2023 State Energy Conference of North Carolina

Connecting North Carolina's diverse energy economy

April 25 – 26, 2023

#NCenergy2023

Hosted By

NC STATE UNIVERSITY
Office of Professional Development

NC CLEAN ENERGY TECHNOLOGY CENTER

Held at McKimmon Conference and Training Center, NC State University, Raleigh, NC

McKimmon Center floor plan for the 2023 State Energy Conference of North Carolina

Key locations

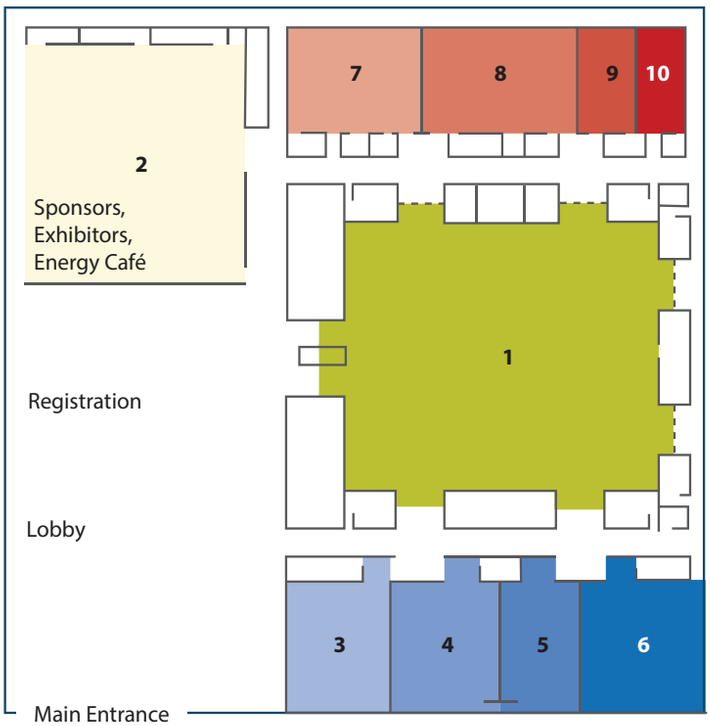
Room 1
Morning Plenary Sessions and Lunches

Room 2
Sponsors, Exhibitors and Energy Café

Lobby
Registration Desk

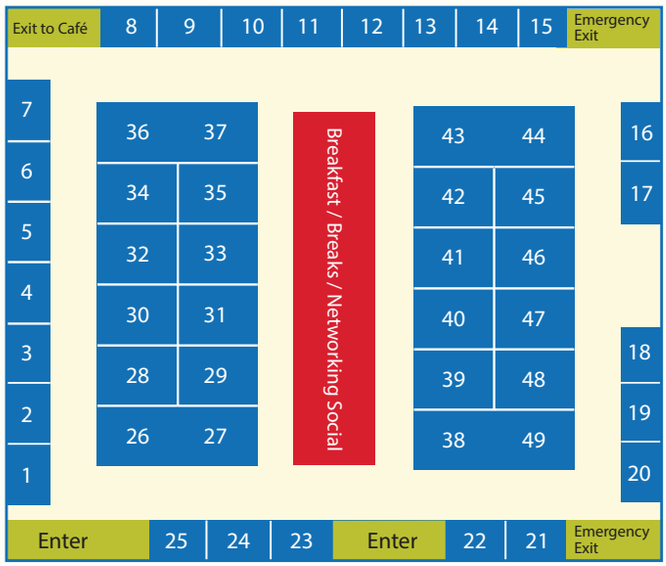
Rooms 3, 4, 5, 6, 7, 8
Concurrent Sessions

Room 10
Media and Speaker Ready Room



Exhibitor booth locations

1 NC State College of Natural Resources
2 Southern Energy Management
3 McCall Thomas Engineering Company
4 NC Justice Center
5 Dept. of Commerce
6 Anne Tazewell, Author
7 NC Department of Environmental Quality
8 Dominion Energy of NC
9 Look for the Power LLC
10 Traffic Plan
11 Center for Energy & Technology, NCA&T
12 NC Clean Energy Technology Center
13 FREEDM Systems Center
14 Energy Services Coalition
15 3Flow Inc.
16 SATEC, Inc.
17 Booth & Associates, LLC
18 TLC Engineering Solutions, Inc.
19 Powersmiths/Socomec
20 Aderis Energy
21 PL&E Sales
22 Greentech Solutions Group
23 Siemens
24 Research Triangle Cleantech Cluster
25 Office of Professional Development
26 ElectriCities
27 NC's Electric Cooperatives
28 Itron
29 Duke Energy
30 HDR
31 NC Sustainable Energy Association
32 Energy Production & Infrastructure Center, UNC Charlotte
33 MBP
34 Phase Change Solutions
35 NC Military Business Center
36 Summit Design and Engineering Services, PLLC



37 Advanced Energy
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Thank you for participating in the conference. If you wish to receive continuing education credits and a certificate, be sure to check in at each session attended during the conference.

Please visit our sponsors' exhibits and share your enthusiasm for this conference!

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In-Person: Individuals requiring a certificate for continuing education credits must check in at each session or plenary attended by scanning their name badge. Attendees seeking AIA, USGBC GBCI, and NC State Bar CLE credits must also sign an attendance sheet at the back of the session room.

Not all sessions offer continuing education credits. Please refer to the conference agenda to identify which sessions are approved for specific continuing education credits, including AIA members (LUs and HSWs), USGBC LEED professionals (GBCI CEs), and NC State Bar members (CLEs).

Additionally, some professionals are eligible for self-reported continuing education credits including NC Professional Engineers and Land Surveyors (NCBELS), Association of Energy Engineers (AEE), North American Board of Certified Energy Practitioners (NABCEP), Certified Public Accountants (CPA), and more. Certificates will be sent electronically 6-8 weeks after the conference. Please contact Allison Carr with questions concerning continuing education credits at the conference.

ANTITRUST LAWS STATEMENT

In compliance with the Sherman Antitrust Act, the Clayton Act, the Federal Trade Commission Act, and the Robinson-Pamn Act, while participating at any event held by North Carolina State University there shall be no discussions among participants regarding agreements or concerted actions that may restrain competition. This prohibition includes the exchange of information concerning individual prices, rates, clients, market practices, vendor relations, or any other competitive aspect of an individual company's operation. Each participant is obligated to speak up immediately for the purpose of preventing any discussion falling outside these bounds.

Keynote Speakers: April 25

8:30 a.m. **Opening General Session: Room 1**

Morning Keynote Plenary: *Pathways to Meet Corporate Demand for Clean Power*

Christopher Chung, Chief Executive Officer, The Economic Development Partnership of North Carolina, Moderator

In 2015, **Christopher Chung** joined the Economic Development Partnership of North Carolina (EDPNC) as Chief Executive Officer. Chris brings nearly 22 years of state-level economic development experience to his role.

As a public-private partnership, the EDPNC is responsible for a number of economic development functions on behalf of the State of North Carolina, including new business recruitment, existing business support, international trade and export assistance, small business start-up counseling, and tourism, sports, and film promotion. With a staff of more than 65 professionals and an annual operating budget of more than $24 million, the EDPNC is focused on improving the economic well-being and quality of life for North Carolina's $10 million residents. Since 2015, the EDPNC has helped North Carolina win more than 500 recruitment and expansion projects, resulting in 67,000 announced new jobs and $14 billion in announced new investments across the state.

Chris previously held various executive and management responsibilities at the Missouri Partnership (2007-2014) and the Ohio Department of Development, now known as Jobs Ohio (1997-2007). Chris attended The Ohio State University (OSU), graduating Phi Beta Kappa with a double-major in Japanese and economics. He also completed significant coursework towards a Master's in Public Policy and Management.

Steve Frank, Strategic Sourcing Manager, Energy, Corning Incorporated

Steve Frank is the Strategic Sourcing Manager, Energy, for Corning Incorporated. He has held several roles for large energy-intensive industrials since he began working in the energy industry in 2006. Currently, Steve holds a vital role as the person responsible for managing the energy procurement and supply chain for Corning's plants across North America. In this capacity, he has been instrumental in driving significant year-over-year savings and working capital gains by effectively leading the procurement and risk management functions in the region.

Steve is known for his ability to collaborate effectively with both internal and external parties to align on energy projects that help improve energy reliability, and integrate renewable solutions to help meet Corning's sustainability commitments. His extensive knowledge of the energy industry, coupled with his leadership skills, has enabled him to make a significant impact in moving the company forward.

Steve is also active in several state regulatory groups including serving as the Chair of CIGFUR III (Carolina Industrial Group for Fair Industrial Rates) and Co-Chair of CIGFUR II as well as the Treasurer for a group in Kentucky, (Kentucky Industrial Users Committee) KIUC. Steve received a Bachelor of Science in Management Information Systems from Youngstown State University and an MBA with a specialization in Energy Management from Waynesburg University.

Brian George, U.S. Federal Lead, Global Energy Market Development and Policy, Google

Brian George is responsible for energy regulatory and policy engagement across the federal government, including Federal Energy Regulatory Commission (FERC) and the Department of Energy. In addition, he is responsible for energy regulatory and legislative engagement across PJM and the mid-Atlantic region, where Google datacenters represent a large and growing commercial load. Brian has extensive experience in wholesale electricity market design and energy policy. Prior to Google, Brian was the Senior Director for Strategy and Government Affairs at the Electric Power Supply Association where he led policy development and federal legislative engagement for a membership consisting of over 150,000 MW of competitive power generation across the US.

Brian started his career as an economist at FERC, serving in roles across multiple offices, including the Office of Enforcement and the Office of Energy Policy and Innovation. Brian capped his service at FERC as a technical advisor to former commissioner Rob Powelson, where he advised on significant issues impacting all of the organized electricity markets.

Brianne Miller, Director, Energy and Sustainability Policy, U.S. Government Affairs, Microsoft

Brianne Miller serves as Energy and Sustainability Policy Director for Microsoft U.S. Government Affairs. Brianne joined Microsoft in 2022 after serving as Director of Federal Relations for the U.S. Department of Energy's Idaho National Laboratory (INL), the nation's laboratory for nuclear energy research and development, where she focused on policy issues related to clean energy, national security, science, and the environment. Prior to joining INL, she served on Capitol Hill for 16 years, most recently as Deputy Staff Director for Energy on the Senate Energy and Natural Resources Committee for then-Chairman Lisa Murkowski and as an energy policy advisor to Senator James E. Risch (R-ID).

Samantha Soto, Product Manager Electric Vehicle DC Charging, Siemens

Samantha Soto is a lead product manager and experienced engineer developing electric vehicle fast charging solutions at Siemens Industry out of Wendell, North Carolina. She takes pride in providing sustainable solutions for transportation and selecting a portfolio to best suit customers. As a

Raleigh resident, Samantha enjoys working with local companies and transit authorities to decarbonize the North Carolina roads. In addition to her primary job functions, she helps with the Siemens internship program and targets North Carolina schools to find local talent for professional development and is Siemens representative for the Women's Energy Network Carolinas.

Jerry Williams, Chief Environmental Officer, SAS

As Chief Environmental Officer, **Jerry Williams** helps lead the development and execution of SAS' sustainability strategy across operations worldwide. He uses SAS analytic solutions to manage the company's global operational data, report Environmental, Social and Governance (ESG) performance, identify risks and opportunities, and ensure SAS is compliant with rapidly emerging environmental regulations.

Jerry is a primary facilitator of smart campus and environmental initiatives at SAS and key contributor to ongoing resource efficiency programs. In the community, he is often asked to speak about the urgency of addressing climate change, the benefits of a clean energy economy, plug-in electric vehicle infrastructure, LEED certification, solar and other corporate sustainability initiatives to a wide range of municipal, education and legislative audiences. He actively fosters collaboration and engagement across operations through the deployment of SAS Visual Analytics reporting to front line subject matter experts.

Noon **Luncheon General Session: Room 1**

Lunch Keynote Plenary: *Squeaky Clean Energy Podcast Live: How Federal Action Has Created NC Funding Opportunities*

Matt Abele, Director of Marketing & Communications, NC Sustainable Energy Association, **Moderator**

Matt Abele helps to drive the strategies designed to enhance the brand and scope of NCSEA. This role collaborates with teams across the organization to oversee external communications efforts, media strategy, marketing tactics, and education initiatives. Additionally, Matt serves as the Host of the Squeaky Clean Energy podcast. Prior to joining NCSEA, Matt specialized in marketing and communications for environmental/cleantech organizations at the national and local levels. Matt holds a master degree in communication from North Carolina State University and a bachelor's degree in sustainable technology from Appalachian State University. Additionally, Matt holds a Certificate in Renewable Energy Management along with a NABCEP Entry Level PV Installer Certification.

Kameale Terry, CEO, ChargerHelp!

Kameale Terry, CEO of ChargerHelp, was born and raised in South Central Los Angeles. The daughter of Belizean immigrants Kameale has always had a focus on environmental sustainability and community engagement. With over a decade of experience in CleanTech, Kameale formed ChargerHelp! with her co-founder Evette Ellis to create a reliable Electric Vehicle Charging Infrastructure. The CleanTech company, powered by technology, uses data to identify and provide maintenance and repair services for electric vehicle charging stations.

Kameale worked at EV Connect where she was the Director of Programs for the electric vehicle charging station network provider. In that role, she structured and led teams to execute infrastructure projects in the United States, Australia, and Canada for both commercial and government entities. Her notable projects include Electrify America - Phase One program, the Southern California Edison Charge Ready Pilot, and the New York Power Authority portfolio.

Dr. Richard Ezike, Program Communications Specialist, Joint Office of Energy and Transportation

Dr. Richard Ezike is currently a Program Communications Specialist at the Joint Office of Energy and Transportation, where he assists with stakeholder engagement and outreach with a focus on equity, environmental justice, and workforce development around the electrification of transportation. The Joint Office of Energy and Transportation supports the deployment of zero-emission, convenient, accessible, equitable transportation infrastructure—coordinating and leveraging activities between the U.S. Department of Energy and the U.S. Department of Transportation. Prior to the Joint Office, Richard has worked for CHPlanning Ltd., the Urban Institute, the Union of Concerned Scientists, and the Congressional Black Caucus Foundation. He has advised on transportation issues for federal agencies such as the Department of Energy, Department of Transportation, and the Environmental Protection Agency; and for organizations such as the Transportation Research Board, Smart Growth America, the Greenlining Institute, Securing America's Future Energy, and the State Innovation Exchange. Dr. Ezike holds a Ph.D. in chemical engineering from the University of Michigan-Ann Arbor and a B.S. in chemical engineering from North Carolina State University.

Dr. Shelly Francis, Program Communications Specialist, Joint Office of Energy and Transportation

Dr. Shelly Francis, a former Medical School Faculty member, is a public health executive, entrepreneur and transportation disruptor. Dr. Francis is the Co-Founder and Managing Partner of EVNoire. EVNoire's work focuses on two pillars: E-Mobility Best Practices and Equity Best Practices. The EVNoire Team specializes in providing business solutions to enhance electrification strategies for Utilities, Non-Profits, Municipalities, Government Agencies, Public Health Organizations, and Regional and National organizations to expand this market share. EVNoire also engages communities on workforce development opportunities in the alternative fuel/electric vehicle economy.

The EVNoire Team provides opportunities to engage with multi-modal, clean transportation through education and outreach, expanding charging infrastructure, marketing/launches,

workplace charging, workforce development and beneficial policies. Dr. Francis and Terry Travis' vision led to the Co-Founding of the nation's largest network of diverse EV drivers and enthusiasts, EVHybridNoire, a 501c3 Nonprofit. EVHybridNoire, is a national, award winning, multicultural organization focused on increasing EV adoption and awareness in diverse communities.

EVHybridNoire is a membership based organization with thousands of members and chapters across the United States, Canada, Europe and beyond. The EVHybridNoire Team is intentional about providing resources and access to under-resourced, diverse and frontline communities, around affordable, clean and sustainable energy vehicles and platforms. Dr. Francis is recognized as a national thought leader in Best Practices, E-Mobility and Public Health Disparities. Dr. Francis serves as a Board Director for the Electric Auto Association, a National 501c3 advocacy group.

Keynote Speakers: April 26

8:30 - 10 a.m. **Opening General Session: Room 1**

Morning Keynote Plenary: *North Carolina Energy Policy in 2023: Different Perspectives on What's in Play*

Christina Cress, Partner, Bailey & Dixon, LLP- **Moderator**

Christina Cress is a partner at the Raleigh law firm of Bailey & Dixon, LLP. Her practice focuses exclusively on energy and utilities regulatory and policy matters, including representing the Carolina Industrial Group for Fair Utility Rates (CIGFUR), a group of many of Duke Energy's and Dominion Energy's largest North Carolina retail customers. Christina is one of 18 attorneys currently certified as a specialist in utilities law by the North Carolina State Bar Board of Legal Specialization. In addition, she serves as the Vice-Chair of the Utilities Law Specialty Committee. Before returning to private practice, Christina served as a Staff Attorney at the North Carolina Utilities Commission, where she spent the majority of her time advising the Commission regarding electric utility matters, including general rate cases and the implementation of clean energy programs created by the enactment of House Bill 589 in 2017.

Chris Carmody, Executive Director, Carolinas Clean Energy Business Association

Chris Carmody is the Executive Director for Carolinas Clean Energy Business Alliance, a position he has held for the past five years. In this role, Chris manages the CCEBA advocacy and legal teams and all of the policy and regulatory work in North and South Carolina. Chris previously worked for the Chambers for Innovation and Clean Energy and at the U.S. Chamber of Commerce and approaches the clean energy industry with a business lens. Chris has an undergraduate degree from Oberlin College and a Masters of Business Administration from Case Western Reserve University.

Representative Dean Arp, Chairman, Appropriations, Chairman, Energy & Public Utilities, NC House of Representatives

Representative Dean Arp has represented Union County in the N.C. General Assembly since 2013. He currently serves as a Senior Chairman of the Appropriations Committee, and Chairman of the Energy and Public Utilities Committee. He also serves as Co-Chair of the Joint Legislative Commission on Energy Policy, Co-Chair of the Joint Legislative Oversight Committee on Capital Improvements, a member of the House Select Committee on Advancing Women in STEM and several other standing and nonstanding committees. Representative Arp is a licensed professional engineer and President of Arp Engineering, which he founded 20 years ago in Monroe, NC. He is a graduate of The Citadel and holds a Master of Science degree in Civil Engineering from the University of North Carolina at Charlotte. He has been married for 34 years to his wife, Anne. They have two married children and are proud grandparents to Emma, Carleene and Thomas. Representative Arp has received the North Carolina Technology Association Public Leader Award, the Outstanding Engineer of the Year Award by the NC Society of Engineers, the North Carolina Dogwood Award, and the prestigious "North Carolina National Guard Civilian Commendation Medal".

Peter Ledford, Clean Energy Director at Office of Governor Roy Cooper

Peter Ledford serves as North Carolina Clean Energy Director for Governor Roy Cooper where he works to further the state's clean energy goals. Ledford previously served as General Counsel and Director of Policy at the North Carolina Sustainable Energy Association where he has served in various capacities since 2014. Prior to his work at NCSEA, Ledford worked in the Research Division of the North Carolina General Assembly as a staff attorney and legislative analyst. Ledford is a member of the Board of Directors for the Advanced Energy Corporation and a recipient of Energy News Network's 40 Under 40 list. Ledford graduated from the University of North Carolina with a bachelor's degree in Geography and from the Wake Forest University School of Law.

Betsy McCorkle, Partner, Kairos Government Affairs

Betsy McCorkle leads The Kairos Government Affairs team and has over a decade of lobbying success with a focus on developing and executing successful government affairs strategies for a diverse set of clients. Betsy has accepted speaking and consulting invitations from across the country to share her strategies and the outcomes of her work. Before co-founding Kairos Government Affairs, Betsy directed the government affairs

work for the North Carolina Sustainable Energy Association, a non-profit membership organization, where she gained extensive experience in leading diverse coalitions of businesses and other non-profits toward legislative goals. Betsy also has experience in workforce development, economic development, agricultural policy, and has been responsible for managing Republican political campaigns across the southeastern United States. As a military spouse, Betsy leads efforts as a Board Director for the Susan M. Tillis Foundation, which has a mission to support junior enlisted military members and their families. In 2021, Betsy was recognized as a member of the Triangle Business Journal's 40 Under 40 class. In 2022, The North Carolina Leukemia and Lymphoma Society recognized Betsy with their Outstanding Citizenship Award for her community leadership to raise over $85,000 in the fight against cancer. In 2023, Betsy received recognition from the Triangle Business Journal as a Women in Business Award winner.

Betsy received a Master Degree in Environmental Management from Duke University, and she holds a bachelor degree in environmental economics from the University of Georgia (UGA), where she graduated magna cum laude. Betsy was a 2013 Recipient of the UGA College of Agricultural and Environmental Sciences Young Alumni Achievement Award and the 2012 Recipient of the J.W. Fanning Distinguished Young Professional Award.

W. Kevin McLaughlin, Jr, Vice President of Government Affairs and External Relations, Duke Energy

Kevin McLaughlin serves as vice president of government affairs and external relations for Duke Energy in North Carolina. He leads the groups responsible for the state's government and community relations strategies. This includes managing strategic relationships with the governor's office, executive branch agencies, legislators, local officials and communities. Before joining Duke Energy in January 2020, McLaughlin served as policy director for the U.S. Government and Education practice at SAS Institute. In this role, he was the principal liaison to governors, attorneys general and legislative leadership to increase brand awareness and encourage the adoption of data-driven strategies.

Prior to joining SAS, McLaughlin was the deputy chief of staff for the governor of North Carolina. He managed all sections of the Office of the Governor and worked directly with Cabinet secretaries and agencies to develop and implement executive branch priorities. He also led legislative negotiations for bipartisan reform to both North Carolina workers and tort laws. Before serving in the governor's office, he was chief operating officer and general counsel for the N.C. Department of Administration. Prior to his public service, McLaughlin was a litigation attorney and partner in The Van Winkle Law Firm in Asheville, N.C. McLaughlin received a Bachelor of Arts in political science from the University of North Carolina at Chapel Hill and a Juris Doctor from Wake Forest University. He is a member of the North Carolina State Bar. He is an Eagle Scout and a recipient of The Order of the Long Leaf Pine Award.

9:45 - 10 a.m. **Guest Speaker: *Governor Roy Cooper***

Governor Roy Cooper, 75th Governor of North Carolina

Governor Roy Cooper is serving his second term as North Carolina's 75th Governor. The Governor is a lifelong North Carolinian, born and raised in Nash County, where he attended public schools and worked summers on the family farm before earning his degrees from the University of North Carolina at Chapel Hill. Throughout his career, Governor Cooper has worked to build a stronger North Carolina where everyone has an opportunity to live in safe communities and get a quality education, a good job and access to affordable health care. As Governor, he has helped create tens of thousands of new jobs and fought to boost public education and revitalize rural communities. He has also taken strong action to fight climate change and make North Carolina a leader in the clean energy economy, appoint the most diverse Cabinet in the state's history, make our state a more inclusive place to live and work and help families with policies like paid parental leave. He has also led the state with a steady hand throughout a series of unprecedented crises, guiding the response to historic hurricanes and the COVID-19 pandemic as North Carolina had among the lowest COVID deaths and job losses per capita. Governor Cooper is focused on ensuring that our people and communities have the tools to grow and thrive and that our state's best days are ahead.

12:00 - 1:15 p.m. **Luncheon General Session: Room 1**

Lunch Keynote Plenary: *$109 Billion Opportunity for East Coast States via Offshore Wind: Who's Going to Get It?*

Joshua Kaplowitz, Vice President, Offshore Wind, American Clean Power

Joshua Kaplowitz joined ACP in November 2021. In his capacity as Vice President, Offshore Wind, Josh leads the ACP team focused on offshore leasing and permitting, supply chain development, vessel and other maritime issues, tax policy, worker health and safety, and legislation. Prior to joining ACP, Josh served as commercial counsel to GE Renewable Energy's U.S. offshore wind business, and spent 5 years at the U.S. Department of the Interior's Office of the Solicitor as attorney-advisor to the Bureau of Ocean Energy Management's Offshore Renewable Energy Programs. Josh is also an adjunct professor at George Washington University Law School, where he co-teaches a seminar on offshore wind. Kaplowitz earned his B.A. in Political Science from Yale University and his J.D. from the University of Virginia. He lives in Arlington, Virginia with his wife Andrea and the two thirds of his children who are not yet in college. In his spare time, he enjoys playing ultimate frisbee and table tennis, hiking, doing grassroots organizing, and writing song parodies.

Agenda — Tuesday, April 25

	TRACK A: Residential Homes/Clean Transportation (Room 5)	TRACK B: Commercial and Industrial Buildings (Room 4)	TRACK C: Governmental and Institutional Buildings (Room 6)	TRACK D: Renewable Energy (Room 7)	TRACK E: Utilities and Infrastructure (Room 3)	TRACK F: Innovative Technology & Deployment (Room 8)
7:30 – 8:30 a.m.	**Registration: Lobby** **Continental Breakfast: Exhibit Hall - Room 2**					
8:30 – 10 a.m.	**Opening General Session: Room 1** **Welcome Speaker: Julie Woosley, Interim Director, State Energy Office, NC Department of Environmental Quality** **Morning Keynote Plenary: *Pathways to Meet Corporate Demand for Clean Power*** **Christopher Chung,** Chief Executive Officer, The Economic Development Partnership of NC- **Moderator** **Steve Frank**, Strategic Sourcing Manager, Energy, Corning Incorporated **Brian George**, U.S. Federal Lead, Global Energy Market Development and Policy, Google **Brianne Miller,** Director, Energy and Sustainability Policy, U.S. Government Affairs, Microsoft **Samantha Soto**, Product Manager Electric Vehicle DC Charging, Siemens **Jerry Williams**, Chief Environmental Officer, SAS					
10 – 10:30 a.m.	**Refreshment Break and Networking: Exhibit Hall - Room 2**					
10:30 a.m. – Noon	**Session A1:** Supporting Low-Income Homeowners with Energy Efficiency and Renewable Energy	**Session B1:** The Push & Pull of Change: New Opportunities for Decarbonization	**Session C1:** EO 271 & the Public Sector's Role in the Future of Zero Emission Vehicles in NC	**Session D1:** Workforce Diversification in Clean Energy	**Session E1:** Grid Investment and Cost Allocation to Accommodate More Clean Energy	**Session F1:** Beneficial Electrification – Emerging Trends and Technology
12:00 – 1:15 p.m.	**Luncheon General Session: Room 1** **Welcome Speaker: Jennifer Weiss, Co-Director, NC Clean Energy Fund** **Keynote Plenary: *Live Recording of Squeaky Clean Podcast - How Federal Action Has Created NC Funding Opportunities*** **Matt Abele,** Director of Marketing & Communication, NC Sustainable Energy Association- **Moderator** **Kameale Terry,** CEO, ChargerHelp! **Shelly Francis,** Co-Founder and Managing Partner, EVNoire **Richard Ezike,** Program Communications Specialist, Joint Office of Energy and Transportation					
1:30 – 3 p.m.	**Session A2:** Achieving kW and kWh Savings Through Innovative Technologies	**Session B2:** Grid Responsive Buildings	**Session C2:** A Bold Choice - Geothermal Central Energy Plant at Wake Tech Community College	**Session D2:** What's Next for the Carbon Plan? Programs, Implementation and Updates	**Session E2:** New Challenges to Resiliency: Bullets + Bomb Cyclones	**Session F2:** Carbon Capture: Emerging Technologies and Innovative Applications
3 – 3:30 p.m.	**Refreshment Break and Networking: Exhibit Hall - Room 2**					
3:30 – 5 p.m.	**Session A3:** Exploring Partnerships and New Methods to Increase the Impact of Weatherization	**Session B3:** Show Me the Workforce	**Session C3:** Energy Conservation Measure Potpourri	**Session D3:** Land Use and Permitting Constraints	**Session E3:** Electric Vehicles and the Grid	**Session F3:** Innovative Municipal Clean Energy Deployments
5 - 7p.m.	**Reception in Exhibit hall featuring Lynwood Brewing Concern**					

Agenda — Wednesday, April 26

	TRACK A: Residential Homes/Clean Transportation (Room 5)	TRACK B: Commercial and Industrial Buildings (Room 4)	TRACK C: Governmental and Institutional Buildings (Room 6)	TRACK D: Renewable Energy (Room 7)	TRACK E: Utilities and Infrastructure (Room 3)	TRACK F: Innovative Technology & Deployment (Room 8)
7:30 – 8:30 a.m.	**Registration:** Lobby **Continental Breakfast:** Exhibit Hall - Room 2					
8:30 – 10 a.m.	**Opening General Session:** Room 1 **Morning Keynote Plenary:** *North Carolina Energy Policy in 2023: Different Perspectives on What's in Play* Christina Cress, Partner, Bailey & Dixon, LLP- Moderator Chris Carmody, Executive Director, Carolinas Clean Energy Business Association Representative Dean Arp, Chairman, Appropriations, Chairman, Energy & Public Utilities, NC House of Representatives Peter Ledford, Clean Energy Director at Office of Governor Roy Cooper Betsy McCorkle, Partner, Kairos Government Affairs W. Kevin McLaughlin, Jr, Vice President of Government Affairs and External Relations, Duke Energy **Guest Speaker:** Governor Roy Cooper, 75th Governor of North Carolina					
10 – 10:30 a.m.	**Refreshment Break and Networking:** Exhibit Hall - Room 2					
10:30 a.m. – Noon	**Session A4:** Planning for Sustainability, Equity, and Economic Development in Transportation	**Session B4:** Energy Audits for Decarbonization	**Session C4:** Microgrid Case Studies for the Public Sector	**Session D4:** Customer Clean Energy Programs	**Session E4:** Small Modular (Nuclear) Reactors Could be Key to a Carbon-free Grid	**Session F4:** Energy Storage: What's Next?
Noon – 1:15 pm	**Luncheon General Session:** Room 1 **Welcome Speaker:** Katharine Kollins, President, Southeastern Wind Coalition **Keynote Speaker:** Joshua Kaplowitz, Vice President, Offshore Wind, American Clean Power **Keynote Topic:** *$109 Billion Opportunity for East Coast States via Offshore Wind: Who's Going to Get It?*					
1:30 – 3 p.m.	**Session A5:** Planning for Demand Charges for Electric Vehicles	**Session B5:** NC Carbon Plan: C+I Implications	**Session C5:** The Intersection of IAQ & Energy Savings: Smart Labs, Outdoor Air Management, & More	**Session D5:** Renewable Federal Funding Guidance & Distribution	**Session E5:** Decarbonizing Gas Infrastructure to Reach Net-Zero	**Session F5:** North Carolina Universities – Leading Clean Energy Innovation
3:30 p.m.	**Conference Adjourns**					

Sessions Tuesday, April 25

Track A: Residential Homes/Clean Transportation Room 5

10:30 a.m. - Noon Supporting Low-Income Homeowners with Energy Efficiency and Renewable Energy (A1)

Access to renewables and energy efficient upgrades to affordable housing has been out of reach to most low to moderate income buyers. Recent government programs have opened access and created a road map for affordable housing programs to include renewable energy, at construction. This panel will discuss a 2022 ARPA program that assisted in the installation of eight projects for Habitat for Humanity homeowners. The panel includes individuals who are involved directly with laying the groundwork for easier access to renewables for the populations who can benefit the most.

Moderator: **Lisa Manuel,** Project Manager and Program Manager of Affordable Housing, Advanced Energy (Moderator)
Melissa Malkin-Weber, Co-Director, NC Clean Energy Fund
Emily Barrett, Environment & Resilience Program Manager, Triangle J Council of Governments

1:30 - 3:00 p.m. Achieving kW and kWh Savings Through Innovative Technologies (A2)

Whether you're a homeowner, builder, developer, professional installer or program manager, there are a growing number of ways to achieve kW and kWh savings to assist with carbon reduction initiatives. Over the past few years, Advanced Energy has partnered with local professionals to conduct numerous research projects on technologies that contribute to energy reduction and also provide non-energy benefits, such as improved comfort and market differentiation. This presentation will share the results of a variety of studies to provide attendees with an updated overview on technologies that are proving to decrease energy usage and support carbon reduction efforts.

Moderator: **Juanita Ward,** Products and Services Manager, Duke Energy
Jonathan Coulter, Senior Consultant, Advanced Energy
Sue Dinnsen, Program Manager, Duke Energy
Charlie Farrell, Manager of Business Strategy, NC Electric Cooperatives
Chad Gillespie, Senior Manager, Performance Construction at Mitsubishi Electric Trane HVAC US
Casey Stone, Data Analyst, Advanced Energy

3:30 - 5 p.m. Exploring Partnerships and New Methods to Increase the Impact of Weatherization (A3)

Utilities are looking for a path to reduce energy for their customers and weatherization Assistance Providers are looking for more qualified applicants. This panel discussion will include new ideas for how to improve the results of weatherization, as well as offering new ideas and concepts for increasing the impact and reach of weatherization through innovative technologies and partnerships. Piedmont EMC and Piedmont Triad Regional Council have worked together to create a winning relationship for both organizations which carries over directly to their low to moderate income community.

Moderator: **Ernie Hodgson,** Energy Analyst, NC Dept. of Environmental Quality
Alexander Linn, CEO, Shipshape Solutions
Jodi Fargis, Member Services Representative, Piedmont EMC
Nikia Beal, Community Development Administrative Coordinator, Piedmont Triad Regional Council
Juanita Ward, Weatherization Program Manager, Duke Energy

Track B: Commercial & Industrial Buildings Room 4

10:30 a.m. - Noon The Push & Pull of Change: New Opportunities for Decarbonization (B1)

The combination of changes in the North Carolina Energy Code and aggressive decarbonization goals has many companies considering more expensive demand-reduction technologies. Recent federal legislation has made many once cost-prohibitive solutions look more attractive. This session will investigate opportunities created in recent federal legistration, as well as opportunities from utilities in North Carolina.

Moderator: **Randy Lucas,** Founding Principal, Lucas Tax + Energy
Ben Evans, Federal Legislative Director, US Green Building Council
Kim Wooten, Principal, Devita Engineering
Matt Doolin, Research and Policy Manager, Duke University
Gary Andrews, Lead Energy Efficiency Engineer, Business Markets, Duke Energy

1:30 - 3 p.m. Grid Responsive Buildings (B2)

The IEA's 2021 World Energy Outlook suggests that reaching net-zero emissions by 2050 will require significant levels of demand response. The report suggests that as much as 20 to 25% of the available resource will need to come from flexible demand. Duke Energy has similarly suggested that meeting carbon goals in North Carolina will require "Zero Emission Load Following Resources." C&I buildings have tremendous opportunities to serve as those ZELFRs. This session will describe some of the current and emerging technologies that exist for achieving these goals. This session will include a discussion about current and emerging technologies that can help to make buildings become active, flexibile resources. Topics include demand response, microgrids, and vehicle to grid applications.

Moderator: **Robert Cox, Ph.D.,** Associate Director, UNC Charlotte | Energy Production and Infrastructure Center (EPIC)
Jordan Harrison, Applications Engineer, Chint Power Systems
Dusan Brhlik, CEO, Direct Energy Partners
Casey Schurtz, Senior Product Manager, Ndustrial
Mitch Simmons, P.E., EV Charging / Energy Transition Solutions Architect, Eaton

3:30 - 5 p.m. Show Me the Workforce (B3)

Conservative estimates from the National Renewable Energy Laboratory suggest that North Carolina will need five times as many workforce in building energy efficiency by 2030. This session will explore gaps in the current workforce training needs for energy-management and energy efficiency in C&I buildings. It will also explore ways in which public-private partnerships can help to address the gaps and create a pipleline for new workers. Attendees will learn how employers and governement partners can benefit and influence workforce development efforts happening in this sector in North Carolina.

Moderator: **Greg Monty,** Ph.D., NC Agricultural and Technical State University
Mozine Lowe, Executive Director, Center for Energy Education
Wanda Ramon-McPherson, Consultant, Apprenticeship NC
Bill Lawler, Vice President and Operational Technology Strategy Leader, Wells Fargo
James Carter, Program Manager – Talent Development, City of Charlotte

Track C: Government & Institutional Buildings Room 6

10:30 a.m. - Noon EO 271 & the Public Sector's Role in the Future of Zero Emission Vehicles in NC (C1)

Learn about the Governor's vision for EVs in North Carolina, and the various government funding available for ZEVs through the Bi-Partisan Infrastructure Law, Inflation Reduction Act, & more! (NEVI, Corridor & Community Charging Grants, the VW Settlement, EV Buses & Clean Heavy Duty Vehicle Programs).

Moderator: **Heather Brutz,** Transportation Program Director, NC Clean Energy Technology Center
Heather Hildebrandt, Statewide Initiatives Group Supervisor, NC Dept. of Transportation
Zach Pierce, Sr. Advisor for Climate Change Policy, Office of Governor Roy Cooper
Brian Phillips, Environmental Program Manager, NC Division of Air Quality

1:30 - 3 p.m. A Bold Choice - Geothermal Central Energy Plant at Wake Tech Community College (C2)

This will be a case study in the performance criteria, priorities, practical limitations, energy savings and costs associated with a geothermal central energy plant, recently completed, for a new installation to serve Wake Tech's new 106-acre Eastern Wake Campus. This presentation will detail the owner's vision, objectives, reliability needs, and NetZero aspirations and includes unique combinations of exciting technologies including geothermal wells, heat recovery chillers, low temperature district heating water, chilled water, photovoltaics and even emergency power. All monitored by their new enterprise Energy Management Information System.

Moderator: **Jason Tobias,** Sr. Project Manager, Skanska USA Building
Jeff Urlaub, Principal, Salas O'Brien
John Majernik, Director of Energy, Sustainability & Transportation, Wake Tech Community College
Leann White, Executive Vice President, Salas O'Brien

Tuesday, April 25 (cont.)

3:30 - 5 p.m. Energy Conservation Measure Potpourri (C3)

Learn about innovative technologies that are driving real energy/utility savings in various vertical markets in the public sector, to include: Combined Heat & Power, Secondary Transformers, Water Control for Correctional Facilities, & Ceramic Window Film Technology.

Moderator: **Reid Conway,** Senior Energy Manager, Western Carolina University
Kyle Krow, Vice President of Sales & Business Development, Dalkia Aegis (EDF Group)
Tim Van Horn, National Account Manager, Powersmiths International
Daniel Ecoff, National Sales Manager, Intelligent Conservation Systems, Inc.
Andrew Sabados Jr., President & CEO, Cornerstone Energy Solutions

Track D: Renewable Energy Room 7

10:30 a.m. - Noon Workforce Diversification in Clean Energy (D1)

The clean energy industry is one of the fastest growing sectors in North Carolina's economy, employing nearly 104,000 individuals across the state. While the total number of clean energy employees is exciting, it's important to note that we still have a lot of work to ensure the workforce is representative of our diverse population at large. In fact, Black and African-Americans are under-represented by nearly 60% in the clean energy economy. As the industry continues to grow, we'll need to identify strategies to recruit new workers from all walks of life. Tune in to hear more about the current status of the workforce, and efforts underway to diversify the energy economy.

Moderator: **Ondrea Austin,** Program Manager, Strategic Energy Innovations
Balakrishna Gokaraju, Associate Professor, NC A&T State University
Eric Grant, Director of Learning and Development, Blue Ridge Power
Sharene Pierce, Vice President and Chief Diversity and Inclusion Officer, Duke Energy
Maria Anderson Campbell, Senior Director Talent and Development, Strata Clean Energy

1:30 - 3 p.m. What's Next for the Carbon Plan? Programs, Implementation and Updates (D2)

Join this panel conversation as we dive into the details of the carbon plan order issued by the NC Utilities Commission at the end of 2022. We'll cover what was in the order, the programs and proceedings that will stem from the order, and next steps on the path to updating the plan every two years. On the panel, you'll hear from the various stakeholders involved in the recent carbon plan proceedings, along with those responsible for implementing the order issued by the commission.

Moderator: **Taylor Jones,** Senior Regulatory Counsel, NC Sustainable Energy Association
Jack Jirak, Deputy General Counsel, Duke Energy
Christina Cress, Partner, Bailey & Dixon
Ben Smith, Counsel, Kilpatrick Townsend & Stockton
Nadia Luhr, Staff Attorney, Public Staff - North Carolina Utilities Commission
Reese Rogers, Manager, Market and Policy Innovation, Clean Energy Buyers Association

3:30 - 5 p.m. Land Use and Permitting Constraints (D3)

Recent policy and regulatory actions, along with wide-scale private investments have chartered a path towards significant renewable deployment over the coming years. In light of this momentum, energy stakeholders have elevated the need for additional transmission buildout in order to accommodate more renewable generation. In this panel, we'll cover the investment and permitting hurdles on the transmission side, while also covering the more frequent permitting and zoning challenges facing renewable projects at the local level.

Moderator: **John Burns,** General Counsel, Carolinas Clean Energy Business Association
Maggie Sasser, Vice President of Government and External Affairs, Pine Gate Renewables
Brandon Durham, Vice President of Performance Engineering, Carolina Solar Services
Liz Kalies, Lead Renewable Energy Scientist, The Nature Conservancy
Andrew Branan, Extension Assistant Professor, NC State University

Track E: Utilities & Infrastructure Room 3

10:30 a.m. - Noon Grid Investment and Cost Allocation to Accommodate More Clean Energy (E1)

Transitioning North Carolina to a clean energy based economy in the coming decades will require large amounts of new offshore wind, expanded utility- and distributed- scale solar PV and other renewable generation resources. Transmission, distribution, interconnection and control strategies will play an important part in the success of this effort. Panelists will discuss what needs to happen to accelerate infrastructure investment for North Carolina's clean energy goals.

Moderator: **Josh Brooks,** Partner, Waybright
Dmitri Moundous, Director, Energy Storage, Cypress Creek Renewables
Matt Neal, Vice President, Grid Solutions North America, Siemens Energy
Steven Shparber, Attorney, Clark Hill
Waheed Oyekanmi, Manager, Transmission & Interconnection,TotalEnergies

1:30 - 3 p.m. New Challenges to Resiliency: Bullets + Bomb Cyclones (E2)

North Carolinians aren't strangers to grid disruptions from severe storms. But as the state has experienced an increasing number of unprecedented, extreme weather impacts, grid vulnerabilities have grown more apparent. Just this past December, a bomb cyclone caused a near collapse of the electrical grid for a large part of the state as temperatures plummeted on Christmas Eve. But weather isn't the only challenge we now face. A recent gunfire attack on a substation in Moore County resulted in 45,000 customers losing power, some for over a week. And across the country, the virtual threat of cyberattacks on our electricity systems is substantial and growing. What can be done to minimize these types of events and the impacts felt by citizens and communities?

Moderator: **Tommy Williamson,** NC Utilities Commission Public Staff
Sam Holeman, Vice President, Transmission, Duke Energy
Ben Sooter, Program Manager, Cyber Security, Electric Power Research Institute
Jordan Kern, Asst. Professor, College of Natural Resources, NC State University
Travis Moran, Senior Reliability & Security Advisor, SERC

3:30 - 5 p.m. Electric Vehicles and the Grid (E3)

This session will discuss the possible impacts of increasing numbers of light-duty, medium-duty, and heavy-duty electric vehicles on the grid. Speakers will discuss ways to ensure grid stability in the face of increasing electrification of the transportation sector.

Moderator: **Daniel Real,** Portfolio Manger, Strategic Projects, Advanced Energy
Mark McIntyre, Director, Government Affairs, Energy, the Environment and Stakeholder Engagement, Duke Energy
Joseph Gadient, Innovation & Business Development Analyst, NC Electric Cooperatives
Marshall Cherry, President and CEO, Roanoke Electric Cooperative

Track F: Innovative Technology & Deployment Room 8

10:30 a.m. - Noon Beneficial Electrification – Emerging Trends and Technology (F1)

From electric vehicles to agriculture and home heating, beneficial electrification has the potential to impact multiple sectors and dramatically reduce carbon emissions. As the adoption of electrification expands, technology is needed to ensure carbon-free electrons are delivered to consumers. End users, both residential and commercial, need innovative solutions that leverage electricity and produce similar results as carbon-based fuels. This panel will address some of the current challenges and solutions associated with beneficial electrification and the role technology will play as we decarbonize point and nonpoint sources of emissions.

Moderator: **Hayes Finley,** Associate, Womble Bond Dickinson
Jim Musilek, Vice President, Innovation and Business Development, NC Electric Cooperatives
Christine Cole, Global Technical Solutions Leader, Itron
Jessica Allen, Engineer IV, Advanced Energy
Tony Olivo, Senior Vice President of Software Engineering, FlexGen

Tuesday, April 25 (cont.)

1:30 - 3 p.m. Carbon Capture: Emerging Technologies and Innovative Applications (F2)

Carbon capture has the potential to be a key factor in reaching global carbon reduction goals and those outlined in the NC Carbon Plan. There are few carbon capture technologies commercially available but a great deal of exciting research and development in progress. North Carolina companies are leading the way in creating new and innovative technologies that will remove, replace, and reuse carbon on a massive scale. This panel will provide insight and perspective from the leaders in the carbon capture market that are working to enable a cleaner future for North Carolina and beyond.

Moderator: **Chris Wedding,** Ph.D., Founder, Entrepreneurs for Impact
Clift Pompée, Managing Director of Generation Technology, Duke Energy
James Custer, Chief of Staff, 8 Rivers
Sudarshan Gupta, Commercial Lead, Susteon

3:30 - 5 p.m. Innovative Municipal Clean Energy Deployments (F3)

Local governments throughout North Carolina are committed to the clean energy transition. As a bridge between industry, state and federal governments, local communities and municipalities can accelerate progress toward the achievement of carbon reduction goals. This panel will highlight innovative projects that cities, towns and counties throughout North Carolina have implemented to reduce energy and climate impacts and enhance sustainability.

Moderator: **Zach Ambrose**, Principal, Ambrose Strategy
Danna Widmar, Assistant Town Manager, Town of Cary
Ray E. Throop, Energy Engineer, USAG Fort Bragg
Jeremiah Leroy, Sustainability Officer, Buncombe Co
Sarah Hazel, Chief Sustainability and Resiliency Officer, City of Charlotte

Wednesday, April 26

Track A: Residential Homes/Clean Transportation Room 5

10:30 a.m. - Noon Planning for Sustainability, Equity, and Economic Development in Transportation (A4)

This session will focus on transportation planning considerations to help regions and municipalities promote sustainability, equity, and economic development as goals.

Moderator: **Michelle Parker,** Sustainable Transportation Services Manager, GoTriangle
Tunya Smith, Director of the Office of Civil Rights, NC Dept. of Transportation
Alexander Yoshizumi, Executive Director, Applied Data Research Institute
Shuchi Gupta, Senior Planner, Triangle J Council of Governments

1:30 - 3 p.m. Planning for Demand Charges for Electric Vehicles (A5)

The costs of implementing electric vehicles can vary greatly depending on how fleet managers and facility managers plan for managing demand charges. This panel will discuss options for managing demand charges.

Moderator: **Lisa Poger,** Clean Transportation Specialist, NC Clean Energy Technology Center
Nikki Hensely, Innovation and Business Development Analyst, NC Electric Cooperatives
J.D. Johnson, President, Evesco
Jacob Bolin, Electric Transportation Specialist, Advanced Energy
Jonathan Byrd, Managing Director - Pricing and Strategic Solutions, Duke Energy

Track B: Commercial & Industrial Buildings Room 4

10:30 a.m. - Noon Energy Audits for Decarbonization (B4)

About 30% of large companies have decarbonization goals, and the vast majority (94%) are not on track to meet them. In order to meet US carbon goals, we need to ramp up energy retrofits from less than 1% to more than 3% per year. Energy assessments and audits are an important part of the solution, but what's the best way for end users to get started with identifying opportunities with deeper energy retrofits? This session will provide details on how assessments and audits work. It will also describe some of the special opportunities available for C&I customers in North Carolina.

Moderator: **Art Samberg,** Program Director, NC Clean Energy Technology Center
Yash Pinapati, Program Manager, Willdan
Jess Allen, Mechanical Engineer, Advanced Energy
Robert Cox, Ph.D., Associate Director, UNC Charlotte, Energy Production and Infrastructure Center (EPIC)
Dale Odom, Supervisor of Retail Energy Services, Electricities

1:30 - 3:30 p.m. NC Carbon Plan: C+I Implications (B5)

The North Carolina Carbon Plan puts the utility industry on track to meeting net zero by 2050. This will have a tremendous impact, however, on C&I commercial and industrial customers. This session will explore how utilities are planning to meet affordability mandates while also achieving carbon-reduction goals. The session will include both utility and customer perspectives.

Moderator: **Jackson Ewing,** Ph.D., Senior Fellow, Duke University
Kevin Martin, Executive Director, Carolina Utility Customers Association
Reese Rogers, Manager, Market and Policy Innovation, Clean Energy Buyers Association
David McGowan, Southeast Region Director, American Petroleum Institute
Layla Cummings, State Energy Policy Director- NC, Duke Energy
Jeff Thomas, Public Utilities Engineer, NC Public Utilities Commission Public Staff

Wednesday, April 26 (cont.)

Track C: Government & Institutional Buildings Room 6

10:30 a.m. - Noon Microgrid Case Studies for the Public Sector (C4)

Resiliency has become critical for North Carolinians and Microgrids are one option to provide increased resiliency for our state. Learn about examples of public sector Microgrids to support buildings, EV charging, and critical services, as well as the various sources of funding that have become available for Microgrids through the Bi-Partisan Infrastructure Law and the Inflation Reduction Act.

Moderator: **Bill Pfleger,** Product Development & Engineering Manager, Schneider Electric
Amanda Corrado, Government Relations Advisor, Schneider Electric
Erik Hall, Energy Services & Technology Director, NC Electric Cooperatives
Lee Ragsdale, Sr. Vice President of Energy Delivery, NC Electric Cooperatives
Michael Yambrach, Chief, Office of Sustainability & Energy, Montgomery County (MD)

1:30 - 3 p.m. The Intersection of IAQ & Energy Savings: Smart Labs, Outdoor Air Management, & More (C5)

Post-COVID, there is a renewed interest in indoor air quality. Explore opportunities to improve indoor air quality, while cutting costs in energy.

Moderator: **Kathleen Owen,** Vice Chair of TRG2.RAST Reactive Air & Surface Treatments, The American Society of Heating, Refrigerating and Air-Conditioning Engineers
Joe Gohn, Business Development Manager, Aeroseal
Tom Smith, President, 3Flow
Thomas Phoenix, Vice Chair, National Institute of Building Sciences

Track D: Renewable Energy Room 7

10:30 a.m. - Noon Customer Clean Energy Programs (D4)

Across the state, large corporations, municipalities, and educational institutions are striving to achieve ESG goals through the use of clean energy. In this session, we'll talk about some of the legacy front of the meter programs like Green Source Advantage, while covering what could potentially be coming for new customer programs in NC. On the residential side, we'll also briefly cover how DSM and community solar programs can be viable options to increase customer affordability and accessibility.

Moderator: **Ethan Blumenthal,** Regulatory Counsel, NC Sustainability Energy Association
Mike Wallace, Vice President of Origination, BrightNight Energy
Kara Gravinese, Innovation and Business Development Analyst, NC Electric Cooperatives
Leland Snook, Managing Director, Rate Design & Regulatory Solutions, Duke Energy
Ann Livingston, Policy Director, Southeast Sustainability Directors Network

1:30 - 3 p.m. Renewable Federal Funding Guidance & Distribution (D5)

Over the past year and half or so, we've seen historic amounts of federal funding invested into the clean energy sector. After months of stakeholder engagement and funding guidance development through various federal agencies, we're starting to see disbursement of funds. In this session, we'll cover the latest guidance on federal funding programs available for clean energy and recap some of the progress made with funds already distributed.

Moderator: **Laura Combs,** Senior Sales Associate, Eagle Solar & Light
Steve Levitas, Senior Vice President for Regulatory and Government Affairs, Pine Gate Renewables
Jennifer Bumgarner, Principal Deputy Assistant Secretary for Congressional and Intergovernmental Affairs, U.S. Dept. of Energy
La'Meshia Whittington, Principal, Whittington & Staley Consulting Group
Zach Pierce, Senior Advisor for Climate Change Policy, Office of Governor Roy Cooper

Track E: Utilities & Infrastructure Room 3

10:30 a.m. - Noon Small Modular (Nuclear) Reactors Could be Key to a Carbon-free Grid (E4)

Solar and wind will be the low-cost backbone of future grids. They have diurnal and seasonal intermittency. A carbon-free grid requires other clean energy sources to fill the gaps. Small modular (nuclear) reactors (SMRs) offer a promising solution. They overcome many of the hurdles faced by conventional nuclear. They also face some of the same ones, such as public antipathy to nuclear and spent fuel disposal. The panelists will discuss the attributes of SMRs and measures that could be taken to address these issues. They will also opine on policy and other means to accelerate the adoption of SMRs, to achieve a carbon-free grid in North Carolina by 2050.

Moderator: **Vik Rao,** Executive Director, Research Triangle Energy Consortium
Kati Austgen, Senior Project Manager, Nuclear Energy Institute
Jackie Siebens, Director, Policy and External Affairs, Oklo Inc.
Rob Hayes, Associate Professor of Nuclear Engineering, NC State University, Joint Faculty Appointment with SRNL

1:30 - 3 p.m. Decarbonizing Gas Infrastructure to Reach Net-Zero (E5)

North Carolina's clean energy goals will require development of hydrogen and renewable biogas.The challenge with both of these resources is the infrastructure to deliver it from the generation source to the customer. This session will discuss why these resources are needed to decarbonize our economy and what needs to be done to deploy more of these two resources.

Moderator: **Rebekah de la Mora,** Policy Analyst, NC Clean Energy Technology Center
Will James, Program Manager, Savannah River National Labs
Emmet Fortuin, Business Development Director, Monarch Energy
Ryan Childress, General Manager, New Business & Customer Solutions, Dominion Energy
Casey Collins, Director, Utility & Energy Services, Duke University

Track F: Innovative Technology and Deployment Room 8

10:30 a.m. - Noon Energy Storage: What's Next? (F4)

Battery Energy Storage Systems open the possibilities for a cleaner, more efficient, and more reliable grid. However, market-dominant lithium batteries face potential supply shortages as the demand for lithium-ion based storage increases. New and innovative storage technologies are needed to enhance the reliability of solar, wind, and other forms of renewable energy at scale. Storage technologies can help us better manage the mismatch between renewable generation and the periods of peak demand. This panel will highlight emerging energy storage technologies, which could further advance the adoption of clean energy technologies including flow batteries, hydrogen, and potential enhancements to lithium energy storage.

Ben Smith, Generation & Regulatory Strategy Director, Duke Energy Corporation
Colleen Campbell, Director of Business Development, FlexGen

1:30 - 3 p.m. North Carolina Universities – Leading Clean Energy Innovation (F4)

North Carolina is an energy innovation leader, with programs across multiple universities focused on developing solutions that enable a cleaner energy future. In many cases, collaboration across various universities and community stakeholders helps drive innovation. These collaborative efforts and multi-disciplinary teams have the capability to develop solutions while also educating students with the knowledge and skills they need to meet the workforce demands of the clean energy industry. This panel will highlight the leaders from both academia and industry who are working together to drive innovation, break down silos, and build a strong clean energy innovation ecosystem.

Moderator: **Deb Wojcik,** Executive Director, Research Triangle Cleantech Cluster
Srdjan Lukic, Ph.D., Deputy Director, FREEDM Systems Center
Pietro Cairoli, Department Manager, Power Electronics, ABB
Madhav Manjrekar, Ph.D., Assistant Director for Corporate Engagement, EPIC
Curtiss Fox, Sr. Technical Leader, Electric Power Research Institute (EPRI)
Balakrishna (Balu) Gokaraju, Ph.D.,Associate Professor, NC A&T University
Robert Cox, Ph.D., Associate Director, UNC Charlotte, Energy Production and Infrastructure Center (EPIC)

We'd like to thank the many talented professionals who provided invaluable service to our conference this year:

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Elizabeth Bowen, Asana Partners
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Heather Brutz, NC Clean Energy Technology Center
Reid Conway, Western Carolina University
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Matt Abele, NC Sustainable Energy Association
Shannon Helm, NC Clean Energy Technology Center
Steve Kalland, NC Clean Energy Technology Center
Emmit Owens, Research Triangle Cleantech Cluster
Mikayla Cardona, Research Triangle Cleantech Cluster
Graham Lewis, Schneider Electric

Continuing Education Coordinators:

Allison Carr, NC Clean Energy Technology Center
Samantha Gibson, NC Clean Energy Technology Center
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A special thank you to the team of volunteers who provided the added staff needed to keep the conference running smoothly.

Conference coordination services provided by the NC Clean Energy Technology Center and the NC State University Office of Professional Development.

2023 State Energy Conference of North Carolina

My Session Tracking Page

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	Tuesday, April 25, 2023	
☐	Keynote Plenary: ***Pathways to Meet Corporate Demand for Clean Power***	**PS1**
☐	Supporting Low-Income Homeowners with Energy Efficiency and Renewable Energy	**A1**
☐	The Push & Pull of Change: New Opportunities for Decarbonization	**B1**
☐	EO 271 & the Public Sector's Role in the Future of ZEV in North Carolina	**C1**
☐	Workforce Diversification in Clean Energy	**D1**
☐	Grid Investment and Cost Allocation to Accommodate More Clean Energy	**E1**
☐	Beneficial Electrification: Emerging Trends and Technology	**F1**
☐	Luncheon Keynote Plenary: ***Live Recording of Squeaky Clean Podcast - How Federal Action Has Created NC Funding Opportunities***	**PS2**
☐	Achieving kW and kWh Savings Through Innovative Technologies	**A2**
☐	Grid Responsive Buildings	**B2**
☐	A Bold Choice - Geothermal Central Energy Plant at Wake Tech Community College	**C2**
☐	What's Next for the Carbon Plan? Programs, Implementation, and Updates	**D2**
☐	New Challenges to Resiliency: Bullets + Bombs (Cyclones)	**E2**
☐	Carbon Capture: Emerging Technologies and Innovative Applications	**F2**
☐	Exploring Partnerships and New Methods to Increase the Impact of Weatherization	**A3**
☐	Show Me the Workforce	**B3**
☐	Energy Conservation Measure Potpourri	**C3**
☐	Land Use and Permitting Constraints	**D3**
☐	Electric Vehicles and the Grid	**E3**
☐	Innovative Municipal Clean Energy Deployments	**F3**

	Wednesday, April 26, 2023	
☐	Keynote Plenary: ***North Carolina Energy Policy in 2023: Different Perspectives on What's in Play***	**F3**
☐	Planning for Sustainability, Equity, and Economic Development in Transportation	**A4**
☐	Energy Audits for Decarbonization	**B4**
☐	Microgrid Case Studies for the Public Sector	**C4**
☐	Customer Clean Energy Programs	**D4**
☐	Small Modular (Nuclear) Reactors Could be Key to a Carbon-free Grid	**E4**
☐	Energy Storage: What's Next?	**F4**
☐	Luncheon Keynote Plenary: **$109 Billion Opportunity for East Coast States via Offshore Wind: Who's Going to Get It?**	**PS4**
☐	Planning for Demand Charges for Electric Vehicles	**A5**
☐	NC Carbon Plan: C+I Implications	**B5**
☐	The Intersection of IAQ and Energy Savings: Smart Labs, Outdoor Air Management and More	**C5**
☐	Renewable Federal Funding Guidance and Distribution	**D5**
☐	Decarbonizing Gas Infrastructure to Reach Net-Zero	**E5**
☐	North Carolina Universities: Leading Clean Energy Innovations	**F5**

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***This form can be used for multi-session, multi-day and Internet programs.**

21 NCAC 56 .1713(b)(6) Provide attendees an evaluation form as provided by the Board that is to be collected and retained for audit by the Board.

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