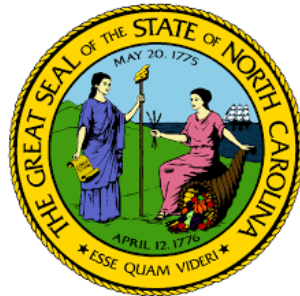


# North Carolina Utilities Commission Public Staff

**Christopher J. Ayers**  
**Executive Director**



# Public Staff

- Established in 1977 by N.C. Gen. Stat. § 62-15
- Represents the **using and consuming public** in North Carolina Utilities Commission proceedings
  - Not the public at-large
  - Economic regulator and advocate
- Eighty-one staff members organized into nine divisions
  - Accounting
  - Consumer Services
  - Economic Research
  - Energy
  - Executive
  - IT
  - Legal
  - Transportation
  - Water/Sewer/Telephone

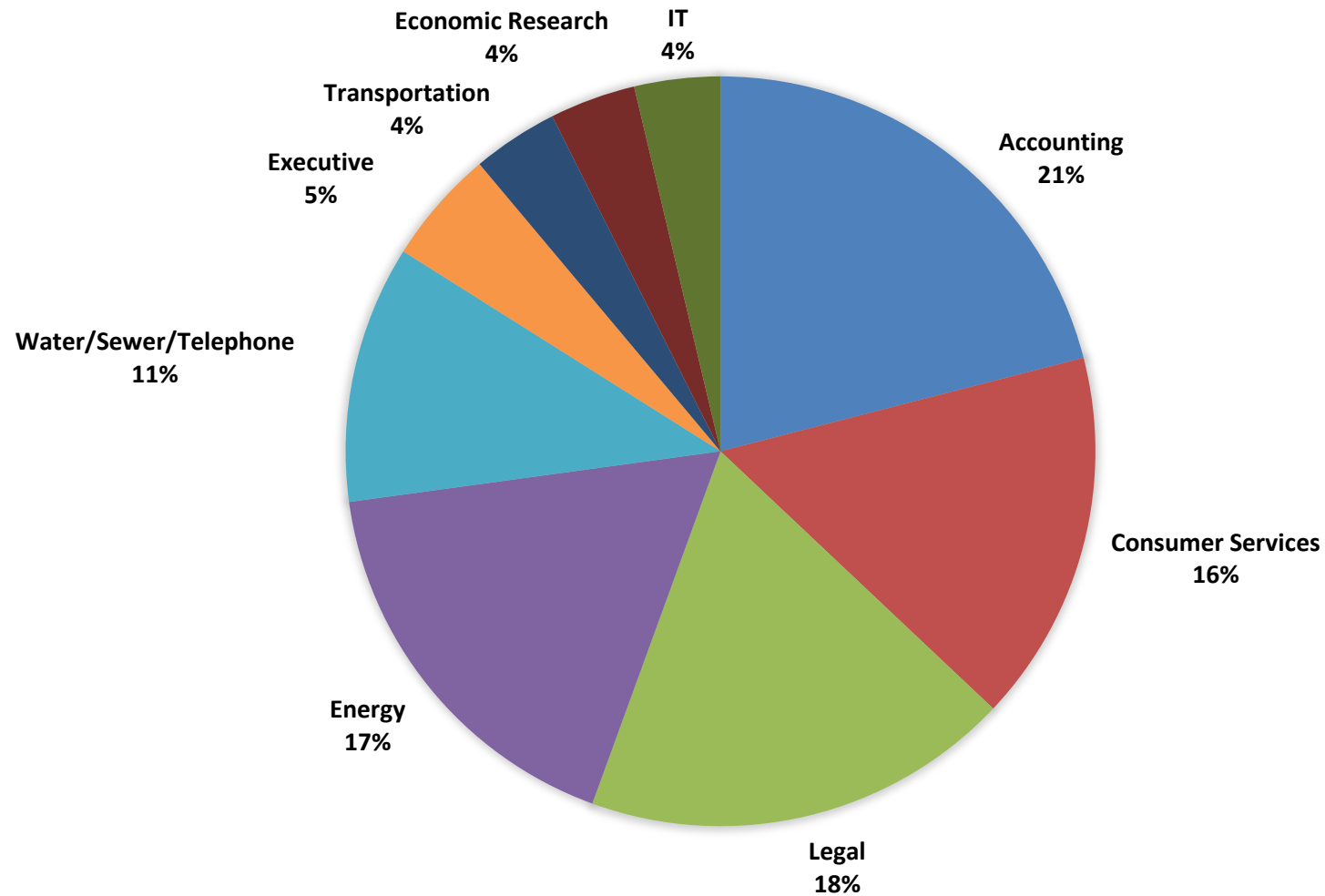
# Key Functions

- Investigate petitions and other filings before NCUC
  - Present testimony and recommendations to NCUC on behalf of utility customers
- Investigate customer complaints
- Assist legislature regarding proposed legislation and constituent service
- Work with state agencies, counties, and municipalities on regulated utility matters
- Undertake studies, investigations, and stakeholder processes as requested by NCUC

# Differences Between NCUC and Public Staff

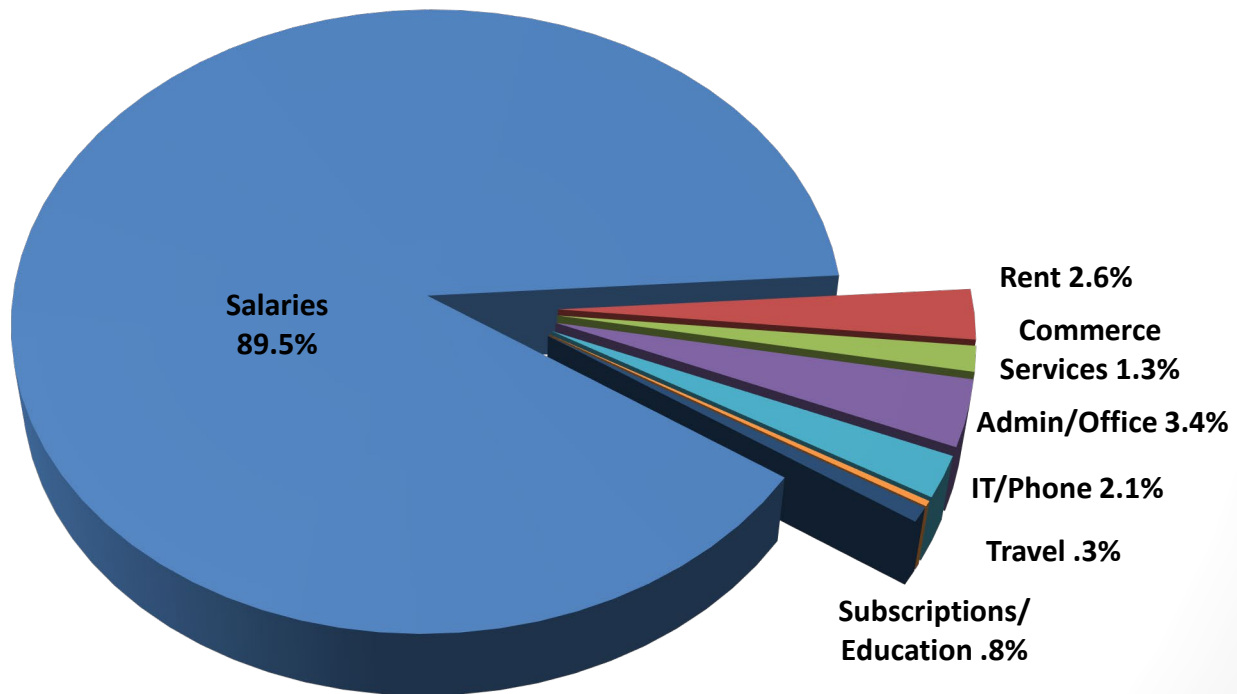
- Independent agencies
  - Separate staffs, leadership and budgets
- NCUC does not direct or oversee the Public Staff's operations
- Public Staff appears as a party before the NCUC
  - Public Staff may appeal decisions to appellate courts
  - Public Staff subject to ex parte rules and cannot independently communicate with NCUC on pending matters
  - Public Staff does not participate in NCUC decision-making
- Staff roles
  - NCUC staff is an advisory staff
  - Public Staff is an audit/advocacy staff

# Staff Organization



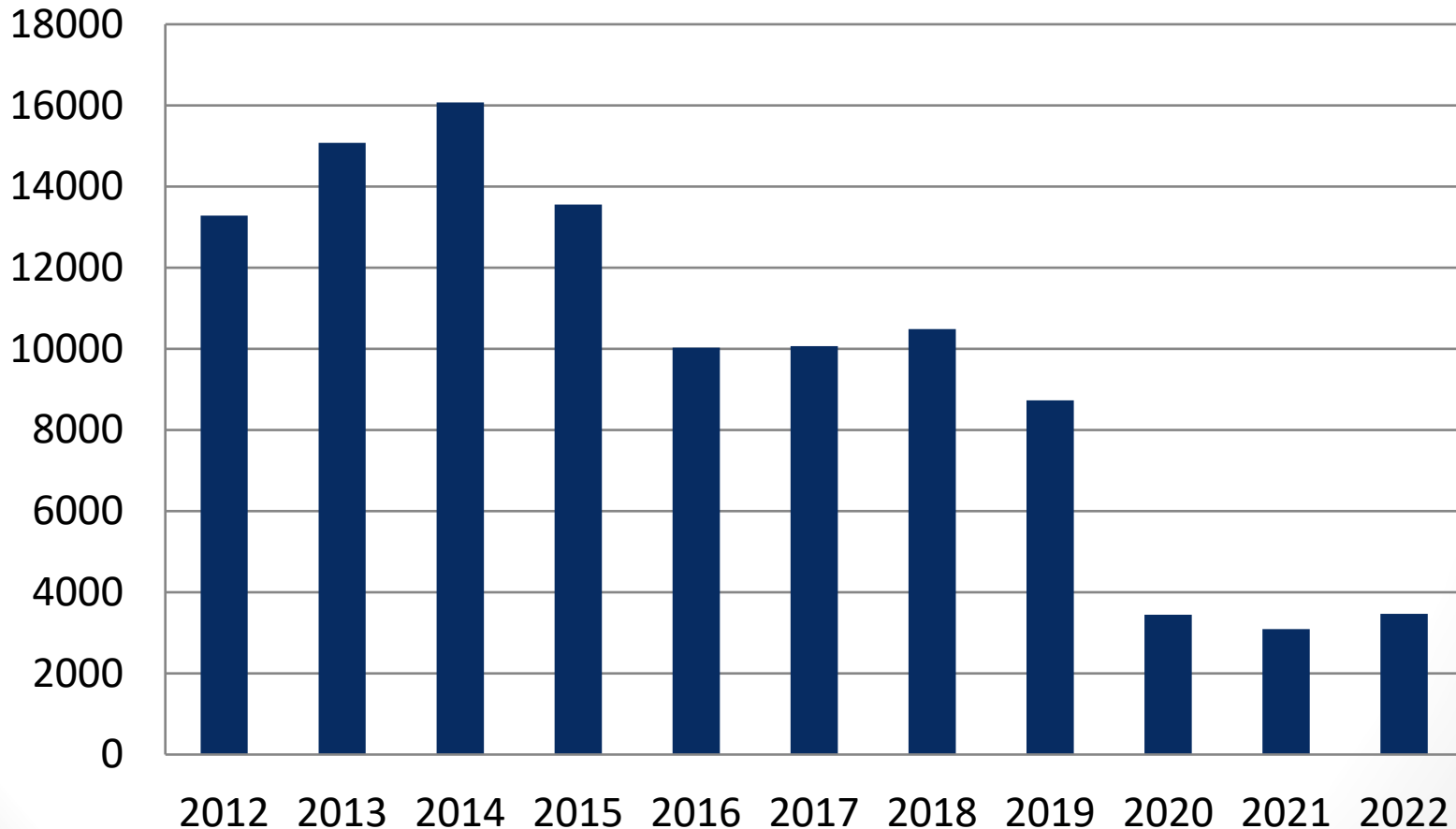
# Budget Expenditures

**FY 2022-23 Budget: \$11.1 million**



# Complaint Investigation

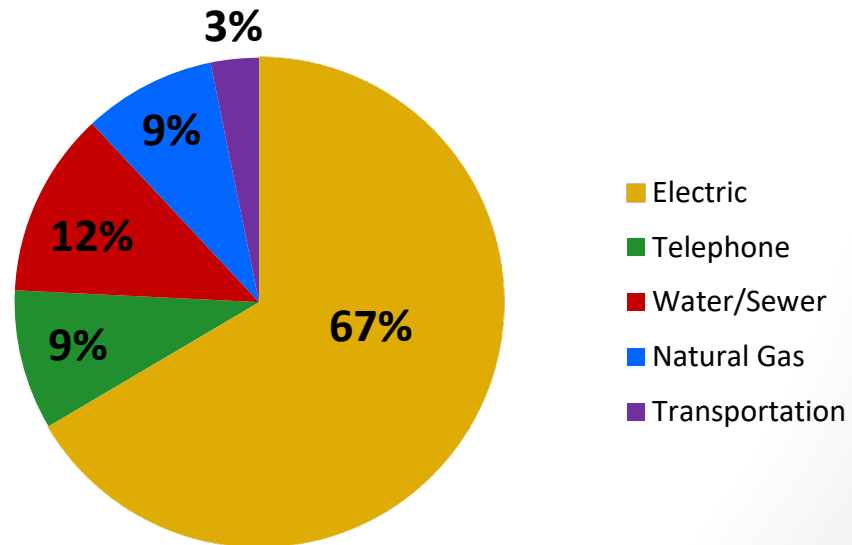
## Annual Complaints Received



# Complaint Investigation

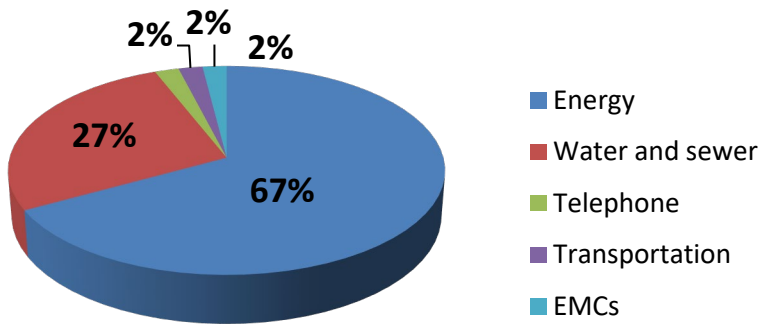
- Complaints by industry in 2022
  - Electric – 2,235
  - Telephone – 311
  - Natural Gas – 412
  - Water/Sewer – 295
  - Transportation – 107

**Industry Percentages**

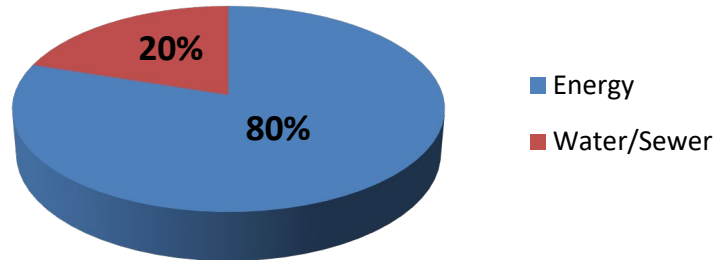


# Allocation of Division Resources

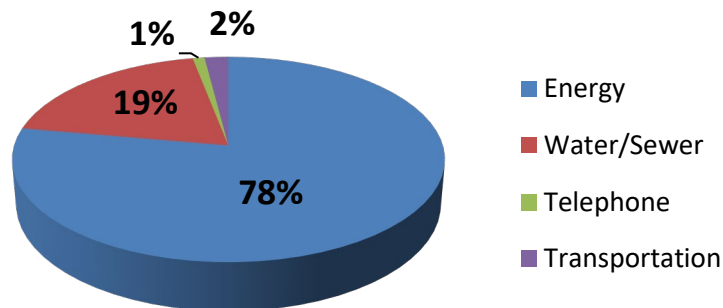
## Accounting Division



## Economic Research Division



## Legal Division



# Ratemaking Overview

# General Rate Case Process – 270 Days Historic Test Year

- 1) Utility files rate case application, exhibits, testimony and proposed rates
- 2) NCUC suspends rates and schedules customer and evidentiary hearings
- 3) Public Staff engages in discovery, audits/investigates, files testimony
- 4) Intervenors engage in discovery and file testimony
- 5) Settlement discussions may occur between parties
- 6) Customer and evidentiary hearings
- 7) Parties file proposed orders
- 8) NCUC reviews all evidence and issues order
- 9) Utility puts new rates into effect

# General Rate Case Process – 270/300 Days Multi-Year Rate Plan

- 1) Technical conference process (electric only)
- 2) Utility files rate case application, exhibits, and testimony
- 3) NCUC suspends rates and schedules customer and evidentiary hearings
- 4) Public Staff engages in discovery, audits/investigates, files testimony
- 5) Intervenors engage in discovery and file testimony
- 6) Settlement discussions may occur between parties
- 7) Customer and evidentiary hearings
- 8) Parties file proposed orders
- 9) NCUC reviews all evidence and issues order
- 10) Utility puts new rates into effect
- 11) Annual rate adjustment (max 4% electric & max 5% water/sewer), earnings review, PIM evaluation and decoupling evaluation

# Ratemaking Overview

- Based on the **cost of service** in the test period
  - **Test year** – Financial data from a historical 12-month period
    - Serves as a proxy for the anticipated level of costs for the period of time the rates will be in effect
- Rates are established based on what the utility has already spent (historic test year) or plans to spend in a future rate year (MYRP)
- N.C. Gen. Stat. § 62-2(3a) requires “...energy planning and fixing of rates in a manner to result in the **least cost** mix of generation and demand side reduction measures which is achievable...”
- Rates must be **just and reasonable**

# General Ratemaking Formula

- **Revenue Requirement** is determined as (**Rate Base** x **Rate of Return** (grossed up for income taxes)) + **Expenses**
- **Rate Base** – value of the property (net of depreciation) on which a utility may earn a rate of return.
  - Must be “**used and useful**” - Power plants, transmission and distribution lines, etc. actually used in providing service to customers
- **Rate of Return** – % return that utility may earn on invested capital, including debt and equity investments.
- **Expenses** – can recover reasonable and prudent expenses based on an historical test year.

# Rate Base

- Rate base is the value of **reasonable and prudent** property on which a public utility is authorized to earn its rate of return

- Rate base calculation:

**Original cost of the utility assets (prudent capital investment)**

*(minus)*

**Accumulated Depreciation**

- Investment costs include:
  - Power plants
  - Transmission lines
  - Distribution lines
  - Transformers
  - Computer systems
  - Vehicles

# Rate of Return

- Percentage return that the utility is allowed to earn on its invested capital
- Designed to compensate investors for the use of their capital and associated risk
- Rate of return composed of three components:
  - Cost of equity
  - Cost of debt
  - Capital structure (debt and equity ratios)
- Rate of return is **not a guaranteed return** → it is the return the utility is authorized to earn
  - Rates are calculated using the rate of return

# Expenses

- Utilities are authorized to recover **reasonable and prudent** expenses
  - Maintenance expense
  - Operating expense
    - Depreciation
    - Salaries
    - Fuel
    - Transportation
    - Customer service
    - General taxes
    - Administrative
    - Uncollectibles
    - Testing
    - Legal
    - Rate case expenses
    - Purchased power costs

# Performance Based Ratemaking (PBR)

- Commission must find a PBR application results in:
  - Just and reasonable rates
  - Is in the public interest
  - Consistent with statutory criteria
- Commission must consider:
  - No customer class is unreasonably harmed
  - Reasonably assures continuation of safe and reliable service
  - Avoids rate shock
- If Commission rejects PBR application
  - Utility may refile, or
  - Stakeholders may collaborate to cure identified deficiencies

# Performance Incentive Mechanisms (PIMs)

- Links utility revenue to performance in targeted areas consistent with policy goals
- PIMs are approved by the Commission in MYRP
  - Includes specific performance metrics and targets
- PIM incentives/penalties cannot exceed 1% of total annual revenue requirement
- Potential considerations for electric utilities
  - Peak load reduction/efficient use of the system
  - Encourage DERs and utility scale renewable energy and storage
  - Reduce low-income energy burdens
  - Encourage energy efficiency, carbon reduction, beneficial electrification
  - Equity in contracting
  - Promote resilience and security of electric grid

\*\* Water/sewer companies can also establish PIMs in MYRP

# Earnings Sharing Mechanism

- Earnings Cap
  - Electric utilities: 50 basis point band
    - PIM incentives and DSM/EE incentives are excluded from the calculation
  - Water/sewer companies: Maximum of 100 basis point band
- Annual earnings evaluation
  - Earnings exceeding authorized band refunded to customers
  - Utility may file a rate case if earnings fall below the authorized return

# Residential Decoupling

- Annual revenue requirement per residential customer
  - Allocated throughout 12-month period
  - Establishes a revenue target
    - Excludes EV charging rates
- Utility tracks difference between target revenue and actual
  - Differences are deferred into regulatory asset or liability account
- True-up mechanism
  - Avoids over-collecting or under-collecting

# Cost Allocation

- Attribute costs to different customer classes based on the cost incurred to serve those classes
  - Residential, commercial and industrial classes
  - Economies of scale
    - Municipalities and industrial customers are cheaper to serve on a per kWh basis
  - Time differentiation
    - Contribution to peak vs. non-peak demand
  - Retail vs. wholesale
    - Municipalities and electric cooperatives
  - System costs across multiple state jurisdictions
    - North Carolina/South Carolina allocate costs approximately 65:35

# Cost Allocation Methodologies

- Summer coincident peak
  - Customer's share of the system load at the system's summer peak
- Winter/summer coincident peak and average demand
  - North Carolina uses a variation of this methodology called "Average and Excess"
- Non-coincident peak and average demand
- Twelve months peak average
  - One peak each month, or
  - Average of twelve highest peaks during year

# Rate Design

- Rates established to meet the revenue requirement
  - Customer rate classes
    - Residential
    - Commercial
    - Industrial
  - Designed to mirror the cost of service to each class
    - Various rate schedules in each customer class
- Average NC retail price of electricity per customer class (2021)
  - Residential: 11.32 cents/kWh (National average: 13.66 cents/kWh)
  - Commercial: 8.50 cents/kWh (National average: 11.22 cents/kWh)
  - Industrial: 6.14 cents/kWh (National average: 7.18 cents/kWh)

Source: Energy Information Administration (February 2023)

# Annual Riders

# Annual Riders

- Electric
  - Fuel
  - Renewable Energy/Energy Efficiency Portfolio Standard (REPS)
  - Demand Side Management (DSM)/Energy Efficiency (EE)
  - Joint Agency Asset Acquisition
  - Competitive Procurement of Renewable Energy (CPRE)
  - Storm Securitization
- Gas
  - Purchased Gas Adjustment (PGA)
  - Customer Utilization Tracker (CUT)
  - Integrity Management (IMR)
- Water/Sewer
  - Water System Improvement Charge (WSSIC)
  - Sewer System Improvement Charge (SSIC)
  - Consumption Adjustment Mechanism (CAM)

# Fuel Rider

- Cost of fuel burned
  - Coal, gas, nuclear, biomass
- Cost of reagents used to treat emissions
- Certain purchased power costs\*
  - Replacement power costs
  - Peak power purchases
  - Transmission charges
- Costs of energy and capacity purchased from qualifying facilities (QFs)\*
- Net gains/losses from sale of fuel or by-products\*
- Renewable energy procurement non-administrative costs\*

\*Limited to 2.5% annual increase in the aggregate amount of costs

# Renewable Energy/Energy Efficiency Portfolio Standard Rider

- Incremental costs to comply with Renewable Energy Portfolio Standard (bundled costs minus avoided costs)
- Costs of Renewable Energy Certificates (RECs)
- Costs recoverable are capped by General Assembly
  - Residential rates: \$27/year
  - Commercial rates: \$150/year
  - Industrial rates: \$1,000/year

# Demand Side Management (DSM)/Energy Efficiency (EE) Rider

- Costs of DSM/EE programs
  - LED bulbs
  - Refrigerator recycling program
  - Home energy audits
  - Load control
- Net lost revenues
  - First three years of program
- Utility incentives
  - Receive a percentage of savings achieved for customers from energy efficiency
- Must be cost effective

# Joint Agency Asset Acquisition Rider

- Recovers the costs associated with Duke Energy Progress' purchase of generation assets from the North Carolina Eastern Municipal Power Agency in 2015
- Adjusted annually to reflect savings/expense associated with changes in the fuel cost

# Competitive Procurement of Renewable Energy (CPRE) Rider

- Annual rider for Duke Energy Carolinas and Duke Energy Progress
- Recovers the costs related to the procurement of energy and capacity under the CPRE Program enacted by N.C. Gen. Stat. § 62-110.8, including:
  - Purchases of energy, capacity, and environmental and renewable attributed from third-party renewable energy facilities
  - Authorized revenue of utility-owned assets procured through CPRE
- Adjusted each year to reflect changes in the cost of administering the CPRE Program
  - Annual increase capped at 1% of utility's gross revenues

# Storm Securitization Rider

- Recovers the costs associated with restoration of electric service and infrastructure associated with a storm
  - AAA debt cost
    - Lower cost versus traditional financing
  - Irrevocable, nonbypassable charge
    - Annual true up mechanism
- NCUC issues financing order authorizing issuance of storm recovery bonds
  - Must find quantifiable benefits to customers
  - Utility's discretion on proceeding with bond issuance

# Purchased Gas Cost Adjustment

- N.C. Gen. Stat. § 62-133.4
- Allows LDC's to recover 100% of their prudently incurred gas commodity and transportation costs
- Based on the Company's forecasted normalized throughput levels and the total delivered cost of natural gas
- True-up mechanism
  - Utilities file as needed (2 to 4 times per year)
  - Avoids over-collecting or under-collecting

# Customer Utilization Tracker

- N.C. Gen. Stat. § 62-133.7
- Based on annual revenue requirement of natural gas utility
  - Utility tracks difference between target revenue and actual revenue over six-month period
    - Based on customer usage
- True-up mechanism
  - Avoids over-collecting or under-collecting
  - Rates adjusted twice a year

# Integrity Management Rider

- N.C. Gen. Stat. § 62-133.7A
- Allows bi-annual recovery of costs related to compliance with federal gas pipeline safety requirements
- Utility tracks difference between actual plant investment and projected revenue requirement over six-month period
  - Based on customer usage
- True-up mechanism
  - Avoids over-collecting or under-collecting
  - Rates adjusted twice a year

# Water System Improvement Charge (WSIC)/Sewer System Improvement Charge (SSIC)

- N.C. Gen. Stat. § 62-133.12
- Recovery of capital costs associated with system improvements
  - Distribution system lines and collection mains
  - Main extensions
  - Replacement of certain sewer equipment
  - Drinking water standards
    - Primary drinking water standards
    - Directed improvements for secondary drinking water standards or other health/environmental standards
  - Relocation of facilities due to roadway projects
- Must be pre-approved by the Utilities Commission
- Cumulative charges may not exceed 7.5% of annual service revenues

# Consumption Adjustment Mechanism

- N.C. Gen. Stat. § 62-133.12A
- Based on annual revenue requirement of water or sewer utility
  - Utility tracks difference between target revenue and actual revenue over twelve-month period
    - Based on customer usage
- True-up mechanism
  - Avoids over-collecting or under-collecting

# Contact Information

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