

2017 Clean Energy Finance Conference

November 15, 2017 8:30 a.m. – 5:00 p.m.

The Hope Valley Country Club, Durham, NC

Register here: bit.ly/17CEF

3.5 CPE Credits in NC

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Overview:

Clean Energy Finance 2017 is your go to conference for gaining timely, priority insights into how the policy, finance and market are changing with the detail you need to make well-timed decisions and connections for successful deal-making. North Carolina clean energy finance is undergoing significant and complex changes. Federal laws and regulations are being revisited for the first time in decades and North Carolina has recently revised a host of clean energy policies as well as created additional financing mechanisms. Over the next 6-24 months, regulatory rules will be established for emerging technologies to do business in North Carolina. This conference intends to explore the effect of these changes as well as provide outlook for the future of financing clean energy projects in North Carolina, which will continue to serve as a precedent for the Southeast region. **Attendees will receive 3.5 CPE credit hours in North Carolina.**

Desired Outcome:

Attendees will leave the CPE with a better understanding of:

- Short-term and medium-term market outlook for the renewable energy sector;
- Proposed changes to energy rates in North Carolina;
- Emerging energy technologies such as energy storage, biogas and electric vehicles and their deployment in North Carolina's market;
- Consumer options for financing renewables including third party leasing and community solar;
- Finance issues surrounding the competitive bidding/RFP for utility scale solar in North Carolina.

In addition, attendees will have the opportunity to network with professionals who can serve as a resource and provide future assistance with clean energy finance issues as they arise.

Terms and Conditions:

Registration is not considered complete until payment is received. Space is limited and will be assigned to complete registrations first. Registrations on-site will be accepted on a space available basis.

Registrations may be transferred. Please contact events@energync.org to complete the transfer.

CPE Credits:

CPE attendance must be confirmed within thirty (30) days of the event. Generally, your credit will show within thirty days.

Cancellations

Any cancellation must be received by November 14, 2017 for a full refund. Any cancellations after this date are non-refundable, but will receive a digital copy of the materials for their payment. Credit hours will not be offered.

Register Online - Space is limited so don't wait!

In an effort to reduce our environmental footprint
we are asking that everyone register on line at: bit.ly/17CEF

If you have any questions, concerns or need assistance with registration please email
events@energync.org or call 919-832-7601.

- 7:45 – 8:30 A.M. Coffee & Networking
- 8:30 – 8:40 A.M. Welcome & Overview of the Conference
Diane Cherry, Strategic Director, NC Sustainable Energy Association
- Goals of the Workshop
 - Agenda Overview
- 8:40 – 9:10 A.M. Keynote: Clean Energy Emerging Technology & Finance Trends
Tyler Norris, Manager, Policy & Market Development, Cypress Creek Renewables & Former Director, Clean Energy Practice, S&P Global
- This session will provide an overview of key trends in renewable energy finance. While public markets for renewable energy companies have been poor, ongoing technology cost reductions, federal tax credit extension, and state-level policies have supported renewable energy project investment. However, the 2016 election outcome, prospective tax reform, and other policy developments have introduced new market uncertainties. How has U.S. renewable energy financing evolved and what is the short- and medium-term market outlook for the sector?
- 9:10 – 9:40 A.M. The Market Outlook for North Carolina’s Future
Michael Walden, William Neal Reynolds Distinguished Professor, Agriculture & Resource Economics, NC State University
- National economic growth has accelerated in 2017 from Federal stimulus and lower taxes. With this as a backdrop, what is North Carolina’s future projected growth? What are the challenges in meeting the state’s increased population and larger economy? How does this factor into the energy market? Will emerging clean technologies see higher rates and expanded economic growth or will a recession loom in the future dampening these trends?
- 9:40 – 10:30 A.M. Utility Investments & Rate Projections
Moderated by: **Paul Quinlan**, Clean Technology Manager, Scott Madden
- Bob Hinton**, Director, Economic Research Division, NC Utilities Commission Public Staff
Kevin O’Donnell, Energy Consultant, Carolina Utility Customer Association
- Energy rates are expected to go up, making clean energy options even more affordable than they ever have been. Duke Energy Progress is proposing a 14.9% increase in its rates that would raise approximately \$477 million in new revenue. In addition, Duke Energy has announced a program called Power Forward Carolinas, a \$13 billion and 10-year project to modernize the state’s electric system against storms, outages, cyber-attacks and threats. What are the impacts of both of these initiatives on future rates and what will that mean for clean energy choices?
- 10:30 – 10:40 A.M. Break

10:40 – 11:40 A.M.

Energy Storage – The Next Disruptive Technology In the Power Sector
Moderated by: Diane Cherry

Sam Kliewer, Market Analyst, Cypress Creek Renewables
Rebecca Rogers Chilton, Renewable Energy, Live Oak Bank
Brad Ives, Executive Director, UNC Policy Collaboratory

This session will explore the energy storage market, which is expected to explode to an annual installation size of 6 gigawatts (GW) in 2017 and over 40 GW by 2022. How can NC ensure its finance and development here? Learn from industry developers, the financial community and the UNC Policy Collaboratory, which is overseeing NC's energy storage study. The session will also review NCSEA's working group discussions and early work on developing an energy storage proforma.

11:40 A.M. – 12:30 P.M.

Financing Electric Vehicle Infrastructure in North Carolina
Moderated by: Ward Lenz, Development Director, NC Sustainable Energy Association

Sheila Holman, Assistant Secretary for the Environment, NC Department of Environmental Quality
Ben Prochazka, Vice-President, Electrification Coalition
Lang Reynolds, Electric Transportation Manager, Duke Energy

EVs represent a relatively new technology that may have difficulty gaining market share in an industry dominated by an older technology, especially without expansion of charging infrastructure. This session will discuss the VW settlement funding, the utility role and other programs that facilitate improved infrastructure.

12:30 – 1:30 P.M.

Lunch & Keynote – Applying Murphy's Law to PV O&M
Dave Scoglio, Chief Financial Officer & **Mike Loeser**, Director of Operations, **Strata Solar**

1:30 – 2:30 P.M.

Biogas Market in North Carolina: Overcoming Obstacles with Project Finance?
Moderated by: Diane Cherry

Gus Simmons, Director of Bioenergy, Cavanaugh Associates
Greg Montgomery, Managing Director, Abundant Power
Kurt Olson, Environmental Attorney, The Law Office of Kurt J. Olson

North Carolina is a biogas rich state, ranking third in the country for biogas resources. Nevertheless, there have been several challenges to unlocking this clean and locally sourced energy option. This panel will discuss the challenges for biogas project financing including the development of a renewable natural gas standard, aggregation offtake challenges, feedstock concerns, risk perception, and other issues that create challenges and barriers to market entry for North Carolina biogas producers.

2:30 – 2:40 P.M.

Break

2:40 – 3:40 P.M.

Consumer Options for Financing Renewables

Moderated by: **Dylan Reed**, Director, Congressional Affairs, Advanced Energy Economy

Thad Culley, Attorney, Keyes & Fox

Lauren Bowen, Attorney, Southern Environmental Law Center

HB 589 allows several consumer options for financing renewables such as the Green Source Rider program, which allows large customers to procure renewable energy; third party leasing of solar energy facilities that offer an affordable and attractive method of meeting renewable energy goals; and community solar, whereby customers who otherwise would not have access to solar energy on their own property are able to subscribe to solar energy facilities as a way of reducing energy costs. This session will discuss each of these consumer options and how they offer choices for financing renewable energy.

3:40 – 4:40 P.M.

Utility Scale Solar RFP in an Integrated Environment

Lee Peterson, Senior Manager, Cohn Reznick

HB 589 lays out a process to move to a competitive bidding/request for proposals for the future growth of utility scale solar in North Carolina. The law lowers the state's avoided cost rate, but kept the 20-year length for power purchase agreements under PURPA. The law also opened access to solar developers for lower-cost financing and set a solar deployment target of 6,800 MW by 2020. Rulemaking is just beginning under this new law but what are the finance issues likely to be as we get started?

4:40 – 5:00 P.M.

Conference Adjournment

Ivan Urlaub, Executive Director, NC Sustainable Energy Association

5:00 – 7:00 P.M

Reception

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Speaker Biographies

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Lauren Bowen is an attorney with the Southern Environmental Law Center, a non-profit environmental organization dedicated to the protection of natural resources, communities, and special places in a six-state region of the Southeast. SELC partners with over 150 national and local groups to achieve its goals and works in all three branches of government. Lauren's practice focuses on promoting clean, renewable solar power. She attended the University of North Carolina School of Law and is based in Chapel Hill, North Carolina.



Diane Cherry is the Strategic Director of the NC Sustainable Energy Association. In this role, she works collaboratively with NCSEA's stakeholders to develop deployment strategies for a variety of clean energy sectors. Diane serves as the facilitator and convener of NCSEA's working groups and sector convenings and oversees public policy issues related to these discussions. Diane also communicates NCSEA's policy positions to stakeholders throughout the state and Southeast. Diane is an adjunct faculty member at NC State University where she teaches in the Master in Public Administration program. She holds an undergraduate degree in Economics from the University of Virginia and a Masters Degree in Public Policy from the John F. Kennedy School at Harvard University.



Tyson Grinstead is the Director for Public Policy at Sunrun, the largest dedicated rooftop solar company in America. Tyson joined Sunrun in 2015 and covers policy for the 12 southeastern states. Tyson joined Sunrun after serving as Political Director for U.S. Senator Lindsey Graham, the South Carolina Republican Party's Victory 2014 campaign, and for Congressman Tom Rice's 2012 primary election campaign. Tyson is a graduate of the University of South Carolina School of Law, and he received his undergraduate degree from the University of North Carolina at Chapel Hill.



Bob Hinton is the Director of Economic Research for the NC Utilities Commission, Public Staff. In this role, Bob largely works in two areas - finance and economic planning for regulated utilities. Financial issues are dominated by the appropriate rate of return set in utility rates and economic issues are dominated by the integrated resource planning and setting avoided cost rates that solar generators and other Qualified Facilities are entitled to receive. Bob earned a bachelor's degree in economics from the University of North Carolina at Wilmington and a Master's Degree in Economics from NC State University.



Sheila Holman is the Assistant Secretary for the Environment at the NC Department of Environmental Quality. In this role, Sheila oversees development of major policy initiatives for programs in surface waters; issuance of air emissions permits; implementation of grant programs for wastewater and permitting of coastal development; and regulation of animal operations. Prior to her current role, Sheila served as the director for the NC Division of Air Quality and also worked for the U.S. Environmental Protection Agency as an environmental engineer. Sheila earned a bachelor's degree in chemical engineering from NC State University.



Brad Ives is the Associate Vice Chancellor for Campus Enterprises and Chief Sustainability Office at UNC-Chapel Hill. Brad is also the Director for the UNC Policy Collaboratory, created by the N.C. General Assembly to come up with energy and environmental solutions for governments. He most recently served as Assistant Secretary for Natural Resources with the N.C. Department of Environment and Natural Resources (NCDENR), where he managed 2,000 employees in five divisions, including the State Parks and the N.C. Zoo. Prior to joining NCDENR, Brad was with Semprius Inc., a North Carolina-based manufacturer of advanced solar panels, and served as CEO of Integro Earth Fuels Inc.



Sam Kliewer is a Policy Manager for Cypress Creek Renewables based out of Asheville, NC. Cypress Creek Renewables is a leading utility scale solar and solar + storage developer. Sam's primary responsibilities include energy storage market development and PURPA implantation in addition to supporting Policy and Government Affairs efforts in the eastern United States. Sam has a degree in Management from Virginia Tech and a Master's in Business Administration from NC State University.



Ward Lenz is the Director of Development at the NC Sustainable Energy Association. Ward manages relationships and programs that serve membership, develop staff abilities, support new technology markets, and increase business opportunities. Ward also serves as an integrator of internal operations and programming to ensure smooth business processes. Ward has a degree in Journalism & Mass Communication from Drake University. He has also participated in the Executive Development Program at the University of North Carolina and completed Executive Education at the National Renewable Energy Laboratory.



Mike Loeser is the Director of Operations at Strata Solar. In this position, Mike is responsible for network operations, business operations and asset management groups within the company. Prior to his current position, he worked in other positions at Strata Solar including as an asset management analyst and a manager within that unit. Throughout his tenure, Mike has built a third-party O&M brand trusted by utilities, institutional investors, and private asset owners alike. Mike has an undergraduate degree in finance and venture management from Emory University.



Greg Montgomery is the Managing Director of CleanSource Capital Charlotte, NC. CleanSource manages the SAVES energy efficiency financing programs and structures specialized funding for energy efficiency and clean energy projects and companies. Prior to joining Abundant Power as a Managing Partner, Greg was the Founder and Managing Director of MCF Advisors in Charlotte, NC, an investment banking firm providing mergers and acquisitions advice and capital formation strategies to privately-held middle market businesses. Greg has a JD and MBA. He received a JD/MBA from Tulane University and a bachelor's degree in Environmental Sciences from the University of Virginia.



Tyler Norris served in the Obama administration as a presidential appointee from 2012-2015, where he was an advisor to the U.S. Secretary of Energy. As a Special Advisor at the Department of Energy he advanced President Obama's agenda for clean energy innovation and finance. Following the administration, Tyler was a Director at S&P Global Platts where he co-led its clean energy practice. In this capacity, he conducted analysis of renewable energy markets, developed market forecasts, and provided advisory services to Fortune 500 companies. Tyler is a Stanford graduate and Truman Scholar. He is currently an independent consultant based in Raleigh.



Kevin O'Donnell is the President and Founder of Nova Energy Consultants, a consulting firm that offers services in wholesale power supply, retail rate design and expert witness litigation support. Kevin has over twenty-five years of experience working in the electric, gas, and water and sewer industries and has appeared as an expert witness or assisted in the settlement process in over 60 utility regulatory cases. He has a B.S. in Civil Engineering - Construction Option from NC State University as well as a MBA in Finance from Florida State University.



Kurt Olson has practiced law for over 33 years, the first 15 years in Washington D.C., and thereafter in Raleigh, North Carolina. His practice has focused on environmental and renewable energy. Shortly after the passage of North Carolina's REPS law, Kurt worked with the NC Sustainable Energy Association on the implementation of this new program and represented NCSEA before the NC Utilities Commission. Kurt has represented the NC Pork Council's efforts to assure compliance with the swine waste-to-energy requirements and in the development of a standard for renewable natural gas derived from swine waste.



Lee Peterson is a licensed attorney in the state of Georgia and a Senior Tax Manager for CohnReznick's National Renewable Energy Practice and National Tax Departments. Lee has been a critical tax advisor in over 10 billion dollars of renewable energy projects within the U.S. and its' territories, involving wind, solar, biomass, landfill gas, fuel cells and other technologies. His clients include the U.S. Department of Energy, Fortune 100 companies, state and local governments, tax exempt organizations and renewable energy project developers and manufacturers. Lee has a bachelor's degree in Liberal Arts from the University of Minnesota and a law degree from William Mitchell College of Law.



Ben Prochazka is the Vice-President of the Electrification Coalition, a non-profit organization of business leaders committed to promoting policies that facilitate the deployment of electric vehicles. Ben has spent more than a decade working on environmental, human rights, and voter engagements efforts. His experience includes leadership roles as the Campaign Director for the Save Darfur Coalition, the Legislative Director for the Colorado Environmental Coalition, the Colorado State Director for the New Voters Project numerous public interest campaign efforts.



Paul Quinlan has served as the Clean Technology Manager at Scott Madden the past five years. Prior to his current position, Paul was the Managing Director at the NC Sustainable Energy Association. He received his Master's in Environmental Management (MEM) and Master's in Public Policy (MPP) from Duke University and a bachelor's degree in Environmental Science from the University of Notre Dame.



Lang Reynolds is the Manager of Electric Transportation for Duke Energy, with responsibility for developing and implementing transportation electrification throughout all six of Duke Energy's service territory states. Lang has worked across several groups within Duke Energy on commercial solar project finance, national accounts marketing, battery energy storage, and utility-scale solar development. Prior to Duke Energy, Lang worked in finance for Morgan Stanley. He is a graduate of the University of Colorado and Swarthmore College.



Rebecca Rogers Chilton is works in the Renewable Energy team at Live Oak Bank, where she has developed a team that deployed more than \$200 million in renewable energy financing in its first year. Prior to joining the bank, Rebecca was Assistant General Counsel and a Commercial Loan Officer at Self-Help Credit Union, where she started the renewable energy lending practice from scratch, and a structured finance Associate at Moore & Van Allen. Rebecca is a graduate of Wellesley College and the University of North Carolina at Chapel Hill School of Law.



Dave Scoglio is the Chief Financial Officer of Strata Solar. He has been with the company for five years. Prior to Strata, he served as CFO of Asure Software, Inc. where he oversaw Finance, Accounting, Business Operations and Human Resources. Before that, he held a variety of positions at Fidelity Investments from 1998 to 2009. Dave has a undergraduate degree in Finance from Bentley University and a Master's Degree in Finance from Boston College.



Gus Simmons is the Director of Bioenergy at Cavanaugh Associates. Gus joined Cavanaugh in 2001 as Agricultural Services Director, serving as Project Manager for the firm's efforts to assist North Carolina with projects to evaluate innovative approaches to managing agricultural wastes. He has also led the development of innovative organic waste treatment solutions for the municipal, industrial, and agricultural sectors. Gus graduated from NC State University with a degree in Biological & Agricultural Engineering.



J.R. Tolbert is Vice-President, State Policy for Advanced Energy Economy (AEE). In this role, J.R. oversees AEE's policy development and campaigns at the state-level and coordinates policy with 14 of AEE's state partner groups. J.R. has worked on energy policy for more than a decade for a variety of non-profit organizations. Prior to joining AEE, J.R. served as the Executive Director of the National Caucus of Environmental Legislators. J.R. graduated from Auburn University with a bachelor's degree in Political Science.



Ivan Urlaub is NCSEA's Executive Director. Under his leadership, NCSEA generates collaborative and innovative approaches to solving member and partner challenges in policy, business model, and market development. Ivan is the founder of the NC Clean Energy Business Alliance, serves on the Three Zeros Advisory Board at UNC-Chapel Hill, is an original lab team member of RMI's national Electricity Innovations Laboratory (e-Lab), and has been recognized most recently by the Charlotte Business Journal as a 2015 Energy Leader for North Carolina. He holds both a Master of Public Policy and a Master of Environmental Management from Duke University.



Michael Walden is a William Neal Reynolds Distinguished Professor and Extension Economist at NC State University and a member of the Graduate Economics faculty with The Poole College of Management. His Ph.D. degree is from Cornell University and he has been at N.C. State since 1978. Mike has teaching, research, and extension responsibilities at NC State University in the areas of consumer economics, economic outlook, and public policy. He can be frequently seen, heard, and read in the media. Mike just authored a new book, *North Carolina Beyond the Connected Age: The Tar Heel State in 2050*.