North Carolina
Climate Change Interagency Council

Executive Order No. 80: NC's Commitment to Address Climate Change and Transition to a Clean Energy Economy

Agenda

2nd Meeting, February 19, 2018

Elizabeth City, NC

Agenda

1. Welcome and Introductions (10 mins) **10:00-10:10**

a. Opening Remarks (Council Chair, Secretary Michael S. Regan, DEQ)
b. Introductions (Council Designees)

2. Overview of Executive Order No. 80 (10 mins) **10:10-10:20**

a. Overview of EO80 (Jeremy Tarr, Governor's Office)
b. Overview of Council's Operating Procedures (Sushma Masemore, DEQ)

3. Overview of Greenhouse Gas Inventory Report (15 mins) **10:20-10:35**

Speakers: Andy Bollman, DEQ and Paula Hemmer, DEQ

4. Climate Change Impacts, Actions and Recommendations (55 mins) **10:35-11:30**

Moderator: Dr. Bill Crowell (Albemarle-Pamlico National Estuary Partnership)
Speakers: Daniel Brinn (Hyde County), Brian Boutin (The Nature Conservancy), Holly White (Town of Nags Head), and Tancred Miller (Division of Coastal Management)

a. What does your expert knowledge say about climate change impacts to the region?
b. How are these impacts affecting the community, ecosystem, infrastructure, businesses, etc.?
c. How should the state prepare for and respond to these impacts?
d. What key messages do you want to deliver to the Council and the Governor?

Agenda (cont'd)

5. Agency Reports (45 mins)	**11:30-12:15**
a. Specific Directive updates	
• Department of Environmental Quality	11:30-11:45
• Department of Commerce	11:45-11:55
• Department of Transportation	11:55-12:05
• Department of Administration	12:05-12:15
Lunch Break	**12:15-1:15**
6. Agency Reports Continued (30 mins)	
b. Each agency discusses progress on general directives	**1:15-1:45**
7. Public engagement (45 mins)	**1:45-2:30**
Individuals and organizations may provide input to cabinet agencies on their implementation of the EO. Oral presentations will be limited to 2 minutes. Sign-up will be required.	

North Carolina
Climate Change Interagency Council

Executive Order No. 80: NC's Commitment to Address Climate Change and Transition to a Clean Energy Economy

Overview

2nd Meeting, February 19, 2018

Elizabeth City, NC

State Goals

The State of North Carolina will strive to accomplish the following by 2025:

a. Reduce statewide greenhouse gas emissions to 40% below 2005 levels
b. Increase the number of registered, zero-emission vehicles (ZEVs) to at least 80,000
c. Reduce energy consumption per square foot in state-owned buildings by at least 40% from fiscal year 2002-2003 levels

N.C. Climate Change Interagency Council

Composition. The secretary or designee of each cabinet agency and a representative of the Governor's Office

Council Chair. Secretary Regan, N.C. Department of Environmental Quality

Council Duties

- Recommend new and updated goals and actions to meaningfully address climate change
- Develop and implement programs and activities that support climate mitigation and adaptation
- Consider stakeholder input when developing recommendations, programs, and activities
- Schedule, monitor, and provide input on the preparation and development of the plans and assessments required by EO 80
- Review and submit to the Governor EO 80 plans and assessments

Status Update on Implementation. To Governor by Oct. 15, 2019.

Specific Directives

Department of Environmental Quality

N.C. Clean Energy Plan to encourage the increased utilization of clean energy technologies in the public and private sectors. Due Oct. 1, 2019.

Updated **Comprehensive Energy, Water, and Utility Use Conservation Program**, which includes best practices and guidance to help achieve the state building efficiency goal in EO 80. Due Feb. 1, 2019 and Dec. 1, 2019.

N.C. Climate Risk Assessment and Resiliency Plan to provide a scientific assessment of current and projected climate impacts on North Carolina and prioritize effective resiliency strategies. Due Mar. 1, 2020.

Greenhouse Gas Inventory that estimates North Carolina's statewide net GHG footprint.

Department of Transportation

N.C. Zero-Emission Vehicle Plan designed to achieve the ZEV target and address topics such as ZEV corridors and ZEV infrastructure. Due Oct. 1, 2019.

Specific Directives

Department of Commerce

Clean energy and clean transportation workforce assessments that evaluate current and future workforce needs, assess the skills and education required for employment, and recommend actions to help North Carolinians develop such skills and education. Due Oct 1, 2019.

Department of Administration

N.C. Motor Fleet Zero-Emission Vehicle Plan that identifies feasible trips for a ZEV, recommends needed infrastructure, addresses ZEV procurement options, and includes other key strategies for increasing ZEV use. Due Oct. 1, 2019.

Accounting of each agency's number of ZEVs and miles driven by vehicle type. Due Oct. 1, 2019.

General Directives to All Cabinet Agencies

Assess and Address Climate Change

- Evaluate the impacts of climate change on agency programs and operations
- Integrate climate change mitigation and adaptation practices into agency programs and operations
- Support communities and sectors vulnerable to climate change impacts

Support Clean Energy Business. Take actions that support the expansion of clean energy businesses and service providers, clean technology investment, and companies committed to procuring renewable energy.

General Directives to All Cabinet Agencies

Procure and Use Zero-Emission Vehicles. Prioritize ZEVs in the purchase or lease of new vehicles and use ZEVs for agency business travel when feasible. When ZEV use is not feasible, prioritize cost-effective, low emission alternatives.

Improve Energy Consumption. Develop and implement strategies to support the state building efficiency goal in EO 80.

- Designate an energy point of contact. Due Jan 15, 2019.
- Develop a utility management plan. Due Mar. 1, 2019.
- Report annually on utility consumption. Due Sept. 1, 2019.

Contact Information

Jeremy Tarr

Policy Advisor

N.C. Governor's Office

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Overview of Climate Council's Operating Procedures and Meeting Plans

Cabinet Secretaries Designees

- **Two Designees from Each Cabinet Agency - Executive and Program Level**
  - Primary points of contact for their agency
  - Strategic direction, planning council meetings, taking actions to achieve the goals of EO80
  - Attain authority to ensure EO80 directives are being carried out throughout the agency
  - Support planning, communication, and interactions with stakeholders
- **Communication with the Public**
  - DEQ web portal https://deq.nc.gov/energy-climate/climate-change
  - Cabinet agencies web pages linked to DEQ portal
  - Interested groups may sign up for regular updates via email

North Carolina
Climate Change Interagency Council

NORTH CAROLINA
Department of Environmental Quality

Climate Council Meeting Plans

1st Meeting: December 19, 2018, attended by Governor Cooper and cabinet secretaries, Raleigh

2nd Meeting: February 2019, attended by Secretary's designees, Elizabeth City
- Agency Status Reports and Public Engagement Period

3rd Meeting: April 2019, attended by Secretary's designees, TBD
- Agency Status Reports and Public Engagement Period

4th Meeting: June 2019, attended by Secretary's designees, TBD
- Agency Status Reports and Public Engagement Period

5th Meeting: August 2019, attended by Secretary's designees, Raleigh
- Agency Status Reports and Public Engagement Period

6th Meeting: September 2019, attended by cabinet secretaries, Raleigh
- Review and Approval of Agency Reports Due October 1, 2019
- Public Engagement Period

7th Meeting: November 2019, attended by Secretary's designees, Eastern N.C.
- Agency Status Reports and Public Engagement Period

Dates and details posted at:
https://deq.nc.gov/climate-council

North Carolina Greenhouse Gas Emissions Inventory

Andy Bollman
Paula Hemmer

North Carolina Division of Air Quality
February 19, 2019

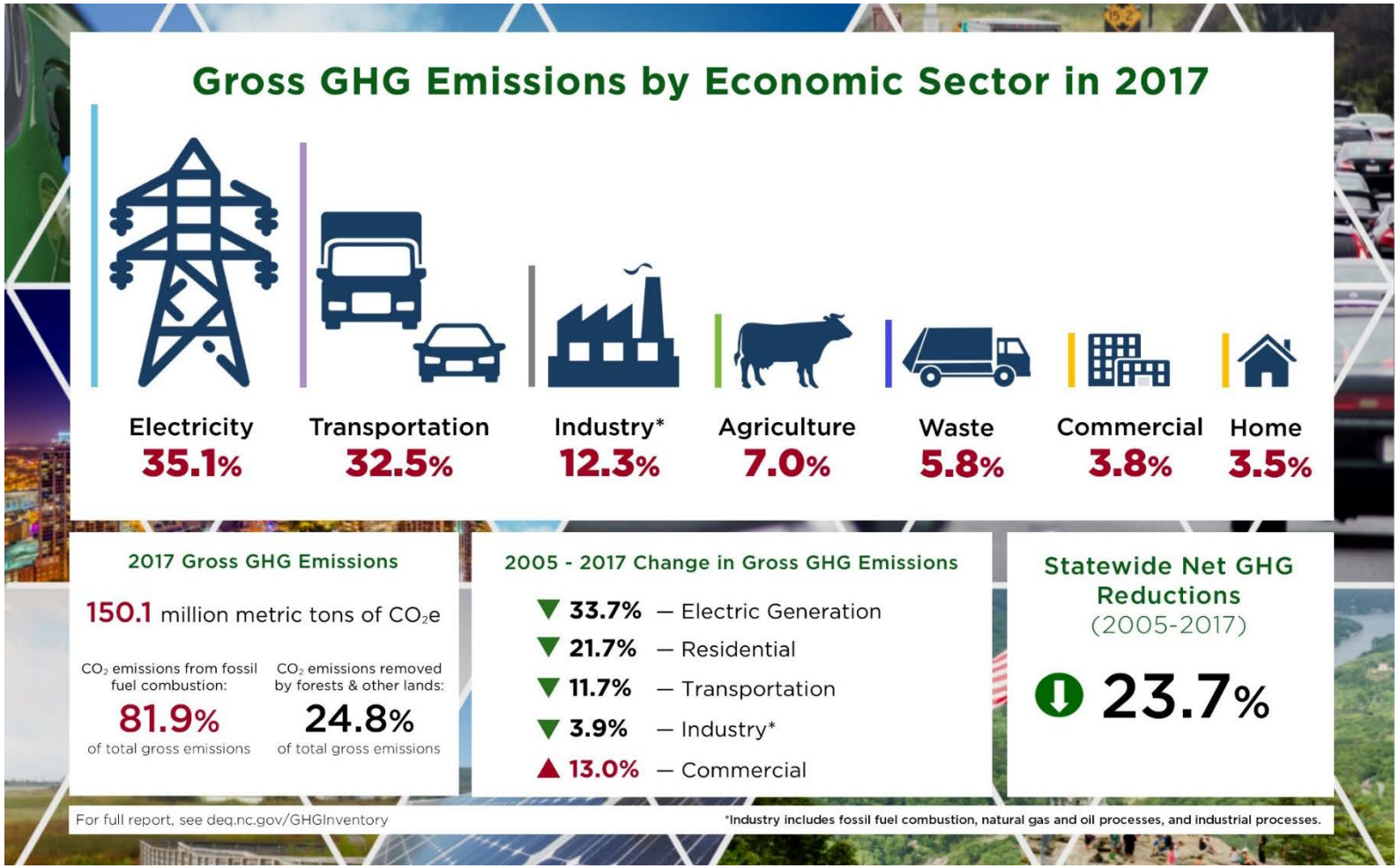
North Carolina Greenhouse Gas (GHG) Emissions Inventory

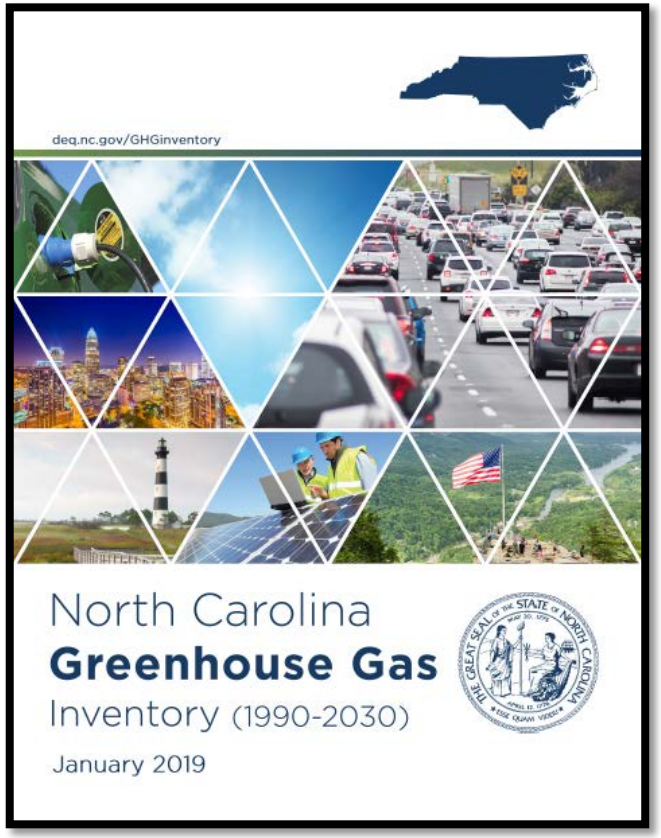
- Purpose
  - Starting Point for Planning
  - Executive Order (EO) 80
- Comprehensive/Economy-Wide
- Identifies Key Sectors/Potential for Reductions
- GHG Pollutants
  - ⇨ Carbon Dioxide (CO_2)
  - ⇨ Methane (CH_4)
  - ⇨ Nitrous Oxide (N_2O)
  - ⇨ Sulfur Hexafluoride (SF_6)
  - ⇨ Perfluorocarbons (PFCs)
  - ⇨ Hydrofluorocarbons (HFCs)

NORTH CAROLINA
Department of Environmental Quality

GHG Inventory Overview

Quick Facts: 2005 - 2017





Full Report

https://files.nc.gov/ncdeq/climate-change/ghg-inventory/GHG-Inventory-Report-FINAL.pdf

North Carolina's GHG Emissions

million metric tons carbon dioxide equivalent ($MMTCO_2e$)

Sector	2005	2017	2025
Electricity Use	79.37	52.60	40.59
Transportation	55.19	48.72	41.00
Residential/Commercial/Industrial Combustion*	26.02	20.92	23.26
Agriculture	10.65	10.53	10.47
Waste Management	8.52	8.77	10.17
Industrial Processes	3.83	7.18	11.31
Natural Gas and Oil Systems	1.17	1.35	1.47
Gross Emissions	**184.74**	**150.08**	**138.28**
Net Carbon Sinks - LULUCF**	-32.66	-34.03	-34.03
Net Emissions	**152.08**	**116.06**	**104.25**
Estimated Reduction in Net Emissions from 2005		23.7%	31.4%

Note: Totals may not equal exact sum of subtotals shown in this table due to independent rounding.
* Emissions associated with on-site fuel combustion activities in the Residential, Commercial, and Industrial sectors.
** Land Use, Land Use Changes and Forestry

NORTH CAROLINA
Department of Environmental Quality

North Carolina's Ranking Nationally

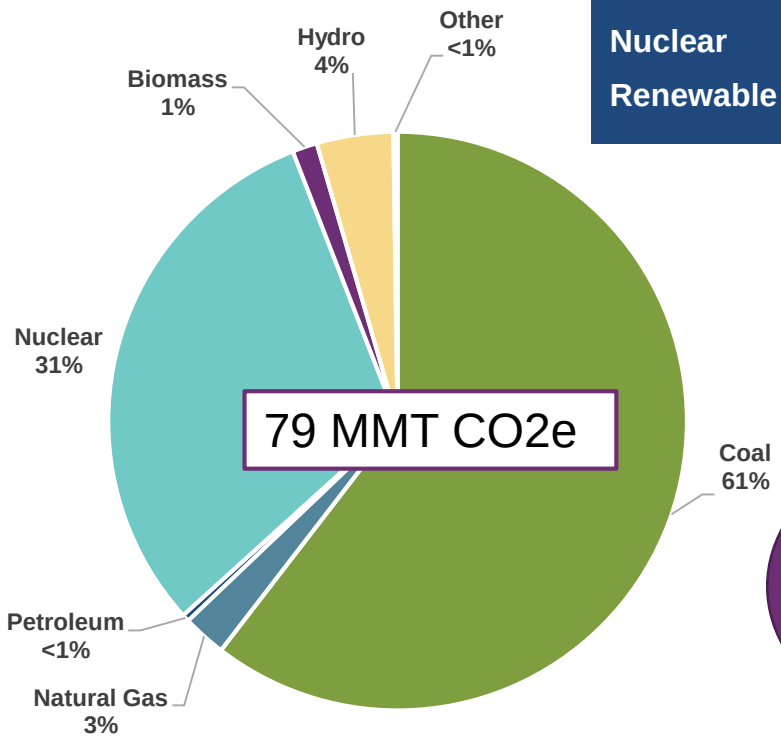
	Ranking
Total Energy Production (trillion Btu)	29th
Total Net Electricity Generation (thousand MWh)	6th
Total Carbon Dioxide Emissions (million metric tons)	14th
Total Energy Consumed per Capita (million Btu)	38th
Total Energy Expenditures per Capita, ($)	45th
Average Retail Price of Electricity to Residential Sector, January 2018 (cents/kWh)	42nd

https://www.eia.gov/state/rankings/?sid= #/series/31

North Carolina Electricity Generation By Source Type (2005 & 2017)

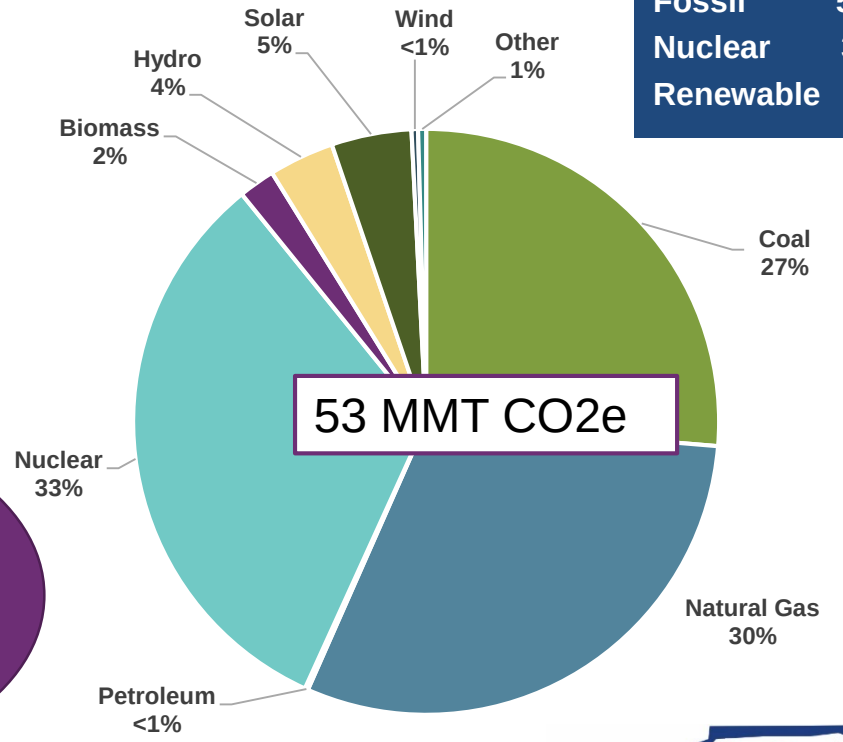
2005 Electricity Generation

Fossil	64%
Nuclear	31%
Renewable	4%



2017 Electricity Generation

Fossil	56%
Nuclear	32%
Renewable	9%



NC Reductions

34% GHG

90% SO2

37% NOx

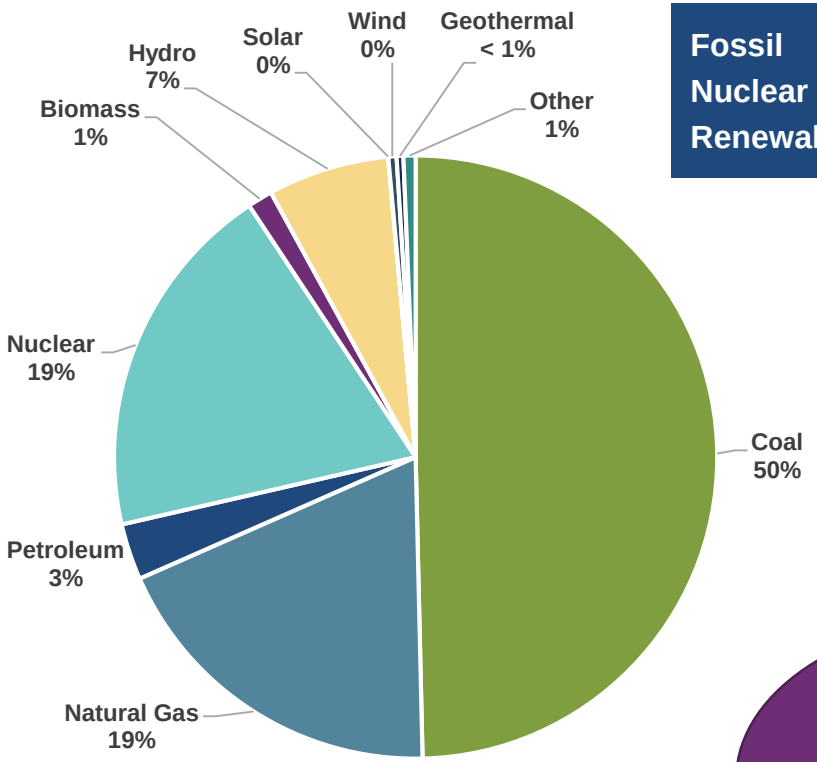
NC Imports about 10% of its electricity each year

Source: NC GHG Inventory, 2019

DEQ NORTH CAROLINA Department of Environmental Quality

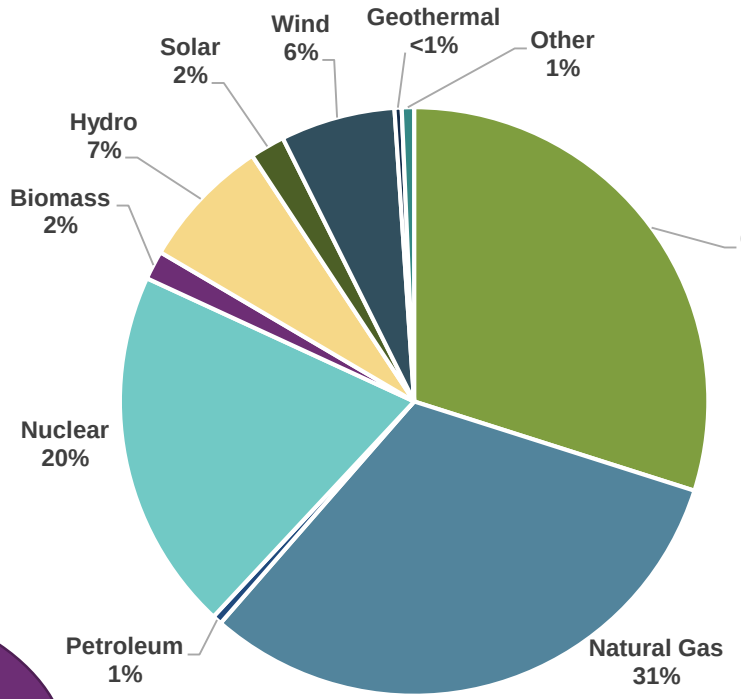
U.S. Electricity Generation By Source Type (2005 & 2017)

U.S. 2005 Electricity Generation



Fossil	71%
Nuclear	19%
Renewable	7%

U.S. 2017 Electricity Generation



Fossil	62%
Nuclear	20%
Renewable	16%

US Reductions

23% GHG

80% SO2

60% NOx

Source: EIA Electricity Data Browser

NORTH CAROLINA Department of Environmental Quality

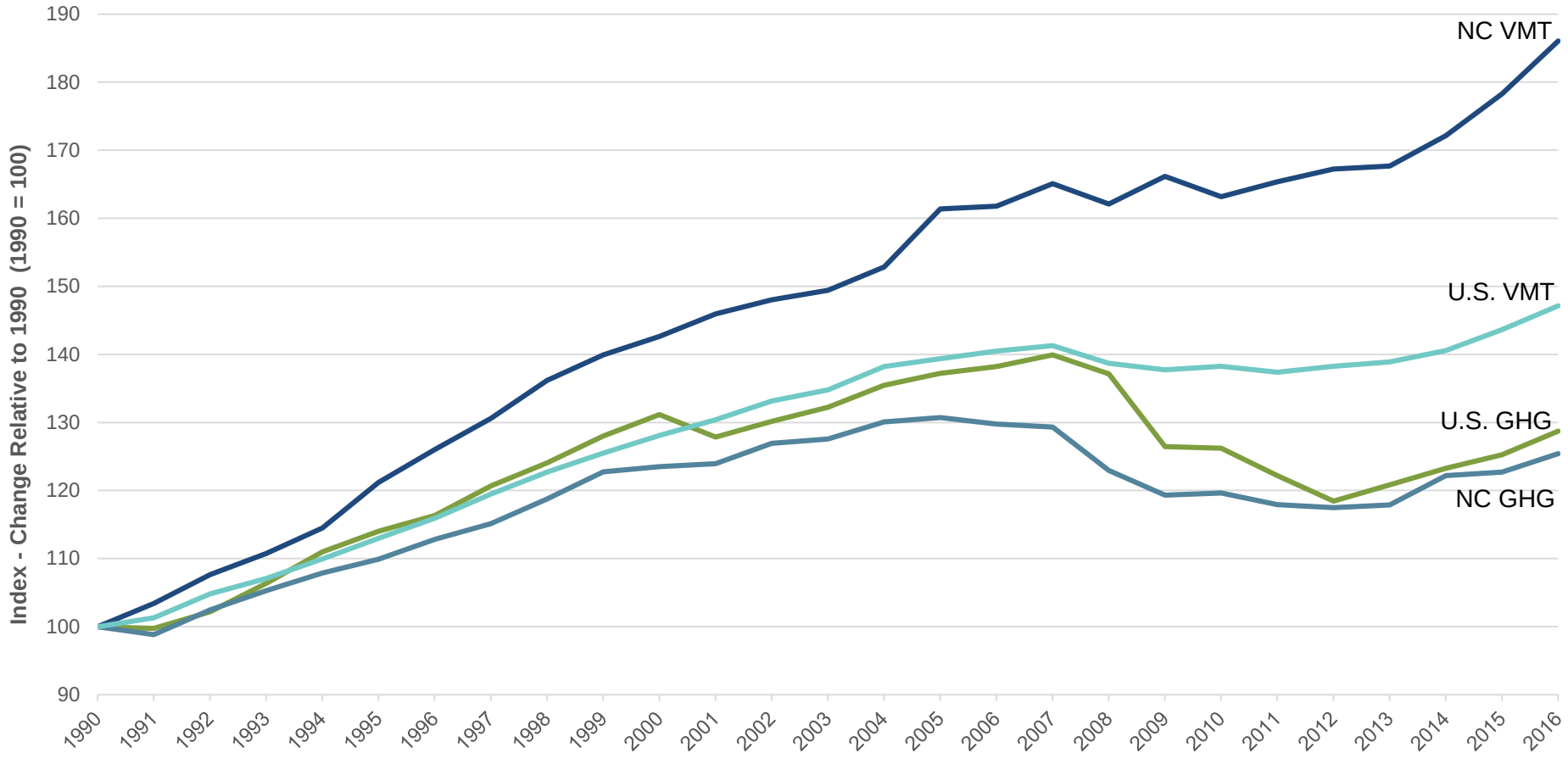
Avoided Emissions from NC REPS

Parameter	2009	2011	2013	2015	2017	with HB 589*
RE Net Generation (MWh)	5,230,196	4,061,146	7,283,230	6,787,674	10,970,000	15,500,000
EE Avoided Generation (MWh)	80,008	1,134,040	2,119,916	6,218,251	4,797,944	4,797,944
Avoided GHGs (MMT CO2e)	2.80	2.80	4.53	5.83	5.79	7.47
Avoided NOx (tons)	1,931	2,189	3,924	4,474	4,399	5,670
Avoided SO2 (tons)	5,231	4,953	4,902	4,474	3,508	4,522

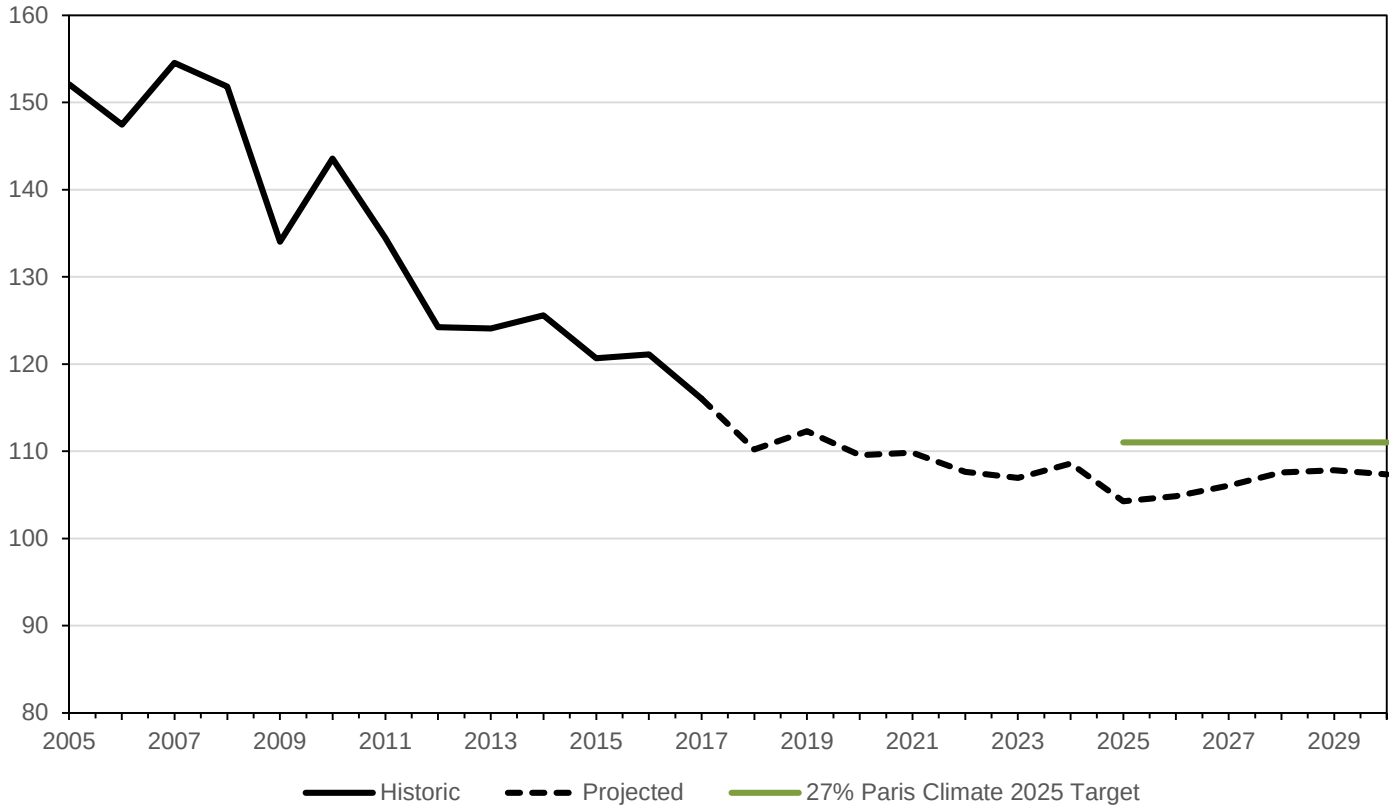
10% of Electricity Sector GHG

* Estimate of generation and avoided emissions resulting from full implementation of HB 589

U.S. and NC Gasoline/Diesel Vehicle Activity & Emissions



Net GHG Emissions Trends in North Carolina, 2005-2030



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Department of Environmental Quality

Land Use, Land Use Changes, and Forests

Forest Stocks and Area	1990	1995	2000	2005	2010	2015	2017	Percent Change 1990-2017
Total Forest Area (Million Acres)	18.51	18.58	18.64	18.71	18.78	18.84	18.87	**2%**
Aboveground Biomass	365.3	392.0	417.1	442.7	469.9	498.6	510.1	
Belowground Biomass	72.7	78.4	83.7	89.1	94.8	100.7	103.1	
Dead Wood	65.3	65.6	65.9	66.2	66.5	66.8	66.9	
Litter	45.9	44.9	44.0	43.1	42.3	41.6	41.3	
Soil Organic Carbon	723.3	722.5	721.8	721.2	720.7	720.4	720.3	
Total Forest Carbon Stocks (MMT Carbon)	**1,272.5**	**1,303.4**	**1,332.5**	**1,362.2**	**1,394.2**	**1,428.2**	**1,441.8**	**13%**
Forest Carbon Flux (MMT CO2e)	-35.3	-35.1	-34.1	-35.2	-37.3	-37.9	-37.8	7%
Net Sources & Sinks (MMT CO2e)*	-35.64	-35.24	-34.33	-32.66	-35.30	-34.16	**-34.03**	

*Includes forest carbon, landfilled biomass, agricultural soil carbon, liming and fertilization, and fires

NORTH CAROLINA
Department of Environmental Quality

North Carolina

Climate Change Interagency Council

Executive Order No. 80: NC's Commitment to Address Climate Change and Transition to a Clean Energy Economy

Cabinet Agency Reports

2nd Meeting, February 19, 2018

Elizabeth City, NC

Department of Environmental Quality Updates

Climate Risk Assessment and Resiliency Plan Development Process EO80 Section 9

1. General Description of Approach

- Scientific assessment of climate change impacts to North Carolina
- Vulnerability and risk assessment
- Evaluating options
- Prioritizing options and planning
- Taking action

2. Stakeholder Process

- University expert team being assembled to assist the State
- Inter-departmental teams being formed
- Community engagement through workshops with local governments

3. Status Update

- DEQ adaptation and resiliency team formed, leadership requiring program reviews
- Many discussions with authors of National Climate Assessment, requesting assistance
- DCM resiliency workshops with local governments
- Framework for developing Plan started

Clean Energy Plan Development Process
EO80 Section 4

1. General Description of Approach

- Vision building and assessing current landscape
  - *What is NC's vision of a clean energy future?*
  - *How different is it from the current direction?*
  - *How well do current policies, regulatory and business practices help achieve that vision?*
- Evolving and changing landscape
  - *What policy and technology trends are influencing how we foster clean energy use?*
- Develop recommendations

2. Status Update

- Clean Energy Plan Development Process Plan released
- Topics to be explored:
  - Ways to ensure all North Carolinians has access to clean, reliable, and affordable energy
  - The role of power sector transformation occurring in policy, regulatory, and utility business model across the country.
  - Creating a more reliable and resilient power grid in the face of increasingly severe weather events.
  - The ways in which clean energy can spur economic expansion and economic development
  - The opportunities for reducing environmental and public health impacts

Clean Energy Plan Development Process

Public Engagement Methods:

Method 1. Six Facilitated Workshops, Raleigh

Method 2. Regional Listening Sessions

Method 3. Combined with Other Statewide Events

Method 4. Online Input

Regional Listening Sessions

- Statewide outreach events organized in metropolitan and rural areas to collect information and provide input on this effort.
- Attendees will be shown pre-recorded segments of the facilitated workshops and asked specific questions to obtain feedback.
- All stakeholders are welcome to attend.

Sessions scheduled from March –May in:

Charlotte	Asheville
Rocky Mount	Wilmington
Hickory	Fayetteville
Elizabeth City	Wilmington

Dates and locations posted at **https://deq.nc.gov/energy-climate/climate-change/nc-climate-change-interagency-council/climate-change-clean-energy-2**

State Buildings Utility Savings Initiative (USI) Implementation Process EO80 Section 8

1. General Description of Approach

- Build on agency success pursuant to G.S. 143-64.12 (a) to further reduce energy usage
- Promote best practices for state government buildings energy efficiency
- Provide training to energy managers and staff
- Adopt a standard methodology for calculations and reporting

2. Status Update

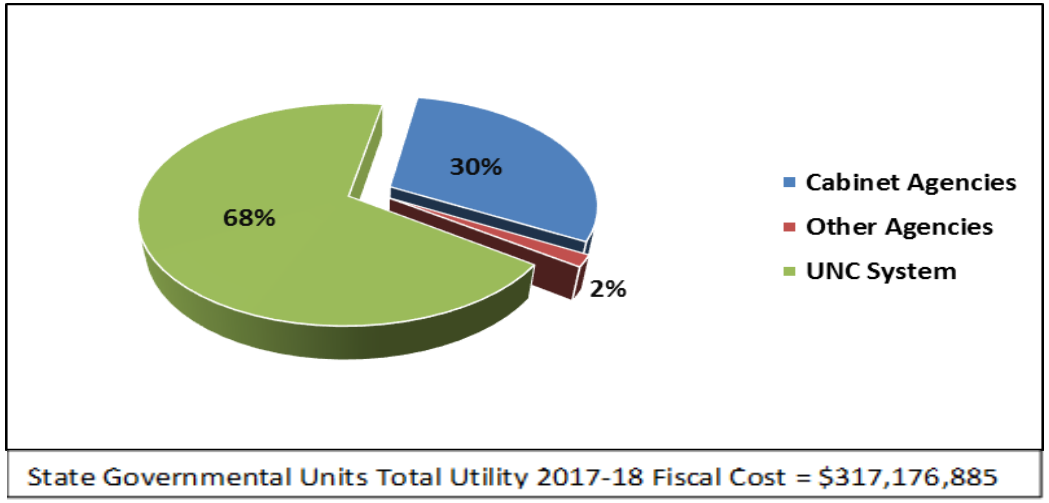
- Comprehensive Program Report drafted and provided to Climate Council for review
- Energy Managers identified for each cabinet agency
- DEQ met with each cabinet agency to discuss FY18 data and accomplishing EO80 goals
- Energy Managers meeting planned for Feb. 21 to collaborate, share best practices and address questions

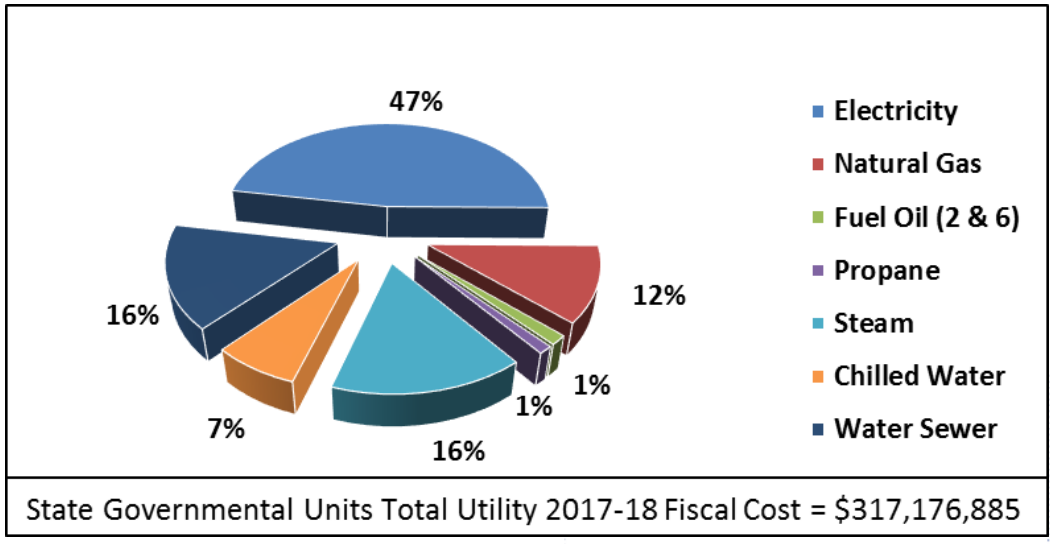
3. EO80 Deliverables Schedule

- ✓ January 15, 2019, Identify energy managers
- ✓ February 1, 2019, update and amend Comprehensive Energy, Water, and Utility Use Conservation Program
- March 1, 2019, collect cabinet agency utility management plans and assess the adequacy of the plans with EO80

2018 Comprehensive Program Report Conclusions – Fuel and Cost

1. State Governmental Units occupied about **135 million square feet** of space. State Governmental Units spent over **$317 million** in utility costs.
2. Electricity costs represent almost 50% of the total utility costs.
3. Since 2003, State Governmental Units have decreased energy consumption by 28% and avoided **$1.2 billion dollars** in utility costs by implementing energy efficiency retrofits or upgrades.
4. To reach a 40% energy intensity goal by 2025, the SEO estimates achieving about **$200 million** in avoided utility costs with $792 million dollars in investment.





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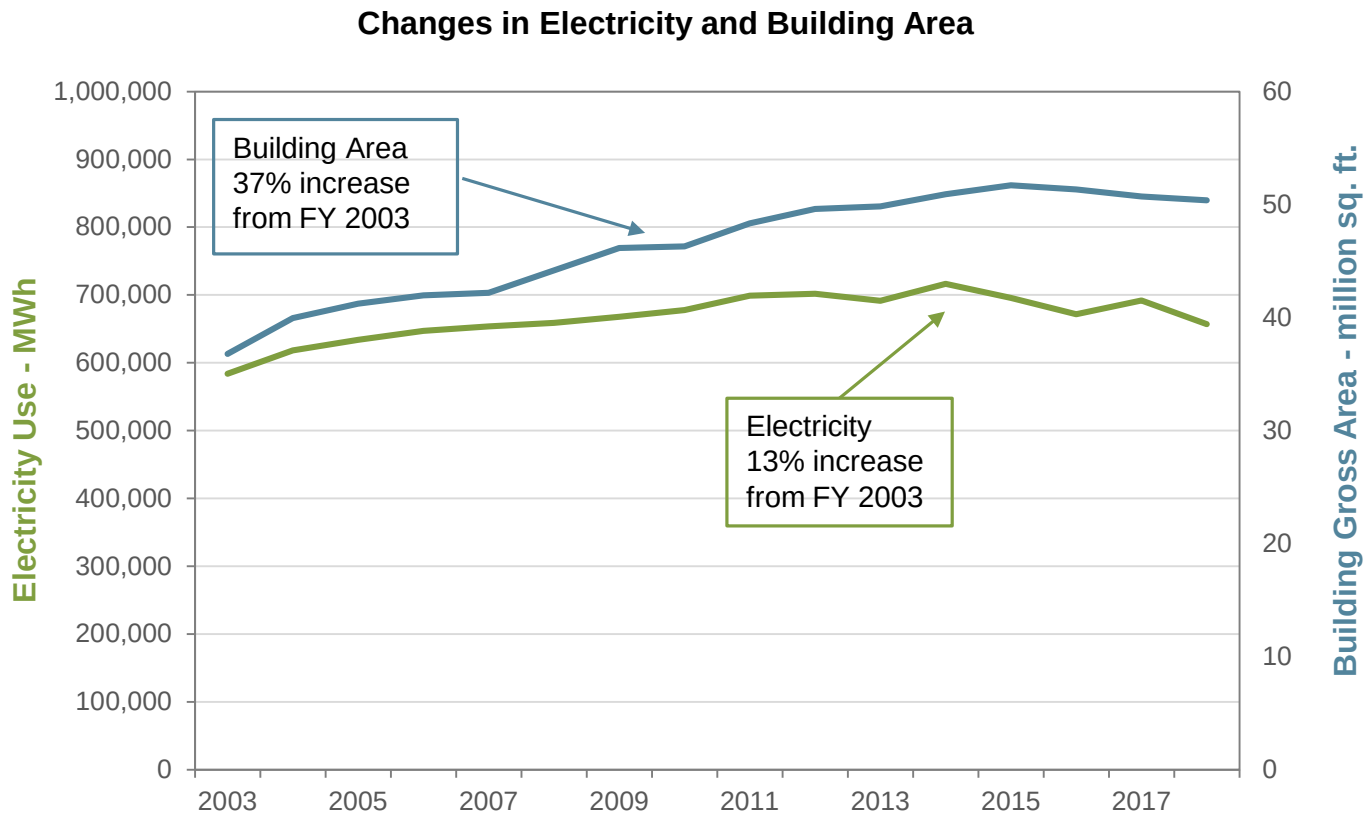
Comprehensive Program Report
Conclusions – Trends and Emissions Summary



Avoided GHG Emissions (FY03-FY18)

Fuel Source	All State Government Units (MTCO2e)
Electricity Usage	1,723,750
Nat Gas Usage	-204,969
Fuel Oil Usage	1,556,109
Propane Usage	91,154
Total	3,166,044

North Carolina
Climate Change Interagency Council

NORTH CAROLINA
Department of Environmental Quality

N.C. Department of Transportation Update

Zero Emission Vehicle (ZEV) Plan Development Process
EO80 Section 5

1. **Approach**
   - Build on existing initiatives and data to deliver a ZEV plan
   - Leverage refined versions of several models already developed to forecast adoption of ZEVs
2. **Stakeholder Process**
   - Working team assembled and has begun to identify major stakeholders
   - This will be a broad, cross-functional and multi-perspective group

Zero Emission Vehicle (ZEV) Plan Development Process
EO80 Section 5

3. Status Update

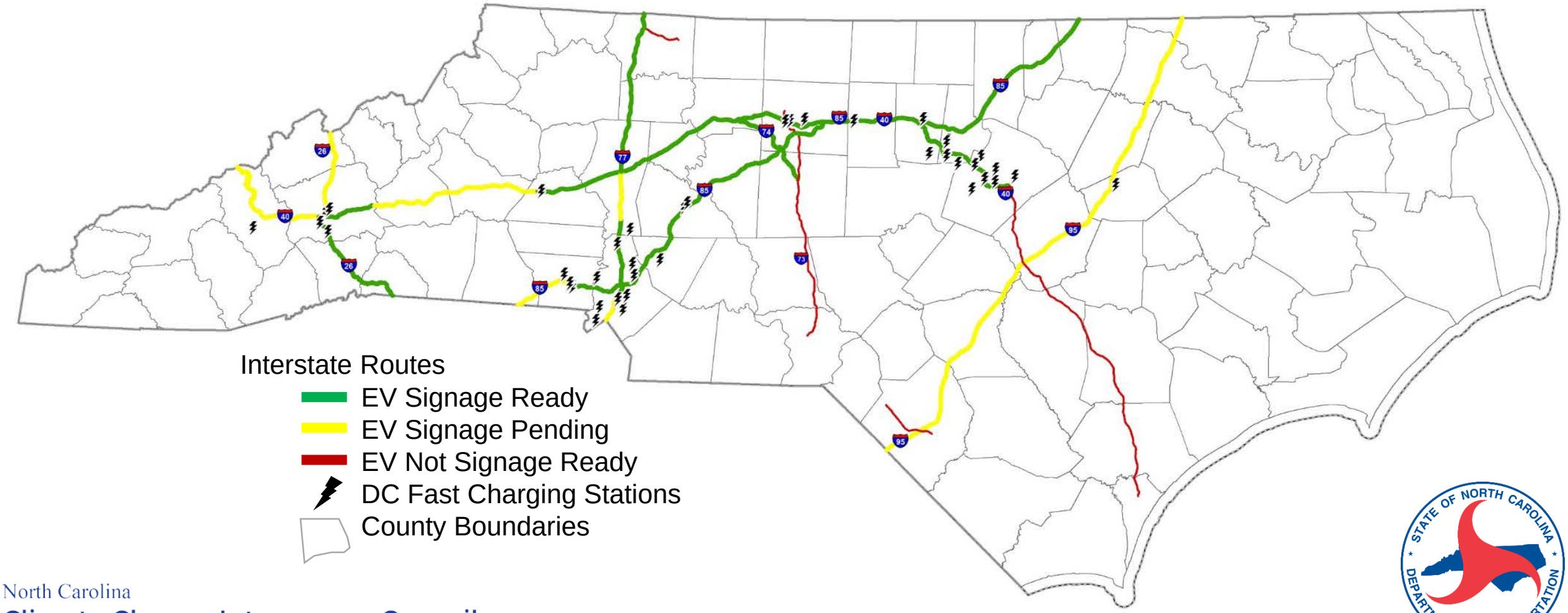
- First working team meeting was in January; data being collected and indexed
- Drafting high-level outline of ZEV Plan in February & March

4. Anticipated Timeline

- A draft plan for public review by June

Zero Emission Vehicle (ZEV) Plan Development Process
EO80 Section 5

Federal Highway Administration's Designated EV Recharging Corridors



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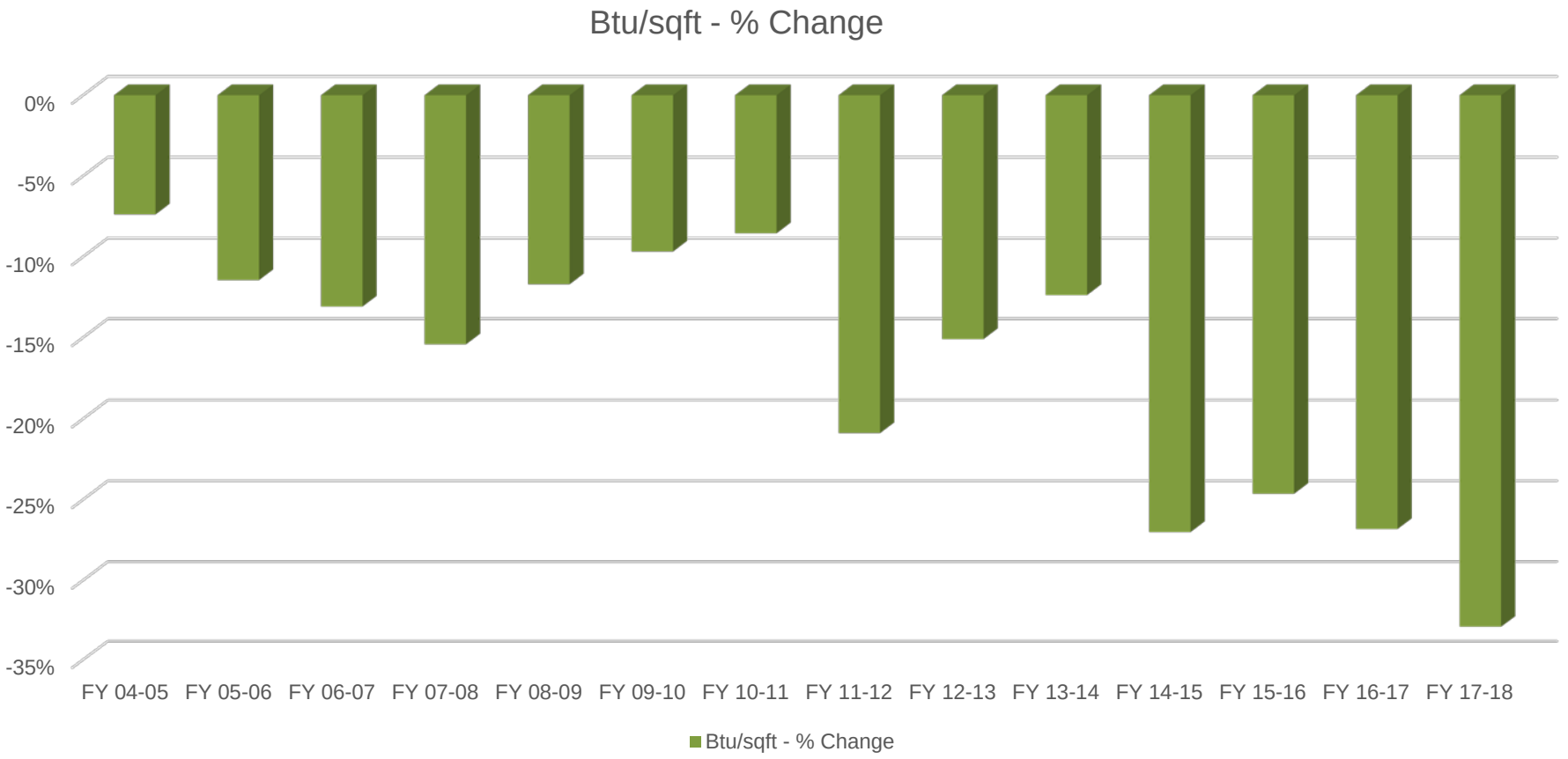
Energy, Water, and Utility Use Conservation EO80 Section 8

NCDOT Energy Consumption History (Btu/ft²)



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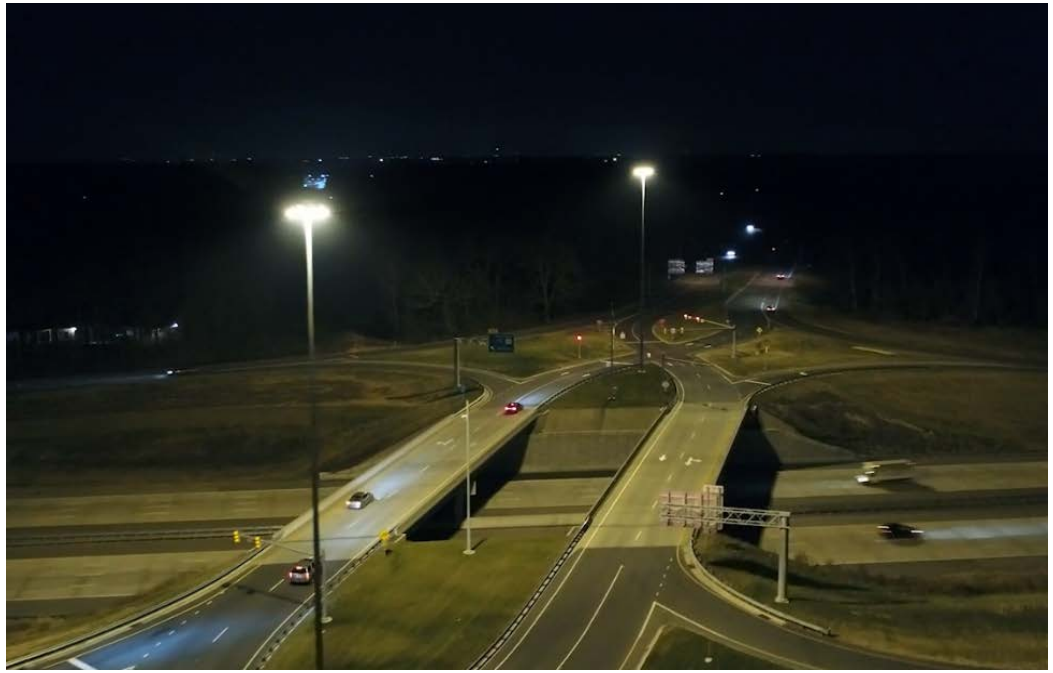
Energy, Water, and Utility Use Conservation
EO80 Section 8

Upgrade Roadway Lighting to LED-Based Fixtures



Before

After

Climate Risk Assessment and Resiliency
NCDOT is Developing a Plan
EO80 Sections 2 & 9

North Carolina
Climate Change Interagency Council

Prioritize ZEV and/or Low-Emission Alternatives
EO80 Section 7

1. **How is the agency prioritizing ZEVs for its own fleet and travel?**
   - Catalogued motor vehicle fleet department wide
   - Analyzing vehicle fleet for trip length and trip type
   - Investigating the installation of charging stations at NCDOT facilities
   - Division of Aviation is investigating the use of electric pushback vehicles
   - Division of Public Transportation helping local agencies use more alternative fuel and all-electric fleets
   - Ferry Division has installed 10 Tier III emission standard engines on 5 vessels

Department of Commerce Updates

NORTH CAROLINA
DEPARTMENT of
COMMERCE

Clean Energy and Clean Transportation Workforce Assessment Process EO80 Section 6

1. **General Description of Approach** (For each sector – Clean Energy & Clean Transportation)
   - Identification of existing talent pool and future workforce demand
   - Assessment of employers' current and future workforce skills and training needs
   - Compilation of educational program offerings, enrollment trends, and work-based learning opportunities
   - Identification of gaps and areas for improvement to meet current and future workforce demand
   - Recommended actions to help North Carolinians develop the required skills and education
2. **Stakeholder Process**
   - Consult with organizations in energy and transportation sectors to identify industries and employers
   - Consult with identified employers regarding current and future skill needs as well as challenges
   - Consult with public and private education institutions regarding program offerings, enrollment trends, and work-based learning opportunities
   - Solicit public comments on draft recommendations before finalizing
   - Updates available at https://www.nccommerce.com/news/current-initiatives

Clean Energy and Clean Transportation Workforce Assessment Process EO80 Section 6

3. Status Update

- Have consulted with several NC organizations, including NC Sustainable Energy Association, NC Clean Energy Technology Center, Energy Futures Initiative, Research Triangle Cleantech Cluster, Governor's Office, Department of Environmental Quality, and Department of Transportation
- Have made outreach to federal and state governments, including Washington State (on Green Jobs report), US Bureau of Labor Statistics (to discuss employment data and methodology issues), and received contact info for key personnel in Climate Alliance in California and New York
- Reviewing several national and state level clean energy and transportation reports

4. Anticipated Timeline

- Jan 2019 – Feb 2019: Consultation with industries, employers, and education institutions
- March 2019 – May 2019: Data gathering, technical analysis, and quantification of findings
- May 2019 – Jun 2019: Draft assessment development
- Jul 2019 – Aug 2019: Public comment period
- Sep 2019: Revised assessment provided to the Climate Council
- Oct 2019: Final assessment submitted to the Governor

General Directives

1. **How is the agency evaluating the impacts of climate change on its programs and operations?**
   - Communities impacted by climate change could see issues with: 1) available buildings and sites for industrial development; 2) transportation networks necessary to move people and products; 3) quality of life assets such as recreational and cultural activities
   - Impacts to these elements could negatively affect a community's competitiveness for economic development opportunities
   - We may need to work with communities to help them think about the impact of climate change on their economic competitiveness
2. **How is the agency integrating climate change mitigation and adaptation practices into its programs and operations?**
   - Reducing the use of paper in operations, most notably through utilization of electronic records, applications, and forms
   - Our Division of Employment Security is implementing a cloud-based unemployment benefits application and payment software, allowing us to decrease the number of paper records per applicant from 30 to none
   - Other practices to be developed and implemented

General Directives

3. **How is the agency prioritizing ZEVs in the purchase or lease of new vehicles and use of ZEVs for agency business travel where feasible?**
   - Committed to integrating Zero-Emissions Vehicles (ZEVs) into our fleet
   - Employees are encouraged to use cost-effective, low-emissions alternatives or carpool with other employees
   - Other practices to be developed and implemented
4. **How is the agency supporting state building energy consumption and reduction goals?**
   - Instituting increased use of timed and motion-activated lighting in our facilities
   - Developing utility management plan for Commerce
   - Other practices to be developed and implemented

Department of Administration Updates

North Carolina
Department of Administration

Motor Fleet ZEV Plan Development Process
EO80 Section 7

1. General Description of Approach

- Stakeholder engagement to seek input on ZEV priorities
- Determination of stakeholder issues, barriers, opportunities and support required for ZEV priorities
- Identify types of feasible ZEV trips; develop procurement options and strategies to increase ZEV purchases and utilization; account for each agency's ZEV utilization
- Recommend policy and actions needed to support ZEV priorities

2. Stakeholder Process

- Inform stakeholders of process and goals
- Meetings, teleconferences and surveys
- Data review and conclusions
- Implement program

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1. **Status Update**
   - Have begun communications with stakeholders
   - Have begun compiling necessary data
2. **Anticipated Timeline**
   - January 2019 – May 2019: Stakeholder engagement and information gathering
   - May 2019 – June 2019: Data analysis and quantification of economic cost
   - July 2019 – August 2019: Draft Plan development and review with stakeholders
   - September 2019: Submit Plan to Council to submit to the Governor

General Directives

1. **How is the agency evaluating the impacts of climate change on its programs and operations?**
   - DOA's Advocacy groups surveying partners to gage how climate change will effect operations & working with them on plans to assist.
2. **How is the agency integrating climate change mitigation and adaptation practices into its programs and operations?**
   - P&C Division is designing sustainable procurement practices
   - State Parking is incorporating new and additional charging stations in parking deck designs
3. **How is the agency prioritizing ZEVs in the purchase or lease of new vehicles and use of ZEVs for agency business travel where feasible?**
   - By using/purchasing ZEVs for all possible functions
4. **How is the agency supporting state building energy consumption and reduction goals?**
   - Facilities Management Division is upgrading existing state buildings to make them more energy efficient
   - State Construction Division is prioritizing efficiency best practices in new building designs.

Department of Public Safety Updates

General Directives

1. **How is the agency evaluating the impacts of climate change on its programs and operations?**
   - NCDPS: Agency-wide team ongoing meetings established February 2019.
   - Central Engineering: Active agenda item in monthly planning meetings for design & R/R projects.

2. **How is the agency integrating climate change mitigation and adaptation practices into its programs and operations?**
   - Initial agency-wide discussions begun.
   - Central Engineering: Design team integrating resiliency in their facility condition assessments, new design and repair and renovation projects by September 1, 2019.

General Directives

3. How is the agency prioritizing ZEVs in the purchase or lease of new vehicles and use of ZEVs for agency business travel where feasible?

- Central Engineering: Consistent with DPS Motorfleet Operations:
  - Evaluating need for larger vehicles
  - Evaluating highest use and oldest vehicles and ROI.
  - Consider vehicle purchases in lieu of leasing.
  - Consider hybrids where ZEVs are not feasible

General Directives

4. How is the agency supporting state building energy consumption and reduction goals?

- Goals already established:
  - Proposed statutory language to retain credits and utility savings to fund larger / more complex future projects
  - Created project funding through Opt-Out (credits) program for large electrical accounts: 2017-18, 2018-19
    - Approximately $850,000 spend on electrical energy reduction projects for 2018-19.
    - $300,000 spend on electrical energy reduction projects for 2017-18.
  - Establish energy efficiency design guidelines by May 2019
  - Evaluating staffing mechanism via proposed statute to build the program
  - Develop data analytics so reduction targets are quickly established and usage outliers analyzed
  - Streamline data collection: So Energy Manager can focus on reduction goals
- Project Priorities established 2018-2020 (utility savings, improve safety & reduce maintenance):
  - Exterior LED (perimeter) $250,000 and 4.6 million kwh estimated annual savings
  - Building Management System Guidelines and Data Analytics

Department of Health and Human Services Updates

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

General Directives

1. How is the agency evaluating the impacts of climate change on its programs and operations?

- Climate and health program in Occupational and Environmental Epidemiology has evaluated most of the possible public health impacts of climate on North Carolinians using health data and subject matter expertise
- Climate and health program has prioritized adaptation activities and currently has programs in 5 counties in Southeastern North Carolina
- NC DETECT (emergency department data stewards) unit with Communicable Disease has supported area researchers' exploration of climate and health connections in emergency department data

2. How is the agency integrating climate change mitigation and adaptation practices into its programs and operations?

- Occupational and Environmental Epidemiology is calculating its carbon footprint (mitigation practice)
- Climate and health program in Occupational and Environmental Epidemiology is implementing a heat-health alert system in Bladen, Robeson, Sampson, and Scotland counties to reduce heat-related illness
- Climate and health program is implementing an elementary school curriculum for reducing health impacts of wildfire and prescribed burning smoke
- Climate and health program has been planning and implementing adaptations since 2011, including one of the country's most comprehensive heat-related illness syndromic surveillance reports (https://publichealth.nc.gov/chronicdiseaseandinjury/heat.htm)

General Directives

3. How is the agency prioritizing ZEVs in the purchase or lease of new vehicles and use of ZEVs for agency business travel where feasible?

- The NC DHHS Division of Property and Construction, Fleet Services Office, which stewards all aspects of divisional vehicular asset management, as part of the new vehicle acquisition process vets the availability of Zero Emission Vehicles (ZEVs) through our partner agency the NC Department of Administration, Division of Motor Fleet Management.
- The Fleet Services Office has augmented standing long-term vehicular acquisition forms to include the vetting of the ZEV priority option. The Fleet Services Office will also educate any requesting division within the NC DHHS of the need to prioritize ZEV acquisitions whether for the long or short-term utilizations. For short-term utilizations, which are currently handled through a State Contract with Enterprise Rent-a-Car, the Fleet Services Office will inform the vendor the ZEV priority and utilize ZEV assets as they are made available within the vendor's fleet

4. How is the agency supporting state building energy consumption and reduction goals?

- The NC DHHS Division of Property & Construction is working with our facilities across the state to identify Repair & Renovation (R&R) projects. Cost estimates will be generated and projects added to the overall DHHS R&R list that gets submitted to OSBM in the fall 2019 and future R&R funding cycles.
- The NC DHHS Division of Property & Construction is investigating the use of a third party service called Capturis to assist in analyzing utility usage at all DHHS facilities. The reports generated from Capturis will help identify anomalies in utility usage and brought to the attention of the maintenance staff

Department of Natural and Cultural Resources Updates

General Directives

1. **How is the agency evaluating the impacts of climate change on its programs and operations?**
   - Quantifying damages, repair costs, lost revenue from storms; changes on the landscape
2. **How is the agency integrating climate change mitigation and adaptation practices into its programs and operations?**
   - Resiliency – floodplain buyouts, stream and wetland restoration, parks and trails in preserved floodplains
   - DNCR Energy and Environmental Performance Team involves all divisions – energy, recycling, plastics
   - Public education - DNCR Website: www.ncdcr.gov/about/nature/every-day-we-care
3. **How is the agency prioritizing ZEVs in the purchase or lease of new vehicles and use of ZEVs for agency business travel where feasible?**
   - Each division evaluating its current fleet make-up to determine where ZEVs workable – HQ & Sites
   - Charging stations at high visitation sites
4. **How is the agency supporting state building energy consumption and reduction goals?**
   - Energy use audits
   - Sharing best practices among divisions re: new construction, repair & renovation, procurement

Department of Military and Veterans Affairs Updates

Department of Revenue Updates

General Directives

1. **How is the agency evaluating the impacts of climate change on its programs and operations?**
   - DOR team established; discussing impacts and opportunities with other agencies
2. **How is the agency integrating climate change mitigation and adaptation practices into its programs and operations?**
   - Promoting electronic filing
   - Reviewing energy efficiency and improvement opportunities at all office locations
   - Developing an employee awareness program and reviewing the employee teleworking policy
3. **How is the agency prioritizing ZEVs in the purchase or lease of new vehicles and use of ZEVs for agency business travel where feasible?**
   - Analyzing use of long term lease and motor fleet vehicles to evaluate future use of ZEVs
4. **How is the agency supporting state building energy consumption and reduction goals?**
   - Replacing outdated equipment such as lighting, power distribution units, cooling units and IT equipment
   - Using motion detected lighting and use of automatic lighting timers

Department of Information Technology

General Directives

1. **How is the agency evaluating the impacts of climate change on its programs and operations?**
   - Evaluating future IT procurements to adapt to clean energy initiatives. This includes the vendor participating in clean energy alternatives and practices. Presently investigating industry solutions to include DoD best practices.
   - Evaluating existing energy management practices, within our facility management activities. Evaluating automated energy management software tools for best practices.
2. **How is the agency integrating climate change mitigation and adaptation practices into its programs and operations?**
   - Engaging staff to engage best practices for energy conservation, providing education on best practices.
   - DIT employee energy savings contest.
3. **How is the agency prioritizing ZEVs in the purchase or lease of new vehicles and use of ZEVs for agency business travel where feasible?**
   - DIT vehicle use minimal; exploring policy issuance
4. **How is the agency supporting state building energy consumption and reduction goals?**
   - Recently completed new building lighting project design, to replace office and data center lighting with the latest energy saving units.

Agenda

Public Engagement