

No. _____

UTILITIES COMMISSION

NORTH CAROLINA COURT OF APPEALS

STATE OF NORTH CAROLINA EX)
REL. UTILITIES COMMISSION;)
PUBLIC STAFF – NORTH CAROLINA)
UTILITIES COMMISSION; DUKE)
ENERGY CAROLINAS, LLC; DUKE)
ENERGY PROGRESS, LLC; SOUTHERN)
ALLIANCE FOR CLEAN ENERGY)

Appellees,

v.

NORTH CAROLINA SUSTAINABLE)
ENERGY ASSOCIATION)

From the North Carolina
Utilities Commission
Docket No. E-100, Sub 113

Appellant.

RECORD ON APPEAL

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**STATEMENT OF ORGANIZATION OF THE
NORTH CAROLINA UTILITIES COMMISSION**

Appellant North Carolina Sustainable Energy Association (“NCSEA”) appeals from the 6 June 2016 Order on NCSEA’s Request issued by the North Carolina Utilities Commission.

NCSEA timely filed and served its written Notice of Appeal and Exceptions on 6 July 2016.

The record on appeal was filed in the North Carolina Court of Appeals on 9 September 2016 and was docketed on _____, 2016.

STATEMENT OF JURISDICTION

This action was commenced by the filing of NCSEA's Requests for Declaratory Ruling and, If Necessary and Appropriate, a Rulemaking on 1 June 2015 with the North Carolina Utilities Commission.

The parties to this appeal acknowledge that the North Carolina Utilities Commission had personal and subject-matter jurisdiction pursuant to Chapter 62 of the North Carolina General Statutes.

This appeal is taken from a final order of the Utilities Commission, and appeal of right therefore lies to this Court pursuant to N.C.G.S. § 7A-29(a).

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-100, SUB 113

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of	)	ORDER INITIATING
Rulemaking Proceeding to Implement	)	RULEMAKING PROCEEDING
Session Law 2007-397)	

BY THE CHAIRMAN: Session Law 2007-397 (Senate Bill 3) was signed into law on August 20, 2007. This comprehensive energy legislation, among other things, (1) establishes a Renewable Energy and Energy Efficiency Portfolio Standard (REPS) for North Carolina, G.S. 62-133.7; (2) provides for cost recovery of demand-side management and energy efficiency expenditures, G.S. 62-133.8; (3) amends the fuel charge adjustment and certification statutes, G.S. 62-133.2 and 62-110.1; (4) provides for Commission review of the construction of out-of-state electric generating facilities, G.S. 62-110.6; (5) provides for Commission review and cost recovery for project development costs associated with potential nuclear generating facilities, G.S. 62-110.7; and (6) alters the statutory rules governing the inclusion of construction work in progress associated with base load electric generating facilities in a public utility's rate base, G.S. 62-133.

As most of the above changes become effective January 1, 2008, the Chairman finds good cause to initiate this rulemaking proceeding to adopt new rules and modify existing rules, as appropriate, to implement Session Law 2007-397. Because the relevant sections are so interrelated, the Commission, except as provided below, is initiating this single rulemaking proceeding to implement Session Law 2007-397 on a comprehensive basis. Although some details may be left to future proceedings, it is the Commission's intent to adopt final rules to implement Session Law 2007-397 by the end of this year. Thus, although the Commission is aware that there are a number of other pending proceedings involving many of the parties who will be interested in this proceeding, the Commission is establishing an expedited schedule in order to have rules in place by January 1, 2008.

To begin this rulemaking process, the Chairman invites interested persons to petition to intervene and file proposed rules, rule revisions, or any other comments or suggestions to assist the Commission in drafting proposed rules to implement Session Law 2007-397. The Commission requests that the Public Staff prepare proposed rules or rule revisions to implement Section 4 of Session Law 2007-397, G.S. 62-133.8. After considering the parties' initial filings and the proposed rules or rule revisions to be submitted by the Public Staff, the Commission will prepare proposed rules or rule revisions to implement the sections of Session Law 2007-397 within its jurisdiction. Parties will be permitted to file comments and reply comments addressing these proposed rules or rule revisions.

While not intending to limit the parties' initial filings in this proceeding in any way, the Chairman has set forth in Appendix A a number of issues about which the Commission is specifically interested in receiving comments or suggestions. The Commission will issue separate orders in the near future regarding the net metering and interconnection rulemaking provisions of Session Law 2007-397 and the analysis required by Section 4.(c).

IT IS, THEREFORE, ORDERED as follows:

1. That Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc.; Duke Power Company LLC d/b/a Duke Energy Carolinas, LLC; Virginia Electric and Power Company d/b/a Dominion North Carolina Power; North Carolina Electric Membership Corporation; and ElectricCities of North Carolina, Inc., are hereby made parties of record in this proceeding;

2. That other parties desiring to become formal participants and parties of record in this proceeding shall file petitions to intervene in accordance with the applicable Commission rules on or before Friday, September 21, 2007;

3. That parties may file initial comments, suggestions, or proposed rules or rule revisions as provided herein on or before Friday, September 21, 2007;

4. That the Public Staff, after considering the parties' initial filings, shall prepare and file proposed rules or rule revisions implementing Section 4 of Session Law 2007-397 on or before Wednesday, October 10, 2007;

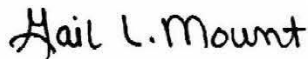
5. That the Commission, after considering the parties' initial filings and the proposed rules or rule revisions filed by the Public Staff, shall issue an order setting forth proposed rules or rule revisions as provided herein implementing those sections of Session Law 2007-397 within its jurisdiction and establishing a further schedule for the filing of comments and reply comments; and

6. That the Chief Clerk shall mail a copy of this Order to all parties of record in Docket No. E-100, Sub 109.

ISSUED BY ORDER OF THE COMMISSION.

This the 23rd day of August, 2007.

NORTH CAROLINA UTILITIES COMMISSION



Gail L. Mount, Deputy Clerk

Ah082307.01

DOCKET NO. E-100, SUB 113
Rulemaking Proceeding to Implement Session Law 2007-397

Specific Issues About Which The Commission Is Seeking Comment

1. Should the Commission convene a generic proceeding each year to consider compliance with the REPS requirement, or is a periodic reporting requirement sufficient to allow the Commission to monitor and report on compliance as required by G.S. 62-133.7(i)(1)?
2. Should the rate recovery mechanisms affecting public utilities be coordinated to provide for a single annual change in rates for each utility? If so, how should this coordination be accomplished?
3. How should the Commission interpret "per account" in considering REPS compliance and in determining the annual assessment of charges under G.S. 62-133.7(h)? Must the Commission approve a uniform charge "per account," or may the charge vary according to usage?
4. What procedures should be adopted regarding potential future requests to modify or delay implementation of the REPS requirements, G.S. 62-133.7(i)(2)?
5. What procedures should be imposed upon electric power suppliers or others to ensure that energy credited toward REPS compliance not be credited toward any other purpose, including another renewable energy portfolio standard or voluntary renewable energy purchase program in this State or any other state, G.S. 62-133.7(i)(3)?
6. What procedures should be imposed upon electric power suppliers or others to ensure that the owner and operator of each renewable energy facility that delivers electric power to an electric power supplier is in substantial compliance with all federal and state laws, regulations, and rules for the protection of the environment and conservation of natural resources, G.S. 62-133.7(i)(5)?
7. What procedures, if any, should the Commission adopt to track and account for renewable energy certificates (RECs), G.S. 62-133.7(i)(7)?
8. Should the Commission allow aggregators or brokers to resell RECs? If so, what rules should apply to these entities?
9. Since a renewable energy facility interconnected on the customer's side of the electric power supplier's meter may earn RECs, how should the output of these facilities be determined? Should the Commission allow entities other than electric power suppliers to meter these facilities? If so, what rules should apply to these entities?
10. Since renewable energy facilities include both solar thermal energy facilities and combined heat and power (CHP) systems earning RECs, G.S. 62-133.7(a)(7), how should the non-electric output of these facilities be determined? Should the

Commission allow entities other than electric power suppliers to meter these facilities? If so, what rules should apply to these entities?

11. How should the Commission determine the value of RECs for CHP systems and solar thermal energy facilities? What information is required, and what is the appropriate conversion factor?
12. What procedures should the Commission adopt to determine if an electric power supplier is in compliance with the solar energy resources REPS provision, G.S. 62-133.7(d), if a new solar electric facility or a new metered solar thermal energy facility fails to meet the terms of its contract with the electric power supplier?
13. How should the Commission evaluate cost-effectiveness for demand-side management and energy efficiency options for purposes of G.S. 62-133.8(c)? Should the Commission adopt new procedures for the approval of such programs, or are current Commission rules sufficient and appropriate to comply with G.S. 62-133.8(c)?
14. What procedures should the Commission adopt to measure and verify avoided costs and capacity and energy savings achieved by demand-side management or energy efficiency measures, G.S. 62-133.8(d)? Specifically, what reporting requirements, if any, should the Commission adopt to monitor demand-side management and energy efficiency measures for purposes of ratemaking, cost-recovery, and REPS compliance?
15. How should the Commission determine the appropriate assignment of costs and benefits of new demand-side management and energy efficiency measures, G.S. 62-133.8(e)?
16. What procedures should the Commission adopt to comply with G.S. 62-133.8(e), (f), and (g), including, but not limited to, procedures and standards addressing how the Commission should evaluate notifications of nonparticipation by industrial customers. Specifically, with regard to the provisions in subsection (f), how should the Commission apply them to commercial customers who establish the threshold level of significant annual usage, and what should that threshold level be?
17. What filing requirements and procedures should be required for generators exempt from certification pursuant to amended G.S. 62-110.1(g)? Should these generators be required to file the same information as those required to file for certification? Should the Commission issue a certificate of exemption? Should the Chief Clerk assign each generator a separate docket? Should the same filing requirements and procedures apply to generators exempt due to their size as those exempt due to self-generation?
18. To what extent are revisions required to the following Commission rules: Rules R1-37, R1-38, R8-52, R8-55, R8-60, R8-61, and R8-63? What other Commission rules, if any, should be revised?

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH, NC
DOCKET E-100, SUB 113

FILED

SEP 20 2007

Clerk's Office
N.C. Utilities Commission

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of	)	MOTION TO INTERVENE AND
Rulemaking Proceeding to Implement	)	COMMENT BY NORTH CAROLINA
Session Law 2007-397	)	SUSTAINABLE ENERGY
	)	ASSOCIATION

NOW COMES the North Carolina Sustainable Energy Association ("NCSEA") through its undersigned attorney with a motion to allow it to intervene and respectfully submit the following comments pursuant to the North Carolina Utilities Commission's ("Commission") ORDER INITIATING RULEMAKING PROCEEDING issued in this docket on September 17, 2007. NCSEA's comments will address the "Specific Issues About Which the Commission Is Seeking Comment" and compliance. In support of the motion is the following:

1. NCSEA is a not-for-profit corporation under North Carolina law, with individual members and member businesses across the state. Its purpose is to ensure a sustainable future by promoting renewable energy and energy efficiency in North Carolina through education, public policy and economic development. Its address is North Carolina Sustainable Energy Association, Post Office Box 6465, Raleigh, North Carolina 27628.

2. The attorney for NCSEA to whom all correspondence should be addressed is Matthew M. Schofield, Attorney for North Carolina Sustainable Energy Association, P.O. Box 2072, Manteo, N.C. 27954, 919 475 6487, mmscho@yahoo.com. In addition, all correspondence should be sent to Rosalie Day, Policy Director, North Carolina Sustainable Energy Association, Post Office Box 6465, Raleigh, North Carolina 27628, rosalie@energync.org.

3. NCSEA has intervened and submitted comments in past dockets concerning utility planning, energy efficiency, demand side management and renewable energy. NCSEA's intervention will bring the point-of-view of energy efficiency, renewable energy and overall sustainable energy concerns to the proceeding.

THEREFORE, NCSEA prays that it be allowed to intervene in this matter and that the Commission allow it to submit comments and suggestions for consideration in drafting proposed rules and rule revisions to implement the Renewable Energy and Energy Efficiency Portfolio Standard (REPS) and other aspects of Session Law 2007-397 identified by the NCUC in initial Order for the above-captioned proceeding.

Background

In August of this year, North Carolina became the first southeastern U.S. state legislature to pass a renewable energy standard into law (Session Law 2007-397). The mandate was signed by Governor Easley and the North Carolina Utilities Commission quickly initiated a single rulemaking proceeding for the comprehensive REPS mandate on an expedited schedule. The Docket sets forth a list of eighteen items, "Specific Issues About Which The Commission Is Seeking Comment."

Comments and Recommendations

NCSEA asks the Commission to strongly consider that the process framework put forth by the Commission in its August 23, 2007 Order initiating rulemaking is premature. The early request for draft rules indicates the Commission believes no further discussion and exploratory research are necessary on the eighteen issues identified, and that such discussion of these issues could not lead to realization of additional, significant issues paramount to achieving the Standard. In fact, the politics of the policy process that shaped Session Law 2007-397 are not an adequate substitute for needed dialogue on the issues identified by the Commission and the additional critical issues that will arise out of such dialogue. Third party, facilitated discussion can efficiently bring all stakeholders to the crux of rulemaking issues necessary to formulate rules which will enable fair and effective participation in, and compliance with, the standard.

With carefully written regulations which address both incentives and barriers, North Carolina can lead the way in the Southeast in accomplishing the implementation of thousands of megawatts of commercially viable renewable generation projects and measurable energy efficiency programs, thereby achieving the REPS mandate.

NCSEA's analysis shows the Standard is achievable within the cost caps placed in the legislation. However, in this expedited rulemaking process there is neither time for the stakeholders to identify, assess and comment on the issues, nor time for the Public Staff to analyze, evaluate and draft the proposed rules to ensure a framework and regulatory environment that leads to success. The regulations which implement the REPS are the single most important determinant of success.

Providing a stable regulatory environment with appropriate and transparent regulations is essential to accomplishing the mandated Standards for the 2011 retail sales and into the future. For renewable energy generation development, an uncertain regulatory environment is an insurmountable barrier. Yet, of the eighteen "Specific Issues" for comment, #1 "Should the Commission convene a generic proceeding each year to consider compliance with the REPS requirement,..." and #4 "What procedures should be adopted regarding potential future requests to modify or delay implementation of the REPS requirements,..." express regulatory uncertainty. The "offramp provision" in the law is a sufficient measure to address a modification of the law. The NCSEA does not foresee a necessary significant modification – if we engage in the appropriate process integrity for drafting of the REPS rules.

A well-conceived and illuminated set of rules must apply for the long term to allow investment in both renewable technology generation and energy efficiency programs to achieve the Standard. Therefore, the NCSEA recommends to the Commission to put the investment in at the beginning and establish a working group process to thoroughly examine the appropriate issues and draft proposed rules accordingly. A short-term working group process will address the bulk of the remainder of the Specific Issues for which the Commission is seeking comment.

Last week NCSEA convened a meeting of members and expert contacts to review the eighteen "Specific Issues" and identify a set of Key Topics which the working groups need to address. The issues could be defined under a rubric of three categories as follows:

1. RECS Accounting, Tracking, Transferring and Retiring Working Group

This working group would address Specific Issues 5, 7, 8, 11 and 12, and should rely on the working group process to determine the exact specifications of Renewable Energy Certificates and the system of tracking them. For example, what are best practices for the information required as attributes of combined heat and power (CHP) and solar thermal generated Certificates? These can be found in other states' and regional transmission organizations' market rules for renewable energy. Model rules would be identified and evaluated for adoption, or modified and adopted, in the working group's drafting of proposed rules.

However, at a minimum, NCSEA strongly urges the NCUC to adopt an account tracking system that provides verification for both assuring compliance and conferring value for the trade of Renewable Energy Certificates (Certificates) across state lines. This system would build infrastructure enabling a robust market at the initiation of the program (and in the event there is a national renewable energy portfolio standard). **Every state that has a renewable energy portfolio standard mandate has an associated software-based tracking system.** The NC REPS will be set up to fail if the Commission does not Order the adoption of such a comparable system. Information about these tracking systems can be found for Midwest Renewable Energy Tracking System (M-RETS) at www.mrets.net; Texas RECS at www.texasrenewables.com; and Western Renewable Energy Information System at www.wregis.org.

The Certificate account tracking system for the NC Renewable Energy and Energy Efficiency Portfolio Standard should have the following functionality:

- A confidential registration entry point for account holders;
- A mechanism that labels a unique serial number to a 1-megawatt Certificate of renewable energy generated or energy equivalent saved through an energy efficiency measure;
- Market participant accounts for the accumulation of certificates;

- A transfer mechanism that enables bilateral contract transactions to track shifts of Certificates from one account to another;
- A publicly viewed screen where the price per Certification is displayed anonymously for each transaction;
- A retirement mechanism for retail load compliance;
- A retirement mechanism for other stakeholders; and
- A screen where the retired certificates in the retail load specific accounts can be publicly viewed.

The certificates associated with renewable energy generation should have attributes that make them verifiable and confer value across state lines. These attributes should include unique serial numbers, month and year, facility location, facility owner, fuel type, and generation technology.

Legislative discussions on Session Law 2007-397 indicate that electric service providers will be expected by the Commission to make a good faith effort to incrementally increase the percent share of retail sales coming from eligible resources under the Standard on roughly a 1% of total retail sales per annum rate, with the opportunity to bank excess RECs in any given year. It is NCSEA's understanding that a tradable REC system as illustrated here will address the concerns of all electric service providers regarding the potential scarcity of RECs in the early years.

The Energy Efficiency working group should specify the attributes of the certificates generated by energy efficiency.

2. Metering and Measurement Working Group

This working group would address Specific Issues 9, 10 and 11 and should specify the metering issues and measurement of the resource on the customer side of the meter. Again, model rules can be identified and evaluated during the working group process.

3. Energy Efficiency and Measurement Working Group

This working group would address Specific Issues 13, 14 and 15, and should establish clear energy efficiency measurement and verification requirements as well as procedures for any energy efficiency measure for which an electric service provider is expected to seek or is seeking cost recovery.

Specific Issue #6 determining compliance of renewable energy facilities with other Federal, State and local regulations is not NCUC jurisdictional. The Environmental Management Commission, Department of Environment and Natural Resources and relevant county departments have within their mandates and capabilities to permit, monitor, and exact penalties for noncompliance on these facilities.

Compliance

Furthermore, the appropriate rules and regulations must be supported by an onerous consequence for non-compliance. The absence of such a penalty – while acceptable for clear reasons to electric service providers – can have the affect of retarding the investment market environment for new renewable energy facilities. Prior to the passage of Session Law 2007-397, North Carolina was rated as one of the top five states favorable to investment in centralized power plant generation assets. This status was only enhanced by Session Law 2007-397, without sufficient consideration for the needs of renewable energy generators and investors in new renewable energy generation. Accordingly, we recommend the Commission exercise its authority to create a penalty mechanism for REPS non-compliance.

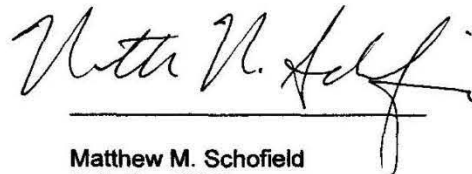
As an incentive for compliance, the NCSEA recommends that a non-compliant energy service provider be compelled to purchase verifiable Renewable Energy Credits (RECS) from a renewable generation source on the Eastern Interconnect in the amount of the gap between actual and required with cost recovery and an extra fifty percent (50%) without cost recovery.

Other Issues Identified and Not Identified by the NCUC

The Commission should wait for clarification of issues, concerns and potential consensus from the three working groups, and the creation of a clear penalty mechanism as recommended above, before addressing the Commission identified issues #2, #3, #4, #17 and #18.

The eighteen specific issues put forth by the NCUC should not be treated as the entire universe of pertinent questions or issues to this proceeding. The workgroup process will raise additional, equally important questions, through dialogue among interveners which will need to be addressed prior to the drafting of rules.

Respectfully submitted, this the 20th day of September, 2007.



Matthew M. Schofield
P.O. Box 2072
Manteo, NC 27954

FILED

SEP 21 2007

Clerk's Office
N.C. Utilities Commission


100

Full distribution is

adoption of rules implementing Session Law 2007-397 that promote energy efficiency and renewable energy while protecting the environment.

WHEREFORE, SACE prays that it be allowed to intervene in this matter.

Respectfully submitted this 24th day of September, 2007.


Marily Nixon, NC Bar No. 33724
Gudrun Thompson, NC Bar No. 28829

Southern Environmental Law Center
200 W. Franklin Street, Suite 330
Chapel Hill, NC 27516
Telephone: (919) 967-1450
Fax: (919) 929-9421

Attorneys for SACE

DOCKET NO. E-100, SUB 113

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of	)	ORDER RULING ON PETITIONS
Rulemaking Proceeding to Implement	)	TO INTERVENE AND GRANTING
Session Law 2007-397	)	MOTIONS FOR LIMITED
	)	ADMISSION TO PRACTICE

BY THE CHAIRMAN: On September 20, 2007, Appalachian Energy, LLC, the North Carolina Sustainable Energy Association (NCSEA), Public Service Company of North Carolina (PSNC), the North Carolina Waste Awareness and Reduction Network, Inc. (NC WARN), and William H. Lee filed petitions to intervene in the above-captioned docket.

On September 21, 2007, EnergyUnited Electric Membership Corporation (EnergyUnited), Domtar Paper Company, LLC (Domtar), North Carolina Farm Bureau Federation, Inc. (NCFB), Southern Environmental Law Center (SELC), Environmental Defense, Southern Alliance for Clean Energy (SACE), Southern Energy Management (SEM), North Carolina Department of Environment and Natural Resources Division of Water Resources (DWR), CPV Renewable Energy Company, LLC (CPV), Acciona Energy North America Corporation (AENAC), and North Carolina Wildlife Resources Commission also filed petitions to intervene.

On September 24, 2007, a petition to intervene was filed on behalf of Sun Edison LLC (SunEdison) and Solar Alliance. Also on September 24, 2007, Christopher R. Cook filed a Motion for Limited Admission to Practice on behalf of SunEdison and Solar Alliance.

On October 2, 2007, Nucor Steel-Hartford filed a Motion for Limited Admission to Practice on behalf of Damon E. Xenopoulos and Michael K. Lavanga of the law firm of Brickfield, Burchette, Ritts, & Stone, P.C. in Washington, D.C.

The Chairman finds good cause to allow the petitions to intervene filed by Appalachian Energy, NCSEA, PSNC, NC WARN, William H. Lee, Domtar, NCFB, SELC, Environmental Defense, SACE, SEM, DWR, CPV, AENAC, North Carolina Wildlife Resources Commission, SunEdison, and Solar Alliance. The Chairman further finds good cause to grant the motions for limited admission to practice before the Commission filed by Christopher R. Cook, Damon E. Xenopoulos, and Michael K. Lavanga. Finally, the Chairman finds good cause to deny the petition to intervene filed by EnergyUnited for failure to comply with the Commission's Rules and Regulations.

IT IS, THEREFORE, ORDERED as follows:

1. That the petitions to intervene filed by Appalachian Energy, NCSEA, PSNC, NC WARN, William H. Lee, Domtar, NCFB, SELC, Environmental Defense, SACE, SEM, DWR, CPV, AENAC, North Carolina Wildlife Resources Commission, SunEdison, and Solar Alliance be, and the same hereby are, granted.

2. That the motions for limited admission to practice before the Commission filed by Christopher R. Cook, Damon E. Xenopoulos, and Michael K. Lavanga be, and the same hereby are, granted.

3. That the petition to intervene filed by EnergyUnited be, and the same hereby is, denied.

4. That the names and addresses of the attorneys for the parties are as follows:

Appalachian Energy:

Jeffrey J. Owen
McGuire, Woods & Bissette, P.A.
Post Office Box 3180
Asheville, North Carolina 28802

NCSEA:

Matthew M. Schofield
Attorney at Law
Post Office Box 2072
Manteo, North Carolina 27954

PSNC:

Mary Lynne Grigg
Womble Carlyle Sandridge & Rice, PLLC
Post Office Box 831
Raleigh, North Carolina 27602

NC WARN:

John D. Runkle
Attorney at Law
Post Office Box 3793
Chapel Hill, North Carolina 27515

Domtar:

Ralph McDonald
Bailey & Dixon, L.L.P.
Post Office Box 1351
Raleigh, North Carolina 27602

NCFB:

H. Julian Philpott, Jr.
Secretary and General Counsel
North Carolina Farm Bureau Federation, Inc.
Post Office Box 27766
Raleigh, North Carolina 27611

SELC, Environmental Defense, and SACE:

Marilyn Nixon
Gudrun Thompson
Southern Environmental Law Center
200 West Franklin Street, Suite 330
Chapel Hill, North Carolina 27516

SEM:

James M. O'Connell
Attorney at Law
410 North Boylan Avenue
Raleigh, North Carolina 27603

DWR:

John Morris, Director
Division of Water Resources
North Carolina Department of Environment and Natural Resources
1611 Mail Service Center
Raleigh, North Carolina 27699

and

Marc Bernstein
Special Deputy Attorney General
North Carolina Department of Justice
Post Office Box 629
Raleigh, North Carolina 27602-0629

CPV and AENAC:

M. Gray Styers, Jr.
Stephon J. Bowens
Blanchard, Miller, Lewis & Styers, P.A.
1117 Hillsborough Street
Raleigh, North Carolina 27603

North Carolina Wildlife Resources Commission:

C. Norman Young, Jr.
Assistant Attorney General
North Carolina Department of Justice
9001 Mail Service Center
Raleigh, North Carolina 27699-9001

SunEdison and Solar Alliance:

Christopher R. Cook
Sun Edison LLC
12500 Baltimore Avenue
Beltsville, Maryland 20705

and

John D. Runkle
Attorney at Law
Post Office Box 3793
Chapel Hill, North Carolina 27515

5. That the name and address of Mr. Lee is as follows:

William H. Lee
Post Office Box 1459
Asheboro, North Carolina 27204

ISSUED BY ORDER OF THE COMMISSION.

This the 9th day of October, 2007.

NORTH CAROLINA UTILITIES COMMISSION

Gail L. Mount

Gail L. Mount, Deputy Clerk

FILED
JUN 01 2015

Clerk's Office
N.C. Utilities Commission

)
) **REQUESTS FOR DECLARATORY**
) **RULING ON MEANING OF**
) **N.C.G.S. § 62-133.9 AND NCUC**
) **RULE R8-67 AND, IF NECESS-**
) **ARY AND APPROPRIATE, A**
) **RULEMAKING TO CLARIFY**
) **NCUC RULE R8-67**
)

It is inconsistent with the clear and unambiguous language of N.C. Gen. Stat. §§ 62-133.8 and 62-133.9 to recognize *only* the heat recovery component of a new topping cycle CHP system as an “energy efficiency measure.”

Finally, in the event one or both of the foregoing declaratory rulings are issued, NCSEA respectfully requests the Commission to initiate a rulemaking, if necessary and appropriate, to make clarifying changes to Commission Rule R8-67.

In support of the foregoing requests, NCSEA shows the Commission as follows:

CONTACT INFORMATION

1. The address for NCSEA is:

NC Sustainable Energy Association
4800 Six Forks Road, Suite 300
Raleigh, NC 27609
2. NCSEA is represented in this proceeding by:

Michael D. Youth
Counsel
NC Sustainable Energy Association
4800 Six Forks Road, Suite 300
Raleigh, NC 27609
michael@energync.org

JURISDICTION

3. The North Carolina Declaratory Judgment Act, N.C. Gen. Stat. § 1-253, empowers courts of record to declare rights, status, and other legal relations, whether or not further relief is or could be claimed. Such declarations shall have the force and effect of a final judgment or decree. Pursuant to N.C. Gen. Stat. § 62-60, the Commission may exercise this power under the Declaratory Judgment Act with respect to all subjects over which the Commission has jurisdiction.

4. N.C. Gen. Stat. § 62-31 vests the Commission with “full power and authority to administer and enforce the provisions of [Chapter 62], and to make and enforce reasonable and necessary rules and regulations to that end.”

FACTS - PART I

Combined Heat and Power – General Background

5. The State and Local Energy Efficiency Action Network (“SEEAAction”) is a state and local effort facilitated by the federal government that is designed to help states, utilities, and other local stakeholders take energy efficiency to scale and achieve all cost-effective energy efficiency by 2020. In March 2013, SEEAAction published a *Guide to the Successful Implementation of State Combined Heat and Power Policies* (“SEEAAction Guide”).¹ The first chapter of the SEEAAction Guide contains a general, non-statutory definition of combined heat and power (“CHP”) as well as a general overview of CHP’s market potential. These portions of the first chapter of the SEEAAction Guide are excerpted here to provide necessary context for the statutory interpretation question being presented to the Commission for resolution:²

The average generation efficiency of grid-supplied power in the United States has remained at 34% since the 1960s—the energy lost in wasted heat-from-power generation in the United States is greater than the total energy use of Japan. **CHP systems typically achieve total system efficiencies of 60%–80% compared to only about 45%–50% for conventional separate heat and power generation** by avoiding line losses and capturing much of the heat energy normally wasted in power generation to provide heating and cooling to factories and businesses. By efficiently providing electricity and thermal energy from the same fuel source at the point of use, CHP significantly reduces the total primary fuel needed to supply energy services to a business or industrial plant, saving them money and reducing air emissions.

¹ The official citation is as follows: State and Local Energy Efficiency Network. 2013. *Guide to the Successful Implementation of State Combined Heat and Power Policies*. Prepared by B. Hedman, A. Hampson, J. Rackley, E. Wong, ICF International; L. Schwartz and D. Lamont, Regulatory Assistance Project; T. Woolf, Synapse Energy Economics; J. Selecky, Brubaker & Associates. The SEEAAction Guide is accessible electronically at <https://www4.eere.energy.gov/seeaction/publication/guide-successful-implementation-state-combined-heat-and-power-policies> (accessed on 9 April 2015).

² For the Commission’s review, the first chapter of the SEEAAction Guide is attached hereto in its entirety as **Exhibit A**.

...

CHP is already an important resource for the United States—the existing 82 GW of CHP capacity at more than 4,100 industrial and commercial facilities represents approximately 8% of current U.S. generating capacity and more than 12% of total megawatt-hours (MWh) generated annually. Compared to the average fossil-based electricity generation, the existing base of CHP saves 1.8 quads of energy annually and eliminates 240 million metric tons of CO₂ emissions each year (equivalent to the emissions of more than 40 million cars).

While investment in CHP declined in the early 2000s due to changes in the wholesale market for electricity and increasingly volatile natural gas prices, CHP's potential role as a clean energy source for the future is much greater than recent market trends would indicate. Efficient on-site CHP represents a largely untapped resource that exists in a variety of energy-intensive industries and businesses . . . [(see Figure 1 below)]. Recent estimates indicate the technical potential for additional CHP at existing industrial facilities is slightly less than 65 GW, with the corresponding technical potential for CHP at commercial and institutional facilities at slightly more than 65 GW, for a total of about 130 GW. A 2009 study by McKinsey and Company estimated that 50 GW of CHP in industrial and large commercial/institutional applications could be deployable at reasonable returns with then current equipment and energy prices. These estimates of both technical and economic potential are likely greater today given the improving outlook in natural gas supply and prices.

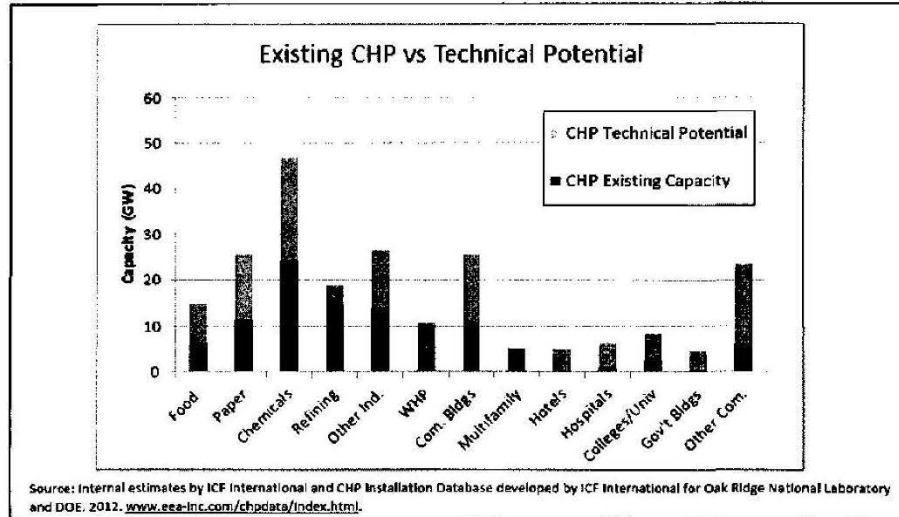
The outlook for increased use of CHP is improving. Policymakers at the federal and state level are beginning to recognize the potential benefits of CHP and the role it could play in providing clean, reliable, cost-effective energy services to industry and businesses. A number of states have developed innovative approaches to increase the deployment of CHP to the benefit of users as well as ratepayers. CHP is being looked at as a productive investment by some companies facing significant costs to upgrade old coal- and oil-fired boilers. In addition, CHP can provide a cost-effective source of new generating capacity in many areas confronting retirement of older power plants. Finally, the economics of CHP are improving as a result of the changing outlook in the long-term supply and price of North American natural gas—a preferred fuel for many CHP applications.

Key to capturing this potential is the market structure for CHP at the state level. **Markets with unnecessary barriers to the development of CHP will see less than the economically and environmentally desirable development of the resource, resulting potentially in higher cost**

resources or resources with greater environmental impacts incorporated into the nation's electricity system.

SEEACTION Guide, pp. 3-5 (emphasis added) (footnotes omitted).

Figure 1



Combined Heat and Power – Topping Cycle and Bottoming Cycle

6. In addition to the already-excerpted general, non-statutory definition of CHP and the general overview of CHP's market potential, the SEEACTION Guide provides working definitions of "topping cycle CHP" and "bottoming cycle CHP." *Understanding topping cycle CHP and bottoming cycle CHP is critical to resolution of the statutory interpretation question at issue.* The SEEACTION Guide provides the following working definitions:

There are two types of CHP—topping and bottoming cycle. In a **topping cycle CHP system** [(see Figure 2 below)], fuel is first used in a prime mover such as a gas turbine or reciprocating engine, generating electricity or mechanical power. Energy normally lost in the prime mover's hot exhaust or cooling systems is recovered to provide process heat, hot water,

or space heating/cooling for the site. Optimally efficient topping CHP systems are typically designed and sized to meet a facility's baseload thermal demand. In a **bottoming cycle CHP system** [(see Figure 3 below)], also referred to as waste heat to power, fuel is first used to provide thermal input to a furnace or other high temperature industrial process, and a portion of the heat rejected from the process is then recovered and used for power production, typically in a waste heat boiler/steam turbine system. Waste heat to power systems are a particularly beneficial form of CHP in that they utilize heat that would otherwise be wasted from an existing thermal process to produce electricity without directly consuming additional fuel.

SEEAAction Guide, p. 3 (emphasis added) (footnotes omitted).

As becomes more evident upon review of the figures below, system configuration is a key distinction between topping cycle CHP and bottoming cycle CHP. Specifically, the heat recovery component's "location" within a CHP system distinguishes a topping cycle CHP system from a bottoming cycle CHP system. In a topping cycle CHP system, the heat recovery component is located "behind" the prime mover component in order to process the prime mover component's waste heat; in contrast, in a bottoming cycle CHP system, the heat recovery component is located "in front of" the prime mover component to process waste heat for use in the prime mover component itself.

Figure 2³

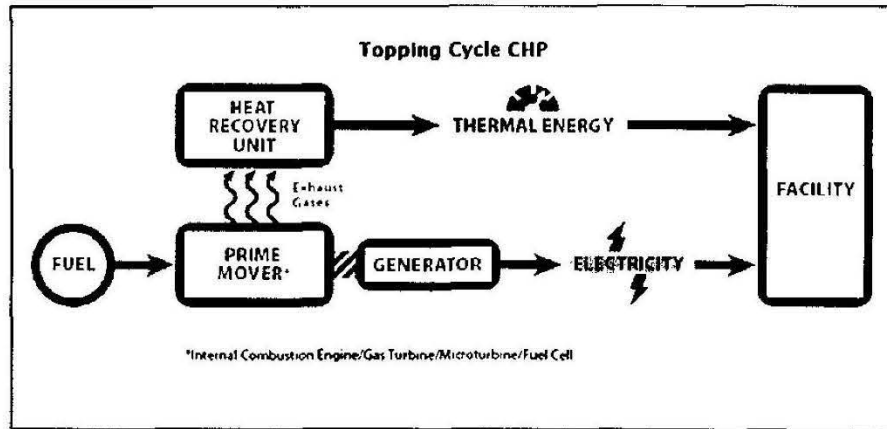
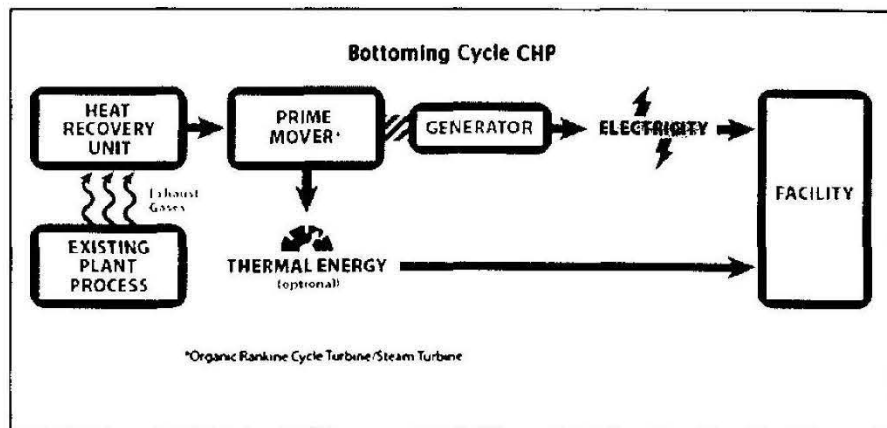


Figure 3³



³ Figures 2 and 3 were prepared by the Center for Sustainable Energy and are accessible electronically at <http://energycenter.org/self-generation-incentive-program/business/technologies/chp> (accessed on 9 April 2015).

*Topping Cycle CHP in North Carolina –
Installed and Potential*

7. As of 7 August 2013, there were 66 CHP systems installed in North Carolina, totaling 1,540 MW of electric generation nameplate capacity. Of the 66 installed CHP systems, 62 were topping cycle CHP systems and only 4 were bottoming cycle CHP systems. *Pre-filed Testimony of Isaac Panzarella on Behalf of NCSEA and EDF*, p. 5, Commission Docket No. E-7, Sub 1032 (7 August 2013).⁴ In other words, the overwhelming majority of installed CHP systems in North Carolina are topping cycle CHP systems.

8. As of 7 August 2013, there was approximately 6,428 MW of new topping cycle CHP technical potential in North Carolina, of which roughly 4,667 MW resided in the industrial sector and 1,761 MW resided in the commercial sector. *Id.* at p. 6 (based on research conducted by the U.S. Department of Energy's Southeast Clean Energy Application Center and ICF International). "Technical potential is defined by ICF [International] as the total electric generating capacity potential from existing and new facilities that are likely to have the appropriate physical electric and thermal load characteristics that would support a CHP system." *Id.*

9. There is no reason to believe the technical potential of new topping cycle CHP systems in North Carolina has diminished significantly since 7 August 2013.

⁴ Isaac Panzarella's pre-filed testimony was stipulated into the record in the E-7, Sub 1032 proceeding. A complete copy of Mr. Panzarella's 14-page pre-filed testimony is attached hereto as **Exhibit B**. Mr. Panzarella's testimony in the 2013 proceeding is relevant to this proceeding because it highlights the parties' differing statutory interpretations and presaged the need for this proceeding. Mr. Panzarella's pre-filed testimony is also accessible via the internet at <http://starw1.ncuc.net/NCUC/ViewFile.aspx?Id=6e50df84-5c22-4618-a5ac-f95f67ef77d7> (accessed on 12 April 2015).

*CHP as an Energy Efficiency
Measure under State Law*

10. As part of what has become known as “Senate Bill 3,” the General Assembly enacted N.C. Gen. Stat. § 62-133.9 in 2007. *See* N.C. Sess. Law 2007-397, § 4(a). N.C. Gen. Stat. § 62-133.9(b) provides that “[e]ach electric power supplier shall implement . . . **energy efficiency measures** . . . [as part of an effort] to establish the least cost mix of demand reduction and generation measures that meet the electricity needs of its customers.” (Emphasis added).

11. For purposes of N.C. Gen. Stat. § 62-133.9, “energy efficiency measure” means, in relevant part,

an equipment, physical, or program change implemented after January 1, 2007, that results in less energy used to perform the same function.
“Energy efficiency measure” includes, but is not limited to, energy produced from a combined heat and power system that uses nonrenewable energy resources.

N.C. Gen. Stat. § 62-133.8(a)(4) (emphasis added). The phrase “combined heat and power system,” as used in the foregoing statutory definition, is itself statutorily defined to mean

a **system that uses waste heat to produce electricity or useful, measurable thermal or mechanical energy at a retail electric customer’s facility.**

N.C. Gen. Stat. § 62-133.8(a)(1) (emphasis added).

FACTS - PART II

Duke Energy Carolinas, LLC's Nonresidential Smart Saver Program's "Component Approach" to Topping Cycle CHP Systems

12. Several years ago, in accordance with Senate Bill 3's directive that electric power suppliers implement cost-effective energy efficiency measures as part of a least cost portfolio, Duke Energy Carolinas, LLC ("DEC") proposed and secured Commission authorization to offer a Nonresidential Smart Saver Energy Efficient Products and Assessment Program ("Smart Saver Program"). In 2013, the Commission issued an order in Commission Docket No. E-7, Sub 1032 that revised the Smart Saver Program. *Order Approving DSM/EE Programs and Stipulation of Settlement*, p. 32, Commission Docket No. E-7, Sub 1032 (29 October 2013).

13. The revised Smart Saver Program leaf, a copy of which is attached hereto as **Exhibit C**,⁵ provides, in relevant part, that the program is intended to encourage the installation of new high efficiency equipment in new and existing nonresidential establishments and, to this end, the program will provide incentive payments to offset a portion of the higher cost of new energy efficient equipment, including custom incentives for custom projects.

14. Of importance to this proceeding, the revised Smart Saver Program leaf includes a paragraph related to custom CHP systems that appears to reflect DEC's current understanding of the extent of "energy efficiency measure" as that term is used in N.C. Gen. Stat. § 62-133.9.

⁵ The revised Smart Saver Program leaf is also accessible electronically at Duke Energy's website at <https://wwwqa.duke-energy.com/pdfs/NCEENonResSS.pdf> (accessed 9 April 2015).

15. Specifically, the revised Smart Saver Program leaf contains the following language that appears to reflect a DEC understanding that only the heat waste recovery components of new topping cycle CHP systems qualify as “energy efficiency measures” under the statute:

Electric generation, from either non-renewable or renewable sources, is not considered an energy efficiency measure and therefore does not qualify for payments; however, bottoming-cycle Combined Heat and Power (“CHP”) systems or the waste heat recovery components of topping-cycle CHP may be eligible for payments.

Exhibit C, p. 2.

***NCSEA’s Decision to Submit the
Question to the Commission***

16. Pursuant to recent Commission orders, NCSEA, DEC, the Public Staff, and several other stakeholders have met to discuss CHP. *See, e.g., Order Approving DSM/EE Rider and Requiring Filing of Proposed Customer Notice*, p. 35, Commission Docket No. E-7, Sub 1050 (29 October 2014) (ordering “[t]hat discussion of CHP at the Collaborative shall continue, and that the Collaborative shall consider whether a stakeholder meeting dedicated solely to discussing CHP in North Carolina as proposed by witness Panzarella is merited and should be scheduled prior to DEC filing its next DSM/EE rider application.”).

17. During said discussions, it has become apparent that NCSEA, DEC, and the Public Staff differ in their current understandings of “energy efficiency measure” as the phrase applies to new topping cycle CHP systems.

18. Given the current differing understandings, NCSEA believes it is appropriate at this time to present the statutory interpretation question to the Commission for resolution.

19. Neither DEC nor the Public Staff objects to NCSEA's presentation of the question to the Commission for resolution.

20. Furthermore, while DEC's, NCSEA's, and the Public Staff's current understandings differ, DEC has indicated that, in the event the Commission clarifies that new topping cycle CHP systems qualify as "energy efficiency measures," DEC will – after participating in any necessary and appropriate rulemaking to establish eligibility standards (see below at ¶¶ 37-38) – perform the necessary analytics to determine if it is cost effective and appropriate and, if so, will seek to modify the language of its Smart Saver Program leaf to include new topping cycle CHP systems.

ARGUMENT

21. The present dispute involves a question of statutory interpretation, focusing on the meaning of “energy efficiency measure” in the context of N.C. Gen. Stat. § 62-133.9, particularly as it relates to new topping cycle CHP systems and the extent of their eligibility for participation in an incentive program.

22. As already stated, for purposes of N.C. Gen. Stat. § 62-133.9, “energy efficiency measure” means, in relevant part,

an equipment, physical, or program change implemented after January 1, 2007, that results in less energy used to perform the same function. **“Energy efficiency measure” includes, but is not limited to, energy produced from a combined heat and power system that uses nonrenewable energy resources.**

N.C. Gen. Stat. § 62-133.8(a)(4) (emphasis added).⁶ The phrase “combined heat and power system,” as used in the foregoing statutory definition, is itself statutorily defined to mean

a **system** that uses waste heat to produce electricity or useful, measurable thermal or mechanical energy at a retail electric customer’s facility.

N.C. Gen. Stat. § 62-133.8(a)(1) (emphasis added).

*A “System Approach” is Appropriate, and a
“Component Approach” is Inappropriate*

23. The two statutory definitions cited in ¶ 22, read together, yield the following composite definition: “Energy efficiency measure” includes, but is not limited to, energy produced from a system, including a system that uses nonrenewable energy resources, that uses waste heat to produce electricity or useful, measurable thermal or mechanical energy at a retail electric customer’s facility.

⁶ Per N.C. Gen. Stat. § 62-133.9(a), the definitions set out in N.C. Gen. Stat. § 62-133.8 apply to N.C. Gen. Stat. § 62-133.9.

24. The definitions, regardless of whether they are read separately or together, clearly and unambiguously focus on a CHP “system” and not on individual components within a CHP system. Similarly, neither definition draws a distinction between bottoming cycle CHP and topping cycle CHP or otherwise distinguishes between systems based on system configuration.

25. Put another way, the statutes clearly and unambiguously state that “energy produced from a combined heat and power *system* that uses nonrenewable energy resources” is an energy efficiency measure.

26. Put yet another way, the relevant statutes do *not* state that energy produced from *only the waste heat recovery component* of a combined heat and power system that uses nonrenewable energy resources is an energy efficiency measure. Nor do the relevant statutes state that a waste heat recovery component, standing alone and apart from a prime mover and a generator, shall constitute an entire CHP system. Instead, the relevant statutes refer to a “system,” clearly meaning all the components of the system, including not only the waste heat recovery component but also the prime mover and generator components.⁷ Under the clear and unambiguous statutes, all that is required for a new CHP “system” – comprised of the waste heat recovery component *and* the prime mover and generator components – to qualify as an energy efficiency measure is that the

⁷ The Internal Revenue Code and North Carolina’s Revenue Act appear to have adopted the “system” approach being advocated for by NCSEA. Thus, for example, in construing the term “combined heat and power system property” for purposes of federal and State tax credits, both taxing authorities consider “system” property to include all of the components of the system except for the input and output property. *See* 26 U.S.C. § 48(c)(3)(C)(iii) (“Input and output property not included. The term ‘combined heat and power system property’ does not include property used to transport the energy source to the facility or to distribute energy produced by the facility.”); *see also* N.C. Gen. Stat. § 105-129.15(7)b. (incorporating the federal definition by reference).

components, working together and regardless of configuration, “use[] waste heat to produce electricity **or** useful, measurable **thermal or** mechanical energy at a retail electric customer’s facility” and that the new CHP system results in less energy being used to perform the same function. (Emphasis added).

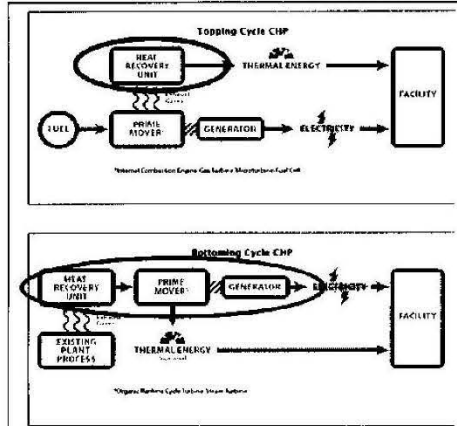
***The Statutory Language is Clear
and Unambiguous and Should
Control***

27. As North Carolina appellate courts have opined, “The general rule in statutory construction is that a statute must be construed as written.” *In re Town of Smithfield*, 749 S.E.2d 293, 296 (N.C. Ct. App. 2013). Furthermore, “Where the language of a statute is clear and unambiguous, there is no room for judicial construction and the courts must give it its plain and definite meaning, and are without power to interpolate, or superimpose, provisions and limitations not contained therein.” *Id.*

28. If the Smart Saver Program leaf sets out DEC’s current understanding of what constitutes an energy efficiency measure under N.C. Gen. Stat. § 62-133.9 (as asserted above in ¶¶ 14-15), then NCSEA disagrees with DEC’s (and possibly the Public Staff’s) current understanding because such an understanding does not appear to be giving full weight to the relevant statutes’ use of the word “system.” Instead of taking a “system” approach, DEC’s apparent understanding takes a “component” approach in interpreting the statutory definitions, leading DEC to construe the statutes to permit (a) DEC’s disaggregation of new topping cycle CHP systems into their component parts and then (b) DEC’s exclusion of the new topping cycle CHP system’s prime mover and generator components from coverage under the definition.

29. The extent to which DEC's apparent interpretation conflicts with the clear and unambiguous statutory language is best illustrated by returning to Figures 2 and 3 set out above. Building on Figures 2 and 3, Figure 4 below illustrates DEC's apparent understanding of the statutory language, including the exclusion of the prime mover and generator components from coverage when they serve as part of a topping cycle CHP system (but not when they serve as part of a bottoming cycle CHP system). There is no statutory basis for drawing such a distinction or for so narrowly and counter-intuitively interpreting what constitutes a "system" in the topping cycle CHP context but not in the bottoming cycle CHP context. Figure 5 below illustrates NCSEA's understanding.

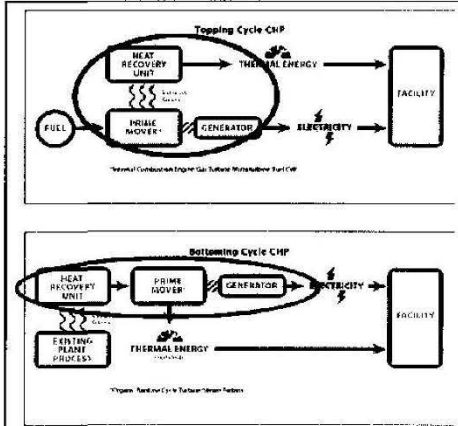
Figure 4



DEC's Apparent Understanding

The red circles in Figure 4 circumscribe the "systems" that DEC apparently asserts qualify as energy efficiency measures. The red circles illustrate that DEC is taking a "component approach" rather than the "system approach" clearly called for by the statutory language. DEC's approach yields an unreasonable result: Despite an absence of any statutory distinction between topping cycle CHP and bottoming cycle CHP systems and despite the fact that topping cycle CHP systems can significantly enhance energy efficiency, DEC's apparent interpretation disqualifies a CHP system's prime mover and generator components as part of the CHP system when they are located "in front of" the heat recovery unit.

Figure 5



NCSEA's Understanding

The red circles in Figure 5 circumscribe the systems, including all their component parts, NCSEA asserts qualify as energy efficiency measures. The red circles illustrate that NCSEA is supporting the "system" approach clearly called for by the statutory language. NCSEA's approach yields a reasonable result: the statutory language expressly states that an "energy efficiency measure" includes "energy produced from a combined heat and power system that uses nonrenewable energy resources." NCSEA's interpretation of what constitutes a topping cycle CHP system is the only interpretation that can yield a "system" that uses nonrenewable energy resources (note the fuel feeds directly into the circumscribed system). Under DEC's apparent interpretation, there would never be a qualifying CHP "system" that uses nonrenewable energy resources; there would only be non-qualifying components – prime movers in topping cycle CHP systems – that use nonrenewable energy resources.

30. The General Assembly's decision to take a "system" approach (and its concomitant decision not to take a "component" approach) is particularly reasonable in light of the fact that *a CHP system, regardless of whether it is topping cycle or bottoming cycle, achieves efficiencies of 60-80% through the concurrent operation of the heat recovery, prime mover, and generator components*, resulting in less energy being used to perform the same function as compared to conventional separate heat and power generation, which achieves efficiencies of only around 45-50%.

31. Based on communications made during NCSEA's, DEC's, and the Public Staff's recent collaborative CHP discussions, NCSEA understands that DEC's (and possibly the Public Staff's) current understanding(s) may be the result of a strict reading of a three-word phrase in the Commission's definition of "energy efficiency measure" in Commission Rule R8-67(a)(3).

32. Subsequent to enactment of the definitional language quoted above in ¶ 22, the Commission promulgated Commission Rule R8-67,⁸ which contains the following administrative definition of "energy efficiency measure," in relevant part:

"Energy efficiency measure" . . . includes energy produced from a combined heat and power system that uses nonrenewable resources **to the extent** the system:

- (i) Uses waste heat to produce electricity or useful, measurable thermal or mechanical energy at a retail electric customer's facility; and
- (ii) Results in less energy used to perform the same function or provide the same level of service at a retail electric customer's facility.

Commission Rule R8-67(a)(3) (emphasis added).

⁸ N.C. Gen. Stat. § 62-133.9(h) provides that the "Commission shall adopt rules to implement this section."

33. DEC (and possibly the Public Staff) may be interpreting the “to the extent” phrase included in the Commission’s definition to require an electric utility to recognize only the heat recovery component of a new topping cycle CHP system as an “energy efficiency measure” eligible for participation in an incentive program.

34. NCSEA believes the “to the extent” phrase included in the Commission’s definition was merely intended to introduce the Commission’s restatement of the two legislative prerequisites for a new CHP system to qualify as an energy efficiency measure: (1) the new system, somewhere in its configuration, must make use of waste heat to produce electricity or useful, measureable thermal or mechanical energy and (2) an otherwise qualifying new CHP system must actually result in less energy being used to perform the same function or provide the same level of service at the customer’s facility. Accordingly, NCSEA believes the “to the extent” phrase in the Commission’s definition was intended to be read as “so long as.”

35. In the event the Commission intended the “to the extent” phrase to limit an electric utility’s ability to recognize more than the heat recovery component of a new topping cycle CHP system as an “energy efficiency measure,” NCSEA believes the Commission exceeded its delegated authority by effectively re-writing a clear and unambiguous statute to include a limitation that does not exist in the statute. *See, e.g., State ex rel. Commissioner of Ins. v. Integon Life Ins. Co.*, 28 N.C. App. 7, 11, 220 S.E.2d 409, 412 (1975) (“An administrative agency has no power to promulgate rules and regulations which alter or add to the law it was set up to administer or which have the effect of substantive law.”); *see also, In re Town of Smithfield*, 749 S.E.2d 293, 296 (N.C. Ct. App. 2013) (Where a party’s interpretation would “giv[e] to the statutory phraseology

a distorted meaning at complete variance with the language used[.]” a court is “powerless to construe away [or create a] limitation just because [the court] feel[s] that the legislative purpose behind the requirement can be more fully achieved in its absence [or presence].”). In such an event, NCSEA also believes that the Commission should revisit, pursuant to N.C. Gen. Stat. §§ 62-31 and 62-80, and revise its earlier ruling promulgating the administrative definition.

***NCSEA’s Current Interpretation is Consistent
With Sound Regulatory Policy***

36. NCSEA believes that its current interpretation is not only consistent with sound and time-honored principles of statutory interpretation but also yields a result that is sound from a policy perspective. For example,

- By concluding that new topping cycle CHP systems that use nonrenewable energy resources are energy efficiency measures eligible to participate in incentive programs, the Commission would further enable use of low cost natural gas to advance the systemic efficiency of the electric suppliers’ grids at shared cost between ratepayers and individual customers.⁹
- Recognizing that the opt-out rate by industrial and large commercial customers merits attention, the Commission has ordered that “DEC shall continue to use its Collaborative to work with stakeholders to find ways of increasing DSM and EE program impacts and participation, including programs designed to decrease opt outs.” *Order Approving DSM/EE Rider and Requiring Filing of Proposed*

⁹ As the Commission contemplates, amidst considerable uncertainty, how best to position the State for compliance with the Environmental Protection Agency’s “Clean Power Plan,” it should not be lost on the Commission that confirming that NCSEA’s interpretation of the statute is correct will also confirm that the State has an additional tool for achieving compliance with any final rule.

Customer Notice, p. 35, Commission Docket No. E-7, Sub 1050 (29 October 2014). By concluding that new topping cycle CHP systems, including all of their components, are energy efficiency measures eligible to participate in incentive programs, the Commission would confirm that electric suppliers have a powerful tool for use in attracting opt-out eligible customers to opt in.

- Finally, by concluding that new topping cycle CHP systems, including all their components, are energy efficiency measures eligible to participate in incentive programs, the Commission would further enable such systems to be strategically deployed to enhance the reliability and resiliency of the grid. Moreover, new topping cycle CHP systems installed as a result of such a Commission ruling could be integrated into islandable microgrids at military installations and at critical government and business facilities. Confirming the existence of a tool that can be used both to advance strategic locational deployment of grid supporting resources *and* to advance the development of islandable microgrids is a positive step toward making the grid more resilient and realizing the so-called “utility of the future” or “Utility 2.0” here in North Carolina.

The Likely Value of a Rulemaking

37. To the extent the Commission is concerned that recognizing that all of the components of a new topping cycle CHP system are eligible for participation in incentive programs will spawn the installation of customer-sited combined-cycle combustion turbines or some other kind of gaming of the incentive program process, NCSEA respectfully submits that there are alternative means for dealing with this concern that are within the Commission’s authority and not *ultra vires*.

38. For example, in order to ensure that new topping cycle CHP systems are truly significant energy efficiency measures, the Commission could initiate a rulemaking to set operating and efficiency standards as well as a fundamental use test, similar to the operating and efficiency standards and fundamental use test set out in 18 C.F.R. § 292.205, promulgated under the Public Utility Regulatory Policies Act of 1978, as amended. Subsection (a) of the federal regulation provides as follows:

(a) *Operating and efficiency standards for topping-cycle facilities*—(1) *Operating standard.* For any topping-cycle cogeneration facility, the useful thermal energy output of the facility must be no less than 5 percent of the total energy output during the 12-month period beginning with the date the facility first produces electric energy, and any calendar year subsequent to the year in which the facility first produces electric energy.

(2) *Efficiency standard.* (i) For any topping-cycle cogeneration facility for which any of the energy input is natural gas or oil, and the installation of which began on or after March 13, 1980, the useful power output of the facility plus one-half the useful thermal energy output, during the 12-month period beginning with the date the facility first produces electric energy, and any calendar year subsequent to the year in which the facility first produces electric energy, must:

(A) Subject to paragraph (a)(2)(i)(B) of this section be no less than 42.5 percent of the total energy input of natural gas and oil to the facility; or

(B) If the useful thermal energy output is less than 15 percent of the total energy output of the facility, be no less than 45 percent of the total energy input of natural gas and oil to the facility.

(ii) For any topping-cycle cogeneration facility not subject to paragraph (a)(2)(i) of this section there is no efficiency standard.

18 C.F.R. § 292.205(a). Subsections (d)(2) and (3) of the federal regulation provides as follows:

(2) The electrical, thermal, chemical and mechanical output of the cogeneration facility is used fundamentally for industrial, commercial, residential or institutional purposes and is not intended fundamentally for sale to an electric utility, taking into account technological, efficiency, economic, and variable thermal energy requirements, as well as state laws

applicable to sales of electric energy from a qualifying facility to its host facility.

(3) Fundamental use test. For the purpose of satisfying paragraph (d)(2) of this section, the electrical, thermal, chemical and mechanical output of the cogeneration facility will be considered used fundamentally for industrial, commercial, or institutional purposes, and not intended fundamentally for sale to an electric utility if at least 50 percent of the aggregate of such output, on an annual basis, is used for industrial, commercial, residential or institutional purposes. In addition, applicants for facilities that do not meet this safe harbor standard may present evidence to the Commission that the facilities should nevertheless be certified given state laws applicable to sales of electric energy or unique technological, efficiency, economic, and variable thermal energy requirements.

18 C.F.R. § 292.205(d).

CONCLUSION

39. For the foregoing reasons, NCSEA respectfully requests that the Commission issue a declaratory ruling, affirmative in form, that:

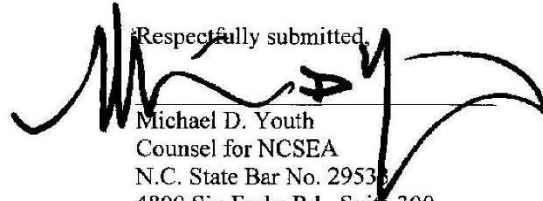
A new topping cycle combined heat and power ("CHP") system – including such a system that uses nonrenewable energy resources – that both (a) produces electricity or useful, measureable thermal or mechanical energy at a retail electric customer's facility and (b) results in less energy being used to perform the same function or provide the same level of service at the retail electric customer's facility constitutes an "energy efficiency measure" for purposes of N.C. Gen. Stat. § 62-133.9 and Commission Rule R8-67.

40. Moreover, if deemed necessary or helpful, NCSEA also respectfully requests that the Commission issue a complementary declaratory ruling, negative in form, that:

It is inconsistent with the clear and unambiguous language of N.C. Gen. Stat. §§ 62-133.8 and 62-133.9 to recognize *only* the heat recovery component of a new topping cycle CHP system as an "energy efficiency measure."

41. Finally, in the event one or both of the foregoing declaratory rulings are issued, NCSEA respectfully requests the Commission to initiate a rulemaking, if necessary and appropriate, to make clarifying changes to Commission Rule R8-67.

Respectfully submitted,

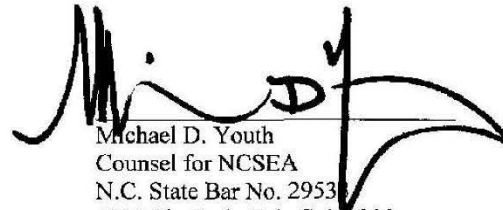


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CERTIFICATE OF SERVICE

I hereby certify that all persons on the docket service list have been served true and accurate copies of the foregoing filing, together with any exhibits attached thereto, by hand delivery, first class mail deposited in the U.S. mail, postage pre-paid, or by email transmission with the party's consent.

This the 1st day of June, 2015.



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EXHIBIT A

DOE/EE-0838



Guide to the Successful Implementation of State Combined Heat and Power Policies

**Industrial Energy Efficiency and Combined Heat and Power
Working Group**

**Driving Ratepayer-Funded Efficiency through Regulatory
Policies Working Group**

March 2013

The State and Local Energy Efficiency Action Network is a state and local effort facilitated by the federal government that helps states, utilities, and other local stakeholders take energy efficiency to scale and achieve all cost-effective energy efficiency by 2020.

Learn more at www.seeaction.energy.gov

Letter from the Co-Chairs of the SEE Action Industrial Energy Efficiency and Combined Heat and Power Working Group

To all,

This *Guide to Successful Implementation of State Combined Heat and Power Policies* is designed to inform state regulators, facility operators, utilities, and other key stakeholders about the benefits, costs, and implications of greater use of combined heat and power (CHP). Achieving greater use of CHP is consistent with President Obama's Executive Order 13626-Accelerating Investment in Industrial Energy Efficiency, which calls for 40 gigawatts (GW) of new, cost-effective CHP by 2020.

CHP can provide significant energy, energy system, and environmental benefits. CHP is inherently more efficient than obtaining electricity from a utility and generating heat or steam from an on-site boiler. By being more efficient, less fuel is consumed and greenhouse gases (GHGs) and other emissions are reduced. Properly designed CHP can bolster the grid, provide security benefits, and potentially support intermittent renewable energy sources.

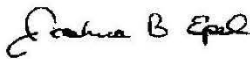
An assumption of this guide is that CHP must have the potential to be economically viable. Chapter 2 describes the design of standby rates charged by utilities to a customer with CHP, a potential impediment to the implementation of CHP.

Economical CHP may encourage large energy users to reduce purchased electricity or leave the grid entirely by self-generating. This impacts regulators and utilities because large customers leaving the grid may shift costs to other customers, requiring these remaining customers to carry the costs of the departing CHP user. Therefore, the challenge for all affected parties is to identify the most equitable arrangement that encourages adoption of CHP while ensuring that costs are not inequitably transferred to those not participating in CHP. Among the policy considerations that must be evaluated are the following: (1) Can CHP be directed to provide system benefits for all customers? (2) How can standby rates be designed to avoid cross-subsidization?

Whether a CHP system exports excess electricity or not can create additional issues that must be considered. As noted in Chapters 3 and 4, CHP that is designed only to supply a facility's energy needs will require an interconnection agreement between the CHP facility and the local utility. However, a CHP project that generates excess electricity may compete with a utility or other generators, and merits different regulatory and contractual considerations.

Finally, Chapter 5 discusses the use of CHP as a clean energy resource, and identifies states where CHP qualifies for the clean energy portfolio standard. While advocates of renewable energy would agree that waste heat to power (also known as waste heat recovery or bottoming cycle CHP) is a clean energy source, others have expressed skepticism that CHP can truly be considered clean energy because it often fundamentally uses a fossil fuel, namely natural gas, albeit efficiently and with lower environmental impact. Considering if and/or how to credit the thermal outputs of CHP that use biomass or biogas can be an important clean energy portfolio standard discussion.

The working groups, authors, and contributors hope that this guide clearly and accurately describes the policy issues all parties must address when evaluating CHP. To ensure the process is transparent, members were given the option to include a statement of alternative perspectives; see Appendix F.



Joshua Epel
Chairman
Colorado Public Utilities Commission



Todd Currier
Assistant Director
Washington State University Extension Energy Program

Guide to the Successful Implementation of State Combined Heat and Power Policies was developed as a product of the State and Local Energy Efficiency Action Network (SEE Action), facilitated by the U.S. Department of Energy and the U.S. Environmental Protection Agency. Content does not imply an endorsement by the individuals or organizations that are part of SEE Action working groups, or reflect the views, policies, or otherwise of the federal government.

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If this document is referenced, it should be cited as:

State and Local Energy Efficiency Action Network. 2013. *Guide to the Successful Implementation of State Combined Heat and Power Policies*. Prepared by B. Hedman, A. Hampson, J. Rackley, E. Wong, ICF International; L. Schwartz and D. Lamont, Regulatory Assistance Project; T. Woolf, Synapse Energy Economics; J. Selecky, Brubaker & Associates.

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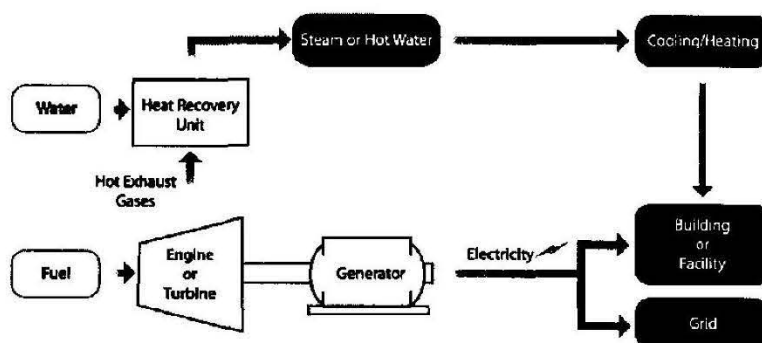
Chapter 1. CHP Defined

1.1 CHP Defined: Topping and Bottoming Cycle CHP

The average generation efficiency of grid-supplied power in the United States has remained at 34% since the 1960s—the energy lost in wasted heat-from-power generation in the United States is greater than the total energy use of Japan.²⁵ CHP systems typically achieve total system efficiencies of 60%–80% compared to only about 45%–50% for conventional separate heat and power generation²⁶ by avoiding line losses and capturing much of the heat energy normally wasted in power generation to provide heating and cooling to factories and businesses.²⁷ By efficiently providing electricity and thermal energy from the same fuel source at the point of use, CHP significantly reduces the total primary fuel needed to supply energy services to a business or industrial plant, saving them money and reducing air emissions.²⁸

There are two types of CHP—topping and bottoming cycle. In a topping cycle CHP system (Figure 2), fuel is first used in a prime mover such as a gas turbine or reciprocating engine, generating electricity or mechanical power. Energy normally lost in the prime mover's hot exhaust or cooling systems is recovered to provide process heat, hot water, or space heating/cooling for the site.²⁹ Optimally efficient topping CHP systems are typically designed and sized to meet a facility's baseload thermal demand.

In a bottoming cycle CHP system (Figure 3), also referred to as waste heat to power, fuel is first used to provide thermal input to a furnace or other high temperature industrial process, and a portion of the heat rejected from the process is then recovered and used for power production, typically in a waste heat boiler/steam turbine system. Waste heat to power systems are a particularly beneficial form of CHP in that they utilize heat that would otherwise be wasted from an existing thermal process to produce electricity without directly consuming additional fuel.



Source: U.S. Environmental Protection Agency (EPA) CHP Partnership www.epa.gov/chp/basic/index.html

Figure 2. Topping cycle CHP: gas turbine or reciprocating engine with heat recovery

²⁵ Oak Ridge National Laboratory, *Combined Heat and Power, Effective Energy Solutions for a Sustainable Future*, 2008.

²⁶ Total system efficiency is equal to the power and useful thermal energy divided by the total fuel consumed to generate both energy services.

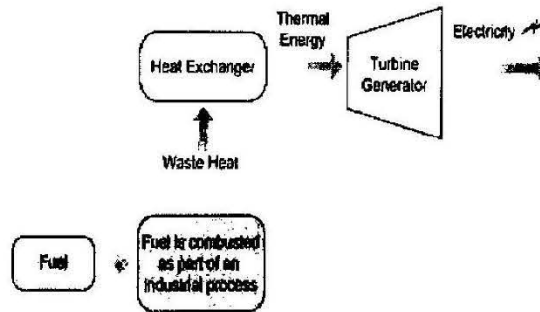
²⁷ U.S. DOE, U.S. EPA, *Combined Heat and Power: A Clean Energy Solution*, August 2012.

www1.eere.energy.gov/manufacturing/distributedenergy/pdfs/chp_clean_energy_solution.pdf.

²⁸ U.S. EPA, *Fuel and Carbon Dioxide Emissions Savings Calculation Methodology for Combined Heat and Power System*, August 2012.

www.epa.gov/chp/documents/fuel_and_co2_savings.pdf.

²⁹ In another version of a topping cycle CHP system, fuel is burned in a boiler to produce high pressure steam. That steam is fed to a steam turbine, generating mechanical power or electricity, before exiting the turbine at lower pressure and temperature and used for process or heating applications at the site.



Source: U.S. EPA CHP Partnership www.epa.gov/chp/documents/waste_heat_power.pdf

Figure 3. Bottoming cycle CHP: waste heat to power

1.2 Market Status and Potential

CHP is already an important resource for the United States—the existing 82 GW of CHP capacity at more than 4,100 industrial and commercial facilities represents approximately 8% of current U.S. generating capacity and more than 12% of total megawatt-hours (MWh) generated annually.³⁰ Compared to the average fossil-based electricity generation, the existing base of CHP saves 1.8 quads of energy annually and eliminates 240 million metric tons of CO₂ emissions each year (equivalent to the emissions of more than 40 million cars).³¹

While investment in CHP declined in the early 2000s due to changes in the wholesale market for electricity and increasingly volatile natural gas prices, CHP's potential role as a clean energy source for the future is much greater than recent market trends would indicate. Efficient on-site CHP represents a largely untapped resource that exists in a variety of energy-intensive industries and businesses (Figure 4). Recent estimates indicate the technical potential³² for additional CHP at existing industrial facilities is slightly less than 65 GW, with the corresponding technical potential for CHP at commercial and institutional facilities at slightly more than 65 GW,³³ for a total of about 130 GW. A 2009 study by McKinsey and Company estimated that 50 GW of CHP in industrial and large commercial/institutional applications could be deployable at reasonable returns with then current equipment and energy prices.³⁴ These estimates of both technical and economic potential are likely greater today given the improving outlook in natural gas supply and prices.

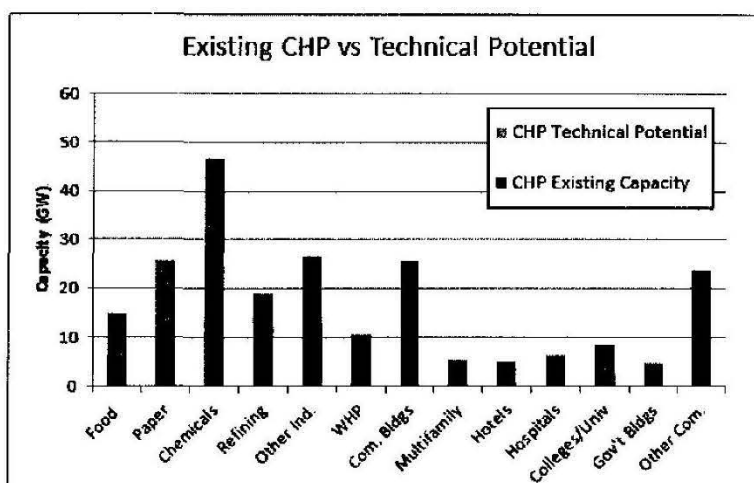
³⁰ CHP Installation Database developed by ICF International for Oak Ridge National Laboratory and the U.S. DOE. 2012. Available at www.eea-inc.com/chpdata/index.html.

³¹ www.epa.gov/chp/basic/environmental.html.

³² The technical market potential is an estimation of market size constrained only by technological limits—the ability of CHP technologies to fit existing customer energy needs. The technical potential includes sites that have the energy consumption characteristics that could apply CHP. The technical market potential does not consider screening for other factors such as ability to retrofit, owner interest in applying CHP, capital availability, fuel availability, and variation of energy consumption within customer application/size classes. All of these factors affect the feasibility, cost, and ultimate acceptance of CHP at a site and are critical in the actual economic implementation of CHP.

³³ Based on ICF International internal estimates as detailed in the report *Effect of a 30 Percent Investment Tax Credit on the Economic Market Potential for Combined Heat and Power*, prepared for WADE and USCHPA, October 2010. These estimates are on the same order as recent estimates developed by McKinsey and Company (see below).

³⁴ McKinsey Global Energy and Materials. (2009). *Unlocking Energy Efficiency in the U.S. Economy*. www.mckinsey.com/Client_Service/Electric_Power_and_Natural_Gas/Latest_thinking/Unlocking_energy_efficiency_in_the_US_economy.



Source: Internal estimates by ICF International and CHP Installation Database developed by ICF International for Oak Ridge National Laboratory and DOE, 2012. www.eeg-inc.com/chpdata/index.html.

Figure 4. Technical potential for CHP at industrial and commercial facilities

The outlook for increased use of CHP is improving. Policymakers at the federal and state level are beginning to recognize the potential benefits of CHP and the role it could play in providing clean, reliable, cost-effective energy services to industry and businesses. A number of states have developed innovative approaches to increase the deployment of CHP to the benefit of users as well as ratepayers. CHP is being looked at as a productive investment by some companies facing significant costs to upgrade old coal- and oil-fired boilers. In addition, CHP can provide a cost-effective source of new generating capacity in many areas confronting retirement of older power plants. Finally, the economics of CHP are improving as a result of the changing outlook in the long-term supply and price of North American natural gas—a preferred fuel for many CHP applications.³⁵

Key to capturing this potential is the market structure for CHP at the state level. Markets with unnecessary barriers to the development of CHP will see less than the economically and environmentally desirable development of the resource, resulting potentially in higher cost resources or resources with greater environmental impacts incorporated into the nation's electricity system.

The chapters that follow provide state utility regulators and other state policymakers with actionable information to assist them in implementing key state policies that address barriers to, and promote opportunities for, CHP development. They discuss five policy categories and highlight successful state CHP policy implementation approaches within each category:

- Design of standby rates
- Interconnection standards for CHP with no electricity export
- Excess power sales
- Clean energy portfolio standards (CEPS)

Emerging market opportunities—CHP in critical infrastructure and utility participation in CHP markets.

³⁵ U.S. DOE, *Combined Heat and Power: A Clean Energy Solution*, August 2012, www1.eere.energy.gov/manufacturing/distributedenergy/pdfs/chp_clean_energy_solution.pdf. Note that the existing fleet of CHP uses a wide variety of fuels in addition to natural gas including coal, oil, landfill gas, waste heat, process wastes, wood, and other forms of biomass.

EXHIBIT B

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AUG 07 2013
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N.C. Utilities Commission

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION
DOCKET E-7, SUB 1032

Testimony of Isaac Panzarella
On Behalf of the North Carolina
Sustainable Energy Association and Environmental Defense Fund

August 7, 2013

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS FOR THE**
2 **RECORD.**

3 **A.** My name is Isaac Panzarella. My business address is 1575 Varsity Drive,
4 Raleigh, NC 27695.

5
6 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

7 **A.** I am employed by the North Carolina Solar Center at North Carolina State
8 University ("NC State"), where I serve as Director of the U.S. Department of
9 Energy's Southeast Clean Energy Application Center ("SE-CEAC").

10
11 **Q. WOULD YOU BRIEFLY DISCUSS YOUR EDUCATION AND**
12 **EXPERIENCE?**

13 **A.** I graduated from NC State with a Bachelors of Science in Mechanical
14 Engineering. After graduating from NC State, I worked as an engineering
15 consultant from 1998 to 2010, and for six years of those years I operated my
16 own practice, providing engineering consulting services on high performance
17 commercial, industrial and institutional projects, including a number of grid
18 connected distributed generation systems. I have been licensed as a
19 Professional Engineer in the State of North Carolina for the past ten years.

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Sep 09 2016

1 For the last three years, I have managed the Clean Power and Industrial
2 Efficiency Project team at the North Carolina Solar Center. Under this
3 project, I work with industrial and commercial energy end-users, utilities,
4 state energy offices, state legislators and state regulators in a nine state
5 Southeast region that includes North Carolina. During this time, my chief
6 responsibility has been to serve as Director of the Southeast Clean Energy
7 Application Center ("SE-CEAC"), which provides targeted education,
8 unbiased information and project technical assistance in the areas of
9 combined heat and power ("CHP"), waste heat to power and district energy.
10

11 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**
12 **PROCEEDING?**

13 **A.** The purpose of my testimony is to (1) provide a brief overview of combined
14 heat and power ("CHP"), including its potential in North Carolina; (2)
15 explain how development and incorporation of a CHP incentive program in
16 Duke Energy Carolinas, LLC's ("Duke" or the "Company") portfolio could
17 yield capacity and energy savings; (3) highlight how Duke's apparent
18 exclusion of a type of CHP -- topping-cycle CHP -- from eligibility for its
19 programs is not appropriate; and (4) request that the Commission strongly
20 encourage Duke to introduce CHP as a topic for discussion in the Duke
21 Collaborative and direct Duke to report back to the Commission on the Duke
22 Collaborative's initial conclusions regarding the feasibility of a CHP
23 incentive program.

1

2 **Q. WHAT IS COMBINED HEAT AND POWER?**

3 **A.** Combined heat and power ("CHP"), also known as cogeneration, is an energy
4 efficient approach to generating electricity and useful thermal energy from a
5 single fuel source at the point of use. An industrial or commercial facility
6 can utilize an on-site CHP system to provide both their thermal and
7 electricity requirements from a single fuel source, instead of utilizing
8 electricity produced at a central station power plant and burning fuel in an on-
9 site furnace or boiler to produce the required thermal energy. An on-site
10 CHP system sized properly for the thermal load of the industrial or
11 commercial facility can provide both electricity and thermal energy at an
12 efficiency of 75% versus the combined efficiency of the conventional method
13 which is approximately 45%. As a result of this efficiency, CHP systems can
14 provide significant emission advantages over the conventional method of
15 providing electricity and thermal requirements via separate systems.

16

17 **Q. WHAT ARE THE BENEFITS OF COMBINED HEAT AND POWER?**

18 **A.** As an energy efficient technology, CHP can provide benefits to both
19 businesses and utilities in North Carolina. For businesses, properly sized and
20 installed CHP systems can:
21 • Make them more competitive by reducing their overall energy costs;
22 • Reduce the risk of electric grid disruptions by enhancing electricity
23 reliability;

- 1 • Provide stability in the face of uncertain electricity prices; and
- 2 • Reduce overall emissions of greenhouse gases and hazardous air pollutants.

3 For utilities, CHP systems can:

- 4 • Offer a low-cost approach to new electricity generation capacity;
- 5 • Lessen the need for new transmission and distribution infrastructure;
- 6 • Enhance power grid security; and
- 7 • Contribute to meeting energy efficiency targets.

8

9 **Q. ARE THERE DIFFERENT TYPES OF CHP?**

10 **A.** Yes. There are basically two types of CHP: Topping-cycle CHP and
11 bottoming-cycle CHP.

12

13 **Q. CAN YOU BRIEFLY DESCRIBE EACH TYPE?**

14 **A.** Yes. In a *topping-cycle* CHP system, sometimes referred to as
15 “conventional” CHP, fuel is combusted in a prime mover such as a gas
16 turbine, micro-turbine, reciprocating engine, or fuel cell for the purpose of
17 generating both electricity and thermal energy. The thermal energy, which
18 comes from using the heat that would otherwise be lost in the prime mover’s
19 hot exhaust or cooling systems is recovered to provide process or space
20 heating, cooling, and/or dehumidification. Optimally-efficient topping-cycle
21 CHP systems are typically designed and sized to meet a facility’s baseload
22 thermal demand. In a *bottoming-cycle* CHP system, also referred to as waste-
23 heat-to-power (“WHP”), the CHP system takes advantage of heat that is

1 generated as part of an industrial process and would normally be vented to
2 the atmosphere. In the WHP process, a portion of the waste heat from the
3 industrial process is recovered and typically used to produce high-grade
4 steam through a heat recovery steam generator, and then a steam turbine
5 utilizes the steam to generate electricity. Under ideal circumstances, WHP
6 systems are a particularly beneficial form of CHP in that they utilize heat that
7 would otherwise be wasted from an existing thermal process to produce
8 electricity with a minimal amount of additional fuel.
9

10 **Q. WHAT IS THE EXISTING CHP CAPACITY IN NORTH**
11 **CAROLINA?**

12 **A.** In North Carolina today, there are 66 CHP systems in operation totaling
13 1,540 MW of electric nameplate capacity. Most of these CHP systems are
14 located at large industrial and manufacturing sites, with some CHP at
15 agribusiness sites and institutional sites, including military installations and
16 university campuses. Of the 66 CHP systems, 62 are topping-cycle and four
17 are bottoming-cycle.
18

19 **Q. IS THERE POTENTIAL FOR ADDITIONAL CHP DEVELOPMENT**
20 **IN NORTH CAROLINA?**

21 **A.** Yes, there is a large amount of potential for new CHP in North Carolina.
22 Since 2006, an estimated 3.5 GW of new CHP capacity has been installed in
23 the United States. The markets with the greatest CHP growth during this time

1 have been paper manufacturing, colleges/universities, food processing plants,
2 chemical plants, refining operations, utilities and hospitals. Many of these
3 markets are present in North Carolina, and represent stable and some growing
4 industry and institutional sectors. Working with ICF International ("ICF"),
5 SE-CEAC recently investigated the technical potential for new topping-cycle
6 CHP in North Carolina. Technical potential is defined by ICF as the total
7 electric generating capacity potential from existing and new facilities that are
8 likely to have the appropriate physical electric and thermal load
9 characteristics that would support a CHP system with high levels of thermal
10 utilization. ICF and SE-CEAC estimated that there is approximately 6,428
11 MW of new topping-cycle technical potential in North Carolina of which
12 roughly 4,667 MW resides in the industrial sector and 1,761 MW resides in
13 the commercial sector.
14

15 **Q. DOES CHP MEET THE DEFINITION OF ENERGY EFFICIENCY IN**
16 **NORTH CAROLINA?**

17 **A.** Yes. North Carolina General Statute §62-133.8(a)(4) states that an "energy
18 efficiency measure" means "an equipment, physical, or program change
19 implemented after January 1, 2007, that results in less energy used to perform
20 the same function" and "includes, but is not limited to, energy produced from
21 a combined heat and power system that uses nonrenewable energy
22 resources." North Carolina General Statute § 62-133.9(a) makes the

1 definition I just recited applicable in the DSM/EE cost recovery context at the
2 heart of this proceeding.
3

4 **Q. DOES DUKE ENERGY'S PROPOSED DSM/EE PORTFOLIO**
5 **INCLUDE A CHP INCENTIVE PROGRAM?**

6 **A.** Duke's proposed portfolio for 2014-2017 does not include a CHP incentive
7 program. Moreover, Duke's proposed new Non-Residential Smart Saver
8 Custom Program, Attachment G Tariff, has a statement under Incentives for
9 Custom Projects that appears to make CHP ineligible: "Electric generation,
10 from either non-renewable or renewable sources, are not considered energy
11 efficiency measures and therefore do not qualify for these payments." The
12 tariff for the 2009-2013 Non-Residential Smart Saver Custom Program did
13 not have this specific exclusion.
14

15 **Q. HOW WOULD A CHP INCENTIVE PROGRAM FIT INTO A**
16 **UTILITY PORTFOLIO?**

17 **A.** When deciding whether CHP should be an allowable technology in a utility
18 incentive program, there are several considerations and an opportunity to
19 learn from what other utilities and states have done. Operating at 65% to
20 80% efficiency, CHP systems are effective energy efficiency measures and
21 can provide cost-effective efficiency savings for both customer and the utility
22 while also boosting the competitiveness of manufacturing and other energy
23 intensive industries. CHP has been included by several states in their state

1 energy efficiency programs and electric utilities have successfully integrated
2 these programs into their multi-year plans.
3 Though there is no universal method for including CHP in an incentive
4 program, the states of Maryland, Massachusetts, Connecticut and Ohio
5 provide examples of different ways that CHP benefits can be quantified. In
6 Maryland, on April 13, 2012, the Potomac Electric Power Company
7 ("Pepco"), Delmarva Power & Light Company ("Delmarva") and Baltimore
8 Gas and Electric Company ("BGE") jointly filed a request for approval to
9 provide a CHP incentive program for their commercial and industrial
10 customers. In Maryland, PSC Commission Order 84955, dated June 5, 2012,
11 the Commission approved the companies' proposed CHP incentive program
12 as filed. The program terms stipulate that CHP systems must meet a
13 minimum efficiency of 65% and pass a modified Total Resource Cost (TRC),
14 with separate valuations for the on-peak and off-peak operation of the CHP
15 system, placing a higher weight on on-peak energy savings. A total
16 combined budget of \$20,000,000 was approved for the CHP incentives under
17 the companies' programs. The incentive structure includes an up-front
18 payment of \$250/kW of capacity, and an incentive of \$0.07/kWh the system
19 saves for the first 18 months of operation. In the first solicitation for
20 participants, which closed on December 21, 2012, BGE received 16
21 proposals from a variety of commercial and industrial customers, for a total
22 of 13 MW of CHP and 102,000 MWh savings. Information on the number or

1 scale of proposals received by Pepco and Delmarva is not available at this
2 time.

3 The state of Massachusetts uses a performance-based incentive program in
4 which efficiency credits are allocated on the basis of one credit per MWh of
5 net fuel source savings. Fuel source savings are determined by metering the
6 CHP generated electrical and useful thermal energy as well as the fuel energy
7 consumed and comparing the CHP fuel energy consumed with what would
8 have been needed to generate an equal amount of electricity by the grid and
9 thermal energy from a boiler or furnace. An empirical formula is used to
10 quantify the net source fuel reduction.

11 The state of Connecticut credits all electricity produced (kWh) by qualified
12 CHP systems that meet or exceed the minimum efficiency threshold of 50%.
13 In Washington State, CHP systems must have a useful thermal output of at
14 least 33% to qualify. In Ohio, recently passed legislation (SB 14 315) allows
15 CHP systems to participate in the state's efficiency program if they have an
16 overall efficiency of at least 60%, with at least 20% of total energy output as
17 thermal energy. The details on calculating CHP savings are currently being
18 finalized by the Public Utility Commission of Ohio.

19

20 **Q. HAS SE-CEAC WORKED WITH DUKE TO EXPLORE CHP**
21 **OPPORTUNITIES IN NORTH CAROLINA?**

22 **A.** SE-CEAC has been part of a working group convened by Duke in January
23 2012 to investigate CHP opportunities in North Carolina. The group was

1 formed after a conference in November 2011 on CHP in North Carolina. At
2 this conference, which had over 70 attendees including large energy-users,
3 SE-CEAC's data on CHP technical potential in North Carolina was
4 presented. The CHP working group was started and managed by Karim Ly,
5 Senior Marketing Manager with Duke Energy, with the intention of realizing
6 a profitable and viable CHP incentive program for the Company. This
7 working group has advised Duke on examples of CHP programs in other
8 states and on aspects of the design for a potential CHP incentive program for
9 Duke. Part of my role as Director of SE-CEAC was to help Duke identify
10 potential pilot sites in North Carolina from among the sites we provide CHP
11 technical assistance to. If our site assessments showed a viable CHP
12 opportunity and interest in a utility incentive program, we obtained their
13 permission to share their contact information with Duke. From there, Duke
14 and the sites worked together directly to evaluate whether the CHP
15 opportunity met Duke's criteria for a pilot site.

16
17 **Q. WHAT IS THE STATUS OF THE DUKE CHP WORKING GROUP**
18 **YOU JUST REFERRED TO?**

19 **A.** Duke's CHP working group has been inactive for the past 9 months due to
20 the departure of Senior Marketing Manager Karim Ly in September of 2012.
21 My understanding is that Duke staff were reassigned to work on the project in
22 early 2013 but the Duke CHP working group has not been re-convened.

23

1 **Q. PLEASE COMMENT ON DUKE'S RESPONSE TO NCSEA'S**
2 **DISCOVERY REQUEST RELATED TO CHP?**

3 **A.** Duke's response to NCSEA's Data Request No. 3-23 is attached to my
4 testimony as Exhibit 1. In the response, Duke responds to the question,
5 "Have you considered or investigated the feasibility of offering a combined
6 heat and power (CHP) program? If so, please provide a summary of the
7 results of your consideration/investigation." Duke's response, in part, reads
8 as follows: "[T]he Company has collaborated with external stakeholders
9 with the hope of identifying one or more customers that are considering a
10 CHP investment and are willing to act as a test case for the incentive design.
11 Unfortunately, to date, no suitable candidates have been identified, however
12 the Company remains interested in exploring a CHP incentive program if one
13 or more test cases emerge." The stakeholder group Duke refers to in its
14 response is the same working group that SE-CEAC was participating in.
15 Although SE-CEAC and the other stakeholders provided Duke with a number
16 of customer contacts that were interested in a CHP project investment, Duke
17 states that no suitable candidates had been identified.

18
19 **Q. CAN YOU EXPLAIN WHY DUKE WAS UNABLE TO IDENTIFY**
20 **ANY SUITABLE CANDIDATES?**

21 **A.** SE-CEAC followed-up with several of the industrial, commercial and
22 institutional customers that were put in touch with Duke's CHP team. Based
23 on follow-ups with representatives of two of these customers, it is my

1 impression that Duke considers only sites with bottoming-cycle CHP
2 applications to be eligible for incentives in North Carolina and that customer
3 applications for topping-cycle CHP systems are not eligible for an incentive
4 because they generate electricity using a nonrenewable fuel. As I stated in an
5 earlier answer, North Carolina law allows for CHP as an energy efficiency
6 *measure under a utility cost recovery program even if the CHP uses a*
7 *nonrenewable energy resource.*
8

9 **Q. DO YOU BELIEVE THAT A CHP INCENTIVE CAN DECREASE**
10 **OPT-OUT OF LARGE ENERGY-USERS FROM A UTILITY'S**
11 **PORTFOLIO OF PROGRAMS?**

12 **A.** Yes. SE-CEAC provides technical services to potential CHP candidates,
13 including large industrial and institutional energy-users who typically opt-out
14 of utility energy efficiency programs. During the period starting October 1,
15 2011 and ending September 30, 2012, SE-CEAC performed technical
16 evaluations for four potential CHP projects in North Carolina. Two of these
17 projects were at industrial sites, with potential natural gas-fired CHP
18 capacities of 10 MW and 4.7 MW, having estimated payback periods
19 between three and five years. The current prevailing practice among
20 industrial companies that we have spoken to is to pursue projects that have
21 less than a two-year payback due to limited internal capital. If an incentive
22 program were offered for CHP projects that could help produce payback
23 periods of approximately two years or less, I believe that could lead

1 industrials to opt-in to the program to pursue projects eligible for the CHP
2 incentive. The level of increased participation achieved would depend on the
3 level of incentive offered and terms of the program.

4
5 **Q. WHAT IS YOUR RECOMMENDATION TO THE COMMISSION?**

6 **A.** I have two recommendations. First, I recommend that the Commission
7 strongly encourage Duke to introduce CHP as a topic for discussion in the
8 Duke Collaborative and direct Duke to report back to the Commission on the
9 Duke Collaborative's initial conclusions regarding the feasibility of a CHP
10 incentive program. Second, I recommend that the Commission reinforce that
11 both topping-cycle CHP and bottoming-cycle CHP qualify as energy
12 efficiency measures per North Carolina law.

13
14 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

15 **A.** Yes.

NCSEA
Docket No. E-7, Sub 1032
NCSEA Data Request No. 3
DSM/EE
Item No. 3-23
Page 1 of 1

DUKE ENERGY CAROLINAS

Request:

Have you considered or investigated the feasibility of offering a combined heat and power (CHP) program? If so, please provide a summary of the results of your consideration/investigation.

Response:

Duke Energy has investigated the viability of an energy efficiency incentive program to promote commercial and industrial customer adoption of combined heat and power (CHP) systems. Similar to Duke Energy Carolinas' SmartSaver custom incentive program, the concept that the Company has explored involves the payment of incentives to customers that install and own a CHP system based on the verified energy and demand savings that result from the increased electric efficiency of the CHP system. Because it is not possible to produce a theoretical analysis model that accurately represents the wide range of customers' unique financial, electric and thermal needs, the Company has collaborated with external stakeholders with the hope of identifying one or more customers that are considering a CHP investment and are willing to act as a test case for the incentive design. Unfortunately, to date, no suitable candidates have been identified, however the Company remains interested in exploring a CHP incentive program if one or more test cases emerge.



EXHIBIT C

Duke Energy Carolinas, LLC

Electricity No. 4
North Carolina Original Leaf No. 174

NONRESIDENTIAL SMART SAVER ®
ENERGY EFFICIENT PRODUCTS AND ASSESSMENT PROGRAM (NC)

PURPOSE

The purpose of this program is to encourage the installation of new high efficiency equipment in new and existing nonresidential establishments as well as efficiency-related repair activities designed to maintain or enhance efficiency levels in currently installed equipment. The program will provide incentive payments for energy assessment and to offset a portion of the higher cost of new energy efficient equipment or the efficiency-related repair activities.

PROGRAM

Payments are available to owners of, or customers occupying, new or existing nonresidential establishments served on Duke Energy Carolinas' general service rate and industrial rate schedules from Duke Energy Carolinas' retail distribution system.

Payments are available for a percentage of qualifying energy assessments, a percentage of the cost difference between standard equipment and qualifying new higher efficiency equipment, or a percentage of the cost of qualifying efficiency-related repair activities as further described below.

Prescriptive Incentives for Specific Equipment

The following types of equipment are eligible for incentives.

- High efficiency lighting
- High efficiency heating, ventilation and air conditioning equipment
- High efficiency pumps and variable frequency drives
- High efficiency food service equipment
- High efficiency process equipment
- High efficiency information technology equipment

The Company may vary the percentage incentive by type of equipment, differences in efficiency and type of efficiency-related repair activity either to provide the minimum incentive needed to drive customers to install higher efficiency equipment or to encourage maintaining or enhancing efficiency levels in currently installed equipment.

The Company reserves the right to adjust the incentive and equipment requirements on a periodic basis, as equipment efficiency standards change and as customers naturally move to install higher efficiency equipment.

The amount of the incentive payment for various standard types of equipment will be filed with the Commission annually, for information, and posted to the Company's website at www.duke-energy.com.

Incentives for Custom Projects

Energy Assessments

Optional energy assessments are available to identify and/or evaluate energy efficiency projects and energy efficient measures. The scope of an energy assessment may include but is not limited to facility energy audit, new construction/renovation energy performance simulation, system energy study and retro-commissioning service. Payments are available to offset a portion of the costs of a qualifying energy assessment.

The Company may vary the percentage of energy assessment payment based on the facility size, age, equipment, and other criteria that may affect the amount of energy efficiency opportunities, and the expectation of the customer implementing recommendations identified. All, or a portion of, the energy assessment payment may be contingent on the customer implementing a minimum amount of cost effective energy efficiency measures within a set timeframe.

Custom Incentives

Custom incentives are available with or without an energy assessment provided by the Company.

The Company shall determine what projects meet the criteria for higher efficiency equipment or efficiency-related maintenance activities, including but not limited to the types of equipment shown above under Prescriptive Incentives. To qualify for efficiency related incentives for HVAC or process equipment, such equipment must have a remaining use life greater than 2 years.

Duke Energy Carolinas, LLC

Electricity No. 4
North Carolina Original Leaf No. 174

Electric generation, from either non-renewable or renewable sources, is not considered an energy efficiency measure and therefore does not qualify for payments; however, bottoming-cycle Combined Heat and Power ("CHP") systems or the waste heat recovery components of topping-cycle CHP may be eligible for payments.

The Company may vary the percentage incentive based on project conditions, including differences in efficiency, operating conditions, measure life, free ridership, and other factors that affect projected energy savings, and based on measure cost effectiveness in order to provide the minimum incentive needed to drive customers to install higher efficiency equipment.

In order to receive payment under this program the following requirements must be met.

- For new high efficiency equipment in an existing establishment, the customer must submit a request for incentive payment either before or within ninety (90) days of installation, along with the required documentation and verification that the installed efficiency measures meet the requirements of this program.
- For efficiency-related activity, the customer must submit a request for incentive payment either before or within 90 days of the completing the efficiency-related activity, along with the required documentation and verification that the efficiency-related activity meet the requirements of the program.
- For new high efficiency equipment in a new establishment the customers must submit a request for incentive payment either before or within 90 days after the customer takes initial permanent service for the Company.

The Company reserves the right to inspect the premises of the customer both before and after implementation of the measure or completion of the efficiency-related activity for which an incentive payment is requested. Incentive payments will be made only after the equipment has been installed and is operable or the efficiency-related activity has been completed, as verified by the Company.

Multiple incentive payments may be requested for each establishment; however, the Company reserves the right to limit the payments per establishment per year.

PAYMENT

- The payment to the customer or owner will be an amount up to 75% of the installed cost difference between new standard equipment and new higher efficiency equipment or up to 75% of the cost of the efficiency-related activity.
- With Company approval, the customer or owner may designate that payment be made to the vendor or other third-party.



**NC SUSTAINABLE
ENERGY ASSOCIATION**

June 2, 2015

OFFICIAL COPY

E-100, Sub 113

FILED

JUN 02 2015

Clerk's Office
N.C. Utilities Commission

Chief Clerk
North Carolina Utilities Commission
Dobbs Building
430 North Salisbury Street
4325 Mail Service Center
Raleigh, NC 27699-4325

Re: NC Sustainable Energy Association's Requests for Declaratory Ruling on Meaning of N.C.G.S. § 62-133.9 and NCUC Rule R8-67 and, If Necessary and Appropriate, a Rulemaking to Clarify NCUC Rule R8-67 (Docket No. E-100, Sub 113)

Dear Honorable Chief Clerk and Commissioners:

On 1 June 2015, NCSEA filed a Request for Declaratory Ruling in this proceeding.

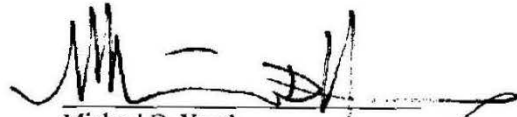
NCSEA's request is representative of a diverse spectrum of stakeholders' positions, as evidenced by the attached letters from business and academic interests.¹ The table below lists the letters' authors and the organizations they represent.

Organization	Author
Broad U.S.A., Inc.	Doug Davis, Director Broad USA
Kestava Energy Management, LLC	Keith McAllister, President
MAE Energy Solutions at NC State University	Dr. Stephen Terry, Research Assistant Professor and Director
Nixon Energy Solutions	Justin Sharp, Business Development Manager
North Carolina Clean Energy Technology Center (NCCETC) at NC State University	Stephen S. Kalland, Executive Director
Wilson Engineering Services, PC	Dan Wilson, Vice President

If you have any questions, please do not hesitate to contact me.

¹ Some or all of these letters may have been filed independently by their authors. NCSEA compiles and submits these letters under this cover letter for ease of access and reference.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Michael D. Youth', is written over a horizontal line.

Michael D. Youth
Counsel for NCSEA
N.C. State Bar No. 29533
4800 Six Forks Rd., Suite 300
Raleigh, NC 27609
(919) 832-7601 Ext. 118
michael@energync.org



BROAD U.S.A., INC.

401 Hackensack Avenue, Suite 503, Hackensack, NJ 07601 Phone: (201) 678-3010 Fax: (201) 678-3011 WWW.BROADUSA.COM

May 26, 2015

Chief Clerk
North Carolina Utilities Commission
Dobbs Building
430 North Salisbury Street
4325 Mail Service Center
Raleigh, NC 27699-4325

Re: NC Sustainable Energy Association's Request for Declaratory Ruling on Meaning of
N.C.G.S. § 62-133.9 and NCUC Rule R8-67 and, If Necessary and Appropriate, a
Rulemaking to Clarify NCUC Rule R8-67 (NCUC Docket No. E-100, Sub 113).

Honorable Chairman and Commissioners,

I am Doug Davis, director at Broad USA located in New Jersey is a manufacturer of CHP
equipment.

I understand that the NC Sustainable Energy Association is requesting the Commission clarify
that new topping cycle combined heat and power (CHP) systems qualify as energy efficiency
measures under North Carolina law.

I believe it is important for the Commission to address this question. Having participated in
formal and informal CHP working group discussions, I believe NC Sustainable Energy
Association's position that new topping cycle CHP systems can qualify as an energy efficiency
measure is reasonable and common-sensical. I also believe that, if the Commission clarifies that
topping cycle CHP systems can qualify, it would be appropriate to establish some clear
eligibility guidelines to ensure there is no "gaming" of the process.

If you have any questions, please do not hesitate to contact me.

Thank you,

Doug Davis
Director Broad USA

A handwritten signature in black ink, appearing to read 'Doug Davis', is written below the typed name.



K E S T A V A E N E R G Y M A N A G E M E N T

May 28th, 2015

Chief Clerk
North Carolina Utilities Commission
Dobbs Building
430 North Salisbury Street
4325 Mail Service Center
Raleigh, NC 27699-4325

Re: NC Sustainable Energy Association's Request for Declaratory Ruling on Meaning of
N.C.G.S. § 62-133.9 and NCUC Rule R8-67 and, If Necessary and Appropriate, a
Rulemaking to Clarify NCUC Rule R8-67 (NCUC Docket No. E-100, Sub 113).

Honorable Chairman and Commissioners,

I am Keith McAllister, President of Kestava Energy Management, LLC located in Cary, NC.
Kestava Energy Management is a consulting firm that helps companies meet their energy needs.

I understand that the NC Sustainable Energy Association is requesting the Commission clarify
that new topping cycle combined heat and power (CHP) systems qualify as energy efficiency
measures under North Carolina law.

I believe it is important for the Commission to address this question. Having participated in
formal and informal CHP working group discussions, I believe NC Sustainable Energy
Association's position that new topping cycle CHP systems can qualify as an energy efficiency
measure is reasonable and common-sensical. I also believe that, if the Commission clarifies that
topping cycle CHP systems can qualify, it would be appropriate to establish some clear
eligibility guidelines to ensure there is no "gaming" of the process.

If you have any questions, please do not hesitate to contact me.

Thank you,



Keith McAllister
President

North Carolina State University is a land-grant university and a constituent institution of The University of North Carolina

Department of Mechanical & Aerospace Engineering

NC STATE UNIVERSITY

College of Engineering
Campus Box 7910 / 3002 EBBH
911 Oval Drive
Raleigh, NC 27695-7910

919.515.2365
919.515.7968 (Fax)

May 26, 2015

Chief Clerk
North Carolina Utilities Commission
Dobbs Building, 430 North Salisbury Street
4325 Mail Service Center
Raleigh, NC 27699-4325

Re: NC Sustainable Energy Association's Request for Declaratory Ruling on Meaning of N.C.G.S. § 62-133.9 and NCUC Rule R8-67 and, If Necessary and Appropriate, a Rulemaking to Clarify NCUC Rule R8-67 (NCUC Docket No. E-100, Sub 113).

Honorable Chairman and Commissioners,

I am Dr. Stephen Terry, Research Assistant Professor and Director of MAE Energy Solutions, a part of North Carolina State University's Mechanical & Aerospace Engineering Department. Energy Solutions provides unbiased energy technical assistance to North Carolina manufacturers and institutions. We have been in operation for over 20 years and have assessed over 1,000 facilities.

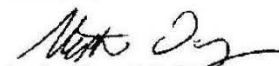
I understand that the NC Sustainable Energy Association is requesting the Commission clarify that new topping cycle combined heat and power (CHP) systems qualify as energy efficiency measure under North Carolina law. Our group cannot directly support legislation or lobby for a particular point of view. However, we can support the science behind the intent.

It is entirely reasonable for topping cycle CHP systems to qualify as an energy efficiency measure. The process of using fuel to generate electricity, then using the considerable quantity of remaining heat for useful purposes is a more efficient process than wasting it, as large utilities must do now. This reduces the overall need to burn fossil fuels and increases the overall fuel energy utilization percentage from in the range of 35% to 60% or more.

One of the goals of the REPS law is to increase energy efficiency, by supporting measures such as improved lighting, higher efficiency HVAC units, and improved process equipment. Topping cycles reduce fuel energy use, thereby reducing harmful emissions and CO₂ production.

If you have any questions, please do not hesitate to contact me.

Thank you,


Stephen Terry, PhD, PE
Research Assistant Professor

May 23, 2015



Chief Clerk
North Carolina Utilities Commission
Dobbs Building
430 North Salisbury Street
4325 Mail Service Center
Raleigh, NC 27699-4325

Re: NC Sustainable Energy Association's Request for Declaratory Ruling on Meaning of
N.C.G.S. § 62-133.9 and NCUC Rule R8-67 and, If Necessary and Appropriate, a
Rulemaking to Clarify NCUC Rule R8-67 (NCUC Docket No. E-100, Sub 113).

Honorable Chairman and Commissioners,

I am Justin Sharp, Business Development Manager at Nixon Energy Solutions located in Charlotte. Nixon is a distributor of Kohler and GE gas engines for electricity generation.

I understand that the NC Sustainable Energy Association is requesting the Commission clarify that new topping cycle combined heat and power (CHP) systems qualify as energy efficiency measures under North Carolina law.

I believe it is important for the Commission to address this question. Having participated in formal and informal CHP working group discussions, I believe NC Sustainable Energy Association's position that new topping cycle CHP systems can qualify as an energy efficiency measure is reasonable and practical. I also believe that, if the Commission clarifies that topping cycle CHP systems can qualify, it would be appropriate to establish some clear eligibility guidelines to ensure there is no "gaming" of the process.

If you have any questions, please do not hesitate to contact me.

Thank you,

A handwritten signature in black ink that reads 'Justin Sharp'. The signature is written in a cursive, flowing style.

Justin Sharp



College of Engineering
N.C. Clean Energy Technology Center
Campus Box 7409
Raleigh, NC 27695-7401
919.515.3480 (P)
www.nccleantech.ncsu.edu

June 1, 2015

Chief Clerk
North Carolina Utilities Commission
Dobbs Building
430 North Salisbury Street
4325 Mail Service Center
Raleigh, NC 27699-4325

Re: NC Sustainable Energy Association's Request for Declaratory Ruling on Meaning of N.C.G.S. § 62-133.9 and NCUC Rule R8-67 and, If Necessary and Appropriate, a Rulemaking to Clarify NCUC Rule R8-67 (NCUC Docket No. E-100, Sub 113).

Honorable Chairman and Commissioners,

I am Stephen Kalland, Executive Director of the North Carolina Clean Energy Technology Center (NCCETC) located at NC State University. NCCETC is a UNC System-chartered Public Service Center administered by the College of Engineering at North Carolina State University. Its mission is to advance a sustainable energy economy by educating, demonstrating and providing support for clean energy technologies, practices, and policies.

Amongst the programs of NCCETC is the U.S. DOE Southeast CHP Technical Assistance Partnership (CHP TAP). The Southeast CHP TAP promotes and assists in transforming the market for combined heat and power, including waste heat to power and district energy, throughout the U.S. The Southeast CHP TAP works in ten states: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee.

Highlighting the benefits of CHP as an energy resource, Presidential Executive Order 13624 established a national goal of 40 gigawatts of new CHP capacity by 2020. The Southeast CHP TAP is helping to reach this goal by identifying, facilitating, and supporting clean, efficient, and cost-effective CHP projects in industrial, commercial, and institutional sectors.

I understand that the NC Sustainable Energy Association is requesting the Commission clarify that new topping cycle combined heat and power (CHP) systems qualify as energy efficiency measures under North Carolina law.

I believe it is important for the Commission to address this question. Since NCCETC has participated in formal and informal CHP working group discussions, I believe NC Sustainable Energy Association's position that new topping cycle CHP systems can qualify as an energy efficiency measure is reasonable and common-sense. I also believe that, if the Commission clarifies that topping cycle CHP systems can qualify, it would be appropriate to establish some clear eligibility guidelines to ensure there is no "gaming" of the process.

If you have any questions, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "S.S. Kalland".

Stephen S. Kalland
Executive Director

Wilson Engineering Services, PC
902 Market Street
Meadville, PA 16335
Office: (814) 337-8223



May 22, 2015

Chief Clerk
North Carolina Utilities Commission
Dobbs Building
430 North Salisbury Street
4325 Mail Service Center
Raleigh, NC 27699-4325

Re: NC Sustainable Energy Association's Request for Declaratory Ruling on Meaning of N.C.G.S. § 62-133.9 and NCUC Rule R8-67 and, If Necessary and Appropriate, a Rulemaking to Clarify NCUC Rule R8-67 (NCUC Docket No. E-100, Sub 113).

Honorable Chairman and Commissioners,

I am Dan Wilson, Vice President at Wilson Engineering Services, PC located in Charlotte, NC. WES is an engineering design and consulting firm specializing in energy efficiency / combined heat and power, renewable energy, and conventional energy project development.

I understand that the NC Sustainable Energy Association is requesting the Commission clarify that new topping cycle combined heat and power (CHP) systems qualify as energy efficiency measures under North Carolina law.

I believe it is important for the Commission to address this question. Having participated in formal and informal CHP working group discussions, I believe NC Sustainable Energy Association's position that new topping cycle CHP systems can qualify as an energy efficiency measure is more than reasonable. In fact, having read in detail the language in question, it appears to unambiguously intend inclusion of topping cycle CHP systems as an energy efficiency measure. I also believe that, if the Commission clarifies that topping cycle CHP systems can qualify, it would be appropriate to establish some clear eligibility guidelines to ensure there is no "gaming" of the process.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Wilson Engineering Services, PC

A handwritten signature in black ink, appearing to read "DAN", is written over a horizontal line.

Daniel A. Wilson, P.E.
Vice President

www.wilsonengineeringservices.com



**NC SUSTAINABLE
ENERGY ASSOCIATION**

15 copies

June 18, 2015

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FILED

JUN 18 2015

**Clerk's Office
N.C. Utilities Commission**

Chief Clerk
North Carolina Utilities Commission
Dobbs Building
430 North Salisbury Street
4325 Mail Service Center
Raleigh, NC 27699-4325

**Re: Letters Related to NCSEA's 1 June 2015 Requests
(Docket No. E-100, Sub 113)**

Dear Honorable Chief Clerk and Commissioners:

On 1 June 2015, NCSEA filed a Request for Declaratory Ruling in this proceeding.

To assure the Commission that NCSEA's request is representative of a diverse spectrum of stakeholders, on 2 June 2015 NCSEA compiled and filed six letters from business and academic interests.¹ NCSEA now supplements its earlier compilation with the letters attached hereto. The table below lists the additional letters' authors and the organizations they represent.

Organization	Author
Alliance for Industrial Efficiency, The	Jennifer Kefer, Director
American Council for an Energy-Efficiency Economy (ACEEE)	R. Neal Elliott, Ph. D., P.E. Associate Director for Research
Institute for Industrial Productivity (IIP), The	Bruce A. Hedman, Technical Director

The table below lists the letters' authors and the organizations they represent that have been filed thus far.

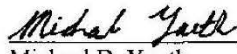
Organization	Author
Alliance for Industrial Efficiency, The	Jennifer Kefer, Director
American Council for an Energy-Efficiency Economy (ACEEE)	R. Neal Elliott, Ph. D., P.E. Associate Director for Research
Broad U.S.A, Inc.	Doug Davis, Director Broad USA
Institute for Industrial Productivity (IIP), The	Bruce A. Hedman, Technical Director
Kestava Energy Management, LLC	Keith McAllister, President
MAE Energy Solutions at NC State University	Dr. Stephen Terry, Research Assistant Professor and Director
Nixon Energy Solutions	Justin Sharp, Business Development Manager
North Carolina Clean Energy Technology Center	Stephen S. Kalland, Executive Director

¹ Some or all of these letters may have been filed independently by their authors. NCSEA compiles and submits these letters under this cover letter for ease of access and reference.

(NCCETC) at NC State University	
Wilson Engineering Services, PC	Dan Wilson, Vice President

If you have any questions, please do not hesitate to contact me.

Respectfully submitted,

 *by Roger Lee Hunt*
Michael D. Youth
Counsel for NCSEA
N.C. State Bar No. 29533
4800 Six Forks Rd., Suite 300
Raleigh, NC 27609
(919) 832-7601 Ext. 118
michael@energync.org

The Alliance for Industrial Efficiency

OFFICIAL COPY

Sep 09 2016

June 17, 2015

Chief Clerk
North Carolina Utilities Commission
Dobbs Building
430 North Salisbury Street
4325 Mail Service Center
Raleigh, NC 2769904325

Re: NC Sustainable Energy Association's Request for Declaratory Ruling on Meaning of N.C.G.S. § 62-133.9 and NCUC Rule R8-67 and, If Necessary and Appropriate, a Rulemaking to Clarify NCUC Rule R8-67 (NCUC Docket No. E-100, Sub 113).

Honorable Chairman and Commissioners,

The Alliance for Industrial Efficiency is writing to express its support for the North Carolina Sustainable Energy Association's (NCSEA) request that the Commission issue a ruling affirming that new topping cycle combined heat and power (CHP) system does indeed qualify as an "energy efficiency measure" under North Carolina law. States as diverse as Massachusetts, Connecticut, Maryland, Illinois and Ohio have specifically included topping cycle CHP as eligible technologies in their energy efficiency programs and established policies to promote its adoption.

The Alliance is a diverse coalition representing the business, environmental, labor, and contractor communities and is committed to enhancing manufacturing competitiveness, reducing emissions, and improving electric reliability through the use of combined heat and power (CHP) and waste heat to power (WHP). Our national membership includes electrical and sheet metal contractors, including more than 20 contractors and businesses based in North Carolina alone. Among these are Stromberg Metal Works in Raleigh, the largest sheet-metal firm in the country; McKenny's in Charlotte, the largest mechanical contracting firm on the East Coast; and K-Flex USSA, LLC in Youngsville. North Carolina currently has 72 CHP sites, generating 1,555 megawatts of clean and efficient power.¹ Additionally, it is estimated that North Carolina has 4,402 megawatts of technical and commercial potential.²

¹ U.S. DOE Combined Heat and Power Installation Database, <https://doe.icfwebervices.com/chpdb/state/PA>.

² Bruce Hedman, Anne Hampson, and Ken Darrow, American Gas Association, *The Opportunity for CHP in the United States*, May 2013, https://www.aga.org/sites/default/files/legacy-assets/Kc/analyses-and-statistics/studies/efficiency_and_environment/Documents/The%20Opportunity%20for%20CHP%20in%20the%20United%20States%20-%20Final%20Report.pdf.

The Alliance believes that NCSEA's position that new topping cycle CHP systems ought to qualify as energy efficiency measures is a reasonable interpretation of the statute and that this ruling will have a beneficial impact on promoting energy-efficiency and cost savings for North Carolina's industrial and commercial sectors.

Sincerely,



Jennifer Kefer, Director
Alliance for Industrial Efficiency



525 14th Street, N.W., Suite 600 • Washington, D.C. 20045 • 202.527.4000 • 202.429.2248 • www.aceee.org

June 12, 2015

Chief Clerk
North Carolina Utilities Commission
Dobbs Building
430 North Salisbury Street
4325 Mail Service Center
Raleigh, NC 27699-4325

Re: NC Sustainable Energy Association's Request for Declaratory Ruling on Meaning of N.C.G.S. § 62-133.9 and NCUC Rule R8-67 and, If Necessary and Appropriate, a Rulemaking to Clarify NCUC Rule R8-67 (NCUC Docket No. E-100, Sub 113).

Honorable Chairman and Commissioners,

The American Council for an Energy-Efficient Economy (ACEEE) is a nonprofit, 501(c)(3) organization, that acts as a catalyst to advance energy efficiency policies, programs, technologies, investments, and behaviors. We believe that the United States can harness the full potential of energy efficiency to achieve greater economic prosperity, energy security, and environmental protection for all its people.

ACEEE supports the request made by the NC Sustainable Energy Association that seeks to have the Commission clarify that new, topping cycle combined heat and power (CHP) systems qualify as energy efficiency measures under North Carolina law. We believe it is important for the Commission to address this question. We believe NC Sustainable Energy Association's position that new topping cycle CHP systems can qualify as an energy efficiency measure is reasonable and logical reading of the statute. ACEEE also believes that the Commission should establish clear eligibility guidelines to ensure there is no "gaming" of the process.

ACEEE stands ready to respond to any questions regarding this request.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Neal Elliott", followed by a stylized flourish.

R. Neal Elliott, Ph.D., P.E.
Associate Director for Research



Sharing best practices
for the low carbon

ipnetwork.org

June 16, 2015

Chief Clerk
North Carolina Utilities Commission
Dobbs Building
430 North Salisbury Street
4325 Mail Service Center
Raleigh, NC 27699-4325

Re: NC Sustainable Energy Association's Request for Declaratory Ruling on Meaning of N.C.G.S. § 62-133.9 and NCUC Rule R8-67 and, If Necessary and Appropriate, a Rulemaking to Clarify NCUC Rule R8-67 (NCUC Docket No. E-100, Sub 113).

Honorable Chairman and Commissioners,

The Institute for Industrial Productivity (IIP) is an independent nonprofit, 501(c)(3) organization whose role is to accelerate the adoption of energy efficiency in industry and increase industrial productivity in an effort to cost-effectively reduce greenhouse gas emissions. We provide technical expertise and advice on best practices for industrial efficiency technologies and policies, and work at both national and local levels to promote energy efficiency policies and practices that foster economic growth, enhance energy security and protect the environment.

IIP supports the request made by the NC Sustainable Energy Association that seeks to have the Commission clarify that new, topping cycle combined heat and power (CHP) systems qualify as energy efficiency measures under North Carolina law. Topping cycle CHP is now recognized as an important energy efficiency measure across the nation. In 2012, President Obama issued an Executive Order establishing a national goal of 40 GW of new, cost effective CHP to be installed by 2020 to "improve the competitiveness of United States manufacturing, lower energy costs, free up future capital for businesses to invest, reduce air pollution, and create jobs". States as diverse as Massachusetts, Connecticut, Maryland, Illinois and Ohio have specifically included topping cycle CHP as eligible technologies in their energy efficiency programs and established policies to promote its adoption.

We believe NC Sustainable Energy Association's position that new topping cycle CHP systems can qualify as an energy efficiency measure is a reasonable and logical reading of the statute, and that it is important for the Commission to address this question to ensure that CHP can serve as an efficient, cost effective resource for North Carolina.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Bruce A. Hedman".

Bruce A. Hedman
Technical Director

Washington, D.C. Office
1615 M Street, NW
Suite 280
Washington, DC 20036 USA
India

Beijing Office
CTFC Building, Room 26 A
No.19, Jianguomenwai Dajie
Beijing, P.R. China 100004

New Delhi Office
S-212, 2nd Floor
Panchsheel Park
New Delhi – 110 017,

SOUTHERN ENVIRONMENTAL LAW CENTER

Telephone 919-967-1450

601 WEST ROSEMARY STREET, SUITE 220
CHAPEL HILL, NC 27516-2356

Facsimile 919-929-9421

July 22, 2015

Via Electronic Filing

Ms. Gail Mount
Chief Clerk
North Carolina Utilities Commission
430 North Salisbury Street
Dobbs Building
Raleigh, NC 27603-5918

Re: NCSEA's Request for Declaratory Ruling
Docket No. E-100, Sub 113

Honorable Clerk and Commissioners:

I write on behalf of intervenor Southern Alliance for Clean Energy ("SACE") to express support for the Request for Declaratory Ruling filed by the North Carolina Sustainable Energy Association ("NCSEA") in the above-referenced docket on June 1, 2015, in which NCSEA requests that the Commission issue a ruling clarifying that a new topping-cycle combined heat and power ("CHP") qualifies as an energy efficiency measure under North Carolina law.

First, NCSEA's request makes sense from a technical standpoint. A topping-cycle CHP system is a system in which the "waste" heat from generation of electricity or mechanical power at an industrial site is recovered to provide process heat, hot water or heating/cooling for the site. In contrast, in a bottoming-cycle CHP system, "waste" heat from the industrial process is recovered and used for power production at the site. As NCSEA correctly explains, most of the CHP systems installed in North Carolina are topping cycle CHP systems, and these represent the vast majority of technical potential for CHP. Clarifying that North Carolina law defines energy efficiency to include both types of CHP systems is consistent with achieving the optimal level of energy savings and economic benefits.

Second, NCSEA's request comports with North Carolina law. Currently, according to NCSEA, it appears that NCSEA, Duke Energy Carolinas ("DEC") and the Public Staff differ in their understanding of the relevant law as it relates to new topping-cycle CHP systems. N.C. Gen. Stat. § 62-133.8(a)(4) defines "energy efficiency measure" to include "energy produced from a combined heat and power system that uses nonrenewable energy resources." N.C. Gen. Stat. § 62-133.8(a)(1), in turn, defines "combined heat and power system" as "a system that uses waste heat to produce electricity or useful, measurable thermal or mechanical energy at a retail electric

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customer's facility." The definition embraces both bottoming-cycle CHP (which uses waste heat to produce electricity) and topping-cycle CHP (which uses waste heat to produce thermal energy). NCSEA asserts, based on DEC's Non-residential Smart Saver tariff, that DEC believes that only the waste heat recovery components of a topping-cycle CHP system, and not the electric generation component, is considered an energy efficiency measure that is eligible for customer incentives. This interpretation, however, ignores both the plain language of the definition of "combined heat and power system" as well as the definition's focus on CHP as a "system" rather than an assemblage of components. Based on the statutory language, a topping-cycle CHP system should be considered an "energy efficiency measure."

Finally, NCSEA's request is consistent with sound public policy. The energy-intensive industrial sector represents a large pool of untapped energy efficiency potential. Clarifying that topping-cycle CHP is eligible for customer incentives would allow electric utilities to offer energy efficiency programs that attract and retain industrial customers, allowing those customers to enhance their competitiveness and lowering costs for all customers. To the extent the Commission is concerned with customers "gaming" incentive programs, it could put in place regulatory safeguards designed to ensure that new topping-cycle CHP systems are bona fide energy efficiency measures, as suggested by NCSEA.

In conclusion, SACE respectfully requests that the Commission grant NCSEA's request, and declare that a new topping-cycle CHP system constitutes an "energy efficiency measure" for purposes of N.C. Gen. Stat. § 62-133.9 and Commission Rule R8-67.

Sincerely,

s/ Gudrun Thompson

cc: Parties of Record

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**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. E-100, SUB 113

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of
Rulemaking Proceeding to Implement)
Session Law 2007-397) ORDER REQUESTING COMMENTS

BY THE CHAIRMAN: On June 1, 2015, as amended June 2, 2015, and June 18, 2015, the North Carolina Sustainable Energy Association (NCSEA) filed a Request for Declaratory Ruling on Meaning of [G.S.] 62-133.9 and NCUC Rule R8-67 and, if Necessary and Appropriate, a Rulemaking to Clarify NCUC Rule R8-67 (Request) in the above-captioned docket. In summary, NCSEA requests that the Commission issue a declaratory ruling that:

A new topping cycle combined heat and power ("CHP") system - including such a system that uses nonrenewable energy resources – that both (a) produces electricity or useful, measureable thermal or mechanical energy at a retail electric customer's facility and (b) results in less energy being used to perform the same function or provide the same level of service at the retail electric customer's facility constitutes an "energy efficiency measure" for purposes of [G.S.] 62-133.9 and Commission Rule R8-67.

In addition, if necessary, NCSEA requests that the Commission issue a complimentary declaratory ruling that:

It is inconsistent with the clear and unambiguous language of [G.S.] 62-133.8 and 62-133.9 to recognize only the heat recovery component of a new topping cycle CHP system as an "energy efficiency measure."

Finally, NCSEA requests, in the event that one or both of the requested declaratory rulings are issued, that the Commission initiate a rulemaking to make clarifying changes to Commission Rule R8-67.

Based on the foregoing and the record, the Chairman is of the opinion that there is good cause to request comments from all interested parties regarding NCSEA's Request. Additionally, the Chairman requests the commenting parties to address whether an actual dispute exists between a CHP operator and an electric utility or whether NCSEA's petition is more in the nature of an advisory opinion; if the latter, whether a justiciable controversy exists under the Declaratory Judgment Act.

IT IS, THEREFORE, ORDERED as follows:

1. That on or before September 30, 2015, all parties may file initial comments.
2. That on or before October 15, 2015, all parties may file reply comments.

ISSUED BY ORDER OF THE COMMISSION.

This the 13th day of August, 2015.

NORTH CAROLINA UTILITIES COMMISSION

A handwritten signature in black ink, appearing to read "Jackie Cox", written over the printed name.

Jackie Cox, Deputy Clerk

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FILED

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION
DOCKET NO. E-100, SUB 113

AUG 24 2015

Clerk's Office
N.C. Utilities Commission

In the Matter of:
Requests for Declaratory Ruling and,
if Necessary and Appropriate, a
Rulemaking by the North Carolina
Sustainable Energy Association

)
) REQUESTS FOR DECLARATORY
) RULING ON MEANING OF
) N.C.G.S. § 62-133.9 AND NCUC
) RULE R8-67 AND, IF NECESS-
) ARY AND APPROPRIATE, A
) RULEMAKING TO CLARIFY
) NCUC RULE R8-67
)

NCSEA'S INITIAL COMMENTS ON JURISDICTION

The North Carolina Sustainable Energy Association ("NCSEA") submits the following initial comments on the jurisdictional question posed by the North Carolina Utilities Commission ("Commission") in its 13 August 2015 *Order Requesting Comments*; specifically, NCSEA's comments respond to the Chairman's request that "the commenting parties ... address whether an actual dispute exists between a CHP operator and an electric utility or whether NCSEA's petition is more in the nature of an advisory opinion; [and,] if the latter, whether a justiciable controversy exists under the Declaratory Judgment Act."

The Commission should exercise jurisdiction over this matter for the reasons set forth herein.

First, it is well-established that the Commission serves both in a quasi-legislative capacity, see N.C. Gen. Stat. §§ 62-23 and 62-31,¹ and in a quasi-judicial capacity. See N.C. Gen. Stat. §§ 62-23 and 62-60. NCSEA understands the Chairman may have read

¹ "Rule making is ... an exercise of the delegated legislative authority of the Commission, under G.S. 62-30 and G.S. 62-31, to supervise and control the public utilities of this State and to make reasonable rules and regulations to accomplish that end." State ex rel. Utilities Com. v. Edmisten, 294 N.C. 598, 603, 242 S.E.2d 862, 866 (1978).

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NCSEA's petition to invite the Commission to act *solely* under its quasi-judicial authority. If NCSEA's petition sought to proceed solely under the Declaratory Judgment Act, then the Chairman's jurisdictional inquiry would present a dispositive threshold question. However, any such appearance was not intended; NCSEA intended to invite the Commission to act under its quasi-judicial authority *or* its quasi-legislative authority *or* both. The best evidence that NCSEA did not intend to invoke only the Commission's quasi-judicial authority consists of the twin facts that (a) NCSEA invoked, in ¶ 4 of the petition, the Commission's quasi-legislative rulemaking authority and (b) NCSEA filed the petition in Docket No. E-100, Sub 113 – a rulemaking docket that has been dedicated primarily to quasi-legislative proceedings aimed at clarifying some of the very statutes at issue in NCSEA's petition.

Next, even if NCSEA's intent to invoke both the Commission's quasi-judicial and quasi-legislative authority is not clearly evidenced by the petition and the manner of its filing, the Commission should – in light of the twin facts cited above and these initial comments – nonetheless liberally construe the petition to invoke both the Commission's quasi-judicial *and* quasi-legislative authority. As the North Carolina Supreme Court has explained,

the procedure before the Commission is more or less informal, and is not as strict as in superior court, nor is it confined by technical rules; substance and not form is controlling. ... Great liberality is indulged in pleadings in proceedings before the Commission, and the technical and strict rules of pleading applicable in ordinary court proceedings do not apply. ... Such liberality and informality is essential to the workings of the Commission. In a real sense regulation of public utilities is a continuing and continuous process as to each utility, in order that regulation may be consistent with changing conditions. To bind the Commission strictly by matters pleaded might well hamper its work to the point of ineffectiveness.

State ex rel. Utilities Com. v. Carolinas Committee for Industrial Power Rates, etc., 257 N.C. 560, 569, 126 S.E.2d 325, 332 (1962) (internal citations omitted); see State ex rel. Utilities Com. v. Carolina Tel. & Tel. Co., 267 N.C. 257, 269, 148 S.E.2d 100, 109 (1966); State ex rel. North Carolina Utilities Com. v. Western Carolina Tel. Co., 260 N.C. 369, 375, 132 S.E.2d 873, 877 (1963); see also State ex rel. Utilities Com. v. M. L. Hatcher Pickup & Delivery Services, Inc., 48 N.C. App. 115, 119, 268 S.E.2d 851, 854 (1980).

Finally, if NCSEA's petition is construed to have invited the Commission to exercise both its quasi-judicial and quasi-legislative authority in this matter (as it should be), NCSEA believes the Commission should, at a minimum, exercise its quasi-legislative authority even if it should conclude it lacks quasi-judicial authority. The Commission should elect to exercise its quasi-legislative authority for at least two reasons:

- First, NCSEA's petition reflects general stakeholder sentiment – arrived at over the course of more than two years of discussions running through Duke Energy Carolinas, Inc.'s ("DEC") "Save-a-Watt 2" proceeding, see generally Commission Docket No. E-7, Sub 1032; through DEC's collaborative meetings, see, e.g., Commission Docket No. E-7, Sub 1050 (the testimony of Isaac Panzarella); and, finally, through a smaller offshoot stakeholder process, see Exhibit A at 1 – that Commission intervention is required to achieve clarity on this issue of first impression. Thus, for example, on 29 May 2015, the Public Staff's attorney communicated that the Public Staff "do[es] support getting the issue before the Commission for resolution," Exhibit A at 3; and, on the same

day, DEC's attorney communicated that DEC "envisioned ... presenting the issue to the Commission for clarification with the opportunity for the parties to articulate their own respective positions in comments." Exhibit A at 6.

- Second, having been apprised by NCSEA that the stakeholders see a need for Commission intervention, the Commission should feel compelled to assume the initiative and exercise its rulemaking authority to provide clarity. Each Commissioner has sworn an "oath of office to support the ... laws of the State of North Carolina[.]" N.C. Gen. Stat. § 62-11. The laws of the State set out that it is the policy of the State to (A) "promote the development of ... energy efficiency . . . that will . . . [d]iversify the resources used to reliably meet the energy needs of consumers in the State . . . [and e]ncourage private investment in . . . energy efficiency[.]" N.C. Gen. Stat. § 62-2(a)(10), and (B) "conserve energy through efficient utilization of all resources." N.C. Gen. Stat. § 62-155(a). The laws of the State further set out that the Commission "shall assume the initiative in performing its duties and responsibilities in securing to the people of the State an efficient and economic system of public utilities[.]" N.C. Gen. Stat. § 62-23, and also that the Commission "shall adopt rules to implement . . . section [62-133.9]." N.C. Gen. Stat. § 62-133.9(h).

In sum, where (a) North Carolina's appellate courts have directed the Commission to liberally construe pleadings, (b) multiple parties have engaged in multiple discussions over more than two years without achieving consensus as to a statute's meaning, and (c) the Commission has been legislatively charged with "assum[ing] the initiative in . . . securing to the people of the State an efficient ... system of public utilities[.]" NCSEA

submits that even if the Commission lacks jurisdiction under the Declaratory Judgment Act,² the Commission nonetheless has jurisdiction and should exercise that jurisdiction to take the initiative in clarifying the issue being presented to it in NCSEA's petition.

Respectfully submitted,

Michael D. Youth
Counsel for NCSEA
N.C. State Bar No. 29583
4800 Six Forks Rd., Suite 800
Raleigh, NC 27609
(919) 832-7601 Ext. 118
michael@energync.org

² To be clear, NCSEA does not concede that the Commission lacks jurisdiction under the Declaratory Judgment Act. NCSEA is a member-based association with both business and individual members whose "zone of [environmental and economic] interests" extend to laws and regulations that enable or inhibit implementation of energy efficiency measures in the State. As the U.S. Supreme Court has opined,

[a]n association has standing to bring suit on behalf of its members when its members would otherwise have standing to sue in their own right, the interests at stake are germane to the organization's purpose, and neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit.

Friends of the Earth, Inc. v. Laidlaw Envtl. Servs. (TOC), Inc., 528 U.S. 167, 180-181 (2000) (citing Hunt v. Washington State Apple Advertising Comm'n, 432 U.S. 333, 343 (1977)). The lack of stakeholder consensus and the apparent positions of DEC and the Public Staff, see Exhibit A at 3, 6, present a significant enough hurdle to implementation of topping cycle CHP to constitute an injury in fact that is concrete and particularized and actual or imminent, not conjectural or hypothetical, and likely to be redressed by a favorable decision. See Friends of the Earth, Inc., 528 U.S. at 180-181. While NCSEA does not concede that the Commission lacks jurisdiction under the Declaratory Judgment Act (for the reasons touched on above), NCSEA hopes to achieve economic use of the Commission's and parties' time and resources and therefore focuses in these comments on an alternate basis for jurisdiction that is beyond dispute.

EXHIBIT A

NCSEA Mail - RE: CHP Working Group Meeting

Page 1 of 2



Youth, Michael <michael@energync.org>

RE: CHP Working Group Meeting

Duff, Tim <Tim.Duff@duke-energy.com>

Thu, Mar 26, 2015 at 3:49 PM

To: "ipanzar@ncsu.edu" <ipanzar@ncsu.edu>, "keith@kestavaenergy.com" <keith@kestavaenergy.com>, "dwilson@wilsonengineeringservices.com" <dwilson@wilsonengineeringservices.com>, "david.nestor@piedmontng.com" <david.nestor@piedmontng.com>, "Joseph.seymour@biomassthermal.org" <joseph.seymour@biomassthermal.org>, "jsharp@nixonpower.com" <jsharp@nixonpower.com>, "KODonnell@novaenergyconsultants.com" <KODonnell@novaenergyconsultants.com>, "Barner, Philip - energy.unc" <philip.barner@energy.unc.edu>, "Kacey@energync.org" <Kacey@energync.org>, "michael@energync.org" <michael@energync.org>, "McIntosh, Molly L. (Molly.McIntosh@troutmansanders.com)" <Molly.McIntosh@troutmansanders.com>, "Gordon, Cory C" <Cory.Gordon@duke-energy.com>, "Cook Jr, Robbie K" <Robbie.Cook@duke-energy.com>, "Barnes, Conitsha B" <Conitsha.Barnes@duke-energy.com>, "Kuznar, Zachary" <Zachary.Kuznar@duke-energy.com>, "Evans, Bob" <Bob.Evans@duke-energy.com>
Cc: "Franklin, Brian L" <Brian.Franklin@duke-energy.com>, "Edge, Chris" <Chris.Edge@duke-energy.com>, "Jack.floyd@psncuc.nc.gov" <jack.floyd@psncuc.nc.gov>, "Ishafer@regstaff.sc.gov" <Ishafer@regstaff.sc.gov>, Achyut Shrestha <abshrest@ncsu.edu>

Hello everyone,

First, I want to thank you all again for taking time out of your busy schedules to participate in yesterday's meeting and I hope that you found the discussion to be as valuable and beneficial like I did. As you recall, we left the meeting with the following conclusions:

1. Each member needed to caucus with its legal counsel to discuss the potential to seek Commission clarification regarding the statutory definition of CHP as energy efficiency and whether topping cycle CHP would qualify.
1. If clarification was given regarding the eligibility of topping cycle CHP as EE, Duke would quickly seek to modify its existing tariff language to include topping cycle CHP
1. If after a period of time, customers do not seem to be participating in the custom program, Duke will work with parties to develop a Prescriptive CHP Pilot.

The next order of business is to get back together again to discuss the results of the caucusing of the various members with their counsel, and see what if any approach could be utilized to seek clarification.

I am not sure if a face to face meeting is required, but I thought that perhaps the morning of April 2, or April 17th could work?

Please let me know your availability and whether you want me to reserve a conference room again in Raleigh or Charlotte.

Thanks again,
Tim

Tim Duff
GM MSRS&E
Office 704-382-6370

NCSEA Exhibit A

<https://mail.google.com/mail/u/0/?ui=2&ik=c3f417698c&view=pt&cat=CHP%20Topping...> 8/17/2015

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NCSEA Mail - RE: CHP Working Group Meeting

Page 2 of 2

Cell 704-975-9083
tim.duff@duke-energy.com
Duke Energy

-----Original Appointment-----

From: Duff, Tim

Sent: Tuesday, March 03, 2015 4:40 PM

To: Duff, Tim; 'lpanzar@ncsu.edu'; 'keith@kestavaenergy.com';
'dwilson@wilsonengineeringservices.com'; 'david.nestor@piedmontng.com';
'joseph.seymour@biomassthermal.org'; 'jsharp@nixonpower.com';
'KODonnell@novaenergyconsultants.com'; Barner, Philip - energy.unc; 'Kacey@energync.org';
'michael@energync.org'; McIntosh, Molly L. (Molly.McIntosh@troutmansanders.com); Gordon, Cory C;
Cook Jr, Robbie K; Barnes, Conitsha B; Kuznar, Zachary; Evans, Bob
Cc: Franklin, Brian L; Edge, Chris; 'jack.floyd@psncuc.nc.gov'; 'lshafer@regstaff.sc.gov'; 'Achyut Shrestha'
Subject: CHP Working Group Meeting
When: Tuesday, March 24, 2015 1:00 PM-3:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Conference Room 1662, 411 Fayetteville Street, Raleigh NC or Conference Line 1-866-385-2663
Code 314195

Hello everyone,

This meeting is to inform you that Duke will be conducting its first meeting of a CHP Working Group. This group will be looking at and evaluating the potential development of a CHP EE Pilot Program to supplement the existing capability currently available through the Non-Residential Custom Program.

Prior to the meeting, I will be working with Kacey Hoover to develop the agenda for the meeting, but wanted to get this on Calendars.

Thanks,
Tim

NCSEA Exhibit A

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NCSEA Mail - Topping Cycle CHP filing

Page 1 of 3



Youth, Michael <michael@energync.org>

Topping Cycle CHP filing

Edmondson, Lucy <lucy.edmondson@psncuc.nc.gov>
To: "Youth, Michael" <michael@energync.org>
Cc: "Drooz, David T" <david.drooz@psncuc.nc.gov>

Fri, May 29, 2015 at 11:29 AM

Michael:

I wanted to make sure that the Public Staff had conveyed that our view of whether topping cycle CHP could be considered EE appears to differ from your view, but that we do support getting the issue before the Commission for resolution. Additionally, we think your proposed filing lays out the matter appropriately.

Thanks,

Lucy

Thanks,

Lucy

Lucy E. Edmondson

Staff Attorney

State of North Carolina

Public Staff- North Carolina Utilities Commission

Mailing Address:

Street Address:

4326 Mail Service Center Dobbs Bldg., 430 N. Salisbury St.

Raleigh, NC 27699-4326

Raleigh, NC 27601

(office) 919.733.6110

(fax) 919.733.9565

lucy.edmondson@psncuc.nc.gov

From: Youth, Michael [mailto:michael@energync.org]

Sent: Friday, May 29, 2015 8:40 AM

NCSEA Exhibit A

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NCSEA Mail - Topping Cycle CHP filing

Page 2 of 3

To: Duff, Tim; McIntosh, Molly L.
Cc: Edmondson, Lucy
Subject: Topping Cycle CHP filing

Tim,

Last week you indicated DEC might be sending some suggestions on NCSEA's proposed filing. Are you still planning to send thoughts?

(I ask because we've been indicating to interested third parties that we are aiming to file something on June 1, which is Monday.)

Thanks in advance for any feedback/thoughts.

Michael

Michael D. Youth
Counsel & Director of Regulatory Affairs
NC Sustainable Energy Association
4800 Six Forks Rd, Suite 300
Raleigh, NC 27609
Phone: (919) 832-7601 ext. 118
Email: michael@energync.org

The NC Sustainable Energy Association works to ensure a sustainable future by promoting renewable energy and energy efficiency to the benefit of North Carolina through education, public policy and economic development.

Individual and business membership sign-up information is available on our website: www.energync.org.
Your support is appreciated.

E-mail correspondence to and from this address may be subject to the North Carolina Public Records Law and may be disclosed to third parties by an authorized state official.

NCSEA Exhibit A

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NCSEA Mail - Topping Cycle CHP filing

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NCSEA Exhibit A

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NCSEA Mail - revised CHP filing

Page 1 of 2



Youth, Michael <michael@energync.org>

revised CHP filing

McIntosh, Molly L. <Molly.McIntosh@troutmansanders.com>

Fri, May 29, 2015 at 2:22 PM

To: "Duff, Tim" <Tim.Duff@duke-energy.com>, "Youth, Michael" <michael@energync.org>
Cc: "Franklin, Brian L" <Brian.Franklin@duke-energy.com>

Hi Michael,

Thank you for making a number of the revisions we suggested and softening some of the language we found objectionable. Given our discussion earlier, I don't think we will be able to resolve our differing views as to the purpose of this filing, which we had envisioned as simply presenting the issue to the Commission for clarification with the opportunity for the parties to articulate their own respective positions in comments. I don't know that any revisions we could suggest at this point will resolve this difference. Even though we are not 100% on the same page, we appreciate you listening to our concerns and running drafts by us in advance.

Thanks and have a great weekend!

Molly

From: Youth, Michael [mailto:michael@energync.org]
Sent: Friday, May 29, 2015 1:00 PM
To: McIntosh, Molly L.; Duff, Tim
Subject: revised CHP filing

Tim and Molly,

I changed the "collaborative decision to submit" heading and adopted the "analytics and cost effectiveness" language. Beyond that, I've tried to soften the assertions about DEC's position by using words like "apparent understanding" etc.

I don't think we're going to agree 100% on the language for this filing, but I hope this evidences that I am trying to be responsive and yet still zealously advocate for my client.

NCSEA Exhibit A

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NCSEA Mail - revised CHP filing

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I am willing to consider further suggestions if you can get them to me in the next couple of hours (sorry for the time constraint, but I myself am dealing with internal and external time pressures).

Michael

Michael D. Youth
Counsel & Director of Regulatory Affairs
NC Sustainable Energy Association
4800 Six Forks Rd, Suite 300
Raleigh, NC 27609
Phone: (919) 832-7601 ext. 118
Email: michael@energync.org

The NC Sustainable Energy Association works to ensure a sustainable future by promoting renewable energy and energy efficiency to the benefit of North Carolina through education, public policy and economic development.

Individual and business membership sign-up information is available on our website: www.energync.org.
Your support is appreciated.

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