

LAW OFFICE OF CHARLOTTE MITCHELL

PO BOX 26212
RALEIGH, NORTH CAROLINA 27611
919-260-9901
www.lawofficecm.com

April 25, 2014

Gail Mount
Chief Clerk
North Carolina Utilities Commission
430 N. Salisbury Street
Raleigh, NC 27603 – 5918

**Re: Direct Testimonies of G. Ness and M. Cohen
NCUC Docket No. E-100, Sub 140**

Dear Ms. Mount:

Enclosed herewith please find the direct testimonies of G. Ness and M.Cohen, to be pre-filed in the above-referenced docket on behalf of NCSEA.

Should you have any questions or comments, please do not hesitate to call me. Thank you in advance for your assistance and cooperation.

Kind Regards,

/s Charlotte Mitchell

4815-7961-0906, v. 1

OFFICIAL COPY
Apr 25 2014

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-100, SUB 140

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION:

In the Matter of:
Biennial Determination of Avoided
Cost Rates for Electric Utility Purchases
from Qualifying Facilities - 2014

DIRECT TESTIMONY

OF

GREG NESS

ON BEHALF OF

NORTH CAROLINA SUSTAINABLE ENERGY ASSOCIATION

April 25, 2014

1 **Q. PLEASE STATE YOUR NAME, TITLE AND BUSINESS ADDRESS.**

2 A. My name is Greg Ness. I am the Assistant General Counsel for FLS Energy.
3 My business address is 130 Roberts Street, Asheville, North Carolina 28801.

4

5 **Q. PLEASE DESCRIBE FLS' BUSINESS AND CONTRIBUTIONS TO THE**
6 **STATE OF NORTH CAROLINA.**

7 A. FLS Energy is a full service solar energy provider that owns and operates a
8 portfolio of solar energy assets throughout the United States, concentrated in
9 North Carolina. Our development team takes a project from conception to
10 commissioning and FLS offers complete in-house system design, engineering,
11 construction. FLS finances and owns and maintains our portfolio over the long
12 term.

13 For the past several years, FLS has made the list of fastest growing
14 companies at the state and national levels. FLS currently has 45 full time
15 employees and plans to add several new employees within the next six months.

16

17 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING?**

18 A. I am testifying on behalf of the North Carolina Sustainable Energy Association
19 (“NCSEA”). FLS is a long-time member of NCSEA.

20

21 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND**
22 **WORK EXPERIENCE.**

1 A. I obtained a B.S. in Biomedical Science, *Cum Laude*, from Auburn University; a
2 M.S. in Cell and Molecular Biology, *Summa Cum Laude*, from Tulane
3 University; a M.S. in Environmental Studies from Vermont Law School and a
4 J.D., also from Vermont Law School.

5 Prior to joining FLS Energy, I practiced in the environmental and land use
6 group at a large commercial real estate law firm.

7

8 **Q. WHAT ARE YOUR CURRENT RESPONSIBILITIES AT FLS?**

9 A. I represent the Business Development and Operations teams throughout the
10 project lifecycle. In this role, I provide substantive expertise in all facets of
11 solar energy project development, including negotiation of solar leases, zoning
12 matters, EPC agreements, power purchase agreements, Operation and
13 Maintenance agreements, and Renewable Energy Certificate (“REC”) purchase
14 agreements. In addition, I assist FLS’ General Counsel with placement and
15 structuring of equity and debt financing. I have held my current position for two
16 years and have played an integral role in arranging for the financing of
17 approximately 30 megawatts (“MW”) of FLS’ currently interconnected and
18 operating solar generation.

19

20 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

21 A. The purpose of my testimony is to demonstrate why the Commission should
22 require Duke Energy Carolinas, LLC (“DEC”), Duke Energy Progress, Inc.
23 (“DEP”) and Virginia Electric and Power Company, d/b/a Dominion North

1 Carolina Power (“DNCP”) to offer long-term levelized capacity payments and
2 energy payments for a 20-year term, in addition to the 5-, 10- and 15-year terms,
3 as a standard option for qualifying facilities (“QFs”). Additionally, the purpose
4 of my testimony is to demonstrate to the Commission why the standard rates
5 and terms approved by the Commission should be extended to QFs up to 10
6 MW.

7

8 **Q. WHY ARE LONG-TERM CONTRACTS NECESSARY TO**
9 **ENCOURAGE THE DEVELOPMENT OF QFS?**

10 A. Long-term contracts or power purchase agreements (“PPAs”) enable investors
11 to calculate return on investment with certainty and instill confidence that the
12 borrower will be in a position to repay any loan extended. With increased price
13 certainty for a project, investors typically require a lower return, which, in turn,
14 reduces the cost of financing.

15 Projects are typically financed through a combination of debt and equity.
16 The degree of uncertainty surrounding the revenue stream of a QF impacts the
17 amount of debt financing it can secure, as well as the cost of that debt financing.
18 The greater the uncertainty, the greater the changes that a project will be able to
19 attract less debt and will require more expensive equity. If the revenue stream
20 of a project cannot cover its cost of capital, the project will not be financed and,
21 therefore, will not be developed.

22

1 **Q. WHY SHOULD THE COMMISSION REQUIRE THE UTILITIES TO**
2 **OFFER A 20-YEAR TERM UNDER THE STANDARD PPA?**

3 A. I am aware that in prior avoided cost proceedings, the Commission has noted
4 that it must reconsider the availability of long-term levelized rate options as
5 economic circumstances change from one biennial proceeding to the next, and,
6 that, in doing so, it must balance the need to encourage QF development, on the
7 one hand, and the risks of overpayments and stranded costs, on the other. For
8 the reasons discussed below, a 20-year term does not disrupt this balance and is
9 necessary to encourage QF development in the current environment.

10 As a preliminary matter, in my experience, a 20-year PPA would allow the
11 QF to finance the project over a 20-year period, which reduces the cost to
12 finance the project by approximately 3 – 5%. More specifically, a 20-year PPA
13 will allow us to obtain substantially more permanent debt at favorable rates,
14 rather than supplementing the capital stack with expensive equity.

15 We are in an environment of declining rates paid to QFs for both output and
16 RECs, as well as increasing uncertainty regarding the financing that can be
17 secured from the tax incentives granted to renewable energy projects.

18 Finally, notwithstanding rate trends or political climate, many QFs rely on
19 variable resources, and, therefore, have no control over how much energy is
20 produced and, in turn, how much revenue is generated.

21 For all of the reasons, reducing the cost to develop the QF, such as through a
22 20-year PPA, increases the possibility that a project will be cost effective and
23 will actually be developed.

1 In past proceedings, the utilities have expressed concerns regarding the
2 overpayment of the QF in the early years of the contract term and underpayment
3 of the QF in the later years of the term in the context of long-term levelized
4 rates. The utilities take the position that this creates an incentive for a QF to
5 cease to operate as soon as the capital investment has been recovered. This
6 concern reflects a misunderstanding of project finance for a QF. Generally
7 speaking, like most power producing assets, QFs are financed over the life of
8 the asset. Therefore, even under a 20-year term, the QF likely will be obligated
9 to service debt and equity throughout the term of the PPA. Indeed a 20-year
10 term facilitates the longer amortization schedule necessary with the lower
11 revenue generated by current avoided cost and REC rates.

12

13 **Q. WHAT ARE YOUR OBSERVATIONS WITH RESPECT TO SIZE OF**
14 **THE QF?**

15 A. When FLS first began developing utility scale solar QFs in North Carolina in
16 2012, the company developed smaller facilities, primarily 1 MW or less.
17 However, over time, the size of the QF around which our business model
18 revolves has grown. The primary reasons for this trend include decreasing
19 revenue streams—resulting from decreasing rates and decreasing prices paid for
20 RECs—and the need to spread certain fixed costs over increased generation to
21 improve cost effectiveness.

22 As of the date of this testimony, through a partnership agreement, FLS has
23 five QFs larger than 5 MW under development.

1 Given the trends noted above, my experience dictates—and is reinforced by
2 the number of projects being proposed that are greater than 5 MW—that cost
3 effectiveness is dictated, in part, by increasing facility size.

4

5 **Q. WHAT ARE YOUR OBSERVATIONS ON THE PROCESS OF**
6 **NEGOTIATING A PPA WITH THE UTILITIES?**

7 A. FLS has not yet negotiated a PPA with the utilities. However, FLS’
8 experience negotiating REC Agreements and my observation of other
9 developers attempting to negotiate PPA’s is that such negotiations can be
10 protracted. Such a protracted process seems an inefficient use of utility time
11 and resources, QF developer time and resources, often Public Staff time and
12 resources, and, on occasion, Commission time and resources. Additionally,
13 such negotiations add significant additional transactional costs to QF project
14 development and the need for certainty by our investors and lenders have
15 influenced FLS’ primary strategy of limiting QF development to less than 5
16 MW. In the context of QFs greater than 5 MW, to my knowledge since 2010,
17 Duke has entered into PPAs with only six QFs greater than 5 MW, two of which
18 are solar. Since 2010, Progress has entered into PPAs with eight QFs greater
19 than 5 MW, none of which are solar. This is in contrast to the large amount of
20 solar capacity in the interconnection queue.

21

1 **Q. GIVEN YOUR OBSERVATIONS REGARDING COST**
2 **EFFECTIVENESS AND THE PPA NEGOTIATION PROCESS, WHAT**
3 **IS YOUR RECOMMENDATION TO THE COMMISSION?**

4 A. In the interest of encouraging the development of QFs, making the most
5 efficient use of resources and keeping transaction costs to a minimum, the
6 Commission should extend the standard offer to QFs up to 10 MW.

7

8 **Q. IN YOUR OPINION, WOULD EXTENDING THE STANDARD OFFER**
9 **TO 10 MW INVITE A SIGNIFICANT INCREASE IN QF**
10 **DEVELOPMENT?**

11 A. No. Not all capacity that has been proposed will be developed. Most
12 developers do not begin the process of securing financing until the PPA has
13 been executed; therefore, even an executed PPA does not guarantee that a
14 proposed QF will be developed. Rates offered for the purchase of energy and
15 capacity, as well as the terms of the PPA, dictate whether a proposed project is
16 financeable and, ultimately, developable. For this reason, extending the
17 standard offer would not result in an onslaught of development, rather, it will
18 allow those projects that have a realistic chance to be developed, to be
19 developed more efficiently at a lower transaction cost.

20

21 **Q. WHY SHOULD THE COMMISSION ENCOURAGE THE**
22 **DEVELOPMENT OF LARGER QFS?**

1 A. As the purpose of PURPA is to encourage QF development, in an environment
2 of declining revenue streams, larger QFs are more cost effective and, therefore,
3 have a better chance at actually being developed. Therefore, in the interest of
4 encouraging QF development as is required by PURPA, the Commission should
5 facilitate the development of larger QFs.

6

7 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

8 A. Yes.

9 4842-2889-8586, v. 2

10

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-100, SUB 140

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION:

In the Matter of:
Biennial Determination of Avoided
Cost Rates for Electric Utility Purchases
from Qualifying Facilities - 2014

DIRECT TESTIMONY

OF

MICHAEL COHEN

ON BEHALF OF

NORTH CAROLINA SUSTAINABLE ENERGY ASSOCIATION

April 25, 2014

1 **Q. PLEASE STATE YOUR NAME, TITLE AND BUSINESS ADDRESS.**

2 A. My name is Michael Cohen. I am the Vice President of Business Development
3 of Strata Solar, LLC (“Strata” or “Company”). My business address for the
4 record is 50101 Governors Drive, Suite 280, Chapel Hill, North Carolina 27517.

5
6 **Q. PLEASE DESCRIBE STRATA’S BUSINESS AND CONTRIBUTIONS
7 TO THE STATE OF NORTH CAROLINA.**

8 A. Strata is a solar development and construction company headquartered in
9 Chapel Hill, North Carolina. Strata is one of the leading end-to-end utility scale
10 solar developers in the country. From 2011 through December 31, 2013, Strata
11 developed, constructed and placed in service 45 solar projects in North Carolina
12 consisting of a cumulative total of 211 MW capacity of renewable energy.
13 These projects are located in 22 counties in the state and Strata estimates that its
14 property tax payments for 2013 will total more than \$800,000. Strata projects
15 that its solar development activities will continue to be robust in North Carolina
16 during 2014.

17 In addition, Strata has been a leading creator of jobs in North Carolina in
18 recent years. Strata works closely with employment and economic development
19 offices to educate and train its workforce. In addition, Strata develops its solar
20 projects in regional clusters so that the development teams move from one job to
21 the next, creating sustainable, long-term job growth. Strata currently has
22 approximately 110 employees, 80 of whom work in the Company’s corporate
23 offices in Chapel Hill while the remainder work in the field in construction and

1 O&M activities. In addition, during 2013, Strata put to work a total of
2 approximately 1200 installers in North Carolina as follows: 400 staff in
3 Southeastern cluster (Robeson, Bladen, Columbus); 300 staff in Western cluster
4 (Catawba, Cleveland, Davie); 300 staff in Northern cluster (Warren,
5 Rockingham, Person) and 200 staff in Eastern cluster (Nash, Wilson). The
6 number of installers doing work for Strata increased from 250 in 2011 to 800 in
7 2012 (an increase of 220 percent) and from 800 in 2012 to 1200 in 2013 (a
8 50 percent increase). Thus, the number of installers doing work for Strata
9 increased by 380 percent between 2011 and 2013. Strata is proud of the positive
10 economic impact that its operations have brought to North Carolina.

11 Strata is also a major producer of reliable, green solar power in North
12 Carolina and the Company is fully committed to the endeavor of developing
13 renewable solar energy. During 2012, Strata produced more than 17,000 MWh
14 of electricity. In 2013, Strata's generation increased by more than 900 percent
15 to a total of almost 172,000 MWh (or 172,000,000 kWh) of electricity which
16 was placed on the grid to serve electric consumers in this state. During the first
17 three months of 2014, Strata generated almost 75,000 MWh of solar power for
18 use by North Carolina consumers.

19

20 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING?**

21 A. I am testifying on behalf of the North Carolina Sustainable Energy Association
22 ("NCSEA"). Strata is a member of NCSEA.

23

1 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND**
2 **WORK EXPERIENCE.**

3 A. My resume is attached as Exhibit 1.

4

5 **Q. WHAT ARE YOUR CURRENT RESPONSIBILITIES AT STRATA?**

6 A. As Vice President of Business Development, I am responsible for arranging and
7 placing project financing for Strata's development portfolio, which involves
8 obtaining investments from banks, insurance companies, corporate and other
9 institutional investors. I have held my current position since 2011 and have
10 played an integral role in arranging for the financing of a majority of Strata's
11 currently interconnected and operating solar generation.

12

13 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

14 A. My testimony has two purposes: first, to demonstrate why the Commission
15 should require Duke Energy Carolinas, LLC ("DEC"), Duke Energy Progress,
16 Inc. ("DEP") and Virginia Electric and Power Company, d/b/a Dominion North
17 Carolina Power ("DNCP") to offer long-term levelized capacity payments and
18 energy payments for five-year, ten-year, 15-year and 20-year terms as standard
19 options to eligible qualifying facilities ("QFs"); and second, to demonstrate to
20 the Commission why the standard rates and terms approved by the Commission
21 in the biennial proceedings should be extended from the present limit of 5 MW
22 up to 10 MW. These proposed changes are reasonable and important to the
23 continued development and vitality of the QF and solar industry in North

1 Carolina. The Commission should reject any attempt to reduce either the term
2 of PPAs from 15 years or the 5 MW size limit and should, instead, approve the
3 proposed changes discussed in my testimony. The QF industry will be
4 significantly, if not irreparably, harmed by any retrenchment from current
5 Commission policy regarding the term and size parameters of current PPAs.

6

7 **I. EXTENDING TERM OF STANDARD POWER PURCHASE**
8 **AGREEMENT**

9

10 **Q. WHY ARE LONG-TERM CONTRACTS NECESSARY TO**
11 **ENCOURAGE THE DEVELOPMENT OF QFS?**

12 A. Long-term contracts or power purchase agreements (“PPAs”) enable investors
13 to calculate the return on the investment with certainty and instill confidence
14 that the borrower will be in a position to repay any loan extended.

15 With increased price certainty for a project, investors typically require a
16 lower return, which in turn reduces the cost of financing. This reduces the
17 overall cost of the project, making it more likely to be developed.

18

19 **Q. WHY SHOULD THE COMMISSION REQUIRE THE UTILITIES TO**
20 **OFFER A 20-YEAR TERM UNDER THE STANDARD PPA?**

21 A. I am aware that in prior avoided cost proceedings, the Commission has noted
22 that it must reconsider the availability of long-term levelized rate options as
23 economic circumstances change from one biennial proceeding to the next, and,

1 that, in doing so, it must balance the need to encourage QF development, on the
2 one hand, and the risks of overpayments and stranded costs, on the other. For
3 the reasons discussed below, a 20-year term does not disrupt this balance and is
4 necessary to encourage QF development in the current environment.

5 As a preliminary matter, in my experience, a 20-year PPA would allow the
6 QF to finance the project over a 20-year period and would reduce the cost to
7 finance the project. In addition, the service life of the solar equipment installed
8 by Strata is expected to be a minimum of twenty years. Thus, a 20-year PPA
9 will better match the avoided cost revenue stream to the useful life of the
10 equipment.

11 The revenue QFs earn from the sale of electricity and Renewable Energy
12 Certificates (“RECs”) has declined dramatically over the past four years, putting
13 the solar industry in North Carolina under considerable cost pressure. In 2010
14 the price of a REC was around \$200 per MWh. Today that price is close to \$5
15 per MWh. More recently, the standard rates for the output generated at Strata’s
16 newer farms was reduced by more than 20% as a result of the 2012 biennial
17 proceeding. Looking forward, the North Carolina Renewable Energy
18 Investment Tax Credit (“ITC”) is due to expire at the end of 2015, and the
19 federal ITC will be reduced at the end of 2016.

20 For all of these reasons, reducing the cost to develop the QF, such as through
21 a 20-year PPA, increases the possibility that a project will be cost effective and
22 will actually be developed, particularly in an environment of decreasing revenue
23 streams and increasing difficulty in securing certain types of financing.

1 In past proceedings, the utilities have expressed concerns regarding the
2 overpayment of the QF in the early years of the contract term and underpayment
3 of the QF in the later years of the term in the context of long-term levelized
4 rates. The utilities take the position that this creates an incentive for a QF to
5 cease to operate as soon as the capital investment has been recovered. This
6 concern reflects a misunderstanding of project finance for a QF. Generally
7 speaking, like most power producing assets, QFs are financed over the life of
8 the asset. Therefore, even under a 20-year term, the QF will be obligated to
9 service debt and equity throughout the term of the PPA for equipment with an
10 expected minimum life of at least 20 years.

11

12 **Q. ARE YOU AWARE OF ANY UTILITY THAT PROVIDES A**
13 **STANDARD OFFER WITH A PPA TERM OF TWENTY YEARS?**

14 A. Yes. The Tennessee Valley Authority (“TVA”) offers a Renewable Standard
15 Offer Contract with a term of twenty (20) years. Strata is developing a solar QF
16 that sells output to the TVA through a Renewable Standard Offer Contract. The
17 20-year term enabled Strata to finance the project over twenty (20) years, which,
18 in turn, reduced overall cost of the project relative to overall cost of projects
19 developed in North Carolina that sell power to Duke, Progress or DNCP.

20

21 **II. EXTENDING STANDARD OFFER TO 10 MW QUALIFYING**
22 **FACILITIES**

23

1 **Q. WHAT ARE YOUR OBSERVATIONS WITH RESPECT TO SIZE OF**
2 **THE QF?**

3 A. As is the case in many industries, achieving scale is critical to success. Since
4 2010 when Strata launched its first utility scale solar farm, the Company has
5 moved to a standard 5 MW design in order to maximize the scale possible under
6 the existing standard contract. That size pales in comparison to the 100 MW to
7 300 MW solar projects built in the southwest. Strata, however, uses repetition to
8 achieve the scale other solar companies achieve through sheer size of project.
9 Each of Strata's projects, however, still incurs fixed costs for construction
10 mobilization and demobilization, as well as legal and financial transaction costs
11 which push up the overall costs.

12 Moving to a 10 MW upper limit for the standard contract will allow solar
13 developers to spread those fixed costs over a larger project size, thereby
14 reducing the overall per MW cost of a project.

15

16 **Q. IS THERE ANY OTHER EVIDENCE, PARTICULARLY IN THE**
17 **CONTEXT OF SOLAR PV, THAT COST EFFECTIVENESS DICTATES**
18 **A LARGER FACILITY?**

19 A. Over the past several years, an increasing number of solar QFs greater than 5
20 MW has been proposed. In fact, my understanding is that, since 2010, Duke has
21 received interconnection requests for 20 solar QFs greater than 5 MW and that
22 Progress has received 43 such interconnection requests. In addition, in the 2012
23 Biennial Determination of Avoided Cost Rates, a utility witness testified that

1 roughly half of the thousands of megawatts of proposed capacity in the
2 interconnection queue at that time was not eligible for standard rates because the
3 projects were greater than 5 MW.

4 It is also worth noting that in the request for proposals for power and
5 renewable energy certificates output purchase from solar PV facilities and solar
6 asset purchase (the “RFP”) issued by Duke Energy on February 13, 2014, the
7 utilities expressed a preference for 20 MW facilities.

8 Therefore, my experience in developing solar facilities, my observations of
9 the facilities being developed in North Carolina, and the parameters of the RFP
10 support the fact that cost effectiveness supports a larger facility.

11

12 **Q. HOW MANY QFS GREATER THAN 5 MW IN NAMEPLATE**
13 **CAPACITY HAVE ENTERED INTO POWER PURCHASE**
14 **AGREEMENTS WITH UTILITIES IN NORTH CAROLINA?**

15 A. My understanding is that since 2010, Duke has entered into PPAs with only six
16 QFs greater than 5 MW, two of which are solar. Since 2010, Progress has
17 entered into PPAs with eight QFs greater than 5 MW, none of which are solar.

18

19 **Q. WHAT ARE YOUR OBSERVATIONS ON THE PROCESS OF**
20 **NEGOTIATING A PPA WITH THE UTILITIES?**

21 A. The negotiation process can be protracted. I am aware of PPA negotiations for
22 Strata projects that have been on-going for many months, and which to date are
23 still unsuccessful. I am aware of other developers that have had similar

1 experience in attempting to negotiate a PPA. Such a protracted process is an
2 unnecessary waste of utility time and resources, QF developer time and
3 resources, often Public Staff time and resources, and, on occasion, Commission
4 time and resources. Moving to a 10 MW upper limit for the standard contract
5 will further streamline the process and partially mitigate the difficulties QFs
6 currently face as they attempt to negotiate PPAs for facilities greater than 5 MW
7 in size.

8
9

10 **Q. GIVEN YOUR OBSERVATIONS REGARDING COST**
11 **EFFECTIVENESS AND WILLINGNESS OF UTILITIES TO**
12 **NEGOTIATE PPAS, WHAT IS YOUR RECOMMENDATION TO THE**
13 **COMMISSION?**

14 A. In the interest of streamlining the negotiating process, encouraging the
15 development of QFs, making the most efficient use of resources and keeping
16 transaction costs to a minimum, the Commission should extend the standard
17 offer to QFs up to 10 MW.

18

19 **Q. IN YOUR OPINION, WOULD EXTENDING THE STANDARD OFFER**
20 **TO 10 MW INVITE AN ONSLAUGHT OF QF DEVELOPMENT?**

21 A. No. As we have already seen, not all proposed capacity will be developed. In
22 fact, over the past year, I have noticed that a number of CPCNs for proposed
23 QFs have been withdrawn. Most developers do not begin the process of

1 securing financing until the PPA has been executed; therefore, even an executed
2 PPA does not guarantee that a proposed QF will be developed. Rates offered
3 for the purchase of energy and capacity, as well as the terms of the PPA, dictate
4 whether a proposed project is financeable and, ultimately, developable. For this
5 reason, extending the standard offer would not result in an onslaught of
6 development, rather, it will allow those projects that have a realistic chance to
7 be developed, to be developed more efficiently at a lower transaction cost.

8

9 **Q. ARE YOU AWARE OF ANY UTILITY THAT PROVIDES A**
10 **STANDARD OFFER FOR QFS GREATER THAN 5 MW?**

11 A. Yes. The TVA offers a Renewable Standard Offer Contract that is available to
12 QFs up to 20 MW. In addition, at least two states in the Pacific Northwest
13 require electric utilities to offer standard rates and terms for QFs greater than 5
14 MW. Specifically, I am aware that electric utilities in Oregon offer standard
15 contracts to QFs up to 10 MW. Electric utilities in California offer standard
16 PPAs for QFs up to 20 MW.

17

18 **Q. WHY SHOULD THE COMMISSION ENCOURAGE THE**
19 **DEVELOPMENT OF LARGER QFS?**

20 A. In other states, solar generation has become a least cost option for new
21 generation. We can hasten that day as well here in North Carolina. Facilitating
22 the deployment of solar in the most cost effective manner will continue to drive

1 down installation costs and allow solar PV in North Carolina to reach this point
2 more quickly, ultimately to the benefit of ratepayers.

3 Compared to conventional generation technologies which are mature and
4 have few remaining options for reducing costs further, solar is still a young
5 technology at a point on the learning curve where every doubling of installed
6 capacity results in significant reductions in cost. This trend has been quite
7 evident over the past few years, and with further technological refinements from
8 solar manufacturers, as well as the ongoing design improvements and
9 productivity gains by installers, that trend will continue.

10 The ultimate beneficiaries of the expansion of solar are the utility ratepayers
11 for whom a diverse generation portfolio helps buffer against the cost increases
12 stemming from an aging and mature existing mix of generation.

13 In addition, as the purpose of PURPA is to encourage QF development, in an
14 environment of declining revenue streams, larger QFs are more cost effective
15 and, therefore, have a better chance at actually being developed. Accordingly,
16 in the interest of encouraging QF development as is required by PURPA, the
17 Commission should facilitate the development of larger QFs.

18

19 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

20 A. Yes.

21 4834-2307-3306, v. 1

EXHIBIT 1

EXPERIENCE:

Strata Solar, LLC, Chapel Hill, N.C.

Vice President -- Business Development:

- Manage development of Strata Solar's Southeast project pipeline
- Develop and obtain project financing for Strata Solar's portfolio of solar assets

Kirkland & Ellis, LLP, Washington, D.C.

Mergers & Acquisitions Associate -- Energy Group:

- Advised clients with mergers and acquisitions, divestitures, financing, and equity investments in the oil, gas, wind, solar and clean tech industries. Specific examples include:
 - Sale of a 4000 MW wind farm development portfolio.
 - Purchase of a 101 MW wind farm.
 - Regulatory filings and acquisition strategy for largest PV facility in California.
 - Develop structure and negotiate joint venture agreement among solar manufacturer, developer and tax investor for a series of 1.5 MW distributed generation solar facilities in the southwest.
 - Acquisition of a combined-cycle natural gas facility for \$525 million.
 - Acquisition of a retail electricity business for \$288 million.
 - \$335 million sale of pipeline assets.
 - Divestiture of multiple oil and chemical products terminals to strategic buyers.
 - Private-equity investment in solar facilities with an innovative financing model.
- Negotiated with federal agencies on behalf on clients for funding under Department of Energy grant, loan guarantee, and technology partnership programs.
- Advised clients on current federal and state support for renewable energy and clean tech, including tax incentives, grants, partnerships and potential federal climate change legislation.
- Advised on a potential restructuring and eventual \$4.5 billion sale in the nuclear industry.
- Advised clients on entering and maintaining international joint ventures for the production of electric vehicles and for the production of advanced biofuels.
- Negotiated architectural and engineering agreement and related design agreements for a national monument to be located in Washington, D.C.

Criterion Economics, LLC, Washington, D.C (now part of Navigant Economics).

Economics Consultant: Drafted expert reports and economic analyses for use in legislative, regulatory, and judiciary proceedings.

- Analyzed economic impact of current and proposed legislation and policies, specializing in Internet, advanced telecommunications, and interstate wine importation issues.

EDUCATION:

Georgetown University Law Center, Washington, D.C.

Juris Doctor, cum laude

University of Florida, Gainesville, FL

Masters and Bachelors in Accounting

CERTIFICATE OF SERVICE

The undersigned certifies that she has served a copy of the foregoing **DIRECT TESTIMONIES OF G. NESS AND M. COHEN** upon the parties of record in this proceeding, or their attorneys, by hand delivery, electronically, facsimile, or by depositing a copy of the same in the United States Mail, postage prepaid and properly addressed .

This 25nd day of April, 2014.

LAW OFFICE OF CHARLOTTE MITCHELL,
PLLC

/s Charlotte A. Mitchell
Law Office of Charlotte Mitchell, PLLC
PO Box 26212
Raleigh, North Carolina 27611
Telephone: (919) 260-9901
E-mail: cmitchell@lawofficecm.com

4836-0795-0362, v. 1