

State of Rhode Island Public Utilities Commission

**Review of the Customer-owned Street & Area Lighting Proposal in compliance with
the RI Municipal Streetlight Investment Act, R.I.G.L. § 39-29-1, et. seq.**

Docket No. 4442

EXHIBIT C

Pre-Filed Testimony of

George A. Woodbury

October 31, 2013

I. Introduction and Qualifications

1 **Q. Please state your name and business address.**

2 A. My name is George Woodbury and my business address is 1052 Johnson Farm Road,
3 Lillington NC27546.

4 **Q. By whom are you employed and in what capacity?**

5 A. I am a self-employed consultant.

6 **Q. Please describe your educational background and training.**

7 A. In 1969 I graduated from The United States Military Academy with a Bachelor of
8 Science degree. In 1977 I graduated from the University of Florida with a Masters
9 degree in Construction Management.

10 **Q. Please describe your professional experience.**

11 A. After a career in the military where I earned the rank of Colonel and commanded
12 engineering and other units, I was the Municipal Utility Director and the Public Works
13 Director for Fort Knox, Kentucky from 1992 to 1995. Fort Knox is the sixth largest city
14 in Kentucky and the Municipal Utility is the largest single customer energy load of
15 Louisville Gas and Electric. During my tenure I instituted demand management
16 programs that reduced our energy costs by 24%.
17 From 1995 to 2000 I was the Director of Public Works in Lexington MA. During that
18 time I authored the legislation in Massachusetts that provided for municipal ownership of
19 street lighting and for municipal aggregation, and played a lead role in the Massachusetts
20 Municipal Association's streetlight maintenance program.

1 From 2000 until the present I have helped 80 communities in eleven states acquire their
2 streetlight systems and implement energy savings. In this capacity I negotiated Purchase
3 and Sale and License Agreements with various utilities.

4 For five years, from 2007 thru 2013, I worked for Republic Electric (now a division of
5 Siemens) as a Municipal Consultant on street lighting matters. Republic Electric is the
6 largest streetlight maintenance company in the country. In this position I was able to gain
7 detailed insights into the maintenance and service requirements of streetlighting systems.

8 Among my current clients is a group of communities in Maine, where I have assisted
9 with the passage of legislation allowing municipal ownership of streetlighting. I have
10 testified numerous before various utility commissions on streetlighting matters.

11 **Q. What is the purpose of your testimony in this docket?**

12 A. The purpose of this testimony is to review the proposed Rhode Island Municipally-
13 owned streetlight tariff and its component documents, the purchase and license
14 agreements, and compare them with my knowledge and experience with municipal
15 ownership in Massachusetts since 1998 when the law permitting municipal ownership
16 was approved, and to share some observations from other states where transfer of
17 ownership from an investor owned utility to a municipality has taken place. It is my
18 hope that by sharing my knowledge and experience of how the process has worked in
19 other states I can help make Rhode Island's new Municipal Streetlights Investment Act a
20 success

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1 **Q. How do you see the role of the Public Utilities Commission?**

2 A. The primary role of the PUC is to assure the “sufficiency and reasonableness of
3 facilities and accommodations of railroad, ferry boats, gas, electric distribution, water,
4 telephone, telegraph, and pipeline public utilities..” An important aspect of the PUC’s
5 role in addition to ensuring the reasonableness is to ensure the integrity and health of the
6 distribution system and to provide fair profitability for the investors. To these ends the
7 PUC should ensure that the utility develops a streetlighting tariff for customer owned
8 lighting based on standard cost of service studies and procedures currently practiced for
9 all tariffs. This tariff should provide for both the spirit and intent of the legislation such
10 that it provides for the freedom of the municipality to invest in newer and more efficient
11 technologies and operating practices so long as their activities do not negatively impact
12 on the company’s equipment, the integrity of their distribution system, or unfairly shift
13 costs to other rate payers.

14 Secondly, in my opinion, the PUC should ensure that the utility does not attempt to
15 impose conditions on the transfer of the assets that are unreasonable, place requirements
16 on communities that are not standard practice, and should not allow the utility to impose
17 arbitrary fees or charges outside of the ratemaking procedures. Finally, I believe the
18 commission should ensure the transfer price is based on current standard methods of
19 depreciation as they relate to the actual consumption of the property as used in normal
20 rate making proceedings. I will address each of these in more detail in my testimony.

21

1 **Q. Can you describe the process works in Massachusetts?**

2 A. Generally, in Massachusetts, the community will request preliminary purchase price
3 information, which they will use to analyze the financial benefit of ownership. If they
4 decide to proceed, they give notice of their intent to the utility and to the DPU. At that
5 point the utility provides the final purchase price and the parties have 60 days to reach
6 agreement on the terms of sale and the purchase price. If they cannot agree, then they
7 can bring the issues to the DPU, which has sixty days to develop a resolution. Once the
8 terms are agreed to, the parties sign the Purchase and Sale agreement and, if any
9 streetlights are attached to joint use poles, a License Agreement (modeled after other
10 attachee agreements.) Once the transfer is complete the utility will adjust the billing at
11 the start of the next billing month, except when the transaction has taken place before the
12 tenth of the month, in which case the billing is adjusted to the beginning of the
13 transaction month. In the event there is a dispute over the terms or the price, then once
14 the dispute is resolved and the transaction has been completed the billing adjustment
15 would be retroactive to 60 days from the date of notice of intent. This eliminates the
16 incentive for the utility to drag out the process.

17 **Q. Are there any pole attachment fees for joint use poles?**

18 A. No. This was a point of some discussion after the law was passed. The DPU
19 recognized several points. Other attachers to the joint use poles, such as the cable
20 television company, do not consume electricity and therefore the utility has no
21 mechanism to recoup a fair share of the poles maintenance costs and depreciation. In this
22 case a fee is appropriate. Streetlights produce revenue for the company, and with

1 properly designed streetlighting rates, the utility captures the pole costs, so no fee is
2 required or would be inappropriate.

3 Secondly, the utility gains a significant benefit from the no-fee placement of their poles
4 in the public way, even though this location increases a community's costs for a wide
5 variety of operations.

6 Finally should the utility be allowed to charge the communities a pole attachment fees the
7 communities could decide to charge a pole placement fee for use of the right-of-way.

8 **III. Customer owned Tariff**

9 **Q. What should the customer-owned tariff consider that is not in the proposed**
10 **Rhode Island tariff?**

11 A. A tariff for Customer-Owned streetlights should include an option where National
12 Grid provides maintenance and a provision for metered streetlights. A community should
13 be able to enter into a contract with NGRID to provide streetlighting maintenance if both
14 parties agree. NGRID already has such a tariff in Massachusetts that provides for certain
15 limited services for customer owned assets.

16 Metered streetlights are a reality in other parts of the country. The Company already has
17 a metered rate for streetlights that typically applies to downtown lights fed from a single
18 power box. What is needed now is to add to that rate (or to the S-5 rate) the ability of the
19 customer to employ the smart photocell or controls on individual streetlights that are
20 currently unmetered. Technology exists today that permits remote operation of
21 streetlights and also provide meter grade accuracy measurements of the streetlights
22 energy consumption using these controls or smart photocells. These devices permit

1 dimming, timed operations and a number of other options for the community, like
2 emergency signaling and receptacles to mount community services like cameras and Wi-
3 Fi devices. These smart photocell devices also provide directly to the utility the metered
4 consumption of the lights. It is important the utility not be allowed to impede the ability
5 of the communities to use the latest technologies and or their streetlights in ways that
6 benefit their communities.

7

8 **Q. Do you see examples of where the tariff or the Agreements proposed by NGRID**
9 **are not consistent with these goals?**

10 A. Yes. First it is important to point out that thousands of municipalities operate
11 municipal power companies very safely and successfully. A municipal owned
12 streetlighting system is in fact a small subset of a municipal power company.

13 The License Agreement requires that streetlights be fused. This is not a standard utility
14 practice and should not be a requirement. It is standard utility practice to add line fuses,
15 remove and reinstall fixtures on mast arms, replace ballasts and other lighting fixture
16 components without de-energizing the circuit. The utility will argue two points: one is
17 that it provides a demarcation between company-owned equipment and secondly it is for
18 safety. The P&S Agreement clearly states:

19 *" The point of ownership demarcation shall be deemed to be the existing connection*
20 *point where the applicable street light Facility is energized from the electric distribution*
21 *system ("Connection Point").*

22 This is easily identified and understood by anyone who would be qualified to work on
23 streetlights. In Massachusetts over 100,000 streetlights without fuses are maintained by

1 either contractors or municipal employees, and I am not aware of any issues in the past
2 13 years that would demonstrate a lack of understanding of this point of demarcation.
3 Currently there are more than fifteen communities in Massachusetts that have taken over
4 their lights from NGRID without any such requirement, and there have been no issues.
5 The Company's second argument would be about safety. If this were a safety issue then
6 the question is why does the company not employ this practice for the safety of its own
7 employees? Fusing is not a standard practice and should not be imposed on communities.

8 Secondly, the Company has very broadly defined Material Change so as to be able
9 unfairly to require make ready work when none is necessary and impose unnecessary fees.
10 Make Ready work should be limited to any alteration of the streetlight that will increase
11 the load on the joint use pole or adversely affect the distribution system, such as
12 introducing an increase in harmonics above the level typical of the current street lighting
13 that would be harmful to the distribution system, or the use of a fixture or device with
14 lower power factor than the current utility owned streetlights. If a community chose to
15 install an LED light that was lighter or equal in weight and presented a equal or lower
16 cross sectional wind area, provided for the same or less harmonics and the same or better
17 power factor then it should be viewed as an "in kind" replacement. The only requirement
18 would be notification of the change if any in wattage and fixture type. Any LED fixture
19 that meets Design Lights Consortium (DLC) criteria for certification would meet these
20 conditions and is the standard adopted in most states. In fact DLC certified LED lights
21 have significantly reduced impact as compared to most current in place streetlighting
22 It is only recently that NRGID has begun trying to modify this language, and they have
23 attempted to use it to require customers to have the Company deenergize a circuit before
24 the community installs a fuse or changes a light to an LED source. This can result in two
25 charges-one to deenergize the circuit and one to reenergize the circuit. This is completely
26 unnecessary and is not in accordance with either their own internal practices or industry
27 practice. Nor has it applied to the communities that previously purchased their systems
28 from NGRID prior to the change.

1 I believe the Agreement should also have a definition of "In Kind" that allows
2 communities flexibility but protects the company's system concerns. This definition
3 could include DLC certified LED street lights.
4 NGRID should not be allowed through their Agreements to circumvent the PUC's
5 regulatory authority by imposing arbitrary or punitive fees or restrictions not regulated by
6 the PUC.

7
8 **Q. Do you find the company's proposal for Customer-Owned LED equipment**
9 **service adequate?**

10 A. No. The company proposes grouping LED streetlights in 50 watt increments and
11 billing each group at the mid point of that group. So 0-50watt LED lamps would be
12 billed at 25 watts. While this may appear fair on the surface when examined in the detail
13 of their streetlighting inventory it will result in overcharging the customers. The most
14 common streetlight in NGRID's service territory is the 3500 to 4000 lumen lamp
15 (approximately 59% taken from a 1998 NGRID depreciation study in Massachusetts-DTE
16 98-76). We believe the inventory in RI will reflect a similar distribution of lamp types
17 and wattages. The matching lumen replacement LED light for the 50w HPS lamp ranges
18 in wattage from 14.61 to 24 watts depending on the manufacturer selected and it would
19 be billed at 25 watts. The second most common fixture is the 100watt HPS or its
20 equivalent lumen fixture. Together these two wattages account for 73% of NGRID's
21 inventory. The current correct LED to replace the 100 watt HPS fixture is a 53 watt LED
22 which would be billed at 75 watts. A review of the entire inventory reported in the
23 NGRID depreciation study finds that if the correct lumen LED is selected based on
24 matching the existing lumen outputs in their inventory it would result in an overcharge of

1 over 20%. NGRID has argued that billing based on actual wattages is too
2 administratively difficult and yet this is the means by which most utilities bill for LED
3 streetlights.

4 The second issue with their approach is the technology is rapidly becoming more
5 efficient which will exacerbate the over charges. LED lights that produce 2000 lumens
6 have dropped from 27 watts two years ago to 17 watts today.

7 **Q. Do you believe tagging of equipment is required?**

8 A. Yes and no. Tagging should be required when a community can purchase only a
9 portion of the streetlights in its area, but should not be required when, like in Rhode
10 Island, a municipality can purchase only all or none of the lights in its area. Tagging is
11 used so residents can report outages to the proper authority. Tagging is not needed for
12 streetlight maintenance or electric distribution system maintenance, because those
13 workers have adequate knowledge and instructions in their work orders.
14 In states where a community can chose to purchase only a portion of its system then
15 tagging is certainly necessary so that the residents or others wanting to report an outage
16 could use the label to identify who is responsible. NGRID has used a red oval shaped tag
17 on the underside of the fixture and adjacent to the lamp tag to indicate a customer owned
18 lights in a number of their Massachusetts towns. This practice dates back to 1995 in
19 towns such as Ware or Chelmsford, where only a portion of the lights were customer
20 owned.

21 Communities should not be tasked with more extensive tagging than is currently
22 demonstrated in NGRIDs own practices in towns where there is a division of ownership.

1 Tagging should be limited to the minimum necessary for outage reporting. Beyond that
2 the persons working on the system have more than adequate knowledge to understand the
3 division of ownership.

4 No such tagging should be required when a community acquires the entire system. The
5 community should provide notice to its citizens of the change of ownership and to whom
6 an outage should be reported. Likewise the utility would be provided the same
7 information so that if a resident of that community called the utility to report an outage
8 the utility's call center could relay the correct contact information to the caller. The
9 utility line workers should also know which communities own their lights

10 **Q. Should the company be allowed to terminate the license at will?**

11 A. No. NGRID should not be allowed to terminate a license for their own
12 convenience. As an example if another party requested attachment to a pole and was
13 willing to pay NGRID for that privilege but the presence of a streetlight would interfere
14 with that additional attachment NGRID could simply revoke the license for the streetlight
15 forcing the community to remove it or pay NGRID to remove it.

16 Instead, in these instances the requesting party should be required to pay to have the pole
17 replaced with a pole that could support all existing attachees as well as their new
18 attachment. If the utility needed to replace a pole for maintenance reasons or because
19 they needed to make changes to their distribution system to improve service then all
20 attachees would remove and reattach at their own expense. If any other party requires the

1 change, the requesting party should reimburse others their reasonable expenses associated
2 with the relocation of their facilities or changes to the pole to accommodate their request.

3 **Q. Is National Grid's refusal to assign easements and approvals standard?**

4 No. NSTAR Electric's Purchase Agreement for municipal streetlights in its service area
5 in Massachusetts provides that NSTAR Electric will "assign to the City any easement,
6 license or other grant of location associated with said pole, to the extent allowed by such
7 agreements. In addition, if NSTAR Electric has an agreement with any entity to use
8 space on any dedicated streetlight pole which will be acquired by the City, NSTAR
9 Electric shall, to the extent allowed by such agreement, assign to the City any such
10 agreement." The proposed Purchase Agreement for Rhode Island should include such a
11 provision rather than requiring the municipal customers to reestablish any such
12 agreements or approvals.

13 **Q. Do you find the Company's dimming schedules to be adequate?**

14 A. Dan Carrigg's testimony has addressed this in part. I will add that today's photocell
15 technology provides meter grade measurements of energy consumed along with virtually
16 unlimited options for dimming or timed operations. This technology would provide
17 usage information directly to NGRID, essentially treating each lamp so equipped as an
18 individually metered consumer.

19 From an operations and public safety standpoint, these new technologies are important
20 and will become more so in the near future. These control systems allow a variety of
21 other options such as causing light to flash, which can assist emergency operations or

1 brightening lights in case of an accident, or reported crime. The adopted tariff should
2 provide for the use of this important technology as called for in the Municipal Streetlights
3 Investment Act.

4 **Q. Have you reviewed the company's proposed distribution charges and if so what**
5 **are your thoughts?**

6 A. I have and I do not fully understand their thinking in the allocation of plant and costs
7 that was used to derive their revenue requirement. As an example, the company has
8 assigned all of the 373 plant to the "Lighting (Lighting Equipment and O & M)" column.
9 However, we know that they will be selling these assets to the communities and the sale
10 price should be reflected in a reduction of the balance in the 373 account. Likewise if we
11 look at FERC accounts 361-367, some portion of that equipment will also be transferred
12 and paid for by the community, so we would expect those numbers to be proportionately
13 reduced. The same principle applies the cost of operation and maintenance. As a result
14 we would like the company to provide us with a detailed explanation of their logic in the
15 allocation of plant and costs in Exhibit JAL-4.

16 **Q. Does this conclude your testimony?**

17 Yes.

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