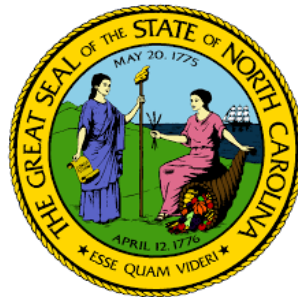


North Carolina Utilities Commission Public Staff

Christopher J. Ayers
Executive Director

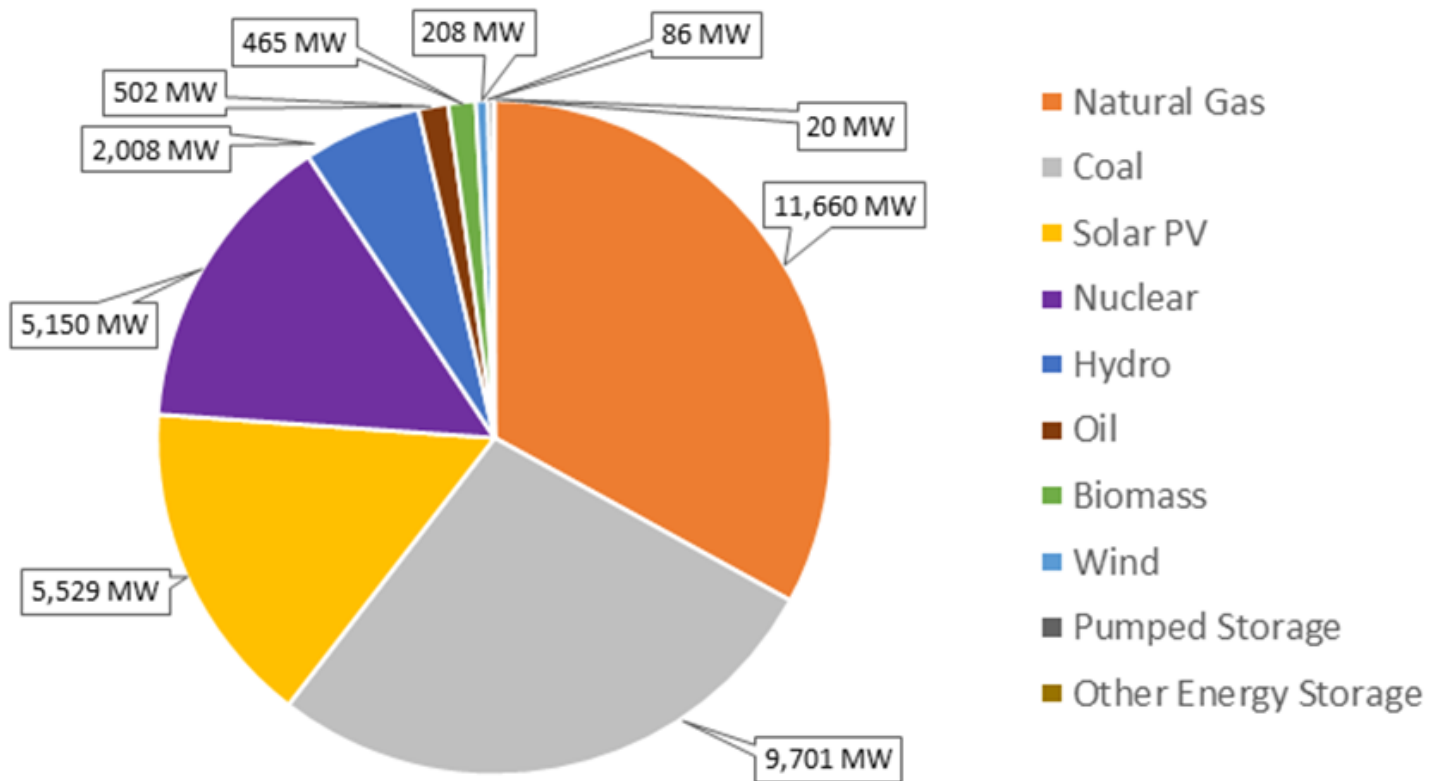


North Carolina Snapshot

- 8th largest state for electricity generation (2020)
- Vertically integrated
 - Small portion of state located in PJM
- Policy goals
 - Statutory
 - 12.5% renewable energy standard (N.C. Gen. Stat. § 62-133.8)
 - 2,660 MW solar procurement (N.C. Gen. Stat. § 62-110.8)
 - Executive Order 80
 - 40% reduction in greenhouse gas emissions by 2025
 - Department of Environmental Quality (DEQ) Clean Energy Plan
 - 70% reduction in greenhouse gas emissions by 2030
 - Carbon neutrality by 2050

North Carolina Snapshot

NC Electric Generating Capacity, June 2021



North Carolina Snapshot

Solar Energy Facilities as of December 31, 2020				
	Connected Facilities		Proposed Facilities (Pre- and Under-construction)	
Electric Utility	Number of Facilities	Capacity of Facilities in MW	Number of Facilities	Capacity of Facilities in MW
DEP	9,379	2,692	1,105	3,264
DEC	10,221	996	959	2,127
DENC	353	1,529	233	7,630
Total	19,953	5,217	2,297	13,022

Independent power producers account for over 90% of NC's solar generation.

North Carolina Snapshot

- Currently in IRP process
 - Grid Impacts of Different Resource Portfolios
 - Potential Use of “All-Source” Procurement Process
 - Methodology for Evaluating Economic Retirement of Coal-Fired Generating Units
- Integrated System & Operations Planning (ISOP)
 - Planning across generation, transmission, and distribution
- Proposed rulemaking for CPCN proceedings
 - Information on system impacts, upgrades, and associated costs
- Implementing queue reform
 - Cluster study
- Interconnection stakeholder process
 - Evolving interconnections procedures

Benefits of Comprehensive Planning

- Enables bidirectional evaluation of investment and resources to maximize system efficiency
- Balances system needs and other objectives while providing reliable service at least cost
- Can open access to distribution grid to maximize customer opportunity and value, support new products, technologies, and customer preference
- Optimizes use of distributed and existing energy resources
- Avoids unnecessary costs to ratepayers

Planning Challenges

- Pace of change within energy industry
- Jurisdictional limitations
- Rapid increase of distribution energy resources
 - Declining availability of low-cost locations
 - Uncertainty around project completion, upgrade costs
 - System stability
- Data
 - Access
 - Staleness
 - Transparency
 - Volume

Opportunities

- Collaboration across electric suppliers
 - Grids are interconnected
 - Share information
 - Informed planning
- Enhanced modeling capabilities
 - Greater granularity
- Interconnection process
 - Evolving interconnections procedures
 - Energy storage retrofit opportunity
 - Queue reform