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DIRECT TESTIMONY
OF
JOHN J. REED
ON BEHALF OF
UNION ELECTRIC COMPANY
d/b/a AMEREN MISSOURI

Marlborough, Massachusetts
March, 2021

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DIRECT TESTIMONY

OF

JOHN J. REED

I. INTRODUCTION

1

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

3 A. My name is John J. Reed. I am President and Chief Executive Officer of Concentric
4 Energy Advisors, Inc. ("Concentric") and CE Capital Advisors, Inc. ("CE Capital"),
5 which has its headquarters at 293 Boston Post Road West, Suite 500, Marlborough,
6 Massachusetts 01752.

7 **Q. On whose behalf are you submitting this testimony?**

8 A. I am testifying on behalf of Union Electric Company d/b/a Ameren Missouri
9 ("Ameren Missouri" or the "Company").

10 **Q. Please describe your educational background and professional experience in
11 the energy and utility industries.**

12 A. I have more than 40 years of experience in the energy industry and have worked as
13 an executive in, and consultant and economist to, the energy industry. Over the
14 past 32 years, I have directed the energy consulting services of Concentric,
15 Navigant Consulting, and Reed Consulting Group. I have served as Vice Chairman
16 and Co-CEO of the nation's largest publicly-traded consulting firm and as
17 Corporate Economist for the nation's largest gas utility.

1 I have provided regulatory policy and regulatory economics support to more than
2 100 energy and utility clients and have provided expert testimony on regulatory,
3 economic, and financial matters on more than 200 occasions before the Federal
4 Energy Regulatory Commission (“FERC”), Canadian regulatory agencies, state
5 regulatory agencies, various state and federal courts, and arbitration panels in the
6 United States and Canada. I have also previously appeared several times before the
7 Missouri Public Service Commission (the “Commission”) as an expert on
8 regulation and ratemaking issues including on the topic of affiliate transactions. I
9 am a graduate of the Wharton School of Business at the University of Pennsylvania,
10 and previously attended the University of Kansas. My curriculum vitae, as well as
11 a listing of my prior testimonies is provided in Schedule JJR-D1.

12 **Q. Please describe Concentric's activities in energy and utility engagements.**

13 A. Concentric provides financial, regulatory and economic advisory services to many
14 energy and utility clients across North America. Our regulatory, economic, and
15 market analysis services include utility ratemaking and regulatory advisory
16 services, energy market assessments, market entry and exit analysis, corporate and
17 business unit strategy development, demand forecasting, resource planning, and
18 energy contract negotiations. Our financial advisory activities include both buy and
19 sell side merger, acquisition and divestiture assignments, due diligence and
20 valuation assignments, project and corporate finance services, and transaction
21 support services. In addition, Concentric provides litigation support services on a

1 wide range of financial and economic issues on behalf of clients throughout North
2 America.

3 **II. PURPOSE OF TESTIMONY**

4 **Q. What is the purpose of your direct testimony?**

5 A. The purpose of my direct testimony is to provide my assessment and
6 recommendation pertaining to the reasonableness of Ameren Service Company's
7 ("AMS") services and associated costs billed to Ameren Missouri during the test
8 year (calendar year 2020).

9 **III. OVERVIEW OF AMEREN MISSOURI AND KEY AFFILIATES**
10 **FROM WHICH IT RECEIVES OR TO WHICH IT PROVIDES**
11 **SERVICES**

12 **Q. Please provide an overview of Ameren Missouri.**

13 A. Ameren Missouri is an operating energy company that is a subsidiary of Ameren
14 Corporation. The Company provides energy to approximately 1.2 million electric
15 and 130,000 natural gas customers in central and eastern Missouri. The Company's
16 gas utility service area covers more than 90 Missouri communities.

17 **Q. Please describe Ameren Corporation.**

18 A. Ameren Corporation ("AMC") is the parent company of Ameren Missouri. AMC
19 was formed in 1997 as a result of the merger of Union Electric Company and
20 Central Illinois Public Service Company ("CIPS"). In its 1997 order approving the
21 merger of Union Electric and CIPS, the Missouri Commission also approved the

1 formation of AMS, which is a centralized service company that provides various
2 corporate support services to AMC affiliates at cost.

3 In 2003, AMC acquired Cilcorp, and its operating utility Central Illinois
4 Light Company. AMC acquired Illinois Power Company from Dynegy in 2004.
5 AMC's Illinois utilities merged to become Ameren Illinois Company ("AIC") in
6 2010.

7 Presently, AMC's operations consist of rate regulated utilities operating in
8 Missouri, Illinois, and in interstate commerce under the jurisdiction of the FERC.

9 **Q. Does Ameren Missouri receive services from AMC?**

10 A. No. AMC has no employees and provides no services to Ameren Missouri, but
11 Ameren Missouri shares in certain AMC-related costs and benefits arising from
12 AMC's ownership of 100% of Ameren Missouri's stock.

13 **IV. SERVICES PROVIDED BY AMS TO AMEREN MISSOURI**

14 **Q. Please describe AMS.**

15 A. AMS is a service company that was originally formed to take advantage of
16 synergies gained by eliminating redundant functions at both Ameren Missouri and
17 CIPS subsequent to their merger that could more cost-effectively be combined into
18 one service company.

19 **Q. Was the formation of the service company required by law?**

20 A. Yes. The Public Utility Holding Company Act of 1935 ("PUHCA") directed the
21 United States Securities and Exchange Commission ("SEC") to flatten the
22 corporate structure of utilities to remove unnecessary corporate layers. Individual
23 operating utility companies were required to centralize certain business operations

1 into central service companies, but all service companies would be subject to SEC
2 and Federal Power Commission regulation. In 1977, the Federal Power
3 Commission was replaced by the FERC.

4 At the time of Ameren’s formation, PUHCA required the utilization of such
5 a service company and required that services be provided at cost. As a result, when
6 a state utility commission regulated a utility in a particular state, the ratepayers of
7 that state would pay only the share of any common service company expenses
8 associated with that state's utility company allocated to it under SEC-approved
9 formulas to prevent a holding company from double recovering its expenses when
10 it operates in more than one state and to ensure each state paid its fair share of costs.

11 Although PUHCA has now been largely repealed, some functions formerly
12 assigned to the SEC under PUHCA were transferred to the FERC at the time of the
13 PUHCA repeal by Congress’ adoption of the Energy Policy Act of 2005. FERC
14 regulations adopted under that Act continue to require the use of cost-based pricing
15 for service companies.¹

16 **Q. Did the Missouri PSC approve the merger of Union Electric and CIPS, as well**
17 **as the formation of AMS?**

¹ 18 CFR § 35.44 – Protection against affiliate cross-subsidization. Section (b)(3) of the rule states: “A franchised public utility that has captive customers or that owns or provides transmission service over jurisdictional transmission facilities, may only purchase or receive non-power goods and services from a centralized service company at cost.” Although this testimony pertains to Ameren Missouri’s natural gas business, that business is operated as a division of Ameren Missouri which, by virtue of its electric utility operations, is subject to the foregoing rule, including regarding the services it receives from AMS, the majority of which support both its electric and gas operations.

1 A. Yes. In Case No. EM-96-149, the Missouri Commission approved the merger of
2 Ameren Missouri (then doing business as Union Electric) and CIPS that resulted in
3 the formation of AMS. The Commission's order stated:

4 In addition, the Commission finds the proposed merger transaction, as
5 reflected in the contractual agreement contained as a part of the Union
6 Electric Company filing of November 7, 1995, and subject to the conditions
7 and modifications as set out in the above Stipulation and Agreement, is not
8 detrimental to the public interest.

9 The Stipulation and Agreement approved by the order specifically
10 referenced the General Services Agreement ("GSA") under which AMS agreed to
11 provide Ameren Missouri corporate support services at cost. The Stipulation states
12 that a "Utility Service Company" will "provide administrative and general or
13 operating services to UE and [its affiliates]" and defines "Service Agreement" as
14 the GSA between AMS and its affiliates. That GSA was part of the record before
15 the Commission in the merger case. While the Commission did not explicitly use
16 the words "we hereby approve the formation of AMS," the Commission approved
17 the merger that created the corporate structure that included AMS and AMS's
18 provision of services to Ameren Missouri and the other affiliates, and clearly
19 understood that AMS would provide services under the GSA at cost.

20 **Q. What services does AMS provide to Ameren Missouri?**

21 A. AMS provides administrative support services. AMS' services include typical
22 corporate functions such as accounting, legal, environmental, building
23 management, information technology, etc. The preponderance of transactions
24 pertains to corporate shared services provided by AMS to Ameren Missouri.

25 **Q. How does Ameren Missouri determine both the services to procure from AMS,
26 and the extent of the services it will receive from AMS?**

1 A. As discussed in the direct testimony of Ameren Missouri witness Laura M. Moore,
2 Ameren Missouri and AMS follow, on an ongoing basis, a Joint Planning and
3 Procurement process and a Demand Planning process. These processes, which are
4 followed in concert with the other, are used during each budget cycle and include
5 ongoing reviews of AMS services and spend as each budget year progresses. Under
6 those processes, Ameren Missouri determines its need for various services, the
7 value of those services, and the level of the services it will receive from AMS.

8 **Q. Does Ameren Missouri also have the option to self-provide or use a third-party**
9 **to provide some or all of these services?**

10 A. Yes, except for those services that necessarily arise from AMC's status as a publicly
11 traded company that owns 100% of Ameren Missouri's stock, Ameren Missouri
12 has the option to self-provide a service, utilize the service of a non-affiliated service
13 provider, or retain AMS to provide defined services.

14 **Q. Are the services provided by AMS to Ameren Missouri necessary and**
15 **appropriate?**

16 A. Yes. The services that Ameren Missouri receives from AMS are both necessary
17 and appropriate. The manner in which the services are provided to Ameren
18 Missouri by AMS is consistent with how numerous other regulated utility
19 companies obtain such services.

20 **Q. Are the services provided by AMS to Ameren Missouri covered by a Cost**
21 **Allocation Manual ("CAM")?**

1 **A.** Yes. The manner by which AMS' services are provided and charged to Ameren
2 Missouri is set forth in the GSA, which is also included as an appendix in the
3 CAM. Among other things, the GSA or the CAM:

- 4 • Requires the services be provided at cost;
- 5 • Codifies recordkeeping and access to records requirements, including
6 documentation of affiliate transactions, and the continued provision of
7 detailed affiliate transaction reporting for all products and services provided
8 by AMS (and other affiliates), not just to Ameren Missouri, but to all AMC
9 affiliates;
- 10 • Codifies certain detailed reporting requirements;
- 11 • Requires that all affiliate transactions be conducted under a written contract
12 between Ameren Missouri and AMS; and
- 13 • Requires the formation and implementation of an Ameren Missouri CAM
14 Team to aid in Ameren Missouri's compliance with the Affiliate Transactions
15 Rules, subject to approved variances.

16 **Q.** **Are the services provided by AMS to Ameren Missouri the same as those**
17 **which AMS provides to Ameren Illinois?**

18 **A.** Yes. The services provided by AMS to Ameren Missouri and Ameren Illinois are
19 essentially the same.

20 **Q.** **Are service companies, such as AMS, common in the energy industry?**

21 **A.** Yes. As a result of industry mergers and acquisitions, many stand-alone, single
22 jurisdictional energy companies have merged or been acquired. In an effort to
23 increase efficiencies, ensure consistent practices throughout the organization, and

1 reduce costs, the post-merger integration of common functions at an affiliated
2 service company has been a common trend throughout the United States. Service
3 companies similar to AMS file Form 60 annual reports with the FERC. The Form
4 60 report is an annual regulatory support requirement under 18 CFR 369.1 for
5 centralized service companies. The report is designed to collect financial
6 information from centralized service companies subject to the jurisdiction of the
7 FERC.

8 **Q. Have you prepared a Schedule identifying the service companies which filed a**
9 **Form 60 annual report, and the affiliated companies to which the service**
10 **companies provided services, and the services provided?**

11 A. Yes, I have included this information in Schedule JJR-D2.

12 **Q. Please describe what Schedule JJR-D2 shows.**

13 A. Schedule JJR-D2 identifies the service companies and affiliated companies to
14 which services are provided, as well as the services provided to the affiliated
15 companies. Schedule JJR-D2 shows that 42 utility service companies filed FERC
16 Form 60 annual reports in 2019. Reviewing these reports, the service companies
17 provided services to 838 affiliated companies, including many regulated utilities.

18 **Q. Based upon your review of the scope of services offered by AMS to Ameren**
19 **Missouri, are the services provided consistent with those of other service**
20 **companies in the energy industry?**

21 A. Yes. In my experience, the services provided by AMS to Ameren Missouri are
22 consistent with those provided by other service companies to affiliated regulated
23 utilities. Schedule JJR-D2 further supports my experience and conclusion.

1 **Q. Based upon your experience, is the use of the shared services model prevalent**
2 **today in the energy industry?**

3 A. Yes. Based upon both my personal knowledge of the energy industry, as well as
4 the number of Form 60 reports filed with the FERC, service companies continue to
5 be widely used throughout the energy industry in the United States.

6 **Q. To what do you attribute the extensive use of service companies?**

7 A. Beyond the fact that the PUHCA required the use of service companies, many of
8 the mergers that have been consummated in the energy industry have been
9 premised, in part, upon the realization that the combined companies could produce
10 savings from the elimination of duplication in public company functions and “back
11 room”, non-customer-facing corporate functions. There are economies of scale that
12 can be achieved by eliminating duplicative roles and functions when two companies
13 merge (e.g., one accounting, human resources, information technology,
14 procurement, etc. function). Further, the merged companies would most likely be
15 able to perform required tasks with fewer staff than the individual operating
16 companies were able to achieve. This approach benefits the holding company (here
17 AMC) and the customers of its operating utilities (including Ameren Missouri)
18 alike because between rate reviews the lower overall costs the service company
19 delivers inures to the benefit of shareholders and ultimately to the benefit of
20 customers in the form of lower cost of service and rates.

21 **V. COST OF AMS’ SERVICES**

22 **Q. Does AMS direct charge for its services when the service is only to one**
23 **affiliate?**

1 A. Yes it does.

2 **Q. When the direct assignment of costs is not possible, are AMS' services**
3 **provided to Ameren Missouri and its other affiliated companies at the fully**
4 **distributed cost of providing those services?**

5 A. Yes, they are (and that is true for directly charged services as well). All costs
6 incurred by AMS are either directly charged (when the cost applies only to one
7 affiliate) or allocated using a service request system, but regardless of how the cost
8 of the services are charged, they are always priced at AMS's fully distributed cost
9 with no mark-up or profit component. As a result of Ameren Missouri's agreement
10 with Missouri Public Service Commission Staff in File No. EO-2017-0176, a fully
11 distributed cost study was conducted to examine two primary items: (a) can a
12 greater proportion of AMS costs be direct charged and (b) can improvements
13 reasonably be made in the allocation factors used to charge allocated costs. The
14 study is being provided as part of the workpapers submitted with the Company's
15 companion electric rate case filing.

16 **Q. How does the Commission's affiliate transaction rule, 20 CSR 4240-40.015,**
17 **define "fully distributed cost" or "FDC"?**

18 A. Section (1)(F) of the Rule defines fully distributed cost as "a methodology that
19 examines all costs of an enterprise in relation to all the goods and services that are
20 produced. FDC requires recognition of all costs incurred directly or indirectly used
21 to produce a good or service. Costs are assigned either through a direct or allocated
22 approach. Costs that cannot be directly assigned or indirectly allocated (e.g.,

1 general and administrative) must also be included in the FDC calculation through
2 a general allocation.”

3 **Q. Does Ameren Services Company profit from the services provided to its**
4 **affiliated companies?**

5 A. No. All AMS charges reflect the direct cost of providing that service or product.
6 There is no profit margin built into the charges, and AMS operates on a zero-profit
7 basis.

8 **Q. Are the costs of AMS’s services the same as if Ameren Missouri were to self-**
9 **provide the services?**

10 A. The services are, at worst, the same as if Ameren Missouri were to self-provide the
11 services. It is more likely, however, that due to the economies of scale realized by
12 centralizing the shared services at AMS, the services are provided at a cost lower
13 than if Ameren Missouri were to self-provide the services on a stand-alone basis.

14 **Q. Please explain.**

15 A. There are inherent efficiencies realized by consolidating common functions at one
16 company, as opposed to requiring each operating company to individually perform
17 each service. Given that AMS provides similar services to Ameren Missouri, AIC,
18 and other affiliated companies, AMS is likely able to perform the required services
19 with fewer personnel, and thus at a lower cost, than if each AMC subsidiary were
20 to be individually fully staffed to provide all services. In other words, there are
21 economies of scale realized by consolidating similar functions across the AMC
22 companies.

1 **Q. Based upon your review of the manner by which AMS charges Ameren**
2 **Missouri for its services, can you conclude that AMS's costs are market based?**

3 A. Yes. AMS is a large scale, efficient organization which provides services at cost,
4 without mark-up or profit, where the costs consist primarily of the wages, salaries
5 and benefits of AMS employees. The wages, salaries and benefits AMS pays and
6 provides are market based. Therefore, it is reasonable to conclude that AMS's costs
7 are market based.

8 **Q. Please explain.**

9 A. The cost of goods and services provided by AMS to its affiliated companies
10 consists of two primary cost components – (1) wages and benefits of AMS
11 employees and (2) goods and materials.

12 With regard to wages and benefits, employees of AMC subsidiaries
13 receive market-based wages and benefits. To ensure that the employees are
14 provided a reasonable compensation package, the AMS Human Resources
15 Department routinely benchmarks total compensation packages (i.e., wages and
16 benefits) against local, regional and national companies. Its goal is to provide a
17 total compensation package that represents the median of the market (i.e., 50th
18 percentile). Therefore, the total cost of Ameren Missouri's and AMS' total wages
19 and benefits are reflective of the market. Ameren witness Kelly Hasenfratz
20 discussed how the Company establishes market-based total compensation and
21 benefits in her direct testimony filed in File No. ER-2019-0335 and has confirmed
22 that the testimony in that proceeding still holds true today.

1 Further, AMS provides its goods and services to Ameren Missouri at cost
2 (i.e., without mark-up or profit). All other non-affiliated service providers'
3 services would include a mark-up and/or profit component in the pricing of their
4 goods and services.

5 In addition, AMS' procurement of labor and other goods and services at market
6 prices and its subsequent charging for its services at cost means that the cost of
7 goods and services provided to Ameren Missouri by AMS can reasonably be
8 concluded to be both priced at or below market and priced at cost. This is
9 because the wages and benefits paid to all employees of the Ameren companies
10 are benchmarked at the 50th percentile of market and, similarly, AMS uses
11 procurement procedures and policies for non-employee-related costs also
12 designed to ensure that good and services are obtained at market prices.

13 **Q. What additional steps has Ameren Missouri taken to ensure the**
14 **reasonableness of the cost of services provided to it by AMS?**

15 A. Ameren Missouri has formed a CAM team and meets extensive reporting and
16 recordkeeping requirements, going well beyond existing legislative and regulatory
17 requirements, to continually oversee the dealings between AMS and Ameren
18 Missouri. In my experience, Ameren Missouri is going beyond typical practices in
19 overseeing such dealings including by use of a dedicated team to oversee CAM
20 compliance, as well as with its reporting activities to monitor and enforce
21 compliance with the requirements set forth in the CAM.

22 **Q. Do you believe that Ameren Missouri would be able to procure the services**
23 **provided by AMS from an unaffiliated company at a lower cost?**

1 A. No. AMS follows well-established and well-designed procurement policies and
2 procedures that provide for solicitation of competitive bids when appropriate so
3 that it is obtaining qualified service providers and other goods it needs to provide
4 its services at reasonable, market-based prices. Given that AMS provides its
5 services to Ameren Missouri at cost, and that it benchmarks its wages, salaries and
6 benefits to the market, I do not believe that Ameren Missouri could procure its
7 services at a lower cost from a non-affiliated service provider.

8 **Q. Are there examples of services that AMS has outsourced, on behalf of Ameren**
9 **Missouri, to a non-affiliated service provider?**

10 A. Yes. Examples of services outsourced by AMS, on behalf of Ameren Missouri,
11 include lock box services, printing and distribution of customer bills, certain
12 vegetation management services, and janitorial services. AMS also uses outside
13 services and suppliers in some instances as it provides its services to the affiliates
14 when specialized knowledge or expertise is needed, or to supplement AMS
15 employee resources when appropriate.

16 **Q. Are there Missouri legal requirements that govern a utility's transactions with**
17 **affiliated companies?**

18 A. Yes, 20 CSR 4240-20.015 and 20 CSR 4240-40.015 set out the Commission's rules
19 for affiliated transactions for electric and gas utilities, respectively. Ameren
20 Missouri is both an electric and gas utility, and the Company's CAM applies to
21 both electric and gas utility affiliate transactions. The rules are intended to prevent
22 regulated utilities from subsidizing their nonregulated operations. Put another way
23 and as I discuss below, the regulations are designed to prevent unfair preferential

1 treatment of affiliates to the detriment of the Company’s customers. In order to
2 accomplish this objective, the rules set forth financial and evidentiary standards and
3 recordkeeping requirements applicable to any Commission-regulated electrical or
4 gas corporation whenever such corporation participates in transactions with any
5 affiliated entity (except with regard to HVAC services as defined in section
6 386.754, RSMo.). The rules and their effective enforcement are intended to provide
7 the public with the assurance that their rates are not adversely impacted by the
8 utilities’ nonregulated activities.

9 **Q. Has the Commission described the intent of the affiliate transaction rules in**
10 **prior orders?**

11 A. Yes, on at least two occasions in recent years. In its July 1, 2008 Report and Order
12 in File No. EM-2007-0374, the Commission granted Greater Missouri Operations
13 (“GMO”) and KCP&L a variance to the Affiliate Transactions Rule for all
14 transactions between GMO and KCP&L, except for wholesale power transactions,
15 which would be based on rates approved by the FERC. At page 264, of the
16 Commission’s Report and Order, it noted that “the purpose of the Commission’s
17 Affiliate Transactions Rule is to prevent cross-subsidization of regulated utility’s
18 non-regulated operations, not to prevent transactions at cost between two regulated
19 affiliates.” In 2018 when the Commission approved the merger of Great Plains
20 Energy (KCP&L’s and GMO’s parent) and Westar Energy, it essentially extended

1 that variance to Westar Energy, KCP&L and GMO's affiliated utility in Kansas
2 operating under the supervision of the Kansas Corporation Commission.²

3 **Q. Is it possible that by centralizing the shared services Ameren Missouri could**
4 **potentially be subsidizing non-regulated affiliates?**

5 A. No. First, AMC has no material non-regulated operations. Second, as previously
6 mentioned, AMS' services are provided at cost, which is determined by prevailing
7 wages/benefits and actual incurred expenses. Therefore, there is no issue of
8 potential subsidies from ratepayers to unregulated affiliates. The pricing of
9 affiliated services only has a material effect on which jurisdiction's customers are
10 responsible for, and benefit from, the cost of providing a service. Essentially, all
11 costs are attributable to one set of regulated customers or the other (i.e., Ameren
12 Missouri versus AIC versus ATXI). Put another way, the cost standard for affiliate
13 transactions is appropriate because the question being addressed is what costs
14 (which are in any event consistent with the market) should be included in the rates
15 for each set of customers in the AMC utility family.

16 **Q. Did the Staff of the Missouri Commission review Ameren Missouri's expenses**
17 **related to AMS charges in Ameren Missouri's most recent electric rate case**
18 **filing (File No. ER-2019-0335)?**

19 A. Yes. Staff witness Mark Oligshlaeger addressed the Staff's audit of Ameren
20 Missouri's expenses related to AMS charges in that recent electric rate case filing,
21 as Staff has done in many Ameren Missouri rate cases over the past 15 years. In

² File No. EM-2018-0012. While these decisions were made under the electric Affiliate Transaction Rule, the Affiliate Transaction Rule applicable to gas utilities is, in all respects pertinent to my testimony, identical to the electric rule as would be the Commission's reasoning in this merger case and in the earlier 2007 GMO case.

1 the audit, Staff did not find any irregularities or excessive charges to Ameren
2 Missouri by AMS, and accordingly did not propose any disallowances of those
3 expenses consistent with previous filings.³

4 **Q. Are AMS' costs billed to affiliated companies subject to regulatory review**
5 **other than by the Missouri Commission?**

6 A. Yes. AMS' costs billed to its affiliated FERC rate regulated subsidiaries have been,
7 and continue to be, reviewed by the FERC. The FERC has never challenged or
8 disallowed any of AMS' charges to the Company's transmission customers⁴.

9 The Illinois Commerce Commission ("ICC") also reviews AMS' charges to
10 AIC during rate proceedings. The ICC has accepted AMS' charges, as well as the
11 allocation methodology, which reflects fully distributed cost.

12 **Q. What do AMS' costs consist of?**

13 A. The majority of AMS costs are non-fuel/production operations and maintenance
14 ("O&M") costs, with more than 90% of those costs consisting of administrative and
15 general ("A&G") costs. AMS also performs services, the cost of which is
16 capitalized on the receiving affiliates' books.

³ Staff did not file specific testimony on affiliate issues in the Company's last gas rate proceeding, but since most of AMS' charges to Ameren Missouri are applicable to both its electric and gas operations, and are first recorded on its electric books with an appropriate share of them allocated to its gas operations for ratemaking purposes, Staff's audit of AMS costs in Ameren Missouri's last electric rate proceeding is indicative of Staff's view of AMS costs ultimately allocated to the gas operation as well.

⁴ The audit in Docket No. FA10-3-000 identified two immaterial AMS accounting items affecting the Company's tariff billings. The costs disallowed were for lobbying and charitable contributions recorded to O&M accounts that should have been recorded to account 426.1, a below-the-line accounts, which is not an includible account in the Midwest ISO Attachment O template. For the reasons give earlier, the lack of FERC disallowances is relevant to AMS charges ultimately allocated to the gas operation for ratemaking purposes.

1 **Q. In your opinion, would a reasonable manager, in possession of and with regard**
2 **for the relevant facts, select AMS to provide these services?**

3 A. Yes. In reaching that conclusion, the facts that would influence the decision maker
4 are:

- 5 • AMS has provided these services every year for more than 20 years and is
6 uniquely qualified to provide continuity of accounting, human resources, legal,
7 payroll, information technology and other services that if Ameren Missouri
8 were a standalone company, Ameren Missouri would have to provide for/or
9 obtain for itself;
- 10 • As explained in the next section of my testimony, AMS has achieved significant
11 reductions (in real terms) in the cost of providing these services;
- 12 • AMS provides these services on a zero-profit basis which no other provider
13 could do on a sustainable basis;
- 14 • AMS provides these services to all of Ameren Missouri's regulated affiliates
15 and no regulator has, to date, found these costs to be unreasonable or
16 imprudently incurred;
- 17 • AMS uses benchmarking to ensure that its costs are market-based and uses
18 competitive bidding in accordance with corporate policies for procurement; and
- 19 • Ameren Missouri can, if it so chooses, reduce the services it takes from AMS
20 in given areas and either self-provide a service or obtain it elsewhere.

21 Simply put, these facts provide a very compelling case that selecting AMS as the
22 service provider is not only a reasonable decision, but also the best decision that

1 escalated A&G expense levels. This indicates that the merged companies,
2 including AMS' allocated costs, are lower than they would likely have been absent
3 the mergers.

4 **Q. Have you also performed an assessment of Ameren Missouri's costs compared**
5 **to those of similar utilities?**

6 A. Yes. I compared Ameren Missouri's total gas distribution operations and
7 maintenance ("O&M") expense and gas administrative and general ("A&G")
8 expense against a peer group consisting of National LDCs with 100,000 to 250,000
9 customers.

10 **Q. Why was the customer count range for the peer companies set at 100,000 to**
11 **250,000 customers?**

12 A. Ameren Missouri operates a relatively small gas company with approximately
13 130,000 customers. For benchmarking results to be meaningful, it is important to
14 select peer companies with similar operating characteristics. Gas companies
15 significantly smaller than Ameren Missouri's gas operations may skew the results
16 of the analysis in Ameren Missouri's favor. Conversely, comparing Ameren
17 Missouri's gas operations to materially larger gas companies would produce an
18 inappropriate benchmark for gas operations of Ameren Missouri's size. Given
19 Ameren Missouri's LDC size, if anything, comparing it to LDCs that are twice as
20 large creates a more challenging comparison.

21 **Q. What years did the benchmarking analyses review?**

1 A. The six most recent years for which data were available (i.e., 2014-2019) were used
2 to perform the analyses, although the data are less reliable in 2019 because of data
3 unavailability.

4 **Q. What was the source of the data used to perform the benchmarking analyses?**

5 A. The analyses utilized data obtained from the S&P Global Market Intelligence
6 platform. The source of the data was the annual FERC Form 2 filings made by
7 LDC gas utilities.

8 **Q. Did you make any adjustments to the source data?**

9 A. No.

10 **Q. How did you normalize the benchmarking analyses to account for differences
11 in the size of the utilities?**

12 A. To normalize issues related to the size of the companies in the comparison, all costs
13 were evaluated on a per customer basis.

14 **Q. How did Ameren Missouri compare to its peers when reviewing total
15 distribution O&M cost per customer of the national LDC gas utilities peer
16 group?**

17 A. As shown on Schedule JJR-D4, Ameren Missouri has had an expense level that is
18 very close to the national average for distribution O&M costs in all six years
19 analyzed. That is consistent with AMS's objective of benchmarking its labor costs
20 at the 50th percentile, which would put it at the industry average.

21 **Q. How did Ameren Missouri compare to its peers when reviewing just the A&G
22 portion of these O&M expenses on a per customer basis?**

1 A. As shown on Schedule JJR-D5, Ameren Missouri's A&G expense per customer
2 showed significant improvement in 2019, which brought it back to the national
3 average. Again, these results are consistent with AMS's objectives for being "in
4 the middle of the pack" for labor costs, and reflects the small size of the Missouri
5 LDC operations.

6 **Q. Did you consider benchmarking Ameren Missouri's gas operations against
7 other peer groups?**

8 A. Yes, we considered using regional data for small LDCs and data for national LDCs
9 that were not constrained by size. For regional small LDC peers, the comparison
10 group becomes too small to be useful (fewer than 10 companies) and has significant
11 data gaps. For the larger group, it is not meaningful to compare a small, largely
12 rural LDC to ones operating in major cities and that are 20 to 30 times the size of
13 the Ameren Missouri's LDC, and that have a much more dense service area. So,
14 we chose to use the national small LDC peer group we have presented.

15 **Q. What can be concluded from the results of these analyses?**

16 A. As a result of the mergers of Union Electric, CIPS, CILCO, and IP, the Company
17 has been able to drive down costs of the businesses. The source of reduced costs is
18 from the consolidation of common corporate and A&G functions which now reside
19 at AMS. These savings result from the elimination of duplicative positions (e.g., a
20 CEO and CFO and Treasurer at each operating company, multiple CIOs, multiple
21 General Counsels, etc.) as well as economies of scale attributable to the
22 provisioning of services by a smaller number of employees than the four individual
23 companies could have achieved separately. In addition, AMS and Ameren

1 Missouri engage in continuous improvement efforts that should be expected to
2 contribute to bringing down Ameren Missouri's largest measure of controllable
3 cost, Total Distribution O&M per customer, which is currently at the average of the
4 peer group for small LDCs. The numbers indicate that these efforts have delivered
5 savings for customers, while maintaining compensation at competitive levels for
6 employees working at AMC subsidiaries.

7 **VII. CONCLUSIONS**

8 **Q. Based upon your review of AMS and the services that it provides to its**
9 **affiliated companies, what are your observations and conclusions?**

10 A. My observations and conclusions are as follows:

- 11 • The use of a shared services organizations, such as AMS, is reasonable and
12 consistent with utility industry practices and its use by Ameren Missouri for the
13 services provided in the test year was prudent and reasonable;
- 14 • The scope of services offered by AMS to its affiliated companies is consistent
15 with other utility shared services companies with which I am familiar;
- 16 • Customers of Ameren Missouri have benefited from the existence of, and
17 services provided by, AMS.

18 **Q. Please summarize what information was relied upon to form the basis of your**
19 **opinions on prudence and reasonableness.**

20 A. The support I have relied on in arriving at my opinions in this case includes:

- 21 • My own analysis of utility holding companies, service companies, Ameren
22 Missouri's A&G costs over time, and my benchmarking of Ameren Missouri's

1 distribution O&M and A&G costs versus national averages for small LDCs
2 presented in my direct testimony.

- 3 • Multiple versions of Ameren Missouri’s Cost Allocation Manual.
- 4 • Documentation pertinent to the Joint Planning and Procurement and Demand
5 Planning Processes for 2020 and 2021, and Ms. Moore’s direct testimony in
6 this case discussing those processes.
- 7 • All the testimony submitted in Ameren Missouri’s recent electric rate case (File
8 No. ER-2019-0335) on affiliate transactions, including Ameren Missouri’s filed
9 testimony of Mr. Tom Byrne, Ms. Laura Moore, Mr. Ben Hasse, and Ms. Kelly
10 Hasenfratz, Staff testimony of Mr. Mark Oligshlaeger, and the testimony of the
11 Office of Public Counsel witness Mr. Schallenberg.
- 12 • All of the data requests responses provided on the topic of affiliate transaction
13 costs and compliance in the electric rate case, which includes a very large
14 volume of material on the following topics:
 - 15 ○ Details of numerous affiliate transactions
 - 16 ○ Ameren Missouri’s corporate policies and procedures for
17 purchasing such services
 - 18 ○ Ameren Missouri’s and AMS’s bidding procedures
 - 19 ○ Organization charts for Ameren Missouri and its affiliates
 - 20 ○ Information on shared employees
 - 21 ○ Ameren Missouri’s Joint Planning and Procurement procedure
 - 22 ○ Vendor lists and information for Ameren Missouri and AMS
 - 23 ○ Details of corporate contracts for AMS

- 1 ○ Details of real estate transactions and costs for Ameren Missouri
- 2 ○ Cost allocation methodologies
- 3 ○ Compensation studies
- 4 ○ Tax allocation agreements
- 5 ○ Employee training processes
- 6 ○ Audits of affiliate transactions
- 7 ○ Determinations of the fair market price
- 8 ○ AMS's and Ameren Missouri's budgeting processes
- 9 ● All of the testimony submitted in the CAM docket (File No. EO-2017-0176)
- 10 including the testimony of Mr. Hasse, Ms. Moore and Mr. Byrne.
- 11 ● All of the data requests responses provided in the CAM docket, which represent
- 12 another very large volume of information on affiliate transactions, compliance
- 13 procedures, cost benchmarking and many other topics.
- 14 ● All of the similar material filed in Ameren Missouri's recent gas rate case (File
- 15 No. GR-2019-0077).
- 16 ● All of the filings in the Commission's recent affiliate transactions rule
- 17 workshop (File No. AW-2018-0394).
- 18 ● Regulatory actions for past Ameren Missouri rate cases and in past rate cases
- 19 for its utility affiliates, all of which provided for cost recovery for affiliate
- 20 provided A&G services (e.g., File No. ER-2016-0179 and Illinois Commerce
- 21 Commission Docket No. 16-0262)).
- 22 ● The Commission's decisions in similar cases for other Missouri utilities,
- 23 including cases for KCP&L (File Nos. EM-2007-0374 and EE-2017-0113),

1 Laclede Gas (File No. GR-2017-0215), and Empire District Electric (File No.
2 AO-2012-0062).

3 • Missouri and federal statutes relating to the treatment of costs of affiliate
4 transactions.

5 In aggregate, my testimony reflects my review of thousands of pages of material
6 in preparing the opinions expressed in my testimony, and my 44 years of
7 experience in utility regulation.

8 **Q. Does this conclude your direct testimony?**

9 **A. Yes, it does.**

JOHN J. REED

Chairman and Chief Executive Officer

Mr. Reed is a financial and economic consultant with more than 42 years of experience in the energy industry. Mr. Reed has also been the CEO of an NASD member securities firm, and Co-CEO of the nation's largest publicly traded management consulting firm (NYSE: NCI). He has provided advisory services in the areas of mergers and acquisitions, asset divestitures and purchases, strategic planning, project finance, corporate valuation, energy market analysis, rate and regulatory matters and energy contract negotiations to clients across North and Central America. Mr. Reed's comprehensive experience includes the development and implementation of nuclear, fossil, and hydroelectric generation divestiture programs with an aggregate valuation in excess of \$20 billion. Mr. Reed has also provided expert testimony on financial and economic matters on more than 400 occasions before the FERC, Canadian regulatory agencies, state utility regulatory agencies, various state and federal courts, and before arbitration panels in the United States and Canada. After graduation from the Wharton School of the University of Pennsylvania, Mr. Reed joined Southern California Gas Company, where he worked in the regulatory and financial groups, leaving the firm as Chief Economist in 1981. He served as executive and consultant with Stone & Webster Management Consulting and R.J. Rudden Associates prior to forming REED Consulting Group (RCG) in 1988. RCG was acquired by Navigant Consulting in 1997, where Mr. Reed served as an executive until leaving Navigant to join Concentric as Chairman and Chief Executive Officer.

REPRESENTATIVE PROJECT EXPERIENCE

Executive Management

- As an executive-level consultant, worked with CEOs, CFOs, other senior officers, and Boards of Directors of many of North America's top electric and gas utilities, as well as with senior political leaders of the U.S. and Canada on numerous engagements over the past 25 years. Directed merger, acquisition, divestiture, and project development engagements for utilities, pipelines and electric generation companies, repositioned several electric and gas utilities as pure distributors through a series of regulatory, financial, and legislative initiatives, and helped to develop and execute several "roll-up" or market aggregation strategies for companies seeking to achieve substantial scale in energy distribution, generation, transmission, and marketing.

Financial and Economic Advisory Services

- Retained by many of the nation's leading energy companies and financial institutions for services relating to the purchase, sale or development of new enterprises. These projects included major new gas pipeline projects, gas storage projects, several non-utility generation projects, the purchase and sale of project development and gas marketing firms, and utility acquisitions. Specific services provided include the development of corporate expansion plans, review of acquisition candidates, establishment of divestiture standards, due diligence on



acquisitions or financing, market entry or expansion studies, competitive assessments, project financing studies, and negotiations relating to these transactions.

Litigation Support and Expert Testimony

- Provided expert testimony on more than 400 occasions in administrative and civil proceedings on a wide range of energy and economic issues. Clients in these matters have included gas distribution utilities, gas pipelines, gas producers, oil producers, electric utilities, large energy consumers, governmental and regulatory agencies, trade associations, independent energy project developers, engineering firms, and gas and power marketers. Testimony has focused on issues ranging from broad regulatory and economic policy to virtually all elements of the utility ratemaking process. Also frequently testified regarding energy contract interpretation, accepted energy industry practices, horizontal and vertical market power, quantification of damages, and management prudence. Has been active in regulatory contract and litigation matters on virtually all interstate pipeline systems serving the U.S. Northeast, Mid-Atlantic, Midwest, and Pacific regions.
- Also served on FERC Commissioner Terzic's Task Force on Competition, which conducted an industry-wide investigation into the levels of and means of encouraging competition in U.S. natural gas markets and served on a "Blue Ribbon" panel established by the Province of New Brunswick regarding the future of natural gas distribution service in that province.

Resource Procurement, Contracting and Analysis

- On behalf of gas distributors, gas pipelines, gas producers, electric utilities, and independent energy project developers, personally managed or participated in the negotiation, drafting, and regulatory support of hundreds of energy contracts, including the largest gas contracts in North America, electric contracts representing billions of dollars, pipeline and storage contracts, and facility leases.
- These efforts have resulted in bringing large new energy projects to market across North America, the creation of hundreds of millions of dollars in savings through contract renegotiation, and the regulatory approval of a number of highly contested energy contracts.

Strategic Planning and Utility Restructuring

- Acted as a leading participant in the restructuring of the natural gas and electric utility industries over the past fifteen years, as an adviser to local distribution companies, pipelines, electric utilities, and independent energy project developers. In the recent past, provided services to most of the top 50 utilities and energy marketers across North America. Managed projects that frequently included the redevelopment of strategic plans, corporate reorganizations, the development of multi-year regulatory and legislative agendas, merger, acquisition and divestiture strategies, and the development of market entry strategies. Developed and supported merchant function exit strategies, marketing affiliate strategies, and detailed plans for the functional business units of many of North America's leading utilities.



PROFESSIONAL HISTORY

Concentric Energy Advisors, Inc. (2002 – Present)

Chairman and Chief Executive Officer

CE Capital Advisors (2004 – Present)

Chairman, President, and Chief Executive Officer

Navigant Consulting, Inc. (1997 – 2002)

President, Navigant Energy Capital (2000 – 2002)

Executive Director (2000 – 2002)

Co-Chief Executive Officer, Vice Chairman (1999 – 2000)

Executive Managing Director (1998 – 1999)

President, REED Consulting Group, Inc. (1997 – 1998)

REED Consulting Group (1988 – 1997)

Chairman, President and Chief Executive Officer

R.J. Rudden Associates, Inc. (1983 – 1988)

Vice President

Stone & Webster Management Consultants, Inc. (1981 – 1983)

Senior Consultant

Consultant

Southern California Gas Company (1976 – 1981)

Corporate Economist

Financial Analyst

Treasury Analyst

EDUCATION

Wharton School, University of Pennsylvania

B.S., Economics and Finance, 1976

Licensed Securities Professional: NASD Series 7, 63, 24, 79 and 99 Licenses

BOARDS OF DIRECTORS (PAST AND PRESENT)

Concentric Energy Advisors, Inc.

Navigant Consulting, Inc.

Navigant Energy Capital

Nukem, Inc.

New England Gas Association

R. J. Rudden Associates

REED Consulting Group



AFFILIATIONS

American Gas Association
Energy Bar Association
Guild of Gas Managers
International Association of Energy Economists
Northeast Gas Association
Society of Gas Lighters
Society of Utility and Regulatory Financial Analysts

ARTICLES AND PUBLICATIONS

“Maximizing U.S. federal loan guarantees for new nuclear energy,” Bulletin of the Atomic Scientists
(with John C. Slocum), July 29, 2009
“Smart Decoupling – Dealing with unfunded mandates in performance-based ratemaking,” Public
Utilities Fortnightly, May 2012



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Alaska Regulatory Commission				
Chugach Electric	12/86	Chugach Electric	U-86-11	Cost Allocation
Chugach Electric	5/87	Enstar Natural Gas Company	U-87-2	Tariff Design
Chugach Electric	12/87	Enstar Natural Gas Company	U-87-42	Gas Transportation
Chugach Electric	11/87 2/88	Chugach Electric	U-87-35	Cost of Capital
Anchorage Municipal Light & Power	9/17	Anchorage Municipal Light & Power	U-16-094 U-17-008	Project Prudence
Municipality of Anchorage ("MOA") d/b/a Municipal Light and Power	8/19 10/19	Municipality of Anchorage ("MOA") d/b/a Municipal Light and Power	U-18-102 U-19-020 U-19-021	Merger Standard for Approval
Alberta Utilities Commission				
Alberta Utilities (AltaLink, EPCOR, ATCO, ENMAX, FortisAlberta, AltaGas)	1/13	Alberta Utilities	Application 1566373, Proceeding ID 20	Stranded Costs
Arizona Corporation Commission				
Tucson Electric Power	7/12	Tucson Electric Power	E-01933A-12-0291	Cost of Capital
UNS Energy and Fortis Inc.	1/14	UNS Energy, Fortis Inc.	E-04230A-00011 E-01933A-14-0011	Merger
California Energy Commission				
Southern California Gas Co.	8/80	Southern California Gas Co.	80-BR-3	Gas Price Forecasting



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
California Public Utility Commission				
Southern California Gas Co.	3/80	Southern California Gas Co.	TY 1981 G.R.C.	Cost of Service, Inflation
Pacific Gas Transmission Co.	10/91 11/91	Pacific Gas & Electric Co.	App. 89-04-033	Rate Design
Pacific Gas Transmission Co.	7/92	Southern California Gas Co.	A. 92-04-031	Rate Design
San Diego Gas & Electric Company	4/19 8/19	San Diego Gas & Electric Company	A. 19-04-017	Risk Premium, Return on Equity
Colorado Public Utilities Commission				
AMAX Molybdenum	2/90	Commission Rulemaking	89R-702G	Gas Transportation
AMAX Molybdenum	11/90	Commission Rulemaking	90R-508G	Gas Transportation
Xcel Energy	8/04	Xcel Energy	031-134E	Cost of Debt
Public Service Company of Colorado	6/17	Public Service Company of Colorado	17AL-0363G	Return on Equity (Gas)
CT Public Utilities Regulatory Authority				
Connecticut Natural Gas	12/88	Connecticut Natural Gas	88-08-15	Gas Purchasing Practices
United Illuminating	3/99	United Illuminating	99-03-04	Nuclear Plant Valuation
Southern Connecticut Gas	2/04	Southern Connecticut Gas	00-12-08	Gas Purchasing Practices
Southern Connecticut Gas	4/05	Southern Connecticut Gas	05-03-17	LNG/Trunkline
Southern Connecticut Gas	5/06	Southern Connecticut Gas	05-03-17PH01	LNG/Trunkline



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Southern Connecticut Gas	8/08	Southern Connecticut Gas	06-05-04	Peaking Service Agreement
SJW Group and Connecticut Water Service	4/19	SJW Group and Connecticut Water Service	19-04-02	Customer Benefits, Public Interest
District of Columbia PSC				
Potomac Electric Power Company	3/99 5/99 7/99	Potomac Electric Power Company	945	Divestiture of Gen. Assets & Purchase Power Contracts
AltaGas Ltd./WGL Holdings	4/17 8/17 10/17	AltaGas Ltd./WGL Holdings	1142	Merger Standards, Public Interest Standard
Federal Energy Regulatory Commission				
Safe Harbor Water Power Corp.	8/82	Safe Harbor Water Power Corp.	-	Wholesale Electric Rate Increase
Western Gas Interstate Company	5/84	Western Gas Interstate Company	RP84-77	Load Forecast Working Capital
Southern Union Gas	4/87 5/87	El Paso Natural Gas Company	RP87-16-000	Take-or-Pay Costs
Connecticut Natural Gas	11/87	Penn-York Energy Corporation	RP87-78-000	Cost Allocation/Rate Design
AMAX Magnesium	12/88 1/89	Questar Pipeline Company	RP88-93-000	Cost Allocation/Rate Design
Western Gas Interstate Company	6/89	Western Gas Interstate Company	RP89-179-000	Cost Allocation/Rate Design, Open-Access Transportation
Associated CD Customers	12/89	CNG Transmission	RP88-211-000	Cost Allocation/Rate Design



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Utah Industrial Group	9/90	Questar Pipeline Company	RP88-93-000, Phase II	Cost Allocation/Rate Design
Iroquois Gas Trans. System	8/90	Iroquois Gas Transmission System	CP89-634-000/001 CP89-815-000	Gas Markets, Rate Design, Cost of Capital, Capital Structure
Boston Edison Company	1/91	Boston Edison Company	ER91-243-000	Electric Generation Markets
Cincinnati Gas and Electric Co., Union Light, Heat and Power Company, Lawrenceburg Gas Company	7/91	Texas Gas Transmission Corp.	RP90-104-000 RP88-115-000 RP90-192-000	Cost Allocation, Rate Design, Comparability of Service
Ocean State Power II	7/91	Ocean State Power II	ER89-563-000	Competitive Market Analysis, Self-dealing
Brooklyn Union/PSE&G	7/91	Texas Eastern	RP88-67, et al	Market Power, Comparability of Service
Northern Distributor Group	9/92 11/92	Northern Natural Gas Company	RP92-1-000, et al	Cost of Service
Canadian Association of Petroleum Producers and Alberta Pet. Marketing Comm.	10/92 7/97	Lakehead Pipeline Co. L.P.	IS92-27-000	Cost Allocation, Rate Design
Colonial Gas, Providence Gas	7/93 8/93	Algonquin Gas Transmission	RP93-14	Cost Allocation, Rate Design
Iroquois Gas Transmission	94	Iroquois Gas Transmission	RP94-72-000	Cost of Service, Rate Design
Transco Customer Group	1/94	Transcontinental Gas Pipeline Corporation	RP92-137-000	Rate Design, Firm to Wellhead
Pacific Gas Transmission	2/94 3/95	Pacific Gas Transmission	RP94-149-000	Rolled-In vs. Incremental Rates, Rate Design



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Tennessee GSR Group	1/95 3/95 1/96	Tennessee Gas Pipeline Company	RP93-151-000 RP94-39-000 RP94-197-000 RP94-309-000	GSR Costs
PG&E and SoCal Gas	8/96 9/96	El Paso Natural Gas Company	RP92-18-000	Stranded Costs
Iroquois Gas Transmission System, L.P.	97	Iroquois Gas Transmission System, L.P.	RP97-126-000	Cost of Service, Rate Design
BEC Energy - Commonwealth Energy System	2/99	Boston Edison Company/ Commonwealth Energy System	EC99-33-000	Market Power Analysis – Merger
Central Hudson Gas & Electric, Consolidated Co. of New York, Niagara Mohawk Power Corporation, Dynegy Power Inc.	10/00	Central Hudson Gas & Electric, Consolidated Co. of New York, Niagara Mohawk Power Corporation, Dynegy Power Inc.	EC01-7-000	Market Power 203/205 Filing
Wyckoff Gas Storage	12/02	Wyckoff Gas Storage	CP03-33-000	Need for Storage Project
Indicated Shippers/Producers	10/03	Northern Natural Gas	RP98-39-029	Ad Valorem Tax Treatment
Maritimes & Northeast Pipeline	6/04	Maritimes & Northeast Pipeline	RP04-360-000	Rolled-In Rates
ISO New England	8/04 2/05	ISO New England	ER03-563-030	Cost of New Entry
Transwestern Pipeline Company, LLC	9/06	Transwestern Pipeline Company, LLC	RP06-614-000	Business Risk



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Portland Natural Gas Transmission System	6/08	Portland Natural Gas Transmission System	RP08-306-000	Market Assessment, Natural Gas Transportation, Rate Setting
Portland Natural Gas Transmission System	5/10 3/11 4/11	Portland Natural Gas Transmission System	RP10-729-000	Business Risks, Extraordinary and Non-recurring Events Pertaining to Discretionary Revenues
Morris Energy	7/10	Morris Energy	RP10-79-000	Impact of Preferential Rate
Gulf South Pipeline	10/14	Gulf South Pipeline	RP15-65-000	Business Risk, Rate Design
BNP Paribas Energy Trading, GP South Jersey Resource Group, LLC	2/15	Transcontinental Gas Pipeline Corporation	RP06-569-008 RP07-376-005	Regulatory Policy, Incremental Rates, Stacked Rate
Tallgrass Interstate Gas Transmission, LLC	10/15 12/15	Tallgrass Interstate Gas Transmission, LLC	RP16-137-000	Market Assessment, Rate Design, Rolled-in Rate Treatment
Tennessee Valley Authority	2/21	Athens Utility Board, Gibson Electric Membership Corp., Joe Wheeler Electric Membership Corp., and Volunteer Energy Cooperative v. Tennessee Valley Authority	EL21-40-000 TX21-01-000	Public Policy, Competition, Economic Harm



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Florida Impact Estimating Conference				
Florida Power and Light Co. on behalf of the Florida Investor-Owned Utilities	2/19 3/19	Florida Power and Light Co. on behalf of the Florida Investor-Owned Utilities	Right to Competitive Energy Market for Customers of Investor-Owned Utilities; Allowing Energy Choice	Economic and Financial Impact of Deregulation on Customers and Market Design and Function
Florida Public Service Commission				
Florida Power and Light Co.	10/07	Florida Power & Light Co.	070650-EI	Need for New Nuclear Plant
Florida Power and Light Co.	5/08	Florida Power & Light Co.	080009-EI	New Nuclear Cost Recovery, Prudence
Florida Power and Light Co.	3/09 8/09	Florida Power & Light Co.	080677-EI	Benchmarking in Support of ROE
Florida Power and Light Co.	3/09 5/09 8/09	Florida Power & Light Co.	090009-EI	New Nuclear Cost Recovery, Prudence
Florida Power and Light Co.	3/10 5/10 8/10	Florida Power & Light Co.	100009-EI	New Nuclear Cost Recovery, Prudence
Florida Power and Light Co.	3/11 7/11	Florida Power & Light Co.	110009-EI	New Nuclear Cost Recovery, Prudence
Florida Power and Light Co.	3/12 7/12	Florida Power & Light Co.	120009-EI	New Nuclear Cost Recovery, Prudence
Florida Power and Light Co.	3/12 8/12	Florida Power & Light Co.	120015-EI	Benchmarking in Support of ROE
Florida Power and Light Co.	3/13 7/13	Florida Power & Light Co.	130009	New Nuclear Cost Recovery, Prudence



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Florida Power and Light Co.	3/14	Florida Power & Light Co.	140009	New Nuclear Cost Recovery, Prudence
Florida Power and Light Co.	3/15 7/15	Florida Power & Light Co.	150009	New Nuclear Cost Recovery, Prudence
Florida Power and Light Co.	10/15	Florida Power and Light Co.	150001	Recovery of Replacement Power Costs
Florida Power and Light Co.	3/16	Florida Power & Light Co.	160021-EI	Benchmarking in Support of ROE
Florida Senate Committee on Communication, Energy and Utilities				
Florida Power and Light Co.	2/09	Florida Power & Light Co.	-	Securitization
Hawai'i Public Utility Commission				
Hawaiian Electric Light Company, Inc.	6/00	Hawaiian Electric Light Company, Inc.	99-0207	Standby Charge
NextEra Energy, Inc. Hawaiian Electric Companies	4/15 8/15 10/15	Hawaiian Electric Company, Inc.; Hawaii Electric Light Company, Inc., Maui Electric Company, Ltd., NextEra Energy, Inc.	2015-0022	Merger Application
Idaho Public Utilities Commission				
Hydro One Limited and Avista Corporation	9/18 11/18	Hydro One Limited and Avista Corporation	AVU-E-17-09 AVU-G-17-05	Governance, Financial Integrity and Ring-fencing Merger Commitments



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Illinois Commerce Commission				
Renewables Suppliers (Algonquin Power Co., EDP Renewables North America, Invenergy, NextEra Energy Resources)	3/14	Renewables Suppliers	13-0546	Application for Rehearing and Reconsideration, Long-term Purchase Power Agreements
WE Energies Corporation	8/14 12/14 2/15	WE Energies/Integrays	14-0496	Merger Application
Indiana Utility Regulatory Commission				
Northern Indiana Public Service Company	10/01	Northern Indiana Public Service Company	41746	Valuation of Electric Generating Facilities
Northern Indiana Public Service Company	1/08 3/08	Northern Indiana Public Service Company	43396	Asset Valuation
Northern Indiana Public Service Company	8/08	Northern Indiana Public Service Company	43526	Fair Market Value Assessment
Indianapolis Power & Light Company	12/14	Indianapolis Power & Light Company	44576	Asset Valuation
Indianapolis Power & Light Company	12/16	Indianapolis Power & Light Company	44893	Rate Recovery for New Plant Additions, Valuation of Electric Generating Facilities
Iowa Utilities Board				
Interstate Power and Light	7/05	Interstate Power and Light and FPL Energy Duane Arnold, LLC	SPU-05-15	Sale of Nuclear Plant
Interstate Power and Light	5/07	City of Everly, Iowa	SPU-06-5	Municipalization



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Interstate Power and Light	5/07	City of Kalona, Iowa	SPU-06-6	Municipalization
Interstate Power and Light	5/07	City of Wellman, Iowa	SPU-06-10	Municipalization
Interstate Power and Light	5/07	City of Terril, Iowa	SPU-06-8	Municipalization
Interstate Power and Light	5/07	City of Rolfe, Iowa	SPU-06-7	Municipalization
Kansas Corporation Commission				
Great Plains Energy Kansas City Power and Light Company	1/17	Great Plains Energy, Kansas City Power & Light Company, and Westar Energy	16-KCPE-593-ACQ	Merger Standards, Acquisition Premium, Ring-Fencing, Public Interest Standard
Great Plains Energy Kansas City Power and Light Company	8/17 2/18	Great Plains Energy, Kansas City Power & Light Company, and Westar Energy	18-KCPE-095-MER	Merger Standards, Transaction Value, Merger Benefits, Ring-Fencing,
Maine Public Utility Commission				
Northern Utilities	5/96	Granite State and PNGTS	95-480 95-481	Transportation Service and PBR
Maine Water Company	7/19 8/19	Maine Water Company	2019-00096	Merger Standards, Net Benefits to Customers, Ring-fencing
Maryland Public Service Commission				
Eastalco Aluminum	3/82	Potomac Edison	7604	Cost Allocation
Potomac Electric Power Company	8/99	Potomac Electric Power Company	8796	Stranded Cost & Price Protection



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
AltaGas Ltd./WGL Holdings	4/17 9/17 1/18 2/18	AltaGas Ltd./WGL Holdings	9449	Merger Standards, Public Interest Standard
Washington Gas Light Company	8/20	Washington Gas Light Company	9622	Regulatory Policy
Mass. Department of Public Utilities				
Haverhill Gas	5/82	Haverhill Gas	DPU #1115	Cost of Capital
New England Energy Group	1/87	Commission Investigation	-	Gas Transportation Rates
Energy Consortium of Mass.	9/87	Commonwealth Gas Company	DPU-87-122	Cost Allocation, Rate Design
Mass. Institute of Technology	12/88	Middleton Municipal Light	DPU #88-91	Cost Allocation, Rate Design
Energy Consortium of Mass.	3/89	Boston Gas	DPU #88-67	Rate Design
PG&E Bechtel Generating Co./ Constellation Holdings	10/91	Commission Investigation	DPU #91-131	Valuation of Environmental Externalities
Coalition of Non-Utility Generators		Cambridge Electric Light Co. & Commonwealth Electric Co.	DPU 91-234 EFSC 91-4	Integrated Resource Management
The Berkshire Gas Company Essex County Gas Company Fitchburg Gas and Elec. Light Co.	5/92	The Berkshire Gas Company Essex County Gas Company Fitchburg Gas & Elec. Light Co.	DPU #92-154	Gas Purchase Contract Approval



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Boston Edison Company	7/92	Boston Edison	DPU #92-130	Least Cost Planning
Boston Edison Company	7/92	The Williams/Newcorp Generating Co.	DPU #92-146	RFP Evaluation
Boston Edison Company	7/92	West Lynn Cogeneration	DPU #92-142	RFP Evaluation
Boston Edison Company	7/92	L'Energia Corp.	DPU #92-167	RFP Evaluation
Boston Edison Company	7/92	DLS Energy, Inc.	DPU #92-153	RFP Evaluation
Boston Edison Company	7/92	CMS Generation Co.	DPU #92-166	RFP Evaluation
Boston Edison Company	7/92	Concord Energy	DPU #92-144	RFP Evaluation
The Berkshire Gas Company Colonial Gas Company Essex County Gas Company Fitchburg Gas and Electric Company	11/93	The Berkshire Gas Company Colonial Gas Company Essex County Gas Company Fitchburg Gas and Electric Co.	DPU #93-187	Gas Purchase Contract Approval
Bay State Gas Company	10/93	Bay State Gas Company	93-129	Integrated Resource Planning
Boston Edison Company	94	Boston Edison	DPU #94-49	Surplus Capacity
Hudson Light & Power Department	4/95	Hudson Light & Power Dept.	DPU #94-176	Stranded Costs
Essex County Gas Company	5/96	Essex County Gas Company	96-70	Unbundled Rates



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Boston Edison Company	8/97	Boston Edison Company	97-63	Holding Company Corporate Structure
Berkshire Gas Company	6/98	Berkshire Gas Mergeco Gas Co.	D.T.E. 98-87	Merger Approval
Eastern Edison Company	8/98	Montaup Electric Company	D.T.E. 98-83	Marketing for Divestiture of its Generation Business
Boston Edison Company	98	Boston Edison Company	D.T.E. 97-113	Fossil Generation Divestiture
Boston Edison Company	2/99	Boston Edison Company	D.T.E. 98-119	Nuclear Generation Divestiture
Eastern Edison Company	12/98	Montaup Electric Company	D.T.E. 99-9	Sale of Nuclear Plant
NStar	9/07 12/07	NStar, Bay State Gas, Fitchburg G&E, NE Gas, W. MA Electric	DPU 07-50	Decoupling, Risk
NStar	6/11	NStar, Northeast Utilities	DPU 10-170	Merger Approval
Town of Milford	1/19 3/19 5/19	Milford Water Company	DPU 18-60	Valuation Analysis
Mass. Energy Facilities Siting Council				
Mass. Institute of Technology	1/89	M.M.W.E.C.	EFSC-88-1	Least-Cost Planning
Boston Edison Company	9/90	Boston Edison	EFSC-90-12	Electric Generation Markets
Silver City Energy Ltd. Partnership	11/91	Silver City Energy	D.P.U. 91-100	State Policies, Need for Facility
Michigan Public Service Commission				
Detroit Edison Company	9/98	Detroit Edison Company	U-11726	Market Value of Generation Assets



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Consumers Energy Company	8/06 1/07	Consumers Energy Company	U-14992	Sale of Nuclear Plant
WE Energies	12/11	Wisconsin Electric Power Co	U-16830	Economic Benefits, Prudence
Consumer Energy Company	7/13	Consumers Energy Company	U-17429	Certificate of Need, Integrated Resource Plan
WE Energies	8/14 3/15	WE Energies/Integrus	U-17682	Merger Application
Minnesota Public Utilities Commission				
Xcel Energy/No. States Power	9/04	Xcel Energy/No. States Power	G002/GR-04-1511	NRG Impacts
Interstate Power and Light	8/05	Interstate Power and Light and FPL Energy Duane Arnold, LLC	E001/PA-05-1272	Sale of Nuclear Plant
Northern States Power Company d/b/a Xcel Energy	11/05	Northern States Power Company	E002/GR-05-1428	NRG Impacts on Debt Costs
Northern States Power Company d/b/a Xcel Energy	09/06 10/06 11/06	NSP v. Excelsior	E6472/M-05-1993	PPA, Financial Impacts
Northern States Power Company d/b/a Xcel Energy	11/06	Northern States Power Company	G002/GR-06-1429	Return on Equity
Northern States Power	11/08 05/09	Northern States Power Company	E002/GR-08-1065	Return on Equity
Northern States Power	11/09 6/10	Northern States Power Company	G002/GR-09-1153	Return on Equity
Northern States Power	11/10 5/11	Northern States Power Company	E002/GR-10-971	Return on Equity



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Northern States Power Company	1/16	Northern States Power Company	E002/GR-15-826	Industry Perspective
Northern States Power Company	11/19	Northern States Power Company	E002/GR-19-564	Return on Equity
Missouri House Committee on Energy and the Environment				
Ameren Missouri	3/16	Ameren Missouri	HB 2816	Performance Based Ratemaking
Missouri Public Service Commission				
Missouri Gas Energy	1/03 04/03	Missouri Gas Energy	GR-2001-382	Gas Purchasing Practices, Prudence
Aquila Networks	2/04	Aquila-MPS, Aquila L&P	ER-2004-0034 HR-2004-0024	Cost of Capital, Capital Structure
Aquila Networks	2/04	Aquila-MPS, Aquila L&P	GR-2004-0072	Cost of Capital, Capital Structure
Missouri Gas Energy	11/05 2/06 7/06	Missouri Gas Energy	GR-2002-348 GR-2003-0330	Capacity Planning
Missouri Gas Energy	11/10 1/11	KCP&L	ER-2010-0355	Natural Gas DSM
Missouri Gas Energy	11/10 1/11	KCP&L GMO	ER-2010-0356	Natural Gas DSM
Laclede Gas Company	5/11	Laclede Gas Company	CG-2011-0098	Affiliate Pricing Standards
Union Electric Company d/b/a Ameren Missouri	2/12 8/12	Union Electric Company	ER-2012-0166	Return on Equity, Earnings Attrition, Regulatory Lag
Union Electric Company d/b/a Ameren Missouri	6/14	Noranda Aluminum Inc.	EC-2014-0223	Ratemaking, Regulatory and Economic Policy



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Union Electric Company d/b/a Ameren Missouri	1/15 2/15	Union Electric Company	ER-2014-0258	Revenue Requirements, Ratemaking Policies
Great Plains Energy Kansas City Power and Light Company	8/17 2/18 3/18	Great Plains Energy, Kansas City Power & Light Company, and Westar Energy	EM-2018-0012	Merger Standards, Transaction Value, Merger Benefits, Ring-Fencing,
Union Electric Company d/b/a Ameren Missouri	6/19	Union Electric Company d/b/a Ameren Missouri	EO-2017-0176	Affiliate Transactions, Cost Allocation Manual
Union Electric Company d/b/a Ameren Missouri	7/19 1/20 2/20	Union Electric Company d/b/a Ameren Missouri	ER-2019-0335	Reasonableness of Affiliate Services and Costs
Missouri Senate Committee on Commerce, Consumer Protection, Energy and the Environment				
Ameren Missouri	3/16	Ameren Missouri	SB 1028	Performance Based Ratemaking
Montana Public Service Commission				
Great Falls Gas Company	10/82	Great Falls Gas Company	82-4-25	Gas Rate Adjustment Clause
National Energy Board (now the Canada Energy Regulator)				
Alberta-Northeast	2/87	Alberta Northeast Gas Export Project	GH-1-87	Gas Export Markets
Alberta-Northeast	11/87	TransCanada Pipeline	GH-2-87	Gas Export Markets
Alberta-Northeast	1/90	TransCanada Pipeline	GH-5-89	Gas Export Markets
Independent Petroleum Association of Canada	1/92	Interprovincial Pipeline, Inc.	RH-2-91	Pipeline Valuation, Toll
The Canadian Association of Petroleum Producers	11/93	Transmountain Pipeline	RH-1-93	Cost of Capital



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Alliance Pipeline L.P.	6/97	Alliance Pipeline L.P.	GH-3-97	Market Study
Maritimes & Northeast Pipeline	97	Sable Offshore Energy Project	GH-6-96	Market Study
Maritimes & Northeast Pipeline	2/02	Maritimes & Northeast Pipeline	GH-3-2002	Natural Gas Demand Analysis
TransCanada Pipelines	8/04	TransCanada Pipelines	RH-3-2004	Toll Design
Brunswick Pipeline	5/06	Brunswick Pipeline	GH-1-2006	Market Study
TransCanada Pipelines Ltd.	12/06 4/07	TransCanada Pipelines Ltd.: Gros Cacouna Receipt Point Application	RH-1-2007	Toll Design
Repsol Energy Canada Ltd	3/08	Repsol Energy Canada Ltd	GH-1-2008	Market Study
Maritimes & Northeast Pipeline	7/10	Maritimes & Northeast Pipeline	RH-4-2010	Regulatory Policy, Toll Development
TransCanada Pipelines Ltd	9/11 5/12	TransCanada Pipelines Ltd.	RH-3-2011	Business Services and Tolls Application
Trans Mountain Pipeline LLC	6/12 1/13	Trans Mountain Pipeline LLC	RH-1-2012	Toll Design
TransCanada Pipelines Ltd	8/13	TransCanada Pipelines Ltd	RE-001-2013	Toll Design
NOVA Gas Transmission Ltd	11/13	NOVA Gas Transmission Ltd	OF-Fac-Gas-N081-2013-1001	Toll Design
Trans Mountain Pipeline LLC	12/13	Trans Mountain Pipeline LLC	OF-Fac-Oil-T260-2013-0301	Economic and Financial Feasibility, Project Benefits



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Energy East Pipeline Ltd.	10/14	Energy East Pipeline	Of-Fac-Oil-E266-2014-01 02	Economic and Financial Feasibility, Project Benefits
NOVA Gas Transmission Ltd	5/16	NOVA Gas Transmission Ltd	GH-003-2015	Certificate of Public Convenience and Necessity
TransCanada PipeLines Limited	4/17 9/17	TransCanada PipeLines Limited	Dawn LTFP Service Application	Public Interest, Toll Design
NOVA Gas Transmission Ltd	10/17	NOVA Gas Transmission Ltd	MH-031-2017	Toll Design
NOVA Gas Transmission Ltd	3/19 11/19	NOVA Gas Transmission Ltd	RH-001-2019	Tolling Changes
Enbridge Pipelines Inc.	12/19 6/20 8/20	Enbridge Pipelines Inc.	C03823 RH-001-2020	Market and Scarcity Conditions; Reasonableness of Tolls, Terms, and Conditions; Public Interest; Open Season Process
New Brunswick Energy and Utilities Board				
Atlantic Wallboard/JD Irving Co	1/08	Enbridge Gas New Brunswick	MCTN #298600	Rate Setting for EGNB
Atlantic Wallboard/Flakeboard	9/09 6/10 7/10	Enbridge Gas New Brunswick	NBEUB 2009-017	Rate Setting for EGNB
Atlantic Wallboard/Flakeboard	1/14	Enbridge Gas New Brunswick	NBEUB Matter 225	Rate Setting for EGNB
NH Public Utilities Commission				
Bus & Industry Association	6/89	P.S. Co. of New Hampshire	DR89-091	Fuel Costs
Bus & Industry Association	5/90	Northeast Utilities	DR89-244	Merger & Acquisition Issues
Eastern Utilities Associates	6/90	Eastern Utilities Associates	DF89-085	Merger & Acquisition Issues



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
EnergyNorth Natural Gas	12/90	EnergyNorth Natural Gas	DE90-166	Gas Purchasing Practices
EnergyNorth Natural Gas	7/90	EnergyNorth Natural Gas	DR90-187	Special Contracts, Discounted Rates
Northern Utilities, Inc.	12/91	Commission Investigation	DR91-172	Generic Discounted Rates
Public Service Co. of New Hampshire	7/14	Public Service Co. of NH	DE 11-250	Prudence
Public Service Co. of New Hampshire	7/15 11/15	Public Service Co. of NH	14-238	Restructuring and Rate Stabilization
New Jersey Board of Public Utilities				
Hilton/Golden Nugget	12/83	Atlantic Electric	BPU 832-154	Line Extension Policies
Golden Nugget	3/87	Atlantic Electric	BPU 837-658	Line Extension Policies
New Jersey Natural Gas	2/89	New Jersey Natural Gas	BPU GR89030335J	Cost Allocation, Rate Design
New Jersey Natural Gas	1/91	New Jersey Natural Gas	BPU GR90080786J	Cost Allocation, Rate Design
New Jersey Natural Gas	8/91	New Jersey Natural Gas	BPU GR91081393J	Rate Design, Weather Normalization Clause
New Jersey Natural Gas	4/93	New Jersey Natural Gas	BPU GR93040114J	Cost Allocation, Rate Design
South Jersey Gas	4/94	South Jersey Gas	BRC Dock No. GR080334	Revised Levelized Gas Adjustment
New Jersey Utilities Association	9/96	Commission Investigation	BPU AX96070530	PBOP Cost Recovery
Morris Energy Group	11/09	Public Service Electric & Gas	BPU GR 09050422	Discriminatory Rates



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
New Jersey American Water Co.	4/10	New Jersey American Water Co.	BPU WR 1040260	Tariff Rates and Revisions
Electric Customer Group	1/11	Generic Stakeholder Proceeding	BPU GR10100761 ER10100762	Natural Gas Ratemaking Standards and pricing
New Mexico Public Service Commission				
Gas Company of New Mexico	11/83	Public Service Co. of New Mexico	1835	Cost Allocation, Rate Design
Southwestern Public Service Co., New Mexico	12/12	SPS New Mexico	12-00350-UT	Rate Case, Return on Equity
PNM Resources	12/13 10/14 12/14	Public Service Co. of New Mexico	13-00390-UT	Nuclear Valuation, In Support of Stipulation
New York State Public Service Commission				
Iroquois Gas Transmission	12/86	Iroquois Gas Transmission System	70363	Gas Markets
Brooklyn Union Gas Company	8/95	Brooklyn Union Gas Company	95-6-0761	Panel on Industry Directions
Central Hudson, ConEdison and Niagara Mohawk	9/00	Central Hudson, ConEdison and Niagara Mohawk	96-E-0909 96-E-0897 94-E-0098 94-E-0099	Section 70, Approval of New Facilities
Central Hudson, New York State Electric & Gas, Rochester Gas & Electric	5/01	Joint Petition of NiMo, NYSEG, RG&E, Central Hudson, Constellation and Nine Mile Point	01-E-0011	Section 70, Rebuttal Testimony



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Rochester Gas & Electric	12/03	Rochester Gas & Electric	03-E-1231	Sale of Nuclear Plant
Rochester Gas & Electric	1/04	Rochester Gas & Electric	03-E-0765 02-E-0198 03-E-0766	Sale of Nuclear Plant; Ratemaking Treatment of Sale
Rochester Gas and Electric and NY State Electric & Gas Corp	2/10	Rochester Gas & Electric NY State Electric & Gas Corp	09-E-0715 09-E-0716 09-E-0717 09-E-0718	Depreciation Policy
National Fuel Gas Corporation	9/16 9/16	National Fuel Gas Corporation	16-G-0257	Ring-fencing Policy
NextEra Energy Transmission New York	8/18	NextEra Energy Transmission New York	18-T-0499	Certificate of Need for Transmission Line, Vertical Market Power
NextEra Energy Transmission New York	2/19 8/19	NextEra Energy Transmission New York	18-E-0765	Certificate of Need for Transmission Line, Vertical Market Power
Nova Scotia Utility and Review Board				
Nova Scotia Power	9/12	Nova Scotia Power	P-893	Audit Reply
Nova Scotia Power	8/14	Nova Scotia Power	P-887	Audit Reply
Nova Scotia Power	5/16	Nova Scotia Power	2017-2019 Fuel Stability Plan	Used and Useful Ratemaking
NSP Maritime Link ("NSPML")	12/16 2/17 5/17	NSP Maritime Link ("NSPML")	M07718 NSPML Interim Cost Assessment Application	Used and Useful Ratemaking
NSP Maritime Link ("NSPML")	10/19	NSP Maritime Link ("NSPML")	M09277 NSPML 2020 Interim Assessment Application	Recovery of Depreciation and Return, Costs and Customer Benefits, Debt Service Coverage Ratio



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Nova Scotia Power	2/21	Nova Scotia Power	M10013 Annapolis Tidal Generation Station Retirement: Request for Accounting Treatment and Net Book Value Recovery	Generation Plant Cost Recovery
Oklahoma Corporation Commission				
Oklahoma Natural Gas Company	6/98	Oklahoma Natural Gas Company	PUD 980000177	Storage Issues
Oklahoma Gas & Electric Company	5/05 9/05	Oklahoma Gas & Electric Company	PUD 200500151	Prudence of McLain Acquisition
Oklahoma Gas & Electric Company	3/08	Oklahoma Gas & Electric Company	PUD 200800086	Acquisition of Redbud Generating Facility
Oklahoma Gas & Electric Company	8/14 1/15	Oklahoma Gas & Electric Company	PUD 201400229	Integrated Resource Plan
Ontario Energy Board				
Market Hub Partners Canada, L.P.	5/06	Natural Gas Electric Interface Roundtable	File No. EB-2005-0551	Market-based Rates for Storage
Ontario Power Generation	9/13 2/14 5/14	Ontario Power Generation	EB-2013-0321	Prudence Review of Nuclear Project Management Processes
Oregon Public Utilities Commission				
Hydro One Limited and Avista Corporation	8/18 10/18	Hydro One Limited and Avista Corporation	UM 1897	Reasonableness and Sufficiency of the Governance, Bankruptcy, and Financial Ring-Fencing Stipulated Settlement Commitments



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Pennsylvania Public Utility Commission				
ATOC	4/95	Equitrans	R-00943272	Rate Design, Unbundling
ATOC	3/96 4/96	Equitrans	P-00940886	Rate Design, Unbundling
Rhode Island Public Utilities Commission				
Newport Electric	7/81	Newport Electric	1599	Rate Attrition
South County Gas	9/82	South County Gas	1671	Cost of Capital
New England Energy Group	7/86	Providence Gas Company	1844	Cost Allocation, Rate Design
Providence Gas	8/88	Providence Gas Company	1914	Load Forecast, Least-Cost Planning
Providence Gas Company and The Valley Gas Company	1/01 3/02	Providence Gas Company and The Valley Gas Company	1673 1736	Gas Cost Mitigation Strategy
The New England Gas Company	3/03	New England Gas Company	3459	Cost of Capital
Texas Public Utility Commission				
Southwestern Electric	5/83	Southwestern Electric	-	Cost of Capital, CWIP
P.U.C. General Counsel	11/90	Texas Utilities Electric Company	9300	Gas Purchasing Practices, Prudence
Oncor Electric Delivery Company	8/07	Oncor Electric Delivery Company	34040	Regulatory Policy, Rate of Return, Return of Capital and Consolidated Tax Adjustment
Oncor Electric Delivery Company	6/08	Oncor Electric Delivery Company	35717	Regulatory policy
Oncor Electric Delivery Company	10/08 11/08	Oncor, TCC, TNC, ETT, LCRA TSC, Sharyland, STEC, TNMP	35665	Competitive Renewable Energy Zone



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
CenterPoint Energy	6/10 10/10	CenterPoint Energy/Houston Electric	38339	Regulatory Policy, Risk, Consolidated Taxes
Oncor Electric Delivery Company	1/11	Oncor Electric Delivery Company	38929	Regulatory Policy, Risk
Cross Texas Transmission	8/12 11/12	Cross Texas Transmission	40604	Return on Equity
Southwestern Public Service	11/12	Southwestern Public Service	40824	Return on Equity
Lone Star Transmission	5/14	Lone Star Transmission	42469	Return on Equity, Debt, Cost of Capital
CenterPoint Energy Houston Electric, LLC	6/15	CenterPoint Energy Houston Electric, LLC	44572	Distribution Cost Recovery Factor
NextEra Energy, Inc.	10/16 2/17	Oncor Electric Delivery Company LLC, NextEra Energy	46238	Merger Application, Ring-fencing, Affiliate Interest, Code of Conduct
CenterPoint Energy Houston Electric, LLC	4/19 6/19	CenterPoint Energy Houston Electric, LLC	49421	Incentive Compensation
Sun Jupiter Holdings LLC ad IIF US Holding 2 LP	11/19	Sun Jupiter Holdings LLC and IIF US Holding 2 LP Acquisition of El Paso Electric Company	49849	Public Interest Standard, Ring-fencing, Regulatory Commitments, Rate Credit and Economic Considerations, Ownership and Governance Post-closing, Tax Matters
Texas-New Mexico Power Company and Avangrid, Inc. and NM Green Holdings, Inc.	3/21	Texas-New Mexico Power Company and Avangrid, Inc. and NM Green Holdings, Inc.	51547	Merger Approval Conditions



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Texas Railroad Commission				
Western Gas Interstate Company	1/85	Southern Union Gas Company	5238	Cost of Service
Atmos Pipeline Texas	9/10 1/11	Atmos Pipeline Texas	GUD 10000	Ratemaking Policy, Risk
Atmos Pipeline Texas	1/17 4/17	Atmos Pipeline Texas	GUD 10580	Ratemaking Policy, Return on Equity, Rate Design Policy
Texas State Legislature				
CenterPoint Energy	4/13	Association of Electric Companies of Texas	SB 1364	Consolidated Tax Adjustment Clause Legislation
Utah Public Service Commission				
AMAX Magnesium	1/88	Mountain Fuel Supply Company	86-057-07	Cost Allocation, Rate Design
AMAX Magnesium	4/88	Utah P&L/Pacific P&L	87-035-27	Merger & Acquisition
Utah Industrial Group	7/90 8/90	Mountain Fuel Supply	89-057-15	Gas Transportation Rates
AMAX Magnesium	9/90	Utah Power & Light	89-035-06	Energy Balancing Account
AMAX Magnesium	8/90	Utah Power & Light	90-035-06	Electric Service Priorities
Questar Gas Company	12/07	Questar Gas Company	07-057-13	Benchmarking in Support of ROE
Vermont Public Service Board				
Green Mountain Power	8/82	Green Mountain Power	4570	Rate Attrition
Green Mountain Power	12/97	Green Mountain Power	5983	Cost of Service
Green Mountain Power	7/98 9/00	Green Mountain Power	6107	Rate Development



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Washington Utilities and Transportation Commission				
Hydro One Limited and Avista Corporation	9/18	Hydro One Limited and Avista Corporation	U-170970	Reasonableness and Sufficiency of the Governance, Bankruptcy, and Financial Ring-Fencing Stipulated Settlement Commitments
Wisconsin Public Service Commission				
WEC & WICOR	11/99	WEC	9401-YO-100 9402-YO-101	Approval to Acquire the Stock of WICOR
Wisconsin Electric Power Company	1/07	Wisconsin Electric Power Co.	6630-EI-113	Sale of Nuclear Plant
Wisconsin Electric Power Company	10/09	Wisconsin Electric Power Co.	6630-CE-302	CPCN Application for Wind Project
Northern States Power Wisconsin	10/13	Xcel Energy (dba Northern States Power Wisconsin)	4220-UR-119	Fuel Cost Adjustments
Wisconsin Electric Power Company	11/13	Wisconsin Electric Power Co.	6630-FR-104	Fuel Cost Adjustment
Wisconsin Gas LLC	5/14	Wisconsin Gas LLC	6650-CG-233	Gas Line Expansion, Reasonableness
WE Energy	8/14 1/15 3/15	WE Energy/Integrus	9400-YO-100	Merger Approval
Wisconsin Public Service Corporation	1/19	Madison Gas and Electric Company and Wisconsin Public Service Corporation	5-BS-228	Evaluation of Models Used in Resource Investment Decisions



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
American Arbitration Association				
Michael Polsky	3/91	M. Polsky vs. Indeck Energy	-	Corporate Valuation, Damages
ProGas Limited	7/92	ProGas Limited v. Texas Eastern	-	Gas Contract Arbitration
Attala Generating Company	12/03	Attala Generating Co v. Attala Energy Co.	16-Y-198-00228-03	Power Project Valuation, Breach of Contract, Damages
Nevada Power Company	4/08	Nevada Power v. Nevada Cogeneration Assoc. #2	-	Power Purchase Agreement
Sensata Technologies, Inc./EMS Engineered Materials Solutions, LLC	1/11	Sensata Technologies, Inc./EMS Engineered Materials Solutions, LLC v. Pepco Energy Services	11-198-Y-00848-10	Change in Usage Dispute, Damages
Sandy Creek Energy Associates, L.P.	9/17	Sandy Creek Energy Associates, L.P. vs. Lower Colorado River Authority	01-16-0002-6892	Power Purchase Agreement, Analysis of Damages
Dynegy Midwest Generation, LLC	1/21 2/21	BNSF Railway Company and Norfolk Southern Railway Company v. Dynegy Midwest Generation, LLC	01-18-0001-3283	Electric Generation Asset Management
Canadian Arbitration Panel				
Hydro-Québec	4/15 5/16 7/16	Hydro-Fraser et al v. Hydro-Québec	-	Electric Price Arbitration
Commonwealth of Massachusetts, Appellate Tax Board				
NStar Electric Company	8/14	NStar Electric Company	F316346 F319254	Valuation Methodology



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Western Massachusetts Electric Company	2/16	Western Massachusetts Electric Company v. Board of Assessors of The City of Springfield	315550 319349	Valuation Methodology
Commonwealth of Massachusetts, Suffolk Superior Court				
John Hancock	1/84	Trinity Church v. John Hancock	C.A. No. 4452	Damages Quantification
Court of Common Pleas of Philadelphia County, Civil Division				
Sunoco Marketing & Terminals L.P.	11/16	Sunoco Marketing & Terminals, L.P. v. South Jersey Resources Group	150302520	Damages Quantification
State of Colorado District Court, County of Garfield				
Questar Corporation, et al	11/00	Questar Corporation, et al.	00CV129-A	Partnership Fiduciary Duties
State of Delaware, Court of Chancery, New Castle County				
Wilmington Trust Company	11/05	Calpine Corporation vs. Bank of New York and Wilmington Trust Company	C.A. No. 1669-N	Bond Indenture Covenants
Illinois Appellate Court, Fifth Division				
Norweb, PLC	8/02	Indeck No. America v. Norweb	97 CH 07291	Breach of Contract, Power Plant Valuation
Independent Arbitration Panel				
Alberta Northeast Gas Limited	2/98	ProGas Ltd., Canadian Forest Oil Ltd., AEC Oil & Gas	-	
Ocean State Power	9/02	Ocean State Power vs. ProGas Ltd.	2001/2002 Arbitration	Gas Price Arbitration
Ocean State Power	2/03	Ocean State Power vs. ProGas Ltd.	2002/2003 Arbitration	Gas Price Arbitration



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Ocean State Power	6/04	Ocean State Power vs. ProGas Ltd.	2003/2004 Arbitration	Gas Price Arbitration
Shell Canada Limited	7/05	Shell Canada Limited and Nova Scotia Power Inc.	-	Gas Contract Price Arbitration
International Court of Arbitration				
Wisconsin Gas Company, Inc.	2/97	Wisconsin Gas Co. vs. Pan-Alberta	9322/CK	Contract Arbitration
Minnegasco, A Division of NorAm Energy Corp.	3/97	Minnegasco vs. Pan-Alberta	9357/CK	Contract Arbitration
Utilicorp United Inc.	4/97	Utilicorp vs. Pan-Alberta	9373/CK	Contract Arbitration
IES Utilities	97	IES vs. Pan-Alberta	9374/CK	Contract Arbitration
Mitsubishi Heavy Industries, Ltd., and Mitsubishi Nuclear Energy Systems, Inc.	12/15 2/16	Southern California Edison Company, Edison Material Supply LLC, San Diego Gas & Electric Co., and the City of Riverside vs. Mitsubishi Heavy Industries, Ltd., and Mitsubishi Nuclear Energy Systems, Inc.	19784/AGF/RD	Damages Arising Under a Nuclear Power Equipment Contract
International Chamber of Commerce				
Senvion GmbH	4/17	Senvion GmbH v. EDF Renewable Energy, Inc.	01-15-0005-4590	Breach-Related Damages, Unfair Competition, Unjust Enrichment
Senvion GmbH	9/17	Senvion GmbH v. EEN CA Lac Alfred Limited Partnership, et al.	21535	Breach-Related Damages



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Senvion GmbH	12/17	Senvion GmbH v. EEN CA Massif du Sud Limited Partnership, et al.	21536	Breach-Related Damages
EDF Inc.	3/21	Exelon Generating Company, LLC v. EDF Inc.	25479/MK	Valuation of Nuclear Power Plants
State of New Jersey, Mercer County Superior Court				
Transamerica Corp., et al.	7/07 10/07	IMO Industries Inc. vs. Transamerica Corp., et al.	L-2140-03	Breach-Related Damages, Enterprise Value
State of New York, Nassau County Supreme Court				
Steel Los III, LP	6/08	Steel Los II, LP & Associated Brook, Corp v. Power Authority of State of NY	Index No. 5662/05	Property Seizure
Province of Alberta, Court of Queen's Bench				
Alberta Northeast Gas Limited	5/07	Cargill Gas Marketing Ltd. vs. Alberta Northeast Gas Limited	Action No. 0501-03291	Gas Contracting Practices
Quebec Superior Court, District of Gaspé				
Senvion Canada and Senvion GmbH	2/19	Senvion Canada and Senvion GmbH v. Suspendem Rope Access	-	Breach-Related Damages, Reimbursement of Liquidated Damages, Reimbursement of Scheduled Maintenance Penalties
State of New Hampshire, Board of Tax and Land Appeals				
Public Service Company of New Hampshire d/b/a Eversource Energy	11/18	Appeal of Public Service Company of New Hampshire d/b/a Eversource Energy	28873-14-15-16-17PT	Valuation of Transmission and Distribution Assets



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
State of New Hampshire, Judicial Court-Rockingham Superior Court				
Public Service Company of New Hampshire d/b/a Eversource Energy	10/18	Public Service Company of New Hampshire d/b/a Eversource Energy v. City of Portsmouth	218-2016-CV-00899 218-2017-CV-00917	Valuation of Transmission and Distribution Assets
State of New Hampshire, Superior Court-Merrimack County				
Public Service Company of New Hampshire d/b/a Eversource Energy	3/18	Public Service Company of New Hampshire d/b/a Eversource Energy v. Town of Bow	217-2015-CV-00469 217-2016-CV-00474 217-2017-CV-00422	Valuation of Transmission and Distribution Assets
State of Rhode Island, Providence City Court				
Aquidneck Energy	5/87	Laroche vs. Newport	-	Least-Cost Planning
State of Texas, Hutchinson County Court				
Western Gas Interstate	5/85	State of Texas vs. Western Gas Interstate Co.	14,843	Cost of Service
State of Utah, Third District Court				
PacifiCorp & Holme, Roberts & Owen, LLP	1/07	USA Power & Spring Canyon Energy vs. PacifiCorp. et al.	Civil No. 050903412	Breach-Related Damages
U.S. Bankruptcy Court, District of New Hampshire				
EUA Power Corporation	7/92	EUA Power Corporation	BK-91-10525-JEY	Pre-Petition Solvency
U.S. Bankruptcy Court, District of New Jersey				
Ponderosa Pine Energy Partners, Ltd.	7/05	Ponderosa Pine Energy Partners, Ltd.	05-21444	Forward Contract Bankruptcy Treatment



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
U.S. Bankruptcy Court, No. District of New York				
Cayuga Energy, NYSEG Solutions, The Energy Network	09/09	Cayuga Energy, NYSEG Solutions, The Energy Network	06-60073-6-sdg	Going Concern
U.S. Bankruptcy Court, So. District of New York				
Johns Manville	5/04	Enron Energy Mktg. v. Johns Manville; Enron No. America v. Johns Manville	01-16034 (AJG)	Breach of Contract, Damages
U.S. Bankruptcy Court, Northern District of Texas				
Southern Maryland Electric Cooperative, Inc., and Potomac Electric Power Company	11/04	Mirant Corporation, et al. v. SMECO	03-4659; Adversary No. 04-4073	PPA Interpretation, Leasing
U.S. Bankruptcy Court, Southern District of Texas				
Ultra Petroleum Corp. et al	3/17	Ultra Petroleum Corp. et al	16-32202 (MI)	Valuation
U.S. Court of Federal Claims				
Boston Edison Company	7/06 11/06	Boston Edison Company v. United States	99-447C 03-2626C	Spent Nuclear Fuel Breach, Damages
Consolidated Edison Company	7/07	Consolidated Edison Company	06-305T	Evaluation of Lease Purchase Option
Consolidated Edison Company	2/08 6/08	Consolidated Edison Company v. United States	04-0033C	Spent Nuclear Fuel Breach, Damages
Vermont Yankee Nuclear Power Corporation	6/08	Vermont Yankee Nuclear Power Corporation v. United States	03-2663C	Spent Nuclear Fuel Breach, Damages



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Virginia Electric and Power Company d/b/a Dominion Virginia Power	3/19	Virginia Electric and Power Company d/b/a Dominion Virginia Power v. United States	17-464C	Double Recovery, Cost Recovery of Infrastructure Improvements
U. S. District Court, Boulder County, Colorado				
KN Energy, Inc.	3/93	KN Energy vs. Colorado GasMark, Inc.	92 CV 1474	Gas Contract Interpretation
U. S. District Court, Northern California				
Pacific Gas & Electric Co./PGT PG&E/PGT Pipeline Exp. Project	4/97	Norcen Energy Resources Limited	C94-0911 VRW	Fraud Claim
U. S. District Court, District of Connecticut				
Constellation Power Source, Inc.	12/04	Constellation Power Source, Inc. v. Select Energy, Inc.	Civil Action 304 CV 983 (RNC)	ISO Structure, Breach of Contract
U.S. District Court, Northern District of Illinois, Eastern Division				
U.S. Securities and Exchange Commission	4/12	U.S. Securities and Exchange Commission v. Thomas Fisher, Kathleen Halloran, and George Behrens	07 C 4483	Prudence, PBR
U. S. District Court, Massachusetts				
Eastern Utilities Associates & Donald F. Pardus	3/94	NECO Enterprises Inc. vs. Eastern Utilities Associates	Civil Action No. 92-10355-RCL	Seabrook Power Sales
U. S. District Court, Montana				
KN Energy, Inc.	9/92	KN Energy v. Freeport MacMoRan	CV 91-40-BLG-RWA	Gas Contract Settlement



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
U.S. District Court, New Hampshire				
Portland Natural Gas Transmission and Maritimes & Northeast Pipeline	9/03	Public Service Company of New Hampshire vs. PNGTS and M&NE Pipeline	C-02-105-B	Impairment of Electric Transmission Right-of-Way
U. S. District Court, Southern District of New York				
Central Hudson Gas & Electric	11/99 8/00	Central Hudson v. Riverkeeper, Inc., Robert H. Boyle, John J. Cronin	Civil Action 99 Civ 2536 (BDP)	Electric Restructuring, Environmental Impacts
Consolidated Edison	3/02	Consolidated Edison v. Northeast Utilities	Case No. 01 Civ. 1893 (JGK) (HP)	Industry Standards for Due Diligence
Merrill Lynch & Company	1/05	Merrill Lynch v. Allegheny Energy, Inc.	Civil Action 02 CV 7689 (HB)	Due Diligence, Breach of Contract, Damages
U. S. District Court, Eastern District of Virginia				
Aquila, Inc.	1/05 2/05	VPEM v. Aquila, Inc.	Civil Action 304 CV 411	Breach of Contract, Damages
U. S. District Court, Western District of Virginia				
Washington Gas Light Company	8/15 9/15	Washington Gas Light Company v. Mountaineer Gas Company	Civil Action No. 5:14-cv-41	Nominations and Gas Balancing, Lost and Unaccounted for Gas, Damages
U. S. District Court, Portland Maine				
ACEC Maine, Inc. et al.	10/91	CIT Financial vs. ACEC Maine	90-0304-B	Project Valuation
Combustion Engineering	1/92	Combustion Eng. vs. Miller Hydro	89-0168P	Output Modeling, Project Valuation



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
U.S. Securities and Exchange Commission				
Eastern Utilities Association	10/92	EUA Power Corporation	File No. 70-8034	Value of EUA Power
U.S. Tax Court in Illinois				
Exelon Corporation	4/15 6/15	Exelon Corporation, as Successor by Merger to Unicom Corporation and Subsidiaries et al. v. Commission of Internal Revenue	29183-13 29184-13	Valuation of Analysis of Lease Terms and Quantify Plant Values
Council of the District of Columbia Committee on Consumer and Regulatory Affairs				
Potomac Electric Power Co.	7/99	Potomac Electric Power Co.	Bill 13-284	Utility Restructuring

Line No.	Service Company	Operating Companies	Services Provided by Affiliated Services Company
1	AES US Services, LLC	<ul style="list-style-type: none"> • AES Southland Energy, LLC, • AES Huntington Beach Energy, LLC, • AES ES Alamitos, LLC, • AES Alamitos Energy, LLC, • AES Wind Generation, LLC., • Indianapolis Power & Light Company, • IPALCO Enterprises, Inc., • AES NA Central, L.L.C., • AES Distributed Energy, Inc., • The AES Corporation, • AES Big Sky, L.L.C., • DPL Inc., • AES Ohio Generation, LLC, • The Dayton Power and Light Company, • AES North America Development, LLC, • AES ES Gilbert, LLC, • AES Hawaii, LLC., • Miami Valley Insurance Company, • MacGregor Park, Inc., • Miami Valley Lighting, LLC, • Na Pua Makani Power Partners, LLC, • AES Shady Point, LLC 	<ul style="list-style-type: none"> • Coo Office, Battery Operations, • Commercial Operation, • Ops Monitoring & Control, • Plant Managers, • Storms, • Systems Operations, • Settlements, • Customer Service, • T&D Metering Service, • Safety, • Environmental Mgt, • Strat Acct & Cus Pro, • Growth & Strg Invest, • Infrstctr Security, • Reliability Programs, • Vendor Discounts, • Us SBU Leader, • De Accounting, Manager - CFO, • Accounts Payable, • Technical Accounting, • Controller, • Financial Reporting, • Fixed Asset Accounting • Gen & Ops Accounting • Treasury, • Regulatory Accounting, • Tax Accounting, • Revenue Accounting, • Internal Audit, • IT Governcre & Scrity, • IT Management, • Cyber Security,

			<ul style="list-style-type: none"> • IT Enterprise Apps, • IT collaboration Svc, • IT Infrastructure, • IT Networks, • IT Generation Apps, • IT T&D Apps, • Legal Services, • Regulatory Affairs, • Local HR, • Benefits O&M, • Talent Coe, • Payroll, • Total Rewards Coe, • Purchasing Management, • Logistic & Mat Management, • A&PM Norms & Stds, • Asset Management - T&D, • Insurance, • A&PM NERC Compliance, • A&PM Performance Eng, • A&PM Outages & Prjct, • Risk Management, • A&PM Technical Eng, • Customer Experience, • Communications, • Employee Ovhd Dollar, • Pension Clearing, • Payroll Taxes O&M, • Digital Customer Exp, • Operations Tech, • Digital Prod & Eco, • IT Digital Operation, • Digital Sol & Innov, • Digital Work Exp, • Emp Ovhd Hours O&M
2	Algonquin Power & Utilities Corp	<ul style="list-style-type: none"> • Algonquin Power Trust, • Liberty Utilities (Sub) Corp., • Liberty Utilities (CalPeco Electric) LLC, 	<ul style="list-style-type: none"> • Legal Costs, • Tax Services, • Audit,

		<ul style="list-style-type: none"> • Liberty Utilities (Granite State Electric) Corp., • Liberty Utilities (Energy North Natural Gas) Corp., • Liberty Utilities (Midstates Natural Gas) Corp., • Liberty Utilities (Gas New Brunswick) LP, • Liberty Utilities (Peach State Natural Gas) Corp., • Liberty Utilities (Pine Bluff Water) Corp., Liberty Energy Utilities (New Hampshire) Corp., • Liberty Utilities (New England Natural Gas Company) Corp., • Liberty Utilities (White Hall Water) Co., • Liberty Utilities (White Hall Sewer) Co., • Liberty Utilities Co., Liberty Utilities (Park Water) Corp., • Empire District Electric, • Liberty Utilities (Woodson-Hensley Water) Corp., • Liberty Utilities (St. Lawrence Gas) Corp, • Liberty Utilities (Tinker Transmission) LP 	<ul style="list-style-type: none"> • Investor Relations, • Director Fees and Insurance, • Licenses, • Fees and Permits, • Escrow and Transfer Agent Fees, • Other Professional Services, • Other Administration Costs, • Executive and Strategic Management
3	Allegheny Energy Service Corporation	<ul style="list-style-type: none"> • FirstEnergy Service Company 	<ul style="list-style-type: none"> • All charges recorded at Allegheny Service Corporation are allocated 100% to FirstEnergy Service Company monthly
4	Alliant Energy Corporate Services, Inc	<ul style="list-style-type: none"> • Alliant Energy Corporation, • Alliant Energy SPE LLC, • Wisconsin Power and Light Company, • Interstate Power and Light Company, • Alliant Energy Resources, LLC, • Heartland Energy Group Inc, • Industrial Energy Applications Delaware Inc, • Alliant Energy Transportation Inc, • Cedar Rapids and Iowa City Railway Company, • Logistics Park Dubuque, Inc., • Williams Bulk Transfer Inc, • Alliant Energy Investments Inc, • Iowa Land and Building Company, • Alliant Energy Generation Inc, • Sheboygan Power LLC, • Alliant Energy Finance, LLC, • AE Growth & Development, LLC, • Comprehensive Energy Solutions, LLC, • AE Development Holdco, LLC, • AER Biofuels, LLC, 	<ul style="list-style-type: none"> • Accounting, • Administrative, • Corporate, • Corporate Secretary, • Customer Service, • Customer Assistance and Customer Relations, • Electric Distribution Engineering and Construction, • Environmental Affairs, • Facilities, • Finance, • Fuels, • Gas Acquisition and Dispatch, • Gas Transmission and Distribution • Engineering and Construction, • Human Resources, • Information Systems, • Insurance and Risk Management, • Internal Auditing, • Investor Relations, • Legal,

		<ul style="list-style-type: none"> • AET Hybrid Transit, LLC, • AET BTS LLC 	<ul style="list-style-type: none"> • Materials Management, • Power Engineering and Construction, • Planning, • Power Planning, • Public and Community Affairs, • Rates, • Real Estate and Right of Way, • Shareowner Services, • Transportation
5	Ameren Services Company	<ul style="list-style-type: none"> • Ameren Corporation, • Ameren Development Corporation, • Union Electric Company, • Ameren Transmission Company of Illinois, • Ameren Energy Medina Valley Cogen, LLC, • Ameren Illinois Company, • ATX Southwest, LLC, • ATX East, LLC, • Ameren Transmission Company, LLC 	<ul style="list-style-type: none"> • Power Ops and Energy Mgmt • Controller • Supply Chain, Risk & Property Management • Treasurer • Corporate Strategy and Innovation • Human Resources • Executive • Digital • CSR Policy & Analysis • Legal, Fed Reg & Compliance • Ameren Services Center • Financial Services • Trans Ops Plan Policy and Reg • Corp Comm, D&I and Corp Contr • Corporate Internal Audit • Corporate Tax • Operations & Tech Services • Safety, Security & Ops Oversight • Customer Affordability • Stores Inventory Transfers • Engineering and Construction Support • Rental Expense • Transfer AMI Software Costs • Rental Income • Vehicle usage by affiliate • Laboratory Services
6	American Electric Power	<ul style="list-style-type: none"> • Abstract Digital, • AEP Amazon, • AEP Appalachian Transmission Company, Inc., 	<ul style="list-style-type: none"> • Chief Administrative Officer Administration, • Corporate Human Resources, • Information Technology,

<p>Service Corporation</p>	<ul style="list-style-type: none"> • AEP Clean Energy Resources LLC, • AEP Coal, Inc. • AEP Credit, Inc., • AEP Energy Partners, Inc., • AEP Energy Service Gas Holding Company • AEP Energy Services, Inc., • AEP Energy Supply LLC • AEP Energy, Inc, • AEP Generating Company • AEP Generation Resources, • AEP Indiana Michigan Transmission Company, Inc. • AEP Investments, Inc., • AEP Kentucky Coal, LLC, • AEP Kentucky Transmission Company, Inc. • AEP Nonutility Funding LLC, • AEP Ohio Transmission Company, Inc., • AEP Oklahoma Transmission Company, Inc. • AEP OnSite Partners, LLC, • AEP Pro Serv, Inc. • AEP Renewables, LLC, • AEP Retail Energy Partners LLC, • AEP Southwestern Transmission Company, Inc. • AEP T&D Services, LLC, • AEP Texas Company, • AEP Transmission Company, LLC, • AEP Transmission Holding Company, LLC • AEP Transmission Partner LLC, • AEP Utility Funding LLC, • AEP West Virginia Transmission Company, Inc, • American Electric Power Company, • Appalachian Power Company, • Apple Blossom Wind, LLC, • Auwahi Wind Energy, LLC, • Blackhawk Coal Company, • Bold Transmission, LLC, • BSE Solutions LLC, • Central Appalachian Coal Company, • Central Coal Company, 	<ul style="list-style-type: none"> • Real Estate & Workplace Services, • Audit Services, • Chief Executive Officer Administration, • Legal, • Chief Financial Officer Administration, • Corporate Accounting, • Corporate Planning & Budgeting, • Risk and Strategic Initiatives, • Supply Chain & Fleet Operations, Treasury, • Commercial Operations, • Chief Customer Officer, • Corporate Communications, • External Affairs Administration, Federal Affairs, • Regulatory Services, • Environmental Services, • Fossil and Hydro Generation, • Generation Administration, • Generation Business Services, • Generation Engineering and Technical Services - Project and Construction, • Regulated Commercial Operations, • Transmission, Transmission Administration, • Transmission Grid Development, • Transmission Field Services, • Trans Ventures Strategy & Policy, • Utility Operations
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		<ul style="list-style-type: none"> • Conesville Coal Preparation Company, • CSW Energy, Inc., • Desert Sky Wind Farm LLC, • Dolet Hills Lignite Co, LLC, • Electric Transmission America, • Electric Transmission TX, LLC, • Franklin Real Estate Company Grid Assurance LLC, • Indiana Michigan Power Company Jacumba Solar LLC, • Kentucky Power Company, • Kingsport Power Company, • Kyte Works, LLC, • NM Renewable Development, LLC, • Ohio Franklin Realty, LLC, • Ohio Power Company, • Oxbow Lignite Company, LLC, • Public Service Company of Oklahoma, • RITELine Indiana, LLC, • Sempra Renewables, LLC, • Snowcap Coal Company, Inc., • Solar LLCs, • Southern Appalachian Coal Company, • Southwestern Electric Power Company, • Transource Energy, LLC, • Transource Maryland, • Transource Missouri, LLC, • Transource Pennsylvania, • Transource West Virginia, LLC, • Trent Wind Farm LLC, • United Sciences Testing, Inc., • Wheeling Power Company 	
7	ATC Management Inc	<ul style="list-style-type: none"> • American Transmission Company LLC, • ATC Development Manager Inc 	<ul style="list-style-type: none"> • Asset Management, • Audit & Risk Management, • Business Administration Services, • Business Development, • Business Partner Services, • Construction, • Corporate, • Corporate Communications,

			<ul style="list-style-type: none"> • Finance & Accounting, • Human Capital, • Information Technology, • Legal, • Officers, • External Affairs, • Regulatory Relations & Policy
8	Avangrid Service Company	<ul style="list-style-type: none"> • Iberdrola S.A. Avangrid, Inc., • Avangrid, Inc, • Avangrid Networks, Inc., • New York State Electric & Gas Corporation, • Rochester Gas and Electric Corporation, • RGS Energy Group, Inc, • Central Maine Power Company, • CMP Group, Inc., • The Union Water Power Company, • Maine Electric Power Company, Inc., • Chester SVC Partnership, • Maine Natural Gas Corporation, • Avangrid Networks NY Transco, • UIL Holdings Corporation, • United Illuminating Electric, • Connecticut Natural Gas, • Southern Connecticut Gas, • Berkshire Gas Company, 	<ul style="list-style-type: none"> • Governing Bodies, Innovation, • Environment & Quality, • Real Estate and General Services, • Corporate Security, • IT, • Human Resources, • Purchasing, • Insurance, • Finance and Treasury, • Risks, • Investor Relations, • Control, • Administration, • Tax, • Communications, • Legal Services, • Corporate Development, • DG Businesses and Regulation, • External Audit, • Secretary of the Board, • Internal Audit, • Compliance
9	Black Hills Service Company, LLC	<ul style="list-style-type: none"> • Wyodak Resources Development Corp, • Black Hills Wyoming, LLC, • Black Hills Electric Generation, LLC, • Black Hills Non-Regulated Holdings, LLC, • Black Hills Colorado IPP, LLC, • N780BH, LLC, • Black Hills Colorado Wind, LLC, • Northern Iowa Windpower, LLC, • Black Hills Corporation, 	<ul style="list-style-type: none"> • Accounting Accrual Entries • Accounting Systems • Asset Blended • Asset Customer • Asset Planning & Data Mana • Asset Programs • Asset Transmission • Benefit Loadings • Benefit Pooled

	<ul style="list-style-type: none"> • Black Hills Exploration and Production, Inc, • Black Hills Gas Resources, Inc, • Black Hills Wyoming Gas, LLC (combination of Cheyenne Light, Fuel and Power Company’s natural gas utility operations, the Wyoming portion of Black Hills Gas Distribution, LLC and Black Hills Northwest Wyoming Gas Utility Company, LLC), • Black Hills Power, Inc, • Cheyenne Light Fuel and Power Company, • Black Hills Energy Service Company, • Black Hills Kansas Gas Utility Company, LLC, Black Hills Iowa Gas Utility Company, LLC, • Black Hills Gas Nebraska Gas Utility Company, LLC, • Black Hills Colorado Electric, LLC, • Black Hills Colorado Gas, Inc, • Black Hills Northwest Wyoming Gas Utility Company, LLC, • Black Hills Shoshone Pipeline, LLC, • Black Hills Energy Arkansas, Inc, • Black Hills Gas Distribution Colorado, • Black Hills Gas Distribution Nebraska, • Black Hills Gas Distribution Wyoming, • Rocky Mountain Natural Gas, LLC 	<ul style="list-style-type: none"> • Community Affairs • Compliance Gas • Corporate Accounting • Credit and Risk • Customer Serv Call Centers • Customer Service Support • Electric Asset Management • Electric Meter Services • Energy Efficiency/DSM • Engineering Resources • Environmental Services • Exec Management-Utilities • Executive Management • FERC Tariff and Compliance • Field Support Services • Fleet Serv • Gas Asset Optimization • Gas Measurement Serv • Generation Dispatch Power Marketing • Generation Plant Operations • Governmental Affairs • Growth Strategy & Innovation • HR Rotation Program • HR Talent Management • HR Total Rewards • Human Resources • Human Resources Corp • In-House Corporate Solutions (Communications) • Internal Audit • IT Security - Compliance-Risk • IT Administration • IT Bus Apps Customer Systems • IT Bus Apps Fin & HR Systems • IT Bus Apps-Adds-Integ • IT Bus Apps-Pmo-Ecm-Gov • IT Bus Apps-Utility Systems • IT Bus Apps-Web • IT Infrastructure & Ops
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			<ul style="list-style-type: none"> • Land Rights • Legal - Corporate • Maintenance • NERC Compliance • Northern Gas Generation • Operational Services • Pipeline and System Integrity • Pipeline Safety and Compliance Gas • Power Delivery Management • Property Accounting • Pwr Supply and Renewables • Real Estate & Facilities • Records Management • Regulatory and Finance • Relay & Controls • Reliability Center • Safety • Service Guard Marketing • Substation/Protection Engineering • Supply Chain • Supply Chain Management • Tax • Technical Training Safety • Transmission & Distribution Planning • Transmission & Distribution Engineering • Transmission Engineering Services (TES) • Treasury • Utility Process & System Training • Vegetation Management
10	CenterPoint Energy Service Company, LLC	<ul style="list-style-type: none"> • CenterPoint Energy Houston Electric, LLC, • CenterPoint Energy Resources Corp., • CenterPoint Energy MRT Services, LLC, • Enable Midstream Partners, LP, • National Furnace Company, • Arkansas Louisiana Finance Corporation, • CenterPoint Energy Properties, Inc, • CenterPoint Energy Arkla, • CenterPoint Energy Minnesota Gas, 	<ul style="list-style-type: none"> • Administrative and service functions involving system-wide coordination, strategy, and compliance functions

		<ul style="list-style-type: none"> • Minnesota Intrastate Pipeline Company, • CenterPoint Energy Services, Inc., • CenterPoint Energy Intrastate Pipelines, LLC, • CenterPoint Energy Entex, • CenterPoint Energy Mobile Energy Solutions, Inc., • Allied Materials Corporation, • CenterPoint Energy Investment Management, Inc., • CenterPoint Energy, Inc., • Utility Holding, LLC, • Labo Land Holdings, LLC, • CenterPoint Energy Home Service Plus, LLC, • CenterPoint Energy Intelligent Energy Solutions, LLC, • CenterPoint Energy Midstream, Inc, • Vectren 	
11	Columbia Pipeline Group Service Company	<ul style="list-style-type: none"> • Columbia Gas Transmission LLC, • Columbia Gulf Transmission Co, • Crossroads Pipeline Company, • Portland Natural Gas Transmission System 	<ul style="list-style-type: none"> • President & CEO; • Executive V.P: <ul style="list-style-type: none"> ○ Commercial Operation, ○ Project Planning and Operations; • CFO: <ul style="list-style-type: none"> ○ Controller - Financial Reporting & Corporate Accounting, ○ Cost Accounting and Business Unit Accounting, ○ Financial Planning & Budget Reporting - Risk Management, ○ Department of Taxation, ○ Capital Markets & Treasury; • Stakeholder Relations & Technical Services & General Counsel: <ul style="list-style-type: none"> ○ Internal Audit & Compliance - SOX Compliance, ○ Legal & Corporate Secretarial, ○ Legal – Land/Litigation, ○ Legal – Corporate/Commercial, ○ Legal – Compliance & Ethics; • Corporate Services; • Human Resources: <ul style="list-style-type: none"> ○ Compensation & Benefits, ○ HR Operations; • Information Services; • Facility Services & Supply Chain
12	Dominion Energy Services, Inc.	<ul style="list-style-type: none"> • BrightSuite, Inc., • CNG Coal Company, 	<ul style="list-style-type: none"> • Accounting: <ul style="list-style-type: none"> ○ Payroll Processing, ○ Accounts Payable Processing,

	<ul style="list-style-type: none"> • Dominion ACP Holding, Inc., • Dominion Capital, Inc., • Dominion Cove Point, LLC, • Dominion Energy Carolina Gas Services, Inc., • Dominion Energy Carolina Gas Transmission, LLC, • Dominion Energy Cove Point LNG, LLC, • Dominion Energy Fairless, LLC, • Dominion Energy Field Services, Inc., • Dominion Energy Fuel Services, Inc., • Dominion Energy Gas Holdings, LLC, • Dominion Energy Generation Marketing, Inc., • Dominion Energy Kewaunee, Inc., • Dominion Energy Manchester Street, Inc., • Dominion Energy Midstream GP, LLC, • Dominion Energy Nuclear Connecticut, Inc., • Dominion Energy Overthrust Pipeline, LLC, • Dominion Energy Questar Corporation, • Dominion Energy Questar Pipeline, LLC, • Dominion Energy Questar Pipeline Services, Inc., • Dominion Energy RNG Holdings, Inc., • Dominion Energy Solutions, Inc., • Dominion Energy Technical Solutions, Inc., • Dominion Energy Terminal Company, Inc., • Dominion Energy Transmission, Inc., • Dominion Energy, Inc., • Dominion Gathering & Processing, Inc., • Dominion Generation, Inc., • Dominion Greenbrier, Inc., • Dominion Iroquois, Inc., Dominion Lands, Inc., • Dominion Modular LNG Holdings, Inc., • Dominion Natrium Holdings, Inc., • Dominion Privatization South Carolina, LLC, • Dominion Privatization Texas, LLC, • Dominion Products and Services, Inc., • Dominion Solar Holdings IV, LLC, • Dominion Solar Projects III, Inc., • Dominion Solar Projects IV, Inc., • Dominion Solar Projects V, Inc., 	<ul style="list-style-type: none"> ○ Fixed Assets Accounting; • Information Technology, Electronic Transmission and Computer Services and Software Pooling: <ul style="list-style-type: none"> ○ LDC/EDC Computer Applications, ○ Other Computer Applications, including Software/Hardware Pooling, ○ Telecommunications Applications; • Human Resources: <ul style="list-style-type: none"> ○ Human Resources; • Business Services: <ul style="list-style-type: none"> ○ Facility Services, ○ Fleet Administration, ○ Security, ○ Gas Supply, ○ Risk Management; • Corporate Planning: <ul style="list-style-type: none"> ○ Corporate Planning; • Supply Chain: <ul style="list-style-type: none"> ○ Purchasing; • Tax: <ul style="list-style-type: none"> ○ Tax Accounting and Compliance; • Customer Services: <ul style="list-style-type: none"> ○ Customer Payment (Remittance) Processing; • Treasury/ Finance: <ul style="list-style-type: none"> ○ Treasury and Cash Management; • Other Service: <ul style="list-style-type: none"> ○ Accounting Services, ○ Audit, ○ Business Planning, ○ Corporate Secretary, ○ Energy Marketing, ○ Environment, ○ Executive, ○ External Affairs, ○ General Services, ○ Legal, ○ Operations, ○ Travel Services, ○ Aviation
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		<ul style="list-style-type: none"> • Dominion Solar Projects D, Inc., • Dominion Solar Services, Inc., • Dominion Solar Projects VI, Inc., • Dominion Solar Projects VII, Inc., • Dominion Voltage, Inc., • Hope Gas, Inc., • Public Service Company of North Carolina, Incorporated, • Questar Energy Services, Inc., • Questar Field Services, LLC, • Questar Gas Company, • Questar InfoComm, Inc., • Questar Southern Trails Pipeline Company, • Dominion Energy South Carolina, Inc., • SCANA Energy Marketing, LLC, • SCANA Corporation, • Dominion Energy Southeast Services, Inc., • The East Ohio Gas Company, • Virginia Electric and Power Company, • Virginia Power Services, LLC, • Virginia Power Nuclear Services Company, • VP Property, Inc., • Virginia Power Services Energy Corp., Inc., • Wexpro Company, • Wexpro Development Company, • Wexpro II Company 	
<p>13</p>	<p>Dominion Energy Southeast Services, Inc.</p>	<ul style="list-style-type: none"> • Dominion Energy South Carolina, Inc., • South Carolina Fuel Company, Inc., • Public Service Company of North Carolina Incorporated, • SCANA Energy Marketing, Inc., • South Carolina Generating Company, Inc., • SCANA Corporation (Parent Company), • Dominion Retail Gas Holdings, Inc. 	<ul style="list-style-type: none"> • Information systems technology services, • Customer-related billing, • Mailing, • Remittance processing, • Call center and customer communications, • Services for electric and gas customers, • Marketing-related services, • Gas measurement services and fleet management services, • Employee services, • Administrative services including procurement, • Finance, • Accounting, • Risk management and public affairs,

			<ul style="list-style-type: none"> • Corporate governance services including legal, • Investor relations, • Shareholder services, • Corporate secretarial, • Corporate compliance, • Strategic planning and certain executive administrative services, • Telecommunications services, • Gas supply and capacity management services, • Gas system management and monitoring services, • Gas control coordination and gas engineering services
<p>14</p>	<p>Duke Energy Business Services, LLC</p>	<ul style="list-style-type: none"> • Bison Insurance Company, Ltd, • Cinergy Corp, • Cinergy Receivables Co LLC, • DE Commercial Enterprises Inc, • DE Merchants, LLC, • DE Renewables Commercial LLC, • DE Transmission Holding Company, LLC, • DEGS NC Solar LLC, • DEGS Solar, LLC, • DEGS Wind I, LLC, • Duke Energy Carolinas, LLC, • Duke Energy Corp, • Duke Energy Corporate Services, Inc, • Duke Energy Florida (f/k/a Progress Energy Florida), • Duke Energy Indiana, Inc., • Duke Energy Kentucky, Inc., • Duke Energy North America, LLC, • Duke Energy Ohio, Inc., • Duke Energy Ohio, Inc. (non-reg), • Duke Energy Pipeline Holding, • Duke Energy Progress (f/k/a Progress Energy Carolinas, Inc.), • Duke Energy Registration Services, Inc., • Duke Generation Services Holding Co. Inc., • Duke Technologies Inc., • Frontier Windpower II LLC, • Frontier Windpower LLC, • KO Transmission, • Piedmont Natural Gas Company Inc, 	<ul style="list-style-type: none"> • Information Systems, • Meters, • Transportation, • System Maintenance, • Marketing and Customer Relations, • Transmission and Distribution Engineering and Construction, • Power Engineering and Construction, • Human Resources, • Supply Chain, • Facilities, • Accounting, • Power and Gas Planning and Operations, • Public Affairs, • Legal, • Rates, • Finance, • Rights of Way, • Internal Auditing, • Environmental, • Health and Safety, • Fuels, • Investor Relations, • Planning, • Executive, • Nuclear Development

		<ul style="list-style-type: none"> • Symphony Breeze, LLC, • Symphony Sun, LLC 	
15	Entergy Enterprises, Inc	<ul style="list-style-type: none"> • EAM Nelson Holding, LLC, • EK Holding III, LLC, • EN Services LP, • Entergy Asset Management, • Entergy Corporation, • Entergy Global, LLC, • Entergy Int Holdings Ltd, LLC-E, • Entergy Int Investments No 2, • Entergy International Ltd, LLC, • Entergy Nuclear Fitzpatrick, LLC, • Entergy Nuclear Holding Corp-No. 1, • Entergy Nuclear Indian Point 2, LLC, • Entergy Nuclear Indian Point 3, LLC, • Entergy Nuclear Vermont Investment Corp, • Entergy Nuclear Generation Company, • Entergy Nuclear, Inc., • Entergy Nuclear Nebraska, LLC, • Entergy Nuclear Operations, Inc., • Entergy Nuclear Palisades, LLC, • Entergy Nuclear Power Mktg, LLC, • Entergy Power E&C Holding, LLC, • Entergy Power, LLC, • Entergy Power RS LLC, • Entergy Power Ops U.S. Inc., • Entergy Services, LLC, • Entergy Solutions Ltd, • Entergy Tech Holding Co-Parent, • EP Gas Holding Corp, • EP Gas Operations Corp, • EWO Marketing LLC, • EWO WIND II - EPGC, • TLG Services, Inc., • Vermont Yankee Asset Retirement Management, LLC, Deferred 	<ul style="list-style-type: none"> • Administration, • Corporate Support - General, • EWC - Entergy Wholesale Commodities, • Finance - Finance and Accounting, • Information Technology, • System Benefits, • System Planning, • Wholesale Ops Corporate Support, • Wholesale Ops Finance

<p>16</p>	<p>Entergy Nuclear Operations, Inc</p>	<ul style="list-style-type: none"> • Entergy Arkansas, LLC, • Entergy Enterprises, Inc., • Entergy Louisiana, LLC, • Entergy Nuclear Fitzpatrick, LLC, • Entergy Nuclear Holding Corp-No. 1, • Entergy Nuclear Indian Point 2, LLC, • Entergy Nuclear Indian Point 3, LLC, • Entergy Nuclear Generation Company, • Entergy Nuclear, Inc., • Entergy Nuclear Nebraska, LLC, • Entergy Nuclear Operations, Inc., • Entergy Nuclear Palisades, LLC, • Entergy Operations, Inc., • Entergy Services, LLC, • TLG Services, Inc., • Vermont Yankee Asset Retirement Management, LLC, Deferred 	<ul style="list-style-type: none"> • Administration, • Chief Administrative Officer, • Corporate, • Corporate - Legal Services, • Corporate - Office of the Chief Executive Officer, • Corporate - Public Relations, • Corporate Support - General, • Customer Service, • Customer Service and Operations Support, • Customer Service Support, Distribution, • EWC - Entergy Wholesale Commodities, • Finance - Finance and Accounting, • Fossil Operations, • Gas Operations, • Human Resources, • Information Technology, • Nuclear - Non-Regulated, • Nuclear Corporate Support, • Nuclear Operations, • Operations and Performance, • President, • Supply Chain, • System Benefits, • System Planning, • Transmission, • Utility Management and Support Services, • Utility Support – Distribution, • Utility Support – Operations, • Wholesale Ops Corporate Support
<p>17</p>	<p>Entergy Operations, Inc</p>	<ul style="list-style-type: none"> • Entergy Arkansas, LLC, • Entergy Enterprises, Inc., • Entergy Louisiana, LLC, • Entergy Mississippi, LLC, • Entergy New Orleans, LLC, • Entergy Nuclear Operations, Inc., • Entergy Operations, Inc., • Entergy Services, LLC, • Entergy Texas, Inc., 	<ul style="list-style-type: none"> • Administration, • Corporate - Public Relations, • Corporate Support – General, • Finance - Finance and Accounting, • Human Resources, • Information Technology, • Nuclear – Regulated, • Nuclear Corporate Support, • Nuclear Operations,

		<ul style="list-style-type: none"> • System Energy Resources, Inc., Deferred 	<ul style="list-style-type: none"> • Supply Chain, • System Benefits, • Transmission, • Utility Support - Distribution
18	Entergy Services, LLC	<ul style="list-style-type: none"> • Entergy Arkansas, LLC, • Entergy Corporation, • Entergy Enterprises, Inc., • Entergy Louisiana, LLC, • Entergy Mississippi, LLC, • Entergy New Orleans, LLC, • Entergy Operations, Inc., • Entergy Services Holding, Inc., • Entergy Services, LLC, • Entergy Texas, Inc., • Entergy Transco Holding Company, LLC, • Entergy Transco Texas, LLC, • Entergy Utility Holding Company, LLC, • Morpheus One Holdings, LLC, • System Energy Resources, Inc., Deferred 	<ul style="list-style-type: none"> • Administration, • Chief Administrative Officer, • Corporate, • Corporate – Legal Services, • Corporate - Office of the Chief Executive Officer, • Corporate – Public Relations, • Corporate Support - General, • Customer Service, • Customer Service and Operations Support, • Customer Service Support, • Distribution, • EWC – Entergy Wholesale Commodities, • Finance - Finance and Accounting, • Fossil Operations, • Gas Operations, • Human Resources, • Information Technology, • Nuclear – Non-Regulated, • Nuclear - Regulated, • Nuclear Corporate Support, • Nuclear Operations, • Operations and Performance, • President, • Regulatory, • Supply Chain, • System Benefits, • System Planning, • Transmission, • Utility Management and Support Services, • Utility Support - Distribution, • Utility Support - Operations, • Wholesale Ops Corporate Support, • Wholesale Ops Finance

19	Eversource Services, Inc.	<ul style="list-style-type: none"> • n/a 	<ul style="list-style-type: none"> • Eversource Services, Inc. did not provide services to Eversource, Inc. or its subsidiaries during 2019.
20	Eversource Energy Service Company	<ul style="list-style-type: none"> • Connecticut Light and Power Company, • Eversource Energy Parent, • Eversource Energy Transmission Ventures Inc, • Eversource Gas Transmission II LLC, • Eversource Investment LLC, • Eversource Investment Service Company, Eversource LNG Service Company LLC, • Harbor Electric Energy Company, • Hopkinton LNG Corp, • HWP Company, • North Atlantic Energy Corporation, • North Atlantic Energy Service Corporation, • Northeast Generation Services Company, • Northern Pass Transmission LLC, • NSTAR Electric Company, • NSTAR Gas Company, • NU Enterprises Inc, • Properties Inc, • Public Service Company of New Hampshire, • Renewable Properties Inc, • The Rocky River Realty Company, • Yankee Energy System Inc, • Yankee Gas Services Company, • Eversource Water Ventures 	<ul style="list-style-type: none"> • Building Rent and Maintenance, • Corporate Relations, • Customer Group, • Depreciation, • Electric Distribution, • Energy Supply, • Engineering and Emergency Prep, • Enterprise Energy Strat + Bus Dev, • ERM and Claims + Insurance, • Finance and Accounting, • General Administration, • Human Resources, • Information Technology, • Internal Audit + Security, • Investor Relations, Legal, • Miscellaneous, • New Business Improvement, • Operations Administration, • Operations Services, • Safety, • Supply Chain + Env Affs + Property Management, • Taxes, • Transmission, Benefits, • Electric Distribution, • Engineering & Emergency Prep
21	Exelon Business Services Company, LLC	<ul style="list-style-type: none"> • Aerolab Enterprises, LLC, • Atlantic City Electric Co., • ATNP Finance Company, • Baltimore Gas and Electric Company, • BGE Home Products & Services, LLC, • CER Generation LLC (Hillabee), • Cltn Battery Utility, LLC, • Colorado Bend II Power, LLC., • Commonwealth Edison Company, • Constellation Energy Comm Grp., • Constellation Energy Nuclear Group, LLC (dba CENG, LLC), 	<ul style="list-style-type: none"> • Corporate Governance Areas: <ul style="list-style-type: none"> ○ Communications, ○ Corporate Governance (including Corporate Secretary), ○ Corporate Security, ○ Corporate Strategy, ○ Corporate Development, ○ Executive, ○ Finance, ○ General Company Activities including interest, severance, and income taxes, ○ Government Affairs and Public Policy,

		<ul style="list-style-type: none"> • Constellation Mystic Pwr, LLC, • Constellation NewEnergy, Inc, • Constellation Power Source Gen., • Constellation Power, Inc., Data Center Enterprises, LLC, • Delmarva Power & Light Co., • Distrigas of Massachusetts LLC, • Exelon Corporation, • Exelon Enterprises Company, LLC, • Exelon Framingham, LLC, • Exelon Generation Company, LLC, • Exelon Generation Finance Company, LLC, • Exelorate Enterprises, LLC., • ExGen Handley Power, LLC, • Exelon PowerLabs, LLC, • Exelon Solar Chicago, LLC, • Exelon Transmission Company, LLC, • Exelon West Medway, LLC, • Exelon West Medway II, LLC, • Exelon Wind, LLC, • Exelon Wyman, LLC, • ExTex LaPorte Limited Partnership, • EZEV Enterprise, LLC, • Handsome Lake Energy, LLC, • PECO Energy Company, • PEPCO Holdings Inc., • PHI Service Company, • Potomac Electric Power Co., • Wolf Hollow II Power, LLC 	<ul style="list-style-type: none"> ○ Legal Services • Exelon Utility Focused Items: <ul style="list-style-type: none"> ○ Transmission Operations and Planning • Human Resources: <ul style="list-style-type: none"> ○ Human Resources, ○ Human Resources - Labor Relations • Real Estate: <ul style="list-style-type: none"> ○ Real Estate Services • Supply: <ul style="list-style-type: none"> ○ Supply – purchasing / activities related to materials, ○ Supply – combined materials and services related purchasing / activities, ○ Supply Administration, ○ Credit card Program Administration • Information Technology (IT): <ul style="list-style-type: none"> ○ IT related to corporate governance areas, ○ IT related to utility customer systems, ○ IT related to Human Resources, ○ IT projects and applications, ○ IT governance and other items of general nature
22	FirstEnergy Service Company	<ul style="list-style-type: none"> • FirstEnergy Corp., • FirstEnergy Solutions Corporation, • FirstEnergy Generation, LLC, • FirstEnergy Nuclear Generation, LLC, • Allegheny Energy Supply, LLC, • Allegheny Generating Company, • FirstEnergy Nuclear Operating Company, • American Transmission Systems, Incorporated, • FirstEnergy Transmission, LLC, • Trans-Allegheny Interstate Line Company, 	<ul style="list-style-type: none"> • Chairman of the Board, • President & CEO, FirstEnergy Service Company, • President, FE Utilities, • Transmission, Distribution Support, • Utility Operations, • Compliance & Reg. Services, • Customer Service, • Energy Efficiency, • Environmental, • SVP & Chief Financial Officer,

		<ul style="list-style-type: none"> • AET PATH Company, LLC, • PATH, LLC, • AYE Series, • PATH Allegheny Trans. Co, • PATH Allegheny Maryland Transmission Co, LLC, • Mid-Atlantic Interstate Transmission, LLC, • FirstEnergy Ventures Corporation, • Bay Shore Power Company, • FirstEnergy Properties, Inc., • Allegheny Ventures, • The Cleveland Electric Illuminating Company, • Jersey Central Power & Light Company, • Metropolitan Edison Company, • Monongahela Power Company, • Ohio Edison Company, • The Potomac Edison Company, • Pennsylvania Electric Company, • Pennsylvania Power Company, • The Toledo Edison Company, • West Penn Power Company, • Buchanan Energy Company of Virginia, LLC, • Warrenton River Terminal, Ltd., • GPU Nuclear, Inc, • Suvon, LLC. 	<ul style="list-style-type: none"> • Corporate Services & CIO, • Supply Chain, • Controller, • Treasury, • Corporate Risk, • Business Development, • Integrated System Planning & Development, • Internal Auditing, • Legal, • Rates & Regulatory Affairs, • Corporate, Real Estate, Records Management, • External Affairs & Communications, • Corporate Affairs & Community Involvement, • Federal Affairs & Energy Policy, • Local Affairs & Economic Development, • State Affairs, • Human Resources, • FE Generation & CNO, • Marketing & Branding, • FE Tomorrow
23	GridLiance Management, LLC	<ul style="list-style-type: none"> • GridLiance Heartland LLC, • GridLiance High Plains LLC, • GridLiance East LLC, • GridLiance West LLC, • GridLiance West Holding LLC, • GridLiance Eastern Holdings LLC, • GridLiance Holdco LP, • GridLiance Texas LLC, 	<ul style="list-style-type: none"> • Corporate oversight, • Human resources, • Records management, • Risk management, • Payroll services, • Legal, • Administrative, • IT services
24	LG&E and KU Services Company	<ul style="list-style-type: none"> • Louisville Gas and Electric Company, • Kentucky Utilities Company, • Western Kentucky Energy Corp., • FCD LLC, • PPL EU Services Corporation, • LG&E and KU Capital LLC, 	<ul style="list-style-type: none"> • Customer Service, • Sales and Marketing, • Economic Development and Major Accounts, • Meter Reading Services, • Cash Remittance, • Billing Integrity,

		<ul style="list-style-type: none"> • PPL Services Corporation, • PPL Electric Utilities Corporation, • PPL Strategic Development, LLC 	<ul style="list-style-type: none"> • Energy Efficiency, • Smart Grid Strategy, • Field Services, • CCS Retail Business Readiness, • Project Engineering, • System Laboratory, • Generation, • Generation Services and Safety, • Fuel Procurement, • Project Development, • Strategy, • Reliability and Tariffs, • Operations and Construction, • Reliability and Compliance, • Energy Marketing, • Market Forecasting, • Load Forecasting, • Generation Planning and Analysis, • Network Trouble and Dispatch, • Electric Engineering, • Distribution Asset Management, • Forestry, • Substation Construction and Maintenance, • Budgeting, • Financial Planning, • Accounting and Reporting, • Property Accounting, • Revenue Accounting, • Payroll, • Tax Accounting, • Compliance and Reporting, • Audit Services, • Sarbanes-Oxley Compliance, • Treasury and Corporate Finance, • Risk Management, • Credit Administration, • Energy Marketing Trading Controls, • Supply Chain,
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25	Liberty Energy Utilities (New Hampshire) Corp	<ul style="list-style-type: none"> • None Listed 	<ul style="list-style-type: none"> • No services listed
26	Liberty Utilities (Canada) Corp	<ul style="list-style-type: none"> • Liberty Utilities (CalPeco Electric) LLC, • Liberty Utilities (Pine Bluff Water) Inc., • Liberty Utilities (Midstates Natural Gas) Corp, • Liberty Utilities (Peach State Natural Gas) Corp., • Liberty Utilities (Sub) Corp., • Liberty Energy Utilities (New Hampshire) Corp., • Liberty Utilities (Granite State Electric) Corp., 	<ul style="list-style-type: none"> • Utility Four-Factor Methodology, • Customer Count, • Utility Net Plant, • Non-Labor Expenses, • Labor Expenses, • Information Technology, • Human Resources,

		<ul style="list-style-type: none"> • Liberty Utilities (EnergyNorth Natural Gas) Corp., • Liberty Utilities (New England Natural Gas Company) Corp., • Algonquin Power & Utilities Corp., • Algonquin Power Trust, Liberty Utilities Co, • Liberty Utilities Energy Solutions Corp, • Liberty Utilities (Pipeline &Transmission) Corp., • Liberty Utilities (Park Water) Corp, Davis Road LP, • Mountain Water Company, • Liberty Utilities (Apple Valley Ranchos Water) Corp, • Blue Duchess Co Inc, Blue Duchess Co S.a.r.l., • Green Duchess Co Inc, Green Duchess Co S.a.r.l., Liberty Utilities Service Corp., • Liberty Utilities (Tinker Transmission) LP, • The Empire District Electric Company, • Éoliennes Belle-Rivière inc., • Great Bay Solar I, LLC, • Project Co (Odell Wind Farm, LLC), • Deerfield Wind Energy, LLC, • Algonquin SKIC 20 Solar, LLC, • Windelectric Inc., • Liberty Utilities (Missouri Water) LLC, • Algonquin Power (Ontario Transmission) Inc., • Liberty Utilities (St. Lawrence Gas) Corp, • Liberty Utilities (Gas New Brunswick) LP, • Algonquin Power Services Canada Inc., • Liberty Utilities (Arkansas Water) Corp 	<ul style="list-style-type: none"> • Training, • Facilities and Building Rent, • Environment, • Health, • Safety and Security, • Procurement, • Executive and Strategic Management, • Technical Services, • Utility Planning, • Risk Management, • Financial Reporting, • Planning and Administration, • Treasury, • Internal Audit, • External Communications, • Legal Costs, • Compliance
27	Liberty Utilities Service Corp	<ul style="list-style-type: none"> • Liberty Utilities (Peach State Natural Gas) Corp., • Liberty Utilities Energy Solutions Corp, • Liberty Utilities (CalPeco Electric) LLC, • Liberty Utilities (Sub) Corp., • Liberty Utilities (Pine Bluff Water) Inc., • Liberty Utilities (New England Natural Gas Company) Corp., • Liberty Utilities (Midstates Natural Gas) Corp., • Liberty Utilities (Canada) Corp., • Liberty Utilities Co, • Algonquin Power Trust, • Liberty Utilities (Pipeline & Transmission) Corp., • Liberty Energy Utilities (New Hampshire) Corp., 	<ul style="list-style-type: none"> • Utility Four-Factor Methodology, • Customer Count, • Utility Net Plant, • Non-Labor Expenses, • Labor Expenses, • Information Technology, • Human Resources, • Training, • Environment, • Health, Safety and Security, • Facilities and Building Rent, • Procurement,

		<ul style="list-style-type: none"> • Algonquin Windsor Lock, • Liberty Utilities (Park Water) Corp., • The Empire District Electric Company, • Liberty Power, Sanger Power, • Liberty Utilities (Missouri Water) LLC, • Liberty Utilities (Tinker Transmission) LP, • Amherst Wind Farm, • Deerfield Wind Energy, • Great Bay Solar, • Minonk Wind, • O'Dell Wind Farm, • Senate Wind, • Shady Oaks Wind, • St. Leon Wind Energy, Liberty Utilities (Tinker Transmission) LP, • Liberty Utilities (St. Lawrence Gas) Corp, • Liberty Utilities (Gas New Brunswick) LP, • Liberty Utilities (Arkansas Water) Corp 	<ul style="list-style-type: none"> • Executive and Strategic Management, • Technical Services, • Utility Planning, • Risk Management, • Financial Reporting, • Planning and Administration, • Compliance, • Treasury, • Internal Audit, • External Communications, • Legal Costs
<p>28</p>	<p>National Grid Engineering & Survey, Inc</p>	<ul style="list-style-type: none"> • Boston Gas Company, • Brooklyn Union Gas-KEDNY, • Colonial Gas Company, • Massachusetts Electric Co, • Nantucket Electric Co, • NE Hydro-Trans Corp, • NE Hydro-Trans Elec Co, • New England Power Company, • NG Development Holdings, • KS Gas East Corp-KEDLI, • NG Generation LLC, • NG Glenwood Energy Center, • NG LNG LP Regulated Entity, • NG Port Jeff Energy Center, • NG Services, Inc., • National Grid USA Parent, • NGUSA Service Company, • Niagara Mohawk Power Corp, • Transgas Inc, • Narragansett Electric Co, 	<ul style="list-style-type: none"> • Maintenance and construction, • Electric power plant operations, • Management of Complex Construction Projects, • Resource Planning and Response and Operations Performance activities

		<ul style="list-style-type: none"> • PSEG Electric Serv TSA Co, • Wayfinder Group, Inc. 	
<p>29</p>	<p>National Grid USA Service Company Inc</p>	<ul style="list-style-type: none"> • Boston Gas Company, • Brooklyn Union Gas-KEDNY, • Colonial Gas Company, • EUA Energy Investment, • Massachusetts Electric Co, • Nantucket Electric Co, • Narragansett Electric Co, • NE Electric Trans Corp, • NE Hydro-Trans Corp, • NE Hydro-Trans Elec Co, • New England Power Company, • NG Development Holdings, • NG Energy Trading Srvcs, • NG Engineering Srvcs, LLC, • KS Gas East Corp-KEDLI, • NG Generation LLC, • NG LNG LP Regulated Entity, • NG NEHoldings 2 LLC, • NG Services, Inc., • National Grid USA Parent, • Niagara Mohawk Holdings, • Niagara Mohawk Power Corp, • Transgas Inc, • Wayfinder Group, Inc., • NG Electric Services, • PSEG Electric Serv TSA Co, • NG North America Inc., • National Grid Ventures Consolidated 	<ul style="list-style-type: none"> • US Human Resources, <ul style="list-style-type: none"> ○ Compensation, ○ Benefits & Pensions, ○ HR SVP, ○ Labor & Employee Relations, ○ Talent & Diversity, ○ Talent Acquisition, ○ US HR Business Partner, • US Finance, <ul style="list-style-type: none"> ○ Finance Business Partnering, ○ Controllership, ○ Corporate Finance, ○ Finance Excellence, ○ US CFO, • Total US IT, <ul style="list-style-type: none"> ○ Global IT, ○ Global Solution Development RTB, ○ Infrastructure & Operations, ○ IS Commercial Supplier Management, ○ IS Digital Risk & Security, ○ IS Enterprise Projects, ○ IS Physical Security, ○ IS Legacy Org, ○ US Group Functions/Data Management., ○ US Infrastructure Program Del. RTB, ○ US IT, • US Legal, <ul style="list-style-type: none"> ○ Federal and State Regulatory, ○ Litigation, ○ Environment and ○ Employment, ○ General Counsel, • Global Human Resources, <ul style="list-style-type: none"> ○ Global & US LTC, ○ Global Academy, ○ Global HR Business Partners, ○ Global People Analytics, • Global Finance,

			<ul style="list-style-type: none"> ○ Claims, ○ Investment Management, ○ US Insurance, ○ US Investor Relations, ○ US Tax, ○ US Treasury, ○ US IS Finance, ● Global Legal, <ul style="list-style-type: none"> ○ Internal Compliance, ○ Records Management, ○ US Risk Management, ● Senior Counsel Corporate, <ul style="list-style-type: none"> ○ Real Estate, ○ Corporate Counsel, ● Corporate Affairs, <ul style="list-style-type: none"> ○ Federal Affairs, ○ Government Relations, ○ Strategic Communications, ● Audit, <ul style="list-style-type: none"> ○ US Audit, ● Capital Delivery, <ul style="list-style-type: none"> ○ Capital Delivery Programs, ○ Capital Delivery SVP, ○ Capital Delivery – Electric, ○ Capital Delivery – Gas, ○ Capital Project Development Contracts & Commercial, ○ Project Controls & Estimating, ● Centralized Functions, <ul style="list-style-type: none"> ○ Centralized Services, ○ Property & Fleet, ● Customer Operations, <ul style="list-style-type: none"> ○ Chief Customer Officer, ○ Customer Delivery, ○ Customer Process Enablement, ○ Customer Solutions, ○ Innovation & Development, ○ Marketing & Product Growth, ● Electric Business Unit, <ul style="list-style-type: none"> ○ COO Electric Business Unit, ○ Elec Inv Strategy & Resource Planning,
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			<ul style="list-style-type: none"> ○ Elec Planning & Performance Management, ○ Emergency Planning & Electric Services, ○ Field Operations (Maintenance & Construction), ○ US Electric Engineering, ● Gas Business Unit, <ul style="list-style-type: none"> ○ COO Gas Business Unit, ○ Gas Bus Planning & Performance, ○ Gas Enablement Project, ○ Gas Field Operation, ○ US Gas Engineering, ○ Work & Resource Management, ● Global Procurement, <ul style="list-style-type: none"> ○ Global Procurement-Strategy, ○ Inventory Management & Warehouse Management, ○ US Procurement, ● Global SHE, <ul style="list-style-type: none"> ○ Global SHE, ● MA JDx, <ul style="list-style-type: none"> ○ Community & Cust Management-MA, ○ Jurisdictions-MA Pres, ○ US Policy & Social Impact, ● NY JDx, <ul style="list-style-type: none"> ○ Community & Cust Management-NY, ○ Jurisdictions-NY Pres, ○ Performance & Strategy-NY, ● RI JDx, <ul style="list-style-type: none"> ○ Community & Cust Management-RI, ○ Jurisdictions-RI Pres, ○ Performance & Strategy-RI, ● Safety & Business Excellence, <ul style="list-style-type: none"> ○ BE-Internal Consultancy, ○ Performance Excellence, ○ Plan, Automation & Analytics, ○ US Business Assurance, ● Safety, Health & Environment, <ul style="list-style-type: none"> ○ Corporate Safety, ○ Environment, ○ Field Safety, ○ Health, ○ Process Safety,
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			<ul style="list-style-type: none"> ○ SHE Performance & Reporting, ○ SHE-VP, ○ US Business Assurance VP, ● Strategy & Regulation, <ul style="list-style-type: none"> ○ New England Pricing, ○ New England Revenue Reqmt, ○ New York Pricing, ○ New York Revenue Reqmt, ○ Reg Process Excellence, ○ Reg Strategy & Int Analytics, ○ Strategy & Regulation SVP, ● Transmission, Gen & Energy Procurement, <ul style="list-style-type: none"> ○ Bus Planning, Dev & Process, ○ Energy Procurement, ○ Power Plant Operations, ○ Pres & COO-Trans, Gen & EP, ○ Systems Eng & Aviation, ○ Tx Planning & Asset Management
<p>30</p>	<p>NiSource Corporate Services Company</p>	<ul style="list-style-type: none"> ● Columbia Gas of Kentucky, Inc., ● Columbia Gas of Maryland, Inc., ● Columbia Gas of Massachusetts (Bay State Gas d/b/a Columbia Gas of Massachusetts), ● Columbia Gas of Ohio, Inc., ● Columbia Gas of Pennsylvania, Inc., ● Columbia Gas of Virginia, Inc., ● Columbia Gas of Ohio Receivables Corporation, ● Columbia Gas of Pennsylvania Receivables Corporation, ● NiSource Development Company, Inc., ● NiSource Energy Technologies, Inc., ● NiSource Inc., ● NiSource Insurance Corporation, Inc., ● Northern Indiana Public Service Company LLC 	<ul style="list-style-type: none"> ● Accounting and Statistical Services, ● Auditing Services, ● Budget Services, ● Business Services, ● Corporate Services, ● Customer Billing, Collection, and Contact Services, ● Employee Services, ● Engineering and Research Services, ● Facility Services, ● Gas Dispatching Services, ● Information Services, ● Information Technology Services, ● Insurance Services, ● Land/Surveying Services, ● Legal Services, ● Officers, ● Operations Support and Planning Services, ● Purchasing, Storage and Disposition Services, ● Regulatory Services, ● Tax Services, ● Transportation Services,

31	PHI Service Company	<ul style="list-style-type: none"> • Potomac Electric Company, • Delmarva Power & Light Company, • Atlantic City Electric Company, • Exelon Business Services Company, LLC, • Constellation NewEnergy, Inc., • Pepco Holdings LLC, • Commonwealth Edison Company, • PECO Energy Company, • Baltimore Gas and Electric Company, • Exelon Generation Company, LLC 	<ul style="list-style-type: none"> • Treasury Services • Executive Management, • Support Services: <ul style="list-style-type: none"> ○ Vehicle Resource Management Building Services, ○ Claims Administration Services Other Services, ○ Financial Services, ○ Human Resources, ○ Legal Services, ○ Customer Services, ○ Information Technology, • Governmental Affairs: <ul style="list-style-type: none"> ○ Customer Research and Account Management Services, ○ Other Government Affairs Services, ○ Communication Services, • Regulatory Services: <ul style="list-style-type: none"> ○ Customer Energy, • Other Regulatory Services, • Regulated Electric and Gas Operation Services: <ul style="list-style-type: none"> ○ System Operations Services, ○ Meter Maintenance and Testing Services Other Delivery Services, ○ Supply Services, ○ Utility Storeroom Services Other Supply Services
32	PNMR Services Company	<ul style="list-style-type: none"> • PNM, • PNMR Holding Company, • TNMP, • PNMR DMC, • NMPPA 	<ul style="list-style-type: none"> • Financial Systems, • Accounts Payable, • Asset Management, • Direct-PNMR Utility, • Co 6 Utility General, • Direct-PNM Utility, • IT Infrastructure, • Building-Lewisville, • Buildings-Dallas-Las Colinas, • Downtown Albuquerque Buildings, • Aztec Building, • Maximo, • Benefits, • Ethics and Governance, • Payroll, • People Services, • Communications

<p>33</p>	<p>PPL EU Services Corporation</p>	<ul style="list-style-type: none"> • PPL Corporation, • PPL Services Corporation, • PPL Strategic Development, LLC, • PPL Electric Utilities Corporation, • PPL Global, LLC, • LG&E and KU Services Company, • PPL Distributed Energy Resources, LLC, • PPL Safari Holdings, LLC, • Safari Energy, LLC 	<ul style="list-style-type: none"> • Communications: <ul style="list-style-type: none"> ○ Board Services, ○ Charitable Contributions, ○ Energy Efficiency, ○ External Communications, ○ Internal Communications, ○ Communications Indirect • Facilities: <ul style="list-style-type: none"> ○ Building Operations and Maintenance, ○ Customer Requests, ○ Rent and Lease Costs, ○ Facilities Indirect • Finance: <ul style="list-style-type: none"> ○ Accounting and Reporting, ○ Energy Acquisition, ○ Ethics and Compliance, ○ Miscellaneous Billing, ○ Planning and Analysis, ○ Property Accounting, ○ Property Accounting / Business Line Support, ○ Regulatory Operations, ○ Finance Indirect • Human Resources: <ul style="list-style-type: none"> ○ Benefits, ○ Business Partners, ○ Compensation, ○ Health Services, ○ Human Resource Information System, ○ Labor Relations, ○ Payroll Services, ○ Talent Management, ○ Human Resources Indirect • Information Technology: <ul style="list-style-type: none"> ○ Cyber Security and Information, ○ Operations, ○ Transformation, ○ Planning, ○ Information Technology Indirect • Supply Chain: <ul style="list-style-type: none"> ○ Contract Management,
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			<ul style="list-style-type: none"> ○ Materials Sourcing, ○ Supply Chain Administration, ○ Warehouse Support ○ Supply Chain Indirect ● Technical Development & Improvement: <ul style="list-style-type: none"> ○ Emergency Preparedness, ○ Training, ○ Technical Development & Improvement Indirect
34	PPL Services Corporation	<ul style="list-style-type: none"> ● PPL Corporation, ● PPL Subsidiary Holding, LLC, ● PPL Energy Holding, LLC, ● PPL Capital Funding, Inc., ● PPL Strategic Development, LLC, ● PPL Power Insurance LTD, ● PPL EU Services Corporation, ● CEP Reserves, Inc., ● CEP Lending, Inc., ● PPL Electric Utilities Corporation, ● PPL Translink, Inc., ● PPL UK Holdings, LLC, ● PPL Global, LLC, ● PMDC International Holdings, Inc., ● PPL Barbados SRL, ● PPL Atlantic Holdings, LLC, ● LG&E and KU Services Company, ● PPL Distributed Energy Resources, LLC, ● PPL Safari Holdings, LLC, ● PPL Safari Energy, LLC, ● PPL Technology Ventures, LLC, ● PPL Energy Resources, LLC, ● PPL Renewables, LLC 	<ul style="list-style-type: none"> ● Corporate Audit Services – Direct: <ul style="list-style-type: none"> ○ Auditing, ○ SOX Control Testing, ○ SOX Compliance, ○ Corporate Audit Services – Indirect; ● Office of Chairman – Direct: <ul style="list-style-type: none"> ○ Office of President, ○ Office of President - Net Jet, ○ Strategic Development Support, ○ Office of Chairman – Indirect; ● Corporate Systems – Direct: <ul style="list-style-type: none"> ○ UIP Systems Support, ○ Wall Street System Support, ○ Wausau System Support, ○ HFM System Support, ○ Strategic Development Support, ○ CaseWare Electronic Workpaper System Support, ○ Business Line Support, ○ Controller App System Support, ○ Treasury App System Support, ○ Corporate Systems – Indirect; ● Enterprise Security – Direct: <ul style="list-style-type: none"> ○ Corporate Compliance Officer, ○ Cyber Security Risk Management, ○ Business Line Support, ○ Strategic Development Support, ○ Enterprise Security – Indirect; ● Financial - Direct: <ul style="list-style-type: none"> ○ Office of President, ○ Training, ○ Financial Support, ○ International Accounting Services,

			<ul style="list-style-type: none"> ○ International Tax Compliance & Planning, ○ Tax Compliance & Reporting-EU, ○ Audit/PCAOB Fees, ○ Financial Reporting, ○ Internal Reporting, ○ Financial Consulting Services ○ Fin Support for Delaware Co's, ○ Distributed Energy Resources, ○ Safari Energy, ○ Investor Relations, ○ Investor Service Fees, ○ Rating Agency, ○ Billing, ○ Remittance Processing, ○ Cash Receipt Exception Posting, ○ Credit Services, ○ Vendor Servicing (Corporate Disbursements), ○ Cash Processing Scanning Services, ○ Pension Domestic Only, ○ Pensions Pennsylvania Only Stock Based Compensation, ○ Compensation & Benefits, ○ Insurance Services-General Strategic Development Support, ○ Financial – Indirect; ● Human Resources - Direct: <ul style="list-style-type: none"> ○ Employee Communications, ○ Executive Services, ○ Board Services, ○ HR Support to Business Lines, ○ Physical Security, ○ Protective Services, ○ Talent Management and Diversity & Inclusion Services., ○ Corp Compensation and Benefit Services, ○ Human Resources – Indirect; ● Information Services - Direct: <ul style="list-style-type: none"> ○ IT Vehicle Costs, ○ IT Tax; ● Office of General Counsel - Direct: <ul style="list-style-type: none"> ○ Legal Services, ○ Government Affairs & Communications, ○ Corporate Compliance,
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			<ul style="list-style-type: none"> ○ Annual Meeting/Proxy, ○ Board Services, ○ Office of General Counsel – Indirect; ○ PPL Services – Indirect; ● Supply Chain - Direct: <ul style="list-style-type: none"> ○ Storage of Goods
35	Sempra North American Infrastructure, LLC	<ul style="list-style-type: none"> ● Sempra Technology Ventures, LLC, ● Sempra LNG, LLC, ● LA Storage, LLC, ● Cameron Interstate Pipeline, LLC, ● Sempra LNG ECA Liquefaction, LLC, ● Port Arthur LNG Holdings, LLC, Port Arthur LNG, LLC, ● Sempra International, LLC, ● Infraestructura Energetica Nova, S.A.B. de C.V., ● Sempra Midstream, Inc., ● Bay Gas Storage, Co. LTD, ● Mississippi Hub, LLC, ● Port Arthur Pipeline, LLC, ● Sempra Gas & Power Marketing, LLC, ● Sempra Renewables, LLC, ● Sempra LNG Marketing, LLC, ● Sempra LNG International, LLC, ● Sempra Louisiana LNG, LLC, ● Domingo Pipeline, LLC, ● PALNG Common Facilities Company, LLC, ● Sempra Global, ● Sempra Renewables Services, Inc., ● Sempra Energy, ● Port Arthur LNG Phase II, LLC, ● Sempra LNG Holdings II, LLC 	<ul style="list-style-type: none"> ● Executive, ● Human Resources, ● Information Technology & Supply Management, ● Operations, ● Legal & External Affairs, ● Asset Management, ● Engineering & Construction, ● Commercial & Project Development, ● Accounting and Finance
36	Sempra Services Corporation	<ul style="list-style-type: none"> ● Sempra LNG International, LLC, ● Sempra Gas & Power Marketing, ● Port Arthur Pipeline, ● Sempra LNG Holdings II, LLC, ● Sempra LNG ECA Liquefaction, ● Port Arthur LNG, LLC 	<ul style="list-style-type: none"> ● No services listed; Sempra Services Corporation became a FERC reporting entity on July 13, 2019

37	Southern Company Services, Inc	<ul style="list-style-type: none"> • The Southern Company, • Alabama Power Company, • Georgia Power Company, • Mississippi Power Company, • Southern Electric Generating Company, • Southern Nuclear Operating Company, • Southern Company Holdings, Inc., • Southern Communications Services, Inc., • Southern Power Company, • Southern Company Gas, • PowerSecure International 	<ul style="list-style-type: none"> • Accounting, Finance, and Treasury, • Auditing, • Executive and Corporate, • External Affairs, • Human Resources, • Information Technology, • Legal and General Counsel, • Supply Chain Management, • System Air, • Engineering, • Transmission, • Environmental and Research, • Executive and Corporate, • Other - SWE, • System Planning, • SCG Exec and Corporate Support, • Chief Production Officer
38	Southern Nuclear Operating Company, Inc	<ul style="list-style-type: none"> • Alabama Power Company, • Georgia Power Company, • Southern Nuclear Services, LLC (SNS), • Southern Nuclear Development, LLC (SND) 	<ul style="list-style-type: none"> • Alabama Power and Georgia Power: <ul style="list-style-type: none"> ○ Operating and maintenance services, ○ New investment services, and ○ Fuel services at cost with respect to nuclear generating plants. • SNS and SND, at cost: <ul style="list-style-type: none"> ○ Assistance, ○ Materials, ○ Supplies, ○ Licenses, ○ Offices, ○ Certain real property rights, ○ Telecommunications services, ○ Public information services, ○ Environmental services, ○ Accounting services, ○ Procurement services, ○ Maintenance personnel, ○ Security personnel
39	TECO Services, Inc	<ul style="list-style-type: none"> • TECO Energy, Inc., • TECO Finance, Inc., • TECO EnergySource, Inc., • TECO Gemstone, Inc., 	<ul style="list-style-type: none"> • Accounts Payable, • Claim Management, • Corporate Communications, • Emergency Management,

		<ul style="list-style-type: none"> • TECO Properties Corporation, • TECO Pipeline Holding Company, LLC, • SeaCoast Gas Transmission, LLC, • Tampa Electric Company, • Peoples Gas System (a division of Tampa Electric Company), • TECO Partners, Inc., • New Mexico Gas Company, Inc., • Emera Technologies LLC, • Bridgeport Energy LLC, • Emera Energy Generation II LLC, • Emera Caribbean Holdings Limited, • Emera (Caribbean) Incorporated, • Emera Energy Incorporated, • Emera Energy U.S. Subsidiary No. 1, Inc., • Emera Incorporated, • Emera Maine, • Emera US Holdings Inc., • Grand Bahama Power Company Limited, • Nova Scotia Power Incorporated, • Rumford Power Inc, • Scotia Power U.S., Ltd., • Tiverton Power LLC, • Emera Energy Services, Inc. 	<ul style="list-style-type: none"> • Human Resources, • Information Technology, • Procurement, • Administrative Services
40	Unitil Service Corporation	<ul style="list-style-type: none"> • Unitil Energy Systems, Inc., • Fitchburg Gas and Electric Light Co., • Unitil Realty Corp., • Unitil Resources, Inc., • Unitil Corporation, • Northern Utilities, Inc., • Granite State Gas Transmission, Inc. 	<ul style="list-style-type: none"> • Regulatory Services, • Distributed Energy Resources, • Human Resources, • Executive, • Finance, • Information Systems, • Accounting, • Engineering, • Energy Contracts, • Financial Services, • Business Continuity & Compliance, • Customer Service, • Operations Shared Services, • Distribution Engineering, • Communication Services,

			<ul style="list-style-type: none"> • Gas Engineering, • Gas Operations, • Electric Operations, • Business Development
41	WEC Business Services LLC	<ul style="list-style-type: none"> • ATC Holding LLC, • Bluewater Gas Storage, LLC, • Dairyland Power Cooperative, • Elm Road Generating Station Supercritical, LLC, • Integrys Holding, Inc., • Madison Gas and Electric Company, • Michigan Gas Utilities Corporation, • Minnesota Energy Resources Corporation, • North Shore Gas Company, • Port Washington Generating Station, LLC, • The Peoples Gas Light and Coke Company, • Upper Michigan Energy Resources Corporation, • WEC Energy Group, Inc., • WEC Infrastructure LLC, • W.E. Power, LLC, • Wisconsin Electric Power Company, • Wisconsin Energy Capital Corporation, • Wisconsin Gas LLC, • Wisconsin Power and Light Company, • Wisconsin Public Service Corporation, • Wisconsin River Power Company, • Wispark LLC, • WPPI Energy, • WPS Power Development, LLC 	<ul style="list-style-type: none"> • Administrative, • Communications, • Customer, • Environmental, • Executive Management, • External Affairs, • Finance, • Human Resources, • Information Technology, • Legal and Governance, • Supply Chain, • Operational Support and Development, • Wholesale Energy and Fuels
42	Xcel Energy Services Inc	<ul style="list-style-type: none"> • NSP-Minnesota, • PSCo, • SPS, • NSP-Wisconsin, • Xcel Energy, Inc., • Xcel Energy Joint Ventures, • MEC Holdings, LLC, • e-prime, Inc., • Capital Services, LLC, • Xcel Energy 	<ul style="list-style-type: none"> • Executive Management Services, • Investor Relations, • Internal Audit, • Legal, • Claims Services, • Corporate Communications, • Employee Communications, • Corporate Strategy & Business Development, • Government Affairs, • Facilities & Real Estate,

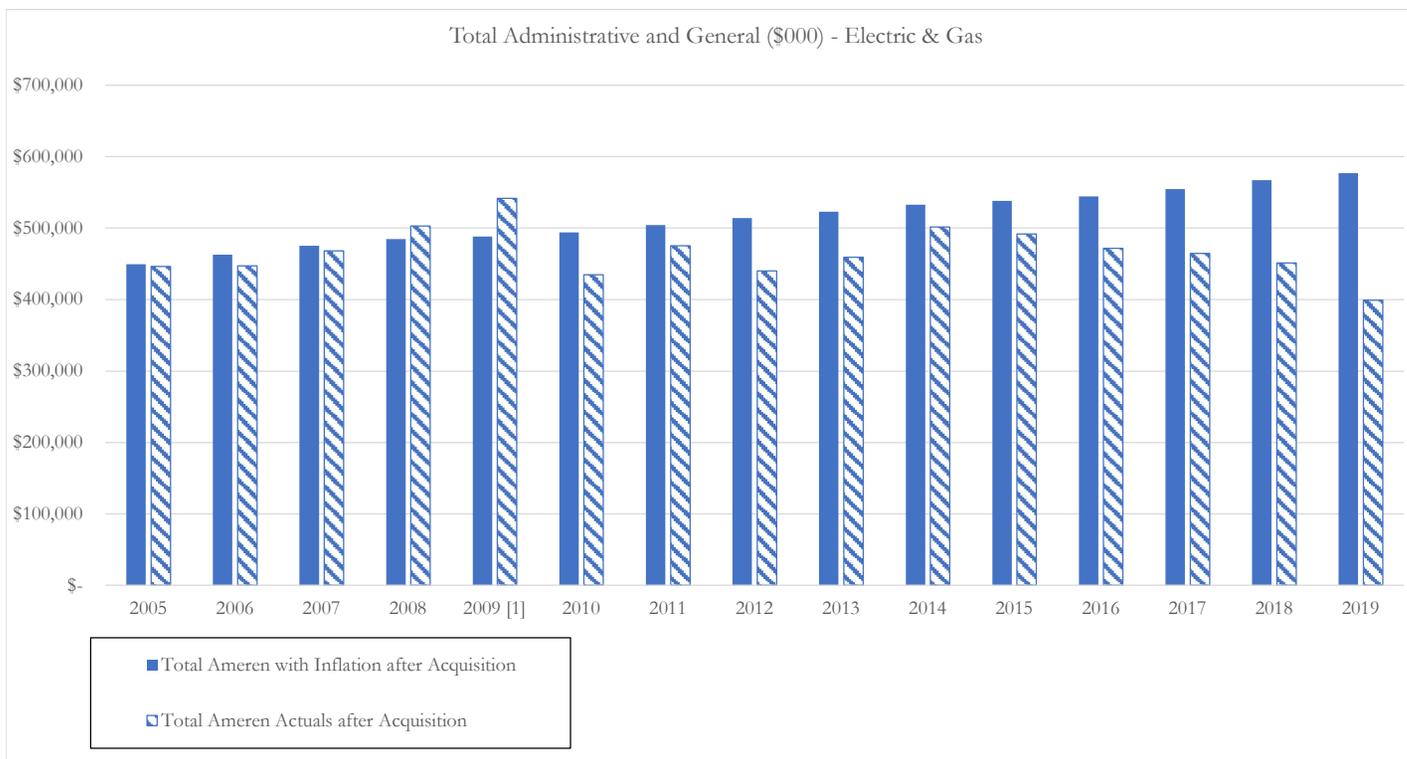
	<ul style="list-style-type: none"> • WYCO, Inc., • Eloigne Company, • Nicollet Projects I, LLC, • Quixx Corporation, • Chippewa and Flambeau Improvement Company, • 1480 Welton, Inc., • United Power & Land Company, • Energy Impact Fund Investments, Inc., • Xcel Energy Transmission Development Company, LLC, • WestGas Interstate, Inc., • Nicollet Holdings Company, • P.S.R. Investments, Inc, • Xcel Energy Ventures, Inc., • Clearwater Investments, Inc., • Xcel Energy Transmission Holding Company, LLC, • Xcel Energy West Transmission Company, LLC, • Xcel Energy Performance Contracting, Inc., • Xcel Energy Retail Holdings Inc., • Xcel Energy Wholesale Group, Inc., • Xcel Energy Ventures Holdings, Inc., • Xcel Energy Markets Holdings, Inc., • Xcel Energy Southwest Transmission Company, LLC, • Xcel Energy International, Inc., • Xcel Energy Communications Group, Inc., • Reddy Kilowatt Corporation, • Xcel Energy Investments, • Seren Innovations, Inc., • NSP Lands, Inc. 	<ul style="list-style-type: none"> • Facilities Administrative Services, • Supply Chain, • Supply Chain Special Programs, • Human Resources, • Finance & Treasury, • Accounting, • Financial Reporting & Taxes, • Payment & Reporting, • Receipts Processing, • Payroll, • Rates & Regulation, • Energy Supply Engineering and Environmental, • Energy Supply Business Resources, • Energy Markets Regulated Trading & Marketing, • Energy Markets - Fuel Procurement, • Energy Delivery Marketing, • Energy Delivery Construction, Operations & Maintenance (COM), • Energy Delivery Engineering/Design, • Marketing & Sales, • Customer Service, • Business Systems, • Aviation Services, • Fleet
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Administrative and General Expense Detailed Analysis

Total Administrative and General (\$000) - Electric & Gas

Inflated after Acquisition															
	2005	2006	2007	2008	2009 [1]	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Union Electric	241,342	248,656	255,333	260,320	262,292	265,340	270,885	276,085	280,923	286,232	289,305	292,464	298,021	304,737	309,941
CIPS (merger completed 12/31/1997)	88,668	91,355	93,808	95,641	96,365	97,485	99,522	101,432	103,210	105,160	106,289	107,450	109,492	111,959	113,871
CILCO (acquisition closed 1/31/2003)	43,461	44,778	45,981	46,879	47,234	47,783	48,781	49,718	50,589	51,545	52,098	52,667	53,668	54,877	55,815
IP (acquisition closed 9/30/2004)	75,671	77,964	80,058	81,621	82,239	83,195	84,934	86,564	88,081	89,710	90,567	91,516	93,235	95,474	97,180
Total Ameren with Inflation after Acquisition	449,142	462,753	475,180	484,461	488,130	493,802	504,122	513,799	522,804	532,647	538,259	544,097	554,416	567,047	576,806

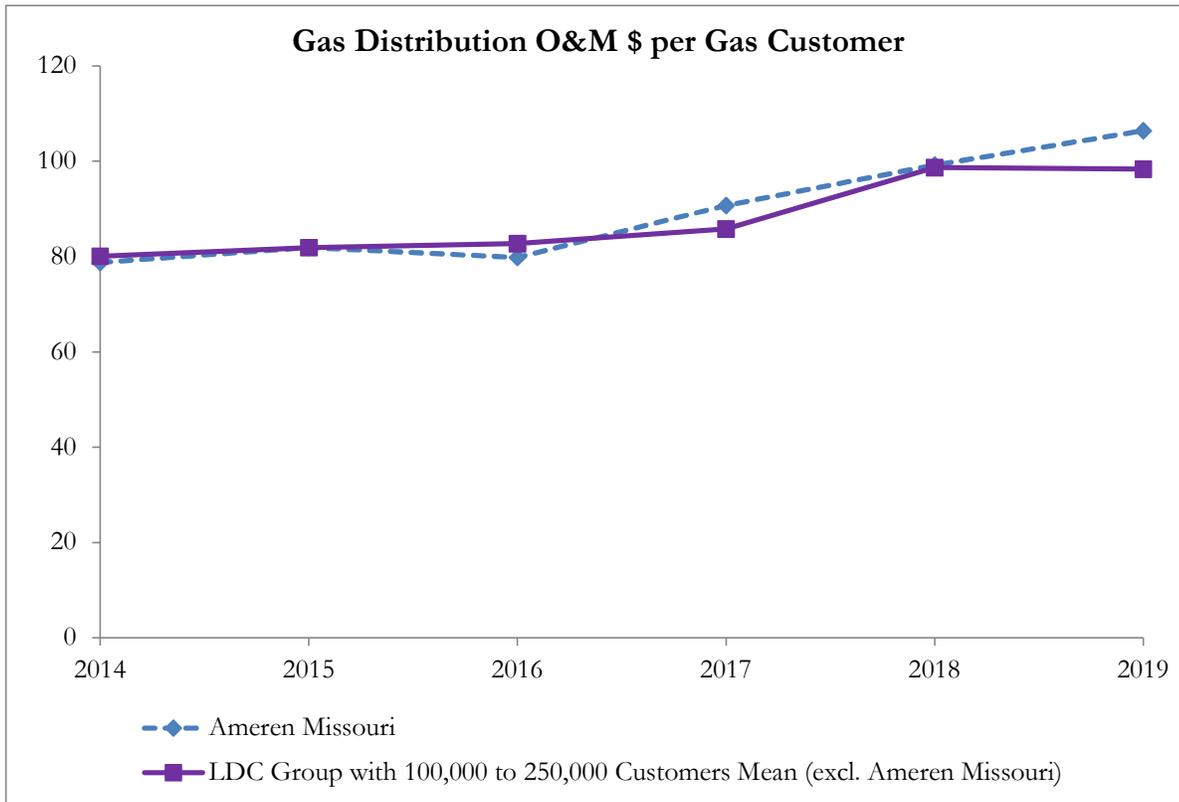
Actuals															
	2005	2006	2007	2008	2009 [1]	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Union Electric	254,973	256,954	277,830	287,277	264,640	254,270	286,445	248,338	263,393	292,458	279,072	266,272	249,866	250,947	228,596
CIPS (merger completed 12/31/1997)	51,843	53,518	56,330	61,046	51,469										
CILCO (acquisition closed 1/31/2003)	51,249	44,291	46,156	40,967	119,443										
IP (acquisition closed 9/30/2004)	88,173	92,427	87,651	113,631	106,127										
Ameren Illinois						180,553	188,614	191,583	195,831	209,237	212,442	205,303	214,495	200,136	170,475
Total Ameren Actuals after Acquisition	446,238	447,190	467,967	502,921	541,679	434,823	475,059	439,921	459,224	501,695	491,514	471,575	464,361	451,083	399,071



NOTES

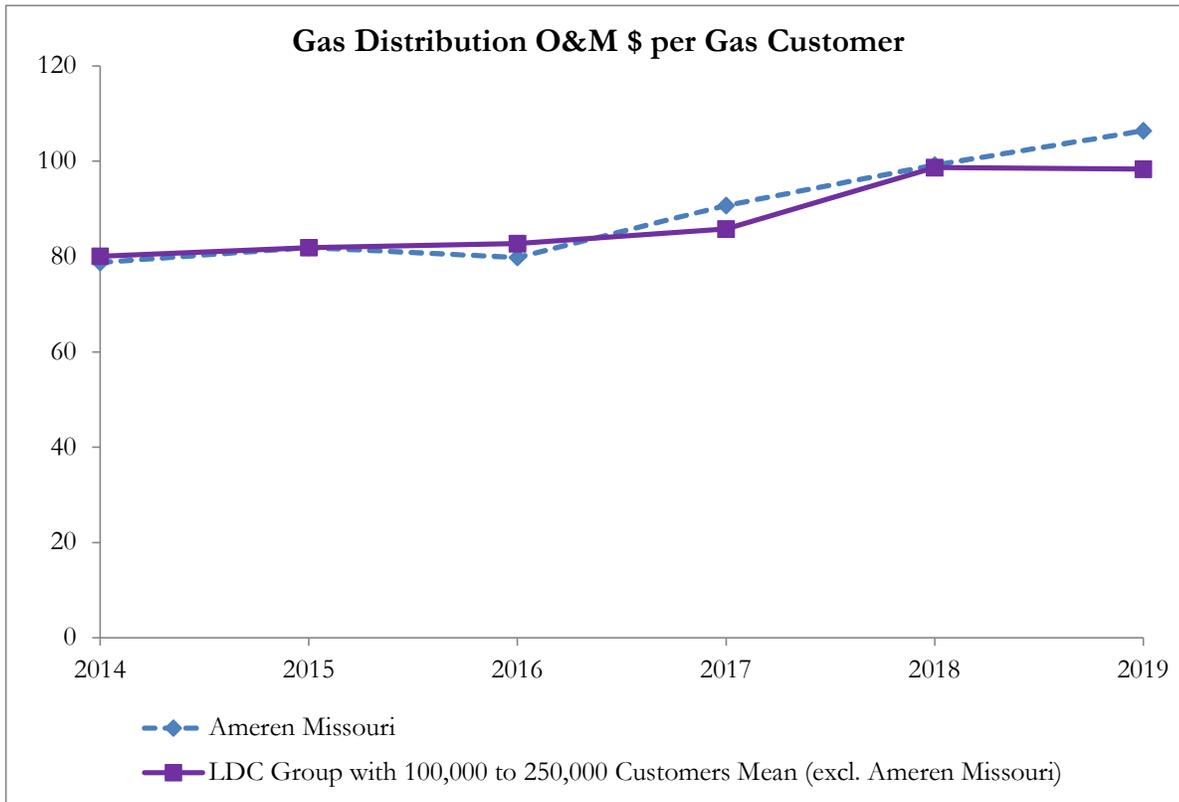
[1] Amount for CILCO in 2009 ties to the Form 1 which includes \$57,483 of intercompany billings recorded in account 921. In the Company's filing in Docket #12-0001, that amount was excluded.

LDC Group with 100,000 to 250,000 Customers



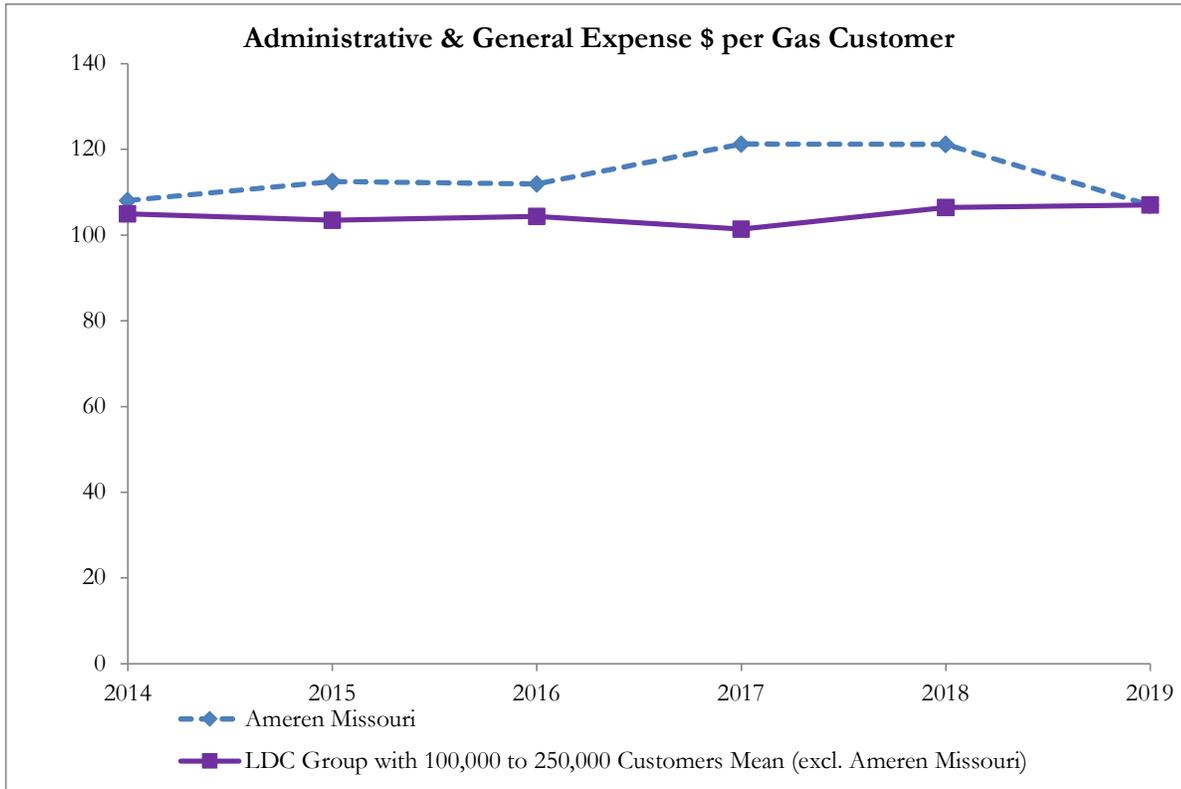
Gas Distribution O&M per Customer						
Annual Values						
	2014	2015	2016	2017	2018	2019
Ameren Missouri	79	82	80	91	99	106
LDC Group with 100,000 to 250,000 Customers Mean (excl. Ameren Missouri)	80	82	83	86	99	98
Rankings						
	2014	2015	2016	2017	2018	2019
LDC Group with 100,000 to 250,000 Customers						
Ameren Missouri	21	26	24	28	24	21
Quartile	3	3	3	3	3	3
Total Ranked	41	41	41	41	37	28

LDC Group with 100,000 to 250,000 Customers



Gas Distribution O&M per Customer						
Annual Values						
	2014	2015	2016	2017	2018	2019
Ameren Missouri	79	82	80	91	99	106
LDC Group with 100,000 to 250,000 Customers Mean (excl. Ameren Missouri)	80	82	83	86	99	98
Rankings						
	2014	2015	2016	2017	2018	2019
LDC Group with 100,000 to 250,000 Customers						
Ameren Missouri	21	26	24	28	24	21
Quartile	3	3	3	3	3	3
Total Ranked	41	41	41	41	37	28

LDC Group with 100,000 to 250,000 Customers



Administrative & General Expense \$ per Gas Customer						
Annual Values						
	2014	2015	2016	2017	2018	2019
Ameren Missouri	108	113	112	121	121	107
LDC Group with 100,000 to 250,000 Customers Mean (excl. Ameren Missouri)	105	103	104	101	106	107
Rankings						
	2014	2015	2016	2017	2018	2019
LDC Group with 100,000 to 250,000 Customers						
Ameren Missouri	27	29	27	29	25	17
Quartile	3	3	3	3	3	3
Total Ranked	42	42	42	42	38	29

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Union Electric Company)
d/b/a Ameren Missouri's Tariffs to Adjust)
Its Revenues for Electric Service.)

Case No. GR-2021-0240

AFFIDAVIT OF JOHN J. REED

STATE OF Massachusetts)
CITY OF Marlborough) ss

John J. Reed, being first duly sworn on his oath, states:

My name is John J. Reed, and on his oath declare that he is of sound mind and lawful age; that he has prepared the foregoing *Direct Testimony*; and further, under the penalty of perjury, that the same is true and correct to the best of my knowledge and belief.



John J. Reed

Sworn to me this 31 day of March, 2021.

Wendy L. Hester
Hester Public
Commissioner of Massachusetts
Commission Expires April 22, 2022