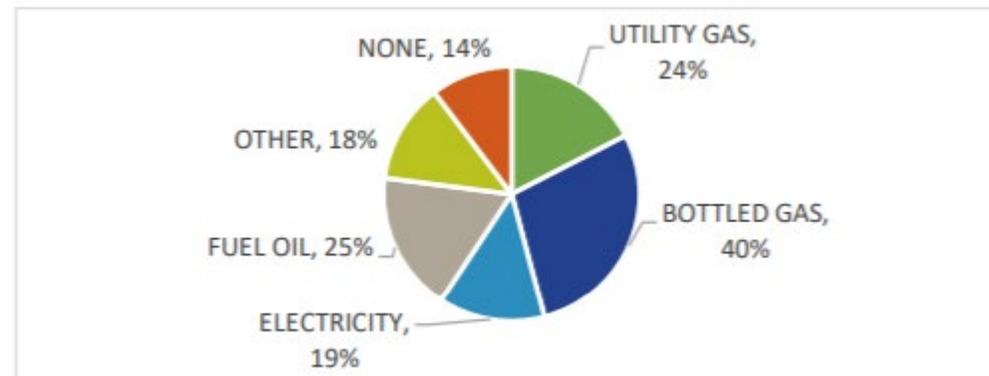
# Low Income Energy Burden Statistics



Population and Poverty Trends in North Carolina from 2010 to 2018

Poverty Level	Home Energy Burden
Below 50%	33%
50 - 100%	18%
100 - 125%	12%
125 - 150%	10%
150 - 185%	8%
185 - 200%	7%

Average Home Energy Burden for North Carolina Residents, 2018



Average Energy Burden for All Low-Income Households by Fuel Type, 2018

# *Recommendations Related to Equity*

## **Enable customers to choose clean energy**

- F-2. Enact a statewide commercial Property Assessed Clean Energy (PACE) and **Pay as You Save Program**.
- F-4. Require utilities to offer virtual or group net metering to enable greater access to **community solar**.

## **Address equitable access and energy affordability**

- I-1. Include non-energy **equity-focused costs and benefits in decisions** regarding resource needs, program design, cost-benefit analyses, and facility siting.
- I-2. Examine the feasibility and proper **design of a low-income rate class and associated rate structures**, including but not limited to the elimination or reduction of fixed charges for ratepayers with high energy burdens.
- I-3. **Expand energy efficiency and clean energy programs** specifically targeted at underserved markets and low-income communities.

# *Recommendations Related to Equity (Cont'd)*

## **Foster a just transition to clean energy**

- J-1. Ensure inclusion and meaningful involvement of historically marginalized individuals (people of color and people living in poverty) in decision-making regarding siting electricity generation assets and implementing programs that would affect their energy bills, health, and access to clean energy and energy efficiency opportunities.
- J-2. Launch an EE Apprenticeship program within Apprenticeship NC to expand access to clean energy careers.
- J-3. Create long term jobs with family sustaining wages and benefits in renewables and grid infrastructure industries for low income communities and workers displaced by the transition to a clean energy economy.

## **Create strategies for electrification**

- L-2. Conduct an analysis of the costs and benefits of using **electrification to reduce energy burden** and GHG emissions in consumer end-use sectors in NC, such as in homes..

# *Implementation Thoughts*

DEQ to focus on short term (1-2 years) recommendations where the agency was identified as the action taker or has interested partners.

## 1. Stakeholder led efforts on carbon and energy regulatory policy designs

- Intermediate stage
- Process ongoing
- Welcome the EJE Board's input and participation in workshops, study groups, etc.

## 2. Projects to reduce energy burden

- Beginning stage
- Requesting EJE Board's advice and guidance on these project concepts

## 3. Projects to foster a just transition

- Beginning stage
- Requesting EJE Board's advice and guidance on potential path forward

# Recommendations Requiring Stakeholder Input

## A-1: Carbon and Clean Energy Policy Designs

- **Goal**
  - Deliver a carbon and clean energy policy design report to the Governor by December 31, 2020 that achieves 70% GHG reductions by 2030 and carbon neutrality by 2050 for the electric power sector.
- **Policy designs to be evaluated**
  - Accelerated coal retirements
  - Market-based carbon reduction programs
  - Clean energy policies, such as an updated REPS, clean energy standard, and EERS
  - A combination of these strategies
- **Engagement Types**
  - Stakeholder meetings (12/9, 2/19, 5/28)
  - Policy Workgroup (6+ mtgs)
  - Policy Homework Teams (3-8 mtgs each)
  - Technical Modeling Workgroup (2+ mtgs)
- **Opportunities for EJE Board Participation**
  - EJE Board Vice Chair Dr. Marian Johnson-Thompson participated in Dec 9 meeting
  - Open seat to the Board

### Lead Facilitators

- Duke University Nicholas Institute
- UNC Chapel Hill School of Law

### Utilities

- Duke Energy
- Dominion Energy
- Fayetteville PWC
- NC Electric Membership Cooperatives
- Electricities
- Roanoke Electric Cooperative

### Businesses

- Vote Solar
- Ceres
- Strata Solar / NCCEBA
- NC Sustainable Energy Association
- Abundant Power
- Southeast Wind Coalition
- Ingersoll Rand/EPC EE Committee Chair
- Research Triangle Cleantech Cluster
- Google
- NC Retail Merchants Association
- SAS

### Ratepayer Advocates

- Appalachian Voices
- Carolina Utility Customers Association
- AARP
- Durham Chamber of Commerce
- Climate Reality Project
- DEQ Environmental Justice Board

- Chambers for Innovation and Clean Energy
- NC Justice Center
- Sol Nation
- Alliance for Climate Education

### Industry Groups

- NCMA
- NC Pork Council
- NC Farm Bureau
- CIGFUR
- Weyerhaeuser

### NGOs

- Environmental Defense Fund
- Southern Environmental Law Center
- Natural Resources Defense Council
- North Carolina Conservation Network
- NC WARN
- Sierra Club

### University/Institutional

- NC Clean Energy Technology Center
- Advanced Energy
- UNC School of Law
- UNC-Charlotte EPIC
- Appalachian State University
- Duke University

### Government

- NC Utilities Commission
- Public Staff - NC Utilities Commission
- County of Durham
- City of Charlotte

# Recommendations Related to Policy and Regulatory Reform

## B-1: NC Energy Regulatory Process

### Purpose

Produce recommendations for policy and regulatory changes that can be delivered by the participants to the NC General Assembly, NC Governor, NC Utilities Commission, and other entities as appropriate.

### Objectives

1. Examine alternatives to the traditional utility regulatory model and incentives, carbon reduction policies, and as needed, energy market reforms identified by stakeholder group
2. Produce specific policy proposals that participants can work to implement

### Engagements

Workshops (2/26, 4/17, 5/14, 5/15, 6/24)  
 Educational webinars (4/2)  
 Three Study Groups (meetings on going)

### Opportunities for EJE Board Participation

- Invitations and follow ups provided
- Open seat to the Board

Category	Name	Organization
State Government (9)	Sushma Masemore	NC DEQ
	Steve McDowell	NCUC
	Christopher Ayers	NCUC Public Staff
	Dianna Downey (designee)	
	Senator Mike Woodard	NC Legislature
	Carol Resar (designee)	NC Legislature
	Representative John Szoka	
	Marshall Conrad (designee)	NC Legislature
	Representative Robert Reives	
	Jamar McCarthy (designee)	NC Governor's Office
Jeremy Tarr	NC Attorney General's Office	
Regulated Utilities (5)	Munashe Magarira	Duke Energy
	Peter Toomey	
	Mark McIntire	
	Diane Denton	
Laura Bateman		
Other Utilities (3)	Sarah Cosby	Dominion North Carolina Power
	Charlie Bayless	North Carolina Electric Cooperatives
Local Government Representation (3)	Drew Elliot	ElectriCities of North Carolina
	Katie Riddle	City of Charlotte
	Sarah Collins	NC League of Municipalities
Clean Energy Industry (3)	Tobin Freid	Durham County
	Peter Daniel, Jr.	NC Chamber of Commerce
	Stewart Leeth	Smithfield Foods
	Elizabeth Robinson	NC Retail Merchants Association
	Rory McIlmoil	Appalachian Voices
	Preston Howard	NC Manufacturers Association
	Kevin Martin	Carolina Utility Customer Association
	Chris Carmody	NC CEBA
	Peter Ledford	NCSEA
	Katherine Ross	Parker Poe
Environmental Justice Groups (3)	EJE Board Representative	DEQ Environmental Justice & Equity (EJE) Board
	Rory McIlmoil	Appalachian Voices
	Alfred (Al) Ripley	NC Justice Center
Environmental Groups (5)	Dionne Delli-Gatti	Environmental Defense Fund
	Gudrun Thompson	Southern Environmental Law Center
	Will Scott	NC Conservation Network
	Brian Buzby (designee March-May)	
	Sally Robertson	NC WARN
David Rogers	Sierra Club	
Universities (2)	Kate Konschnik	Duke University Nicholas Institute
	Stephen Kalland	NC Clean Tech Center

# *Project 1: Upgrade and Save (U&S) Program for New Manufactured Homes*

## **Goal**

- Provide new, ENERGY STAR certified manufactured homes (ESMH) with energy-efficient heat pumps to supplement factory-installed electric furnaces that are standard heating systems in manufactured homes

## **What is it?**

- Annual energy savings of ~ \$630/year for eastern NC's low-to-moderate income homeowners who purchase and live in a heat pump-equipped ESMH
- Mitigation of rising energy costs
- A \$400 rebate is provided to retailers upon verification of an ESMH that is sold

## **Participants**

- DEQ State Energy Program
- Contract administrator: East Carolina University College of Engineering and Technology
- Participating Retailers: An active network of ~28 retailers in 52 eastern NC counties

## **Opportunities for EJE Board Participation**

- Outreach to eligible buyers
- Assist in replicating to other parts of the state



# *Project 2: Community Solar for Low and Moderate Income (LMI) households*

## **Goal**

- Provide solar access and home weatherization services to low income residents
- Pilot program to fund 40 community solar households in 2020.

## **What is it?**

- Ground mounted solar systems located in a community setting rather than the homeowner's rooftop
- Utility owned and operated, benefitting a large pool of customers
- Clients chosen according to utility guidelines; limited to clients served by participating utilities
- Virtual net metering financial benefit ~ \$365 per household participant and is linked to direct solar production.
- After weatherizing an eligible residence, the utility can apply for \$3,200 of WAP funds towards a solar project.

## **Participants**

- DEQ Weatherization Assistance Program
- Blue Ridge Utility, Fayetteville Public Works, and Roanoke Electric Cooperative

## **Opportunities for EJE Board Participation**

- Outreach to eligible homeowners
- Assist in replicating to other utilities and co-ops
- Identify additional funding opportunities



# *Project 3: Expand Weatherization Services to Low Income Households*

## **Goal**

- Provide home weatherization services to low-income North Carolinians save energy, reduce their utility bills, and stay safe in their homes
- Create job opportunities for plumbers, electricians, HVAC repairmen, general contractors, etc.

## **What is it?**

- Families with incomes below 200 percent of the federal poverty guidelines or those receiving cash assistance payments under Work First or Supplemental Security are eligible
- Statewide program
- ~1500 homes weatherized, ~1200 heating & air units repaired or replaced
- Offers reduction in energy bills, indoor air quality, and public health benefits

## **Participants**

- DEQ Weatherization Assistance Program
- Statewide sub grantee agencies

## **Opportunities for EJE Board Participation**

- Advocate to maintain and increase program funds
- Program outreach and marketing
- Identify additional funding opportunities
- Increase funding levels beyond current allocations
- Integrate WAP with disaster rebuild efforts



# *Project 4: Pay as You Save Program Expansion*

## **Goal**

- On-bill financing program offered by the utility that lowers customer bills
- Customers invest in energy efficiency (EE) retrofit measures like LED lighting, insulation, duct sealing, and HVAC replacements and their costs are recovered through monthly bills

## **What is it?**

- Requires utility to secure capital funding (e.g., Rural Electric Service)
- Requires utility to have a loss prevention guarantee, develop marketing program, identify best customers for the program

## **Participants**

- Roanoke Electric Cooperative and PAYS programs in Kentucky and Arkansas
- Duke Energy, NCEMC, other cooperatives, Electricities
- NCSEA

## **Opportunities for EJE Board Participation**

- Join a Task Force to evaluate options and develop suitable program
- Recruit key coops interested in PAYS expansion



# *Project 5: Beneficial Electrification to Lower Energy Bills*

## **Goal**

- Deploy “smart” equipped Heat Pump Water Heaters (HPWH) as an energy efficiency tool targeted to low- to moderate-income communities (LMI) through a utility-sponsored equipment rental or ownership program.

## **What is it?**

- Water heating consumes about 12% of residential energy use. Residents can achieve significant reduction in energy use from efficient water heaters
- Shifting loads off peak through thermal storage, saves utilities money and provides funding for LMI programs

## **Participants**

- Duke Energy, Electricities
- NCEMC is planning a pilot program in several Co-op territories that include HPWHW installations
- Low income community advocates, Academia

## **Opportunities for EJE Board Participation**

- Work with utility providers to design and implement a program
- HPWH programs could be instituted immediately in rural electric cooperatives territories that already have deployed smart meters
- For IOUs, the program would need to be approved by the NC Utilities Commission



# Project 6: Energy Efficiency Retrofit Interagency Coordination

## Goal

- Streamline EE retrofit assistance offered by multiple NC agencies and programs for LMI recipients
- Pilot program in Orange County could be a model for coordinated EE services

## What is it?

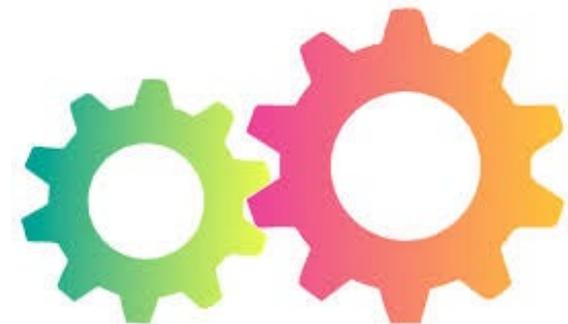
- Fast tracks interagency work so there is less delay as home transitions from one program to another
- Takes responsibility away from resident to complete various forms and paperwork
- Optimizes retrofits so that funds are used in order of priority needs and so that additional programs qualify for a housing unit (e.g., urgent repair must be done prior to WAP program work)
- Spends money faster so more homes can be reached in a given period
- Data is gathered for performance tracking + outcomes analysis

## Participants

- Duke Energy Carolina Weatherization Assistance – rebate program
- Duke Energy Progress Helping Hands Fund – reimbursement
- NC Housing Finance Agency – Single Family Rehabilitation and Urgent Repair programs
- Blue Cross & Blue Shield – Healthy Home program
- Piedmont Natural Gas – Weatherization Energy Efficiency program
- NCDEQ – Weatherization Assistance Program
- NCDHHS – Utility payment program
- NC Justice Center, others

## Opportunities for EJE Board Participation

- Assess viability for expansion and identify barriers to wider implementation
- Expand pilot program into other areas of the state
- Establish a task force to streamline interagency cooperation
- Find additional funding



# *Discussion*

1. **Stakeholder led efforts on carbon and energy regulatory policy designs**
  - Welcome the EJE Board's input and participation in workshops, study groups, etc.
2. **Projects to reduce energy burden**
  - Requesting EJE Board's advice and guidance on these project concepts
    - Are these aligned with your interests?
    - Did we miss anything?
    - Who should we engage with further?
    - How do we address capacity and funding limitations?
3. **Projects to foster a just transition**
  - Requesting EJE Board's advice and guidance on potential path forward
  - Climate Alliance Just Transition Working Group Framework
    - Multi-state Framework for Cooperation

# Thank you.

## Questions?

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*Department of Environmental Quality*