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June 9, 2025

Via Electronic Filing

Mr. Adam Teitzman
Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, Florida 32399-0850

Re: Docket No. 20250011-EI- Petition for Rate Increase by Florida Power & Light Company

Dear Mr. Teitzman:

Please find attached for filing on behalf of Florida Energy for Innovation Association ("FEIA") in the above-referenced docket, the Prefiled Direct Testimony of David Loomis and the following exhibits thereto:

- Exhibit DGL-1 - Curriculum Vitae of David Loomis
- Exhibit DGL-2 - GSLD-3 Current & GSLD-3, LLCS-1 Proposed Rates
- Exhibit DGL-3 - Contractual Comparison: FPL GSLD-3 vs LLCS-1
- Exhibit DGL-4 - Data Center Market Contract Lengths
- Exhibit DGL-5 - Entergy Louisiana Additional Facilities Charge
- Exhibit DGL-6 - Electricity Rates Across Data Center Markets vs FPL

Service of the foregoing is being made on the parties in accordance with the attached Certificate of Service. Please contact me if you have any questions regarding this submission.

Sincerely,

HOLLAND & KNIGHT LLP

D. Bruce May

DBM:jg

Enclosures

cc: Counsel for parties shown on the attached Certificate of Service

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished by e-mail this 9th day of June 2025 the following:

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By: */s/D. Bruce May, Jr.*
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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for rate increase by Florida Power & Light Company. _____/	Docket No.: 20250011-EI Filed: June 9, 2025

DIRECT TESTIMONY

OF

DAVID LOOMIS

on behalf of Intervenor,

Florida Energy for Innovation Association, Inc.

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, BUSINESS AFFILIATION, AND ADDRESS.

A. My name is David Loomis. I am Professor Emeritus of Economics at Illinois State University, former Executive Director of the Institute for Regulatory Policy Studies, and President of Strategic Economic Research, LLC. My business address is 1604 Visa Drive, Suite 1, Normal, IL 61761.

Q. WHAT IS YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND?

A. I have a Bachelor of Arts in Mathematics and in Honors Economics, as well as a Doctor of Philosophy in Economics, from Temple University in Philadelphia, Pennsylvania. My current Curriculum Vitae is attached as Exhibit DGL-1.

For twenty-six years, I taught regulatory economics in the graduate economics program at Illinois State University. During that time, I was also the Executive Director at the Institute for Regulatory Policy Studies, a public-private partnership between Illinois State University and the regulatory community in the Midwest consisting of the Illinois Commerce Commission, PJM, MISO, Commonwealth Edison, Exelon (Constellation), Ameren, Illinois American Water, Aqua, Nicor Gas, Peoples Gas, Citizens Utility Board and others throughout its history.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE STATE REGULATORY BODIES?

A. Yes. I have testified before the Illinois Commerce Commission, Indiana Utility Regulatory Commission, Iowa Utilities Board, Kentucky State Board on

Electric Generation and Transmission Siting, Louisiana Public Service Commission, Mississippi Public Service Commission, Missouri Public Service Commission, New Mexico Public Regulation Commission, Ohio Power Siting Board, the Public Service Commission of West Virginia, and the Public Service Commission of Wisconsin. This is my first time testifying before the Florida Public Service Commission ("Commission").

Q. ON WHOSE BEHALF ARE YOU SUBMITTING TESTIMONY TODAY?

A. I am testifying on behalf of the Florida Energy for Innovation Association ("FEIA"), an alliance of data center providers and groups committed to advancing Florida's position as a competitive and innovation-driven data center market. FEIA is an intervenor in this proceeding.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I have been retained by FEIA to review the discovery and testimony in this case and provide my expert testimony and analysis concerning whether the Large Load Contract Service ("LLCS") Tariff proposed by Florida Power and Light ("FPL") is reasonable and designed in accordance with sound ratemaking principles.

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. My analysis shows that FPL is proposing to do two things with respect to its proposed LLCS Tariff. First, FPL is asking the Commission for approval to close its existing General Service Large Demand -3 ("GSLD-3") Tariff to data centers with a load of 25 MW or more and a load factor of 85 percent or more. Second, upon closure of the GSLD-3 Tariff, FPL is asking the Commission for

approval to reclassify those large data centers as LLCS customers who, depending on their geographic location, would be required to take electric service under the rates, terms, and conditions of FPL's proposed LLCS-1 or LLCS-2 Tariff. My analysis shows that the proposed new LLCS-1 and LLCS-2 customer classifications are not designed in accordance with sound rate making principles and that the rates, terms and conditions set forth in the proposed rate schedules LLCS-1 and LLCS-2 are unreasonable, arbitrary and discriminatory. In particular, they are not supported by an appropriate cost-of-service study and therefore lack justification for the creation of a new rate schedule.

Finally, I make a series of recommendations regarding how FPL's proposed LLCS Tariff can be refined to encourage the responsible development of data centers in the state while at the same time protecting the general body of ratepayers.

II. OVERVIEW OF FPL'S PROPOSAL

Q. PLEASE GENERALLY DESCRIBE FPL'S LLCS TARIFF PROPOSAL.

A. As I explained, FPL is proposing to close its existing GSLD-3 and GSLD(T)-3 Tariffs to large load data centers and reclassify them as LLCS customers under a brand-new customer classification. LLCS customers would be required to take electric service under the rates, terms, and conditions of FPL's proposed LLCS-1 or LLCS-2 Tariff depending on where the data center is located. According to the direct testimony of FPL Witness Cohen, the LLCS-1 Tariff has total combined load cap of 3 Gigawatts ("GW") and applies only to "three zones in the vicinity of Sunbreak in St. Lucie County, Tesoro in Martin County

and Sugar in Palm Beach County". LLCS-1 will be closed to new or incremental load at the time the total combined 3 GW load becomes fully subscribed [Cohen, p.24, lines 9-10]. The LLCS-2 Tariff applies to FPL's service areas outside of the LLCS-1 zones and does not have a subscription limit. Of note, the LLCS-2 territory covers the majority of FPL's service territory.

Q. CURRENTLY, UNDER WHAT FPL CUSTOMER CLASSIFICATION WOULD LARGE DATA CENTERS BE ASSIGNED?

A. Under FPL's current tariff, large data centers with a load of 25 MW or more and a load factor of 85 percent or more are classified as GSLD customers and would pay for electric service under FPL's Rate Schedule GSLD-3 or GSLD(T)-3.

Q. DO THE RATES UNDER THE GSLD-3 TARIFF DIFFER FROM THE PROPOSED LLCS-1 AND LLCS-2 TARIFFS?

A. Yes. While there are some structural similarities, there are significant differences. Like the GSLD-3 tariff, the proposed LLCS-1 and LLCS-2 tariffs include a base charge, a demand charge, an energy charge, along with applicable riders. However, the LLCS tariffs introduce a new and distinct component—an Incremental Generation Charge ("IGC")—which is designed to ensure that costs for the incremental generation necessary to serve these loads is recovered from the LLCS-1 and LLCS-2 customers. [Witness Cohen, p. 25, lines 18–21.] Under LLCS-1, FPL proposes setting the IGC at $28.07 per kilowatt (kW) per month, while under LLCS-2 the IGC is undefined.

Q. HOW DOES THE ALL-IN LLCS-1 RATE COMPARE TO THE GSLD-3

RATE?

A. Today, as shown in Exhibit DLG-2, under FPL's current GSLD-3 Tariff, a large data center would pay FPL approximately 5.98 cents per kWh for electric service pre taxes and fees. Under FPL's proposed LLCS-1 Tariff that same data center would pay, inclusive of the IGC, approximately 10.16 cents per kWh pre taxes and fees. That represents an increase in rates of approximately 69%.

Q. ARE THE RATES UNDER THE LLCS-2 TARIFF THE SAME AS THE LLCS-1 TARIFF?

A. The LLCS-2 Tariff is structured similarly to LLCS-1. Like LLCS-1 Tariff, the LLCS-2 Tariff includes an IGC, but the amount of that charge is undefined. FPL claims that it "is not able to provide a stated rate for the incremental generation capacity necessary to serve customer loads under this rate schedule" [Cohen, p. 25, lines 1-4].

Q. DO THE TERMS AND CONDITIONS FOR SERVICE UNDER THE LLCS TARIFFS DIFFER FROM THE TERMS AND CONDITIONS UNDER THE GSLD-3 TARIFF?

A. Yes, as shown in Exhibit DGL-3, there are substantial contractual differences. Customers served under LLCS-1 and LLCS-2 would be required to enter a rigid 20-year contract that imposes a maximum contracted demand amount, minimum take-or-pay requirements, substantial exit fees for early termination, provide significant levels of additional security, and complete the set of multi-billion dollar contracts within a compressed six month period after acceptance of FPL's formal engineering study ("Engineering Study"). None of those contractual requirements apply under the GSLD-3 Tariff.

Q. HOW DOES FPL JUSTIFY THE NEED FOR THE CREATION OF A NEW RATE SCHEDULE?

A. In her testimony, FPL Witness Cohen justifies the new rate schedules by stating that they will protect the general body of customers served by FPL because FPL believes these LLCS-1 and LLCS-2 customers would require significant investments in new incremental generation capacity that would not be otherwise needed to serve the general body of customers [Cohen, p. 23, lines 19-22]. She further states that the purpose is "to ensure that the general body of customers is protected from higher costs to serve such large load customers" [Cohen, p. 23 lines 15-17]. She also mentions that certain of the initial LLCS-1 and LLCS-2 rate elements are set at similar levels as in the GSLD-3 rate schedule. However, according to our analysis, adding FPL's proposed IGC turns an approximately 15% effective rate increase for GSLD-3 customers into an approximately 69% rate increase for LLCS-1 customers. Although the IGC for LLCS-2 is undefined and it is not clear what the effective LLCS-2 rate might be, FPL has indicated that it would be higher than LLCS-1. (See Exhibit DGL-2 for further detail.)

Q. DOES FPL EXPECT ANY DATA CENTER CUSTOMERS TO USE LLCS-1 OR LLCS-2?

A. FPL does not include any LLCS customer revenue in its 2026 or 2027 test years, citing the absence of executed agreements. That said, FPL is currently conducting Engineering Studies for multiple large data center projects with in-service expectations beginning in 2028 and 2029. These projects provide sufficient visibility to make reasonable pro forma cost and revenue

assumptions. A more transparent and accurate approach would have acknowledged substantial potential LLCS revenue starting in 2028 and incorporated that into long-range planning and cost allocation analysis.

III. RATE COMPARISON AND THE IGC IMPACT

Q. YOU PREVIOUSLY TESTIFIED THAT THE LLCS-1 RATE IS APPROXIMATELY 69% HIGHER THAN THE GSLD-3 RATE BECAUSE THE LLCS-1 TARIFF INCLUDES AN IGC. PLEASE EXPLAIN YOUR UNDERSTANDING OF THE IGC.

A. The IGC is a new rate element that is not present in any other FPL rate schedule for any other rate class. It is supposed to capture the new generation buildout that would be required to satisfy the load for the new LLCS customers. FPL proposes that the IGC be set $28.07 per kW. For LLCS-1 customers that element alone amounts to approximately 4.52 cents per kWh, or 45% of the total proposed LLCS-1 rate assuming a 1000 MW data center at an 85% Load Factor. For LLCS-2 customers, the amount of the IGC is left unspecified, making it impractical for customers to assess its commercial feasibility.

Q. IN YOUR PROFESSIONAL OPINION, HAVE OTHER STATES ADOPTED AN IGC COMPONENT IN DESIGNING RATES FOR DATA CENTERS?

A. Yes. For example, Entergy Louisiana uses an Additional Facilities Charge ("AFC") to recover infrastructure costs for large-load customers, including data centers. Unlike FPL's proposed $28.07/kW/month IGC, Entergy's AFC is set significantly lower at $9.16/kW/month. Furthermore, Entergy's AFC is repaid over a 20-year contract term, and typically negotiated with customers to ensure

the charge is cost-justified and commercially viable. This is explained in further detail in Exhibit DGL-5 to my testimony.

Q. IN YOUR PROFESSIONAL OPINION, HAS THE IGC CHARGE BEEN PROPERLY JUSTIFIED IN THIS PROCEEDING?

A. No. There are several aspects of the IGC that indicate lack of proper justification, including the incorporation of peak year costs across the entire 20-year term of the LLCS service agreement, potential over-estimation of the incremental generation capacity required to serve data centers, and a general lack of information and assumptions required to assess the appropriate IGC level. These concerns are further detailed in the testimony of FEIA Witness Ahmed.

Q. HAS FPL PROVIDED A COST-OF-SERVICE STUDY TO SUPPORT THE IGC?

A. No, it has not. FPL states only that the IGC is based on the cost of new solar generation and battery storage, which is needed to serve large data center demand. FPL asserts that this new solar generation and battery storage is cost-effective due in part to solar production tax credits and battery investment tax credits set forth in the Inflation Reduction Act of 2022 ("IRA") [See Pre-filed Direct Testimony of FPL Witnesses Oliver and Whitley].

Q. IS THERE ENOUGH CERTAINTY IN THE MARKET FOR SOLAR AND STORAGE FOR THE COMMISSION TO ESTABLISH A NEW IGC RATE ELEMENT?

A. Not in my opinion. Congress is currently proposing to phase out the federal Production Tax Credit (PTC) and the Investment Tax Credit (ITC) enshrined in

the previous administration's Inflation Reduction Act. The House Ways and Means Committee's draft budget, part of a Republican-sponsored reconciliation package, proposes to phase out the technology-neutral clean energy PTC (Section 45Y) and ITC (Section 48E) for projects not placed in service by the end of 2028. The credits would remain at full value through 2028, then step down to 80% in 2029, 60% in 2030, 40% in 2031, and zero in 2032. This would accelerate the phase out compared to the IRA's original timeline, which allowed full credits through 2032 or until U.S. power sector greenhouse gas emissions reach 25% of 2022 levels, whichever is later.

These tax credits were assumed to be sustained at their full value when FPL did its assessment in their Integrated Resource Plan (IRP). FPL proposes to increase their solar and battery generation from 12% to 34% in Schedule 6.2, Page No. 173 of FPL's Ten-Year Power Plant Site Plan 2025 - 2034, while materially decreasing their use of lower-cost available sources of generation. The potential for material reductions and earlier expiration of the ITC and PTC incentives create significant risks of material cost overruns and significant and unexpected future increased rates for the general body of rate payers.

Q. WHAT RECOMMENDATION WOULD YOU OFFER THE COMMISSION IN REGARD TO THE IGC?

Because of the multiple layers of market uncertainty concerning solar and battery storage, I would recommend that it approve an amended LLCS Tariff structure consistent with the suggestions in my testimony.

IV. COST OF SERVICE AND RATEMAKING PRINCIPLES

Q. YOU PREVIOUSLY TESTIFIED THAT FPL PROPOSES TO CLOSE

ITS GSLD-3 TARIFF TO LARGE DATA CENTERS AND ASSIGN THEM TO A NEW LLCS CUSTOMER CLASSIFICATION. IN YOUR PROFESSIONAL OPINION, ARE THERE SOME BASIC STEPS THAT A UTILITY SHOULD UNDERTAKE IN CREATING A NEW CLASSIFICATION OF CUSTOMERS?

A. Yes. Typically, a utility would be expected to perform a cost-of-service study to analyze how costs are allocated to the new customer group within a utility's overall cost structure. This process would help determine the appropriate revenue requirement for the new group, create a fair rate setting environment, and ensure there is no cross-subsidization between customer classes.

Q. WHY IS A COST-OF-SERVICE STUDY IMPORTANT?

A. It provides a basis for setting fair, equitable and non-discriminatory rates for all customer classes, ensuring that each group contributes its fair share to the utility's overall revenue requirement.

Q. DID FPL PERFORM A COST-OF-SERVICE STUDY TO SUPPORT THE CREATION OF THE NEW LLCS CUSTOMER CLASSIFICATION?

A. I have seen no cost-of-service study for the new LLCS customer classification. In her testimony, Witness Cohen points to Witness DuBose as having justified costs in her cost of service study. However, LLCS costs do not appear in that study.

FPL's claim of cost justification for the LLCS-1 Incremental Generation Charge of $28.07/kW of Demand (as per Rate Schedule LLCS-1 MFR No. E-14 Attachment No. 1A of 15 Page 130 of 270) lacks transparency and FPL has yet to provide any figures for the Incremental Generation Charge for LLCS-2

customers (as per Rate Schedule LLCS-2 MFR No. E-14 Attachment No. 1A of 15 Page 133 of 270).

Q. HOW WOULD YOU RESPOND IF FPL SAYS IT IS UNABLE TO INCLUDE THE LLCS COSTS IN THE COST OF SERVICE STUDY BECAUSE THERE ARE NO EXISTING CUSTOMERS ON WHICH TO BASE THE COSTS?

A. FPL bears the burden of proof to justify any new rate or customer class. While FPL may argue that the absence of current LLCS customers prevents a cost-of-service study, that does not relieve it of the obligation to demonstrate the cost basis for the proposed rates, similar to the current process it completes for all other rate schedules. The exclusion of LLCS costs suggests that FPL lacks a clear understanding of the actual costs to serve these customers. A proper approach would be to present a detailed cost projection showing how LLCS customers materially differ from GSLD customers, consistent with the ratemaking principle that rates must reflect cost causation. The lack of concrete cost data highlights the uncertainty surrounding the true cost to serve these loads, making it difficult for FPL to reasonably incorporate them into the cost-of-service study at this time.

Q. ARE THERE OTHER STEPS A UTILITY SHOULD TAKE IN CREATING A NEW LLCS CUSTOMER CLASSIFICATION?

A. Yes. A utility should adhere to the principles of parity and gradualism to avoid dramatic rate increases.

Q. WHAT DO YOU MEAN BY PARITY AND GRADUALISM?

A. A rate class is at "parity" if it is earning the same as the system retail rate of return.

By "gradualism", I am referring to the principle of trying to obtain parity to the greatest extent possible without increasing any customer class's rates by more than 1.5 times the system average. According to FPL witness Cohen, the Commission's practice of gradualism is "long-standing".

Q. IN YOUR OPINION HAS FPL ADHERED TO THE COMMISSION'S LONG-STANDING PRACTICE OF GRADUALISM IN THIS CASE?

A. Not with respect to its proposal to move large data centers to the new LLCS Tariff. As I mentioned earlier, large data centers are currently considered GSLD customers and, as such, would be charged rates under FPL's GSLD-3 Tariff, i.e., approximately 5.98 cents per kWh for electric service pre taxes and fees. Under FPL's proposed LLCS-1 Tariff, that same data center would pay approximately 10.16 cents per kWh pre taxes and fees. That represents an increase in rates of approximately 69%.

The average rate increase for FPL's system is 6.10 percent for the 2026 test year, and 5.36 percent for the 2027 test year. Thus, FPL's proposal to increase the rates for large data center customers by 69% (Exhibit DGL-2), is far greater than 1.5 times the system average increase.

Q. DOES FPL'S PROPOSED TREATMENT OF LLCS CUSTOMERS ALIGN WITH PRINCIPLES OF RATE PARITY ACROSS CUSTOMER CLASSES?

A. No. FPL's proposal creates an entirely new customer class for large data centers, but without demonstrating that these customers impose materially different cost burdens than those already served under GSLD-3.

Q. IN PROPOSING A NEW CUSTOMER CLASSIFICATION FOR

LARGE DATA CENTERS, DOES FPL CONSIDER THAT LARGE LOAD/HIGH LOAD FACTOR CUSTOMERS CAN PROVIDE BENEFITS TO THE GENERAL BODY OF RATEPAYERS?

A. No. As explained in greater detail in FEIA Witness Ahmed's testimony, regulators typically recognize that larger load / higher load factor-customers can lower the per kWh cost of power through an increased revenue base, enabling wider amortization of fixed grid costs and consistent load factors reducing the need for costly capital infrastructure.

Q HAVE ANY LARGE DATA CENTER OPERATORS AGREED TO BE SERVED BY FPL UNDER THE LLCS TARIFF STRUCTURE?

A. None that I or any of the FEIA members are aware of, and this is further confirmed in Cohen's testimony, "FPL does not have any agreements to serve any customers of this size in 2026 or 2027" [Cohen, p. 23, lines 7-8].

Q. DOES THAT SURPRISE YOU?

A. No. In my professional opinion, the rates, terms and conditions that FPL proposes for large data centers are not only unjustified, they are also excessive. Based on my experience, top tier hyperscale operators are likely to consider FPL's territory a "no-go" zone when compared to data center tariffs in other states. That assessment will continue until the LLCS rate and structure proposals are materially modified to conform with the actual cost of service and market norms in competing markets.

Q. HOW SHOULD FPL SERVE THESE LARGE DATA CUSTOMERS

A. II would recommend that the Commission approve an amended LLCS Tariff structure for large data centers consistent with my testimony.

V. LLCS CONTRACT TERMS AND INDUSTRY COMPARISON

Q. EXPLAIN HOW THE RATES FPL PROPOSES TO CHARGE LARGE DATA CENTERS ARE UNREASONABLE AND EXCESSIVE?

A. FPL's proposed LLCS rate of over 10 cents/kWh before taxes and fees reflects a 69% increase from the current GSLD-3 rate (Exhibit DGL-2), primarily due to an unsupported IGC. This increase is excessive given data centers' superior load characteristics, lower cost to serve, and consistent demand. Charging the highest-cost rate to the lowest-cost customers violates basic cost-causation principles and undermines Florida's competitiveness in the data center industry.

Q. EXPLAIN HOW FPL'S PROPOSED LLCS CONTRACTUAL TERMS ARE UNREASONABLE AND EXCESSIVE.

A. The proposed LLCS tariff imposes burdens materially beyond industry norms and FPL's own GSLD-3 terms, including a 20-year contract, 90% take-or-pay minimums, redundant credit and performance security requirements, and a very limited six-month period in which to complete multiple, complex multi-billion-dollar contracts (Exhibit DGL-3). These terms create unnecessary risk, limit flexibility, fail to meet Florida's statutory requirement under Chapter 366 for "just and reasonable" cost-based rates, and diverge sharply from practices in competing states. All of these contract terms will undermine Florida's ability to attract data center investment.

Q. IS THE 20-YEAR LLCS SERVICE AGREEMENT TERM REASONABLE?

A. No. A 20-year LLCS Service Agreement ("LSA") term is excessively long for businesses as compared with industry standards and accepted market practice.

The following are examples of contract lengths for large load customers in other relevant markets: Indiana & Michigan Power has a minimum 12-year contract term with up to a 5-year extension; AEP Ohio requires a minimum of 10 years with up to a 3-year load ramp; and, Georgia Power has a 15-year minimum contract length (Exhibit DGL-4).

A 12-year LSA with two 5-year optional extensions would align with standard business planning horizons and industry practices, providing FPL planning certainty while preserving customer flexibility.

Q. IS THERE JUSTIFICATION FOR THE MINIMUM TAKE-OR-PAY REQUIREMENT OF 90% OF THE CUSTOMER'S CONTRACT DEMAND?

A. No. FPL has not proven that a take-or-pay charge of 90% of the customer's contract demand is necessary. Data centers' high load factors and predictable usage ensure robust and predictable revenue streams. A take-or-pay charge of 65% of the contract demand would provide adequate protection and is consistent with industry standards (Exhibit DGL-3).

Q. IS THE INCREMENTAL GENERATION PERFORMANCE SECURITY REASONABLE?

A. No. Requiring customers to post an additional 100% collateral for the IGC over a 20-year contract is excessive and duplicative as the IGC is included in the contractual assurances under the LLCS Service Agreement. For a 1,000 MW data center, this would mean over $6 billion in redundant upfront collateral — an unreasonable burden that shifts infrastructure risk onto customers who also lack the right to resell unused capacity without FPL's consent (Exhibit DGL-

3, DGL-5).

Q. ARE YOU RECOMMENDING ANY REFINEMENTS TO FPL'S LLCS TARIFF?

A. Yes. FEIA recommends that the LLCS Tariff be revised to align with cost-of-service principles, standard industry practices, and Florida's economic development goals. Specifically, the following changes are essential to ensure the tariff is fair, reasonable, and commercially viable:

- **ICG Performance Security**: Eliminate redundant IGC collateral for customers executing LLCS Service Agreements who meet FPL's stated creditworthiness requirements. If the customer executing the LLCS Service Agreement does not meet FPL's creditworthiness standards, then the ICG Performance Security would be provided but at an amount reflecting FPL's actual generation costs, not the arbitrary 20-year contract value.
- **Contract Term**: Reduce the minimum term from 20 years to a base of 12 years with optional extensions at the customer's discretion.
- **Take-or-Pay Requirement**: Adjust the minimum Customer Demand Load from 90% to 65%, which would be consistent with operational norms and still sufficient for FPL cost recovery and resource planning.
- **CIAC Terms**: Remove the 5-year cap on Contribution in Aid of Construction (CIAC) refunds for off-site transmission to ensure full repayment of customer-funded upgrades.

- **Final Rate**: Set the all-in LLCS rate, including the IGC, at a level comparable to FPL's proposed GSLD-3 rate (~6.89 cents/kWh), reflecting data centers' low cost-to-serve, high load factor, and credit strength.
- **Engineering Acceptance Period**: Extend the period commencing on the date of completion of the Engineering Study, during which the LLCS Service Agreement and other relevant FPL contracts must be executed, from six months to 18 months (MFR No. E-14, 2026 Projected Test Year, Attachment No. 1A of 15, Page 132 of 217).

These revisions preserve FPL's ability to recover prudent costs, maintain system integrity, and protect the general body of rate payers while ensuring Florida remains competitive for large-scale digital infrastructure investment.

VI. MARKET VIABILITY AND LONG-TERM PLANNING

Q. ARE THE LLCS-1 AND LLCS-2 RATE SCHEDULES DESIGNED TO ACCOMMODATE THE ENTRY OF DATA CENTERS INTO FLORIDA?

A. No, these rate schedules will lead to prohibitively expensive energy costs for data centers with insufficient cost justification. There are no current customers for LLCS-1 and LLCS-2 and there likely will not be if these rate schedules become effective. These rates are a stealth 69% rate increase over the existing GSLD-3 rate and violate basic ratemaking principles (Exhibit DGL-2). Data center customers will look to locate elsewhere, where the electricity costs are not artificially inflated (Exhibit DGL-6). As others will address in testimony, this appears to conflict with the State of Florida's leadership strategy to attract

this industry.

Q. CAN FPL SERVICE LLCS CUSTOMERS PROFITABLY WITH LOWER RATES?

A. Yes. As further substantiated in FEIA Witness Ahmed's testimony, serving data centers at competitive rates generates robust, predictable revenue streams, leveraging their high load factors, consistent usage patterns, and strong credit profiles to spread fixed costs effectively over a materially increased revenue base. Reducing the LLCS rates to a level consistent with higher cost of service rate classes such as GSLD-3, to whom FPL is currently profitably generating and transmitting power, would preserve profitability while maintaining fairness and avoiding unnecessary cross-subsidization and protecting the general body of ratepayers.

Q. IN YOUR OPINION, ARE THERE ADDITIONAL BENEFITS TO FPL RESIDENTIAL AND COMMERCIAL CUSTOMERS?

A. Yes. Adding data centers will benefit the general body of ratepayers by helping to share the burden of joint and common costs over a significantly increased revenue base. Further, they provide tax revenue and jobs that provide an economic benefit to the entire community. See FEIA Witnesses Magnum and Rizer testimonies for more details on the economic impact that Data Center projects can provide.

Q. HOW WOULD THESE CHANGES BENEFIT FLORIDA?

A. Implementing these reforms would position Florida as a premier destination for data center investment and the AI industry, unlocking long-term tax revenues, job creation, and statewide economic growth, while ensuring utilities

maintain fair compensation and system stability with no negative impacts on the general body of rate payers. Aligning with best practices in competitive jurisdictions will further strengthen Florida's reputation as an innovation-friendly and economically resilient market.

Q. WHAT IS YOUR OVERALL RECOMMENDATION?

A. I would recommend that the Commission approve an amended LLCS Tariff structure consistent with my testimony.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

DAVID G. LOOMIS

PRESIDENT

STRATEGIC ECONOMIC RESEARCH

Areas of expertise

- Economic and fiscal impact analysis of energy infrastructure
- Regulatory economics and utility rate design
- Expert witness testimony before zoning boards and public utility commissions
- Renewable energy development and policy (wind, solar, storage)
- Transmission and generation project evaluation and siting strategy

Professional summary

Versatile and highly accomplished economist with over three decades of experience spanning energy policy, utility regulation, infrastructure economics, and expert witness testimony. Proven leader in the development of renewable energy and transmission projects, with extensive engagements across state regulatory agencies, zoning boards, and legislative bodies. As founder of Strategic Economic Research and a former professor at Illinois State University, Dr. Loomis has combined academic rigor with practical consulting, producing actionable insights for clients in the wind, solar, and transmission sectors. A published scholar with 40+ peer-reviewed articles and over $7 million in awarded grants, he brings deep expertise in cost-benefit analysis, economic impact modeling, and stakeholder engagement across the evolving energy landscape.

Education

Ph.D., Economics
Temple University, Philadelphia, Pennsylvania, 1995

B.A., Mathematics and Honors Economics
Temple University, Magna Cum Laude, 1985

Professional Experience

President 2011 - Present
Strategic Economic Research

- Performed economic impact analyses on policy initiatives and energy projects such as wind energy, solar energy, natural gas plants, and transmission lines at the county and state levels.
- Provided expert testimony before state legislative bodies, state public utility commissions, and county boards.
- Wrote telecommunications policy impact report comparing Illinois to other Midwestern states.

Professor Emeritus – Department of Economics 2023 - Present
Full Professor – Department of Economics 2010 - 2023
Associate Professor – Department of Economics 2002 - 2009
Assistant Professor – Department of Economics 1996 - 2002
Illinois State University, Normal, IL

- Taught Regulatory Economics, Telecommunications Economics and Public Policy, Environmental Economics, Industrial Organization and Pricing, Individual and Social Choice, Economics of Energy and

Public Policy, and a Graduate Seminar Course in Electricity, Natural Gas, and Telecommunications Issues.

- Supervised as many as 5 graduate students in research projects each semester.
- Served on numerous departmental committees.

Executive Director 2005 - 2023
Co-Director 1997 - 2005

Institute for Regulatory Policy Studies, Normal, IL

- Grew contributing membership from 5 companies to 16 organizations.
- Doubled the number of workshop/training events annually.
- Supervised 2 Directors, Administrative Staff, and an internship program.
- Developed and implemented state-level workshops concerning regulatory issues related to the electric, natural gas, and telecommunications industries.

Director **2006 - 2018**
Illinois Wind Working Group, Normal, IL

- Founded the organization and grew the organizing committee to over 200 key wind stakeholders.
- Organized annual wind energy conference with over 400 attendees.
- Organized strategic conferences to address critical wind energy issues.
- Initiated monthly conference calls with stakeholders.
- Devised organizational structure and bylaws.

Director **2007 - 2018**
Center for Renewable Energy, Normal, IL

- Created the founding document approved by the Illinois State University Board of Trustees and the Illinois Board of Higher Education.
- Secured over $150,000 in funding from private companies.
- Hired and supervised 4 professional staff members and supervised 3 faculty members as Associate Directors.
- Reviewed renewable energy manufacturing grant applications for the Illinois Department of Commerce and Economic Opportunity for a $30 million program.
- Created technical "Due Diligence" documents for the Illinois Finance Authority loan program for wind farm projects in Illinois.

Chair **1997 - 2002**
International Communications Forecasting Conference

- Expanded Planning Committee with representatives from over 18 different international companies and delivered high quality conference attracting over 500 people over 4 years.

Economist - Business Research **1985 - 1996**
Bell Atlantic, Philadelphia, PA

- Wrote and taught Applied Business Forecasting multimedia course.
- Developed and documented 25 econometric demand models that were used in regulatory filings.
- Provided statistical and analytic support to regulatory costing studies.
- Served as subject matter expert in switched and special access.
- Administered a $4 million budget, including a $1.8 million consulting budget.

PROFESSIONAL AWARDS AND MEMBERSHIPS

- 2016 – Outstanding Cross-Disciplinary Team Research Award
  With Jin Jo and Matt Aldeman – Recognizes exemplary collaborative research conducted by multiple investigators from different disciplines
- 2011 – Midwestern Regional Wind Advocacy Award
  From the U.S. Department of Energy's Wind Powering America, presented at WindPower 2011
- 2009 – Economics Department Scott M. Elliott Faculty Excellence Award
  Awarded for excellence in teaching, research, and service
- 2009 – Illinois State University Million Dollar Club
  For faculty with over $1 million in grants through the university
- 2008 – Outstanding State Wind Working Group Award
  From the U.S. Department of Energy's Wind Powering America, presented at WindPower 2008
- 1999 – Illinois State University Teaching Initiative Award
- Member, American Economic Association
- Member, National Association of Business Economists
- Member, International Association for Energy Economics
- Member, Institute for Business Forecasters
- Member, Institute for Telecommunications Society

Publications

40. Nowakowski, Gary, and **Loomis, D. G.** (2023). The Power of Economies of Scale: A Wind Industry Case Study. *Strategic Planning for Energy and the Environment*. Vol. 42 3, 1–38.
39. Aldeman, M. R., Jo, J. H., Loomis, D. G. & Krull, B. (2023). Reduction of solar photovoltaic system output variability with geographical aggregation. Renewable and Sustainable Energy Transition, Aug. 2023. Published online Feb. 2023. https://www.sciencedirect.com/journal/renewable-and-sustainable-energy-transition/vol/3/suppl/C.
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37. Ohler, A., Loomis, D.G., Ilves, K. (2020). A study of electricity savings from Energy Star appliances using household survey data, Energy Policy, 144: 1- 13.
36. Ohler, A., Mohammadi, H. and Loomis, D.G. (2020). Electricity restructuring and the relationship between fuel costs and electricity prices for industrial and residential customers, Energy Policy, 142: 1-8.
35. Aldeman, M. R., Jo, J. H., & Loomis, D. G. (2020). Wind energy production uncertainty is associated with wind assessments of various intervals. Wind Engineering, Feb. 2020. Published online May 2019. https://doi.org/10.1177/0309524X19849865.
34. Aldeman, M.R., Jo, J.H., and Loomis, D.G. (2018). Quantification of Uncertainty Associated with Wind Assessments of Various Intervals, Transactions of the Canadian Society for Mechanical Engineering, 42(4): 350-358.
33. Jo, J.H., Cross, J., Rose, Z., Daebel, E., Verderber, A., and Loomis, D. G. (2016). Financing options and economic impact: distributed generation using solar photovoltaic systems in Normal, Illinois, AIMS Energy, 4(3): 504- 516.
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31. Loomis, D.G., Jo, J.H., and Aldeman, M.R., (2016). Economic Impact Potential of Solar Photovoltaics in Illinois, Renewable Energy, 87, 253-258.

30. Aldeman, M.R., Jo, J.H., and Loomis, D.G. (2015). The Technical Potential for Wind Energy in Illinois, Energy, 90(1), 1082-1090.
29. Tegen, S., Keyser, D., Flores-Espino, F., Miles, J., Zammit, D. and Loomis, D. (2015). Offshore Wind Jobs and Economic Development Impacts in the United States: Four Regional Scenarios, National Renewable Energy Laboratory Technical Report, NREL/TP-5000-61315, February.
28. Loomis, D. G. and Bowden, N. S. (2013). Nationwide Database of Electric Rates to Become Available, Natural Gas & Electricity, 30 (5), 20-25.
27. Jo, J. H., Loomis, D. G., and Aldeman, M. R. (2013). Optimum penetration of utility-scale grid-connected solar photovoltaic systems in Illinois, Renewable Energy, 60, 20-26.
26. Malm, E., Loomis, D. G., DeFranco, J. (2012). A Campus Technology Choice Model with Incorporated Network Effects: Choosing Between General Use and Campus Systems, International Journal of Computer Trends and Technology, 3(4), 622-629.
25. Chupp, B. A., Hickey, E.A. & Loomis, D. G. (2012). Optimal Wind Portfolios in Illinois, Electricity Journal, 25, 46-56.
24. Hickey, E., Loomis, D. G., & Mohammadi, H. (2012). Forecasting hourly electricity prices using ARMAX-GARCH models: An application to MISO hubs, Energy Economics, 34, 307-315.
23. Theron, S., Winter, J.R., Loomis, D. G., & Spaulding, A. D. (2011). Attitudes Concerning Wind Energy in Central Illinois. Journal of the American Society of Farm Managers and Rural Appraisers, 74, 120-128.
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21. Loomis, D. G. & Ohler, A. O. (2010). Are Renewable Portfolio Standards A Policy Cure-all? A Case Study of Illinois's Experience. Environmental Law and Policy Review, 35, 135-182.
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19. Carlson, J. L., Payne, J. E., & Loomis, D. G. (2010). An Assessment of the Economic Impact of the Wind Turbine Supply Chain in Illinois. Electricity Journal, 13, 75-93.
18. Apergis, N., Payne, J. E., & Loomis, D. G. (2010). Are shocks to natural gas consumption transitory or permanent? Energy Policy, 38, 4734-4736.
17. Apergis, N., Payne, J. E., & Loomis, D. G. (2010). Are fluctuations in coal consumption transitory or permanent? Evidence from a panel of U.S. states. Applied Energy, 87, 2424-2426.
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15. Carlson, J. L., & Loomis, D. G. (2008). An assessment of the impact of deregulation on the relative price of electricity in Illinois. Electricity Journal, 21, 60-70.
14. Loomis, D. G. (2008). The telecommunications industry. In H. Bidgoli (Ed.), The handbook of computer networks (pp. 3-19). Hoboken, NJ: John Wiley & Sons.
13. Cox, J. E., Jr., & Loomis, D. G. (2007). A managerial approach to using error measures in the evaluation of forecasting methods. International Journal of Business Research, 7, 143-149.
12. Cox, J. E., Jr., & Loomis, D. G. (2006). Improving forecasting through textbooks – a 25-year review. International Journal of Forecasting, 22, 617-624.
11. Swann, C. M., & Loomis, D. G. (2005). Competition in local telecommunications – there's more than you think. Business Economics, 40, 18-28.
10. Swann, C. M., & Loomis, D. G. (2005). Intermodal competition in local telecommunications markets. Information Economics and Policy, 17, 97- 113.
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8. Cox, J. E., Jr., & Loomis, D. G. (2003). Principles for teaching economic forecasting. International Review of Economics Education, 1, 69-79.
7. Taylor, L. D. & Loomis, D. G. (2002). Forecasting the Internet: Understanding the explosive growth of data communications. Boston: Kluwer Academic Publishers.
6. Wiedman, J. & Loomis, D. G. (2002). U.S. broadband pricing and alternatives for internet service providers. In D. G. Loomis & L. D. Taylor (Eds.). Boston: Kluwer Academic Publishers.

5. Cox, J. E., Jr. & Loomis, D. G. (2001). Diffusion of forecasting principles: an assessment of books relevant to forecasting. In J. S. Armstrong (Ed.), Principles of Forecasting: A Handbook for Researchers and Practitioners (pp. 633-650). Norwell, MA: Kluwer Academic Publishers.
4. Cox, J. E., Jr. & Loomis, D. G. (2000). A course in economic forecasting: rationale and content. Journal of Economics Education, 31, 349-357.
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2. Loomis, D. G. (1999). Forecasting of new products and the impact of competition. In D. G. Loomis & L. D. Taylor (Eds.), The future of the telecommunications industry: forecasting and demand analysis. Boston: Kluwer Academic Publishers.
1. Loomis, D. G. (1997). Strategic substitutes and strategic complements with interdependent demands. The Review of Industrial Organization, 12, 781-791.Expert Testimony

EXPERT TESTIMONY

101. Public Utilities Commission of the State of South Dakota, SD PUC Docket EL24-023, In the Matter of the Application by Deuel Harvest Wind Energy South LLC for Energy Facility Permits of a Wind Energy Facility and a 345 kV Transmission Facility in Deuel County, South Dakota (Invenergy): Written Direct Testimony filed June 28, 2024; Hearing, January 22, 2025.

100. Public Service Commission of Wisconsin, Docket No. 9809-CE-100, Application for Dawn Harvest Solar Energy, LLC to Construct a Photovoltaic Electric Generation Facility, Battery Energy Storage System, and a 138 kV Generator Tie Line and Interconnection Switchyard in the Towns of La Prairie and Harmony, Rock County, Wisconsin (Invenergy): Written Direct Testimony filed October 11, 2024; Hearing, January 17, 2025.

99. Indiana Utility Regulatory Commission, Cause No. 46097, In the Matter of the Verified Petition of Indiana Michigan Power Company for Approval of Modifications to its Industrial Power Tariff – Tariff I.P. (Amazon Data Services, Inc.): Direct Written Testimony filed October 15, 2024.

98. Public Service Commission of Wisconsin, Docket No. 5-CE-154, Joint Application of Maple Grove Solar I, LLC and Maple Grove Solar II, LLC for a Certificate of Public Convenience and Necessity to Construct a Photovoltaic Electric Generation Facility, a Battery Energy Storage System, Collector, Project Substation, and 161 kV Generator Tie Line, and Towns of Barron and Maple Grove, Barron County, Wisconsin (ibV Energy): Written Direct Testimony filed June 21, 2024; Hearing, September 12, 2024.

97. Cumberland County (Illinois) County Board, on behalf of Northwest Solar, LLC (Earthrise Energy), Direct Oral Testimony, September 10, 2024 and October 9, 2024.

96. Will County (Illinois) Zoning Board of Appeals, on behalf of Will County Solar, LLC (Acciona), Direct Oral Testimony, August 20, 2024.

95. Public Service Commission of Wisconsin, Docket No. 9820-CE-100, Application for a Certificate of Public Convenience and Necessity of Vista Sands Solar, LLC to Construct a Photovoltaic Electric Generation Facility, a Battery Energy Storage System, Collector and Project Substations, a 345 kV generator tie line, and a 138 kV collector transmission lines (Vista Sands Solar Farm) in the Village of Plover and Towns of Plover, Buena Vista, and Grant, Portage County, Wisconsin (Doral): Written Direct Testimony filed June 21, 2024; Hearing, August 16, 2024.

94. Perry County (Illinois) Zoning Board of Appeals, on behalf of Camelot Solar, LLC (Pine Gate Renewables), Direct Oral Testimony, August 14, 2024.

93. Livingston County (Illinois) Zoning Board of Appeals, on behalf of Heritage Prairie Wind, LLC (Connect Gen), Direct Oral Testimony, July 10, 2024.

92. Montgomery County (Illinois) Development & Personnel Committee, on behalf of Virden Wind, LLC

(UKA), Direct Oral Testimony, April 30, 2024.

91. Rock Island County (Illinois) Zoning Board of Appeals, on behalf of Fowl Solar, LLC (Pine Gate Renewables), Direct Oral Testimony, April 17, 2024.

90. Louisiana Public Service Commission, Docket No. U-36669, Application of Southern Spirit Transmission LLC for Transmission Certification, Written Direct Testimony filed February 2023, Hearing and Cross-Examination, December 20-21, 2023.

89. Wichita-Sedgwick County Metropolitan Area Planning Commission, Advanced Plans Committee, on behalf of Chisholm Trail Solar, LLC (Invenergy), Direct Oral Testimony, December 14, 2023.

88. Public Service Commission of West Virginia, Case No. 23-0708-E-SCS-PV, Application for a Solar Siting Certificate for a Facility in Mason County, on behalf of New Haven PV I, LLC (TED Renewables), Written Direct Testimony filed October 26, 2023.

87. Dickinson County (Iowa) Board of Adjustments, on behalf of Red Rock Wind, LLC (Invenergy), Direct Oral Testimony, October 23-25, 2023.

86. Public Service Commission of Wisconsin, Docket No. 9813-CE-100, Application for a Certificate of Public Convenience and Necessity of Silver Maple Solar, LLC to Construct a Solar Electric Generation Facility in the Townships of Eldorado and Rosendale, Fond du Lac County and Nekimi Township, Winnebago County, Wisconsin (Leeward Renewable Energy): Written Direct Testimony filed July 11, 2023; Rebuttal Testimony filed September 8, 2023; Hearing, October 13, 2023.

85. Piatt County (Illinois) Zoning Board of Appeals, on behalf of Prosperity Wind, LLC (Apex Clean Energy), Direct Oral Testimony, August 28-29, 2023.

84. Ohio Power Siting Board, Case No. 21-1231-EL-BGN, In the Matter of the Application of Fountain Point Solar Energy, LLC for a Certificate of Environmental Compatibility and Public Need to Construct a Solar-Powered Electric Generation Facility in Logan County, Ohio (Invenergy): Written Testimony filed July 24, 2023, Hearing, August 15, 2023.

83. Iowa Utilities Board, Docket No. E-22436, on behalf of SOO Green HVDC Link Projectco, LLC: Written Direct Testimony filed May 3, 2023; Hearing July 11, 2023.

82. Christian County (Illinois) Zoning Board of Appeals, on behalf of Hickory Point Solar, LLC (Invenergy, LLC), Direct Oral Testimony, June 27, 2023.

81. Macoupin County (Illinois) Zoning Board of Appeals, on behalf of Lotus Wind, LLC (Apex Clean Energy), Direct Oral Testimony, June 14, 2023.

80. Missouri Public Service Commission, File No. EA-2023-0017, on behalf of Grain Belt Express LLC: Written Direct Testimony filed August 24, 2022; Rebuttal Testimony filed Surrebuttal Testimony, May 15, 2023; Cross-Examination Testimony, June 7, 2023.

79. Livingston County (Illinois) Zoning Board of Appeals, on behalf of Prairie Dock Solar, LLC (Competitive Power Ventures (CPV)), Direct Oral Testimony, May 31, 2023.

78. Public Service Commission of Wisconsin, Docket No. 9818-CE-100, Application for a Certificate of Public Convenience and Necessity of Ursa Solar, LLC to Construct the Langdon Mills Solar Electric Generation Facility in the Towns of Courtland and Springvale, Columbia County, Wisconsin (Samsung): Written Direct Testimony filed April 14, 2023; Rebuttal Testimony filed April 21, 2023; Hearing, May 19, 2023.

77. Ohio Power Siting Board, Case No. 22-549-EL-BGN, In the Matter of the Application of Oak Run Solar Project, LLC for a Certificate of Environmental Compatibility and Public Need to Construct a Solar-Powered Electric Generation Facility in Madison County, Ohio (Savion): Written Testimony filed May 2, 2023, Hearing, May 16, 2023.

76. Public Service Commission of Wisconsin, Docket No. 9814-CE-100, Application for High Noon Solar

Energy Center, LLC to Construct a New Solar Electric Generation Facility located in the Town of Leeds, Town of Lowville, Town of Arlington and Town of Hampden, Columbia County, Wisconsin (Invenergy): Written Direct Testimony filed December 2, 2022; Hearing, March 1, 2023.

75. Public Service Commission of Wisconsin, Docket No. 9815-CE-100, Application for Northern Prairie Solar, LLC to Construct a Solar Electric Generation Facility located in the Town of Cyclon, St. Croix County, Wisconsin (Leeward Renewables): Written Direct Testimony filed October 31, 2022; Hearing, January 20, 2023.

74. Illinois Commerce Commission, Case No. 22-0499, on behalf of Grain Belt Express LLC: Written Direct Testimony filed July 26, 2022; Oral Cross-examination Testimony, November 30, 2022.

73. Piatt County (Illinois) Zoning Board of Appeals, on behalf of Goose Creek Wind (Apex), Direct Oral Testimony, November 22, 2022 & December 20, 2022.

72. Logan County (Illinois) Zoning Board of Appeals, on behalf of Pine Creek Wind (ConnectGen), Direct Oral Testimony, November 7, 2022.

71. Kankakee County (Illinois) Zoning Board of Appeals, on behalf of Heritage Prairie Solar (ConnectGen/Pattern Energy), Direct Oral Testimony, October 6, 2022.

70. Osage County (Kansas) County Board, on behalf of Auburn Harvest (Steelhead-Vestas), Direct Oral Testimony, October 3, 2022.

69. Livingston County (Illinois) Zoning Board of Appeals, on behalf of Livingston County Wind, LLC (EDF Renewables), Direct Oral Testimony, September 21, 2022.

68. Ohio Power Siting Board, Case No. 20-1680-EL-BGN, on behalf of Yellow Wood Solar Energy, LLC(Invenergy), Direct Written Testimony filed September 19, 2022; Hearing, September 27, 2022.

67. Randolph County (Illinois) Zoning Board of Appeals, on behalf of Tilden Soar (Tenaska), Direct Oral Testimony, September 13, 2022.

66. Saline County (Illinois) Zoning Board of Appeals, on behalf of Eldorado Solar (Tenaska), Direct Oral Testimony, August 18, 2022.

65. Missouri Public Service Commission, Docket EA-2022-0234, on behalf of NextEra Energy Transmission Southwest, LLC, Direct Written Testimony filed July 7, 2022.

64. Tazewell County (Illinois) Zoning Board of Appeals, on behalf of Invenergy, Direct Oral Testimony, June 9, 2022.

63. Pueblo County (Colorado) Board of County Commissioners, on behalf of Leeward Renewables, Direct Oral Testimony, April 26, 2022.

62. Montour County (Pennsylvania) County Commission, on behalf of Montour Solar One (Pattern Energy), Direct Oral Testimony, March 21, 2022, and April 5, 2022.

61. Thetford Township (Michigan) Planning Board, on behalf of Otisville Solar (EDF Renewables), Direct Oral Testimony, March 10, 2022.

60. Pueblo County (Colorado) Board of County Commissioners, on behalf of Pronghorn Solar (Leeward Renewables), Direct Oral Testimony, March 10, 2022.

59. Forest Township (Michigan) Planning Board, on behalf of Otisville Solar (EDF Renewables), Direct Oral Testimony, March 8, 2022.

58. Kansas Corporation Commission, Docket 22-NETE-419-COC, on behalf of NextEra Energy Transmission Southwest, LLC, Direct Written Testimony filed February 28, 2022; Rebuttal Testimony filed May 27, 2022; Hearing, June 8, 2022.

57. Iowa Utilities Board, Docket No. GCU-2021-0002 and GCU-2021-0003, on behalf of Duane Arnold

Solar, LLC (NextEra), Written Direct Testimony filed November 2, 2021.

56. Sangamon County (Illinois) Zoning Board of Appeals, on behalf of Double Black Diamond Solar (Swift Current), Direct Oral Testimony, October 21, 2021.

55. Public Service Commission of Wisconsin, Docket No. 9811-CE-100, Application for Koshkonong Solar Energy Center, LLC to Construct a New Solar Electric Generation Facility located in Dane County, Wisconsin (Invenergy): Written Direct Testimony filed October 7, 2021; Written Rebuttal Testimony filed December 17, 2021; Hearing, January 19, 2022.

54. Kentucky State Board on Electric Generation and Transmission Siting, Case No. 2021-00029, on behalf of Martin County Solar Project, LLC (Savion), Hearing, September 28, 2021.

53. Ohio Power Siting Board, Case No. 20-1405-EL-BGN, on behalf of AEUG Union Solar, LLC (Acciona), Written Direct Testimony filed October 28, 2021, November 10, 2021.

52. DeKalb County (Illinois) Zoning Board of Appeals, on behalf of Red Maple Solar (Leeward Renewables), Direct Oral Testimony, August 26, 2021.

51. DeKalb County (Illinois) Zoning Board of Appeals, on behalf of Owens Creek Solar (Leeward Renewables), Direct Oral Testimony, August 10, 2021.

50. Public Service Commission of West Virginia, Case No. 21-0566-E-SCS- PW, Application for a Solar Siting Certificate for a Facility in Hampshire County, on behalf of Capon Bridge Solar, LLC (Galehead Renewables), Written Direct Testimony filed July 16, 2021.

49. Edgar County (Illinois) County Board, on behalf of Orsted, Direct Oral Testimony, June 9, 2021.

48. McLean County (Illinois) Zoning Board of Appeals, on behalf of Invenergy, Direct Oral Testimony, June 1, 8, 9, and 22, 2021.

47. Clark County (Kentucky) Board Meeting, on behalf of Swift Current, Direct Oral Testimony, May 25, 2021.

46. Public Service Commission of Wisconsin, Docket No. 9806-CE-100, Application for Darien Solar Energy Center, LLC to Construct a New Solar Electric Generation Facility located in Walworth County, Wisconsin (Invenergy), Written Direct Testimony filed February 5, 2021; April 22, 2021 Hearing.

45. Kentucky State Board on Electric Generation and Transmission Siting, Case No. 2020-00219, on behalf of AEUG Madison Solar (Acciona), Hearing, April 15, 2021.

44. McLean County (Illinois) Zoning Board of Appeals, on behalf of Invenergy, Direct Oral Testimony, April 6-7, 2021.

43. Kentucky State Board on Electric Generation and Transmission Siting, Case No. 2020-00206, on behalf of AEUG Fleming Solar (Acciona), April 1, 2021 Hearing.

42. Iowa Utilities Board, Docket No. E-22432, on behalf of Heartland Divide Wind II, LLC (NextEra), Written Direct Testimony filed February 2, 2021, March 18, 2021 Hearing.

41. Macon Township Zoning Board, on behalf of Invenergy, Direct Oral Testimony, January 6, 2021, January 20, 2021, February 24, 2021, March 17, 2021.

40. Public Service Commission of Wisconsin, Docket No. 9804-CE-100, Application for Grant County Solar, LLC to Construct a New Solar Electric Generation Facility located near Potosi and Harrison Townships, in Grant County, Wisconsin (NextEra): Written Direct Testimony filed November 3, 2020; Rebuttal Testimony filed January 5, 2021; February 10, 2021 Hearing.

39. Warren County (Missouri) Zoning Board, on behalf of Invenergy, Direct Oral Testimony, November 19, 30, December 17, 2020.

38. Grundy County (Illinois) Zoning Board of Appeals, on behalf of RES America, Direct Oral Testimony,

November 17, 2020.

37. McLean County (Illinois) Zoning Board of Appeals, on behalf of Invenergy, Direct Oral Testimony, August 4, 2020.

36. Public Service Commission of Wisconsin, Docket No. 9801-CE-100, Application of Paris Solar Farm, LLC for a Certificate of Public Convenience and Necessity, on behalf of Paris Solar Farm, LLC (Invenergy): Written Direct Testimony filed July 2, 2020.

35. Christian County (Illinois) Zoning Board of Appeals, on behalf of Invenergy, Direct Oral Testimony, June 23, 24, 30, & July 6, 7, 21, 2020.

34. Piatt County (Illinois) Zoning Board of Appeals, on behalf of Apex Energy, Direct Oral Testimony, January 23, 2020.

33. Marshall County (Illinois) Zoning Board of Appeals, on behalf of Akuo Energy, Direct Oral Testimony, October 17, 2019.

32. Public Service Commission of Wisconsin, Docket No. 9800-CE-100, Application of Badger State Solar, LLC for a Certificate of Public Convenience and Necessity, on behalf of Badger State Solar, LLC (Ranger Power): Written Direct Testimony filed September 10, 2019.

31. Adams Township (Michigan) Planning Commission Hearing, on behalf of Invenergy, Direct Oral Testimony, August 27, 2019.

30. Christian County (Illinois) Zoning Board of Appeals, on behalf of Invenergy, Direct Oral Testimony, July 23, 2019.

29. Wheatland Township (Michigan) Planning Commission Hearing, on behalf of Invenergy, Direct Oral Testimony, July 18, 2019.

28. Christian County (Illinois) Board Meeting, on behalf of Invenergy and Tradewind Energy, Direct Oral Testimony, May 29, 2019.

27. DeWitt County (Illinois) Zoning Board of Appeals, on behalf of Tradewind Energy, Direct Oral Testimony, February 8, 2019.

26. Public Service Commission of Wisconsin, Docket No. 9697-CE-100, Application of Badger Hollow Solar Farm for a Certificate of Public Convenience and Necessity, on behalf of Badger Hollow Solar Farm LLC (Invenergy): Written Direct Testimony filed November 20, 2018; Written Rebuttal Testimony filed January 8, 2019; Surrebuttal Testimony filed January 14, 2019; Oral Cross-Examination, January 16, 2019.

25. Ohio Power Siting Board, Case No. 19-1880-EL-BGN, In the Matter of the Application of Atlanta Farms Solar Project, LLC for a Certificate of Environmental Compatibility and Public Need to Construct a Solar- Powered Electric Generation Facility in Pickaway County, Ohio, on behalf of Atlanta Farms Solar Project, LLC, Exhibit with Report filed October 18, 2019.

24. Ford County (Illinois) Zoning Board of Appeals, on behalf of Pattern Energy and Apex Clean Energy, Direct Oral Testimony, October 3, 2018.

23. DeKalb County (Illinois) County Board Hearing, on behalf of EDF Renewable Development, Inc., Direct Oral Testimony, September 24, 2018.

22. Ford County (Illinois) Planning Commission, on behalf of Pattern Energy, Direct Oral Testimony, September 5, 2018.

21. Ohio Power Siting Board, Case No. 18-1360-EL-BGN, In the matter of Hardin Solar Energy II LLC for a Certificate of Environmental Compatibility and Public Need to Construct a Solar-Powered Electric Generation Facility in Hardin County, Ohio, on behalf of Hardin Solar Energy II LLC, Exhibit with Report filed August 3, 2018.

20. Ohio Power Siting Board, Case No. 17-774-EL-BGN, In the Matter of the Application of Vinton Solar Energy LLC for a Certificate of Environmental Compatibility and Public Need to Construct a Solar-Powered Electric Generation Facility in Vinton County, Ohio. On behalf of Vinton Solar Energy LLC, Exhibit with Report filed July 27, 2018.

19. DeKalb County (Illinois) Zoning Board of Appeals, on behalf of EDF Renewable Development, Inc., Direct Oral Testimony, June 27, 2018.

18. Ford County (Illinois) Zoning Board, on behalf of Apex Clean Energy, Inc., Direct Oral Testimony, June 11, 2018.

17. McLean County (Illinois) Zoning Board of Appeals, Application for Special Use Permit for a Wind Energy Conversion System, on behalf of Invenergy, LLC, Direct Oral Testimony, January 4, 2018.

16. New Mexico Public Regulation Commission, Case No. 17-00275-UT, Application of Sagamore Wind Energy LLC, on behalf of Invenergy, LLC: Direct Written Testimony filed November 6, 2017; Oral Cross-examination Testimony appeared before the Commission on March 13, 2018.

15. Ohio Power Siting Board, Case No. 17-773-EL-BGN, In the Matter of Hardin Solar Energy LLC for a Certificate of Environmental Compatibility and Public Need to Construct a Solar-Powered Electric Generation Facility in Hardin County, Ohio, on behalf of Invenergy, LLC, appendix with Report filed July 5, 2017.

14. Macon County (Illinois) Environmental, Education, Health and Welfare Committee, Application for Special Use Permit for a Wind Energy Conversion System, on behalf of E.ON Energy, Direct Oral Testimony, August 20, 2015.

13. Macon County (Illinois) Zoning Board of Appeals, Application for Special Use Permit for a Wind Energy Conversion System, on behalf of E.ON Energy, Direct Oral Testimony, August 11, 2015.

12. Kankakee County (Illinois) Planning, Zoning, and Agriculture Committee, Application for Special Use Permit for a Wind Energy Conversion System, on behalf of EDF Renewables, Direct Oral Testimony, July 22, 2015.

11. Kankakee County (Illinois) Zoning Board of Appeals, Application for Special Use Permit for a Wind Energy Conversion System, on behalf of EDF Renewables, Direct Oral Testimony, July 13, 2015.

10. Bureau County (Illinois) Zoning Board of Appeals, Application for Special Use Permit for a Wind Energy Conversion System, on behalf of Berkshire Hathaway Energy/Geronimo Energy, Direct Oral Testimony, June 16, 2015.

9. Illinois Commerce Commission, Case No. 15-0277, on behalf of Grain Belt Express Clean Line LLC: Written Direct Testimony filed April 10, 2015; Written Rebuttal Testimony filed August 7, 2015; Oral Cross-examination Testimony, August 19, 2015.

8. Livingston County (Illinois) Zoning Board of Appeals, Application for Special Use Permit for a Wind Energy Conversion System, on behalf of Invenergy, Oral Cross-Examination, December 8-9, 2014.

7. Livingston County (Illinois) Zoning Board of Appeals, Application for Special Use Permit for a Wind Energy Conversion System, on behalf of Invenergy, Direct Oral Testimony, November 17-19, 2014.

6. Missouri Public Service Commission, Case No. EA-2014-0207, on behalf of Grain Belt Express Clean Line LLC: Written Direct Testimony filed March 26, 2014; Written Surrebuttal Testimony, filed October 14, 2014; Oral Cross-examination Testimony, November 21, 2014.

5. Boone County (Illinois) Board, Examination of Wind Energy Conversion System Ordinance, Direct Testimony and Cross-Examination, April 23, 2013.

4. Illinois Commerce Commission, Case No. 12-0560, on behalf of Rock Island Clean Line LLC: Written Direct Testimony filed October 10, 2012; Written Rebuttal Testimony filed August 20, 2013; Oral Cross-examination Testimony, December 11, 2013.

3. Whiteside County (Illinois) Board and Whiteside County Planning and Zoning Committee, Examination of Wind Energy Conversion System Ordinance, Direct Testimony and Cross-Examination, on behalf of the Center for Renewable Energy, April 12, 2012.
2. State of Illinois Senate Energy and Environment Committee, Direct Testimony and Cross-Examination, on behalf of the Center for Renewable Energy, October 28, 2010.
1. Livingston County (Illinois) Zoning Board of Appeals, Application for Special Use Permit for a Wind Energy Conversion System, on behalf of the Center for Renewable Energy, Direct Testimony and Cross-Examination, July 28, 2010.

SELECTED PRESENTATIONS

- "Is Solar Energy a Good Use of Farmland?" presented on June 10, 2020 at CleanPower 2020 (webinar) with Jin Jo and Matt Aldeman.
- "Renewable Energy in McLean County," presented December 13, 2018 at Bloomington-Normal Economic Development Council's BN By the Numbers, Normal, IL.
- "Smart Cities and Micro Grids: Cost Recovery Issues," presented September 12,2017 at the National Association of Regulatory Utility Commissioners Staff Subcommittee on Accounting and Finance Meeting, Springfield, IL.
- "Cloud Computing: Regulatory Principles and ICC NOI," presented September 11,2017 at the National Association of Regulatory Utility Commissioners Staff Subcommittee on Accounting and Finance Meeting, Springfield, IL.
- "Illinois Wind, Illinois Solar and the Illinois Future Energy Jobs Act," presented July 25, 2017 at the Illinois County Assessors Meeting, Normal, IL.
- "Illinois Wind, Illinois Solar and the Illinois Future Energy Jobs Act," presented April 21, 2017 at the Illinois Association of County Zoning Officers Meeting, Bloomington, IL.
- "Energy Storage Economics and RTOs," presented October 30, 2016 at the Energy Storage Conference at Argonne National Laboratory.
- "Wind Energy in Illinois," on October 6, 2016 at the B/N Daybreak Rotary Club, Bloomington, IL.
- "Smart Grid for Schools," presented August 17, 2016 to the Ameren External Affairs Meeting, Decatur, IL.
- "Solar Energy in Illinois," presented July 28, 2016 at the 3rd Annual K-12 Teachers Clean Energy Workshop, Richland Community College, Decatur, IL.
- "Wind Energy in Illinois," presented July 28, 2016 at the 3rd Annual K-12 Teachers Clean Energy Workshop, Richland Community College, Decatur, IL.
- "Smart Grid for Schools," presented June 21, 2016 at the ISEIF Grantee and Ameren Meeting, Decatur, IL.
- "Costs and Benefits of Renewable Energy," presented November 4, 2015 at the Osher Lifelong Learning Institute at Bradley, University, Peoria, IL.
- "Energy Sector Workforce Issues," presented September 17, 2015 at the Illinois Workforce Investment Board, Springfield, IL.
- "The Past, Present and Future of Wind Energy in Illinois," presented March 13, 2015 at the Peoria Rotary Club, Peoria, IL.
- "Where Are All the Green Jobs?" presented January 28, 2015 at the 2015 Illinois Green Economy Network Sustainability Conference, Normal, IL.

- "Teaching Next Generation Energy Concepts with Next Generation Science Standards: Addressing the Critical Need for a More Energy-Literate Workforce," presented September 30, 2014 at the Mathematics and Science Partnerships Program 2014 Conference in Washington, DC.
- "National Utility Rate Database," presented October 23, 2013 at Solar Power International, Chicago, IL.
- "Potential Economic Impact of Offshore Wind Energy in the Great Lakes," presented May 6, 2013 at WindPower 2013, Chicago, IL.
- "Why Illinois? Windy City, Prairie Power," presented May 5, 2013 at WindPower 2013, Chicago, IL.
- "National Utility Rate Database," presented January 29, 2013 at the EUEC Conference, Phoenix, AZ.
- "Energy Learning Exchange and Green Jobs," presented December 13, 2012 at the TRICON Meeting of Peoria and Tazewell County Counselors, Peoria, IL.
- "Potential Economic Impact of Offshore Wind Energy in the Great Lakes," presented November 12, 2012 at the Offshore Wind Jobs and Economic Development Impacts Webinar.
- "Energy Learning Exchange," presented October 31, 2012 at the Utility Workforce Development Meeting, Chicago, IL.
- "Wind Energy in McLean County," presented June 26, 2012 at BN By the Numbers, Normal, IL.
- "Wind Energy," presented June 14, 2012 at the Wind for Schools Statewide Teacher Workshop, Normal, IL.
- "Economic Impact of Wind Energy in Illinois," presented June 6, 2012 at AWEA's WINDPOWER 2012, Atlanta, GA.
- "Trends in Illinois Wind Energy," presented March 6, 2012 at the AWEA Regional Wind Energy Summit – Midwest in Chicago, IL.
- "Challenges and New Growth Strategies in the Wind Energy Business," invited plenary session speaker at the Green Revolution Leaders Forum, November 18, 2011 in Seoul, South Korea.
- "Overview of the Center for Renewable Energy," presented July 20, 2011 at the University-Industry Consortium Meeting at Illinois Institute of Technology, Chicago, IL.
- "Building the Wind Turbine Supply Chain," presented May 11, 2011 at the Supply Chain Growth Conference, Chicago, IL
- "Building a Regional Energy Policy for Economic Development," presented April 4, 2011 at the Midwestern Legislative Conference's Economic Development Committee Webinar.
- "Wind Energy 101," presented February 7, 2011 at the Wind Power in Central Illinois - A Public Forum, CCNET Renewable Energy Group, Champaign, IL.
- "Alternative Energy Strategies," presented with Matt Aldeman November 19, 2010 at the Innovation Talent STEM Education Forum, Chicago, IL.
- "Siting and Zoning in Illinois," presented November 17, 2010 at the Wind Powering America Webinar.
- "What Governor Quinn Should Do about Energy?" presented November 15, 2010 at the Illinois Chamber of Commerce Energy Forum Conference, Chicago, IL.
- "Is Wind Energy Development Right for Illinois," presented with Matt Aldeman October 28, 2010 at the Illinois Association of Illinois County Zoning Officials Annual Seminar in Utica, IL.
- "Economic Impact of Wind Energy in Illinois," presented July 22, 2010 at the AgriEnergy Conference in Champaign, IL.
- "Renewable Energy Major at ISU," presented July 21, 2010 at Green Universities and Colleges Subcommittee Webinar.

- "Economics of Wind Energy," presented May 19, 2010 at the U.S. Green Building Council meeting in Chicago, IL.
- "Forecasting: A Primer for the Small Business Entrepreneur," presented with James E. Cox, Jr. April 14, 2010 at the Allied Academies' Spring International Conference in New Orleans, LA.
- "Are Renewable Portfolio Standards a Policy Cure-All? A Case Study of Illinois' Experience," presented January 30, 2010 at the 2010 William and Mary Environmental Law and Policy Review Symposium in Williamsburg, VA.
- "Creating Partnerships between Universities and Industry," presented November 19, 2009, at New Ideas in Educating a Workforce in Renewable Energy and Energy Efficiency in Albany, NY.
- "Educating Illinois in Renewable Energy, presented November 14, 2009 at the Illinois Science Teachers Association in Peoria, IL.
- "Green Collar Jobs," invited presentation October 14, 2009 at the 2009 Workforce Forum in Peoria, IL.
- "The Role of Wind Power in Illinois," presented March 4, 2009 at the Association of Illinois Electric Cooperatives Engineering Seminar in Springfield, IL.
- "The Economic Benefits of Wind Farms," presented January 30, 2009 at the East Central Illinois Economic Development District Meeting in Champaign, IL.
- "Green Collar Jobs in Illinois," presented January 6, 2009 at the Illinois Workforce Investment Board Meeting in Macomb, Illinois.
- "Green Collar Jobs: What Lies Ahead for Illinois?" presented August 1, 2008 at the Illinois Employment and Training Association Conference.
- "Mapping Broadband Access in Illinois," presented October 16, 2007 at the Rural Telecon '07 conference.
- "A Managerial Approach to Using Error Measures to Evaluate Forecasting Methods," presented October 15, 2007 at the International Academy of Business and Economics.
- "Dollars and Sense: The Pros and Cons of Renewable Fuel," presented October 18, 2006 at Illinois State University Faculty Lecture Series.
- "Broadband Access in Illinois," presented July 28, 2006 at the Illinois Association of Regional Councils Annual Meeting.
- "Broadband Access in Illinois," presented November 17, 2005 at the University of Illinois' Connecting the e to Rural Illinois.
- "Improving Forecasting Through Textbooks – A 25 Year Review," with James E. Cox, Jr., presented June 14, 2005 at the 25th International Symposium on Forecasting.
- "Telecommunications Demand Forecasting with Intermodal Competition, with Christopher Swann, presented April 2, 2004 at the Telecommunications Systems Management Conference 2004.
- "Intermodal Competition," with Christopher Swann, presented April 3, 2003 at the Telecommunications Systems Management Conference 2003.
- "Intermodal Competition in Local Exchange Markets," with Christopher Swann, presented June 26, 2002 at the 20th Annual International Communications Forecasting Conference.
- "Assessing Retail Competition," presented May 23, 2002 at the Institute for Regulatory Policy Studies' Illinois Energy Policy for the 21st Century workshop.
- "The Devil in the Details: An Analysis of Default Service and Switching," with Eric Malm presented May 24, 2001 at the 20th Annual Advanced Workshop on Regulation and Competition.

- "Forecasting Challenges for U.S. Telecommunications with Local Competition," presented June 28, 1999 at the 19th International Symposium on Forecasting.
- "Acceptance of Forecasting Principles in Forecasting Textbooks," presented June 28, 1999 at the 19th International Symposium on Forecasting.
- "Forecasting Challenges for Telecommunications With Local Competition," presented June 17, 1999 at the 17th Annual International Communications Forecasting Conference.
- "Measures of Market Competitiveness in Deregulating Industries," with Eric Malm, presented May 28, 1999 at the 18th Annual Advanced Workshop on Regulation and Competition.
- "Trends in Telecommunications Forecasting and the Impact of Deregulation," Proceedings of EPRI's 11th Forecasting Symposium, 1998.
- "Forecasting in a Competitive Age: Utilizing Macroeconomic Forecasts to Accurately Predict the Demand for Services," invited speaker, Institute for International Research Conference, September 29, 1997.
- "Regulatory Fairness and Local Competition Pricing," presented May 30, 1996 at the 15th Annual Advanced Workshop in Regulation and Public Utility Economics.
- "Optimal Pricing For a Regulated Monopolist Facing New Competition: The Case of Bell Atlantic Special Access Demand," presented May 28, 1992 at the Rutgers Advanced Workshop in Regulation and Public Utility Economics.

GRANTS

- "RUI: Developing a multi-dimensional assessment framework to evaluate the sustainability of utility scale solar photovoltaic (PV) systems," with Jin Jo, Matt Aldeman, Eric Godoy, and Liang Cheng Yang, National Science Foundation, June 2021, $449,994 (pending).
- "Developing a Multi-dimensional Assessment Framework to Support the Sustainability of Utility Scale Renewable Energy Systems," with Matt Aldeman, Frank Beck, Eric Godoy, Jin Jo, and Liang Cheng Yang, Scott Elliott Cross- Disciplinary Grant Program, February 2020, $15,000.
- "SmartGrid for Schools 2018 and Energy Challenge," with William Hunter, Illinois Science and Energy Innovation Foundation, RSP Award # A15-0092-002 - extended, January 2018, $300,000.
- "Energy Learning Exchange - Implementing Nationally Recognized Energy Curriculum and Credentials in Illinois," Northern Illinois University, RSP Award # A17-0098, February, 2017, $13,000.
- "SmartGrid for Schools 2017 and Energy Challenge," with William Hunter, Illinois Science and Energy Innovation Foundation, RSP Award # A15-0092-002 - extended, January 2017, $350,000.
- "Illinois Jobs Project," University of California Berkeley, RSP Award # A16-0148, August, 2016, $10,000.
- "Energy Workforce Ready Through Building Performance Analysis," Illinois Department of Commerce and Economic Opportunity through the Department of Labor, RSP # A16-0139, June, 2016, $328,000 (grant was de-obligated before completion).
- "SmartGrid for Schools 2016 and Smart Appliance Challenge," with William Hunter, Brad Christenson and Jeritt Williams, Illinois Science and Energy Innovation Foundation, RSP Award # A15-0092-002, January 2016, $450,000.
- "SmartGrid for Schools 2015," with William Hunter and Matt Aldeman, Illinois Science and Energy Innovation Foundation, RSP Award # A15-0092-001, February 2015, $400,000.
- "Economic Impact of Nuclear Plant Closings: A Response to HR 1146," Illinois Department of Economic Opportunity, RSP Award # 14-025001 amended, January, 2015, $22,000.

- "Partnership with Midwest Renewable Energy Association for Solar Market Pathways" with Missy Nergard and Jin Jo, U.S. Department of Energy Award Number DE-EE0006910, October, 2014, $109,469 (ISU Award amount).
- "Renewable Energy for Schools," with Matt Aldeman and Jin Jo, Illinois Department of Commerce and Economic Opportunity, Award Number 14- 025001, June, 2014, $130,001.
- "SmartGrid for Schools 2014," with William Hunter and Matt Aldeman, Illinois Science and Energy Innovation Foundation, RSP # 14B116, March 2014, $451,701.
- "WINDPOWER 2014 Conference Exhibit," Illinois Department of Commerce and Economic Opportunity, RSP #14C167, March, 2014, $95,000.
- "Lake Michigan Offshore Wind Energy Buoy," with Matt Aldeman, Illinois Clean Energy Community Foundation, Request ID 6435, November, 2013, $90,000.
- "Teaching Next Generation Energy Concepts with Next Generation Science Standards," with William Hunter, Matt Aldeman and Amy Bloom, Illinois State Board of Education, RSP # 13B170A, October, 2013, second year, $159,954; amended to $223,914.
- "Solar for Schools," with Matt Aldeman, Illinois Green Economy Network, RSP # 13C280, August, 2013, $66,072.
- "Energy Learning Exchange Implementation Grant," with William Hunter and Matt Aldeman, Illinois Department of Commerce and Economic Opportunity, Award Number 13-052003, June, 2013, $350,000.
- "Teaching Next Generation Energy Concepts with Next Generation Science Standards," with William Hunter, Matt Aldeman and Amy Bloom, Illinois State Board of Education, RSP # 13B170, April, 2013, $159,901.
- "Illinois Sustainability Education SEP," Illinois Department of Commerce and Economic Opportunity, Award Number 08-431006, March, 2013, $225,000.
- "Illinois Pathways Energy Learning Exchange Planning Grant," with William Hunter and Matt Aldeman, Illinois State Board of Education (Source: U.S. Department of Education), RSP # 13A007, December, 2012, $50,000.
- "Illinois Sustainability Education SEP," Illinois Department of Commerce and Economic Opportunity, Award Number 08-431005, June 2011, amended March, 2012, $98,911.
- "Wind for Schools Education and Outreach," with Matt Aldeman, Illinois Department of Commerce and Economic Opportunity, Award Number 11- 025001, amended February, 2012, $111,752.
- "A Proposal to Support Solar Energy Potential and Job Creation for the State of Illinois Focused on Large Scale Photovoltaic System," with Jin Jo (lead PI), Illinois Department of Commerce and Economic Opportunity, Award Number 12- 025001, January 2012, $135,000.
- "National Database of Utility Rates and Rate Structure," U.S. Department of Energy, Award Number DE-EE0005350TDD, 2011-2014, $850,000.
- "Illinois Sustainability Education SEP," Illinois Department of Commerce and Economic Opportunity, Award Number 08-431005, June 2011, $75,000.
- "Wind for Schools Education and Outreach," with Matt Aldeman, Illinois Department of Commerce and Economic Opportunity, Award Number 11- 025001, March 2011, $190,818.
- "Using Informal Science Education to Increase Public Knowledge of Wind Energy in Illinois," with Amy Bloom and Matt Aldeman, Scott Elliott Cross-Disciplinary Grant Program, February 2011, $13,713.

- "Wind Turbine Market Research," with Matt Aldeman, Illinois Manufacturers Extension Center, May, 2010, $4,000.
- "Petco Resource Assessment," with Matt Aldeman, Petco Petroleum Co., April, 2010 amended August 2010 $34,000; original amount $18,000.
- "Wind for Schools Education and Outreach," with Anthony Lornbach and Matt Aldeman, Scott Elliott Cross-Disciplinary Grant Program, February, 2010, $13,635.
- "IGA IFA/ISU Wind Due Diligence," Illinois Finance Authority, November, 2009, $8,580 amended December 2009; original amount $2,860.
- "Green Industry Business Development Program, with the Shaw Group and Illinois Manufacturers Extension Center, Illinois Department of Commerce and Economic Opportunity, Award Number 09-021007, August 2009, $245,000.
- "Wind Turbine Workshop Support," Illinois Department of Commerce and Economic Opportunity, June 2009, $14,900.
- "Illinois Wind Workers Group," with Randy Winter, U.S. Department of Energy, Award Number DE-EE0000507, 2009-2011, $107,941.
- "Wind Turbine Supply Chain Study," with J. Lon Carlson and James E. Payne, Illinois Department of Commerce and Economic Opportunity, Award Number 09- 021003, April 2009, $125,000.
- "Renewable Energy Team Travel to American Wind Energy Association WindPower 2009 Conference, Center for Mathematics, Science and Technology, February 2009, $3,005.
- "Renewable Energy Educational Lab Equipment," with Randy Winter and David Kennell, Illinois Clean Energy Community Foundation (peer-reviewed), February, 2008, $232,600.
- "Proposal for New Certificate Program in Electricity, Natural Gas and Telecommunications Economics," with James E. Payne, Extended Learning Program Grant, April, 2007, $29,600.
- "Illinois Broadband Mapping Study," with J. Lon Carlson and Rajeev Goel, Illinois Department of Commerce and Economic Opportunity, Award Number 06- 205008, 2006-2007, $75,000.
- "Illinois Wind Energy Education and Outreach Project," with David Kennell and Randy Winter, U.S. Department of Energy, Award Number DE-FG36- 06GO86091, 2006-2010, $990,000.
- "Wind Turbine Installation at Illinois State University Farm," with Doug Kingman and David Kennell, Illinois Clean Energy Community Foundation (peer-reviewed), May, 2004, $500,000.
- "Illinois State University Wind Measurement Project," Doug Kingman and David Kennell, Illinois Clean Energy Community Foundation (peer-reviewed), with August, 2003, $40,000.
- "Illinois State University Wind Measurement Project," with Doug Kingman and David Kennell, NEG Micon matching contribution, August, 2003, $65,000.
- "Distance Learning Technology Program," Illinois State University Faculty Technology Support Services, Summer 2002, $3,000.
- "Providing an Understanding of Telecommunications Technology By Incorporating Multimedia into Economics 235," Instructional Technology Development Grant (peer-reviewed), January 15, 2001, $1,400.
- "Using Real Presenter to create a virtual tour of GTE's Central Office," with Jack Chizmar, Instructional Technology Literacy Mentoring Project Grant (peer- reviewed), January 15, 2001, $1,000.
- "An Empirical Study of Telecommunications Industry Forecasting Practices," with James E. Cox, College of Business University Research Grant (peer-reviewed), Summer, 1999, $6,000.

- "Ownership Form and the Efficiency of Electric Utilities: A Meta-Analytic Review" with L. Dean Hiebert, Institute for Regulatory Policy Studies research grant (peer-reviewed), August 1998, $6,000.
- **Total Grants: $7,755,953**

EXTERNAL FUNDING

- Corporate Funding for Institute for Regulatory Policy Studies, Ameren ($7,500), Aqua Illinois ($7,500); Commonwealth Edison ($7,500); Exelon ($7,500); Illinois American Water ($7,500); Illinois Competitive Energy Association ($3,750); Midcontinent ISO ($7,500); NICOR Energy ($7,500); People Gas Light and Coke ($7,500); PJM Interconnect ($7,500); Fiscal Year 2021, $63,900 total.
- Workshop Surplus for Institute for Regulatory Policy Studies, Fiscal Year 2021,$1,960.
- Corporate Funding for Institute for Regulatory Policy Studies, Ameren ($7,500), Aqua Illinois ($7,500); Commonwealth Edison ($7,500); Exelon ($7,500); Illinois American Water ($7,500); Illinois Competitive Energy Association ($3,750); Midcontinent ISO ($7,500); NICOR Energy ($7,500); People Gas Light and Coke ($7,500); PJM Interconnect ($7,500); Fiscal Year 2020, $71,250 total.
- Workshop Surplus for Institute for Regulatory Policy Studies, Fiscal Year 2020,$11,125.
- Corporate Funding for Institute for Regulatory Policy Studies, Ameren ($7,500), Aqua Illinois ($7,500); Commonwealth Edison ($7,500); Exelon ($7,500); Illinois American Water ($7,500); Illinois Competitive Energy Association ($3,750); Midcontinent ISO ($7,500); NICOR Energy ($7,500); People Gas Light and Coke ($7,500); PJM Interconnect ($7,500); Fiscal Year 2019, $71,250 total.
- Workshop Surplus for Institute for Regulatory Policy Studies, Fiscal Year 2019,$2,901.
- Corporate Funding for Institute for Regulatory Policy Studies, Ameren ($7,500), Aqua Illinois ($7,500); Commonwealth Edison ($7,500); Exelon ($7,500); Illinois American Water ($7,500); Midcontinent ISO ($7,500); NICOR Energy ($7,500); People Gas Light and Coke ($7,500); PJM Interconnect ($7,500); Fiscal Year 2018, $67,500 total.
- Workshop Surplus for Institute for Regulatory Policy Studies, with Adrienne Ohler, Fiscal Year 2018, $11,553.
- Corporate Funding for Institute for Regulatory Policy Studies, Ameren ($7,500), Aqua Illinois ($7,500); Commonwealth Edison ($7,500); Exelon ($7,500); Illinois American Water ($7,500); Midcontinent ISO ($7,500); NICOR Energy ($7,500); People Gas Light and Coke ($7,500); PJM Interconnect ($7,500); Fiscal Year 2017, $67,500 total.
- Workshop Surplus for Institute for Regulatory Policy Studies, with Adrienne Ohler, Fiscal Year 2017, $18,342.
- Corporate Funding for Institute for Regulatory Policy Studies, Ameren ($7,500), Aqua Illinois ($7,500); Commonwealth Edison ($7,500); Exelon ($7,500); Illinois American Water ($7,500) ITC Holdings ($7,500); Midcontinent ISO ($7,500); NICOR Energy ($7,500); People Gas Light and Coke ($7,500); PJM Interconnect ($7,500); Fiscal Year 2017, $75,000 total.
- Workshop Surplus for Institute for Regulatory Policy Studies, with Adrienne Ohler, Fiscal Year 2016, $19,667.
- Corporate Funding for Energy Learning Exchange, Calendar Year 2016,$53,000.
- Corporate Funding for Institute for Regulatory Policy Studies, Ameren ($7,500), Aqua Illinois ($7,500); Commonwealth Edison ($7,500); Exelon/Constellation NewEnergy ($7,500); Illinois American Water

($7,500) ITC Holdings ($7,500); Midcontinent ISO ($7,500); NICOR Energy ($7,500); People Gas Light and Coke ($7,500); PJM Interconnect ($7,500); Utilities, Inc. ($7,500) Fiscal Year 2016, $82,500 total.

- Workshop Surplus for Institute for Regulatory Policy Studies, with Adrienne Ohler, Fiscal Year 2015, $15,897.
- Corporate Funding for Institute for Regulatory Policy Studies, Ameren ($7,500), Alliance Pipeline ($7,500); Aqua Illinois ($7,500); AT&T ($7,500);Commonwealth Edison ($7,500); Exelon/Constellation NewEnergy ($7,500); Illinois American Water ($7,500) ITC Holdings ($7,500); Midcontinent ISO ($7,500); NICOR Energy ($7,500); People Gas Light and Coke ($7,500); PJM Interconnect ($7,500); Fiscal Year 2015, $90,000 total.
- Corporate Funding for Energy Learning Exchange, Calendar Year 2014, $55,000.
- Workshop Surplus for Institute for Regulatory Policy Studies, with Adrienne Ohler, Fiscal Year 2014, $12,381.
- Corporate Funding for Institute for Regulatory Policy Studies, Ameren ($7,500), Alliance Pipeline ($7,500); Aqua Illinois ($7,500); AT&T ($7,500);Commonwealth Edison ($7,500); Constellation NewEnergy ($7,500); Illinois American Water ($7,500) ITC Holdings ($7,500); Midwest Energy Efficiency Alliance ($4,500); Midwest Generation ($7,500); MidWest ISO ($7,500); NICOR Energy ($7,500); People Gas Light and Coke ($7,500); PJM Interconnect ($7,500); Fiscal Year 2014, $102,000 total.
- Corporate Funding for Energy Learning Exchange, Calendar Year 2013, $53,000.
- Workshop Surplus for Institute for Regulatory Policy Studies, with Adrienne Ohler, Fiscal Year 2013, $17,097.
- Corporate Funding for Institute for Regulatory Policy Studies, Ameren ($7,500), Alliance Pipeline ($7,500); Aqua Illinois ($7,500); AT&T ($7,500);Commonwealth Edison ($7,500); Constellation NewEnergy ($7,500); Illinois American Water ($7,500) ITC Holdings ($7,500); Midwest Generation ($7,500); MidWest ISO ($7,500); NICOR Energy ($7,500); People Gas Light and Coke ($7,500); PJM Interconnect ($7,500); Fiscal Year 2013, $97,500 total.
- Corporate Funding for Illinois Wind Working Group, Calendar Year 2012, $29,325.
- Workshop Surplus for Institute for Regulatory Policy Studies, with Adrienne Ohler, Fiscal Year 2012, $16,060.
- Corporate Funding for Institute for Regulatory Policy Studies, Alliance Pipeline ($7,500); Aqua Illinois ($7,500); AT&T ($7,500);Commonwealth Edison ($7,500); Constellation NewEnergy ($7,500); Illinois American Water ($7,500) ITC Holdings ($7,500); Midwest Generation ($7,500); MidWest ISO ($7,500); NICOR Energy ($7,500); People Gas Light and Coke ($7,500); PJM Interconnect ($7,500); Fiscal Year 2012, $90,000 total.
- Corporate Funding for Illinois Wind Working Group, Calendar Year 2011, $57,005.
- Workshop Surplus for Institute for Regulatory Policy Studies, with Adrienne Ohler, Fiscal Year 2011, $13,562.
- Corporate Funding for Institute for Regulatory Policy Studies, Alliance Pipeline ($7,500); Aqua Illinois ($7,500); AT&T ($7,500);Commonwealth Edison ($7,500); Constellation NewEnergy ($7,500); Illinois American Water ($7,500) ITC Holdings ($7,500); Midwest Generation ($7,500); MidWest ISO ($7,500); NICOR Energy ($7,500); People Gas Light and Coke ($7,500); PJM Interconnect ($7,500); Fiscal Year 2011, $90,000 total.
- Corporate Funding for Center for Renewable Energy, Calendar Year 2010, $50,000.
- Corporate Funding for Illinois Wind Working Group, Calendar Year 2010, $49,000.

- Workshop Surplus for Institute for Regulatory Policy Studies, with Lon Carlson, Fiscal Year 2010, $17,759.
- Corporate Funding for Institute for Regulatory Policy Studies, Alliance Pipeline ($7,500); Ameren ($7,500); AT&T ($7,500);Commonwealth Edison ($7,500); Constellation NewEnergy ($7,500); ITC Holdings ($7,500); Midwest Generation ($7,500); MidWest ISO ($7,500); NICOR Energy ($7,500); People Gas Light and Coke ($7,500); PJM Interconnect ($7,500); Fiscal Year 2010, $82,500 total.
- Corporate Funding for Illinois Wind Working Group, Calendar Year 2009, $57,140.
- Workshop Surplus for Institute for Regulatory Policy Studies, with Lon Carlson, Fiscal Year 2009, $21,988.
- Corporate Funding for Institute for Regulatory Policy Studies, Alliance Pipeline ($7,500); Ameren ($7,500); AT&T ($7,500);Commonwealth Edison ($7,500); Constellation NewEnergy ($7,500); MidAmerican Energy ($7,500); Midwest Generation ($7,500); MidWest ISO ($7,500); NICOR Energy ($7,500); People Gas Light and Coke ($7,500); PJM Interconnect ($7,500); Fiscal Year 2009, $82,500 total.
- Corporate Funding for Center for Renewable Energy, Calendar Year 2008, $157,500.
- Corporate Funding for Illinois Wind Working Group, Calendar Year 2008, $38,500.
- Workshop Surplus for Institute for Regulatory Policy Studies, with Lon Carlson, Fiscal Year 2008, $28,489.
- Corporate Funding for Institute for Regulatory Policy Studies, Alliance Pipeline ($5,000); Ameren ($5,000); AT&T ($5,000);Commonwealth Edison ($5,000); Constellation NewEnergy ($5,000); MidAmerican Energy ($5,000); Midwest Generation ($5,000); MidWest ISO ($5,000); NICOR Energy ($5,000); Peabody Energy ($5,000), People Gas Light and Coke ($5,000); PJM Interconnect ($5,000); Fiscal Year 2008, $60,000 total.
- Corporate Funding for Illinois Wind Working Group, Calendar Year 2007, $16,250.
- Workshop Surplus for Institute for Regulatory Policy Studies, with Lon Carlson, Fiscal Year 2007, $19,403.
- Corporate Funding for Institute for Regulatory Policy Studies, AARP ($3,000), Alliance Pipeline ($5,000), Ameren ($5,000); Citizens Utility Board ($5,000); Commonwealth Edison ($5,000); Constellation NewEnergy ($5,000); MidAmerican Energy ($5,000); Midwest Generation ($5,000); MidWest ISO ($5,000); NICOR Energy ($5,000); Peabody Energy ($5,000), People Gas Light and Coke ($5,000); PJM Interconnect ($5,000); SBC ($5,000); Verizon ($5,000); Fiscal Year 2007, $73,000 total.
- Workshop Surplus for Institute for Regulatory Policy Studies, with Lon Carlson, Fiscal Year 2006, $13,360.
- Corporate Funding for Institute for Regulatory Policy Studies, AARP ($1,500), Alliance Pipeline ($2,500), Ameren ($5,000); Citizens Utility Board ($5,000); Commonwealth Edison ($5,000); Constellation NewEnergy ($5,000); DTE Energy ($5,000); MidAmerican Energy ($5,000); Midwest Generation ($5,000); MidWest ISO ($5,000); NICOR Energy ($5,000); Peabody Energy ($2,500), People Gas Light and Coke ($5,000); PJM Interconnect ($5,000); SBC ($5,000); Verizon ($5,000); Fiscal Year 2006, $71,500 total.
- Workshop Surplus for Institute for Regulatory Policy Studies, with L. Dean Hiebert, Fiscal Year 2005, $12,916.
- Corporate Funding for Institute for Regulatory Policy Studies, with L. Dean Hiebert, AmerenCIPS ($5,000); Citizens Utility Board ($5,000); Commonwealth Edison ($5,000); Constellation NewEnergy ($5,000); Illinois Power ($5,000); MidAmerican Energy ($5,000); Midwest Generation ($5,000); MidWest ISO ($5,000); NICOR Energy ($5,000); People Gas Light and Coke ($5,000); PJM Interconnect ($5,000); SBC ($2,500); Verizon ($2,500); Fiscal Year 2005, $60,000 total.
- Workshop Surplus for Institute for Regulatory Policy Studies, with L. Dean Hiebert, Fiscal Year 2004, $17,515.
- Corporate Funding for Institute for Regulatory Policy Studies, with L. Dean Hiebert, AmerenCIPS ($5,000); Commonwealth Edison ($5,000); Constellation NewEnergy ($5,000); Illinois Power ($5,000); MidAmerican

Energy ($5,000); Midwest Generation ($5,000); NICOR Energy ($5,000); People Gas Light and Coke ($5,000); PJM Interconnect ($5,000); Fiscal Year 2004, $45,000 total.

- Workshop Surplus for Institute for Regulatory Policy Studies, with L. Dean Hiebert, Fiscal Year 2003, $8,300.
- Corporate Funding for Institute for Regulatory Policy Studies, with L. Dean Hiebert, AmerenCIPS ($5,000); AT&T ($2,500); Commonwealth Edison ($5,000); Illinois Power ($5,000); MidAmerican Energy ($5,000); NICOR Energy ($5,000); People Gas Light and Coke ($5,000); Fiscal Year 2003, $32,500 total.
- Workshop Surplus for Institute for Regulatory Policy Studies, with L. Dean Hiebert, Calendar Year 2002, $15,700.
- Corporate Funding for Institute for Regulatory Policy Studies, with L. Dean Hiebert, AmerenCIPS ($2,500); AT&T ($5,000); Commonwealth Edison ($2,500); Illinois Power ($2,500); MidAmerican Energy ($2,500); NICOR Energy ($2,500); People Gas Light and Coke ($2,500); Calendar Year 2002, $17,500 total.
- Corporate Funding for International Communications Forecasting Conference, National Economic Research Associates ($10,000); Taylor Nelson Sofres Telecoms ($10,000); Calendar Year 2002, $20,000 total.
- Corporate Funding for Institute for Regulatory Policy Studies, with L. Dean Hiebert, AmerenCIPS ($5,000); AT&T ($5,000); Commonwealth Edison ($5,000); Illinois Power ($5,000); MidAmerican Energy ($5,000); NICOR Energy ($5,000); People Gas Light and Coke ($5,000); Calendar Year 2001, $35,000 total.
- Workshop Surplus for Institute for Regulatory Policy Studies, with L. Dean Hiebert, Calendar Year 2001, $19,400.
- Corporate Funding for International Communications Forecasting Conference, National Economic Research Associates ($10,000); Taylor Nelson Sofres Telecoms ($10,000); SAS Institute ($10,000); Calendar Year 2001, $30,000 total.
- Corporate Funding for Institute for Regulatory Policy Studies, with L. Dean Hiebert, AmerenCIPS ($5,000); AT&T ($5,000); Commonwealth Edison ($5,000); Illinois Power ($5,000); MidAmerican Energy ($5,000); NICOR Energy ($5,000); People Gas Light and Coke ($5,000); Calendar Year 2000, $35,000 total.
- Workshop Surplus for Institute for Regulatory Policy Studies, with L. Dean Hiebert, Calendar Year 2000, $20,270.
- Corporate Funding for International Communications Forecasting Conference, National Economic Research Associates ($10,000); Taylor Nelson Sofres Telecoms ($10,000); Calendar Year 2000, $20,000 total.
- Corporate Funding for Institute for Regulatory Policy Studies, with L. Dean Hiebert, AmerenCIPS ($5,000); AT&T ($5,000); Commonwealth Edison ($5,000); Illinois Power ($5,000); MidAmerican Energy ($5,000); NICOR Energy ($5,000); People Gas Light and Coke ($5,000); Calendar Year 1999, $35,000 total.
- Workshop Surplus for Institute for Regulatory Policy Studies, with L. Dean Hiebert, Calendar Year 1999, $10,520.
- Corporate Funding for International Communications Forecasting Conference, National Economic Research Associates ($10,000); PNR Associates ($10,000); Calendar Year 1999, $20,000 total.
- Corporate Funding for Institute for Regulatory Policy Studies, with L. Dean Hiebert, AmerenCIPS ($5,000); CILCO ($5,000); Commonwealth Edison ($5,000); Illinois Power ($5,000); MidAmerican Energy ($5,000); People Gas Light and Coke ($5,000); Calendar Year 1998, $30,000 total.

- Workshop Surplus for Institute for Regulatory Policy Studies, with L. Dean Hiebert, Calendar Year 1998, $44,334.
- Corporate Funding for International Communications Forecasting Conference, National Economic Research Associates ($10,000); PNR Associates ($10,000); Calendar Year 1998, $20,000 total.
- Corporate Funding for Institute for Regulatory Policy Studies, with L. Dean Hiebert, AmerenCIPS ($5,000); CILCO ($5,000); Commonwealth Edison ($5,000); Illinois Power ($5,000); MidAmerican Energy ($5,000); People Gas Light and Coke ($5,000); Calendar Year 1997, $30,000 total.
- Workshop Surplus for Institute for Regulatory Policy Studies, with L. Dean Hiebert, Calendar Year 1997, $19,717.

Total External Funding: $2,793,836

Exhibit DGL-2: GSLD-3 Current & GSLD-3, LLCS-1 Proposed Rates

	GSLD-3 Current Rates (Cents / Kwh)	GSLD-3 Proposed Rates (Cents / Kwh)	~ Change	% Change
Base Bill	3.00	3.92	0.93	31%
Rate before Taxes and Fees	5.98**	6.89**	0.91	15%
Total Rate Incl Taxes and Fees	6.14	7.08	0.94	15%

	GSLD-3 Current Rates (Cents / Kwh)	LLCS-1 Proposed Rates* (Cents / Kwh)	~ Change	% Change
Base Bill	**3.00**	**7.13**	**4.13**	**138%**
Rate before Taxes and Fees	**5.98**	**10.16**	**4.10**	**69%**
Total Rate Incl Taxes and Fees	**6.14**	**10.43**	**4.29**	**69%**

*Base Bill Include Incremental Gen Charge

**Schedule A-2: 2026 Projected Test Year Page 11 of 12	GSLD-3 Current	GSLD-3 Proposed
Typical Kwh	3,285,000 Kwh	3,285,000 Kwh
Cost (Pre GRT/ RAF)	$196,576	$226,437
Rate (Pre GRT/ RAF)	**5.98 cents / Kwh**	**6.89 cents / Kwh**
Cost Including GRT/ RAF	$ 201,792	$232,445
Rate Including GRT/ RAF	6.14 cents / Kwh	7.08 cents / Kwh

Exhibit DGL-3: Contractual Comparison: FPL GSLD-3 vs LLCS-1

Category	GSLD-3 (General Service Large Demand)	LLCS-1 (Large Load Contract Service-1)
Eligibility	≥69 kV service No minimum load or load factor	≥25 MW and ≥85% load factor at a single location
Availability Area	Entire FPL service territory	Limited to 3 zones near 500 kV: Sunbreak, Tesoro, Sugar
Total Load Cap	No cap	3,000 MW cap across all LLCS-1 customers
Voltage Requirement	Transmission voltage (≥69 kV)	Transmission voltage (≥69 kV), near 500 kV infrastructure
Term of Service	Minimum 1 Year	Minimum 20-year (includes Load Ramp Period)
Termination Notice	Not required	Minimum 2 years' written notice
Early Termination Charges	Not applicable	Yes, per LLCS Service Agreement
Load Ramp Period	Not required	Defined period to reach Contract Demand; minimum billing applies during this phase
Minimum Monthly Bill	Based on metered usage	Includes 90% of Contract Demand or past max demand, plus all charges
RECs (Renewable Energy Credits)	Not offered	Can be purchased separately (if available)
Generation Resource Rights	Not restricted	FPL selects type, location, and size of generation

Service Agreement	Standard agreement	Mandatory LLCS Service Agreement + Construction & Operating Agreement
System Impact Studies	Not required	Required and paid by customer before agreement execution
In-Service Date Definition	Energization date of facilities	As defined in LLCS Service Agreement
Contract Demand	Determined by usage	Fixed and agreed upon; used in billing and planning
Load Factor Requirement	None	Minimum 85%, contractually enforced
CIAC (Construction Contribution)	Required; may require Performance Guaranty	Required; excludes Incremental Gen Charge from calculation
Eligibility for Riders	May qualify for economic or interruptible riders	Not eligible for EDR, CISR, SST-1, ISST-1, etc

Exhibit DGL-4: Data Center Market Contract Lengths

Category	Aspect	Georgia (CARES/Sch 10)	Indiana (Tariff I.P.)	AEP Ohio (Rider GP/IRP)	Louisiana (LPHLF-G)
Contract Term	Length of Commitment	15 years	12 years (+5 yr ramp)	10–15 years	Flexible / Not defined

Exhibit DGL-5: Entergy Louisiana Additional Facilities Charge

Recovery Period Years	Monthly % of Costs During Recovery Term	Monthly % of Costs Post Recovery Term
1	8.93%	0.18%
2	4.75%	0.18%
3	3.37%	0.18%
4	2.67%	0.18%
5	2.26%	0.18%
6	1.99%	0.18%
7	1.79%	0.18%
8	1.65%	0.18%
9	1.54%	0.18%
10	1.45%	0.18%

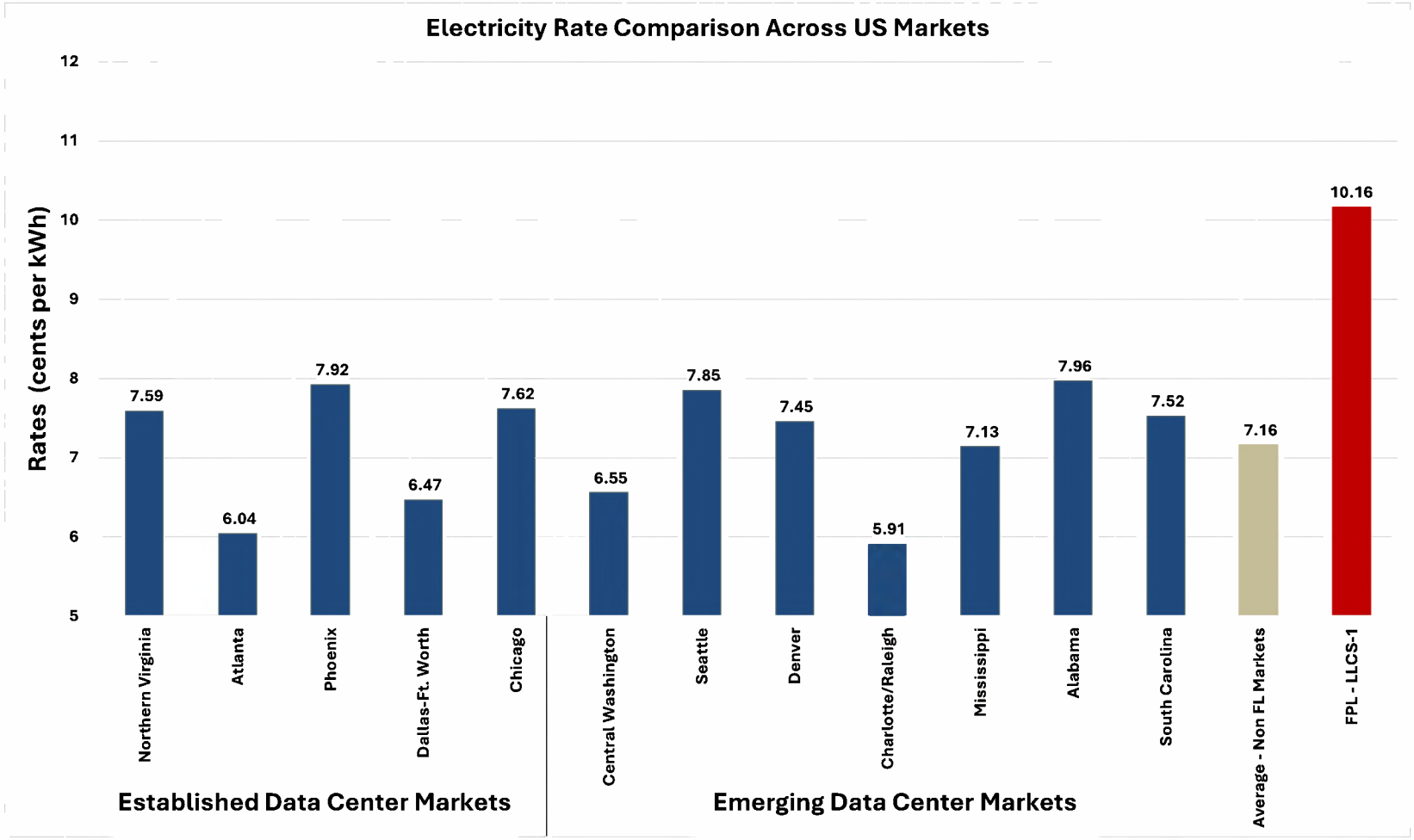
	Entergy Louisiana – Additional Facilities Charge (10 Year Recovery)	FPL – LLCS-1 Incremental Generation Charge
Payment Years 1-10	$ 1,130 per kW * 1,000,000 kW * 1.45% * 12 Months * 10 Years = **$ 1.96 Billion**	$ 28.07 / Kw * 1,000,000 kW * 12 Months * 10 Years = **$ 3.36 Billion**
Payment Years 11-20	$ 1,130 per kW * 1,000,000 kW * 0.18% * 12 Months * 10 Years = **$ 244.1 Million**	$ 28.07 / Kw * 1,000 MW * 12 Months * 10 Years = **$ 3.36 Billion**
Total Payment Over 20 Years	**$ 2.2 Billion**	**$ 6.7 Billion**
Effective Cost per Kw over 20 Years	**$ 9.16 / kW**	**$ 28.07 / kW**

* $1,130 per kW is assumed battery storage cost – per FPL model

Exhibit DGL-6: Electricity Rates Across Data Center Markets vs FPL

FPL Current vs Proposed Large Load Rates		
Utility	**Rate (¢/kwh)**	**% Difference from Current Rate**
FPL Large Load (GSLD - 3 Current)	5.98	-
FPL Large Load (Proposed)	10.16	69%

FPL vs Other Data Center Markets – Large Load Rates		
Market	**Rate (¢/kwh)**	**% Difference (from Secondary DC Market rate)**
Average Rate – Secondary DC Markets	6.95	-
Average Rate – Primary DC Markets	7.14	3%
FPL Large Load (Proposed)	10.16	46%


Electricity Rate Comparison Across US Markets
Rates (cents per kWh)
12
11
10
9
8
7
6
5
7.59
6.04
7.92
6.47
7.62
6.55
7.85
7.45
5.91
7.13
7.96
7.52
7.16
10.16
Northern Virginia
Atlanta
Phoenix
Dallas-Ft. Worth
Chicago
Central Washington
Seattle
Denver
Charlotte/Raleigh
Mississippi
Alabama
South Carolina
Average - Non FL Markets
FPL - LLCS-1
Established Data Center Markets
Emerging Data Center Markets