STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION

The Narragansett Electric Company d/b/a Rhode Island Energy

Docket No. 23-37-EL

RE: Petition for Acceleration Due to DG Project – Tiverton Project

PREFILED DIRECT TESTIMONY OF

Gregory L. Booth, PE
President, Gregory L. Booth, PLLC
On Behalf of Rhode Island Division of Public Utilities and Carriers

April 10, 2024

Prepared by:
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Prefiled Direct Testimony of

Gregory L. Booth, PE, President Gregory L. Booth, PLLC

On Behalf of Rhode Island Division of Public Utilities and Carriers Docket No. 23-37-EL

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Exhibits:

GLB-1 Gregory L. Booth Curriculum Vitae

DIRECT TESTIMONY OF GREGORY L. BOOTH, PE

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3 I. <u>INTRODUCTION</u>

- 4 Q. PLEASE STATE YOUR NAME AND THE BUSINESS ADDRESS OF YOUR
- 5 **EMPLOYER.**
- 6 A. My name is Gregory L. Booth. My company is Gregory L. Booth, PLLC ("Booth, PLLC"),
- 7 mailing address 14460 Falls of Neuse Road, Suite 149-110, Raleigh, North Carolina 27614.
- 8 Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS MATTER?
- 9 A. I am testifying on behalf of the Rhode Island Division of Public Utilities and Carriers
- 10 ("Division").
- 11 Q. WOULD YOU PLEASE OUTLINE YOUR EDUCATIONAL BACKGROUND?
- 12 A. I graduated from North Carolina State University in Raleigh, North Carolina in 1969 with
- a Bachelor of Science Degree in Electrical Engineering, and was inducted into the North
- 14 Carolina State University Department of Electrical and Computer Engineering Alumni
- Hall of Fame in November 2016. I am a registered professional engineer in twenty-three
- 16 (23) states, including Rhode Island, as well as the District of Columbia. I am a registered
- 17 land surveyor in North Carolina. I am also registered under the National Council of
- Examiners for Engineering and Surveying.
- 19 Q. ARE YOU A MEMBER OF ANY PROFESSIONAL SOCIETIES?
- 20 A. I am an active member of the National Society of Professional Engineers ("NSPE"), the
- 21 Professional Engineers of North Carolina ("PENC"), the Institute of Electrical and
- Electronics Engineers ("IEEE"), American Public Power Association ("APPA"), American
- Standards and Testing Materials Association ("ASTM"), the National Fire Protection

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- Association ("NFPA"), and Professional Engineers in Private Practice ("PEPP"). I have also served as a member of the IEEE Distribution Subcommittee on Reliability and as an advisory member of the National Rural Electric Cooperative Association ("NRECA")Cooperative Research Network, which is an organization similar to EPRI.
- 5 Q. PLEASE BRIEFLY DESCRIBE YOUR EXPERIENCE WITH ELECTRIC UTILITIES.
- A. I have worked in the area of electric utility and telecommunication engineering and management services since 1963. I have been actively involved in all aspects of electric utility planning, design and construction, including generation, transmission, and distribution systems, and North American Electric Reliability Corporation ("NERC") compliance.
- 12 Q. HAVE YOU PREVIOUSLY TESTIFIED AS AN EXPERT BEFORE THE RHODE
 13 ISLAND PUBLIC UTILITIES COMMISSION?
- 14 A. Yes. I have testified before the Rhode Island Public Utilities Commission on numerous
 15 matters, including Docket Nos. 2489, 2509, 2930, 3564, 3732, 4029, 4218, 4237, 4307,
 16 4360, 4382, 4770/4780, 4473, 4483, 4513, 4539, 4592, 4614, 4682, 4783, 4857, 4915,
 17 4995, 5077, 5098, 5209, 5235, D-11-94, D-17-45, and D-21-09. My testimony in Rhode
 18 Island has included filed and live testimony on previous Electric Infrastructure, Safety and
 19 Reliability Plan Fiscal Year Proposal filings by National Grid in Docket Nos. 4218, 4307,
 20 4382, 4473, 4539, 4592, 4682, 4783, 4915, 4995, 5098, 5209, 22-53-EL and 23-48-EL.
- 21 Q. HAVE YOU PREVIOUSLY TESTIFIED AS AN EXPERT IN OTHER
 22 JURISDICTIONS?

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1 A. I have testified before the Federal Energy Regulatory Commission ("FERC") and
2 numerous state commissions, including in Connecticut, Delaware, Florida, Georgia,
3 Maine, Maryland, Massachusetts, Minnesota, New Jersey, North Carolina, Pennsylvania,
4 South Carolina and Virginia. Attached is Exhibit GLB-1 Gregory L. Booth Curriculum

II. PURPOSE OF TESTIMONY

Vitae.

8 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to address the Petition of Narragansett Electric Company d/b/a as Rhode Island Energy ("Company" or "RIE") for Acceleration of a System Modification Due to Distributed Generation Project: Tiverton Projects dated October 17, 2023 (the "Petition"). The interconnection request that is the subject of the Petition was made by Green Development, LLC ("Green" or "Green Development" or "Interconnection Customer") for the purpose of interconnection of a 11,791 kW photovoltaic system located at 390 Brayton Road, Tiverton, RI 02878 ("Tiverton Projects"). My analysis, testimony and recommendations are presented on behalf of the Division and are intended to assess the system improvement that is the subject of this Petition, and to equitably apply the tariff in order to protect the integrity of the tariff and the ratepayers.

III. OVERVIEW AND SYSTEM IMPROVEMENTS

21 Q. WHAT HAS THE COMPANY STATED AS ITS BASIS FOR FILING THE

PETITION?

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- 1 A. The Company's stated basis is R.I. Gen Laws 39-26.3-4.1, entitled *Interconnection*
- 2 Standards (the "Interconnection Statute"), and Section 5.4 of RIPUC No. 2258, entitled
- 3 The Narragansett Electric Company Standards for Connecting Distributed Generation
- 4 (the "Interconnection Tariff").
- 5 Q. DO YOU AGREE THE INTERCONNECTION TARIFF SHOULD APPLY TO
- 6 THIS FILING?
- 7 A. Yes.
- 8 Q. DO YOU AGREE WITH THE COMPANY'S METHOD FOR APPLYING THE
- 9 TARIFF?
- 10 A. I do not agree with the Company's method of applying the Interconnection Tariff.
- 11 Q. BEFORE DISCUSSING THE DETAILS OF YOUR ANALYSIS AND WHY YOU
- 12 DISAGREE WITH THE COMPANY'S METHOD OF APPLYING THE TARIFF,
- WOULD YOU PROVIDE AN OVERVIEW OF YOUR ANALYSIS AND
- 14 **DISAGREEMENTS?**
- 15 A. Yes. I have performed an assessment of the Tiverton Project including reviewing ISR Plan

 16 materials, Area Study materials, system engineering models, and area peak loads which the
- 17 Company relied upon to determine the need and timing of system improvements
- 18 considered in this Petition. Generally, the load has been declining since the time the Area
- 19 Study was performed, eliminating any near term need for system improvements. My
- assessment indicates the system improvements in the Tiverton Area do not need to be
- 21 installed within five years from the time the Company began the impact study of the
- proposed DG project. Based on existing data and analysis, my opinion is the improvements
- do not need to be included in an ISR Plan for capital improvement expenditure for ten or

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more years. This means that under the Interconnection Statute and Interconnection Tariff, there should not be any reimbursement to the DG customer as proposed by the Company. The Company, however, has taken a more liberal view of the tariff's intent while ignoring the actual Interconnection Tariff language. The Company, in its response to DIV 2-11, confirmed that the proposed improvements that are the subject of this Petition do not need to be installed within the five-year timeframe intended to be used for reimbursement purposes. Despite the Company's acknowledgement that the project's parameters fail to comply with the Interconnection Tariff requirements, rendering the DG customer ineligible for reimbursement, the Company ignores the tariff language and proposes reimbursement anyway. The Company's recommendation represents a deviation from its own Interconnection Tariff. I will discuss in detail my assessment and how I reached my conclusions and recommendations.

13 Q. DO YOU HAVE ANY DISAGREEMENT WITH THE SYSTEM IMPROVEMENTS 14 PROPOSED BY THE COMPANY?

A. Yes. The Company's Tiverton Area Study performed in 2021 identified the need for a new circuit 33F6, a portion of which is part of the accelerated system improvement in this Petition. I am concerned the Company's original project, outlined in 2021, included 9,300 feet of underground if Green did not move forward. Now it includes 21,000 feet of underground based on Green's moving forward with the project. The Company should not pay for any portion of that differential under any circumstances.

Q. DOES THE COMPANY PROPOSE ANY ADJUSTMENTS?

A. The Company does propose a \$3.3 million decrease in reimbursement for the differential between overhead line construction and underground line construction costs. (See response

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to DIV 3-11). It is unclear, however, how this credit applies or why 21,000 feet of duct
bank and underground cable should be considered for reimbursement.

3 Q. IS THERE ANYTHING IN PRIOR DOCKETS THAT FURTHER SUPPORTS THE

4 ASSERTION THAT GREEN SHOULD NOT RECEIVE ANY

5 **REIMBURSEMENT?**

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A. Yes. Additionally, in Docket No. 5209 the Company responded to DIV 5-1 (dated January 31, 2022) and included a discussion of Tiverton feeders which stated: "Since the DG project is on a different schedule which is earlier than the Company's recommended plan, the DG developer will be responsible for the cost in the table below to serve their project." In that table, the Company provided the estimated capital and operating expenses associated with the construction of a new 33F6 circuit for DG interconnection, excluding civil work which was being performed by Green in connection with the DG project. The Company also stated that "Cost sharing will apply to this portion of work once the 33F6 circuit is being used to serve load as per the Standards for Interconnecting Distributed Generation (RIPUC 2244¹) Section 5.4 (b)." The Company's position in early 2022 was that reimbursement did not apply until the project was installed, but now it seeks to deviate from both its initial position and the Interconnection Tariff.

Q. DOES THE COMPANY APPROPRIATELY APPLY SECTION 5.4 OF THE INTERCONNECTION TARIFF TO THE TIVERTON PROJECT?

A. No. The Company provides Section 5.4 language in its testimony (pages 9-10) and follows with its rationale on its applicability, mainly that "the System Improvements that have been accelerated by the Interconnection Customer's Tiverton Projects are System Modifications

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¹ RIPUC 2244 has been superseded by RIPUC 2258.

that benefit the Interconnection Customer and distribution customers" (pages 11-12). The Company contends that the Project should be "accelerated", which is that the "modification is otherwise identified in the Company's work plan as a necessary capital investment to be installed within a five-year period as of the date the Company begins the impact study of the proposed distributed generation (DG) project (defined as an Accelerated Modification)." (Interconnection Tariff, Section 5.4.c). The Company commenced the Green System Impact Study on June 6, 2019. The Tiverton circuit 33F6, if implemented as the Company identified in its Area Study, will not be installed until 2029. (DIV 2-11). The installation date for the Tiverton project is well beyond the five-year limitation period that determines if a capital investment is "accelerated" under the plain language of Section 5.4 of the Interconnection Tariff. DG reimbursement, therefore, is not available.² THE COMPANY ACKNOWLEDGES THAT THE TIVERTON INVESTMENT WILL NOT BE INSTALLED WITHIN THE FIVE-YEAR LIMITATIONS PERIOD AS REQUIRED BY THE INTERCONNECTION TARIFF. DO YOU AGREE WITH THE COMPANY'S RATIONALE FOR PROPOSING DG REIMBURSEMENT WHEN THE PROJECT DEVIATES FROM THE TARIFF'S REQUIREMENTS? I do not. The Company supports DG reimbursement on the grounds the project provides overlapping benefits to the developer and to all customers and because the project has been identified for *spend*, as opposed to installed, within the five-year timeframe (DIV 2-11).

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The Interconnection Tariff language was developed to balance infrastructure development

and cost responsibility by establishing specific timelines when investments can be

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² In its petition, the Company "proposes that it would begin recovering depreciation and return from distribution customers in FY 2025 through the ISR plan revenue requirement." (Petition, Page 19, lines 19-20). Since making that request, the Company and Division agreed that the Company will forego its requested relief, reserving its right to recover it in an unspecified future proceeding.

considered for cost sharing. Loosely applying the standards, regardless of the level of perceived benefits, leads to premature system investments and requires the expenditure of capital that could otherwise be used for imminent and more critical projects. I go into much greater detail about project timing and actual system needs in my remaining testimony.

The Company also mentions fairness to the DG developers as rationale for supporting reimbursement. To this point, I do not consider the lack of reimbursement as unfair to the DG customer. My analysis is the product of applying the Interconnection Tariff's plain language and its obvious meaning which DG customers were well aware of. The Interconnection Tariff provides the regulatory-approved processes and requirements that govern when DG projects, like the Tiverton DG project, are to receive accelerated treatment. What is unfair is requiring the general body of ratepayers to reimburse DG developers now for project work that the Company claims will only be installed after the tariff limitations period has expired, and in any event, based on my analysis, will not be needed for years beyond the five-year period, if at all.

A.

IV. AREA STUDY AND ISR PLAN ANALYSIS

17 Q. PLEASE BRIEFLY DESCRIBE YOUR ANALYSIS PROCESS.

I have been involved in the ISR Plan process on behalf of the Division since its inception.

I have been involved in the analysis and conferences with the Company concerning every aspect of the ISR Plan process, Area Studies performed from 2014 to 2021, and the recently delivered Long-Range Plan in the FY 2025 ISR Plan filing. The Division, much like the Company, uses Area Studies to assist in development of the ISR Plan discretionary capital projects. The study outcomes are not considered approved capital investments by the

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Division but rather a level of guidance for many ISR Plan projects. While these studies provide a view of the future needs presented in a Long-Range Plan, they do not establish what will become acceptable in future ISR Plans. To be clear, the Long-Range Plan is not an approved capital investment plan but rather the Company's strategic view of future needs. The Division has not completed the Long-Range Plan analysis process and will have further conferences with the Company. My annual ISR Plan review includes evaluating the need and prioritization of proposed projects, including those driven by Area Studies. I rely on numerous information sources for my review and assessment, including my first-hand knowledge of the past and present ISR Plans, Area Studies together with their CYME engineering models, field assessment of substations with asset condition issues, asset condition reports, and system reliability and loading analysis. All this analysis forms a basis of certain criticality for existing and future projects, with a focus on identifying projects justified for implementation now based on actual system conditions versus those that can be deferred. The ISR Plans are based on this analysis, a collaborative process with the Company, and a balance of criticality with affordability and risk assessment and tolerance. All the Company's proposed work cannot be accomplished immediately, nor is it affordable to do so.

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Q. HOW DO THE AREA STUDY AND ISR PLAN ANALYSES RELATE TO THE TIVERTON PETITION?

A. The Company's Petition states, among other things, that the interconnection of the DG project has accelerated, that the Company's 5-year and beyond capital investment plan includes system investments in the Tiverton area through calendar year 2029; suggests the need for system investments in the Tiverton area, and opines that absent the interconnection

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of the DG projects, the Company anticipates making the system improvements by 2029. The Company relies on these submittals to justify its proposed DG reimbursement. I used the Company's Tiverton Area Study assumptions to assess the actual need and timing of the system improvement that is the subject of the Petition. To do this I evaluated system loads, forecasts, and engineering models to confirm whether system conditions would require the stated improvements. I then evaluated the criticality of the system issues requiring the improvement, comparing the need for the investment against other discretionary work to determine if the Company's anticipated completion of the project by 2029 will be necessary.

Q.

A.

WHAT IS YOUR OVERALL ASSESSMENT OF THE NEED AND TIMING OF THE SYSTEM IMPROVEMENT IDENTIFIED IN THE TIVERTON AREA STUDY?

The system improvement identified in the Company's Tiverton Area Study is a new circuit 33F6 proposed to interconnect a DG customer which the Company would then extend and utilize to address several area issues. The Area Study is premised on the fact that the DG Customer is going to interconnect; therefore, the Company does not have an Area Study including the base case for Tiverton system improvements that assumes the DG Customer does not exist. In my evaluation, it is necessary to analyze the specific Tiverton improvements based on the criticality of circuit 33F6 being added for purposes other than the DG Customer interconnection. From an engineering and ISR Plan perspective, it is more likely than not that the 33F6 circuit addition to solve the voltage, load and reliability issues identified by the Company in its Area Study will not be incorporated into an ISR Plan for ten years and possibly even longer. While RIE admits these capital improvements

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will only be installed after the five-year, tariff limitations period has expired, I wanted to analyze the projects based on all the other known system requirements as well as the criticality of the other projects that are to be completed before the circuit 33F6 is incorporated into an ISR Plan.

Q. WHAT ARE THE RESULTS OF YOUR ANALYSIS OF THE NEAR-TERM REQUIREMENT FOR CIRCUIT 33F6?

The Tiverton Area Study identified voltage and loading violations on four existing feeders which the Company proposed to resolve with the new 33F6 circuit. By evaluating the CYME engineering model provided by the Company, it was determined that all potential voltage or loading violations could be eliminated by simply balancing the load on the threephase feeders. This is customary utility practice and should be done as a normal course of business to mitigate voltage and loading problems and to reduce power line energy losses. The engineering models indicate that while circuit loading approached capacity limits on each of the four feeders, the load levels do not create system issues. Therefore, based on current models, any system issues can be resolved with little or no capital investment and certainly do not require a new circuit. The Company also proposes that the 33F6 circuit extension provides reliability benefits. My analysis confirms that only one circuit, 33F4, has very poor reliability.³ This circuit can be remediated by a series of lower cost options instead of constructing a new circuit at a cost of over \$15 million. The construction of a new 33F6 circuit to solve poor reliability for the 2,964 customers served on circuit 33F4 is not cost justified. While circuit 33F4 SAIFI is 2.3 and the SAIDI is 140.56, these levels

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³ The other three Tiverton circuits have reliability better than system average and well below the Commission standard for SAIFI of 1.05. The SAIFI for each is 0.89 for 33F1; 0.48 for 33F2 and 0.80 for 33F3. I have relied upon the Company's response to DIV 4-12 in Docket 23-48-EL for the FY 2025 ISR Plan for reliability information per circuit.

can be mitigated with Trip Savers (cutout mounted reclosers, or CMR), enhanced by vegetation management, animal guards and added sectionalizing such as circuit reclosers. Indeed, the Company has followed this more reasonable path of improvements by including Tiverton circuit 33F4 in its CEMI-4 program for FY 2025. The Company plans to invest in CMRs and tree trimming at a cost of \$125,000, and reclosers at a cost of \$332,000 to improve reliability. These are a much more cost-effective solution than building a new feeder. The CEMI-4 program did not exist when the Area Study was completed. This is a good example of why Area Study solutions, particularly capacity and performance related projects, must be re-evaluated before implementation because system loads and conditions naturally change and are further impacted by the Company's programs and projects. An Area Study solution and timeline must be validated before implementation. My review of the proposed Tiverton 33F6 circuit takes those factors into consideration. A current-state examination indicates that absent the DG interconnection, there is not a near term need to construct the circuit.

Q. WHAT ARE THE RESULTS OF YOUR ANALYSIS OF YOUR LONG-TERM REQUIREMENT FOR CIRCUIT 33F6?

A. There is very little projected load growth and most likely no-load growth in the Tiverton substation area. That means voltage or loading violations are very unlikely through the end of the study period or 2035. What does remain is a lack of N-1 reliability (contingency load at-risk) on the four existing feeders. That means if there is a feeder outage, that outage will be a sustained outage until repairs are completed. Thus, a portion of any feeder cannot be

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⁴ \$125,000 for CMRs, a little tree trimming, and \$332,000 for four reclosers, one of them for a future tie with 33F6 per FY 2025 the ISR Plan, Attachment DIV 3-21-2.

transferred to another feeder, but this limitation is only applicable during peak load times. The Company's recommended contingency solution is to build the new 33F6 circuit and extend the line to pick up load from other Tiverton circuits. The question becomes: what is the urgency and criticality of resolving contingency load at-risk exposure? For Tiverton specifically, I take into account that three of the four feeders have actual reliability that is below the Commission standard. Since these circuits have a lower frequency of outages, there is a lower probability the contingency at-risk scenario will develop. The additional work planned to improve circuit 33F4 reliability should also place that feeder in a lower probability category. In addition, the N-1 exposure at Tiverton should be lower relative to the time the Area Study was performed since loads have been decreasing. My assessment, based on the favorable reliability performance of other planned improvements, is that a new 33F6 feeder solely to resolve the limited N-1 exposure would not be an appropriate solution in an ISR Plan until approximately 2035, and possibly even beyond that year.

A.

Q. WHY NOT SOLVE THE LOAD TRANSFER DEFICIENCY NOW OR IN THE NEAR TERM?

The Tiverton feeder contingency load at-risk violations are not unique or isolated. This situation exists on many of the RIE feeders and it is typical for most electric utility systems to have a large number of feeders without load transfer capability, particularly during peak load period. Within its Area Studies, the Company has identified solutions for at least 30 feeders with contingency load at-risk which includes Tiverton (Docket 5209, DIV 5-1). Of these 30 feeders, there are feeders with industrial load, more MVA load and more MWh at risk and that are more critical than Tiverton. There are 28 circuits with contingency load at-risk that do not have N-1 solutions (DIV 3-2) which means that exposure is indefinite.

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Additionally, there are fourteen (14) substations with load at-risk. Since at least sixty (60) feeders and fourteen (14) substations without N-1 capability cannot be immediately eliminated, the risk assessment and criticality of each must be evaluated and prioritized. That evaluation must also weigh the importance of resolving contingency loading concerns against every other discretionary capital investment the Company proposes. This goes back to my initial discussion on the ISR Plan and distribution planning in general. In a narrow view, contingency projects are evaluated and prioritized considering factors such as risk of failure, restoration options, customers served, criticality of customers, and load at risk. However, planned solutions must account for competing capital needs in every ISR Plan category, and in particular the Company's substantial substation asset condition projects which require remediation in the near and long term. Each of these areas involves programs and projects which require significant capital investment in existing and future ISR Plans. A project such as the addition of circuit 33F6, which may have some level of reliability benefit, is not of significant enough criticality to place its advancement before most of the other identified capital-intensive projects and programs. As stated above, three of the four Tiverton feeders have reliability far better than the Commission standard requirement and even at or below the Company's most aggressive indicated desire to reach a SAIFI of 0.85. The fourth feeder, 33F4, is scheduled for significant reliability improvements in FY 2025, thus reducing risk of failure and developing into a contingency load at-risk situation. It is expected that feeder 33F4 will be brought to a reliability level closer to the other three existing Tiverton feeders with a SAIFI between 0.48 and 0.89. Furthermore, the Company is now moving into a period of significantly higher capital investment (as compared to historical spending levels), which is caused by the new AMF advancement, more

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substation asset condition projects and more feeder projects, including FLISR reclosers in the CEMI-4 program. Therefore, in my opinion, Tiverton circuit 33F6 is not a capital project that rises to a level of criticality that should be incorporated into an ISR Plan before 2035, and more likely than not beyond the RIE projected year of 2029. I find nothing that would cause the Division to accept capital spending for a new 33F6 feeder any earlier except a DG Customer requirement or some other unexpected large commercial or industrial load addition.

A.

8 Q. YOU MENTIONED PRIORITIZING SUBSTATION ASSET CONDITION 9 PROJECTS, CAN YOU EXPLAIN YOUR REASONING?

- Yes. The Company identified a minimum of sixteen (16) substations which have substantially deteriorated assets. Most of the equipment and infrastructure is obsolete and unreliable creating both safety and reliability concerns. The Division and its consultant visited these substations to verify the level of asset condition and a priority of stations for significant improvement projects. These stations represent a significant level of capital investment over the next five plus years. The substations serve a large number of customers and have a much higher priority than marginal reliability issues on one feeder in the Tiverton area. Thus, the substation projects will result in budgetary pressure to further delay single circuit marginal reliability issues, particularly when these reliability issues can be solved with relatively inexpensive projects.
- Q. ARE THERE ANY OTHER BUDGETARY PRESSURES WHICH WOULD FURTHER DICTATE DELAYING A NEW 33F6 FEEDER ABSENT THE GREEN GENERATION INTERCONNECTION?

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Yes. There are long-standing programs such as the UG Program which is addressing the upgrades to the underground duct bank system in areas such as Providence that are approaching or are more than 100 years old. Additionally, there is a URD program which involves direct buried vintage cable replacement and numerous other long standing asset condition programs which have far higher criticality than a single marginal reliability feeder such as that proposed for Tiverton. Tariff and engineering concerns aside, the Commission should not compromise these major programs for a feeder, 33F6, that would not be built for at least the next five years, and may not even be incorporated into an ISR Plan for ten years or possibly even longer, absent the Green generation interconnection requirement.

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V. <u>COST TO BE PAID AND REIMBURSED</u>

- 13 Q. **SETTING ASIDE YOUR TARIFF** AND **ENGINEERING ANALYSES** 14 INDICATING THAT REIMBURSEMENT FOR 33F6 IS NOT PERMITTED AND 15 THERE IS NO NEED FOR CIRCUIT 33F6, RESPECTIVELY, DO YOU HAVE 16 ANY OTHER CONCERNS WITH THE REIMBURSEMENT PROPOSED IN THE 17 **PETITION?**
- 18 A. Yes. The Company has outlined a reimbursement predicated on 21,000 feet of underground duct bank. Earlier studies indicated only 9,300 feet of underground duct bank was required.

 20 Furthermore, if circuit 33F6 were built exclusively for the retail customer reliability enhancement, there remains the question as to why the entire circuit addition would not be overhead at a significantly lower cost. Even if the Division's legal and engineering concerns are set aside momentarily (which they should not be), if there is to be an approved

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- reimbursement level to Green, it should be only for the cost of what would have been built
 by the Company if Green did not exist. That means a much lower cost project. Additionally,
 any reimbursement to Green should not occur until the Company reaches the year in which
 it would complete the construction of circuit 33F6.
- 5 Q. HAVE YOU CALCULATED THE REIMBURSEMENT LEVEL BASED ON
 6 EITHER 9,300 FEET OF UNDERGROUND OR BASED ON AN OVERHEAD
 7 CIRCUIT DESIGN?
 - A. The burden is on the Company to show why the aforementioned concerns do not require a material reduction of its cost reimbursement proposal. With the contradictory information that exists in the materials provided to me, the Company has not satisfied its burden. Thus, I have not performed these calculations. If proffered, the estimates should be examined to ensure that the Company's assumptions, design and estimating tools follow the same methodology that the Company typically uses in project development. This would assume that the Company procures and installs all infrastructure as opposed to a hybrid methodology in the Petition where some components are based on the DG customer's expected costs and others are based on the Company's estimates.

18 VI. RECOMMENDATIONS AND CONCLUSIONS

- 19 Q. WHAT IS YOUR RECOMMENDATION TO THE COMMISSION?
- 20 A. The Company's Petition should be denied in its entirety.
- 21 Q. DOES THIS CONCLUDE YOUR TESTIMONY?
- 22 A. Yes.

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AFFIDAVIT OF GREGORY L. BOOTH, PE

Gregory L. Booth, does hereby depose and say as follows:

I, Gregory L. Booth, on behalf of the Rhode Island Division of Public Utilities and Carriers, certify that testimony, including information responses, which bear my name was prepared by me or under my supervision and is true and accurate to the best of my knowledge and belief.

Signed under the penalties of perjury this the 10th day of April, 2024.

I hereby certify this document was prepared by me or under my direct supervision. I also certify I am a duly registered professional engineer under the laws of the State of Rhode Island, Registration No. 8078.

REGISTERED PROFESSIONAL ENGINEER (ELECTRICAL)

Gregory L. Booth, PE

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	EXHIBIT GLB-1 Page 1 of 48
CURRICULUM VITAE OF	
GREGORY L. BOOTH	
February 2023	

RESUME OF GREGORY L. BOOTH, PE, PLS President Gregory L. Booth, PLLC

Gregory L. Booth is a registered professional engineer with engineering, financial, and management services experience in the areas of utilities, industry private businesses and forensic investigation. He has been representing over 300 clients in some 40 states for more than 50 years. Mr. Booth was inducted into the North Carolina State University Electrical and Computer Engineering Alumni Hall of Fame in November of 2016 based on his accomplishments in the field of engineering.

Mr. Booth has been accepted as an expert before state and federal regulatory agencies, including the Federal Energy Regulatory Commission, the Delaware Public Service Commission, the Connecticut Public Utilities Regulatory Authority, Florida Public Service Commission, the Minnesota Department of Public Service Environmental Quality Board, the Maine Public Utilities Commission, the Massachusetts Department of Public Utilities, the New Jersey Board of Public Utilities, the North Carolina Utilities Commission, the Pennsylvania Public Utility Commission, the Rhode Island Public Utilities Commission, and the Virginia State Corporation Commission. Mr. Booth has provided expert witness services on over 500 tort case matters, and over 50 regulatory matters. Investigation and testimony experience includes areas of wholesale and retail rates, utility acquisition, territorial disputes, electric service reliability, right-of-way acquisition and impact of electromagnetic fields and evaluation of transmission line options for utility commissions.

He has been accepted as an expert in both state and federal courts, including Colorado, Delaware, District of Columbia, Florida, Georgia, Kansas, Maryland, Minnesota, Missouri, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Puerto Rico, South Carolina, Texas, Virginia, West Virginia, Virgin Islands, and Wisconsin, and numerous Federal Court jurisdictions. Mr. Booth has extensive experience serving as an expert witness before state and federal courts on matters including property damage, forensic evaluation, fire investigations, fatality, and areas of electric facility disputes and Occupational, Safety and Health Administration violations and investigations together with National Electrical Code and National Electrical Safety Code and Industry Standard compliance.

The following pages provided are the education and experience from 1963 through the present, along with courses taught and publications.

RESUME OF GREGORY L. BOOTH, PE, PLS

Mr. Booth is a Registered Professional Engineer with engineering, financial, and management experience assisting local, state, and federal governmental units; rural electric and telephone cooperatives; investor owned utilities, industrial customers and privately owned businesses. He has extensive experience representing clients as an expert witness in regulatory proceedings, private negotiations, and litigation.

PROFESSIONAL EDUCATION:

NORTH CAROLINA STATE UNIVERSITY; Raleigh NC, Bachelor of Science, Electrical Engineering, 1969

PROFESSIONAL HONORS:

Inducted into North Carolina State University Department of Electrical and Computer Engineering Alumni Hall of Fame in November 2016.

REGISTRATIONS:

Registered as Professional Engineer in Alabama, Arizona, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Kansas, Maryland, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, North Carolina, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Texas, Commonwealth of Virginia, West Virginia, and Wisconsin

Professional Land Surveyor in North Carolina

Council Record with National Council of Examiners for Engineering and

Surveying

EXPERIENCE:

1963-1967 Technician Booth & Associates Transmission surveying and design assistance, substation design assistance; distribution staking; construction work plan, long-range plan, and sectionalizing study preparation assistance for many utilities, including Cape Hatteras EMC, Halifax EMC, Delaware Electric Cooperative, Prince George Electric Cooperative, A&N Electric Cooperative; assistance generation plant design, start-up, and evaluations.

1967-1973 Project Engineer Booth & Associates

Transmission line and substation design; distribution line design; long-range and construction work plans; rate studies in testimony before State and Federal commissions; power supply negotiations; all other facets of electrical engineering for utility systems and over 30 utilities in 10 states.

1973-1975 Professional Engineer Associates 1975-1994 Executive Vice President Booth & Associates Directed five departments of Booth & Associates, Inc.; provided engineering services to electric cooperatives and other public Booth & power utilities in 23 states; provided expert testimony before state regulatory commissions on rates and reliability issues; in accident investigations and tort proceedings; transmission line routing and designs; generation plant designs; preparation and presentation of longrange and construction work plans; relay and sectionalizing studies; relay design and field start-up assistance; generation plant designs; rate and cost-of-service studies; reliability studies and analyses; filed testimony, preparation and teaching of seminars; preparation of nationally published manuals; numerous special projects for statewide organizations, including North Carolina EMC. Work was provided to over 130 utility clients in 23 states, PWC of the City of Fayetteville, NC, Cities of

Wilson, Rocky Mount and Greenville are among the utilities in which I have provided engineering services in North Carolina during this time frame. Services to industrial customers include Texfi Industries, Bridgestone Firestone, Inc and many others.

1994-2004 President Booth & Associates Responsible for the direction of the engineering and operations of Booth & Associates, Inc. for all divisions and departments. The engineering work during this time frame has continued to be the same as during 1974 through 1993 with the addition of greater emphasis on power supply issues, including negotiating power supply contracts for clients; increased involvement in peaking generation projects; development of joint transmission projects, including wheeling agreements, power supply analyses, and power audit analyses. The work during this time frame includes providing services to over 200 utility clients across the United States, including NCEMC and NRECA.

2005-July 2019 President PowerServices, Inc.

Providing engineering and management services to the electric industry, including planning and design and utility acquisition. Providing forensic engineering, product evaluation, fire investigations and accident investigation, serving as an expert witness in state and federal regulatory matters and state and federal court.

2004-Present President Gregory L. Booth, PLLC Providing engineering and management services to the electric industry, including planning and design. Providing forensic engineering, product evaluation, fire investigations and accident investigation, serving as an expert witness in state and federal regulatory matters and state and federal court.

WORK AND EXPERTISE:

ELECTRIC UTILITIES: (more than 300 clients)

- All aspects of utility planning, design and construction, from generation, transmission, substation and distribution to the end user.
- Utility acquisition expert, including providing condition assessment, system electrical and financial valuation, electrical engineering assessment, initial Work Plan and integration plans, acquisition loan funds, testimony, assessment and consulting services for numerous electric utility acquisitions. Utility clients for acquisition projects include Winter Park, FL acquisition of Progress Energy, FL, system in the City limits, A & N Electric Cooperative acquisition of the Delmarva Power & Light Virginia jurisdiction, Shenandoah Valley Electric Cooperative acquisition of Allegheny Energy Virginia jurisdiction, Rappahannock Electric Cooperative acquisition of Allegheny Energy Virginia jurisdiction, and numerous other past and currently active electric utility acquisitions.
- System studies, including long-range and short-range planning, sectionalizing studies, transmission load flow studies, system stability studies (including effects of imbalance and neutral-toearth voltage), environmental analyses and impact studies and statements, construction work plan, power requirements studies, and feasibility studies.

- Fossil, hydro, microgrid, wind, and solar generation plan analysis, design, and construction observation.
- Transmission line design and construction observation through 230 kV overhead and underground, including interface with DOT and other utilities.
- Switching station and substation design and construction observation through 230 kV.
- Distribution line design and staking, overhead and underground, including interface with DOT and other utilities.
- Design of submarine cable installations. (Transmission and distribution)
- Supervisory control and data acquisition system design, installation and operation assistance.
- Load management system design, installation and operation assistance.
- Computer program development.
- Load research and alternative energy source evaluation.
- Field inspection, wiring, and testing of facilities.
- Relay and energy control center design.
- Mapping and pole inventories.
- Specialized grounding for abnormal lightning conditions.
- Ground potential rise protection.
- Protective system/relay coordination.
- Grid Modernization Plan development, regulatory testimony, and implementation
- Pole Attachment Agreements, rate design, and testimony

UTILITY OPERATIONS:

- Storm assessment services., including interface with DOT and other utilities
- Regulatory testimony on storm response.
- Storm Response Plan development.
- Operations, including outage management and Call Centers.
- Outage management and operations enhancement services and testimony.

GENERATION DESIGN / FAILURE ANALYSES:

- Intermediate and peaking generation (gas and oil fired through 400 MW).
- Peaking generation (diesel and gas through 10,000 kW)
- Wind generation.
- Solar (PV) generation.
- Hydroelectric generation.
- Microgrid, including energy storage.

TELECOMMUNICATION: UTILITIES:

- Subscriber and trunk carrier facilities design.
- Stand-by generation and DC power supplies
- DC-AC inverters for interrupted processor supplies.
- Plant design and testing.
- Fiber optics and other transmission media.
- Microwave design.
- Pole attachment designs and make-ready design.
- Pole Attachment Agreements and rental rates calculations.
- Regulatory testimony.

FINANCIAL SERVICES:

- Long-term growth analyses and venture analyses.
- Lease and cost/benefit analyses.
- Capital planning and management.
- Utility rate design and service regulations.
- Cost-of-Service studies.
- Franchise agreements.
- Corporate accounting assistance.
- Utility Commission testimony (State and Federal)

FORENSIC ENGINEERING:

- Compliance with NESC, NEC, OSHA, IEEE, ANSI, ASTM and other codes and industry standards, including DOT standards.
- Equipment and product failure and analysis and electrical accident investigation (high and low voltage equipment).
- Stray voltage, electrical shocking, and electrocution investigations.
- Building code investigations.
- New product evaluation.
- MCC, MDP failure analysis and arc flash analysis
- Electrical fire analysis

INDUSTRIAL/ELECTRICAL ENGINEERING:

- Building design (commercial and industrial).
- Building code application and investigation. (NFPA and NEC)
- Electric thermal storage designs for heating, cooling, and hot water.
- Standby generation and peaking generation design.
- Electric service design (residential, commercial, and industrial).

INSTRUCTIONAL SEMINARS AND TEXT:

- Seminars taught on arc flash hazards and safety, including National Electrical Safety Code regulations for utilities.
- Courses taught on Distribution System Power Loss Evaluation and Management.
- Courses taught on Distribution System Protection.
- Text prepared on Distribution System Power Loss Management.
- Text prepared on Distribution System Protection.
- Seminars taught on substation design, NESC capacitor application, current limiting fuses, arresters, and many others electrical engineering subjects.
- Courses taught on accident investigations and safety.
- Courses taught on Asset Management.
- Courses taught on OSHA and Construction Safety.

TESTIMONY AS AN EXPERT:

- Concerning rate and other regulatory issues before Federal Energy Regulatory Commission and state commissions in Connecticut, Delaware, Florida, Maine, Maryland, Massachusetts, Minnesota, New Jersey, New Hampshire, North Carolina, Pennsylvania, Rhode Island, and Virginia.
- Concerning property damage or personal injury before courts in Colorado, Delaware, District of Columbia, Florida, Georgia, Kansas, Maryland, Minnesota, Missouri, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Puerto Rico, South Carolina, Texas, Virginia, West Virginia, Virgin Islands, and Wisconsin.

FIELD ENGINEERING:

- Transmission line survey and plan and profile.
- Distribution line staking.
- Property surveying.
- DOT highway relocation design.
- Relay and recloser testing.
- Substation start-up testing.
- Generation acceptance and start-up testing.
- Ground resistivity testing.
- Work order inspections.
- Operation and maintenance surveys.
- Building inspection and service facility inspection.
- Construction Management
 - Generation
 - Transmission
 - Substation
 - Distribution
 - Building Electrical Installations
 - GSA construction projects
 - NASA construction projects
 - University construction projects

PROFESSIONAL ORGANIZATIONS:

- a. National Society of Professional Engineers (NSPE)
- b. Professional Engineers in Private Practice (PEPP)
- c. National Council of Examiners for Engineering & Surveying (NCEES)
- d. Professional Engineers of North Carolina (PENC)
- e. National Fire Protection Association (NFPA)
- f. Associate Member of the NRECA
- g. NRECA Cooperative Network Advisory Committee (NRECA-CRN)
- h. The Institute of Electrical and Electronics Engineers (IEEE) (Distribution sub-committee members on reliability)
- i. American Standards and Testing Materials Association (ASTM)
- j. Occupational Safety and Health Administration (OSHA) Certification
- k. American Public Power Association (APPA)
- 1. American National Standards Institute (ANSI)

		EXHIBIT GLB-1
RI	ERAL & STATE EGULATORY CASE LIST	Page 8 of 48

Colorado Public Utility Regulatory Authority

2015

The City of Lamar, Colorado, Colorado Mills LLC, Palace Holdings, LLC, Ports of Plains Travel Plaza and Jeanna Dewitt 2014CV30031

Commonwealth of Virginia State Corporation Commission

Approximately 1976 - 1981 A&N Electric Cooperative Retail Rates Cases (WT) (HE)

2007

Delmarva Power & Light System Acquisition Purchase by A & N Electric Cooperative, Post Office Box 290, 21275 Cooperative Way, Tasley, VA 23441 and Old Dominion Electric Cooperative, 4201 Dominion Boulevard, Glen Allen, VA 23060 Case Nos. PUE-2007-00060, 00061, 00062, 00063, and 00065 (WT) (HE)

2009

Potomac Edison/Alleghenv Power System Acquisition Purchase by Shenandoah Valley Electric Cooperative, 147 Dinkel Ave., Hwy 257, Mt. Crawford, VA 22841 Case No. PUE-2009-00101 (WT) (HE)

2009

Potomac Edison/Allegheny Power System Acquisition Purchase by Rappahannock Electric Cooperative, 247 Industrial Court, Fredericksburg, VA 22408 Case No. PUE-2009-0010 (WT) (HE)

2011

Virginia, Maryland & Delaware Association of Electric Cooperatives Commonwealth of Virginia at the relation of the State Corporation Commission in the Matter of Determining Appropriate Regulation of Pole Attachments and Cost Sharing in Virginia Case No. PUE-2011-00033

(WT) (HE)

2013

Northern Virginia Electric Cooperative Pole Attachment Dispute with ComCast PUE-2013-00055 (WT) (HE)

2016

A&N Eastern Shore of Virginia Broadband Authority

Connecticut Public Utilities Regulatory Authority

2017

The Connecticut Light and Power Company d/b/a Eversource Energy to Amend its Rate Schedules on behalf of the Connecticut Office of Consumer Counsel

Docket No. 17-10-46

(HE)

2018

PURA Investigation into Distribution System Planning of the Electric Distribution Companies on behalf of the Connecticut Office of Consumer Counsel

Docket No. 17-12-03

(HE)

2020

Phases II and III and IV Subdockets RE02 thruRE09 and RE11 Regarding AMI, Battery Storage, Electric Vehicles, Innovative Technology Applications & Programs, Non-Wires Alternatives, Resilience & Reliability, Clean and Renewable Energy, Interconnection Standards & Practices, Rate Design, RE11 17-12-03

2020

PURA Implementation of Section 3 of Public Act 19-35, Renewable Energy Tariffs and Procurement Plans

20-07-01

2021

Annual Review of Rate Adjustment Mechanism of United Illuminating Company 21-08-02

2021

Annual Non-Residential Renewable Energy Tariff Program Review – Year 1 21-08-03

2021

Annual Review of Storage Program – Year 1 21-08-05

2021

Annual Review of Electric Vehicle Charging Program – Year 1 21-08-06

2021

Application To Install and Operate an Electric Submetering System at 1 Long Wharf Drive, New Haven, CT

21-08-07

2021

Petition to Establish a Docket Pertaining to Public Act 21-162, An Act Concerning the Solicitation of New Fuel Cell Electricity Generation Projects 21-08-08

HE = Hearing **WT** = Written Testimony

Gregory L. Booth, PLLC.

2021

Application of AEP Onsite Partners, LLC for Qualification of 0 High Street, Willimantic, Ct as a Class I Renewable Energy Source

21-08-11

2021

Investigation into Medium and Heavy-Duty Electric Vehicle Charging 21-09-17

2022

Public Act 22-55, Energy Storage Systems and Electric Distribution on System Reliability 22-06-05

2022

Application of The United Illuminating Company to Amend Its Rate Schedule 22-08-08

2023

Annual Electric Distribution Company Reliability and Resilience 23-08-09

Delaware Public Service Commission

1976

Approximately 1976 – 1985 Delaware Electric Cooperative, Inc., Retail Rate Case and Reliability Cases (WT) (HE)

2018

Delaware Distribution Planning Process Phase II

18-0935

(Report)

2018

Delaware Distribution Planning Process, Phase I

18-0935

(Report)

2018

In The Matter of the Petition of the Public Service Commission Staff and Delaware Division of the Public Advocate to Establish a Regulation for Distribution System Investment Plans for Delaware Electric and Natural Gas Utilities

18-0935

(Report)

2020

Delaware Distribution Planning Process Phase III

18-0935

(Report)

2020

Evaluation of the Delmarva Power & Light Company's infrastructure, Safety, and Reliability Plan for the period of July 1, 2020 to June 30,2020

18-0935

(Report)

2020

Application of Delmarva Power & Light Company for an Increase in Electric Base Rates 20-0149

(Report)

2020

Consecutive Estimation Program

20-0226

2022

2022-2024 Electric Infrastructure, Safety and Reliability Plan

22-0320

(Report)

2022

2023-2032 Long Range Distribution Plan

22-0506

2022

2022 Delmarva Power Rate Case

Docket No. 22-0897

2023

2023-2025 Electric Infrastructure, Safety and Reliability Plan

23-0460

(Memorandum)

Federal Energy Regulatory Commission

Public Works Commission of the City of Fayetteville, NC v. Carolina Power & Light Company ER76-, ER77-, ER78, ER81-344, ER84-

(WT) (HE)

2000

North Carolina Electric Membership Corporation v. Duke Energy Corporation and Duke Electric

Transmission

ER01-282-000 and ER01-283-000

(WT)(HE)

2000

North Carolina Electric Membership Corporation v. Virginia Electric Power Company dba North Carolina Power

EL90-26-00-000

(WT) (HE)

HE = Hearing

Gregory L. Booth, PLLC.

2015

Application for Authorization Pursuant to Section 203(a)(1)(A) and 203(a)(2) of the Federal Power Act and Request for Waivers of Certain Filing Requirements on behalf of New Jersey Division of Rate Counsel

Dkt EC15-157-000

(Report)

Florida Public Service Commission (PSC)

2007

Municipal Utility Underground Consortium Pre-Filed Testimony for Storm Hardening and Undergrounding Assessment Docket Nos. 07023-EI, 080244-EI, and 080522-EI

(WT) (HE)

2007

Gulf Power Company's Storm Hardening Plan Pre-filed Testimony on Behalf of City of Panama City Beach, Florida

Florida PSC Docket No. 070299-EI

(HE)

Georgia Public Service Commission

2020

Notice of Proposed Rulemaking to Adopt Rule 515-12-1-.36, Pole Attachment Agreements Docket No. 43453

(WT) (HE)

Maine Public Utilities Commission

2016

Efficiency Maine Trust Request for Examination of Voltage Optimization Pilot Program Docket No. 2016-00162 on behalf of Maine Office of Public Advocate

Dkt. 2016-00162

(WT) (HE)

2017

Investigation into the Designation of Non-Transmission Alternative (NTA) Coordinator on behalf of Maine Office of Public Advocate

Docket No. 2016-00049

(WT) (HE)

2017

Investigation of Inclusion of Acadia Substation Investment in Rates Pertaining to Emera Maine on behalf of Maine Office of Public Advocate

Docket No. 2017-00018

(WT)(HE)

Public Service Commission of Maryland

1976

1976 Approximately 1976 – 1985 A&N Electric Cooperative Retail Rate Cases (WT) (HE)

HE = Hearing **WT** = Written Testimony

Massachusetts Department of Public Utilities

2012

Massachusetts Attorney General's Office Commonwealth of Massachusetts Department of Public Utilities Massachusetts Electric Company and Nantucket Electric Company d/b/a National Grid Review for Storm Response and Recovery of 2008 Storm Costs

DPU 11-56

(WT) (HE)

2012

Massachusetts Attorney General's Office Western Massachusetts Electric Company, Northeast Utilities System, Review for Recovery of Storm Costs

DPU 11-102/DPU 11-102A

(WT) (HE)

2013

Massachusetts Attorney General's Office Nstar Review for Recovery of Storm Costs DPU 13-52

(WT) (HE)

2014

Massachusetts Attorney General's Office National Grid Solar Generation Phase II Program Assessment D.P.U. 14-01

(WT) (HE)

2014

Massachusetts Attorney General's Office Western Massachusetts Electric Company, Review of Storm Recovery Reserve Cost Adjustment "SRRCA"

D.P.U. 13-135

(WT) (HE)

2016

Massachusetts Attorney General's Office MA Elec. Co. and Nantucket Elec. Co. d/b/a National Grid, Fitchburg Gas and Elec. Light Co. d/a/a Unitil and NSTAR Elec. Co. d/b/a Eversource for Approval by the DPU of their Grid Modernization Plan

DPU 15-120, 15-121, 15-122/15-123

(WT) (HE)

2017

Massachusetts Attorney General's Office Nstar Electric Company and Western Massachusetts Electric Company d/b/a Eversource Energy Petition for Approval of a Performance-Based Ratemaking Mechanism and General Distribution Revenue Change

DPU 17-05

(WT) (HE)

2017

Massachusetts Attorney General's Office Petition of Massachusetts Electric Company and Nantucket Electric Company each d/b/a National Grid for Pre-Approval of Enhanced Vegetation Management Pilot Program

DPU 17-92

(WT) (HE)

HE = Hearing

Gregory L. Booth, PLLC.

WT = Written Testimony

2018

Massachusetts Attorney General's Office Massachusetts Eversource Performance Based Ratemaking Mechanism Performance Metrics

DPU 18-50

2018

Massachusetts Attorney General's Office Massachusetts Electric Company and Nantucket Electric Company each d/b/a National Grid Storm Cost Recovery DPU 18-94

2019

Massachusetts Attorney General's Office National Grid Rate Case DPU 18-150

Minnesota Department of Public Service/Environmental Quality Board

Transmission Line Assessment Minnesota Department of Public Service and Minnesota Environmental Quality Board

(HE)

New Hampshire Public Utilities Commission

1985

Approximately 1985 - 1995 Other Cases on Behalf of the New Hampshire Public Utilities Commission Staff

2004

City of Bedford v. Public Service of New Hampshire

New Jersey Board of Public Utilities

1978

Approximately 1978 - 1985 Sussex Rural Electric Cooperative Retail Rate Cases (WT) (HE)

2004

New Jersey Board of Public Utilities, Focused audit of the planning, operations and maintenance practices, policies and procedures of Jersey Central Power & Light Company Docket No. EX02120950

(WT) (HE)

2015

Jersey Central Power & Light Company ("JCP&L") and Mid-Atlantic Interstate Transmission, LLC ("MAIT") FERC 7 Factor Test Evaluation on behalf of New Jersey Division of Rate Counsel BPU Docket No. EM15060733 (WT)

2016

Atlantic City Electric Company for Approval of Amendments to its Tariff to Provide for an Increase in Rates and Charges For Electric Service Pursuant to NJSA 48:2-21 and JJSA 48:2-21.1 on behalf of New Jersey Division of Rate Counsel

DPU Docket No. ER16030252 OAL Docket No. PUC 5556-16

HE = Hearing **WT** = Written Testimony Gregory L. Booth, PLLC.

North Carolina Utilities Commission

1990

Delora Dennis, et. al. v. Haywood EMC E-7, Sub 474, EC-10, Sub 37, E013, Sub 151 (WT) (HE)

1990

In Approximately 1990's Larry Eaves, et. al. v. Town of Clayton (WT) (HE)

1990

In approximately 1990's Poly-Loc v. Town of Tarboro (WT) (HE)

2001

Wake EMC Right of Way Acquisition

(TE)

2002

Progress Energy Carolinas, Inc., v. E.M. Harris, Jr. Family Limited Partnership, Edward M. Harris, III and wife Pamela M. Harris, Gene K. Harris and wife Linda Harris, Camille H. Cunnup and husband Timothy J. Cunnup Siler City Transmission Line Issues
General Court of Justice Superior Court Division, File No. 03 CVS SP 251, 252, 253, 254, 255
(WT) (HE)

2004

John Wardlaw, et. al. Interveners v. Progress Energy Carolinas Docket No. E-2, Sub 855 (WT) (HE)

2011

Frontier Communications of the Carolinas, Inc. v. Blue Ridge Mountain Electric Membership Corporation
11-CVS-17175

2017

Jones-Onslow Electric Membership Corporation; Surry-Yadkin Electric Membership Corporation; Carteret-Craven Electric Membership Corporation; Union Electric Membership Corporation, d/b/a Union Power Cooperative v. Time Warner Cable Southeast, LLC NCUC Docket Nos. EC-43 5888, EC-49 555, EC55 570 and EC-39 S44 (WT) (HE)

2017

Blue Ridge Electric Membership Corporation v. Charter Docket No EC-23, SUB 50 (WT) (HE)

Pennsylvania Public Utility Commission

2004

Investigation regarding the Metropolitan Edison Company Pennsylvania Electric Company and Pennsylvania Power Company Reliability Performance on behalf of Allegheny Electric Cooperative and its Member Cooperatives

Docket No. I-00040102

(WT) (HE)

2006

Investigation regarding Pennsylvania Rural Electric Association / Allegheny Electric Cooperative and its Member Cooperatives Rates

Docket Nos. R-00061366, R-0061367, et. al.

(WT)(HE)

2007

Wellsboro Electric Company participants Included C&T Enterprises, Inc., comprised of Wellsboro Electric Company, Claverack Rural Electric Cooperative, Inc., Tri-County Rural Electric Cooperative, Inc., and Citizens Electric

Docket No. P-2008-2020257

(WT) (HE)

2014

Allegheny Electric Cooperative and its Member Cooperatives 2014 Intervention Assistance, Analysis of Service Reliability Concerns Regarding West Pennsylvania Power Company, Pennsylvania Electric Company, Metropolitan Edison Company (First Energy Company)

Docket Nos. R-2014-2428742, -2428743, -2428744, -248745

(WT) (HE)

2015

MAIT and PENELEC for Authorizing the Transfer of Certain Transmission Assets from MET-Ed & PENELEC to MAIT on behalf of Wellsboro Electric Company A-2015-2488903 (cons.)

Rhode Island Public Utilities Commission

1997

1990 - 1997 Other Matters Before the Rhode Island Public Utilities Commission on behalf of Rhode Island Division of Public Utilities and Carriers (WT) (HE)

1997

Testimony before the Rhode Island Public Utilities Commission, on behalf of Rhode Island Division of Public Utilities and Carriers, May 15, 1997

Docket No. 2489

(WT) (HE)

2003

Testimony before the Rhode Island Public Utilities Commission on behalf of Rhode Island Division of Public Utilities and Carriers December 2003

Docket No. 2930

(WT) (HE)

HE = Hearing

Gregory L. Booth, PLLC.

WT = Written Testimony

2004

Issuance of Advisory Opinion to Energy Facility Siting Board Regarding The Narragansett Electric Company's Application to Relocate Transmission Lines Between Providence and East Providence on behalf of Rhode Island Division of Public Utilities and Carriers

Docket No. 3564

(WT) (HE)

2006

Issuance of Advisory Opinion to Energy Facility Siting Board Regarding the Narragansett Electric Company d/b/a National Grid's Application to Construct and Alter Major Energy Facilities, on behalf of Rhode Island Division of Public Utilities and Carriers, 2004

Docket No. 3732

(WT) (HE)

2007

Issuance of Advisory Opinion to RIDPUC in the Matter of the Joseph Allard Fatality Involving Verizon and National Grid on behalf of Rhode Island Division of Public Utilities and Carriers

2008

Issuance of Advisory Opinion to Energy Facility Siting Board Regarding the Narragansett Electric Company d/b/a

National Grid's Application to Construct and Alter Major Energy Facilities, on behalf of Rhode Island Division of Public Utilities and Carriers

Docket No. 4029

(WT) (HE)

2010

Rhode Island Division of Public Utilities and Carriers Narragansett Tariff Investigation on behalf of Rhode Island Division of Public Utilities and Carriers Docket No. R.I.P.U.C. 4065

2010

National Grid Proposed Electric Infrastructure, Safety and Reliability Plan for FY 2012 Submitted Pursuant to R.I.G.L. § 39-1-27.7.1 on behalf of Rhode Island Division of Public Utilities and Carriers Docket No. 4218 (WT) (HE)

2012

National Grid Electric FY 2013 Electric Infrastructure, Safety and Reliability Plan on behalf of Rhode Island Division of Public Utilities and Carriers

Docket No. 4307

(WT) (HE)

2012

National Grid Hurricane Irene Response Assessment, 2012 on behalf of Rhode Island Division of Public Utilities and Carriers

Docket No. D-11-94

(WT) (HE)

HE = Hearing **WT** = Written Testimony

Gregory L. Booth, PLLC.

2012

Public Utilities Commission Review of Storm Contingency Funds of Electric Utilities on behalf of Rhode Island Division of Public Utilities and Carriers

Docket No. 2509

(WT) (HE)

2012

Commission's Investigation Relating to Stray and Contact Voltage on behalf of Rhode Island Division of Public Utilities and Carriers

Docket No. 4237

(Annual Reports 2012 through 2022)

2012

Rhode Island Public Utilities Commission Interstate Reliability Assessment on behalf of Rhode Island Division of Public Utilities and Carriers

Docket No. 4360

(WT) (HE)

2012

National Grid Electric Infrastructure, Safety, and Reliability Plan for 2014 on behalf of Rhode Island Division of Public Utilities and Carriers

Docket No. 4382

(WT) (HE)

2014

National Grid Electric Infrastructure, Safety, and Reliability Plan 2015 Proposal on behalf of Rhode Island Division of Public Utilities and Carriers

Docket No. 4473

(WT) (HE)

2014

National Grid's FY 2016 Electric Infrastructure, Safety and Reliability Plan on behalf of Rhode Island Division of Public Utilities and Carriers

Docket No. 4539

(WT) (HE)

2015

Division's Investigation into Verizon's Vegetation Management Practices on behalf of Rhode Island Division of Public Utilities and Carriers

2015

Wind Energy Development, LLC (WED) and ACP Land, LLC Petition for Dispute Resolution Relating to Interconnection on behalf of Rhode Island Division of Public Utilities and Carriers Docket No. 4483

(WT)

2018

RIDPUC Streetlight Pilot Metering Program Docket 4513 on behalf of Rhode Island Division of Public Utilities and Carriers

Docket No. 4513

2015

National Grid Electric Infrastructure, Safety, and Reliability Plan FY 2017 on behalf of Rhode Island Division of Public Utilities and Carriers

Docket No. 4592

(WT) (HE)

2016

PUC Advisory Opinion Regarding Need of The Narragansett Electric Co. d/b/a National Grid to Construct and Alter Certain Transmission Components in the Towns of Portsmouth and Middletown (Aquidneck Island Reliability Project) on behalf of Rhode Island Division of Public Utilities and Carriers Docket No. 4614

2016

National Grid Electric Infrastructure, Safety, and Reliability Plan FY 2018 on behalf of Rhode Island Division of Public Utilities and Carriers

Docket No. 4682

(WT) (HE)

2017

National Grid Electric Infrastructure, Safety, and Reliability Plan FY 2019 on behalf of Rhode Island Division of Public Utilities and Carriers

Docket No. 4783

2017

Narragansett Electric Company d/b/a National Grid's October 2017 Storm Response on behalf of Rhode Island Division of Public Utilities and Carriers

Docket No. D-17-45

2019

Capital Efficiency Mechanism - Adoption of Performance Incentives for The Narragansett Electric Company d/b/a National Grid Pursuant to R.I. Gen. Laws Section 39-1-27.7.1(e)(3) to Apply to the Electric Infrastructure, Safety, and Reliability Plans on behalf of Rhode Island Division of Public Utilities and Carriers

Docket No. 4857

2018

National Grid Electric Infrastructure, Safety and Reliability Plan FY 2020 on behalf of Rhode Island Division of Public Utilities and Carriers

Docket No. 4915

(WT) (HE)

2019

RIDPUC Block Island Transmission Deficiencies Evaluation on behalf of Rhode Island Division of Public Utilities and Carriers

HE = Hearing **WT** = Written Testimony Gregory L. Booth, PLLC.

2019

Guidance Document Regarding Principles to Guide the Development and Review of Performance Incentive Mechanisms on behalf of Rhode Island Division of Public Utilities and Carriers Docket No. 4943

2020

Rhode Island Division of Public Utilities - Least Cost Procurement Standards Docket No. 5015

2020

National Grid Electric Infrastructure, Safety and Reliability Plan FY 2021 on behalf of Rhode Island Division of Public Utilities and Carriers

Docket No. 4995

(WT) (HE)

2020

RIDPUC Ngrid Performance Based Incentive Mechanism and Scorecard Metrics Docket No. 4770

2020

The Narragansett Electric Company d/b/a National Grid's Electric Proposed Power Sector Transformation (PST) Vision and Implementation Plan on behalf of Rhode Island Division of Public Utilities and Carriers Docket No. 4780

(WT) (HE)

2021

Petition of PPL Corporation, PPL Rhode Island Holdings, LLC, National Grid USA and The Narragansett Electric Company for Authority to Transfer Ownership of the Narragansett Electric Company to PPL Rhode Island Holdings, LLC and related approvals.

D-21-09

(WT) (HE)

2021

National Grid Standards for Connecting Distributed Generation - Docket # 5077 Docket # 5077

2021

Rhode Island National Grid AMF 2023 Docket No. 5113 - The Narragansett Electric Co. D/b/a National Grid Updated Advanced Metering Functionality Business Case Docket No. 5113

2021

Rhode Island The Narragansett Electric Co. D/b/a National Grid - Grid Modernization Plan Docket No. 5114

2022

National Grid Infrastructure, Safety and Reliability Plan FY 2022 on behalf of RIDPUC and Carriers - Docket # 5098

(WT) (HE)

HE = Hearing WT = Written Testimony Gregory L. Booth, PLLC.

2022

National Grid Infrastructure, Safety and Reliability Plan FY 2023 on behalf of RIDPUC and Carriers - Docket #5209 (WT) (HE)

2022

Revity Energy LLC Petition for Declaratory Judgment regarding the Rights and Obligations of an Interconnection
Docket No. 5235
(WT)

2022

Rhode Island Energy Automated Metering Infrastructure 2022 The Narragansett Electric Co. d/b/a Rhode Island Energy's Advanced Metering Functionality ("AMF") Business Case Docket No. 22-49-EL

2022

Rhode Island Energy FY2023-2024 Infrastructure Safety and Reliability Plan 2022 Docket No. 22-53-EL The Narragansett Electric Co. d/b/a Rhode Island Energy - FY 2024 Electric Infrastructure, Safety and Reliability (ISR) Plan Docket No. 22-53-EL

2022

Rhode Island Energy Grid Modernization Plan 2024 Docket No. 22-56-EL The Narragansett Electric Co. d/b/a Rhode Island Energy - Grid Modernization Plan Docket No. 22-56-EL

2023

Rhode Island Energy Petition for Acceleration Due to DG Project – Tiverton Projects Docket No. 23-37-EL

2023

Rhode Island Energy Petition for Acceleration Due to DG Project – Weaver Hill Projects Docket No. 23-38-EL

2023

Rhode Island Energy FY2025 Infrastructure Safety and Reliability Plan 2022 Docket No. 22-53-EL The Narragansett Electric Co. d/b/a Rhode Island Energy - FY 2024 Electric Infrastructure, Safety and Reliability (ISR) Plan

Docket No. 23-48-EL

The South Carolina Office of Regulatory Staff

2022

2022 Spectrum Southeast, LLC, Complainant v. York Electric Cooperative, Incorporated, Respondent, Petition to Determine Just and Reasonable Terms and Conditions for Pole Attachment Agreement Pursuant to S.C. Code Ann. § 58-9-3030

Case # 2022-188-EC

(WT) (HE)

	EXHIBIT GLB-1
CURRENT & HISTORICAL CLIENT LISTS	Page 23 of 48

Partial List of Historical Utility Clients

Client Name	<u>City</u>	<u>State</u>
4 CES/CEEC	Seymour Johnson AFB	NC
A&N Electric Cooperative	Parksley	VA
ACRES International Corporation	Grand Forks	ND
Adams Electric Cooperative	Gettysburg	PA
Adams Rural Electric Cooperative	West Union	ОН
AFL Telecommunications		NC
Alabama Power Company	Birmingham	AL
Alachua, City of	Alachua	FL
Alaska 220 Communications	Anchorage	AK
Albemarle Electric Membership Corporation	Hertford	NC
Allegheny Electric Cooperative	Harrisburg	PA
Alleghany Power Energy	Greensburg	PA
Altahama Electric Membership Corporation	Lyons	GA
Alternative Energy Corporation	ŔŢЪ	NC
American Public Power Association	Washington	DC
American Telecommunications	Raleigh	NC
Apex Communications, LLC	Wynne	AR
Apex, Town of	Apex	NC
Arkansas Electric Cooperative, Inc.	Little Rock	AR
Arlington County		VA
AT&T	Durham	NC
Ayden, Town of	Ayden	NC
BARC Electric Cooperative	Millboro	VA
Bath Electric, Gas & Water	Bath	NC
Bedford, City of	Bedford	VA
Belhaven, Town of	Belhaven	NC
Bellsouth Mobility DCS	Raleigh	NC
Bennettsville, City of	Bennettsville	SC
Benson, Town of	Benson	NC
Black Creek, Town of	Black Creek	NC
Blountstown, City of	Blountstown	FL
Blue Ridge Electric Cooperative	Pickens	SC
Blue Ridge Electric Membership Corporation	Lenoir	NC
Boulder, City of	Boulder	CO
Brazos Electric Power Cooperative		TX
Brunswick Electric Membership Corporation	Shallotte	NC
Burlington-Northern Railroad	St. Paul	MN
Bushnell, City of	Bushnell	FL
Cape Hatteras Electric Membership Corporation	Buxton	NC
Carolina Power & Light	Raleigh	NC
Carroll Electric Cooperative	Carrollton	ОН
Carteret Craven Electric Cooperative	Morehead City	NC
Central Electric Cooperative, Inc.	Parker	PA

Client Name	City	<u>State</u>
Central Electric Membership Corporation	Sanford	NC
Central Georgia Electric Membership Corporation	Jackson	GA
Central Virginia Electric Cooperative	Lovingston	VA
Charter Communications	Holly Ridge	NC
Chattahoochee, City of	Chattahoochee	FL
Choptank Electric Cooperative	Denton	MD
Citizens Electric Corporation	Perryville	MO
Claverack Rural Electric Cooperative	Wysox	PA
Clayton, Town of	Clayton	NC
Clemson University	Clemson	SC
Clewiston, City of	Clewiston	FL
Cobb Electric Membership Corporation	Marietta	GA
Coconut Creek, City of	Coconut Creek	FL
Columbus Water Works	Columbus	GA
Community Electric Cooperative	Windsor	VA
Cooperative Energy	Hattiesburg	MS
Cornelius & Huntersville, NC	Huntersville	NC
Continental Cooperative Services	Harrisburg	PA
Craig-Botetourt Electric Cooperative	New Castle	VA
CP&L Area Cooperatives		NC
Crescent Electric Membership Corporation	Statesville	NC
C&T Enterprises		PA
Dalton Utilities	Dalton	GA
Danvers, Town of	Danvers	MA
Danville, City of	Danville	VA
Davidson Water Cooperative	Welcome	NC
Delaware County Electric Cooperative	Delhi	NY
Delaware Division of Parks & Recreation	Dover	DE
Delaware Electric Cooperative	Greenwood	DE
Depcom Power		
Dover, City of	Dover	DE
Drexel, Town of	Drexel	NC
Duke Energy Progress	Raleigh	NC
East Carolina University	Greenville	NC
East Kentucky Power Cooperative	Winchester	KY
Easton Utilities Commission	Easton	MD
Eden, City of	Eden	NC
Edenton, Town of	Edenton	NC
Edgecombe Martin County Electric Membership Corp.	Tarboro	NC
Electric Cooperatives of SC	Cayce	SC
ElectriCities of NC, Inc.	Raleigh	NC
Elizabeth City	Elizabeth City	NC
EnergyUnited	Statesville	NC
Enfield, Town of	Enfield	NC
Enron Wind Corporation	Tehachapi	CA
Farmville Water and Wastewater Systems	Farmville	NC

Client Name	City	<u>State</u>
Farmville, Town of	Farmville	NC
Flint Energies	Warner Robins	GA
Florida Keys Electric Cooperative Association, Inc.	Tavernier	FL
Florida Municipal Electric Association	Tallahassee	FL
Florida Municipal Power Agency	Orlando	FL
Fort-Bragg – USA	Fort Bragg	NC
Fort Lauderdale, City of	Fort Lauderdale	FL
Fort Meade, City of	Fort Meade	FL
Fort Pierce Utilities	Fort Pierce	FL
Four County Electric Membership Corporation	Burgaw	NC
Fox Islands Electric Cooperative	Vinalhaven	ME
French Broad Electric Membership Corporation	Marshall	NC
Fremont, Town of	Fremont	NC
Georgia Consumers Utility Council	Atlanta	GA
Georgia Power	Union City	GA
Gillette, City of	Gillette	WY
Great River Energy	Maple Grove	MN
Green Cove Springs, City of	Green Cove Springs	FL
Greenville Utilities	Greenville	NC
Greer, SC Comm. Of Public Works	Greer	SC
Greystone Power Corporation	Douglasville	GA
Groton Utilities	Groton	CT
Guernsey-Muskingum Electric Cooperative	New Concord	NH
Habersham Electric Membership Corporation	Clarksville	GA
Halifax Electric Membership Corporation	Enfield	NC
Hamilton, Town of	Hamilton	NC
Hancock-Wood Electric Cooperative	N. Baltimore	ОН
Harkers Island Electric Membership Corporation	Harkers Island	NC
Harnett County Wastewater	Lillington	NC
Harron Communications	Frazer	PA
Hart Electric Membership Corporation	Hartwell	GA
Havana, Town of	Havana	FL
Haynes Electric Utility Company	Asheville	NC
Haywood Electric Membership Corporation	Waynesville	NC
Hertford, Town of	Hertford	NC
High Point, City of	High Point	NC
Hobgood, Town of	Hobgood	NC
Hookerton, Town of	Hookerton	NC
Jacksonville Beach, City of	Jacksonville Beach	FL
Jefferson Energy Cooperative	Wrens	GA
Joe Wheeler Electric Membership Corporation	Trinity	AL
Jones-Onslow Electric Membership Corporation	Jacksonville	NC
Jupiter Inlet Colony	Jupiter Inlet	FL
Kenergy	Owensboro	KY
Keys Energy Services	Key West	FL
Kinston, City of	Kinston	NC

Client Name	City	<u>State</u>
LaGrange, Town of	LaGrange	NC
Laurinburg, City of	Laurinburg	NC
Lee County Electric Cooperative	O	FL
Lenior, City of	Lenoir	NC
Lewes, DE Board of Public Works	Lewes	DE
Lewis County Rural Electric Cooperative	Lewiston	MO
Lexington Utilities	Lexington	NC
Lexington, City of	Lexington	NC
Lookout Windpower, LLC	O	PA
Louisburg, Town of	Louisburg	NC
Lucama, City of	Lucama	NC
Lumbee River MEC	Red Springs	NC
Lumberton, City of	Lumberton	NC
Lynches River Electric Cooperative	Pageland	SC
Madison, Borough of	Madison	NJ
Maine Public Service Company	Presque Isle	мĔ
Manassas, City of	Manassas	VA
Martinsville, City of	Martinsville	VA
Mebane, City of	Mebane	NC
Mecklenburg Electric Cooperative	Chase City	VA
Middle Georgia Electric Membership Corporation	Rochelle	GA
Milford, City of	Milford	DE
Mississippi Power	Gulfport	MS
Mitchell Electric Membership Corporation	Camilla	GA
MN Planning/Environmental	St. Paul	MN
Monroe, City of	Monroe	NC
Morganton, City of	Morganton	NC
Municipal Gas Group	Wilson	NC
NASA	Wallops Island	VA
National Rural Telecom Cooperative	Herndon	VA
New Bern, City of	New Bern	NC
Newberry, City of	Newberry	NC
New Enterprise Rural Electric Cooperative	New Enterprise	PA
New Hampshire Electric Cooperative	Plymouth	NH
North Carolina AT&T State University	Greensboro	NC
North Carolina Association of Electric Cooperatives	Raleigh	NC
North Carolina Eastern Municipal Power Agency	Raleigh	NC
North Carolina Electric Membership Corporation	Raleigh	NC
North Carolina League of Municipalities	Raleigh	NC
North Carolina Rural Telecommunications Cooperative	Enfield	NC
North Carolina State University	Raleigh	NC
North Georgia Electric Membership Corporation	Dalton	GA
North Miami, City of	Miami	FL
Northern Neck Electric Cooperative	Warsaw	VA
Northern Virginia Electric Cooperative	Gainesville	VA
Northfield Electric Department	Northfield	VT

Client Name	City	<u>State</u>
Northwest Public Power Association	Vancouver	WA
Northwestern Rural Electric Cooperative Association	Cambridge Springs	PA
NRECA	Arlington	VA
Ohio Rural Electric Cooperative, Inc.	Columbus	ОН
Old Dominion Electric Cooperative	Glen Allen	VA
Origis Energy		FL
Ostego Electric Cooperative	Hartwick	NY
Palm Beach, Town of	Palm Beach	FL
Panama City Beach	Panama City	FL
Peace River Electric Cooperative	Wauchula	FL
Pee Dee Electric Cooperative	Darlington	SC
Pee Dee Electric Membership Corporation	Wadesboro	NC
Pennsylvania Rural Electric Association	Harrisburg	PA
Perkasie, Borough of	Perkasie	PA
Piedmont Electric Membership Corporation	Hillsborough	NC
Pineville, Town of	Pineville	NC
Pitt & Greene Electric Membership Corporation	Farmville	NC
Pompano Beach, City of	Pompano Beach	FL
Pope Air Force Base	Pope AFB	NC
Potomac Electric Power Company	Washington	DC
Prince George Electric Cooperative	Waverly	VA
PGEC Enterprise, LLC	Waverly	VA
Progress Energy	Raleigh	NC
PWC of the City of Fayetteville	Fayetteville	NC
Quincy, City of	Quincy	FL
Randolph Electric Membership Corporation	Asheboro	NC
Rappahannock Electric Cooperative	Fredericksburg	VA
REA Energy Cooperative (SW Central)	Indiana	PA
Red Springs, Town of	Red Springs	NC
Roanoke Electric Cooperative	Rich Square	NC
Robersonville, Town of	Robersonville	NC
Rockingham County	Rockingham	NC
Rocky Mount, City of	Rocky Mount	NC
Roxboro, City of	Roxboro	NC
Rutherford Electric Membership Corporation	Forest City	NC
Sacramento Municipal Utility District	Sacramento	CA
Salem, City of	Salem	VA
Sandhills Utility Services, LLC	Red Springs	NC
Santee Cooper	Myrtle Beach	SC
Satilla Rural Electric Membership Corporation	Alma	GA
Sawnee Electric Membership Corporation	Cumming	GA
Scotland Neck, Town of	Scotland Neck	NC
Seaford, Town of	Seaford	DE
SECO Energy	Sumterville	FL
Selma, Town of	Selma	NC
Seneca, City of	Seneca	SC

Client Name	City	<u>State</u>
Seymour-Johnson Air Force Base	Goldsboro	NC
Sharpsburg, Town of	Sharpsburg	NC
Shenandoah Valley Electric Cooperative	Mt. Crawford	VA
SMECO	Hughesville	MD
Smithfield, Town of	Smithfield	NC
Snapping Shoals Electric Membership Corporation	Covington	GA
Somerset Rural Electric Cooperative	Somerset	PA
South Daytona, City of	South Daytona	FL
South Mississippi Electric Power Association	Hattiesburg	MS
South River Electric Membership Corporation	Dunn	NC
Southern Company Services	Atlanta	GA
Southern Maryland Electric Cooperative		MD
Southport, City of	Southport	NC
Southside Electric Cooperative	Crewe	VA
South Carolina Association of Municipal Power Systems	Columbia	SC
Stantonsburg, Town of	Stantonsburg	NC
Starke, City of	Starke	FL
Strata Solar, LLC		
Statesville, City of	Statesville	NC
Steuben Rural Electric Cooperative	Bath	NY
STS Hydro Power Limited	Northbrook	IL
Sullivan County Rural Electric Cooperative	Forksville	PA
Sulphur Springs Valley Electric Membership Corp.	Willcox	AZ
Sumter Electric Cooperative		FL
Surry-Yadkin Electric Membership Corporation	Dobson	NC
Sussex Rural Electric Cooperative	Sussex	NJ
Talquin Electric Cooperative, Inc.	Quincy	FĹ
Tarboro, Town of	Tarboro	NC
Tarboro Water and Wastewater Systems	Tarboro	NC
Tideland Electric Membership Corporation	Pantego	NC
Time Warner Cable	Newport	NC
Tri-County Electric Membership Corporation	Dudley	NC
Tri-County Electric Membership Corporation	Lafayette	TN
Tri-County Rural Electric Cooperative	Mansfield	PA
TVPPA	Chattanooga	TN
UNC – Asheville	Asheville	NC
UNC – Chapel Hill	Chapel Hill	NC
UNC – Charlotte	Charlotte	NC
UNC – Greensboro	Greensboro	NC
Union Electric Membership Corporation	Monroe	NC
Union Power Cooperative	Monroe	NC
United Electric Cooperative	DuBois	PA
US Generating Company	Bethesda	MD
VA, MD & DE Association of Electric Cooperatives	Glen Allen	VA
Valley Rural Electric Cooperative	Huntington	PA
Vanceburg, City of	Vanceburg	KY
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Client Name	<u>City</u>	State
Vero Beach, City of	Vero Beach	FL
Wake County Parks & Recreation	Raleigh	NC
Wake Electric Membership Corporation	Wake Forest	NC
Wake Forest, Town of	Wake Forest	NC
Walstonburg, Town of	Walstonburg	NC
Warren Electric Membership Corporation	Youngsville	PA
Washington Electric Cooperative	E. Montpelier	VT
Washington Electric Membership Corporation	Sandersville	GA
Washington, City of	Washington	NC
Wauchula, City of	Wauchula	FL
Waynesville, Town of	Waynesville	NC
Wellsboro Electric Company	Wellsboro	PA
West Virginia Power Company	Lewisburg	WV
Western Carolina University	Cullowhee	NC
Western North Carolina School for the Deaf	Morganton	NC
Wilmington, City of	Wilmington	NC
Wilson, City of	Wilson	NC
Windsor, Town of	Windsor	NC
Winter Park, City of	Winter Park	FL
Winterville, Town of	Winterville	NC

Partial List of Historical Industrial/Commercial Clients

Client Name	<u>City</u>	<u>State</u>
Action Sensors, Inc.	Wendell	NC
Alcoa Fujikura, Ltd.	Spartanburg	SC
Alliance Development Group, LLC		VA
Atlantic Power Generation	Charlotte	NC
Barnhill Contracting Company	Tarboro	NC
Beckwith Power Systems	North Versailles	PA
Biltmore Dairy Farms, Inc.	Asheville	NC
Black & Decker	Tarboro	NC
Bridgestone/Firestone (BFS)	Wilson	NC
Burroughs Wellcome Company	RTP	NC
CAA Engineers, Inc.		
Calpine Operations Services (Calpine Power)	Houston	TX
Caswell Center	Kinston	NC
Centura Bank	Rocky Mount	NC
Centex Construction	Atlanta	GA
Charter Communications	Surf City	NC
Cherry Hospital – DHR	Goldsboro	NC
Clapp Research Associates	Raleigh	NC
Clark Substations, LLC	Calera	AL
CNA Insurance Companies	Rockville	MD
Cornice Engineering, Inc.	Pagosa Springs	CO
Crawford & Company	Raleigh	NC
Data Comlink, Inc.	Sandersville	GA
Design Dimensions, Inc.	Raleigh	NC
Dolan and Dolan	Newton	NJ
Dupaco	Kinston	NC
Drucker & Falk	Raleigh	NC
E&R Construction	Kinston	NC
East Coast Power & Lighting		
EMC Technologies	Raleigh	NC
Empire of Carolina	Tarboro	NC
Exelon Business Services		
Frigidaire	Kinston	NC
Fontaine Fifth Wheel	Birmingham	AL
Fonville-Morrisey	Raleigh	NC
General Electric	Fairfield	CT
Glenoit Industries	Tarboro	NC
Green Property Advisors, LLC		
Goldsboro, City of	Goldsboro	NC
Cherry Hospital DHR	Goldsboro	NC
Gregory Poole Power Systems	Raleigh	NC
Harris Development Corp.	Wilson	NC
Hesco, Incorporated	Smithfield	NC
High Point Regional Hospital	High Point	NC

Client Name	<u>City</u>	<u>State</u>
Homestead, LLC	Hot Springs	VA
Honeywell	Fort Bragg	NC
Infrastructure Consulting & Engineering	80	
Jag Management, Inc.	Raleigh	NC
KCI Technologies, Inc.	Raleigh	NC
Kelly Springfield Tire Co.	Fayetteville	NC
Kinston City Hall	Kinston	NC
Larry A. Blattenberger, Inc.	Martinsburg	PA
Lenoir Memorial Hospital	Kinston	NC
Maida Vale, LLC	Raleigh	NC
National Fruit Product Company		VA
National Spinning Co., Inc.	Washington	NC
NC Department of Human Resources	Raleigh	NC
NC Department of Transportation	Raleigh	NC
NC Division of Mental Health	Raleigh	NC
NC Licensing Board – General Contractor	Raleigh	NC
NC School of Deaf	Raleigh	NC
NC State Construction Office	Raleigh	NC
New Hanover County	Wilmington	NC
North Hills PBX	Raleigh	NC
Nucor Steel	Charlotte	NC
Pitt County Memorial Hospital	Greensville	NC
Power Delivery Associates	Smyrna	GA
PS & W Engineering	Cary	NC
Rail-Veyor Global Technologies, Inc.	,	
Raleigh, City of	Raleigh	NC
Richardson-Wayland Electrical Company	O	
Rocky Mount City Hall	Rocky Mount	NC
Rural Green Power, LLC	•	
Sara Lee Corporation	Tarboro	NC
Stanton Barton, LLC		
Still Waters Engineering		
T&D Solutions		
Talisman Partners, Inc. (now Earthtech)	Englewood	CO
Tantalus Systems, Corp.	Burnaby, BC	Canada
Tarboro Elementary School	Tarboro	NC
Tarboro High School	Tarboro	NC
Technical Associates, Inc.		
Teligent, Inc.	Alpharetta	GA
Texfi Industries	Fayetteville	NC
The West Co.	Kinston	NC
Transco	Charlottesville	VA
US Postal Services (GSA)	Raleigh	NC
Utility Engineering Services	Jackson	TN
Volvo Data North America	Greensboro	NC
West Company	Kinston	NC

Client Name	<u>City</u>	<u>State</u>
Williams Energy Group	Tulsa	OK
Zenith Controls, Inc.	Chicago	IL

	List of Historical Lav	w Firm Clients	Page 34 of 48
Law Firms	Firm Name	Address - City	Address- State
Abrams & Abrams, P.A., Raleigh, NC	Abrams & Abrams, P.A.	Raleigh	NC
Adams, Hendon, Carson, Crow & Saenger, P.A., ,	Adams, Hendon, Carson, Crow & Saenger, P.A.		
Allegheny Electric Cooperative, Inc., Harrisburg, PA	Allegheny Electric Cooperative, Inc.	Harrisburg	PA
Allen & Gooch, Lafayette, LA	Allen & Gooch	Lafayette	LA
Andrews Law Group, Tampa, FL	Andrews Law Group	Tampa	FL
Arnold & Itkin LLP, Houston, TX	Arnold & Itkin LLP	Houston	TX
Bailey & Dixon LLP, Raleigh, NC	Bailey & Dixon LLP	Raleigh	NC
Baker & Abraham, PC, Boston, MA	Baker & Abraham, PC	Boston	MA
Baker Law Firm, PA, Wilmington, NC	Baker Law Firm, PA	Wilmington	NC
Baker, Jenkins, Jones & Daly PA, Ahoskie, NC	Baker, Jenkins, Jones & Daly PA	Ahoskie	NC
Baker, Jenkins, Jones, Murray, Askew & Carter, PA, ,	Baker, Jenkins, Jones, Murray, Askew & Carter, PA		
Balch & Bingham LLP, Birmingham, AL	Balch & Bingham LLP	Birmingham	AL
Barnes Law Firm, LLC, Kansas City, MO	Barnes Law Firm, LLC	Kansas City	MO
Barr, Murman, Tonelli, Slother & Sleet, Tampa, FL	Barr, Murman, Tonelli, Slother & Sleet	Tampa	FL
Bartimus, Frickleton, Robertson & Goza, P.C., Leawood, KS	Bartimus, Frickleton, Robertson & Goza, P.C.	Leawood	KS
Battle, Winslow, Scott & Wiley, P.A., Rocky Mount, NC	Battle, Winslow, Scott & Wiley, P.A.	Rocky Mount	NC
Beasley Allen, Montgomery, AL	Beasley Allen	Montgomery	AL
Beaver, Holt, Richardson, Sternlicht, Burge & Glazier, PA, Fayetteville, NC	Beaver, Holt, Richardson, Sternlicht, Burge & Glazier, PA	Fayetteville	NC
Berkley Net Underwriters, LLC, Woodbridge, VA	Berkley Net Underwriters, LLC	Woodbridge	VA
Berman & Simmons, Lewiston, ME	Berman & Simmons	Lewiston	ME

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Lookup to Law Firms	Firm Name	Address - City	EXHIBIT GLB-1 Page 35 SF48
Berman Sobin Gross Feldman & Darby, LLP, Gaithersburg, MD	Berman Sobin Gross Feldman & Darby, LLP	Gaithersburg	MD
Beskind and Rudolph, P.A., Chapel Hill, NC	Beskind and Rudolph, P.A.	Chapel Hill	NC
Bordas, Bordas & Jividen, Wheeling, WV	Bordas, Bordas & Jividen	Wheeling	WV
Brault Palmer Steinhilver & Robbins LLP, Fairfax, VA	Brault Palmer Steinhilver & Robbins LLP	Fairfax	VA
Breit Drescher Imprevento & Walker, Virginia Beach, VA	Breit Drescher Imprevento & Walker	Virginia Beach	VA
Bretz & Young, L.L.C, Hutchinson, KS	Bretz & Young, L.L.C	Hutchinson	KS
Brian G. Miller Co.,L.P.A., Columbus, OH	Brian G. Miller Co.,L.P.A.	Columbus	ОН
Britcher, Leone and Roth, LLC, Glen Rock, NJ	Britcher, Leone and Roth, LLC	Glen Rock	NJ
Brown, Crump, Vanore & Tierney, LLP, Raleigh, NC	Brown, Crump, Vanore & Tierney, LLP	Raleigh	NC
Brunswick Electric Membership Corporation, Supply, NC	Brunswick Electric Membership Corporation	Supply	NC
Buck, Danaher, Ryan & McGlenn, Elmira, NY	Buck, Danaher, Ryan & McGlenn	Elmira	NY
Campbell, Campbell Edwards & Conroy, Boston, MA	Campbell, Campbell Edwards & Conroy	Boston	MA
Carey Leisure & Neal, Clearwater, FL	Carey Leisure & Neal	Clearwater	FL
Carolina Adjusters, ,	Carolina Adjusters		
Carolina Power & Light Company, Raleigh, NC	Carolina Power & Light Company	Raleigh	NC
Chappell, Smith and Arden, Columbia, SC	Chappell, Smith and Arden	Columbia	SC
City of Monroe, ,	City of Monroe		
Civille & Tang, PLLC, Hagatna, GU	Civille & Tang, PLLC	Hagatna	GU
Cohen, Placitella & Roth, Philadelphia, PA	Cohen, Placitella & Roth	Philadelphia	PA
Coleman, Bernholz, Dickerson, Bernholz, Gledhill, Hargrave, Chapel Hill, NC	Coleman, Bernholz, Dickerson, Bernholz, Gledhill, Hargrave	Chapel Hill	NC
Colombo Law, Columbus, OH	Colombo Law	Columbus	ОН

Lookup to Law Firms	Firm Name	Address - City	EXHIBIT GLB-1 Page 36 of 48
Connecticut Office of Consumer Counsel (OCC), New Britain, CT	Connecticut Office of Consumer Counsel (OCC)	New Britain	CT
Copeland, Cook, Taylor & Bush, PA, Ridgeland, MS	Copeland, Cook, Taylor & Bush, PA	Ridgeland	MS
Couch & Taibi, Durham, NC	Couch & Taibi	Durham	NC
Cozen O' Connor, Charlotte, NC	Cozen O' Connor	Charlotte	NC
Cranfill Sumner & Hartzog LLP, Charlotte, NC	Cranfill Sumner & Hartzog LLP	Charlotte	NC
Cranfill Sumner & Hartzog, LLP, Raleigh, NC	Cranfill Sumner & Hartzog, LLP	Raleigh	NC
Crisp, Davis, Page & Currin, LLP, Raleigh, NC	Crisp, Davis, Page & Currin, LLP	Raleigh	NC
Crisp, Page & Currin, LLP, Raleigh, NC	Crisp, Page & Currin, LLP	Raleigh	NC
Daniel & Daniel, ,	Daniel & Daniel		
Daniel, Medley & Kirby, P.C., Danville, VA	Daniel, Medley & Kirby, P.C.	Danville	VA
David A. Vukelja, PA, Ormond Beach, FL	David A. Vukelja, PA	Ormond Beach	FL
Davis & Lumsden PA, Beaufort, NC	Davis & Lumsden PA	Beaufort	NC
Dean Law Firm, Houston, TX	Dean Law Firm	Houston	TX
Delaware County Electric Cooperative, Inc., ,	Delaware County Electric Cooperative, Inc.		
Delaware Division of the Public Advocate, Dover, DE	Delaware Division of the Public Advocate	Dover	DE
Delaware Electric Cooperative, Inc., Greenwood, DE	Delaware Electric Cooperative, Inc.	Greenwood	DE
DeVore & Acton, PA, Charlotte, NC	DeVore & Acton, PA	Charlotte	NC
Devore, Acton & Stafford, PA, Charlotte, NC	Devore, Acton & Stafford, PA	Charlotte	NC
Dickie, McCamey & Chilcote, P.C., Charlotte, NC	Dickie, McCamey & Chilcote, P.C.	Charlotte	NC
Dollar Burns & Becker, Kansas City, MO	Dollar Burns & Becker	Kansas City	MO
Dugan, Brinkmann, Maginnis & Pace, Philadelphia, PA	Dugan, Brinkmann, Maginnis & Pace	Philadelphia	PA
Duke Energy Corporation, Charlotte, NC	Duke Energy Corporation	Charlotte	NC

Lookup to Law Firms	Firm Name	Address - City	EXHIBIT GLB-1 Page 37 of 48
Duke Energy Progress, Raleigh, NC	Duke Energy Progress	Raleigh	NC
Dull & Heaney, LLC, Clinton, MO	Dull & Heaney, LLC	Clinton	MO
Edelman & Thompson, LLC, Kansas City, MO	Edelman & Thompson, LLC	Kansas City	МО
Edmonds Cole Law Firm, PC, Oklahoma City, OK	Edmonds Cole Law Firm, PC	Oklahoma City	OK
Edward M. Ricci Law Firm, West Palm Beach, FL	Edward M. Ricci Law Firm	West Palm Beach	FL
Edwards, Kirby & Holt, LLP, Raleigh, NC	Edwards, Kirby & Holt, LLP	Raleigh	NC
Electric Insurance Company, Beverly, MA	Electric Insurance Company	Beverly	MA
EnergyUnited, ,	EnergyUnited		
Eppes & Plumblee, P.A., Greenville, SC	Eppes & Plumblee, P.A.	Greenville	SC
Ervin & Gates, Charlotte, NC	Ervin & Gates	Charlotte	NC
Faulkner & Boyce, PC, New London, CT	Faulkner & Boyce, PC	New London	CT
Federal Reserve Bank of Richmond, VA, ,	Federal Reserve Bank of Richmond, VA		
Federated Rural Electric Insurance Corporation, ,	Federated Rural Electric Insurance Corporation		
Federated Rural Insurance Corporation, ,	Federated Rural Insurance Corporation		
Ferderigos & Lambe, Winter Park, FL	Ferderigos & Lambe	Winter Park	FL
Fields Law Firm, Kansas City, MO	Fields Law Firm	Kansas City	МО
Fiore, Krause, Crogan & Lopez, Owings Mills, MD	Fiore, Krause, Crogan & Lopez	Owings Mills	MD
Forensic Engineering, Inc., ,	Forensic Engineering, Inc.		
Frank M. Wilson, PC, ,	Frank M. Wilson, PC		
Freeman & Freeman, PC, Rockville, MD	Freeman & Freeman, PC	Rockville	MD
Freidman, Sissman & Heaton, Memphis, TN	Freidman, Sissman & Heaton	Memphis	TN
French Broad EMC, Marshall, NC	French Broad EMC	Marshall	NC

Lookup to Law Firms	Firm Name	Address - City	EXHIBIT GLB-1 Page 38 SF 48
Friday & Cox, LLC, Pittsburgh, PA	Friday & Cox, LLC	Pittsburgh	PA
Friday, Eldredge & Clark, Little Rock, AZ	Friday, Eldredge & Clark	Little Rock	AZ
Frohilich, Gordon & Beason Law Firm, Port Charles, FL	Frohilich, Gordon & Beason Law Firm	Port Charles	FL
Gallivan, White & Boyd, P.A., Greenville, SC	Gallivan, White & Boyd, P.A.	Greenville	SC
Gary Harris Attorneys At Law, Orlando, FL	Gary Harris Attorneys At Law	Orlando	FL
Glascock, Gardy & Salvage, Suffolk, VA	Glascock, Gardy & Salvage	Suffolk	VA
Godin Geretty & Puntillo, Kenosha, WI	Godin Geretty & Puntillo	Kenosha	WI
Godwin, Morris, Laurenzi & Bloomfield, Memphis, TN	Godwin, Morris, Laurenzi & Bloomfield	Memphis	TN
Gough, Skipworth, Summers, Eves & Travett, Rochester, NY	Gough, Skipworth, Summers, Eves & Travett	Rochester	NY
Granger, Santry, Mitchell & Heath PA, Tallahassee, FL	Granger, Santry, Mitchell & Heath PA	Tallahassee	FL
Grossman, Roth & Partridge, Sarasota, FL	Grossman, Roth & Partridge	Sarasota	FL
Habush, Habush and Rottier, Milwaukee, WI	Habush, Habush and Rottier	Milwaukee	WI
Habush, Habush, Davis & Rottier, SC, Rhinelander, WI	Habush, Habush, Davis & Rottier, SC	Rhinelander	WI
Halifax Electric Membership Corporation, Enfield, NC	Halifax Electric Membership Corporation	Enfield	NC
Hall & Bates, San Antonia, TX	Hall & Bates	San Antonia	TX
Hall Ansley, P.C., Springfield, MO	Hall Ansley, P.C.	Springfield	MO
Harrison, White, Smtih & Coggins, P.C., Spartanburg, SC	Harrison, White, Smtih & Coggins, P.C.	Spartanburg	SC
Haynes Electric Utility Company,	Haynes Electric Utility Company		
Haynsworth Sinkler Boyd, P.A., Greenville, SC	Haynsworth Sinkler Boyd, P.A.	Greenville	SC
Hedrick & Blackwell, LLP, Wilmington, NC	Hedrick & Blackwell, LLP	Wilmington	NC
Hedrick, Eatman, Gardner & Kincheloe, ,	Hedrick, Eatman, Gardner & Kincheloe		

Lookup to Law Firms	Firm Name	Address - City	EXHIBIT GLB-1 Page 39 of 48
Herzfeld & Rubin, P.C., New York, NY	Herzfeld & Rubin, P.C.	New York	NY
Hogue, Hill, Jones, Nash & Lynch, Wilmington, NC	Hogue, Hill, Jones, Nash & Lynch	Wilmington	NC
Holden & Carr, Tulsa, OK	Holden & Carr	Tulsa	OK
Holt Sherlin LLP, ,	Holt Sherlin LLP		
Hoover Penrod, PLC, Harrisonburg, Virgnia	Hoover Penrod, PLC	Harrisonburg	Virgnia
Hutchens Law Firm, Fayetteville, NC	Hutchens Law Firm	Fayetteville	NC
Hux, Livermon & Armstrong, LLP, Enfield, NC	Hux, Livermon & Armstrong, LLP	Enfield	NC
Irigonegaray & Associates, Горека, KS	Irigonegaray & Associates	Topeka	KS
Jacquart & Lowe, S.C., Milwaukee, WI	Jacquart & Lowe, S.C.	Milwaukee	WI
James McElroy & Diehl, P.A., Charlotte, NC	James McElroy & Diehl, P.A.	Charlotte	NC
Jensen, McGrath, & Podgorny, PA, Research Triangle Park, NC	Jensen, McGrath, & Podgorny, PA	Research Triangle Park	NC
Jernigan Law Firm, Raleigh, NC	Jernigan Law Firm	Raleigh	NC
Joel H. Holt, Esq., PC, Christiansted, VI	Joel H. Holt, Esq., PC	Christiansted	VI
John Gehlhausen Attorney at Law, Lamar, CO	John Gehlhausen Attorney at Law	Lamar	СО
Johnson & Lambeth, Wilmington, NC	Johnson & Lambeth	Wilmington	NC
Johnson & Ward, Atlanta, GA	Johnson & Ward	Atlanta	GA
Jose G. Rodriguez, PA, West Palm Beach, FL	Jose G. Rodriguez, PA	West Palm Beach	FL
Kaplan, Gilpin & Associates, LLC, Charlotte, NC	Kaplan, Gilpin & Associates, LLC	Charlotte	NC
Kassel Law, Columbia, SC	Kassel Law	Columbia	SC
Katzman, Wasserman, Bennardini & Rubinstein, PA, Plantation, FL	Katzman, Wasserman, Bennardini & Rubinstein, PA	Plantation	FL
Kaufman & Canoles, Richmond, VA	Kaufman & Canoles	Richmond	VA
Kenneth J. Allen Law Group, Valparaiso, IN	Kenneth J. Allen Law Group	Valparaiso	IN

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Key & Tatel, Roanoke, VA	Key & Tatel	Roanoke	VA
Kilpatrick Stockton LLP, Raleigh, NC	Kilpatrick Stockton LLP	Raleigh	NC
Kline & Specter, PC, Philadelphia, PA	Kline & Specter, PC	Philadelphia	PA
Koskoff Koskoff & Beider, PC, Bridgeport, CT	Koskoff Koskoff & Beider, PC	Bridgeport	CT
Kullman, Klein & Dioneda, PC, Clayton, MO	Kullman, Klein & Dioneda, PC	Clayton	МО
La Capra Associates, Inc., Boston, MA	La Capra Associates, Inc.	Boston	MA
Langdon & Emison, Lexington, MO	Langdon & Emison	Lexington	МО
Langdon & Emison, N. Kansas City, MO	Langdon & Emison	N. Kansas City	МО
Langdon and Emison, Lexington, MO	Langdon and Emison	Lexington	МО
Lanzotti & Rau LLC, Cape Girardeau, MO	Lanzotti & Rau LLC	Cape Girardeau	МО
Larry Leake Attorney At Law, Asheville, NC	Larry Leake Attorney At Law	Asheville	NC
Law Office of Robert Stranick, Media, PA	Law Office of Robert Stranick	Media	PA
Law Offices of Jeffrey G. Scott, PLLC, Charlotte, NC	Law Offices of Jeffrey G. Scott, PLLC	Charlotte	NC
Law Offices of Peter A. Jouras, Jr., Overland Park, KS	Law Offices of Peter A. Jouras, Jr.	Overland Park	KS
Law Offices of Rohn and Carpenter, LLC, Christiansted, VI	Law Offices of Rohn and Carpenter, LLC	Christiansted	VI
Law Offices of William M. Jeter, PLLC, Memphis, TN	Law Offices of William M. Jeter, PLLC	Memphis	TN
LeClair Ryan, Glen Allen, VI	LeClair Ryan	Glen Allen	VI
LeClairRyan, Newark, NJ	LeClairRyan	Newark	NJ
LeClairRyan, Washington, DC	LeClairRyan	Washington	DC
Levinson Axelrod, P.A., Edison, NJ	Levinson Axelrod, P.A.	Edison	NJ
Lewis Kappes, Indianapolis, IN	Lewis Kappes	Indianapolis	IN
Lichtenstein Fishwick PPL, Roanoke, VA	Lichtenstein Fishwick PPL	Roanoke	VA

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Lucas, Bryant & Denning, PA, ,	Lucas, Bryant & Denning, PA		
Lytal, Reiter, Ivey & Fronrath, West Palm Beach, FL	Lytal, Reiter, Ivey & Fronrath	West Palm Beach	FL
Lytal, Reiter, Smith, Ivey & Fronrath, LLP, West Palm Beach, FL	Lytal, Reiter, Smith, Ivey & Fronrath, LLP	West Palm Beach	FL
MA Attorney General's Office, Boston, MA	MA Attorney General's Office	Boston	MA
Maher & Associates, Towson, MD	Maher & Associates	Towson	MD
Margolis and Velassco, Chicago, IL	Margolis and Velassco	Chicago	IL
Mark C. Tanenbaum, PA, ,	Mark C. Tanenbaum, PA		
Marshall, Williams, Gorham and Brawley, Wilmington, NC	Marshall, Williams, Gorham and Brawley	Wilmington	NC
Martin and Jones, PLLC, Raleigh, NC	Martin and Jones, PLLC	Raleigh	NC
Martin, Jean & Jackson, Ponca City, OK	Martin, Jean & Jackson	Ponca City	OK
Massachusetts Attorney General's Office, Boston, MA	Massachusetts Attorney General's Office	Boston	MA
Maupin Taylor, PA, Raleigh, NC	Maupin Taylor, PA	Raleigh	NC
McAngus Goudelock & Courie, LLC, Raleigh, NC	McAngus Goudelock & Courie, LLC	Raleigh	NC
McCandlish Holton Morris, Richmond, VA	McCandlish Holton Morris	Richmond	VA
McCoy, Weaver, Wiggins, Cleveland & Raper PLLC, ,	McCoy, Weaver, Wiggins, Cleveland & Raper PLLC		
McDonald Toole Wiggins, P.A., Orlando, FL	McDonald Toole Wiggins, P.A.	Orlando	FL
McGougan, Wright, Worley, Harper & Bullard, LLP, Tabor City, NC	McGougan, Wright, Worley, Harper & Bullard, LLP	Tabor City	NC
McGuire Woods, LLP, Richmond, VA	McGuire Woods, LLP	Richmond	VA
McNees Wallace & Nurick LLC, Harrisburg, PA	McNees Wallace & Nurick LLC	Harrisburg	PA
Michael F. Amezaga, P.A., West Palm Beach, FL	Michael F. Amezaga, P.A.	West Palm Beach	FL
Michie Hamlett Lowry Rasmussen & Tweel PLLC, Charlottesville, VA	Michie Hamlett Lowry Rasmussen & Tweel PLLC	Charlottesville	VA

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Miles & Stockbridge, PC, Baltimore, MD	Miles & Stockbridge, PC	Baltimore	MD
Montgomery & Larson, LLP, West Palm Beach, FL	Montgomery & Larson, LLP	West Palm Beach	FL
Moore & Van Allen, PLLC, Durham, NC	Moore & Van Allen, PLLC	Durham	NC
Morris & Morris, ,	Morris & Morris		
Morton and Gettys, Rock Hill, SC	Morton and Gettys	Rock Hill	SC
Narron, O'Hale, Whittington & Woodruff PA, ,	Narron, O'Hale, Whittington & Woodruff PA		
National Benefits America, Inc., ,	National Benefits America, Inc.		
Nationwide Insurance, ,	Nationwide Insurance		
Nelson, Mullins, Riley & Scarborough LLP, Raleigh, NC	Nelson, Mullins, Riley & Scarborough LLP	Raleigh	NC
New Jersey Dividion of Rate Counsel, Trenton, NJ	New Jersey Dividion of Rate Counsel	Trenton	NJ
Nexsen Pruet, Greensboro, NC	Nexsen Pruet	Greensboro	NC
North Carolina League of Municipalities, Raleigh, NC	North Carolina League of Municipalities	Raleigh	NC
Northern Virginia Electric Cooperative (NOVEC), Gainesville, VA	Northern Virginia Electric Cooperative (NOVEC)	Gainesville	VA
Odem & Groves PC, Charlotte, NC	Odem & Groves PC	Charlotte	NC
Offices of David B. Mishael, PA, Miami, FL	Offices of David B. Mishael, PA	Miami	FL
Offices of Ronald C. Jessamy, PLLC, Washington, DC	Offices of Ronald C. Jessamy, PLLC	Washington	DC
O'Malley & Langan, PC, Pittston, PA	O'Malley & Langan, PC	Pittston	PA
Orr & Reno, P.A., Concord, NH	Orr & Reno, P.A.	Concord	NH
Panter, Panter & Sampedro, Miami, FL	Panter, Panter & Sampedro	Miami	FL
Parker Poe, Raleigh, NC	Parker Poe	Raleigh	NC
Parker Poe Law Firm, Spartanburg, SC	Parker Poe Law Firm	Spartanburg	SC
Parker, Poe, Adams & Bernstein, LLP, Charlotte, NC	Parker, Poe, Adams & Bernstein, LLP	Charlotte	NC

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Parr Richey Obremskey Frandsen & Patterson, Lebanon, IN	Parr Richey Obremskey Frandsen & Patterson	Lebanon	IN
Patla, Staus, Robinson & Moore, P.A., Asheville, NC	Patla, Staus, Robinson & Moore, P.A.	Asheville	NC
Patrick C. Fire Law Offices, Boardman, OH	Patrick C. Fire Law Offices	Boardman	ОН
Patrick H. Dekle, P.A., Tampa, FL	Patrick H. Dekle, P.A.	Tampa	FL
Patterson Dilthey, LLP, Raleigh, NC	Patterson Dilthey, LLP	Raleigh	NC
Patterson, Dilthey, Clay & Bryson, Raleigh, NC	Patterson, Dilthey, Clay & Bryson	Raleigh	NC
Patterson, Dilthey, Clay, Bryson & Anderson, LLP, Raleigh, NC	Patterson, Dilthey, Clay, Bryson & Anderson, LLP	Raleigh	NC
Patterson, Dilthey, Clay, Cranfill, Sumner & Hartzog, Raleigh, NC	Patterson, Dilthey, Clay, Cranfill, Sumner & Hartzog	Raleigh	NC
Patterson, Harkavy & Lawrence LLP, Raleigh, NC	Patterson, Harkavy & Lawrence LLP	Raleigh	NC
Penry Riemann PLLC, Raleigh, NC	Penry Riemann PLLC	Raleigh	NC
PEPCO, Washington, DC	PEPCO	Washington	DC
Peter Perlman Law Offices PSC, Lexington, KY	Peter Perlman Law Offices PSC	Lexington	KY
Peters, Murdaugh, Parker, Eltzroth & Detrick, Hampton, SC	Peters, Murdaugh, Parker, Eltzroth & Detrick	Hampton	SC
Pitt & Green Electric Membership Corporation, Farmville, NC	Pitt & Green Electric Membership Corporation	Farmville	NC
Pittman, Germany, Roberts & Welsh LLP, Jackson, MS	Pittman, Germany, Roberts & Welsh LLP	Jackson	MS
Podgorny Law, PA, Durham, NC	Podgorny Law, PA	Durham	NC
Pope & Tart, Dunn, NC	Pope & Tart	Dunn	NC
Poyner & Spruill, LLP, ,	Poyner & Spruill, LLP		
Pulley, Watson, King & Lischer, P.A., Durham, NC	Pulley, Watson, King & Lischer, P.A.	Durham	NC
Ragsdale Liggett, Raleigh, NC	Ragsdale Liggett	Raleigh	NC
Rainwater Holt & Sexton, PA, ,	Rainwater Holt & Sexton, PA		
Randles, Mata & Brown, LLC, Kansas City, MO	Randles, Mata & Brown, LLC	Kansas City	МО

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Reid, Lewis Deese & Nance, ,	Reid, Lewis Deese & Nance		
Rhode Island Attorney General, ,	Rhode Island Attorney General		
Rhode Island Division of Public Utilities, Warwick, RI	Rhode Island Division of Public Utilities	Warwick	RI
Rhode Island Division of Public Utilities & Carriers, Warwick, RI	Rhode Island Division of Public Utilities & Carriers	Warwick	RI
Ricci & Leopold, P.A., Palm Beach Gardens, FL	Ricci & Leopold, P.A.	Palm Beach Gardens	FL
Richardson, Patrick, Westbrook & Brickman, LLC, Barnwell, SC	Richardson, Patrick, Westbrook & Brickman, LLC	Barnwell	SC
Robert D. Douglass Attorney at Law, Indiana, PA	Robert D. Douglass Attorney at Law	Indiana	PA
Rogers Mastrangelo Carvalho & Mitchell, Las Vegas, NV	Rogers Mastrangelo Carvalho & Mitchell	Las Vegas	NV
Romano, Eriksen, Cronin & Mullins, Lake Worth, FL	Romano, Eriksen, Cronin & Mullins	Lake Worth	FL
Rountree Losee, LLP, Wilmington, NC	Rountree Losee, LLP	Wilmington	NC
Rourke and Blumenthal, Columbus, OH	Rourke and Blumenthal	Columbus	ОН
Sandler & Marchesini, PC, Philadelphia, PA	Sandler & Marchesini, PC	Philadelphia	PA
Sanford Thompson, PLLC, Raleigh, NC	Sanford Thompson, PLLC	Raleigh	NC
Saperston & Day, PC, Buffalo, NY	Saperston & Day, PC	Buffalo	NY
Sasscer, Clagett & Bucher, Upper Marlboro, MD	Sasscer, Clagett & Bucher	Upper Marlboro	MD
Scherffius, Ballard, Still & Ayers, LLP, Atlanta, GA	Scherffius, Ballard, Still & Ayers, LLP	Atlanta	GA
Schoen Walton Teleken & Foster, LLC, Edwardsville, IL	Schoen Walton Teleken & Foster, LLC	Edwardsville	IL
Schultz Law, LLC, Conshohocken, PA	Schultz Law, LLC	Conshohocken	PA
Schwed, Adams, Sobel & McGinley, P.A., Palm Beach Gardens, FL	Schwed, Adams, Sobel & McGinley, P.A.	Palm Beach Gardens	FL
Scott T. Kimmel Attorney at Law, Lighthouse Point, FL	Scott T. Kimmel Attorney at Law	Lighthouse Point	FL

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Searcy, Denney, Scarola, Barnhart & Shipley, PA, W. Palm Beach, FL	Searcy, Denney, Scarola, Barnhart & Shipley, PA	W. Palm Beach	FL
Sedgwick Claims Management Services, Inc, Louisville, KY	Sedgwick Claims Management Services, Inc	Louisville	KY
Shapiro, Cooper, Lewis & Appleton, PC, Virginia Beach, VA	Shapiro, Cooper, Lewis & Appleton, PC	Virginia Beach	VA
Shollenberger Januzzi & Wolfe, LLP, Enola, PA	Shollenberger Januzzi & Wolfe, LLP	Enola	PA
Silverstein, Silverstein & Silverstein, PA, Aventura, FL	Silverstein, Silverstein & Silverstein, PA	Aventura	FL
Simon & Bocksch, Miami, FL	Simon & Bocksch	Miami	FL
Simon Passanante, PC, St. Louis, MO	Simon Passanante, PC	St. Louis	MO
Simpson Boyd & Powers, Decatur, TX	Simpson Boyd & Powers	Decatur	TX
Smith & Duggan LLC, Lincoln, MA	Smith & Duggan LLC	Lincoln	MA
Smith & Duggan, LLP, Boston, MA	Smith & Duggan, LLP	Boston	MA
Smith, Anderson, Blount, Dorsett, Mitchell & Jernigan, LLP, Raleigh, NC	Smith, Anderson, Blount, Dorsett, Mitchell & Jernigan, LLP	Raleigh	NC
Smith, Helms, Mulliss & Moore, LLP, ,	Smith, Helms, Mulliss & Moore, LLP		
Smith, Patterson, Follin, Curtis, James & Haravey, Greensboro, NC	Smith, Patterson, Follin, Curtis, James & Haravey	Greensboro	NC
Sommer, Olk, Schroeder & Payant, LLP, Rhienlander, WI	Sommer, Olk, Schroeder & Payant, LLP	Rhienlander	WI
Spivey Law Firm, Ft. Myers, FL	Spivey Law Firm	Ft. Myers	FL
St. Paul Fire and Marine Insurance Company, Charlotte, NC	St. Paul Fire and Marine Insurance Company	Charlotte	NC
State of Maine, Department of Public Advocate, Augusta, ME	State of Maine, Department of Public Advocate	Augusta	ME
Stites & Hopkins, Kansas City, MO	Stites & Hopkins	Kansas City	MO
Stoner, Bowers, Gray & McDonald, P.A.,	Stoner, Bowers, Gray & McDonald, P.A.		

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Strassburger McKenna Gutnick & Gefsky, Pittsburgh, PA	Strassburger McKenna Gutnick & Gefsky	Pittsburgh	PA
Strong Garner Bauer, PC, Springfield, MO	Strong Garner Bauer, PC	Springfield	МО
Sumrel ,Sugg, Carmichael, Hicks & Hart, New Bern, NC	Sumrel ,Sugg, Carmichael, Hicks & Hart	New Bern	NC
Taraska, Grower, Unger & Ketcham, PA, ,	Taraska, Grower, Unger & Ketcham, PA		
Taylor, Day, Grimm, Boyd & Johnson, Jacksonville, FL	Taylor, Day, Grimm, Boyd & Johnson	Jacksonville	FL
The Accurso Law Firm, Kansas City, MO	The Accurso Law Firm	Kansas City	MO
The Becker Law Firm, Cleveland, OH	The Becker Law Firm	Cleveland	ОН
The Chandler Law Group, Charlottesville, VA	The Chandler Law Group	Charlottesville	VA
The Daniel Law Group PLLC, Indiana, PA	The Daniel Law Group PLLC	Indiana	PA
The Goss Law Firm, P.C., Kansas City, MO	The Goss Law Firm, P.C.	Kansas City	MO
The Kuhlman Law Firm, LLC, Kansas City, MO	The Kuhlman Law Firm, LLC	Kansas City	MO
The Popham Law Firm, Kansas City, MO	The Popham Law Firm	Kansas City	MO
The Redfearn Law Firm, P.C., Independence, MO	The Redfearn Law Firm, P.C.	Independence	MO
The Simon Law Firm, P.C., St Louis, MO	The Simon Law Firm, P.C.	St Louis	MO
The Wilbur C. Smith, III Law Firm, LLC, Fort Myers, FL	The Wilbur C. Smith, III Law Firm, LLC	Fort Myers	FL
Thompson, Smyth & Cioffi, LLP, Raleigh, NC	Thompson, Smyth & Cioffi, LLP	Raleigh	NC
Throp, Fuller & Slifkin, P.A., Raleigh, NC	Throp, Fuller & Slifkin, P.A.	Raleigh	NC
Timothy D. Welbourne Attorney at Law, ,	Timothy D. Welbourne Attorney at Law		
Town of Hookerton, ,	Town of Hookerton		
Troutman Sanders LLP, Raleigh, NC	Troutman Sanders LLP	Raleigh	NC
Turner & Sweeny, Kansas City, MO	Turner & Sweeny	Kansas City	MO

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Twiggs, Abrams, Strickland & Trehy, P.A., Raleigh, NC	Twiggs, Abrams, Strickland & Trehy, P.A.	Raleigh	NC
US General Services Administration, Kansas City, MO	US General Services Administration	Kansas City	МО
Utiliworks Consulting, LLC, Baton Rouge, LA	Utiliworks Consulting, LLC	Baton Rouge	LA
Vandeventer Black LLP, Raleigh, NC	Vandeventer Black LLP	Raleigh	NC
VML Insurance Programs, Richmond, VA	VML Insurance Programs	Richmond	VA
W. Osmond Smith III Attorney at Law, ,	W. Osmond Smith III Attorney at Law		
Walker & Morgan, LLC, Lexington, SC	Walker & Morgan, LLC	Lexington	SC
Walters Bender Strohbehn & Vaughan, PC, Kansas City, MO	Walters Bender Strohbehn & Vaughan, PC	Kansas City	МО
Ward & Smith, PA, Greenville, NC	Ward & Smith, PA	Greenville	NC
Warren & Kallianos, Charlotte, NC	Warren & Kallianos	Charlotte	NC
Warren & McGraw, LLC, Blue Bell, PA	Warren & McGraw, LLC	Blue Bell	PA
Warshafsky, Rotter, Tarnoff & Block, S.C., Milwaukee, WI	Warshafsky, Rotter, Tarnoff & Block, S.C.	Milwaukee	WI
Warshauer Poe & Thornton, PC, Atlanta, GA	Warshauer Poe & Thornton, PC	Atlanta	GA
Whitacker, Mudd, Luke & Wells, LLC, Birmingham, AL	Whitacker, Mudd, Luke & Wells, LLC	Birmingham	AL
Whitesides & Kenny, ,	Whitesides & Kenny		
Wilkins Frohlich, PA, Port Charlotte, FL	Wilkins Frohlich, PA	Port Charlotte	FL
Williams & Connolly LLP, Washington, DC	Williams & Connolly LLP	Washington	DC
Williams Hart Boundas Easterby, LLP, Houston, TX	Williams Hart Boundas Easterby, LLP	Houston	TX
Williamson & Lavecchia LC, Richmond, VA	Williamson & Lavecchia LC	Richmond	VA
Wilson Elser Moskowitz Edelman & Dicker LLP, McClean, VA	Wilson Elser Moskowitz Edelman & Dicker LLP	McClean	VA

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Wilson Elser Moskowitz Edelman & Dicker, LLP, McLean, VA	Wilson Elser Moskowitz Edelman & Dicker, LLP	McLean	VA
Wilson, Frame, Metheney Attorneys & Counselors at Law, Morgantown, WV	Wilson, Frame, Metheney Attorneys & Counselors at Law	Morgantown	WV
Wilson, Garber & Small, Orlando, FL	Wilson, Garber & Small	Orlando	FL
Winner, Wixson & Pernitz, Madison, WI	Winner, Wixson & Pernitz	Madison	WI
Womble Carlyle Sandridge & Rice, Winston-Salem, NC	Womble Carlyle Sandridge & Rice	Winston-Salem	NC
Wyatt Law Firm, San Antonio, TX	Wyatt Law Firm	San Antonio	TX
Yates, McLamb & Weyher, LLP, Raleigh, NC	Yates, McLamb & Weyher, LLP	Raleigh	NC
Young & Adams, Attorneys at Law, Boca Raton, FL	Young & Adams, Attorneys at Law	Boca Raton	FL
Young Moore and Henderson, P.A., Raleigh, NC	Young Moore and Henderson, P.A.	Raleigh	NC
Zurich American Insurance Company, Charlotte, NC	Zurich American Insurance Company	Charlotte	NC
Zurich North America,,	Zurich North America		