BEFORE THE NORTH CAROLINA UTILITIES COMMISSION
DOCKET NO. E-100, SUB 73

In the Matter of: Investigation of Changes Occurring in the Electric Utility Industry and the Regulatory and Policy Implications of Such Changes, Including Proposals for Innovative Rates and Mechanisms, and Proposed Interim Guidelines for Self-Generation Deferral Rates	**COMMENTS**

NCSEA'S COMMENTS

Introduction

On 21 January 2014, the North Carolina Utilities Commission ("Commission") issued an *Order Requesting Comments on Industrial Economic Recovery Riders* ("Order"), in Commission Docket No. E-100, Sub 73, calling for comments on job retention tariffs. The Commission indicated it would like to use comments received in this proceeding to "establish specific objectives for job retention tariffs and set the guidelines for eligibility, cost recovery, measurement of results and other parameters." Order at p. 2. In response to the Commission's Order, the North Carolina Sustainable Energy Association ("NCSEA") submits the following comments that focus on eligibility guidelines. NCSEA's comments make the following three recommendations:

1. Any guidelines established should require that a utility filing a job retention tariff include as part of the application a good faith estimate of any anticipated cost-shift and a quantification of expected benefits;
2. Any guidelines established should require that a utility filing a job retention tariff include as part of the application a statement indicating that the proposing utility

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has no reason to believe the tariff will not pass constitutional muster with regard to the dormant Commerce Clause; and

3. Any guidelines establish should prohibit a utility filing a job retention tariff from conditioning customer eligibility on submission of proof that a viable, lower cost renewable energy or energy efficiency alternative exists that demonstrates the customer could leave or reduce its usage of the utility's system.

Comments

1. **Any guidelines established should require that a utility filing a job retention tariff include as part of the application a good faith estimate of any anticipated cost-shift and a quantification of expected benefits.**

The Commission has already indicated that the "question of whether the Commission should approve [a job retention tariff] is largely a public policy issue requiring the Commission to balance the costs and benefits to [the proposing utility's various] ratepayers and arrive at a decision that promotes the public interest." *Order Granting General Rate Increase*, p. 110, Commission Docket No. E-2, Sub 1023 (30 May 2013). Given the Commission's task, any guidelines developed for job retention tariffs should include a requirement that tariffs submitted for Commission approval include, at a minimum, a good faith estimate of any anticipated cost-shift and a quantification of expected benefits. The good faith cost estimate should include the magnitude of any expected cost-shift, an identification and breakdown of the customer classes and/or rate schedules that will bear the burden of the cost-shift, and the timeframe over which the burden will persist. The quantification of expected benefits should likewise include the magnitude of any expected benefits, an identification and breakdown of the customer classes and/or rate schedules that will realize the benefits, and the

timeframe over which the benefits will be realized. An up-front good faith estimate of any anticipated cost-shift accompanied by a quantification of benefits will put the Commission, the Public Staff, and the public at large in the best position to evaluate whether the asserted benefits of the proposed tariff are worth the cost-shift and are therefore in the public interest.

a. Basis for NCSEA's Recommendation

Regardless of whether the mechanism is called an industrial economic recovery rider, a job retention tariff, or an economic development rider, it is almost certainly going to be a "mechanism[] that allow[s] certain customers to receive electricity at prices below the rates established by traditional embedded cost approaches, mainly for the purpose of retaining industrial load or attracting load with beneficial load characteristics." *Petition of the Public Staff for the Initiation of a Generic Proceeding and Consideration of Proposed Interim Guidelines*, p. 1, Commission Docket No. E-100, Sub 73 (22 April 1994). If certain customers are receiving electricity at below-cost rates, this means a "cost-shift" or "cross-subsidy" is likely occurring.

"[C]ross-subsidies exist throughout utility tariffs in support of various State policies. Economic development rates, such as that recently approved for Progress in Docket No. E-2, Sub 681, are but one example in which the Commission has determined that certain policy benefits outweigh the cost of cross-subsidies." *Order Amending Net Metering Policy*, p. 11 n. 3, Commission Docket No. E-100, Sub 83 (31 March 2009). A December 2004 *Fortnightly Magazine* article, entitled "Cross-Subsidies: Getting the Signals Right," contains the following amplification of the Commission's 2009 statement:

> The reason we have regulated utilities is to create cross-subsidies. The first rural customer did not have to pay the full cost of stringing transmission cables to the home, and a customer in an ice storm is not expected to pay overtime fees to the linemen reconnecting the system the next day. In all cases, the costs of such services are subsidized by other ratepayers. Indeed, the cross-subsidization concept is found throughout utility rates: From discounted rates to low-income families to systems benefits charges, there are huge swathes of customers who pay less than their full cost of service, thus being subsidized by other customers who pay more to make up the difference. We tolerate and encourage such rate setting out of the belief that the social benefits created by such subsidization outweigh the resulting economic inefficiency. In this context, one cannot logically claim that cross-subsidies are uniformly good or bad. They are put in place to achieve certain economic, social, and political ends. While we might disagree with the application of a particular cross-subsidy, our opposition is not based on the cross-subsidy, but rather on our judgment about the worthiness of those socio-political goals. To put it bluntly, one cannot be categorically opposed to cross-subsidies and categorically in favor of regulated utilities. The latter exists to provide the former. Since [regulated] utilities were founded to create cross-subsidies, it's not surprising to see an on-going creation and maintenance of cross-subsidies throughout electric rate structures. Many cross-subsidies receive little objection or notice from the general public, showing just how prevalent they are.

Exhibit A. The article goes on to list, generically, some common examples of cross-subsidies. North Carolina rates are no exception. Beyond incorporation of many of the common cross-subsidies listed in the article, North Carolina's rates include other less common cost-shifts as well.[1]

This Commission has indicated, quite appropriately, that "the presence of cross-subsidies alone is not dispositive." *Order Amending Net Metering Policy*, p. 11 n. 3, Commission Docket No. E-100, Sub 83 (31 March 2009). A cost-shift is only half of the story; the other half is the actual or expected "return on investment." Despite this, NCSEA has observed that, in the clean energy arena, purported cost-shifts are often portrayed as the whole story.

[1] A table identifying some of these cost-shifts is attached as **Exhibit B**.

For example, during a 7 January 2014 Joint Legislative Energy Policy Committee meeting, the President of Duke Energy Corporation's North Carolina operating companies made the following statement:

> [The] net metering customer is expecting to use the grid when they need it but the credited rate they pay does not fully cover their cost for the share for maintaining that infrastructure. The result is a shifting of cost from those who want solar panels to those who do not. In fact, unless we fix the rules, fixed income and low income customers, those who can least afford it, actually help pay for the solar panels of those who can afford to install them. . . . The cost burden for net metering shifts to households with fewer resources to spare and this has to change. . . . *We plan to ask the Utilities Commission to take a look at the rules around that metering in the state and to ensure those rules are fair to all our customers.*

(Emphasis added). To NCSEA's knowledge, Duke Energy Corporation has not publicly identified the magnitude of the purported cost-shift, nor is NCSEA aware of any attempt to publicly complement the identification of the alleged cost-shift with a quantification of any benefits representing actual or expected "return on investment."

Using the logic messaged in the statement above, Duke Energy Progress, Inc. ("DEP") would never have proposed and supported the Industrial Economic Recovery Rider ("Rider IER") in its last rate case, because the rider would have shifted costs from industrial customers to non-industrial customers, with the result being "that non-participating ratepayers would be charged $31 million a year for the five-year program ($150 million total) in direct subsidies to participating industrial customers." *Order Granting General Rate Increase*, p. 103, Commission Docket No. E-2, Sub 1023 (30 May 2013); *Affidavit of James Kennerly* attached hereto as **Exhibit C** (highlighting that non-participants ineligible for the Rider IER discount would have born shifted costs of **$89.1 million** through 2018, **$62.6 million** of which would have been borne solely by the residential class). Where only the cost-shift part of the story is communicated, the

Commission, the Public Staff and the general public are deprived of the "return on investment" part of the story. For example, if cost-shifts were all that mattered, the Commission would not have been presented with the argument of the Carolina Utility Customers Association, Inc. ("CUCA") that Rider IER presented an opportunity for significant "return on investment" because, in its absence, "residential and commercial rates would increase by 8.1% if [DEP's] industrial sales completely erode[,]" and because Rider IER, as proposed, "would be much less harmful to [non-participating] customers . . . than to pay a permanent 8.1% increase." *Order Granting General Rate Increase*, p. 101, Commission Docket No. E-2, Sub 1023 (30 May 2013). It is important that both sides of the story be told and evaluated.

NCSEA raises this issue, and makes the recommendation it is making, because it believes cost-shifts and actual or expected benefits should be considered as a package, not just in the context of a proposed job retention tariff, but also more generally in utility ratemaking. To the extent ratemaking is intended to balance a multitude of concerns and yield rates that are in the public interest, both near-term and longer-term, it seems fair that the Commission, the Public Staff, and the general public be apprised, in the simplest manner possible, of the various cost-shift and cross-subsidy implications in proposed rates so that they have a way to compare the various cost-shifts and weigh in on whether they find the actual or promised benefits of the cost-shifts to be worth the additional burden.

2. Any guidelines established should require that a utility filing a job retention tariff include as part of the application a statement indicating that the proposing utility has no reason to believe the tariff will not pass constitutional muster with regard to the dormant Commerce Clause.

Each job retention tariff filed for approval at the Commission should be accompanied by a statement indicating that the proposing utility believes the submission passes constitutional muster under the dormant Commerce Clause.

a. Basis for NCSEA's Recommendation

In a 1994 order, the Commission concluded as follows:

> By specifying that economic development rates are applicable to new load, at least for purposes of these guidelines, the Commission will leave unaddressed the issue of whether or not such rates should also be used to retain existing load. That question is probably more complex than should be dealt with in the guidelines contained in this Order, because it also involves retail wheeling, competition between utilities within the same state, etc.

Order Adopting Interim Guidelines for Economic Development Rates, p. 5, Commission Docket No. E-100, Sub 73 (28 November 1994). To the extent a job retention tariff, like a load retention tariff, implicates competition between jurisdictions, it could foreseeably involve interstate commerce in addition to competition within a state.

As the North Carolina Court of Appeals has explained:

> The United States Constitution expressly grants to Congress the power to "regulate [c]ommerce with foreign [n]ations, and among the several [s]tates[.]" "[T]he Commerce Clause is more than an affirmative grant of power; it has a negative sweep as well" in that "'by its own force' [it] prohibits certain state actions that interfere with interstate commerce." The United States Supreme Court has explained that the "dormant" Commerce Clause means that "[a] State is . . . precluded from taking any action which may fairly be deemed to have the effect of impeding the free flow of trade between States." . . . "Discrimination" for purposes of the dormant Commerce Clause is "differential treatment of in-state and out-of-state economic interests that benefits the former and burdens the latter."

> Thus, no state may "impose a tax which discriminates against interstate commerce . . . by providing a direct commercial advantage to local business." There are three ways in which a statute can discriminate against out-of-state interests: (1) it may be facially discriminatory; (2) it may have a discriminatory intent; or (3) it may discriminate in its practical effect.

DirecTV, Inc. v. State, 178 N.C. App. 659, 661-62, 632 S.E.2d 543, 546 (2006) (internal citations omitted). Job retention seems a goal that on its face is intended to provide a direct commercial advantage to local business.[2] Commission approval of a job retention tariff would likely constitute state action. As such, it seems worthwhile for each proposed job retention tariff submitted to the Commission for approval to be accompanied by a statement indicating that the proposing utility believes the submission passes constitutional muster under the dormant Commerce Clause.

3. Any guidelines established should prohibit a utility filing a job retention tariff from conditioning customer eligibility on submission of proof that a viable, lower cost renewable energy or energy efficiency alternative exists that demonstrates the customer could leave or reduce its usage of the utility's system.

The Commission should include in any guidelines a prohibition against conditioning customer eligibility for a job retention tariff on submission of proof that a viable, lower cost renewable energy or energy efficiency alternative exists that demonstrates the customer could leave or reduce its usage of the utility's system.

a. Basis for NCSEA's Recommendation

It is NCSEA's understanding that a job retention tariff is separate and distinct from a self-generation deferral tariff. It is also NCSEA's understanding that the policy

[2] By comparison, a mechanism aimed at attracting new load could be designed to be available both to existing in-state customers and to new out-of-state customers willing to relocate in the state and would not therefore present the same potential Constitutional infirmity.

goal of a job retention tariff would be to retain North Carolina jobs in the aggregate and not particularized jobs at one location or in one industry at the expense of jobs at another location or in another industry. The clean energy industry employs a large number of North Carolinians and any job retention tariff conditioned on choosing not to implement a renewable energy or energy efficiency alternative would be detrimental to aggregate employment numbers within the clean energy industry.

On 11 May 2012, Duke Energy Carolinas, LLC ("DEC") filed a pilot Economic Recovery Rider ("ERR") in Commission Docket No. E-7, Sub 1013. DEC proposed to make the rider available to customers who, *inter alia*, were able to provide "a letter demonstrating a viable, lower cost alternative energy option that demonstrates the Customer could leave the Company's system or reduce usage thereof[.]" This language concerned NCSEA and prompted a discussion between NCSEA and DEC as to the meaning of the criterion. While DEC ultimately withdrew ERR, it is NCSEA's understanding that DEC would have been willing to modify the criterion to require provision of "a letter demonstrating a viable, lower cost alternative energy option (excluding energy efficiency or renewable energy systems) that demonstrates the Customer could leave the Company's system or reduce usage thereof." To the extent Commission guidelines permit self-generation deferral as a criterion for eligibility for a job retention tariff, NCSEA recommends that energy efficiency and renewable energy systems be excluded from the consideration so that the job retention tariff does not induce clean energy job loss by discouraging customers from installing alternative energy systems, such as solar panels, or from installing energy efficiency measures.

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 Comments, together with any attachments, 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 21 day of February, 2014.

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EXHIBIT A

PUBLIC UTILITIES FORTNIGHTLY
ENERGY, MONEY, POWER
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CROSS-SUBSIDIES:

Should regulators care about the inefficiencies?

With the first wave of legislative utility deregulation largely complete, the bulk of market restructuring is now happening in the much less public, but just as important, realm of utility rate-making proceedings. Inside these proceedings, utility commissioners address the basic economic and contractual framework for electric utility services.

By setting the absolute rate and the rate structure under which electric service is provided, these proceedings affect all future capital allocation in the electric sector on both sides of the meter. Where the first wave of deregulation focused on wholesale power markets, this second deregulation wave directly affects retail markets. It is therefore critical that regulators carefully consider the long-term impacts of the proposed rates on the broader retail market.

Within these proceedings, commissions strive to avoid cross-subsidization of one ratepayer by another. Economic theory teaches that optimal economic efficiency occurs when costs and benefits are aligned, and thus cross-subsidization is widely considered a symptom of economic inefficiency to be avoided in utility rate design.

But is a dogmatic opposition to cross-subsidies appropriate? We argue that it is not. Step back in time for a moment and ask yourself a question: Why did society decide to create regulated utilities? Given the free-market, competition-friendly principles on which our economy is based, why did we decide years ago to grant monopoly rights to the electric, gas, airline, railroad, and telephone industries?

There are many answers to this question, but all ultimately derive from a belief that the benefits created by these utilities were too important to be left to the vagaries of a free market. Would a profit-seeking business electrify rural areas or expedite repair crews in the middle of an ice storm? In the early part of the last century, Samuel Insull convinced the Illinois state legislature they would not, and negotiated for his utility to guarantee service in exchange for a regulatory cap on profits. Other states rapidly followed, and today all utility regulators grapple with the same conundrum: how to respect the integrity of a for-profit, private business while at the same time ensuring that those businesses deliver the public benefits for which they

were created.

But look at the implication: The reason we have regulated utilities is to create cross-subsidies. The first rural customer did not have to pay the full cost of stringing transmission cables to the home, and a customer in an ice storm is not expected to pay overtime fees to the linemen reconnecting the system the next day. In all cases, the costs of such services are subsidized by other ratepayers. Indeed, the cross-subsidization concept is found throughout utility rates: From discounted rates to low-income families to systems benefits charges, there are huge swathes of customers who pay less than their full cost of service, thus being subsidized by other customers who pay more to make up the difference. We tolerate and encourage such rate setting out of the belief that the social benefits created by such subsidization outweigh the resulting economic inefficiency.

In this context, one cannot logically claim that cross-subsidies are uniformly good or bad. They are put in place to achieve certain economic, social, and political ends. While we might disagree with the application of a particular cross-subsidy, our opposition is based not on the cross-subsidy, but rather on our judgment about the worthiness of those socio-political goals. To put it bluntly, one cannot be categorically opposed to cross-subsidies and categorically in favor of regulated utilities. The latter exists to provide the former.

Since utilities were founded to create cross-subsidies, it's not surprising to see an on-going creation and maintenance of cross-subsidies throughout electric rate structures. Many cross-subsidies receive little objection or notice from the general public, showing just how prevalent they are. For example:

- **Geographic diversity within the same rate class.** Utility rates often cover all customers in large swaths of geography. Similar to postage stamps, the price of service is the same if the end-user is located in an urban center or rural county. The rates are constructed and applied without regard for the higher system costs in congested urban areas and higher maintenance costs in remote rural areas. Thus, low-cost, high-profit customers are implicitly subsidizing high-cost, low-profit customers.

- **No real-time prices.** With a few notable exceptions, users do not pay for the actual wholesale market price of generation but rather for the average costs over a year. While many users have divergent on- and off-peak rates, this is set in advance and does not have any direct bearing on the actual costs of service at any given time. Thus, consumers who demand more power during peak hours when only the most expensive generators are available (and line losses are at a maximum) are being directly subsidized by those who consume most of their power during shoulder or non-peak pricing periods.

- **System-benefits charges.** Many states have created system-benefits charges, assessed to all consumers so as to fund a variety of energy-efficiency and renewable-power projects. Many ratepayers contribute to these programs, but the select few who gain access to the funds realize the primary financial benefit.

- **Standby rates.** Standby rate proceedings for on-site generation are theoretically based on the costs *imposed by the generator on the grid*, but they *rarely, if ever*, take into account the benefits created for the grid by the generator (, reduction in grid congestion, reduced demand for power plant fuels, etc.). By ignoring one side of the ledger, these rates are guaranteed to overcompensate the regulated utility at the expense of the ratepayer with on-site generation.

- **Inter-class subsidization.** It is widely known that the profitability of commercial customers tends to be higher than residential or industrial rate classes, since commercial classes do not have the *political leverage of residential interest groups*, nor the financial leverage of large industrials that can self-generate and leave the system if rates get too high. Such differences imply a cross-subsidy among these rate classifications.

- **Intra-class subsidization.** Since all rate classes are devised from the average of many customers, there is necessarily a subsidization that exists between customers on either side of this average. This can create substantial cross-subsidization if the class encompasses a broad range of sub-segments that pay significantly different prices for similar utility services ().

So, are any of these existing cross-subsidies categorically bad? The answer ultimately depends on the answers to two questions:

1. Are the benefits created by the subsidy larger or smaller than the subsidy itself (e.g., does the presence of the subsidy create a macroeconomic benefit)?

2) Can the costs be better allocated to those who realize the benefits (, is the subsidy fair)?

These questions are easy to ask, but they can be intellectually and politically difficult to answer. Intellectually, how does one put a dollar value on the benefits of renewable energy? Politically, what level of rate support for low-income families is too high?

What the Industry Should Do

To help regulators address these issues in a more logically coherent and politically constructive way, we offer the following recommendations:

Recommendation #1

Consider a hierarchy of cross-subsidy value.

As has been demonstrated herein, there is no simple answer to the question of whether cross-subsidies are good or bad. However, there are a few cases where one can still be dogmatic. When first considering a potential for cross-subsidization, regulators should assess which of the following three categories the cross-subsidy

falls into, and they should respond accordingly.

1) **Beneficial cross-subsidies.** These cross-subsidies exist to create a value that would otherwise be missed by purely market-driven companies. These are easy to identify in theory but hard to pin down in practice. For example, while no one would argue that one should not provide lower-cost electricity to low-income customers, reasonable people might disagree about the best mechanism to achieve those goals. Other examples of such cross-subsidies include system benefits charges to support renewable energy technologies. We recommend that regulators treat such subsidies as beneficial, but revisit them on a regular basis to ensure that they are always using the best regulatory tool to achieve a given objective.

2) **Harmful cross-subsidies.** Two cases exist in which a cross-subsidy is universally bad for society: in the case of discriminatory pricing[1] and in the case where the cross-subsidy benefits a utility's shareholders at the expense of their customers. The former describes any circumstance wherein a given customer class is given a higher rate than other customers with identical cost structure. This describes most standby rates, which are calculated based on the cost of a grid outage, but do not apply equally to other customers with comparably peaky load profiles (, the standby rate creates less financial impact on the utility than the variance already tolerated as part of intra-class cross-subsidization). The latter describes any situation where the rate increases utility profits at their customers' expense. This describes all cost-plus rates, which gives utilities a vested interest in increasing their cost of service.

3) **All others.** If the cross-subsidy cannot readily fit into one of the two categories above, one cannot justifiably take a dogmatic position in support of, or opposition to, the cross-subsidy.

Recommendation #2

Use market-based mechanisms to encourage good behavior wherever possible.

The best regulations give market participants a vested interest in society's success. However, the legacy of regulations designed to ensure that utilities do not earn unfair profits have made most utility regulations quite proscriptive, incorporating many sticks but few carrots. Current rates are rife with opportunity for more market-driven efficiency, from cost-plus rate making that discourages cost-control measures and encourages inefficiency, to the lack of transparent price signals that could guide end-users in rationalizing their energy demand during peak-pricing periods.

Indeed, many benefits that existing cross-subsidies are designed to create can be achieved more efficiently with a market-based approach. For example, many service quality protocols penalize utilities for failing to deliver some base level of grid reliability, but they provide no financial incentive for exceeding those targets. This

necessarily encourages a lowest-common-denominator approach to reliability planning. Instead, why not allow utilities to earn a greater rate of return on their system assets as their system reliability increases? Better yet, why not link that to the return they earn on depreciated assets so as to provide an incentive to seek reliability in the most capital-effective way possible?

The absence of such incentives in the regulated utility sector forces ratemakers to encourage these benefits through less efficient means, and the creation of such measures often leads to debates over cross-subsidies and their socio-political goals. It is much better to get the market signals right, and then allow businesses to respond accordingly.

Recommendation #3

Consider the goals and objectives of other regulatory agencies when crafting utility rates.

Utility regulators should establish broad goals that are consistent with goals of other state officials, and then craft rates that are consistent for all. Too often, rate cases are narrowly focused on the acceptability of a particular rate and are thus structurally unable to address broader state objectives. Commissioners typically have neither the time nor the resources to ask how rates could be best designed to achieve state policy objectives when they are instead focused on the minutiae of accepting or rejecting specific rate filings. This leads to a multitude of utility rates that stand in direct opposition to broader state policy goals, and no controlling authority exists to rectify the inconsistency.

As an example, consider utilities that have been "unbundled" through legislatively-mandated deregulation so as to promote competition in the electric sector. In many cases, the resulting distribution utilities are no longer permitted to own generation assets, but commissioners still (reasonably) insist that such utilities take a "least-cost approach" to planning future load growth. By exempting generation from the planning process, it is a virtual certainty that commissioners will approve too many over-expensive (but regulated) wires and too few cost-effective (but unregulated) generators to serve future load growth. Thus, the legislature's objective to inject competition and reduce electric costs is implemented through a planning process that relies exclusively on the services of a single regulated utility and conspicuously fails to include many of the most cost-effective mechanisms to serve a growing load.

Many similar disconnects exist between utility rates and environmental policy, which on the one hand reward utilities for selling more power (and thus burning more fuel) while on the other encourage emissions reduction through end-user conservation. When environmental stimuli take the form of demand-management programs, there is a truly perverse cross-subsidy created wherein the utility's cost-plus pricing encourages the maximum sale of the least efficient generation, and the profits are then used to support reduced consumption by their customers.

These inconsistencies constrain the state's ability to realize its policy objectives, and they all too frequently lead to utility rates that encourage exactly the opposite behavior sought by other state agencies.

Recommendation #4

Make a conscious effort to include benefits created by ratepayer actions in ratemaking proceedings.

Given their focus on ensuring utility cost recovery, ratemaking proceedings tend to ignore or understate the benefits some ratepayers provide to the system. From load shedding to VARs support, customers can and often do take numerous actions that reduce utility costs. Unfortunately, these actions are rarely if ever considered in rate proceedings. Nobel laureate Vernon Smith has spoken frequently on this topic, and notes that it is a flaw common to virtually all regulated industries.[2]

By failing to include benefits in their calculus, these rate proceedings guarantee that unfair cross-subsidies will be created because customers will be penalized for the costs they impose but ignored for the benefits they create. This type of regulatory failure is particularly prevalent in rates associated with on-site generation, since the benefits resulting from load congestion, emissions reduction, and power-factor correction are almost never factored into cost-based proceedings.

This Achilles' heel makes regulators at best blind to, and at worst discriminatory towards, customers who seek to create benefits for the system. Regulators can overcome this limitation by clearly defining the benefits sought, identifying technical means to create those benefits, and ensuring such technologies are encouraged-or at least not discouraged-in subsequent rate proceedings.

Recommendation #5

Recognize that "cross-subsidization" is a charged term, and its use diverts attention from more important socio-political objectives.

As described earlier, cross-subsidies are neither categorically good nor bad, but serve as a means to achieve social, economic, and political objectives. They are an inherent feature of utility ratemaking, and exist by virtue of compromises made in the creation and maintenance of electric utility regulation. Discussion of cross-subsidization without discussion of those socio-political objectives is diversionary at best and deceitful at worst. Regulators are encouraged to disallow such testimony in their proceedings to steer participants toward a more relevant focus on the issues at hand.

This is not to suggest that regulators should ignore the issues surrounding cross-subsidies. From a purely economic perspective, there is an economic inefficiency inherent in any system with cross-subsidization, but society did not create regulated

utilities out of a desire to achieve economic efficiency. We created such entities out of a desire to achieve a *broad* slate of socio-political objectives, and cross-subsidies are to be opposed only to the degree that they interfere with our ability to realize those goals.

Endnotes

1. Here and throughout, we use the term "discriminatory pricing" in the regulatory law context, as opposed to the economic context. The former frowns on any rate that charges a differential rate to two customers with identical cost structures, while the latter would argue that a customer's willingness to pay should be factored into this determination. The difference does not substantively affect the arguments espoused herein.
2. See .

Appendix

To better illustrate heterogeneity inside a rate class, consider the following data from Massachusetts Electric. The data shown is for all customers on the utility's G-3 rate, and it plots the ratio of the minimum and maximum power demand over the 1999 calendar year. As this ratio falls, customer-load profiles become flatter, while those at the other extreme have infrequent load spikes. These ratios are an expression of a customer's load factor as measured by the peak-demand charge on 12 months of utility bills. Consider how the rates for this customer class were set. Massachusetts Electric has fixed and variable charges. Some variable charges scale with power usage (kW) while others scale with energy usage (kWh). Utility rate engineers looked carefully at the characteristics of this rate class and devised a structure including demand and energy charges to meet the needs of these customers and recover the costs of service. A customer on the far left side of the above graph has a peak monthly kilowatt usage that is 10 times its minimum monthly kilowatt usage over a calendar year (such as might be found in a mid-size apartment building with high summer cooling loads). This customer is paying relatively little in the annual demand charge even though the utility must maintain infrastructure to serve the customer all year long. At the other end of the spectrum, a customer on the same rate classification has a very flat load profile (such as might be found in an industrial facility where electric loads are driven by process requirements). These customers are paying much more per year for the same peak capacity needs than those at the other extreme. Thus, the rate design implicitly includes a cross-subsidy.

Media:

Source URL: http://www.fortnightly.com/fortnightly/2004/12/cross-subsidies-getting-signals-right

EXHIBIT B

EXHIBIT B

Some Examples of Non-Typical Cost Shifts in North Carolina Rates

- Economic Development Rates
    - "Economic development rates, such as that recently approved for Progress in Docket No. E-2, Sub 681, are but one example in which the Commission has determined that certain policy benefits outweigh the cost of cross-subsidies." *Order Amending Net Metering Policy*, p. 11 n. 3, Commission Docket No. E-100, Sub 83 (31 March 2009)
- Demand Side Management/Energy Efficiency Program Rates
    - Duke Energy Progress, Inc.'s ("DEP") Distribution System Demand Response ("DSDR") program confers benefits on certain opted-out large commercial and industrial customers, for which these same customers do not have to pay; instead the costs for this program are shifted to other customers. *See Order Granting Motions for Reconsideration in Part*, pp. 5-8, Commission Docket Nos. E-2, Sub 926 and E-2, Sub 931 (25 November 2011)
- The Distinct OPT Rates
    - "The Commission gives substantial weight to [Duke Energy Carolinas, LLC] witness Bailey's testimony that OPT-G customers currently subsidize other customers and that OPT-I customers receive a subsidy. In particular, witness Bailey's Exhibit 4 shows that OPT-G customers pay a subsidy of $2,521,000 and OPT-I customers receive a subsidy of $9,873,000." *Order Granting General Rate Increase*, p. 97, Commission Docket No. E-7, Sub 1026 (24 September 2013)
- Renewable Energy Portfolio Standard Cost Recovery Rates
    - Duke Energy Carolinas, LLC's ("DEC") methodology for allocating the cost of EE RECs for cost recovery created a cost-shift. *See Transcript of Testimony Heard on 12 June 2012*, p. 76, Commission Docket No. E-7, Sub 1008 (21 June 2012) (DEC witness Smith testified, "we could not avoid the cost subsidization between classes")

EXHIBIT C

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION
DOCKET NO. E-100, SUB 73

In the Matter of: Investigation of Changes Occurring in the Electric Utility Industry and the Regulatory and Policy Implications of Such Changes, Including Proposals for Innovative Rates and Mechanisms, and Proposed Interim Guidelines for Self-Generation Deferral Rates	**AFFIDAVIT IN SUPPORT OF COMMENTS**

AFFIDAVIT OF JAMES D. KENNERLY

STATE OF NORTH CAROLINA

WAKE COUNTY

I, James D. Kennerly, being first duly sworn, do depose and say:

1. I am a Policy Analyst at the North Carolina Solar Center at the College of Engineering at North Carolina State University. I offer my testimony today strictly as an individual and regulatory specialist in a consulting capacity to the NC Sustainable Energy Association. A summary of my background is attached to this affidavit.
2. In preparing this affidavit, I reviewed the testimony and exhibits of Michael T. O'Sheasy for Duke Energy Progress, Inc. (DEP) filed in Docket E-2, Sub 1023, the Company's most recent base rate case. Witness O'Sheasy's testimony in Docket E-2, Sub 1023 was intended to support DEP's rate design for its North Carolina customers. One such new tariff was DEP's Industrial Economic Recovery (IER) Rider ("the Rider").[1] While the Commission ultimately did not approve the Rider, the purpose of

[1] Application Exhibit B, Page 90 of 120. *PEC's Application for Adjustment of Rates and Charges Applicable to Electric Service in NC.* NCUC Docket E-2, Sub 1023. Filed at the NC Utilities Commission 12 October 2012.

my affidavit is to demonstrate the cross-subsidy from non-participating customers to Rider participants, particularly those customers in the Residential class.

3. Customers meeting the eligibility requirements for the Rider and submitting to the Company's service regulations would receive a discount on their energy charge of $0.00221/kWh for the first 250,000 kWh consumed during the monthly billing period; and $0.00441/kWh for all additional kWh consumed during the monthly billing period. All participating customers would receive this discount during an initial "pilot" period that would last until no later than June 1, 2018.[2]

4. Overall, Witness O'Sheasy testified that the Rider would reduce DEP's industrial revenues by $31 million, which represented a 5.5% discount to industrial rates, based on DEP's proposed revenue requirement for its North Carolina customers at that time. To pay for the rider, DEP proposed a flat charge of .084 cents/kWh for all DEP customers. According to Witness O'Sheasy, the net discount for participating customers would have been approximately 4.2%. The remainder of this cost, if approved, would have been shifted to discount-ineligible, non-participating customer classes.

5. O'Sheasy Exhibit No. 2, attached to Witness O'Sheasy's testimony, describes DEP's proposed revenue requirement per customer class, both before and after the rate impact of the Rider. Had the IER rider been approved, both the participating and non-participating customers would have had to pay an increment of .084 cents/kWh to recover the annual $31 million cost of the Rider discount.

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[2] Application Exhibit B, Page 90 of 120. *PEC's Application for Adjustment of Rates and Charges Applicable to Electric Service in NC.* NCUC Docket E-2, Sub 1023. Filed at the NC Utilities Commission 12 October 2012.

6. In addition, the term of the Rider discount was intended to last from approval of the Rider to June 1, 2018, a term of approximately five years. Therefore, the cost of the rider must be calculated on a five-year basis. Two tables detailing the test year and five-year discount and cost of the IER rider are below.

Duke Energy Progress Proposed Test Year and 5-Year IER Net Cost Allocations by Customer Class

Customer Class	*IER Discount*	*5-Year IER Discount*	*IER Cost*	*5-Year IER Cost*	*Test Year Net Rate Benefit*	*5 Year Net Rate Benefit*
Residential	$0	$0	$12,515,074	$62,575,370	**($12,515,074)**	**($62,575,370)**
Small General Service (SGS)	$115,348	$576,740	$2,040,630	$10,203,150	**($1,925,282)**	**($9,626,410)**
Medium General Service (MGS)	$5,638,426	$28,192,130	$8,593,094	$42,965,470	**($2,954,668)**	**($14,773,340)**
Large General Service (LGS)	$25,217,598	$126,087,990	$7,386,056	$36,930,280	**$17,831,542**	**$89,157,710**
Seasonal/ Intermittent Service	$4,520	$22,600	$44,472	$222,360	**($39,952)**	**($199,760)**
Traffic Signal Service (TSS)	$0	$0	$7,529	$37,645	**($7,529)**	**($37,645)**
Area Lighting (ALS)	$0	$0	$265,470	$1,327,350	**($265,470)**	**($1,327,350)**
Street Lighting (SLS)	$0	$0	$105,360	$526,800	**($105,360)**	**($526,800)**
Sports Field Lighting Service (SFLS)	$0	$0	$1,269	$6,345	**($1,269)**	**($6,345)**

Source: Michael O'Sheasy Exhibit No. 2, p. 1 of 1, PEC's Application for Adjustment of Rates and Charges Applicable to Electric Service in NC. NCUC Docket E-2, Sub 1023. Filed at the NC Utilities Commission 12 October 2012. NOTE: Net test year and 5-year rate benefits calculated by netting the amount of discount paid by customer class by the amount recovered by customer class. 5 year amounts obtained by extrapolating test year revenue (as designed) across 5 years.

Duke Energy Progress Proposed IER Cost Shift Summary

Category	Test Year	5-Year IER Program Term
Total IER Discount	$30,975,892	$154,879,460
Total IER Rider Cost to IER-Eligible Classes (SGS,MGS,LGS,SIS)	$12,911,640	$64,558,200
Total IER Rider Cost Shift to IER-Ineligible Classes (Residential, TSS, ALS, SLS, SFLS)	**$17,814,604**	**$89,073,020**
Total IER Rider Cost Shift to IER-Ineligible Residential Customers	**$12,515,074**	**$62,575,370**

Source: Michael O'Sheasy Exhibit No. 2, p. 1 of 1, PEC's Application for Adjustment of Rates and Charges Applicable to Electric Service in NC. NCUC Docket E-2, Sub 1023. Filed at the NC Utilities Commission 12 October 2012.

7. If DEP were to collect its full requested test year revenue requirement, the customer classes eligible to receive the IER discount would have paid **$12.9 million** of the $31 million cost of the rider, and non-participating customers from IER-ineligible customer classes would have had costs shifted to them at a rate of **$17.8 million per year**.

8. Of this $17.8 million, the Residential class would have been responsible for **$12.5 million annually**, which is 70% of the total cost shift. Overall, the five-year cost of the Rider discount is **$154.9 million**. If it had been approved, non-participants ineligible for the discount would have paid **$89.1 million** through 2018, **$62.6 million** of which would have been borne solely by the Residential class.

9. According to the World Trade Organization (WTO), cross-subsidization is "the practice of using profits generated from one product or service to support another provided by the same operating entity."[3] Using this definition, the full cost of the cross-subsidy paid by IER discount-ineligible customers due to the cost shift to SGS, MGS, LGS and SIS customers eligible for the discount would have been **$89.1 million**. The full cost of the cross-subsidy for the Residential class would have been **$62.6 million**.

10. The cost of the Residential class' portion of the IER is subdivided across DEP's residential customers, which creates a monthly, annual, and five-year rate impact associated with the Rider discount. Overall, using a standard 1,000 kWh/month residential consumption estimate, DEP Residential customers would have paid 84

[3] World Trade Organization. *Telecommunications Services: Glossary of Terms.* Available at: http://www.wto.org/english/tratop_e/serv_e/telecom_e/tel12_e.htm. Accessed 18 February 2014.

cents per month, $10 per year and $50 over the initial five-year term of the rider. A table describing these findings is below.

DEP Residential Monthly, Annual and 5-Year IER Cross-Subsidy Rate Impact							
Customer Class	*IER Fee/kWh*	*Monthly kWh*	*Monthly Discount/ Customer*	*Monthly Cost/Customer*	***Monthly $/Customer***	***Annual $/Customer***	***5-Year $/ Customer***
Residential	.084	1,000	$0.00	$0.84	**$0.84**	**$10.08**	**$50.40**
Sources: Michael O'Sheasy Exhibit No. 2, p. 1 of 1, PEC's Application for Adjustment of Rates and Charges Applicable to Electric Service in NC. NCUC Docket E-2, Sub 1023. Filed at the NC Utilities Commission 12 October 2012.							

11. This completes my affidavit.

James D. Kennerly

SWORN TO AND SUBSCRIBED BEFORE ME
ON THIS THE 20 DAY OF FEBRUARY, 2014.

Notary Public

VICTORIA PRINCE-SOMOL
NOTARY PUBLIC
JOHNSTON COUNTY
STATE OF NORTH CAROLINA
MY COMMISSION EXPIRES 03-26-2017

My Commission Expires: 3-26-2017

JIM KENNERLY

I graduated with a Master of Public Affairs from the Lyndon B. Johnson School of Public Affairs at University of Texas at Austin specializing in Energy and Environmental Policy, and a Bachelor of Arts with Honors in Politics at Oberlin College. I currently attend the Poole College of Management at North Carolina State University as a candidate for a Master of Business Administration degree. I have five years of professional experience in energy policy and economics, and nearly three years as a utility regulatory analyst. I am a graduate of the National Association of Regulatory Utility Commissioners' Utility Rate School.

At the NC Solar Center, a unit of NC State's College of Engineering, I provide regulatory, market and policy analysis and support to several U.S. Department of Energy (DOE) projects, including the Southeast Combined Heat and Power Technical Assistance Partnership (CHP TAP), the Database of State Incentives for Renewables and Efficiency (DSIRE), and the SunShot Solar Outreach Partnership (SolarOPs), for which I serve as principal investigator.

Prior to working at NC State, I spent two years as a Regulatory and Policy Analyst for the NC Sustainable Energy Association (NCSEA). At NCSEA, I supervised the organization's regulatory and policy analysis, contributing to several dozen rate-setting dockets before this Commission. I also served for a time on the Duke Energy Carolinas DSM/EE Collaborative, and testified before this Commission in Docket E-100, Sub 113 on matters related to the Renewable Energy and Energy Efficiency Portfolio Standard's Animal Waste Set-Asides.

Prior to working for NCSEA, I worked in the energy services industry for ICF International as a consultant to the EPA ENERGY STAR Labeling Branch, and as an Energy Analyst for Frontier Associates, a firm specializing in evaluation, measurement and verification (EM&V) of utility energy efficiency programs.