Issues: Cost of Assets
Witness: Robert E. Pender
Sponsoring Party: South Central MCN LLC
Type of Exhibit: Direct Testimony
Case No.: EA-2016-0036
Date Testimony Prepared: August 17, 2015

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of the Application of South Central MCN LLC for Approval of Transfer of Assets and a Certificate of Convenience and Necessity	))))	File No. EA-2016-0036

DIRECT TESTIMONY OF

ROBERT E. PENDER

ON BEHALF OF

SOUTH CENTRAL MCN LLC

AUGUST 17, 2015

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

PREPARED DIRECT TESTIMONY OF
ROBERT E. PENDER
ON BEHALF OF
SOUTH CENTRAL MCN LLC
AUGUST 17, 2015

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I. INTRODUCTION AND PURPOSE OF TESTIMONY

Q 1: Please state your name and business address.

A: Robert E. Pender, P.O. Box 1567, Goldenrod, Florida, 32733.

Q 2: What is your occupation?

A: I am a consultant with the firm of R. E. Pender, Inc., holding the title of President.

Q 3: Have you previously testified before this Commission?

A: No.

Q 4: Have you testified before any other forums?

A: Yes. I previously testified before the Federal Energy Regulatory Commission (FERC) in Florida Power & Light Company, Docket No. ER93-465-000; City of Las Cruces, New Mexico, Docket No. SC97-2-000; and Nevada Power Company, Docket No. ER03-T328-000. I have also testified before the Kansas Corporation Commission, the Public Service Commission of the District of Columbia, the New York Public Service Commission, the New Mexico Public Regulation Commission, the Public Utilities Commission of Ohio, the Pennsylvania Public Utility Commission, as well as several state circuit courts, Federal District Court and in an arbitration proceeding convened pursuant to a Florida district court order.

Q 5: Briefly summarize your experience in the electric utility industry.

A: I have over 35 years of experience in the electric utility industry, working primarily in the areas of utility appraisal and valuation; electric wholesale and retail rate regulation, including the preparation and analysis of cost of service studies, interconnection agreement filings and rate design; and general consulting. For nine years, I was employed primarily in the Rates and Regulatory Affairs department of Public Service Company of Indiana (now Duke Indiana) where I held the positions of Wholesale Cost of Service Supervisor, Transmission Joint Agreements Supervisor and Sr. Rates Analyst, among others. I was also employed by the engineering and consulting firm of R. W. Beck,

Inc. for nineteen years where I last held the positions of Principal and Senior Director. I am an Accredited Senior Appraiser – Public Utilities, as certified by the American Society of Appraisers. I received a B.S. degree in Accounting and Business Administration from Indiana State University in May 1977. In addition, I have taken over 180 hours of appraisal courses through the American Society of Appraisers. A copy of my curriculum vitae is provided in Exhibit No. REP-1 attached hereto.

Q 6: On whose behalf are you testifying in this proceeding?

A: I am appearing on behalf of South Central MCN LLC (SCMCN), a subsidiary of GridLiance Heartland LLC.

Q 7: What is the purpose of your testimony?

A: I have been asked by SCMCN to present testimony supporting the estimated original cost less depreciation (OCLD) value of certain transmission facilities currently owned by the City of Nixa, Missouri (Nixa Assets). The Nixa Assets are to be acquired by SCMCN and, pending the approval of FERC, the costs of these facilities will be included as part of the Southwest Power Pool, Inc. (SPP) transmission rates. SCMCN's acquisition of the Nixa Assets is the subject of SCMCN's application (Application) to this Commission for a certificate of convenience and necessity and, if required, approval to transfer the assets.

II. ORIGINAL COST LESS DEPRECIATION VALUE OF THE NIXA ASSETS

Q 8: Please describe the Nixa assets.

A: The Nixa Assets include five transmission lines operating at 69 kV which total 10.82 miles. The transmission lines provide the means for Nixa to import its power purchases from the Southwest Power Administration (SWPA) and the City Utilities of Springfield (CU). The line sections are described as follows:

- CU's James River Plant to City of Nixa's Northeast Substation is 3.92 miles built in 2006 with 636 MCM conductor and on 161 kV structures;
- City of Nixa's Northeast Substation to City of Nixa's Tracker Substation is 2.31 miles built in 2006 with 636 MCM conductor on 69 kV structures;
- City of Nixa's Tracker Substation to City of Nixa's Downtown Substation is 1.8 miles built in 2000 with 477 MCM conductor on 69 kV structures;
- City of Nixa's Downtown Substation to City of Nixa's ESPY Substation is 1.24 miles built in 1984 with 4/0 conductor on 69 kV structures; and
- The City of Nixa's ESPY Substation to SWPA's Nixa Substation is 1.55 miles built in 2012 with 636 MCM conductor.

The associated terminal equipment includes ten 69kV breakers. In addition, SCMCN will purchase associated land and land rights and a small inventory of spare parts and equipment. A one-line diagram showing the Nixa Assets is provided in Appendix C to the Application. I have reviewed Appendix C and believe it accurately depicts the assets included in the OCLD value.

Q 9: Will SPP have functional control of the Nixa Transmission Facilities?

A: Yes. Upon acquisition from Nixa, SCMCN will turn over functional control of the subject facilities to SPP.

Q 10: Why is it necessary to estimate the OCLD value of the Nixa Assets?

A: Located just south of Springfield in south central Missouri, Nixa operates a municipally-owned electric utility that serves about 9,000 customers and has 14 employees. The Nixa electric utility is a considered a non-jurisdictional utility under the Federal Power Act (16 U.S.C. § 791a et seq.) and Missouri law (Section 393.010 et seq., RSMo.). The electric utility operates as part of Nixa's Public Works department which also includes Nixa's water and sewer utilities. The Nixa Assets, while

separately accounted for, are included as part of Nixa's total city government assets reported in its consolidated annual financial report (CAFR). I have attached an excerpted page from the City's 2014 CAFR which demonstrates this treatment (*see* Exhibit No. REP-2). Nixa maintains its accounting books and records in accordance with the Governmental Accounting Standards Board; it does not however account for its electric capital assets using the Commission's Uniform System of Accounts. Because of this it was necessary to estimate, by FERC account, the OCLD value of the transmission assets.

Q 11: Please explain how you calculated the OCLD value of the Nixa Assets.

A: As shown in the attached Exhibit No. REP-3, the calculation of OCLD value was performed in three (3) basic steps. The first step was to determine the estimated Replacement Cost as of June 30, 2015. The next step involved restating the Replacement Cost to Original Cost, based on the in-service year shown in column (c). The final step was to calculate the estimated Accumulated Depreciation applicable to the Original Cost, given the age of the assets as of the valuation date.

Q 12: How did you determine the estimated replacement cost for the Nixa Assets?

A: The estimated Replacement Cost was based on an estimate of the current engineering, procurement and construction ("EPC") cost for the subject assets, adjusted to account for capitalized owner's costs. The estimated EPC cost, shown in column (d) of Exhibit No. REP-3 was provided by Quanta Technology,[1] The EPC cost was increased by 15 percent to account for capitalized owner's costs (e.g. planning, insurance, project oversight and interest during construction). The 15 percent capitalized overhead adder is based on my experience as a certified appraiser in performing

[1] Quanta Technology, a subsidiary of Quanta Services, provides a wide variety of consulting services to the energy and utility industries.

valuations and appraisals of public utility property. The total calculated Replacement Cost is shown in column (e) of Exhibit No. REP-3.

Q 13: How did you calculate the estimated original cost for the Nixa Assets?

A: The calculation of Original Cost for each facility was accomplished using a "reverse-trending" technique whereby the Replacement Cost is divided by a reverse trend factor (or factors in this case) to produce the Estimated Original Cost as of June 30, 2015. Due to the timing of the filing and the date of valuation (June 30, 2015), it was necessary to reverse trend for two separate time periods; (i) from vintage year to January 1, 2015 using the Handy Whitman Index of Public Utility Construction Costs,[2] and (ii) from January 1, 2015 to June 30, 2015 using the Engineering News-Record Construction Cost Index.[3] This approach was necessary because the latest Handy-Whitman Index available at the time of the filing was January 1, 2015. I have attached a copy the pertinent pages of the Handy-Whitman Index and Engineering News-Record used in the subject analysis as Exhibit No. REP-4. The development of the reverse trend factors are shown in the footnotes to Exhibit No. REP-3. For the transmission lines, it was also necessary to compute a weighted reverse trend factor since the breakdown between FERC accounts 355 – Poles & Fixtures and 356 – Conductor and Devices is unknown. The weighting percentages (50% for Account 355 and 50% for Account 356) were developed from gross plant in service data contained in the FERC Form 1 Annual Report for the Empire District Electric Company ("EDEC"). Excerpted pages from the EDEC FERC Form 1 are provided as Exhibit No. REP-5. The data for the EDEC was used as a "proxy" for the FERC account

[2] The Handy-Whitman Index© is a well-known industry publication prepared specifically for estimating construction costs applicable to electric, gas and water utilities. It is published twice annually for cost indices stated as of January 1 and July 1.

[3] The Engineering News-Record is widely circulated monthly magazine that provides news, analysis, data and opinion to the construction industry worldwide. It is owned by BNP Media.

breakdown primarily because Nixa is located within the EDEC service area, providing some evidence of similarity; at least from a geographic standpoint. The resulting Estimated Original Cost as of June 30, 2015 is shown in column (h) of Exhibit No. REP-3.

Q 14: Please explain your computation of accumulated depreciation.

A: The estimated Accumulated Depreciation for each of the transmission facilities is shown in columns (i) and (j) of Exhibit No. REP-3. Accumulated Depreciation (column (j)) was determined by the applying the appropriate depreciation percentage (column (i)) to the estimated Original Cost (column (h)). The applicable depreciation percentage was computed based on the estimated age of each facility and depreciation rates of 2.60 percent for transmission lines and 2.20 percent for the substation equipment. The depreciation rates (rounded to the nearest tenth of a percent) were developed from data contained in the aforementioned EDEC FERC Form 1 (see Exhibit No. REP-5). After subtracting the amount of accumulated depreciation from the original cost, it produces the sub-total OCLD values shown in column (k) of Exhibit No. REP-3.

Q 15: What is the basis for the value of land and land rights shown in Exhibit No. REP-3?

A: The value of Land and Land Rights shown in column (l) of Exhibit No. REP-3 was estimated and provided by the City of Nixa.

Q 16: Please summarize the results of your OCLD calculations.

A: The results of the determination of the OCLD value of the Nixa Assets as shown in Exhibit No. REP-3 are summarized below.

Original Cost	$000's
Plant and Equipment	$11,336
Land	52
Total Original Cost	$11,388

Accumulated Depreciation	2,273
Estimated OCLD	$ 9,115

III. CONCLUSION

Q 17: Does this conclude your testimony?

A: Yes it does.

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OF THE STATE OF MISSOURI

In the Matter of the Application of South Central MCN LLC for Approval of Transfer of Assets and a Certificate of Convenience and Necessity	))))	File No. EA-2015-_____

AFFIDAVIT OF ROBERT E. PENDER

STATE OF FLORIDA)
) **ss**
COUNTY OF SEMINOLE)

Robert E. Pender, being first duly sworn on his oath, states:

1. My name is Robert E. Pender. I am currently a consultant with the firm of R.E. Pender, Incorporated. My business address is P.O. Box 1567, Goldenrod, Florida 32733.

2. Attached hereto and made a part hereof for all purposes is my Direct Testimony on behalf of South Central MCN, LLC, consisting of 7 pages, all of which have been prepared in written form for introduction into evidence in the above-referenced docket.

2. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and accurate to the best of my knowledge, information and belief.

Robert E. Pender

Subscribed and sworn to before me this 14th day of August, 2015.

Notary Public

My commission expires: Jun 28, 2017

CYNTHIA L. HARRIS
Notary Public, State of Florida
Commission # FF 21330
My comm. expires June 28, 2017

ROBERT E. PENDER, ASA
P.O. BOX 1567
GOLDENROD, FL 32733
407-644-9795
bob@repender.com

Mr. Pender has over 35 years of experience in providing professional services to the utility industry as both a consultant and in a management role for an investor-owned utility. From 1986 through 2004, Mr. Pender was a Principal and Senior Director in the firm of R. W. Beck, Inc., a well-known international consulting and engineering firm. Prior to joining R. W. Beck, Mr. Pender was employed by Public Service Company of Indiana (now an operating division of Duke Energy) where he last held the position of Wholesale Cost of Service Supervisor. Mr. Pender's areas of expertise include utility property appraisals and valuations; utility cost of service, rates and regulatory support; economic feasibility studies; contract billing compliance reviews and dispute resolution; right-of-way cost studies; and impact fee studies. He has testified as an expert witness in defense of his appraisals before courts in Florida (ad valorem) and Virginia and on various utility rate/regulatory matters before the Federal Energy Regulatory Commission, several state commissions and the courts. Mr. Pender received a B. S. Degree in Accounting and Business Administration from Indiana State University in 1977. He is a retired major of the United States Air Force Reserve and has lived in the Orlando, Florida area since 1986.

UTILITY APPRAISALS AND VALUATIONS

- An Accredited Senior Appraiser (ASA), Public Utilities, as certified by the American Society of Appraisers (member since 1998). Currently, one of only 22 such appraisers nationwide.
- Performed a large number of appraisals and valuations of utility assets in connection with property tax disputes and litigations, municipal condemnations, sale/purchase of assets, stranded cost assessments, contract litigation, book/rate base valuation and bond financings (See Exhibit A).
- Appraised all types of utility property including electric (generation, transmission and distribution), natural gas, water, wastewater, telecommunications, steam and chilled water utilities and coal conveyer systems. Seventy (70) such engagements (since 1991) have involved electric utility property; thirty-nine (39) of which included electric generation-related assets.
- Testified as an expert witness in defense of appraisals and valuations before the courts, arbitration panels and regulatory commissions.

UTILITY RATES AND REGULATORY SUPPORT

- Extensive background in performing and analyzing utility wholesale and retail rate studies.
- Performed a number electric retail rate studies for municipal-owned electric systems across the country which involved a cost of service analysis, rate reviews and retail rate design.

- As a wholesale cost of service supervisor for an investor-owned utility, had primary responsibility for the preparation of wholesale rate filings and interconnection agreement filings before the Federal Energy Regulatory Commission.
- Testified as an expert on various utility rate matters before the Federal Energy Regulatory Commission, several state utility commissions and Federal district court (See Exhibit B). Issues addressed include income taxes, stranded costs; various cost of service allocations/assignments; fuel cost recovery; merger cost savings and regulatory policy.

ECONOMIC FEASIBILITY STUDIES

- Performed several economic feasibility studies analyzing both the privatization and public ownership of utility systems.
- Relied on extensive knowledge of the cost of service profiles of public and private utility systems to develop models that analyze total utility costs under a variety of assumptions and alternative scenarios.

CONTRACT BILLING REVIEWS AND DISPUTE RESOLUTION

- Utilized accounting knowledge and expert background in utility cost of service principles to perform a number of in-depth reviews of charges under power supply and joint-ownership contracts between municipal joint-action agencies and investor-owned utilities.
- Annual reviews resulted in the identification of a number of important issues, including cost allocation/assignment issues that were ultimately resolved by the parties either through negotiation or arbitration.
- Played a lead role in assessing the value of identified issues and in negotiating their resolution on behalf of the client. These efforts resulted in total cumulative savings to the clients of well over $1.0 billion.

RIGHT-OF-WAY COST STUDIES

- Performed comprehensive studies to determine a local government's costs associated with the ownership, management and maintenance of public right-of-ways and appropriate access fees for use of the right-of-ways.
- Scope of work typically includes conducting departmental interviews, preparing data requests, analyzing data, developing the cost study to identify the "direct" and "indirect" expenses and capital-related costs and determining the amount (e.g., linear feet) of right-of-way to use in designing the fees for right-of-way access.
- If necessary, expert testimony and other litigation assistance in support of the right-of-way cost study and rates are also provided.

IMPACT FEE STUDIES

- Conducted several in-depth cost studies to determine appropriate impact fees for municipalities and municipal electric systems. Impact fees were designed for electric, police, library, parks & recreation and refuse.

- Worked closely with staff to determine the estimated incremental costs that would be incurred by the local government in providing services to new residential/commercial development areas.
- Appropriate impact fees were determined utilizing both the inductive and deductive methods for fee design.

PAPERS AND PRESENTATIONS

- "The Use of Comparable Sales in the Valuation of Public Utility Property," International Association of Assessing Officers, Public Utility Workshop, March 22, 2002
- "Understanding GASB Statement No. 34," First Coast Chapter of the Florida Water Environment Association, July 2002.
- "Recent Mandates by the FCC and Their Potential Impact," International Association of Assessing Officers, Public Utility Workshop, March 5, 2004
- "What is Your Water System Worth – A Primer on How to Effectively Value Water Systems," American Water Works Association Annual Conference, June 15, 2005
- "Broadband Services – Potential Impact on Telecom Value," International Association of Assessing Officers, Annual Conference, September 1, 2004.
- "Questions for Appraising or Valuating a Water System," *Opflow*, published by the American Water Works Association, December 2004.
- "Protecting Your Interests Underground," Web seminar by the American Public Works Association, May 11, 2005.
- "Property Tax Litigation – Case Study," National Conference of Unit Valuation States, November 7, 2005.
- "Telecommunications Competition – Impact on Telecom Value," Annual Wichita Conference on Ad Valorem Taxation, July 2006.
- "The Public Right-of-Way Cost Analysis – Basic Concepts and Approach," National Association of Telecommunications Officers and Advisors, Annual Meeting, August 2006.
- "A Primer for Determining Public Right-of-Way Costs," *NATOA Journal*, Spring 2007.
- "The Public Right-of-Way – Are You Recovering All of Your Costs?" National Association of Telecommunications Officers and Advisors, Annual Local Government Conference, October 2, 2009.

ASSOCIATIONS

- American Society of Appraisers
- International Association of Assessing Officers
- American Water Works Association

REPRESENTATIVE PROJECT EXPERIENCE

The following are brief representative profiles of Mr. Pender's project experience.[1] A complete listing of his appraisal/valuation and litigation project experience is presented in the attached Exhibit A and Exhibit B, respectively.

Utility Appraisals and Valuations

Crawfordsville Electric Light & Power
Potential Asset Sale
Certified Appraisal
2011

R. E. Pender, Inc. was engaged by Crawfordsville Electric Light & Power ("CEL&P") to conduct an appraisal of the Crawfordsville Power Plant ("CPP") located in Crawfordsville, Indiana. Very generally, the subject property was a 25-megawatt, coal-fired power plant wholly owned and operated by CEL&P. The plant consisted of two generating units that were placed in service in 1955 and 1965. The purpose of the appraisal was to determine the market value of the CPP as of January 1, 2011. CEL&P sought to dispose of (i.e., sell) the subject property though a competitive bidding process and was required by Indiana statute (i.e., IC 36-1-11) to have an appraisal performed. The appraisal indicated that the fair market value of the CPP was approximately $1.1 million. The plant later sold for $975,000.

Hardee County Property Appraiser
Property Tax Proceeding
Certified Appraisal and Expert Testimony
2007 - 2008

R. E. Pender, Inc. was engaged by the Hardee County Property Appraiser (the "Client") to conduct an appraisal of the Vandolah Power Plant ("Vandolah") located in Hardee County, Florida. Vandolah is wholly owned and operated by the Vandolah Power Company, L.L.C. ("VPC" or the "Owner"); an operating subsidiary of Northern Star Generation. The purpose of the appraisal was to determine the fair market (or "just") value of Vandolah's tangible personal property ("TPP") as of January 1, 2005 and January 1, 2006. The appraisal was requested by the Client to submit as an independent valuation of Vandolah in a civil proceeding before the Tenth Judicial Circuit Court of Hardee County regarding the appropriate "just" value of Vandolah for property tax assessment purposes. Mr. Pender's work included the complete appraisal of Vandolah, performed in accordance with the Uniform Standards of Professional Appraisal Practice and applicable state laws; expert testimony before the court; and related tasks.

Town of Berlin, Maryland
Sale of Electric Utility
Certified Appraisal
2006

R. E. Pender, Inc. was engaged by the Town of Berlin, Maryland (the "Town") to conduct an appraisal of certain electric distribution and generation properties (the "Electric System") owned and operated by the Town. The purpose of the appraisal was to determine the fair market value

[1] Several of the project profiles presented represent work performed while employed at R. W. Beck, Inc.

of the Electric System as of July 1, 2006. The appraisal was requested by the Town as part the process of allowing its citizens to make an informed decision regarding the proposed sale of the Electric System assets to Choptank Electric Cooperative and Old Dominion Electric Cooperative. The findings of the appraisal were presented to the citizens of Berlin at two (2) public hearings.

Utility Rates and Regulatory Support

Heber Light & Power
Heber City, UT
Rate Services
2011 - Present

In 2011, Mr. Pender was engaged by Heber Light & Power to perform a preliminary electric cost of service study to determine if there was any deficiency in its current electric rates and to review the current rates and make recommendations (if any) with regard to future electric rate design. Mr. Pender was hired by HLP in early 2014 to conduct an electric cost of service study and design new electric rates for the commercial class of customers. The entire rate study was completed in April 2014 and presentations of the results were given to the HLP staff, the utility board executive committee, the full board and at a public hearing.

City of Fairhope, AL
Rate Review Services
2007 - Present

Mr. Pender currently provides on-going rate services for the City of Fairhope's electric, gas, water and sewer utilities. The rate services include the preparation of rate studies (cost of service and rate design), monthly review of purchased gas rate adjustment; energy cost adjustment; preparation of utility operating reports; electric load forecast reviews; drafting of rate ordinances; and preparation of electric and gas annual reports filed with the Department of Energy, among others.

Utilities Board of Tuskegee
Tuskegee, AL
Utility Rate Studies and Financial Forecast Models
2006 - 2007

Mr. Pender was engaged by the Utilities Board of Tuskegee ("UBT") to perform rate studies for the City's water, wastewater and electric utilities. This work involved the preparation of a cost of service model for each utility; rate design for existing and proposed rate classifications; rate policy review and preparation of a summary report for each study. Mr. Pender's work also included the preparation of a five-year financial forecast model for each utility and a composite forecast for the UBT combined. The five-year model, which is to be used by the UBT for future financial forecasting, included projections of customers, consumption patterns; sales and other revenues; fixed and variable expenses, debt service and capital requirements.

Economic Feasibility Studies

City of Fort Wayne, IN
Municipalization Feasibility Studies
2008 - 2009

Mr. Pender was engaged by the City of Fort Wayne, IN to conduct certain cost/benefit analyses and studies in connection with the potential reformation of an electric distribution utility that was owned by City and leased to Indiana-Michigan Electric Company ("I&M"). I&M had indicated to the City that it desired to purchase the City Light System when the 35-year lease expired in 2010. However, under the provisions of the lease agreement, I&M also had the option to extend the lease for an additional 15 years and the City had the option of acquiring all Betterments, Enlargements and Extensions made by I&M to the City Light System and taking over operations at the lease termination date. Mr. Pender's studies and analyses were undertaken to determine the long-term economic impact (i.e., net present value of the costs/benefits) to the City of (i) selling the City Light System to I&M versus (ii) taking over operations of the City Light System (i.e., reforming the City's electric utility). Both of the options were compared to the option of extending the lease for at least another fifteen (15) years. Mr. Pender also provided analytical support to the negotiations surrounding the sale of the City Light System to I&M.

Keys Energy Services
Military Privatization Studies
2003 – 2005

Mr. Pender provided assistance to the Keys Energy Services ("Keys") in connection with Keys' proposal to acquire certain electric facilities owned by the Department of the Navy, located in Key West, Florida. The proposal was submitted in response to the Navy's solicitation (No. N62467-00-R-1801) published pursuant to the Department of Defense Utility Privatization Initiative. Mr. Pender's services included the preparation of an economic cost/feasibility analysis, a fair market value determination of the assets to be acquired, assistance in preparation of the proposal and negotiations with the Navy.

City of Geneva, Ohio
Municipalization Feasibility Study
2001 – 2004

In 2001, the City of Geneva, Ohio undertook a project to acquire the water distribution system of Consumer's Ohio Water Company (now Aqua-Ohio) located within the City. Mr. Pender served as the project manager and lead appraiser in performing various services related to the proposed acquisition, including, (i) performing an economic feasibility study that estimated the impact on customers of acquiring the COWC assets, (ii) completing a certified appraisal of the water system, (iii) providing support in negotiations with COWC and, (iv) providing expert testimony in support of the appraisal before the Ashtabula County circuit court. Mr. Pender also played a key role in helping the City and COWC agree on a purchase price for the system after several days of intense negotiations. The City ultimately acquired the system in late 2004.

Contract Billing Reviews and Dispute Resolution

North Carolina Eastern Municipal Power Agency
Contract Compliance Reviews
1988 – 2000

Since 1988, the North Carolina Eastern Municipal Power Agency ("NCEMPA") has undertaken annual reviews of charges under its contracts with Progress Energy Carolina ("PEC"), formally Carolina Power & Light Company. NCEMPA retained its consulting engineer, R. W. Beck, Inc. to conduct certain aspects of these annual contract reviews. While employed at R. W. Beck, Mr. Pender had primary responsibility for completing these annual reviews, which involved the verification of monthly and annual charges as to accuracy and compliance with the various contract provisions and formulas; identification and analysis of issues for potential challenge; negotiation of their resolution and drafting of settlement agreements. In certain cases where the issues could not be resolved through negotiations, Mr. Pender also assisted NCEMPA in litigation of the contractual dispute(s). These efforts have resulted in NCEMPA saving hundreds of millions of dollars over the years, resulting in lower wholesale power rates to its members.

North Carolina Municipal Power Agency No. 1
Contract Compliance Reviews
1988 - 2000

Since their inception, the North Carolina Municipal Power Agency No. 1 ("NCMPA1") has been performing periodic compliance reviews of certain contracts between NCMPA1 and Duke Power Company ("Duke"). The subject contracts include an Interconnection Agreement regarding the purchase of supplemental power from Duke and an Operating and Fuel Agreement pertaining to NCMPA1's joint-ownership in the Catawba Nuclear Station. NCMPA1 employed its consulting engineer, R. W. Beck, Inc., to conduct certain aspects of these reviews. While employed at R. W. Beck, Mr. Pender played a key role in conducting these reviews, which involved a verification of monthly and annual charges as to accuracy and compliance with the various provisions and rate formulas contained in the contracts, identification and analysis of key issues for potential challenge, negotiation of their resolution and drafting of settlement agreements. When certain issues could not be resolved through negotiations between the parties, Mr. Pender also assisted NCMPA1 in the arbitration of the contractual dispute(s). Mr. Pender's efforts were instrumental to NCMPA1 saving several hundred million dollars over the life of the contracts.

Right-of-Way Cost Studies

City of Nashville – Davidson County ("Metro-Nashville")
Right-of-Way Cost Study
2005 - 2013

Mr. Pender was retained by Ashpaugh and Sculco CPAs, PLC to assist in the preparation of a right-of-way cost study for the Metro-Nashville city/county government. Work for this project included the preparation of departmental surveys and data requests; design of departmental cost allocation models; design of right-of-way access fees; and a comprehensive report conveying the results of the study. Two such studies were performed; a preliminary study based on fiscal year 2005 budget data and a 2007 final study using 2007 actual data. In addition, expert testimony was provided in support of the 2007 study which was litigated before the Chancery Court of Davidson County, Tennessee, Docket No. 02-679-IV.

Impact Feet Studies

Springville, UT
Electric Impact Fee Study
2012-13

The electric impact fee studies for Springville, UT was a joint effort between Salient Power Engineering ("SPE") and R. E. Pender, Incorporated. The engagement involved the preparation of a Impact Fee Facilities Plan ("IFFP") and an Impact Fee Analysis ("IFA"), as required by Utah Statute. SPE had primary responsibility for preparation of the IFFP with Mr. Pender providing review and analytical support. Mr. Pender was primarily responsible for preparing the IFA and the final report. The results of the studies were presented to the City Council in February 2013.

City of Wildwood, FL
Impact Fees for Municipal Services
2006

Working as a sub-consultant to Barnes, Ferland & Associates, Mr. Pender performed several impact fee studies for the City of Wildwood, FL. The impact fees were designed to recover the City's incremental capital costs estimated to be incurred in providing various services to new residential and commercial development over the next 25 years. The services to be provided include police, library, parks and recreation and refuse collection. The study included an analysis of the incremental capital costs for each service; analysis of current and projected demand units (e.g., residential dwelling units) and the design of the associated impact fee considering the level of service provided. The results of the study were conveyed in a comprehensive report provided to the client.

* * *

EXHIBIT A
APPRAISAL / VALUATION PROJECT LISTING
FOR
ROBERT E. PENDER, ASA

Completion Date	Work Performed For	Property Description	Purpose of Assignment	Project Deliverables	Intended use
ELECTRIC					
On-going	GridLiance Heartland, LLC	Transmission Facilities	Valuation Studies	Valuation exhibits and testimony.	Determination of OCLD value for FERC transmission filings.
On-going	City of Bloomfield, NM	Transmission and Distribution Facilities	Valuation / Appraisal Studies	Certified Appraisal Report	Determination of FMV for Property Acquisition
On-going	Stelzner, Winter, et. al. (Socorro, NM)	Transmission and Distribution Facilities	Valuation / Appraisal Studies	Certified Appraisal Report	Determination of FMV for Property Acquisition
On-going	Stelzner, Winter, et. al. (Gallup, NM)	Transmission and Distribution Facilities	Appraisal Studies	Certified Appraisal Report	Determination of FMV for Property Acquisition
March 2014	Sutherland, Asbill & Brennan (Duke Energy)	Electric Generation and T&D Properties	Appraisal Studies	Certified Appraisal Report	Determination of Just Value for property tax litigation.
July 2013	Stelzner, Winter, et. al. (Jicarilla Nation)	Electric Distribution System	Valuation / Appraisal Studies	Preliminary Valuation Report	Determination of FMV for Potential Property Acquisition
August 2012	Hardee County, Florida	Combined-cycle Generation Plant	Fair Market Value Determination	Preliminary Valuation	Determination of Just Value Property Tax Assessment
September 2011	Filsinger Energy Partners (Deseret Electric Cooperative)	Generation, Transmission and Distribution Plant	Appraisal Review	Certified Appraisal Review Report	Supporting evidence in property tax dispute proceeding.
April 2011	Crawfordsville Electric Light & Power	Coal-fired Power Plant	Appraisal Studies	Certified Appraisal Report	Determination of FMV for Proposed Sale of Property
March 2010	Dunbeck & Moss (Confidential Client)	Electric Distribution System	Valuation / Appraisal Studies	Letter Report	Determination of FMV for Potential Property Acquisition
February 2010	Ater Wynne (Confidential Client)	Electric Distribution System	Valuation / Appraisal Studies	Letter Report	Determination of FMV for Property Acquisition
January 2009	City of Union, SC	Diesel Generation Plant	Appraisal Study	Certified Appraisal Report	Determination of FMV for Property Acquisition
July 2007	Green, de Bortnowsky & Quintanilla (Victorville, CA)	Combined Cycle Generation Plant	Fair Market Value Determination	Certified Appraisal Report	Determination of FMV for Property Tax Assessment before State Court

EXHIBIT A
APPRAISAL / VALUATION PROJECT LISTING
FOR
ROBERT E. PENDER, ASA

Completion Date	Work Performed For	Property Description	Purpose of Assignment	Project Deliverables	Intended use
ELECTRIC (cont.)					
February 2008	Hardee County, Florida	Combustion Turbine Generation Plant	Fair Market Value Determination	Certified Appraisal	Determination of FMV for Property Tax Assessment before Circuit Court
August 2006	Berlin, Maryland	Electric Generation & Distribution	Fair Market Value Determination	Certified Appraisal	Potential Sale of Utility
May 2005	Keys Energy Services	Electric Distribution	Navy privatization RFP – valuation of facilities	Consulting/Appraisal	Support proposal to Navy
January 2005	Joseph J. Luzinski (Liquidating Trustee)	Combustion Turbine Generation Plant	Liquidation Value Determination	Certified Appraisal	Value for Property Tax Assessment
January 2005	Wabash Valley Power Association	Coal Gasification Facility	Fair Market Value Determination	Certified Appraisal	Support Financing Transaction
April 2004	Christian & Barton	Electric Generation	Valuation for Property Tax Dispute	Litigation Support / Expert Testimony	Rebuttal Testimony re: Fair Market Value
Feb. 2004	[CONFIDENTIAL]	Electric Generation	Valuation of Assets for Investment Decision	Certified Limited Appraisal	Determination of FMV to support acquisition.
Oct. 2003	Blue Mountain Energy	Electric Generation Coal Conveyor System	Acquisition Under Lease Agreement	Certified Appraisal	Determination of FMV before State court.
June 2003	Town of Belleair, FL	Electric Distribution	Acquisition Arbitration Proceeding	Certified Appraisal	Submit to Arbitration Board for determining acquisition price
May 2003	Okeechobee County, FL	Electric Transmission and Distribution	Property Tax Litigation	Certified Appraisal	Determination of FMV before Circuit Court
May 2002	Rochester Public Utilities	Electric and Water	Valuation of Assets For GASB 34	Book Valuation Study/Implementation Plan	Update Continuing Property Records
April 2002	Florida Municipal Power Agency	Electric Transmission and Distribution	Rate Base Valuation	Valuation Report	Transmission Cost of Service for RTO Rates

EXHIBIT A
APPRAISAL / VALUATION PROJECT LISTING
FOR
ROBERT E. PENDER, ASA

Completion Date	Work Performed For	Property Description	Purpose of Assignment	Project Deliverables	Intended use
ELECTRIC (cont.)					
Jan. 2001	Riviera Utilities Foley, AL	Electric, Gas, Water, Sewer and Cable TV facilities	Governance and valuation of systems	Consulting / Valuation Study	Identify changes, establish value
Nov. 2000	[CONFIDENTIAL]	Electric Generation	Valuation of Assets	Valuation Report	Non-recourse financing
Oct 2000	U.S. Navy	Electric and Gas Distribution	FMV Determination	Certified Appraisal	Potential Utility Privatization
Oct 2000	Florida Municipal Power Agency	Electric Transmission	Determination of Book Value of Assets	Consulting	Regional Transmission Arrangements
Oct 2000	[CONFIDENTIAL]	Electric Generation	FMV Determination	Certified Appraisal	Bond Refinancing
July 2000	City of Tallahassee, FL	Electric Distribution	FMV Determination	Certified Appraisal	Arbitration Proceeding
May 2000	ElectriCities of North Carolina	Electric Distribution	Preliminary Valuation of Assets	Consulting	Evaluate Options
Jan 2000	Coalition for Electric Competition	Electric Generation	Residual Value (stranded cost) Determination	Consulting	Utility Restructuring Hearings
Jan 2000	City of Dothan, AL	Electric Transmission and Distribution	Valuation of Electric Assets	Consulting	Establishment of CPR
Jan 2000	[CONFIDENTIAL]	Electric Generation and Transmission	Valuation of Merged Assets	Consulting	Support for potential merger
Jan 1999	General Services Administration	Electric, Water, Gas & Steam Utility	FMV Determination	Certified Appraisal	Potential Sale
Jan 1999	NC Eastern Municipal Power Agency	Electric Generation and Transmission	Rate Base Valuation	Consulting	Contractual Challenges

EXHIBIT A
APPRAISAL / VALUATION PROJECT LISTING
FOR
ROBERT E. PENDER, ASA

Completion Date	Work Performed For	Property Description	Purpose of Assignment	Project Deliverables	Intended use
ELECTRIC (cont.)					
Nov 1998	[CONFIDENTIAL]	Electric Generation	Valuation of Merged Assets	Consulting	Go-forward decision
Sept 1998	Caribbean Utilities Company	Electric Distribution	Establish fixed Asset Record	Consulting	N/A
Jan 1998	Village of Lakewood, NY	Electric Distribution	Condemnation Feasibility Study	Appraisal/Consulting	Go-forward decision
Dec 1998	Christian & Barton	Electric Generation	FMV Value	Consulting	Regulatory Proceeding
Nov 1998	Piedmont Municipal Power Agency	Electric Generation	Residual Value (stranded cost) Determination	Consulting	Strategic Planning
Sept 1998	Deseret G&T	Electric Generation	FMV Determination	Certified Appraisal	Valuation of Lease
April 1998	City of Las Cruces, NM	Electric Utility	Rate Base Valuation	Consulting	Regulatory Proceeding
July 1998	Piedmont Municipal Power Agency	Electric Distribution	Determination of Leased Asset Value	Consulting	Potential Arbitration Proceeding
April 1998	City of Las Cruces	Electric Distribution	FMV Determination	Updated Appraisal	Condemnation Proceeding
Jan 1998	NC Eastern Municipal Power Agency	Electric Generation and Transmission	Rate Base Valuation	Consulting	Contractual Challenge
Aug 1997	City of Las Cruces	Electric Generation and Distribution	Residual Value (Stranded Costs) Determination	Consulting	Regulatory Proceeding
Aug 1997	NC Municipal Power Agency 1	Electric Generation and Transmission	Rate Base Valuation	Consulting	Contractual Challenge

EXHIBIT A
APPRAISAL / VALUATION PROJECT LISTING
FOR
ROBERT E. PENDER, ASA

Completion Date	Work Performed For	Property Description	Purpose of Assignment	Project Deliverables	Intended use
ELECTRIC (cont.)					
June 1997	Reedy Creek Improvement District	Electric, Water, Gas, Steam and Chilled Water Utilities	FMV of Leased Assets	Certified Appraisal	Support Refinancing
Apr 1997	NC Municipal Power Agency 1	Electric Generation	Valuation of Joint Ownership of generation Assets	Consulting	Legislative Hearing
Apr 1997	Piedmont Municipal Power Agency	Electric Generation	Valuation of Joint Ownership of Generation assets	Consulting	Legislative Hearings
Apr 1997	NC Eastern Municipal Power Agency	Electric Generation	Valuation of Joint Ownership of Generation Assets	Consulting	Legislative Hearings
Jan 1997	NC Eastern municipal Power Agency	Electric Generation and Transmission	Rate Base Valuation	Consulting	Contractual Challenge
Nov 1996	City of Las Cruces	Electric Transmission	Rate Base Valuation	Consulting	Regulatory Proceeding
Oct 1996	City of Maitland, FL	Electric Distribution	Municipalization Feasibility Study	Economic Feasibility Analysis	Go-forward Decision
Sept 1996	City of Lafayette, LA	Electric Transmission	Rate Base Valuation	Consulting	Regulatory Proceeding
June 1996	Sithe Energies	Electric Transmission	Rate Base Valuation	Consulting	Regulatory Proceeding
June 1996	Washington Metro Area Transit Authority	Electric Generation	Valuation of Proposed Merger	Expert Testimony	Regulatory Proceeding

EXHIBIT A
APPRAISAL / VALUATION PROJECT LISTING
FOR
ROBERT E. PENDER, ASA

Completion Date	Work Performed For	Property Description	Purpose of Assignment	Project Deliverables	Intended use
ELECTRIC (cont.)					
Jan 1996	NC Municipal Power Agency 1	Electric Generation	Residual Value (Stranded Cost) Determination	Consulting	Strategic Planning
Jan 1996	NC Eastern Municipal Power Agency	Electric Generation	Residual Value (Stranded Cost) Determination	Consulting	Strategic Planning
Jan 1996	NC Eastern Municipal Power Agency	Electric Generation and Transmission	Rate Base Valuation	Consulting	Contractual Challenge
Aug 1995	Piedmont Municipal Power Agency	Electric Generation and Distribution	Asset Valuations	Consulting	Strategic Planning
June 1995	City of Las Cruces	Electric Distribution	Condemnation Feasibility Study	Consulting	Go-forward Decision
Jan 1995	NC Eastern Municipal Power Agency	Electric Generation and Transmission	Rate Base Valuation	Consulting	Contractual Challenge
Jan 1995	NC Municipal Power Agency 1	Electric Distribution	Probabilistic Income Valuation Model	Consulting	Evaluate Investment Payback Periods
Mar 1995	NC Municipal Power Agency 1	Electric Transmission	Rate Base Valuation	Consulting	Regulatory Proceeding
Aug 1994	NC Eastern Municipal Power Agency	Electric Generation	Asset Valuation	Consulting	Contract Negotiations
July 1994	NC Municipal Power Agency 1	Electric Generation	Rate Base Valuation	Consulting	Contractual Dispute

EXHIBIT A
APPRAISAL / VALUATION PROJECT LISTING
FOR
ROBERT E. PENDER, ASA

Completion Date	Work Performed For	Property Description	Purpose of Assignment	Project Deliverables	Intended use
June 1994	NC Eastern Municipal Power Agency	Electric Distribution	Rate Base Valuation	Consulting	Financial Ratings Analysis
Jan 1994	Piedmont municipal Power Agency	Electric Generation	Rate Base Valuation	Consulting	Arbitration Proceeding
Jan 1992	NC municipal Power Agency 1	Electric Generation	Rate Base Valuation	Consulting	Arbitration Proceeding
Aug 1992	NC Eastern Municipal Power Agency	Electric Generation	Rate Base Valuation	Damages Study / Dispute Resolution	State Court Proceeding
Oct 1991	South Carolina Public Service Authority	Electric Generation and Transmission	Privatization Proposal	Privatization Cost Study	Legislative Proceeding
WATER / WASTEWATER					
Feb. 2014	Falcon Ridge Water System	Water Distribution System	Valuation for Income Tax Purposes	Certified Appraisal Report	Income Tax Requirements
On-going	Rice, Silbey, Reuther & Sullivan, LLP (Confidential Client	Water Transmission Company	Valuation Studies	Valuation Summary Reports	Potential sale of company.
October 2012	City of Las Cruces, NM	Water Distribution Utility	Appraisal Studies	Certified Appraisal Report	Determination of FMV for potential acquisition.
June 2011	Keleher & McLeod, P.A. (City of Las Cruces, NM)	Water Distribution Utility	Valuation / Appraisal Studies	Certified Appraisal Report	Determination of FMV for Property Acquisition
March 2010	Andrews Kurth, LLP (Confidential Client)	Water Transmission System	Appraisal Review / Valuation Studies	Letter Report	Determination of FMV for Property Acquisition
June 2009	Sunshine Utilities of Central Florida, Inc.	Water Utility	Valuation Study	Preliminary Valuation Report	Use in negotiating purchase price for utility.

EXHIBIT A
APPRAISAL / VALUATION PROJECT LISTING
FOR
ROBERT E. PENDER, ASA

Completion Date	Work Performed For	Property Description	Purpose of Assignment	Project Deliverables	Intended use
January 2007	Keleher & McLeod, P.A. (City of Las Cruces, NM)	Water Distribution Utility	Appraisal Review	Review Comments and Testimony	Determination of Condemnation Damages before State District Court of New Mexico
January 2006	Boyle Engineering (City of Leesburg)	Water Distribution System	Fair Market Value Determination	Preliminary Valuation	Support Purchase Price Negotiations for Acquisition
August 2004	Odin, Feldman and Pittleman	Wastewater Treatment Plant	Determine Appropriate Value of Assets	Certified Appraisal / Expert Testimony	Determination of FMV for contract litigation
May 2004	City of Geneva, OH	Water Distribution	Municipalization	Feasibility Study Certified Appraisal	Submit to Arbitration Board and/or Courts
NATURAL GAS					
April 2009	Metropolitan Utilities District, Omaha, NE	Natural Gas Distribution System	Valuation / Appraisal Studies	Letter Report / Certified Appraisal Report	Determination of FMV for Property Acquisition
January 2006	Sheehan, Sheehan & Stelzner (Las Vegas, NM)	Natural Gas Pipeline	Valuation / Appraisal Studies	Preliminary Valuation / Certified Appraisal	Support for acquisition /potential condemnation.
TELECOMMUNICATIONS					
January 2012	Ashpaugh & Sculco (Howard County, MD)	Telecom – Dark Fiber	Appraisal Studies	Certified Appraisal Report	Determination of FMV for "in-kind" contribution under federal grant.
Dec. 2004	[CONFIDENTIAL]	Telecom Facility	Fair Market Value Determination	Certified Appraisal	Support Refinancing Transaction
Jan 2003	[CONFIDENTIAL]	Telecommunications	Valuation of Assets	Consulting	Bond Purchase
April 2002	Hillsborough County Property Appraiser	Telecommunications	Property Tax Dispute	Certified Appraisal	Independent Valuation before Circuit Court
May 2002	City of Boston, MA	Telecommunications	Property Tax Dispute	Preliminary Valuation Analysis	Hearing before the Appellate Tax Board

EXHIBIT B
LITIGATION RECORD
FOR
ROBERT E. PENDER

NAME OF UTILITY/DOCKET NOS.	TYPE OF PROCEEDING	DESCRIPTION OF ISSUES	DESCRIPTION OF INVOLVEMENT	YEAR
Metropolitan Government of Nashville and Davidson County v. XO Tennessee, Inc. and TCG Midsouth, Inc.	Claim for non-payment of franchise fees.	Right-of-way costs and user fees.	Preparation of expert reports; direct testimony; and general case support.	2013
Philadelphia Gas Works, Docket No. R-2009-2139884 before the Pennsylvania Public Utility Commission on behalf of Philadelphia Housing Authority.	Natural gas distribution general rate increase.	Appropriate rate classification; rate subsidy level.	Preparation of direct and surrebuttal testimony; assistance in settlement negotiations and general case support	2010
Vandolah Power Company v. Kathy L. Crawford, et. al., (Hardee County Property Appraiser), Case No. 252006CA000008.	Property tax dispute before the Circuit Court of Hardee County, Florida	Determination of fair market or "just" value by the Property Appraiser.	Preparation of certified appraisal report; direct testimony and general case support.	2008
Moongate Water Company v. City of Las Cruces, NM; Case No. CV-2004-747.	Condemnation proceeding before the New Mexico State District Court, 3rd District.	Determination of claimed damages by Plaintiff.	Direct Testimony; review and analysis of Plaintiff's expert report.	2007
Blake Construction, et. al., v. Upper Occoquan Sewage Authority, Law No. 206595	Contract litigation proceeding before Circuit Court of Fairfax County, Virginia	Value of Wastewater Treatment Facility	Valuation direct testimony and general case support.	2005
Buchanan Generation, LLC; Case No. PST-2003-00066	Property Tax Assessment filing before the State Corporation Commission of Virginia.	Value of generation plant.	Direct testimony and general case support.	2004
Aqua-Ohio Water Company; Case No. 03-2290-WW-AIR	Application for increase in rates before the Public Utilities Commission of Ohio	General cost of service; rate of return; rate design	Direct testimony and general case support.	2004
Nevada Power Company, Docket No.; ER03-T328-000.	Transmission rate filing before the Federal Energy Regulatory Commission.	Rate of return, rate design and various cost of service issues.	Direct testimony and general case support.	2004
Provident Bank v. Blue Mountain Energy	Contractual dispute before Colorado State court.	Fair market value of assets under a lease agreement.	Expert appraisal report, direct testimony and general case support.	2003

Note: assignments during the period 1986 through 2004 were performed while employed at R. W. Beck, Inc.

EXHIBIT B
LITIGATION RECORD
FOR
ROBERT E. PENDER

NAME OF UTILITY/DOCKET NOS.	TYPE OF PROCEEDING	DESCRIPTION OF ISSUES	DESCRIPTION OF INVOLVEMENT	YEAR
Florida Power & Light v. W. C. Sherman Case No. 00-CA-301 & 01-CA-338.	Property tax dispute before the Circuit Court of Okeechobee County	Valuation of tangible personal property	Preparation of appraisal report, oral testimony; case support.	2003 – 2006
Consumers Ohio Water Company v. City of Geneva, Ohio	Dispute before Ashtabula County Circuit Court	Fair market value of water system.	Expert appraisal report, direct testimony and general case support.	2002 – 2004
Florida Power & Light v. W. C. Sherman Case No. 99-1025-CA	Property tax dispute before the Circuit Court of Okeechobee County	Valuation of tangible personal property	Preparation of appraisal report, oral testimony; case support.	2001
Florida Power & Light v. W. C. Sherman Case No. 98-1008-CA	Property tax dispute before the Circuit Court of Okeechobee County	Valuation; litigation costs.	Oral testimony; preparation of cost estimate.	2001
Progress Energy Florida v. Town of Belleair, FL	Arbitration Proceeding	Value of Electric Distribution System	Preparation of Appraisal Report, oral testimony and case support	2002 – 2003
First Energy Corporation; Case No. 99-1212-EL-ETP, et. al.	Application for Approval of Electric Transition Plan before the Public Utilities Commission of Ohio	Determination and recovery of Transition Costs; Rate Unbundling; Separation Plan.	Written testimony, issues development and general case support.	2000
Nebraska Public Power District v. MidAmerican Energy Company; No. 4:97 CV 346.	Complaint before the U.S. District Court of Nebraska.	Payment of decommissioning and other costs under Power Supply Contract.	Expert's Report, issue development and general case support.	1999 – 2002
Niagara Mohawk Power Corporation; Village of Lakewood NY, P.S.C. Case No. 99-E-0681	Petition for Declaratory Order before the New York Public Service Commission	Village of Lakewood's Stranded Cost Obligation under Rule 52 of P.S.C. No. 207 Electricity	Preparation of direct and rebuttal testimony; assistance in preparation of various motions, cross-examination of witnesses and briefs.	1999/ 2000

Note: assignments during the period 1986 through 2004 were performed while employed at R. W. Beck, Inc.

EXHIBIT B
LITIGATION RECORD
FOR
ROBERT E. PENDER

NAME OF UTILITY/DOCKET NOS.	TYPE OF PROCEEDING	DESCRIPTION OF ISSUES	DESCRIPTION OF INVOLVEMENT	YEAR
City of Las Cruces, NM, Docket No. SC97-2-000.	Stranded Cost Obligation under FERC Order 888.	Determination of Revenue Stream Estimate, Competitive Market Value Estimate and Length of obligation to serve.	Preparation of direct and rebuttal testimony; assistance in preparation of various motions, cross-examination of witnesses and briefs.	1997/ 1998
City of Las Cruces, NM, Case No. 2722.	Hearing s before the New Mexico Public Service Commission; Re: Proposed Rate Stipulation.	Various issues in opposition to rate stipulation.	Analysis of issues; preparation of written direct testimony and other trial support.	1998
El Paso Electric Company, Docket No. 0A96-200-000.	Open-access transmission tariff; rates for transmission and ancillary services.	Various cost of service and rate design issues.	Assistance in preparation of motion to intervene; participation in settlement discussions.	1996/ 1997
Baltimore Gas & Electric Company, Potomac Electric Power Company, Constellation Energy Corporation; Case No. 951.	Merger proceeding before Public Service Commission of the District of Columbia.	Potential impact on ratepayers and competitive issues.	Preparation and filing of direct testimony.	1996
Western Resources, Inc., Kansas Gas & Electric Company; Docket Nos. 193,307-U & 193,306-U.	General rate proceedings before the Kansas Corporation Commission.	Fuel repricing adjustment.	Preparation and filing of direct testimony.	1996
Florida Power & Light, Docket No. ER93-465-000	Wholesale rate filing before FERC	Cost functionalization, income taxes	Preparation and filing of direct testimony	1993/ 1995
Entergy Corp. / Gulf States Utilities Docket Nos. EC92-21-000 and ER92-806-000	Merger filing before the FERC.	Merger savings and competitive impacts.	Analysis and development of issues.	1992
Florida Power Corporation Docket No. ER93-299-000	Wholesale rate filing before the FERC.	Test-year expense levels and cost allocation.	Analysis and development of issues.	1993
North Carolina Municipal Power Agency No. 1, et. al. v. Duke Power Company	6th Proceeding In Arbitration Under the Project Agreements	Return on common equity investment	Analysis of damages, case preparation and settlement discussions.	1993

Note: assignments during the period 1986 through 2004 were performed while employed at R. W. Beck, Inc.

EXHIBIT B
LITIGATION RECORD
FOR
ROBERT E. PENDER

NAME OF UTILITY/DOCKET NOS.	TYPE OF PROCEEDING	DESCRIPTION OF ISSUES	DESCRIPTION OF INVOLVEMENT	YEAR
Duke Power Company v. North Carolina Electric Membership Corporation, et. al.	4th Proceeding In Arbitration Under the Project Agreements.	Rate of return determination.	Analysis of damages, assistance in case preparation, including testimony and exhibits.	1986
North Carolina Municipal Power Agency No. 1, et. al. v. Duke Power Company	1st Proceeding in Arbitration Under the Project Agreements	Purchased capacity and supplemental capacity and energy pricing.	Analysis of issues, assistance in preparation of testimony and exhibits and various aspects of settlement discussions.	1987
Central Power and Light Co. Docket No. 86-721-000	Wholesale rate proceeding before the FERC	Cost allocation and expense levels.	Analysis and preparation of data requests, testimony and exhibits.	1987
Gulf States Utilities Docket No. ER86-558-000	Wholesale rate proceeding before the FERC	Cost allocation and expense levels.	Analysis of issues and preparation of data requests.	1986
ENTEX, Inc.	Rate proceeding before the Texas Public Utilities Commission	Cost allocation and expense levels.	Analysis of issues and assistance in preparation of testimony.	1986
City of Tallahassee, Florida Docket No. 861003EM	Retail rate proceeding before the Florida Public Service Commission.	Various cost of service issues and rate design.	Development of the cost of service study and rate design.	1986
Georgia Power Company Docket No. ER85-659-001	Wholesale rate proceeding before the FERC.	Cost of service and rate design.	Review of testimony and preparation of data requests.	1986
Gulf States Utilities Docket No. 6525	General rate proceeding before the Texas PUC	Various cost of service issues.	Analysis of issues and preparation of data requests.	1986
Public Service Company of Indiana, Inc.	General rate proceedings before the FERC and the IURC.	Various cost of service and rate design issues.	Preparation of cost of service studies, workpapers and exhibits to testimony, data requests and responses to data requests.	1977 to 1985

Note: assignments during the period 1986 through 2004 were performed while employed at R. W. Beck, Inc.

EXHIBIT REP-2

CITY OF NIXA, MISSOURI

FINANCIAL STATEMENTS
WITH REQUIRED SUPPLEMENTARY
INFORMATION AND
INDEPENDENT AUDITOR'S REPORT

FOR THE YEAR ENDED
DECEMBER 31, 2014

CITY OF NIXA, MISSOURI

STATEMENT OF NET POSITION-
PROPRIETARY FUNDS
DECEMBER 31, 2014

ASSETS	Waterworks Fund	Sewer Fund	Electric Fund	Total
Current assets:				
Cash and cash equivalent	$ 2,706,145	$ 3,003,634	$ 8,035,749	$ 13,745,528
Utility accounts receivable	102,468	171,025	966,963	1,240,456
Reimbursement receivable	-	36,937	-	36,937
Material and supplies inventory	130,304	-	842,629	972,933
Prepaid expenses	2,634	3,097	4,888	10,619
Total Current Assets	2,941,551	3,214,693	9,850,229	16,006,473
Noncurrent assets:				
Restricted assets: Cash				
Debt service reserve	-	88,485	624,531	713,016
Capital assets:				
Land	116,751	149,255	652,677	918,683
Construction in progress	109,743	124,618	58,615	292,976
Property, plant and equipment (Net of accumulated depreciation)	6,262,562	16,161,060	14,878,360	37,301,982
Total Noncurrent Assets	6,489,056	16,523,418	16,214,183	39,226,657
Total Assets	9,430,607	19,738,111	26,064,412	55,233,130
DEFERRED OUTFLOW OF RESOURCES				
Deferred loss on debt refunding, net	38,699	-	215,198	253,897
LIABILITIES				
Current liabilities:				
Accounts payable	6,863	54,556	1,076,657	1,138,076
Accrued wages	7,000	10,342	12,965	30,307
Accrued sales tax	1,414	-	18,529	19,943
Accrued interest	2,688	2,154	42,769	47,611
Compensated absences	17,918	12,951	20,644	51,513
Debt due within one year:				
Revenue bonds payable	205,000	534,000	775,000	1,514,000
Capital lease obligation	-	100,000	-	100,000
Total Current Liabilities	240,883	714,003	1,946,564	2,901,450
Noncurrent liabilities:				
Revenue bonds payable	1,370,000	3,664,000	5,115,000	10,149,000
Capital lease obligation	-	1,055,000	-	1,055,000
Customer deposits	168,475	-	668,437	836,912
Total Noncurrent Liabilities	1,538,475	4,719,000	5,783,437	12,040,912
Total Liabilities	1,779,358	5,433,003	7,730,001	14,942,362
DEFERRED INFLOW OF RESOURCES				
Deferred gain on debt refunding, net	-	103,378	-	103,378
NET POSITION				
Net investment in capital assets	4,957,022	10,983,184	9,203,558	25,143,764
Restricted for revenue bond retirement	-	88,485	624,019	712,504
Unrestricted	2,732,926	3,130,061	8,722,032	14,585,019
Total Net Position	$ 7,689,948	$ 14,201,730	$ 18,549,609	$ 40,441,287

The accompanying notes are an integral part of these financial statements.

South Central Municipal - Cooperative Network, LLC

Original Cost Less Depreciation
for Certain Transmission Facilities Owned by the City of Nixa, MO
Estimated as of June 30, 2015
(Dollars in Thousands)

Line No.	Line Description	Length (Mi.) No. (Units)	Year Placed In Service	Total EPC * Cost	Total Replacement Cost	Reverse Trend Factors to 1/1/15	Reverse Trend Factors 1/1/15 to 6/30/15	Estimated Original Cost as of 6/30/15	Estimated Accumulated Depreciation Percent	Estimated Accumulated Depreciation Total	Sub-total OCLD	Add: Land and Land Rights	Total OCLD
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
	Transmission Lines												
1	James River Plant to Northeast Substation - 161 kV	3.92	2006	$ 3,525	$ 4,054	1.1298	1.0104	$ 3,551	23.40%	$ 831	$ 2,720		
2	Northeast Substation to Tracker Substation - 69 kV	2.31	2006	1,290	1,484	1.1298	1.0104	1,300	23.40%	304	996		
3	Tracker Sustation to Downtown Substation - 69 kV	1.80	2000	996	1,146	1.5672	1.0104	724	39.00%	282	441		
4	Downtown Substation to ESPY Substation - 69 kV	1.24	1984	678	779	2.5952	1.0104	297	80.60%	240	58		
5	ESPY Substation to SWPA Nixa Substation - 69 kV	1.55	2012	866	996	1.0425	1.0104	945	7.80%	74	872		
6	Total Transmission Lines	10.82		7,355	8,459			6,818		1,731	5,087		
	Substation Equipment												
7	Tracker Substation	2	2006	1,113	1,280	1.4240	1.0104	890	19.80%	176	714		
8	Northeast Substation	3	2006	1,441	1,657	1.4240	1.0104	1,152	19.80%	228	924		
9	ESPY Substation	2	2012	1,231	1,415	1.0571	1.0104	1,325	6.60%	87	1,238		
10	Downtown Substation	2	2013	1,056	1,214	1.0426	1.0104	1,152	4.40%	51	1,102		
11	Total Substation Equipment	9		4,840	5,566			4,519		542	3,977		
12	Materials & Supplies Inventory	1	2015	15	15	N/A	N/A	15		N/A	15		
13	Total Property, Plant & Equipment			$ 12,211	$ 14,040			$ 11,336		$ 2,273	$ 9,063	$ 52	$ 9,115
	Depreciation Percent →									20.1%			

* Engineering, Procurement and Construction.

(Footnotes shown on page 2.)

EXHIBIT REP-3

South Central Municipal - Cooperative Network, LLC

Original Cost Less Depreciation
for Certain Transmission Facilities Owned by the City of Nixa, MO
Estimated as of June 30, 2015
(Dollars in Thousands)

Footnotes by column:

(a) - (d) Based on information provided by Quanta Technology for Grid Capital.

(e) Column (d) increased by 15% to account for capitalized owners costs (e.g., AFUDC/IDC, project planning, insurance, etc.)

(f) Handy-Whitman Index of Public Utility Construction Costs, Bulletin No. 180, E-3 North Central Region, as of January 1, 2015. Transmission Lines are based on a weighted average of FERC Account 355 - Poles and Fixtures (50%) and FERC Account 356 - Conductor and Devices (50%); based on Electric Plant In Service data contained in the Empire District Electric Company 2014 FERC Form 1 Annual Report.

	H-W Index Acct. 355 (50%)			H-W Index Acct. 356 (50%)			Weighted
Transmission Lines - Vintage Year	1/1/2015	Vintage Year	Trend Factor	1/1/2015	Vintage Year	Trend Factor	Trend Factor
1984	599	234	2.5598	705	268	2.6306	2.5952
2000	599	407	1.4717	705	424	1.6627	1.5672
2006	599	515	1.1631	705	643	1.0964	1.1298
2012	599	591	1.0135	705	658	1.0714	1.0425

	H-W Index Acct. 353		
Substation Equipment - Vintage Year	1/1/2015	Vintage Year	Trend Factor
2006	759	533	1.4240
2012	759	718	1.0571
2013	759	728	1.0426

(g) Based on Engineering News Record Historical Construction Cost Index - U.S. Historical Average.

Month Ending:	
December 2014	9936
June 2015	10039
Trend Factor	1.0104

(h) Column (e) / column (f) / column (g).

(i) Based on the age of the plant and assumed depreciation rate of 2.60% for Transmission Lines and 2.20% for Substation Equipment -- derived from depreciation rate data contained in the Empire District Electric Company 2014 FERC Form 1 Annual Report (Empire District Electric Company).

(j) Column (h) x column (i).

(k) Column (h) - column (j).

(l) Estimated value provided by the City of Nixa.

(m) Column (k) - column (l).

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COST TRENDS OF ELECTRIC UTILITY CONSTRUCTION

NORTH CENTRAL REGION (1973=100)

Line	CONSTRUCTION AND EQUIPMENT	FERC	COST INDEX NUMBERS													
			1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
1	Total Plant-All Steam Generation		229	235	241	246	249	254	272	284	293	297	302	311	324	336
2	Total Plant-All Steam & Nuclear Gen.		228	235	241	246	249	254	272	284	293	296	301	310	323	335
3	Total Plant-All Steam & Hydro Gen.		227	234	241	246	249	254	272	284	292	296	301	310	323	335
4																
5	**Steam Production Plant**															
6	Total Steam Production Plant		231	239	248	255	259	266	283	294	303	306	312	323	337	348
7	Structures & Improvements-Indoor	311	204	212	221	228	234	240	251	261	264	264	270	281	295	304
8	Structures & Improvements-Semi-Outdoor	311	200	205	218	227	233	241	252	260	262	254	256	270	287	297
9	Boiler Plant Equipment-Coal Fired	312	242	248	258	266	270	280	297	309	323	330	337	347	359	369
10	Boiler Plant Equipment-Gas Fired	312	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Boiler Plant Piping Installed		229	226	230	234	237	249	272	280	281	285	288	293	301	311
12	Turbogenerator Units	314	234	247	255	258	257	263	280	289	295	300	305	315	331	343
13	Accessory Electrical Equipment	315	243	251	247	249	254	256	288	302	312	318	330	341	351	368
14	Misc. Power Plant Equipment	316	235	246	255	267	272	280	293	305	314	319	326	338	356	366
15																
16	**Nuclear Production Plant**															
17	Total Nuclear Production Plant		223	231	237	242	245	254	268	279	285	289	295	304	317	327
18	Structures & Improvements	321	203	210	217	222	225	232	240	246	251	253	260	271	285	292
19	Reactor Plant Equipment	322	223	231	237	242	246	258	272	285	292	296	301	309	318	329
20																
21	**Hydro Production Plant**															
22	Total Hydraulic Production Plant		214	222	230	237	242	249	260	266	270	272	276	287	298	307
23	Structures & Improvements	331	204	212	221	228	234	240	251	261	264	264	270	281	295	304
24	Reservoirs, Dams & Waterways	332	202	209	217	223	230	237	245	249	251	251	256	267	279	286
25	Water Wheels, Turbines & Generators	333	247	257	266	272	273	278	297	310	317	329	329	337	346	356
26																
27	**Other Production Plant**															
28	Total Other Production Plant		229	235	238	241	245	264	309	333	341	346	354	359	351	355
29	Fuel Holders, Producers & Accessories	342	230	230	235	242	248	257	272	285	293	298	302	309	316	324
30	Gas Turbogenerators	344	230	236	239	242	246	267	315	341	348	354	362	366	355	359
31																
32	**Transmission Plant**															
33	Total Transmission Plant		231	237	239	243	246	249	275	289	300	306	309	319	335	351
34	Station Equipment	353	236	237	241	245	247	255	267	282	299	301	310	321	337	350
35	Towers & Fixtures	354	208	214	227	236	243	251	261	268	271	265	269	281	298	309
36	Poles & Fixtures	355	223	228	234	237	243	247	267	286	298	318	335	342	363	376
37	Overhead Conductors & Devices	356	259	279	268	267	270	259	344	354	356	366	344	355	370	404
38	Underground Conduit	357	210	217	223	227	231	238	252	263	265	265	269	276	286	293
39	Underground Conductors & Devices	358	250	253	249	242	267	271	284	307	360	403	412	416	420	431
40																
41	**Distribution Plant**															
42	Total Distribution Plant		224	229	232	235	238	240	255	268	276	280	283	289	298	309
43	Station Equipment	362	234	236	235	239	242	250	275	299	320	322	322	325	336	355
44	Poles, Towers & Fixtures	364	228	232	236	240	245	248	257	265	275	286	301	310	330	344
45	Overhead Conductors & Devices	365	231	244	246	247	249	248	293	304	306	313	305	316	330	355
46	Underground Conduit	366	197	210	218	221	225	232	249	269	268	262	264	271	284	292
47	Underground Conductors & Devices	367	211	213	212	218	229	234	239	255	266	272	275	278	281	293
48	Line Transformers	368	207	210	212	214	215	214	216	225	228	228	232	233	238	234
49	Pad Mounted Transformers	368	186	188	205	207	215	238	262	276	282	291	291	298	300	302
50	Services-Overhead	369	205	210	224	223	225	231	250	264	265	267	266	273	284	299
51	Services-Underground	369	181	199	203	187	181	194	208	224	227	218	216	216	225	233
52	Meters Installed	370	190	203	204	206	211	211	198	188	189	203	202	205	195	192
53	Street Lighting-Overhead	373	261	262	273	283	283	271	274	284	292	302	313	326	342	358
54	Mast Arms & Luminaires Installed	373	263	268	286	298	290	280	281	296	306	318	331	340	360	373
55	Street Lighting-Underground	373	265	265	275	285	287	273	276	284	293	302	312	326	340	356
56																

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COST TRENDS OF ELECTRIC UTILITY CONSTRUCTION

NORTH CENTRAL REGION (1973=100)

Line	CONSTRUCTION AND EQUIPMENT	FERC	COST INDEX NUMBERS													
								2001		2002		2003		2004	
			1996	1997	1998	1999	2000	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1
1	Total Plant-All Steam Generation		342	349	356	361	375	381	390	395	402	411	410	418	434
2	Total Plant-All Steam & Nuclear Gen.		341	348	355	360	374	380	389	393	401	409	409	417	433
3	Total Plant-All Steam & Hydro Gen.		341	348	355	360	374	380	389	393	401	409	409	417	433
4															
5	**Steam Production Plant**														
6	Total Steam Production Plant		357	365	372	380	398	404	414	417	428	438	436	446	456
7	Structures & Improvements-Indoor	311	311	318	324	334	351	357	371	371	383	389	386	398	413
8	Structures & Improvements-Semi-Outdoor	311	308	315	321	330	345	348	358	360	364	369	369	396	404
9	Boiler Plant Equipment-Coal Fired	312	377	385	393	401	419	426	440	442	453	458	454	459	475
10	Boiler Plant Equipment-Gas Fired	312	-		-	-	-	-	-	-	-	-	-	-	-
11	Boiler Plant Piping Installed		318	325	331	336	345	350	359	360	367	373	370	381	394
12	Turbogenerator Units	314	349	361	367	373	391	396	394	400	410	433	434	438	441
13	Accessory Electrical Equipment	315	379	388	396	408	433	446	463	472	493	505	504	513	522
14	Misc. Power Plant Equipment	316	372	383	392	404	422	427	439	441	452	457	453	465	479
15															
16	**Nuclear Production Plant**														
17	Total Nuclear Production Plant		333	342	348	354	369	374	382	386	395	404	405	410	422
18	Structures & Improvements	321	300	309	313	321	335	338	353	354	364	370	367	378	388
19	Reactor Plant Equipment	322	334	340	346	351	364	368	376	379	387	391	393	396	413
20															
21	**Hydro Production Plant**														
22	Total Hydraulic Production Plant		315	324	330	337	348	350	356	357	363	367	368	382	384
23	Structures & Improvements	331	311	318	324	334	351	357	371	371	383	389	386	398	413
24	Reservoirs, Dams & Waterways	332	295	303	309	318	327	328	338	337	346	348	348	364	370
25	Water Wheels, Turbines & Generators	333	363	375	381	385	394	398	385	395	390	396	402	410	393
26															
27	**Other Production Plant**														
28	Total Other Production Plant		368	373	385	399	429	441	412	417	429	436	439	430	437
29	Fuel Holders, Producers & Accessories	342	334	343	353	359	369	373	382	383	392	397	397	402	427
30	Gas Turbogenerators	344	372	377	389	404	401	402	413	418	430	437	439	428	434
31															
32	**Transmission Plant**														
33	Total Transmission Plant		357	364	373	370	388	396	406	410	413	418	417	427	454
34	Station Equipment	353	352	357	367	373	394	401	414	417	423	428	424	427	466
35	Towers & Fixtures	354	320	328	337	346	361	366	372	381	382	389	390	417	424
36	Poles & Fixtures	355	392	406	410	403	407	412	427	432	436	442	444	453	457
37	Overhead Conductors & Devices	356	410	415	428	393	424	438	448	451	442	447	448	455	487
38	Underground Conduit	357	299	306	317	326	334	338	350	354	367	377	376	388	404
39	Underground Conductors & Devices	358	437	442	445	453	454	464	447	451	460	467	469	473	523
40															
41	**Distribution Plant**														
42	Total Distribution Plant		313	318	325	326	334	339	346	352	359	367	369	373	391
43	Station Equipment	362	353	359	373	377	380	383	387	388	383	387	386	391	441
44	Poles, Towers & Fixtures	364	354	364	368	372	380	384	395	399	411	419	423	425	434
45	Overhead Conductors & Devices	365	363	370	380	370	393	404	416	422	427	439	442	449	468
46	Underground Conduit	366	298	306	315	325	338	342	352	356	374	383	380	393	395
47	Underground Conductors & Devices	367	300	303	308	314	322	330	319	324	329	333	335	337	354
48	Line Transformers	368	230	221	225	227	228	230	237	241	247	248	253	244	264
49	Pad Mounted Transformers	368	315	320	323	325	328	328	350	351	362	359	359	387	457
50	Services-Overhead	369	302	306	312	315	325	330	338	344	349	362	362	371	378
51	Services-Underground	369	233	236	232	231	243	247	246	249	260	264	264	268	269
52	Meters Installed	370	196	211	217	209	207	216	235	256	270	282	282	319	319
53	Street Lighting-Overhead	373	377	387	389	394	402	407	416	423	442	467	471	474	480
54	Mast Arms & Luminaires Installed	373	398	408	405	406	412	417	421	427	433	438	444	447	453
55	Street Lighting-Underground	373	374	384	388	394	404	409	419	426	450	481	484	488	492
56															

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COST TRENDS OF ELECTRIC UTILITY CONSTRUCTION

NORTH CENTRAL REGION (1973=100)

Line	CONSTRUCTION AND EQUIPMENT	FERC	COST INDEX NUMBERS											
			2005		2006		2007		2008		2009		2010	
			Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1
1	Total Plant-All Steam Generation		453	460	481	495	518	529	561	580	585	564	579	587
2	Total Plant-All Steam & Nuclear Gen.		452	459	480	494	517	527	559	578	583	561	577	585
3	Total Plant-All Steam & Hydro Gen.		452	459	479	493	516	527	559	578	583	561	577	585
4														
5	**Steam Production Plant**													
6	Total Steam Production Plant		477	481	495	503	520	531	547	576	570	554	566	577
7	Structures & Improvements-Indoor	311	435	438	451	458	474	482	501	530	532	518	528	535
8	Structures & Improvements-Semi-Outdoor	311	418	425	438	445	457	483	501	513	514	490	495	498
9	Boiler Plant Equipment-Coal Fired	312	495	499	514	521	534	543	557	585	591	577	589	597
10	Boiler Plant Equipment-Gas Fired	312	-	-	-	-	-	-	-	-	-	-	-	-
11	Boiler Plant Piping Installed		439	443	460	465	477	475	491	530	545	529	538	550
12	Turbogenerator Units	314	464	461	471	483	499	501	513	559	514	489	502	525
13	Accessory Electrical Equipment	315	562	572	596	616	661	682	719	744	774	793	812	828
14	Misc. Power Plant Equipment	316	511	513	531	538	540	544	555	593	595	587	597	603
15														
16	**Nuclear Production Plant**													
17	Total Nuclear Production Plant		447	449	462	471	486	489	502	530	521	510	521	532
18	Structures & Improvements	321	406	410	420	427	438	433	447	462	462	455	461	466
19	Reactor Plant Equipment	322	439	441	455	463	476	480	489	518	512	502	513	521
20														
21	**Hydro Production Plant**													
22	Total Hydraulic Production Plant		397	400	410	417	432	442	454	471	469	461	467	475
23	Structures & Improvements	331	435	438	451	458	474	482	501	530	532	518	528	535
24	Reservoirs, Dams & Waterways	332	384	388	399	404	417	428	439	446	447	441	445	449
25	Water Wheels, Turbines & Generators	333	399	397	406	416	436	444	455	493	481	469	478	496
26														
27	**Other Production Plant**													
28	Total Other Production Plant		428	435	445	456	516	529	582	603	620	655	675	688
29	Fuel Holders, Producers & Accessories	342	454	460	469	478	494	497	512	548	554	537	541	540
30	Gas Turbogenerators	344	420	427	435	447	511	524	581	602	619	659	680	693
31														
32	**Transmission Plant**													
33	Total Transmission Plant		471	485	512	528	553	568	603	631	640	591	617	619
34	Station Equipment	353	483	495	517	533	567	583	604	627	640	641	658	665
35	Towers & Fixtures	354	436	439	454	457	468	494	513	515	523	500	506	506
36	Poles & Fixtures	355	476	493	502	515	526	529	561	570	583	587	596	574
37	Overhead Conductors & Devices	356	511	542	605	643	678	695	753	828	831	580	669	677
38	Underground Conduit	357	436	436	454	458	477	472	494	527	536	519	520	526
39	Underground Conductors & Devices	358	529	547	590	594	605	610	790	828	829	840	836	828
40														
41	**Distribution Plant**													
42	Total Distribution Plant		408	417	446	466	499	507	563	562	581	567	583	591
43	Station Equipment	362	457	464	492	503	537	555	573	595	606	608	629	637
44	Poles, Towers & Fixtures	364	453	457	470	480	496	497	511	525	537	538	547	545
45	Overhead Conductors & Devices	365	489	512	555	579	609	624	670	715	725	612	666	679
46	Underground Conduit	366	420	422	449	451	471	468	487	495	509	507	501	504
47	Underground Conductors & Devices	367	382	393	423	428	507	514	554	586	647	639	593	600
48	Line Transformers	368	275	283	320	361	408	416	602	506	532	555	581	606
49	Pad Mounted Transformers	368	492	541	562	653	689	820	642	759	728	665	668	646
50	Services-Overhead	369	395	402	428	428	451	452	475	485	491	457	477	484
51	Services-Underground	369	279	292	335	372	356	352	349	350	325	327	328	350
52	Meters Installed	370	306	306	310	316	319	326	330	332	334	334	346	347
53	Street Lighting-Overhead	373	499	508	526	594	617	627	641	672	738	751	771	719
54	Mast Arms & Luminaires Installed	373	482	496	524	555	574	585	576	587	709	705	714	728
55	Street Lighting-Underground	373	510	517	535	615	640	651	671	708	766	784	809	735
56														

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COST TRENDS OF ELECTRIC UTILITY CONSTRUC

NORTH CENTRAL REGION (1973=100)

Line	CONSTRUCTION AND EQUIPMENT	FERC	COST INDEX NUMBERS													
			2011		2012		2013		2014		2015		2016		2017	
			Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1
1	Total Plant-All Steam Generation		599	616	622	628	650	641	648	657	668					
2	Total Plant-All Steam & Nuclear Gen.		597	614	620	626	648	639	646	655	666					
3	Total Plant-All Steam & Hydro Gen.		597	613	620	625	647	639	645	654	666					
4																
5	**Steam Production Plant**															
6	Total Steam Production Plant		586	602	614	616	647	624	628	640	650					
7	Structures & Improvements-Indoor	311	547	561	574	578	596	587	597	608	617					
8	Structures & Improvements-Semi-Outdoor	311	509	512	523	527	535	534	544	545	555					
9	Boiler Plant Equipment-Coal Fired	312	607	625	636	639	669	645	647	662	670					
10	Boiler Plant Equipment-Gas Fired	312	-	-	-	-	-	-	-	-	-					
11	Boiler Plant Piping Installed		564	578	597	601	612	603	611	617	619					
12	Turbogenerator Units	314	525	547	551	547	596	551	550	562	570					
13	Accessory Electrical Equipment	315	855	883	917	938	971	973	987	1010	1042					
14	Misc. Power Plant Equipment	316	620	632	652	660	675	670	669	683	686					
15																
16	**Nuclear Production Plant**															
17	Total Nuclear Production Plant		539	557	565	568	606	575	580	590	597					
18	Structures & Improvements	321	471	478	487	493	509	499	508	512	520					
19	Reactor Plant Equipment	322	530	549	554	556	603	562	566	576	579					
20																
21	**Hydro Production Plant**															
22	Total Hydraulic Production Plant		483	488	498	500	518	507	513	518	527					
23	Structures & Improvements	331	547	561	574	578	596	587	597	608	617					
24	Reservoirs, Dams & Waterways	332	462	464	476	481	487	488	495	500	511					
25	Water Wheels, Turbines & Generators	333	491	499	501	494	542	498	499	499	504					
26																
27	**Other Production Plant**															
28	Total Other Production Plant		681	702	751	768	790	**786**	**803**	**819**	840					
29	Fuel Holders, Producers & Accessories	342	554	563	582	587	596	590	606	615	621					
30	Gas Turbogenerators	344	683	704	757	775	797	**792**	**810**	**827**	847					
31																
32	**Transmission Plant**															
33	Total Transmission Plant		631	650	646	653	667	666	673	680	690					
34	Station Equipment	353	682	699	709	718	736	728	735	746	759					
35	Towers & Fixtures	354	524	525	541	543	558	549	560	562	572					
36	Poles & Fixtures	355	581	584	588	591	595	598	591	593	599					
37	Overhead Conductors & Devices	356	662	725	650	658	673	690	691	698	705					
38	Underground Conduit	357	540	544	566	568	569	567	591	588	596					
39	Underground Conductors & Devices	358	893	897	906	937	948	970	997	1008	1019					
40																
41	**Distribution Plant**															
42	Total Distribution Plant		606	621	627	637	649	659	670	676	690					
43	Station Equipment	362	653	662	669	677	679	683	693	696	703					
44	Poles, Towers & Fixtures	364	548	552	558	562	567	570	568	569	577					
45	Overhead Conductors & Devices	365	690	732	699	710	729	744	757	770	789					
46	Underground Conduit	366	517	518	537	539	541	542	556	555	564					
47	Underground Conductors & Devices	367	638	652	684	708	694	722	715	728	725					
48	Line Transformers	368	620	638	658	673	714	731	770	787	819					
49	Pad Mounted Transformers	368	650	706	708	708	710	688	691	674	677					
50	Services-Overhead	369	510	528	509	511	515	517	529	537	555					
51	Services-Underground	369	390	408	429	448	454	456	453	411	439					
52	Meters Installed	370	340	338	334	337	341	343	349	350	355					
53	Street Lighting-Overhead	373	732	755	766	781	775	783	743	744	743					
54	Mast Arms & Luminaires Installed	373	733	748	769	788	772	788	701	704	696					
55	Street Lighting-Underground	373	751	777	788	802	798	806	776	775	775					
56																

Construction Cost Index History - As of August 2015

View all **Historical Indices** »

Text size: A A

HOW ENR BUILDS THE INDEX: 200 hours of common labor at the 20-city average of common labor rates, plus 25 cwt of standard structural steel shapes at the mill price prior to 1996 and the fabricated 20-city price from 1996, plus 1.128 tons of portland cement at the 20-city price, plus 1,088 board ft of 2 x 4 lumber at the 20-city price.

ENR'S CONSTRUCTION COST INDEX HISTORY (1908-2015)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG.
2015	9972	9962	9972	9992	9979	10039	10037						
2014	9664	9681	9702	9750	9796	9800	9835	9846	9870	9886	9912	9936	9806
2013	9437	9453	9456	9484	9516	9542	9552	9545	9552	9689	9666	9668	9547
2012	9176	9198	9268	9273	9290	9291	9324	9351	9341	9376	9398	9412	9308
2011	8938	8998	9011	9027	9035	9053	9080	9088	9116	9147	9173	9172	9070
2010	8660	8672	8671	8677	8761	8805	8844	8837	8836	8921	8951	8952	8799
2009	8549	8533	8534	8528	8574	8578	8566	8564	8586	8596	8592	8641	8570
2008	8090	8094	8109	8112	8141	8185	8293	8362	8557	8623	8602	8551	8310
2007	7880	7880	7856	7865	7942	7939	7959	8007	8050	8045	8092	8089	7966
2006	7660	7689	7692	7695	7691	7700	7721	7722	7763	7883	7911	7888	7751
2005	7297	7298	7309	7355	7398	7415	7422	7479	7540	7563	7630	7647	7446
2004	6825	6862	6957	7017	7065	7109	7126	7188	7298	7314	7312	7308	7115
2003	6581	6640	6627	6635	6642	6694	6695	6733	6741	6771	6794	6782	6694
2002	6462	6462	6502	6480	6512	6532	6605	6592	6589	6579	6578	6563	6538
2001	6281	6272	6279	6286	6288	6318	6404	6389	6391	6397	6410	6390	6343
2000	6130	6160	6202	6201	6233	6238	6225	6233	6224	6259	6266	6283	6221
1999	6000	5992	5986	6008	6006	6039	6076	6091	6128	6134	6127	6127	6059
1998	5852	5874	5875	5883	5881	5895	5921	5929	5963	5986	5995	5991	5920
1997	5765	5769	5759	5799	5837	5860	5863	5854	5851	5848	5838	5858	5826
1996	5523	5532	5537	5550	5572	5597	5617	5652	5683	5719	5740	5744	5620
1995	5443	5444	5435	5432	5433	5432	5484	5506	5491	5511	5519	5524	5471
1994	5336	5371	5381	5405	5405	5408	5409	5424	5437	5437	5439	5439	5408
1993	5071	5070	5106	5167	5262	5260	5252	5230	5255	5264	5278	5310	5210
1992	4888	4884	4927	4946	4965	4973	4992	5032	5042	5052	5058	5059	4985
1991	4777	4773	4772	4766	4801	4818	4854	4892	4891	4892	4896	4889	4835
1990	4680	4685	4691	4693	4707	4732	4734	4752	4774	4771	4787	4777	4732

SOURCE FOR THE DATA HERE

ANNUAL AVERAGE

YEAR	AVG	YEAR	AVG	YEAR	AVG	YEAR	AVG

EXHIBIT REP-5

FERC FORM NO. 1/3-Q:
REPORT OF MAJOR ELECTRIC UTILITIES, LICENSEES AND OTHER

IDENTIFICATION

01 Exact Legal Name of Respondent The Empire District Electric Company	02 Year/Period of Report End of 2014/Q4
03 Previous Name and Date of Change *(if name changed during year)* The Empire District Electric Company	/ /
04 Address of Principal Office at End of Period *(Street, City, State, Zip Code)* 602 S Joplin Ave Joplin MO 64801	
05 Name of Contact Person Robert W. Sager	06 Title of Contact Person Controller, Asst Sec/Treas
07 Address of Contact Person *(Street, City, State, Zip Code)* 602 S Joplin Ave Joplin MO 64801	

08 Telephone of Contact Person,*Including Area Code* (417) 625-5100	09 This Report Is (1) ☐ An Original (2) ☒ A Resubmission	10 Date of Report *(Mo, Da, Yr)* 04/23/2015

ANNUAL CORPORATE OFFICER CERTIFICATION

The undersigned officer certifies that:

I have examined this report and to the best of my knowledge, information, and belief all statements of fact contained in this report are correct statements of the business affairs of the respondent and the financial statements, and other financial information contained in this report, conform in all material respects to the Uniform System of Accounts.

01 Name Laurie A. Delano	03 Signature Laurie A. Delano	04 Date Signed *(Mo, Da, Yr)* 04/23/2015
02 Title Vice-President-Finance & CFO		

Title 18, U.S.C. 1001 makes it a crime for any person to knowingly and willingly to make to any Agency or Department of the United States any false, fictitious or fraudulent statements as to any matter within its jurisdiction.

Name of Respondent	This Report Is:	Date of Report (Mo, Da, Yr)	Year/Period of Report
The Empire District Electric Company	(1) ☐ An Original (2) ☒ A Resubmission	04/23/2015	End of 2014/Q4

ELECTRIC PLANT IN SERVICE (Account 101, 102, 103 and 106) (Continued)

Line No.	Account (a)	Balance Beginning of Year (b)	Additions (c)
47	3. TRANSMISSION PLANT		
48	(350) Land and Land Rights	11,611,367	-2,159
49	(352) Structures and Improvements	2,423,284	477,321
50	(353) Station Equipment	107,808,591	9,777,732
51	(354) Towers and Fixtures	1,334,199	755,756
52	(355) Poles and Fixtures	60,304,169	14,204,218
53	(356) Overhead Conductors and Devices	79,916,379	932,921
54	(357) Underground Conduit		
55	(358) Underground Conductors and Devices		
56	(359) Roads and Trails		
57	(359.1) Asset Retirement Costs for Transmission Plant		
58	TOTAL Transmission Plant (Enter Total of lines 48 thru 57)	263,397,989	26,145,789
59	4. DISTRIBUTION PLANT		
60	(360) Land and Land Rights	3,645,666	91,716
61	(361) Structures and Improvements	10,853,012	18,237,550
62	(362) Station Equipment	93,015,499	8,644,433
63	(363) Storage Battery Equipment		
64	(364) Poles, Towers, and Fixtures	173,908,439	6,661,856
65	(365) Overhead Conductors and Devices	179,304,897	7,973,399
66	(366) Underground Conduit	35,451,272	1,883,561
67	(367) Underground Conductors and Devices	59,262,385	143,915
68	(368) Line Transformers	105,546,608	6,316,389
69	(369) Services	74,952,777	1,897,500
70	(370) Meters	20,769,939	1,237,456
71	(371) Installations on Customer Premises	16,997,515	597,660
72	(372) Leased Property on Customer Premises		
73	(373) Street Lighting and Signal Systems	18,285,694	990,891
74	(374) Asset Retirement Costs for Distribution Plant	183,153	
75	TOTAL Distribution Plant (Enter Total of lines 60 thru 74)	792,176,856	54,676,326
76	5. REGIONAL TRANSMISSION AND MARKET OPERATION PLANT		
77	(380) Land and Land Rights		
78	(381) Structures and Improvements		
79	(382) Computer Hardware		
80	(383) Computer Software		
81	(384) Communication Equipment		
82	(385) Miscellaneous Regional Transmission and Market Operation Plant		
83	(386) Asset Retirement Costs for Regional Transmission and Market Oper		
84	TOTAL Transmission and Market Operation Plant (Total lines 77 thru 83)		
85	6. GENERAL PLANT		
86	(389) Land and Land Rights	679,467	
87	(390) Structures and Improvements	10,427,621	471,774
88	(391) Office Furniture and Equipment	17,693,900	2,916,963
89	(392) Transportation Equipment	12,006,024	2,260,428
90	(393) Stores Equipment	449,494	145,651
91	(394) Tools, Shop and Garage Equipment	5,729,099	-15,231
92	(395) Laboratory Equipment	1,189,323	102,850
93	(396) Power Operated Equipment	16,931,619	2,660,661
94	(397) Communication Equipment	11,906,045	282,403
95	(398) Miscellaneous Equipment	224,558	14,107
96	SUBTOTAL (Enter Total of lines 86 thru 95)	77,237,150	8,839,606
97	(399) Other Tangible Property		
98	(399.1) Asset Retirement Costs for General Plant		
99	TOTAL General Plant (Enter Total of lines 96, 97 and 98)	77,237,150	8,839,606
100	TOTAL (Accounts 101 and 106)	2,205,784,669	249,300,719
101	(102) Electric Plant Purchased (See Instr. 8)		
102	(Less) (102) Electric Plant Sold (See Instr. 8)		
103	(103) Experimental Plant Unclassified		
104	TOTAL Electric Plant in Service (Enter Total of lines 100 thru 103)	2,205,784,669	249,300,719

Name of Respondent	This Report Is:	Date of Report (Mo, Da, Yr)	Year/Period of Report
The Empire District Electric Company	(1) ☐ An Original (2) ☒ A Resubmission	04/23/2015	End of 2014/Q4

ELECTRIC PLANT IN SERVICE (Account 101, 102, 103 and 106) (Continued)

Retirements (d)	Adjustments (e)	Transfers (f)	Balance at End of Year (g)		Line No.
					47
			11,609,208		48
			2,900,605		49
539,898		260,819	117,307,244		50
706			2,089,249		51
391,562			74,116,825		52
329,993			80,519,307		53
					54
					55
					56
					57
1,262,159		260,819	288,542,438		58
					59
		326,918	4,064,300		60
74,093			29,016,469		61
1,437,760		-260,819	99,961,353		62
					63
511,317			180,058,978		64
579,514		3,479,582	190,178,364		65
53,285			37,281,548		66
269,026			59,137,274		67
2,503,165		-3,479,582	105,880,250		68
39,785			76,810,492		69
			22,007,395		70
769,977			16,825,198		71
					72
406,946			18,869,639		73
			183,153		74
6,644,868		66,099	840,274,413		75
					76
					77
					78
					79
					80
					81
					82
					83
					84
					85
20,386			659,081		86
906,310			9,993,085		87
1,733,445			18,877,418		88
2,155,312			12,111,140		89
			595,145		90
62,421		19,010	5,670,457		91
			1,292,173		92
2,396,463		-19,010	17,176,807		93
456,954			11,731,494		94
698			237,967		95
7,731,989			78,344,767		96
					97
					98
7,731,989			78,344,767		99
48,198,583		326,918	2,407,213,723		100
					101
					102
					103
48,198,583		326,918	2,407,213,723		104

Name of Respondent	This Report Is:	Date of Report	Year/Period of Report
The Empire District Electric Company	(1) ☐ An Original (2) ☒ A Resubmission	(Mo, Da, Yr) 04/23/2015	End of 2014/Q4

DEPRECIATION AND AMORTIZATION OF ELECTRIC PLANT (Continued)

C. Factors Used in Estimating Depreciation Charges

Line No.	Account No. (a)	Depreciable Plant Base (In Thousands) (b)	Estimated Avg. Service Life (c)	Net Salvage (Percent) (d)	Applied Depr. rates (Percent) (e)	Mortality Curve Type (f)	Average Remaining Life (g)
12	311	171,295	83.33		1.20		70.61
13	312	655,669	52.08		1.92		44.23
14	312.7	18,596	52.08		1.92		37.17
15	314	139,221	61.35		1.63		52.68
16	315	50,684	54.05		1.85		42.13
17	316	13,226	51.02		1.96		17.72
18	SUBTOTAL STEAM	1,048,691					
19							
20	331	839	60.61		1.65		35.81
21	332	2,228	61.35		1.63		36.76
22	333	3,180	68.49		1.46		55.19
23	334	1,786	68.97		1.45		53.45
24	335	618	41.49		2.41		22.44
25	SUBTOTAL HYDRO	8,651					
26							
27	341	8,271	35.21		2.84		25.15
28	342		35.21		2.84		
29	343	79,414	35.21		2.84		26.06
30	344	27,367	35.21		2.84		30.06
31	345	7,995	35.21		2.84		24.25
32	346	2,814	35.34		2.83		29.67
33	SUBTOTAL CC	125,861					
34							
35	341	5,390	55.25		1.81		22.71
36	342	3,823	26.46		3.78		10.74
37	343	149,546	51.81		1.93		34.08
38	344	24,449	54.95		1.82		25.52
39	345	11,962	28.25		3.54		19.14
40	346	1,608	25.38		3.94		3.97
41	SUBTOTAL OTHER	196,778					
42							
43	352	2,678	49.75		2.01		26.85
44	353	113,019	45.87		2.18		29.22
45	354	1,892	54.64		1.83		31.99
46	355	68,687	31.35		3.19		21.55
47	356	81,583	47.85		2.09		33.26
48	SUBTOTAL TRANS	267,859					
49							
50	361	24,978	48.54		2.06		40.35