

*Response to Request for Quotes for a
Guaranteed Energy Savings Project for the
Commonwealth of Pennsylvania
Department of General Services at
SCI Muncy
Project No. **GESA 2017-2**
Contract No. **GESA 2017-2.1***



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*Lycoming County, PA
May 3, 2018*



Tony Prelec, Account Executive
Phone: 724.996.7970
tprelec@energysystemsgroup.com



Pennsylvania Department of Corrections Past Project Reference

"In my 30 years of working at SCI Dallas, I have been part of many projects, including energy savings projects.

I have worked with many different professionals and contractors here at the facility...the 2015/2016 Guaranteed Energy Savings Project implemented by Energy Systems Group at SCI Dallas has by far, been the best project I've been involved with.

All of the ESG people that I have worked with have been a pleasure dealing with. To this point this energy savings project has run faster and smoother than any other projects I have been a part of at SCI Dallas.

I am moving onto another phase in my life and it was a privilege to end my career working with the Energy Systems Group."

Michael Truchon, *Corrections Maintenance Manager 3 (retired)*

Executive Summary

Energy Systems Group (ESG) is pleased to submit this proposal in response to the SCI Muncy Request for Quotes issued by PA DGS for a guaranteed energy savings agreement (GESA) project. **Energy Systems Group has brought together the same internal team of professionals who implemented the very successful, PA GESA for SCI Dallas to develop and implement the PA GESA for SCI Muncy.** That same internal team consisting of Account Executive, Project Manager, Corrections Specialist, and Engineers has worked on numerous Corrections projects and fully understands the uniqueness of a corrections environment and how to operate in a safe and secure manner.



The information in this proposal will show “why” Energy Systems Group is the leader in customer satisfaction and how we set ourselves apart from the competition. Our value is manifested in having the best expertise, financial strength, and long term dependability. But most importantly, our track record shows our commitment to forming long-term partnerships with our customers, helping them meet infrastructure and environmental goals and standing behind our workmanship 100%.

Since 1994, ESG has been implementing energy conservation projects and has been awarded over 475 contracts throughout the country with a total value in excess of \$2.5 Billion dollars.

Our growth and expansion comes as a result of our dedication to project completion — not just with an “on-time and on-budget” mentality — but with a foundational business philosophy and a consistent objective of overachieving to provide exceptional value and results that translate into the highest level of customer satisfaction and deliver the greatest possible benefits to each of our Customers. Another important factor contributing to our success is the fact that ESG routinely matches our project team and their capabilities and experience with each specific type of project.

Energy Systems Group is very pleased that we were able to develop this 20 year, budget-neutral project which includes all the Base ECM’s outlined in Appendix T, as well as some additional ECMs developed by ESG which added to the amount of overall energy savings available to fund the project.

STATEMENTS REGARDING RFQ REQUIREMENTS

- Energy Systems Group (ESG) has received and acknowledged all six (6) bulletins released by PA DGS pertaining to the SCI Muncy RFQ.
- ESG has not included any cost information in the SCI Muncy Technical Submission
- ESG has not labeled any portion of our proposal as proprietary or confidential
- The total energy savings project in our ESG final scope of work will be at least 95% of the savings projected in the Quote, and the actual ECM costs shall be within 10% of the costs listed in the CEA/IGA, and the project will be self-funded from energy savings over the term of the project (maximum 20 years).
- Our sample RFQ Project schedule should not be construed as the final CPM schedule
- The Energy Consultants service fees are included in our project cash flow
- Measurement and Verification Services are included in the first three years of the project

Our team spent a considerable amount of time talking with SCI Muncy staff to fully understand the needs and desires most important to the staff, and the PA Department of Corrections, relative to this SCI Muncy GESA project. We feel our proposed GESA project addresses all the important issues brought to our attention by the SCI Muncy staff and hope that PA DGS and PA DOC will select Energy Systems Group as the ESCO of choice for this Corrections project.

Thank you for this opportunity to once again serve the Commonwealth of Pennsylvania, PA Department of Corrections and PA Department of General Services.

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Electronic Copy (USB Flash Drive) Includes:
Full Copy of Technical Submission
ESG Financial Reports



PO Box 285
Portersville, PA 16051
724.996.7970 – phone
812.492.8541 - fax

May 3, 2018

Becky Tomlinson
403 North Office Building
401 North Street
Harrisburg, Pennsylvania 17120

Subject: Response to Request for Proposals for a Guaranteed Energy Savings Project at SCI Muncy; Project Number GESA 2017-2; Contract Number GESA 2107-2.1; Appendix E; Small Diverse Business and Small Business Letter of Intent

Dear Selection Committee Members:

Energy Systems Group, LLC, (ESG) is pleased to provide our response to the above referenced Energy Savings Improvement Program to assist The Department of General Services and The Department of Corrections at SCI Muncy – DGS GESA #2017-2. Vectren’s State of Pennsylvania Vendor Number is **406674**. As a comprehensive and NAESCO accredited Energy Service Provider, ESG designs, develops, implements, operates, maintains and verifies innovative, customer focused energy and operation solutions that enhance our client partners’ facilities, productivity, comfort and finances so they can focus on meeting their core mission. ESG possesses all of the resources necessary to implement an energy performance contract project with SCI Muncy.

The ESG team offers a complete complement of staff members to develop and implement comprehensive energy efficient and guaranteed savings programs to assist various agencies in achieving mandated reductions in energy consumption. To ensure the strongest value and responsiveness, subcontractors such as mechanical, lighting and water conservation will be selected/bid for specific jobs.

The primary point of contact for questions or notification regarding the submitted response is:

Tony Prelec, Account Executive
tprelec@energysystemsgroup.com
Phone Number: 724.996.7970
Fax Number: 812-492-8541

The primary person(s) authorized to bind the company and conduct contract negotiations:

**Gregory F. Collins, President or
Dan Shell, VP and General Counsel**
Phone Number: 812-471-5000
Fax Number: 812-475-2544

Thank you for your time and consideration. We look forward to your acceptance of our proposal.

Sincerely,

Gregory F. Collins
President

APPENDIX A

Quote Signature Page

Quote Signature

Offeror's Representations and Authorizations. Offeror by signing on the signature page and submitting its Quote understands, represents, acknowledges and certifies that:

1. All information provided by, and representations made by, the Offeror in the Quote are material and important and will be relied upon by the Issuing Office in awarding the contract(s). Any misstatement shall be treated as fraudulent concealment from the Issuing Office of the true facts relating to the submission of this Quote. A misrepresentation shall be punishable under 18 Pa. C.S. § 4904.
2. No attempt has been made or will be made to induce any firm or person to refrain from submitting a Quote on this contract, or to submit a Quote higher than this Quote, or to submit any intentionally high or noncompetitive Quote or other form of complementary Quote.
3. The Quote is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive Quote.
4. To the best knowledge of the person signing the Quote for the Offeror, the Offeror, its affiliates, subsidiaries, officers, directors, and employees are not currently under investigation by any governmental agency and have not in the last four (4) years been convicted or found liable for any act prohibited by State or Federal law in any jurisdiction, involving conspiracy or collusion with respect to bidding or proposing on any public contract, except as disclosed by the Offeror in its Quote.
5. To the best of the knowledge of the person signing the Quote for the Offeror and except as otherwise disclosed by the Offeror in its Quote, the Offeror has no outstanding, delinquent obligations to the Commonwealth including, but not limited to, any state tax liability not being contested on appeal or other obligation of the Offeror that is owed to the Commonwealth.
6. The Offeror is not currently under suspension or debarment by the Commonwealth, or any other state, or the federal government. If the Offeror has received, within three years of the issuance of this RFQ, a Notice of Default from the Commonwealth, other state or the federal government, then the Offeror shall submit, as part of the Technical Submission, seven copies of a written explanation of why such Notice of Default was issued. This written explanation shall not exceed 1 sheet (2 pages) and shall not count towards the sheet and page limit established for the Technical Submission of the Quote.
7. The Offeror has not, under separate contract with the Issuing Office, made any recommendations to the Issuing Office concerning the need for the services described in the Quote or the specifications for the services described in the Quote.
8. Each Offeror, by submitting its Quote, authorizes all Commonwealth agencies to release to the Commonwealth information related to liabilities to the Commonwealth including, but not limited to, taxes, unemployment compensation, and workers' compensation liabilities.

9. Until the awarded GESA Contractor receives a fully executed and approved written contract from the Issuing Office there is no legal and valid contract, in law or in equity, and the GESA Contractor should not begin to perform.
10. The total energy savings projected in the final scope of work will be at least 95% of the savings projected in the Quote and that the project will be self-funded over the financial term of the project (maximum term of 20 years.)
11. Offeror agrees and certifies in accordance with the enclosed Commonwealth of Pennsylvania:
 - o Nondiscrimination/Sexual Harassment Clause
 - o Tax Liability Certification
 - o Americans Disabilities Act
 - o GESA Contractor Integrity Provisions
 - o GESA Contractor Responsibility Provisions
 - o Environmental Statement
 - o Compliance with State and Federal Statutes, Rules and Regulations
 - o Non-Collusion Affidavit

I am authorized to sign this Quote on behalf of the Offeror and I agree and state that Energy Systems Group, LLC (Name of Firm) understands and acknowledges that the above representations are material and important, and will be relied upon by the Department of General Services in awarding the contract(s) for which this Quote is submitted. I understand and my firm understands that any misstatement shall be treated as fraudulent concealment from the Department of General Services of the true facts relating to the submission of this Quote.

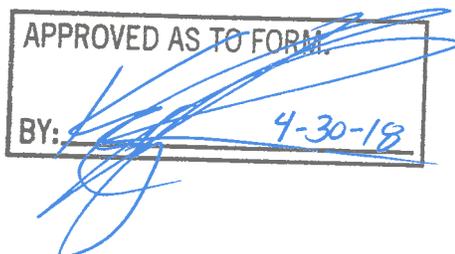

Signature

Gregory F. Collins

Print Name Legibly

President

Title



APPENDIX B

Non-Collusion Affidavit

INSTRUCTIONS FOR NONCOLLUSION AFFIDAVIT

1. This Noncollusion Affidavit is material to any contract awarded pursuant to this Quote. According to §4507 of the Commonwealth Procurement Code, 62 Pa.C.S. §4507, governmental agencies may require Noncollusion Affidavits to be submitted with Quotes.
2. This Noncollusion Affidavit must be executed by the member, officer, or employee of the Offeror who makes the final decision on prices and the amount quoted in the Quote.
3. Bid rigging and other efforts to restrain competition, and the making of false sworn statements in connection with the submission of Quotes are unlawful and may be subject to criminal prosecution. The person who signs the affidavit should examine it carefully before signing and assure himself or herself that each statement is true and accurate, making diligent inquiry, as necessary, of all other persons employed by or associated with the Offeror with responsibilities for the preparation, approval or submission of the Quote.
4. In the case of a Quote submitted by a joint venture, each party to the venture must be identified in the Quote documents and an affidavit must be submitted separately on behalf of each party to the joint venture.
5. The term “complementary Quote” as used in the affidavit has the meaning commonly associated with that term in the Quote process, and includes the knowing submission of Quotes higher than the Quote of another firm, any intentionally high or noncompetitive Quote, and any other form of Quote submitted for the purpose of giving a false appearance of competition.
6. Failure to submit an affidavit with the Quote in compliance with these instructions may result in disqualification of the Quote.

NONCOLLUSION AFFIDAVIT

DGS Project Number: GESA - 2017 - 2

State of Indiana _____ :

County of Warrick _____ : s.s.

I state that I am the President (Title) of Energy Systems Group, LLC (Name of Firm) and that I am authorized to make this affidavit on behalf of my firm, and its owners, directors, and officers. I am the person responsible in my firm for the prices(s) and the amount of this Quote.

I state that:

1. The price(s) and amount of this Quote have been arrived at independently and without consultation, communication or agreement with any other contractor, Offeror, or potential Offeror.
2. Neither the price(s) nor the amount of this Quote, and neither the approximate price(s) nor approximate amount of this Quote, have been disclosed to any other firm or person who is a Offeror or potential Offeror, and they will not be disclosed before the Quote submission date.
3. No attempt has been made or will be made to induce any firm or person to refrain from proposing on this contract, or to submit a Quote higher than this Quote, or to submit any intentionally high or noncompetitive Quote or other form of complementary Quote.
4. The Quote of my firm is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive Quote.
5. Energy Systems Group, LLC (Name of Firm) its affiliates, subsidiaries, officers, directors, and employees are not currently under investigation by any governmental agency and have not in the last four years been convicted or found liable for any act prohibited by state or federal law in any jurisdiction, involving conspiracy or collusion with respect to proposing and/or bidding on any public contract, except as follows:
N/A

I state that Energy Systems Group, LLC (Name of Firm) understands and acknowledges that the above representations are material and important, and will be relied upon by the Department of General Services in awarding the contract(s) for which this Quote is submitted. I understand and my firm understands that any misstatement in this affidavit is and shall be treated as fraudulent concealment from the Department of General Services of the true facts relating to the submission of this Quote.

[Signature]
(Signature)

Gregory F. Collins
(Signatory's Printed Name)
Notary Public
President
(Signatory's Title)

SWORN TO AND SUBSCRIBED
BEFORE ME THIS 30th DAY OF
April, 2018

[Signature]

My Commission Expires October 4, 2022



DGS Project GESA 2017-2
SCI Muncy

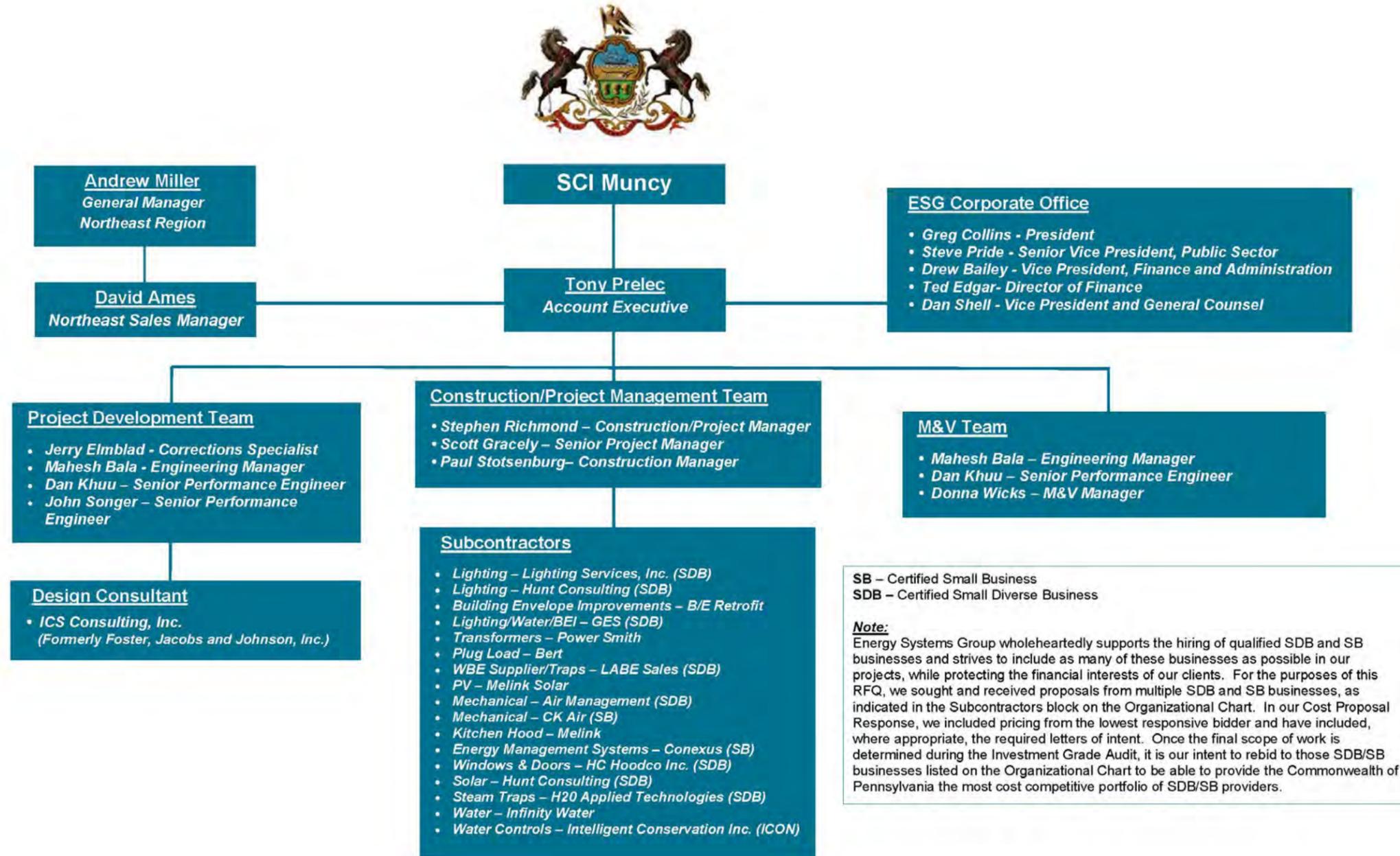
APPROVED AS TO FORM.
BY: [Signature] 4-30-18

2-5.1 Project Management Team Overview

(Suggested number of sheets/pages: 2 sheets plus a single 11 x17 sheet, front only, for Organization Chart)

- A. *Provide Project Team Organization Chart that graphically depicts the hierarchy and reporting structure of the Team members, with specific personnel identified.*
 - 1. *Personnel identified should include, as practical, executives, project managers, etc. down through field supervisors;*
- B. *Provide a brief description regarding the assignment of responsibilities for major tasks and the interrelationships and management structure of the overall Project Management Team. Describe the reporting hierarchy and the history, if any, of working relationships with other firms on the Project Management Team, including the process utilized in selecting subcontractors.*
- C. *The Evaluation Committee will consider the degree to which the proposed Management Team will effectively manage this Project. Information considered in this evaluation includes: the proposed management organization, roles and responsibilities, qualifications and experience of key personnel, and quality control of all subcontractors. Quotes should therefore discuss:*
 - 1. *A clear assignment of responsibility for various Project tasks to specific individuals and assignment of qualified individuals to fulfill designated responsibilities;*
 - 2. *The percentage of time that key personnel are assigned to this Project; and*
 - 3. *The ability to manage construction, repairs, regular service and emergencies effectively.*
- D. *If awarded a contract, the GESA Contractor shall not substitute personnel identified on the Project Management Team and shall not alter the structure of the Project Management Team organization chart without prior written authorization by the DGS.*

A. Organizational Chart



B. Assignments of Responsibilities by Core Team Members

Below is a list of the Energy Systems Group (ESG) Core Team Members that will either directly or indirectly be responsible for different aspects of Energy Performance Contracting Services for the SCI Muncy GESA 2017-2 project. The same Core Team Members recently completed the highly successful SCI Dallas GESA project.

Assignments of Core Members

Account Executive, Tony Prelec: procurement, Investment Grade Audit (IGA) work reviewer and post construction support.

General Manager, Andrew Miller: Procurement, financing, contracting, project resourcing, and performance team.

Sales Manager, David Ames: Procurement, financing, and contracting.

Corrections Specialist, Jerry Elmblad: Procurement, IGA work, construction management, training and post construction support

Engineering Manager, Mahesh Bala: Engineering work assignment and management during IGA and other project phases, and procurement.

Operations Manager, Stephen Richmond: Overall project management responsibility, construction management, commissioning, and project turnover.

Performance Engineer, Dan Khuu: IGA work, design and review, commissioning and diagnostic testing, M&V and warranty services.

Project Manager, Scott Gracely: IGA work, procurement, construction management, training, post-construction support and warranty services.

Site Superintendent, Paul Stotsenburg: Procurement, construction management, training, post-construction support and warranty services.

The core project team members assigned to this SCI Muncy GESA project have an outstanding track record of implementing Guaranteed Energy Savings Projects together. The most recent project completed by this project team is the \$20M dollar project for the SCI Dallas Department of Corrections project in Northeast Pennsylvania. The project was completed on time and the customer is completely satisfied with all Energy Conservation Measures implemented during the construction process. ESG also exceeded our Guaranteed Energy Savings commitment in Year 1 by a substantial amount.

This team has worked with some extremely talented subcontractors, many of whom we intend to utilize for specific ECMs on the SCI Muncy project. ESG has utilized subcontractors such as ICON, Lighting Services Inc., Melink, CK Air, H2O Technologies, HC Hood, ICS Consulting and Conexus on many past projects and we are confident that they will accomplish their assignments in a timely and cost effective fashion and fully stand behind their workmanship. Best of all many of the subcontractors we have used in the past have their Small Diverse Business or Small Business Certification from the Commonwealth of Pennsylvania.



CI. Assignment of responsibilities for various project tasks

Listed below is a more detailed description of specific activities and how each core team member interrelates to other members of the team:

Corporate Officers work closely with the General Manager to ensure ESG understands, and meets the needs and requirements of the customer. Corporate officers ensure the best financing plan, quality engineering, accurate estimates, and best solutions for the project. They are a part of all negotiations and contracts with the customer, and are the ultimate point of accountability.

Account Executive – Tony Prelec deals directly with both technical representatives and contract specialists to develop a clear understanding of the customer’s needs and concerns. In order to translate the customer’s requests into a feasible, successfully installed solution, he communicates with representatives of the operations group: Performance Engineer, Corrections Specialist, Mechanical Engineer, Electrical Engineer, Operations Manager, and Project Manager. Additionally, Tony has a wide knowledge base ranging from specialized technologies to the business operations of the customer.

Corrections Specialists – Jerry Elmblad, having over 35 years of Corrections experience is involved with the development of the project from start to finish. Jerry works with ESG’s sales and operations teams through the development, implementation and start-up phases on all ESG corrections projects.

Northeast General Manager - Andrew Miller is involved with the developmental and sales team through the implementation and start-up on all projects. This process ensures a direct link and accountability to deliver what was sold. The General Manager works closely with Project Development / Account Executives / Sales Managers to make sure ESG understands and fulfills the needs and requirements of the customer. The General Manager also works closely with the Project Managers to ensure ESG provides quality installations, exceeds customer expectations, and immediately deals with any issues inherent with construction in a timely and professional manner.

Northeast Sales Manager – David Ames is involved in all phases of the sales effort, focusing the team to ensure customer satisfaction throughout the project development, implementation, and measurement/verification phases. The Sales Manager works closely with Account Executives to discover and understand customers’ needs and concerns and, working closely with the operations team and other internal resources to translate those into feasible, installable solutions. The Sales Manager oversees the installation of contracts and ensures customer satisfaction.

Northeast Engineering Manager – Mahesh Bala serves as the chief technical resource to the Sales and Operations teams. The engineering manager reviews the technical solutions to ensure they adequately address the mechanical and energy-related challenges within a Customer’s facility, in a comprehensive and cost-effective manner such that the solutions increase the operational efficiency of the site throughout the contract term. The Engineering Manager serves as a technical consultant for ESG in-house staff, on issues that include ECM brainstorming, equipment selection, savings calculation, and energy guarantee protocol development. The Engineering Manager is involved with every customer and their project, from initial involvement with the operations team in the design phase, through the installation phase, and sometimes throughout ongoing services. The Engineering Manager oversees and coordinates engineering resources during the development phase.

Northeast Delivery Manager – Stephen Richmond works as a team coordinator for the project and is ultimately responsible for the technical approach and delivery of the project. The Project Delivery Manager works closely with the Account Executive to ensure ESG understands and fulfills the needs and requirements of the customer. The Project Delivery Manager oversees and coordinates all project delivery resources, both internal and external, to ensure quality engineering, accurate estimates, and the correct solutions for the particular customer. In the delivery of a project, the Project Delivery Manager oversees the Project Managers to ensure ESG provides



quality installations, exceeds customer expectations, and deals with all problems inherent with construction in a timely and professional manner. The Project Delivery Manager also oversees all negotiations and contracts with subcontractors and vendors.

Senior Performance Engineers – Dan Khuu and John Songer- are responsible for identifying and understanding the mechanical and energy-related improvements within a customer’s facility; and taking the site evaluation/information and developing comprehensive, cost-effective technical solutions that increase the operational efficiency of the site. The Performance Engineers are also responsible for providing ongoing technical consultation to the customer on the current systems and future energy and operating efficiencies. The consultation includes ensuring equipment selection, proper installation, implementation of the measures as they were designed, and troubleshooting construction problems.

The Performance Engineers are involved with every customer and their project from initial involvement with the Operations Team in the design phase, through the installation phase, and throughout ongoing services. The Performance Engineers act as the operations team leads ensuring accuracy, quality, and cohesion of all technical and economical engineering decisions. Coordination of the engineering design information is imperative to a quality project. The continuous open communication between the Performance Engineer and Account Executive ensures a timely and technically correct solution for the customer.

Project Manager (PM) – Scott Gracely and Site Superintendent (SS) – Paul Stotsenburg work closely with the Account Executive to advise and assist in estimating and managing the account; the Electrical, Mechanical, and Performance Engineers to obtain technical information and advice; the Project Delivery Manager on resource needs; and, our management, finance, and accounting support groups. Both Scott and Paul have correction facility experience, with Scott being our Project Manager for the SCI Dallas GESA project.

The Project Manager and Site Superintendent are generally on the project each day working very closely with the customer to ensure that all aspects of the project are running according to plan. Our PM and SS are committed to staffing the project with a workforce capable of handling the technologies associated with the project, and plan for and use these personnel to achieve optimum results according to the customer’s requirements. Once again Scott and Paul are experienced with the unique challenges of working in a correctional environment.

ESG’s PM applies technical expertise, project knowledge, people and communication skills, as well as management talent in a proactive manner to ensure that our contract commitments are met on time, within budget, and at the quality expected by the customer. Scott Gracely will be the primary contact and interface during the project implementation and customer acceptance phases.

Measurement and Verification Manager - Donna Wicks has the responsibility of monitoring the guarantee and presenting results to the customer in a format that is clear and concise. In addition to excellent communication skills, Donna has the capability to determine what factors affect energy savings and calculate savings given changing parameters. Some customers may prefer modified baselines showing monthly deviations, while others may prefer to see only savings based on initial verifications and measured equipment operation. Donna is adept at meeting those needs. Maintaining and tracking guaranteed energy savings over the length of a program is the final step of a Performance Contract. Maintaining core competencies is important to the success of an energy services agreement.

ESG is committed to guaranteeing all of the operational and financial benefits the energy services agreement offers. ESG’s primary competency is as an energy services provider, not a manufacturer. We are, therefore, committed to selecting the best products and services that will over-perform on the requirements and goals of our customers.



C2. Reasonableness of percentage of time key personnel are assigned to this project

On projects of this size and scope, ESG typically has had great success staffing similar projects according to the percentages of time listed below for key individuals

Percentage Of Time Assigned by Role			
Project Manager (1)	100%	Mechanical and Electrical Engineers (2)	50%
Corrections Specialist (1)	75%	Account Executive (1)	35%
Regional Operations Manager (1)	30%	Manager EHS (1)	20%
Site Superintendent (1)	100%	M & V Specialist (1)	10%
Senior Performance Engineers (2)	75%	ICON, Window, and Solar Specialists (3)	35%

C3. Offeror described ability to manage construction repairs, regular service and emergencies effectively

A key to consistent delivery of our systems and services is our attention to project management. This project will likely have varied and diverse scope and magnitude. The project may consist of implementing several measures in one building, implementing a variety of measures in many buildings, or applying an individual Energy Conservation Measure (ECM) throughout several buildings. At ESG, our project manager provides a single focal point for all contracts, carrying out the responsibility for the implementation phase of the project.

The project manager will work closely with the PA DOC on-site designated representatives. Given the projected size and scope of this project, ESG will assign a full-time project manager while the construction phase is under way. This project manager is available 24/7, and will be on site any time there is regardless of hours of day, weekends or holidays. ESG will develop a protocol to following specific to the SCI Muncy Corrections Facility and in conjunction with DOC and DGS representatives concerning response to emergencies.

ESG prefers to select local subcontractors that are familiar with a corrections environment. ESG, working in conjunction with DOC/DGS safety and security personnel, will develop a contingency plan specific to the SCI Muncy Corrections Facility, which will address specific types of emergencies that could be encountered during the project. This will allow us to effectively address any situation, which may arise. Utilizing our past State government/Corrections experience, we will develop very effective emergency response plans and are quite familiar with the process.

D. GESA Contractor will not substitute any personnel without prior written consent by DGS.

ESG will not substitute any personnel currently assigned to this SCI Muncy project without prior written consent by DGS.

ESG also understands that the percentages of work for the project to be implemented by Small Diverse Business and Small Business will remain the same, even if a change of contractor is necessary.

2-5.2 Work Plan for this Project

(Suggested number of sheets/pages: 4 sheets).

- A. *The Offeror shall describe its technical plan for completing the Project. The Work Plan should outline and describe the steps necessary to successfully undertake the Project from the GESA Contract execution through completion of construction, including commissioning. This portion of the Quote discusses ECMs in general terms but shall not include any discussion on costs or savings. The Evaluation Committee will consider the degree to which the Quote addresses or discusses the following:*
1. *Demonstrate Offeror's understanding of the design process and how they will coordinate with Energy Consultant;*
 2. *Identify potential design issues;*
 3. *Describe how the Team will manage and execute the Project;*
 4. *Address early construction packages, long lead items and phases of construction;*
 5. *Identify critical material and equipment. Discuss/explain why these are critical and timing/lead times for acquisition;*
 6. *Address construction challenges and proposed solutions;*
 7. *Outline a construction plan that includes: site operations, site layout, logistics, lay-down, field offices, parking areas and etc., including how the Offeror intends to accomplish the work within a fully occupied environment;*
 8. *Address Project Safety Plan, Management and Monitoring;*
 9. *Provide outline and effectiveness of QA/QC Plan;*
 10. *Describe closeout process for training of Funding Agency personnel, manuals, Occupancy Permits, commissioning, and final close-out.*

1. Offeror demonstrates thorough understanding of the design process

Having performed a large GESA project for the State of Pennsylvania Department of Corrections, Energy Systems Group is quite familiar with the GESA Project Design Manual along with working conditions in correctional facilities. A very successful approach to design, which we utilized on the SCI Dallas GESA project, consisted of the following steps: During the IGA phase, ESG will prepare a detailed scope of work, based from energy, facility and Central Office needs, performance specification documents for Energy Conservation Measures (ECMs) in the project scope; including 35% design documents for measures that warrant design details, and will follow the *GESA Project Design Manual*. After the Notice to Proceed (NTP), ESG will submit long lead equipment submittals to DGS, while continuing to develop the design documents from 35% to construction-ready. Long lead equipment will be ordered after DGS' approval. For measures requiring detailed design, ***ESG has partnered with ICS Consulting as our design consultant for the project.*** ICS, is an engineering and design firm based in Media, Pennsylvania with excellent background in MEP design. ESG will utilize ICS to prepare 35% design documents and specifications of critical mechanical components, which will be provided as part of the IGA submission to the Commonwealth for review. After the contract execution and the issuance of the NTP, we will continue to utilize ICS to develop and complete construction-ready design and specification documents. For ECMs requiring like-for-like equipment replacement ESG engineers will complete the necessary documents in house and provide them to the DGS Energy Consultant for their review and approval.

2. Offeror identified potential design issues

Some key design challenges which ESG has identified and has prepared creative approaches to mitigate:

1. Age and condition of buildings and infrastructure has to be considered during the design phase;
2. Working within a corrections environment always has a bearing on design of ECMs;
3. Installing a large centralized condensate receiver just prior to the D/A tank with solar pre-heating;
4. If savings warrants a summer boiler, it is generally a longer lead time item and requires careful coordination for the seasonal heating;
5. West Steam Loop replacement will require coordination and tie-in due to 24/7 operations;
6. Water Conservation and Controls will be in housing units and need to meet the ACA requirements;
7. Lighting Levels need to meet the ACA and security requirements;
8. Upgrading existing internal lighting to LED (light emitting diode), while meeting adequate light levels (as required by DGS Design Manual);
9. Enhancing the operation of heating, ventilation and air conditioning, and associated control systems;
10. Addressing any building envelope deficiencies;
11. Enhancing the hot-water systems, while reducing the water use and associated costs;
12. Identifying and enhancing the operational efficiency of other energy-using devices; and,
13. Identifying and fully developing cost savings strategies, such as fuel switching, demand-side management, on-site generation, utility bill auditing, utility rate changes, and distribution upgrades;

3. Offeror described how the Team will manage and minimize DGS' risk

Clear and on-going communication will be a key component of minimizing DGS risk. The communication will start during the IGA process. Through careful and thorough site investigations utilizing correctional specialists, ESG will identify all visible potential risks and make them known to DGS and all parties involved in the project. The potential risks will be discussed and together we will determine how to mitigate the risks.

Once the areas of risk are all identified a risk mitigation plan will be developed and become part of the construction process. Plan steps include:

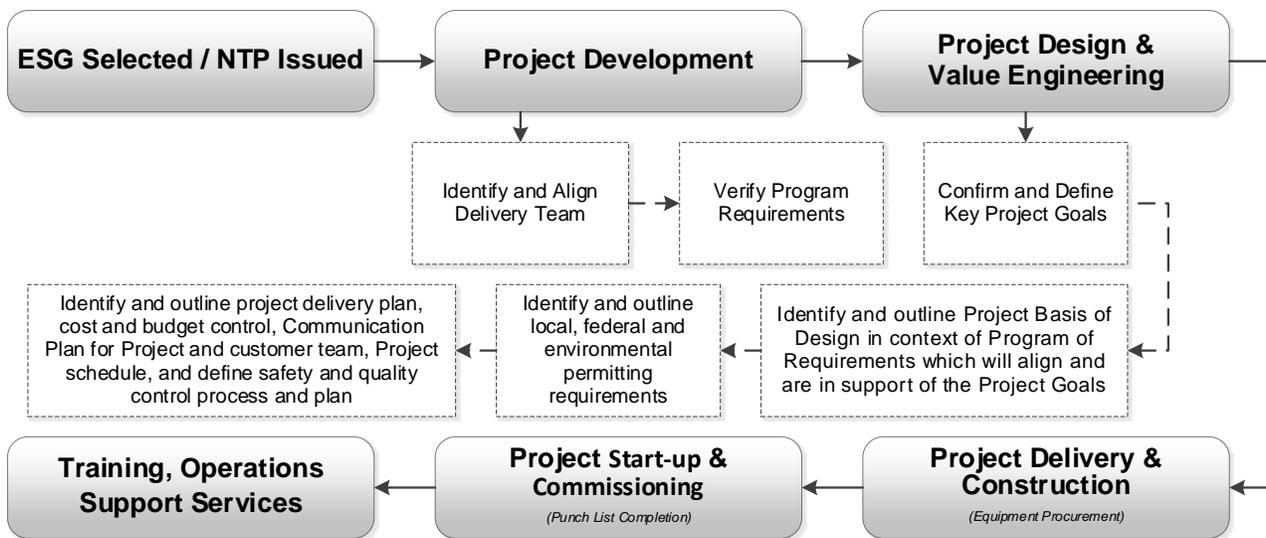
- Evaluate the risk causes, interactions (inmates, escorts, staff safety and security) and probability
- Identify the impact of the individual risks and their combined impact
- Prioritize the risk items based on their potential impact on schedule and cost
- Identify risk mitigation steps and costs

This risk mitigation methodology has proven in the past to work well on previous DOC projects. ESG believes that identifying the risks early is key to developing a plan to overcome them.

4. Offeror identified early construction packages, long lead items and phases of construction

For lighting, water conservation measures, safety, security, building envelope and other similar ECMs, ESG will provide submittals for DGS’ Energy Consultant to review and approve. Long lead items will be identified during the IGA and submittals phase, and 35% design packages will be prepared for DGS’ Energy Consultants approval in a timely manner. The construction phase begins after submittal review and approval process to allow all material and equipment to be ordered. Our basic phases of construction are list in the graphic below. The timing for each Energy Conservation Measure (ECM) shall be defined within the implementation schedule.

ESG Standard Construction Phases



ESG has an excellent track record with developing and completing project schedules in correctional facilities. We focus on both understanding how we are impacting the client’s working environment and completing tasks within the timeframe of the construction period. ESG prides itself on being flexible and innovative to mitigate issues that could potentially impact all phases of the construction and project completion.

Our typical Construction Phases for a Corrections project would generally consist of the following steps:

After the IGA acceptance by DGS and DOC as well as execution of the GESA contract, ESG will:

- Issue contracts to our partners
- ESG will order long lead time equipment
- Provide ECM 35% design specifications and drawings to the Energy Consultant
- Meet with SCI Muncy security team
- Arrange kick-off meetings with each key subcontractor
- Conduct detailed safety and security meetings with all employees and subcontractors
- Order construction trailer and necessary mobile equipment
- Designate final laydown areas with DOC and the SCI Muncy staff
- Discuss proposed final work schedule with SCI Muncy staff and security
- Determine number of daily escorts required based on schedule
- Review hazardous material log book and confirm if any abatement will be necessary
- Acquire final ECM Design documents and drawings from the Energy Consultant
- Begin the actual Energy Conservation Measures based on the agreed upon schedule
- Conduct weekly safety and progress meetings with SCI Muncy and our subcontractors
- Complete all ECM's in a timely fashion
- Begin Commissioning of all systems
- Begin detailed staff training for the SCI Muncy staff on all systems and equipment
- Develop final turnover O & M manuals for all systems and equipment
- Review standard manufacturer warranties of all installed equipment
- Turnover the project to PA DOC and confirm that all work has been implemented to their satisfaction

5. *Offeror demonstrated understanding of critical material and equipment and why they are critical, timing/lead times for acquisition and how they will be managed*

For the proposed ECMs, the critical long-lead items are special order mechanical system components, such as boilers, stack economizers, De-aerating Feed Tanks. We expect the lead times for these components to be 8-12 weeks. The mechanical system components are critical because the testing of distribution piping and controls strategies are contingent upon being able to place the large mechanical components in a timely manner. Any delay in releasing or ordering mechanical equipment would impact and extent the overall project schedule.

- Lighting, water and building envelope materials are generally available in 2 to 6 weeks.
- Remaining ECM equipment that is not seasonal will be ordered after approvals and installed based on the approved escort and implementation schedule.
- Special order equipment with long lead times (e.g. summer boiler) will be expedited in the submittal process.

Since *Energy Systems Group* has a vested interest in the complete success of this project, DGS can be assured of the following:

- Materials and equipment will be correctional grade and their selection based upon life-cycle costs rather than initial acquisition costs.
- Energy Systems Group will make every effort to standardize the products to reduce an operations and maintenance burden.

- Every product or application associated with this project will meet applicable standards, such as ASHRAE's guide for equipment efficiencies, or Illuminating Engineering Society guidelines for lighting standards.

We will leverage *our extensive buying power* along with our ability to aggregate the purchasing requirements of many of our customers. In this way, we can obtain the highest quality grade products and services that we both want, at the lowest possible price. Again, our goal will be to maximize the impact and value we provide without sacrificing the quality needed for a successful outcome.

6. Offeror demonstrated understanding of construction challenges and proposed solutions

The main challenge of the schedule is estimating duration of tasks in a Correctional environment, which includes: completing security back ground checks of all ESG employees and all subcontractor employees; the scheduling of deliveries of materials and equipment to the facility; and the manifesting of tools and equipment from outside the perimeter to inside the facility, through the Sally Port or Gate House locations on a daily basis; and scheduling of escorts with the work crews. Another challenge in the corrections environment is working within the cellblock areas while trying to minimize disruptions to the normal operations of the facility. One critical component of our project is the need to remove inmates from cells and relocate them while the toilets, sinks and lighting fixtures are replaced or updated. As a possible remedy, it may be necessary for housing units to hold some cells vacant for inmate relocation while the work is being completed to their cells. Another critical component is the need to ensure that the facility maintains heat during the heating season. Our plan will include boiler upgrades to be completed during the summer when the building heat is not required.

Our solution is to work closely with the facility security and maintenance personnel to understand the operational procedures for the individual buildings throughout the prison facility and then develop an accurate schedule to fully abide by the security requirements, tool control, manifesting of tools, equipment and personal inside the facilities.

During the IGA phase, the ESG Delivery team shall meet with SCI Muncy staff to prepare a preliminary implementation schedule for the project. The development of this schedule will take into account SCI Muncy priorities and goals for this energy savings project. DOC and ESG shall review the construction challenges and logistics with each individual ECM, to further understand and define the optimum timeline for starting, performing and completing energy improvement work during the course of the project. The objective of this pre-installation administration process, is to allow DOC and ESG to prepare a base line working construction plan which will be redefined and updated with as the development of the IGA. ESG will also utilize the preliminary implementation schedule with to assist subcontractors with addressing or confirming procurement and installation requirements associated with this project.

7. Offeror thoroughly described a construction plan, including site operations, logistics, lay down area, including a detailed discussion on how the Offeror will accomplish the work within a fully occupied environment.

ESG's delivery team shall hold weekly progress meetings at the ESG Field Office with DOC and subcontractors. Meeting minutes and three week look ahead schedule will be prepared for every progress meeting. These meetings will be dedicated to reviewing and addressing all coordination and production issues, escort allocation for each ECM and action items with current work schedule and preparing for future work. In addition, these meetings will facilitate DGS and DOC monthly on site administrative procedures, L&I inspections and future customer training and O&M Manual review meetings.



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ESG will provide onsite supervision to oversee and manage the daily project coordination and assure weekly scheduled implementation work is performed per the agreements and time-line commitments summarized within the project progress meeting minutes and look ahead schedules. ESG's supervision will continually monitor and manage the ECM work-in-progress to coincide with the required security procedures and with assuring minimal disruption to SCI Muncy facility.

ESG shall prepare to utilize exterior fenced in staging areas, such as the Powerhouse fenced-in yard, to store the majority of the equipment and materials required for this project. Materials will be transported each work week and shall be stored interior location within a designated secured area. Daily cleanup and disposal procedures will be performed by all subcontractors.

ESG utilizes before and after photographs of occupied spaces to document conditions pre and post work. Great care is taken to leave occupied spaces in exactly the same condition as before the work took place. ESG anticipates the very limited amount of inmate traffic rerouting or program disruption needs for our proposed project scope of work. Final determination with obtaining secured access with performing ECM work will be addressed during the IGA development timeline.

8. *Offeror discussed Project Safety Plan, Management and Monitoring*

ESG's safety management program is supported by corporate management, administered by the company's project management team, and monitored by ESG's Corporate Safety Department (Corporate Safety). Safety will be accomplished by providing a safe work environment for our employees, subcontractors, and our customer's employees, inmates and visitors; incorporating safety into the planning, construction, and maintenance of the project site and equipment; and complying with applicable rules, policies, procedures and regulations relating to Federal, State, Customer policies and ESG requirements.

Corporate Safety is authorized to provide training in 29 CFR 1926 OSHA Construction Industry Regulations and 29 CFR 1910 OSHA General Industry Regulations to ESG's employees. Project team members are required to obtain at least a 30-hour OSHA outreach training course every 3-5 years, and participate in applicable job related safety training. Corporate Safety oversees the Corporate Safety Program and Policies and disseminates pertinent safety information to the Project Management team to keep focus on safety. Corporate Safety visits project sites periodically to provide guidance to project teams and subcontractors relative to potential hazards, education and training, and compliance with the applicable 29 CFR OSHA industry regulation. Corporate Safety communicates the applicable State Occupational and Health Plans and the requirements for each compliance with the federal requirements provided in 29 CFR OSHA industry regulations.

ESG develops project specific safety plans based upon the state and federal regulations, the customers policies and procedures, along with their rules and regulations, ESG's corporate safety program and policies, as well as, our Subcontractor Safety information and input from our project team. ESG's project team is responsible for the safety on the project by actively promoting and creating the proper job safety atmosphere; managing and coordinating the project along with the Subcontractors selected, during all phases of the project and in accordance with the project specific safety plan. The Project Team may direct a work stoppage for unsafe operations or an imminent danger to any Subcontractor or ESG employee on the project site; and may direct the removal of any individual or equipment not in compliance with federal, state, local, customer, ESG safety rules and regulations and the project specific safety plan.

Prior to project commencement, Corporate Safety reviews Subcontractor Safety information and communicates the findings to the project team. The information reviewed includes but is not limited to Subcontractor Worker’s Compensation Experience Modification Rate, OSHA Recordable Incident Rate, OSHA activity history, On-site Safety Meetings and their Safety Program. Listed in the table below are the ESG most recent Experience Modification Rates:

ESG Safety Record

Year	2017	2016	2015	2014
EMR Rate	0.66	0.66	0.66	0.67
Incident(s)	2	0	1	1
Lost Time Incident(s)	0	0	0	0
RIR Rate	0.61	0	0.37	0.42

Experience Modification Rating (EMR) compares your workers’ compensation claims experience to other companies similar in size who operate in the same industry. Most employers who have annual premiums in excess of \$3,000 receive an Experience Modification Rate. The industry average, Experience Mod is a 1.0. A rate better than industry average is below 1.0. ESG’s rate is consistently and significantly better than the industry average.

9. Offeror discussed an effective QA/QC plan

The ESG Project Manager will have the following responsibilities with respect to QA/QC:

- Ensure work is performed in compliance with contract requirements, code requirements, savings plan, and construction industry standards.
- Ensure that work is performed in accordance with facility, DOC, DGS, and ESG standards.
- Manage and coordinate QC activities, submittals, tests, samples, as-builts, and results.
- Ensure that periodic (weekly or bi-weekly) project briefings are held to discuss safety, security, quality, progress, and performance.
- Ensure that drawings are kept up to date with the proper revisions, and provided to the contractor.
- Inspect equipment to be installed and reject equipment if determined to be non-compliant with specifications or damaged during transportation or storage.
- Hold and document QA/QC Pre-Construction meetings as well as QA/QC Initial meetings with both DOC, ESG and subcontractors.
- Perform site inspections to confirm compliance to submittals and drawings and ensure quality. If a discrepancies are found a deficiency report will be filled out to track the issue to resolution.
- Coordinate commissioning activities among ESG engineering team, DOC, DGS, and Subcontractors involved.
- Investigate and resolve warranty problems and indicate the action taken on warranty reports.

10. Offeror demonstrated understanding of the close out process for training of personnel, manuals, Occupancy Permits, commissioning and final closeout

For the proposed scope of work, the major objectives for implementing a closeout and commissioning process are to:

- Ensure total system operationally and functionality
- Optimize energy use in line with the ECM intent
- Lower operation and maintenance costs
- Extend the life of assets
- Reduce asset life-cycle costs
- Improve indoor comfort

Commissioning takes place in several phases, ECM development, design, construction, acceptance and post acceptance. Due to the page limitations of this RFP response, we are providing a brief overview of the commissioning process, however, a detailed, system-specific commission plan will be included in the IGA and the design phase. Commissioning is a process of documenting, adjusting, testing, verifying, and training that improves building and equipment operation. It is performed specifically to ensure that the completed facility improvements operate in accordance with the documented project requirements. ESG's commissioning steps include Operational Acceptance Testing (OAT) and Functional Acceptance Testing (FAT). The primary goal of OAT and FAT is to optimize equipment operations and maximize the benefits without comprising American Correctional Accreditations and facility security.

ESG proposes training and monitoring as an integral part of this GESA project. We feel that an investment in continued technical training of the existing staff with respect to the utilization of the proposed systems, in combination with continued systems monitoring, will contribute to the proficiency of the staff and provide the level of efficiencies designed in our solutions. Depending on the complexity of the ECM, training can range from a few minutes in the field to classroom sessions. The training program subject matter will include information customized exactly for what it takes to perform the required maintenance and operations functions, what skill levels are required, and what specialized tools and/or instrumentation will be necessary. All training will be documented with a sign-off form. Technical support and flexibility are key ingredients for ESG's support services plan. Based on our assessment of the facility, ESG will provide maintenance and operational training for the proposed building automation systems, HVAC equipment, computerized water conservation measures and other identified equipment installations. ESG will design and perform any training programs (customized and based on the expertise level of the DOC staff) required to ensure proper maintenance of the installed equipment.

Providing updated O&M Manuals is an important element of the project's success. Energy Systems Group will collect copies of applicable operations and maintenance material currently available in each building, including mechanical, electrical and architectural drawings, as well as technical manuals. Associated drawings and technical manuals will be checked for accuracy, and corrected as necessary. Existing O&M material will then be combined with information for all new systems to create a master O&M manual. For the proposed scope of work, this will contain a summary of all equipment and systems within the facility, and will reference where to find additional information (if required) from the drawings and technical manuals.

This manual will be used to help the on-site staff maintain equipment operation at the level that will ensure optimal energy efficiency. The O&M manuals will be used during staff training sessions to address any questions and to reinforce their importance. The O&M manuals will contain all pertinent warranty information which will also be addressed at the time of ECM training.

The final step in this phase is the execution of the Certificate of Completion. This is the statement of agreement that all work contracted for this project has been performed, and triggers the savings guarantee and financial payment. The Project Manager uses a combination of project scheduling software, custom spreadsheets, site specific reports, web technology, and regular owner meetings to keep you up-to-date on all aspects of the project.

2-5.3 RFQ Project Schedule

(Suggested number of sheets/pages: 2 sheets, plus a maximum of 2 single-sided 11x17 sheets).

This RFQ Project Schedule shall not be construed as the Final CPM Schedule. Do Not Submit a Full and Complete detailed CPM Schedule in the Technical Submission. DGS does not accept the logic or durations of the activities in this RFQ Project Schedule. The purpose of this RFQ Project Schedule is only to allow DGS to evaluate and score the Offeror's scheduling ability. After the GESA Contract is executed, the successful GESA Contractor shall submit a full and complete project schedule per the requirements of the General Conditions and Project Administrative Procedures.

A. *The Evaluation Committee will consider the degree to which the Quote addresses or discusses the following:*

- 1. A narrative for the schedule that discusses the challenges of the schedule and proposed solutions. Address critical aspects of the schedule, associated risks and the Team process to ensure achievement of critical milestone dates.*
- 2. Submit an executive level graphic schedule commencing at Notice of Selection, showing estimated overall project duration and milestone dates. At a minimum, milestone dates should include: commencement and completion of the IGA and submission of the resulting Report, full execution of the GESA Contract (a minimum of 60 calendar days), submission and approval of all required permits from every entity having jurisdiction, procurement of all major equipment, commencement of on-site work (at least 10 but no more than 20 calendar days from execution of contract), final inspection of all construction, commissioning of the project and training of Funding Agency personnel.*
- 3. The ability to coordinate project construction with local utilities, subcontractors, equipment suppliers and Funding Agency facility personnel.*

Critical Aspects of Schedule and Associated Risks

The ESG project delivery team's approach and methodology is to manage the project schedule by defining critical milestone dates with accurate implementation ECM durations. ESG's extensive experience and teamwork philosophy assures all material and critical equipment lead times are confirmed with determining an ECM implementation start date with the qualified duration and projected completion timeline. In addition, ESG understands the value with involving the client with the initial development and final schedule orientation, to assure their priorities and or critical improvement recommendations are prioritized within the Master Site Implementation Schedule.

ESG has an excellent record of accomplishment with managing and maintaining project schedules during the Development and Delivery phases of the project. ESG utilizes their "Look Ahead Schedule" format to organize and communicate the status of each ECM.



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Look-ahead schedules shall be distributed and reviewed during the bi-weekly progress meeting; main purpose of the look ahead is to assist with summarizing and communicating all completed work, work currently in progress and forecasted work or ECM completion timelines associated with the project. In addition, ESG will schedule specific meeting to address a client request or coordination issue with a specific ECM as required.

The Master Site Implementation Schedule shall be updated monthly and included within ESG's Executive Summary Report.

The ESG master schedule development process provides the following advantages for a team approach Energy Savings Project:

- Provides clear and definite milestone timelines and or completion dates required by the client.
- Promotes partnership with the client during the development and implementation phases of the project.
- Insures careful planning, since we are affecting the environment of employees and the public. ESG shall advise subcontractors to work within pre-determined client timelines or during off-hour shift work, to assure a specific work or shut down is scheduled to minimizing disruptions with daily operations are included within the Master Site Implementation Plan.
- Remains available to address future client requirements and will be updated monthly to document completed ECMs during the entire Delivery Phase duration. At times we encounter unexpected issues: It may be from the client requests that change the scope, or building use that has changed since the completion of the IGA, or future plans for the building have changed causing an ECM to be added and or removal from the project. In every case, ESG shall assist the client and incorporate the ECM change in scope of work with minimal impact or delay with the overall schedule.

The associated risks relative to this project schedule would be delayed shipment of materials by suppliers and scope creep caused by unexpected additions to the project scope. ESG has procedures in place to mitigate both associated risks. We spend a great deal of time during the IGA process coordinating with various suppliers and investigating each scope of work. A Sample Project Schedule is included within this section.

Construction Coordination w/Utilities and Subs, Suppliers, DGS

At ESG, we pride ourselves on our ability to manage complex projects and to adhere to project schedules and milestones. Through a collaborative effort, ESG publishes a project schedule and manages the project following monthly progress updates. Over the course of construction, ESG monthly schedule updates shall record progress and duration adjustments to current ECMs in progress through to substantial completion, close out and customer training. Prior to construction, we will map out a plan and mobilize the project team as well as all approved subcontractors and facility personnel to implement project operating procedures, safety training, identify required permits, submittals and utility coordination.

Communication is critical to the success of all projects, and we will utilize both formal and informal contacts to ensure we are continually apprised of your views. We will first develop a contact list of primary project participants. All reports will then be submitted based on this list. ESG will hold regular job progress meetings with all subcontractors, consultants, DGS and facility representatives. This will allow all interested parties to monitor our installation and performance. Our project management process is structured to maintain close control of all tasks involved in implementation. At the same time, the continuous involvement of facility personnel will ensure that the impact on day-to-day operations is minimized. Our dedicated local project manager and on-site construction foreman will control the pace and responsibilities of all subcontractors and suppliers.

The ESG Team will be responsible for interfacing with all parties (local utilities providers, suppliers, consultants and subcontractors) associated with or impacted by this project. During the Investment Grade Audit (IGA) phase, ESG will work with DGS closely to review utility regulations, permits or approval requirements with selected ECMs and shall include any pre-construction procurement timelines within Master Site Implementation Plan. As mentioned previously during construction, ESG shall administrate bimonthly progress meetings with the overall project team, (DGS, ESG, Engineer of Record, Utilities Representatives and Subcontractors) to manage short and long term scheduling and coordination issues as they arise, review current ECM progress with updated look ahead schedules. Action items and agreements arising from progress meetings will be documented within ESG meeting minute format; look-ahead schedule section will include with each meeting minute issued.

ESG will devote a qualified construction management team to be on-site during all phases of implementation to oversee and ensure seamless project execution. All aspects of the project are directly overseen through ESG on-site field office. It is our policy to work in concert with our customers to obtain preferred supplier, vendor, and contractor resources to assemble the most appropriate team. ESG's prequalification and acceptance criteria in our final selection protocol to assure recommended subcontractors and suppliers conform our high standards of performance, safety, reliability and providing customer satisfaction.



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SCI Muncy - Sample Project Schedule

ID	ECM No.	Task Name	Duration	Start	Finish	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November						
0		GESA 2017-2 SCI Muncy Preliminary Schedule	445d	2/21/2018	11/5/2019	[Red bar spanning all months]																											
1		1 RFQ Phase	93d	2/21/2018	6/29/2018	[Black bar from Feb to Jun]																											
2		1.1 Notice to Proposers and RFQ Issued	1d	2/21/2018	2/21/2018	[Blue dot at Feb 21]																											
3		1.2 Pre Proposal Conference and Site Visit	1d	3/1/2018	3/1/2018	[Blue dot at Mar 1]																											
4		1.3 Proposers Deadline to Submit Questions	40d	3/2/2018	4/26/2018	[Blue bar from Mar 2 to Apr 26]																											
5		1.4 DGS Deadline to Issues Bulletins	42d	3/2/2018	4/30/2018	[Blue bar from Mar 2 to Apr 30]																											
6		1.5 Proposal Submission Deadline	1d	5/3/2018	5/3/2018	[Blue dot at May 3]																											
7		1.6 DGS Interviews	12d	5/4/2018	5/21/2018	[Blue bar from May 4 to May 21]																											
8		1.7 DGS Selects ESG	29d	5/22/2018	6/29/2018	[Blue bar from May 22 to Jun 29]																											
9		2 Commencement and Completion of IGA Submission	81d	7/16/2018	11/5/2018	[Green bar from Jul 16 to Nov 5]																											
10		2.1 DGS Issues Notice to Proceed to ESG	1d	7/16/2018	7/16/2018	[Blue dot at Jul 16]																											
11		2.2 ESG Develops and Submits Investment Grade Audit	58d	7/18/2018	10/5/2018	[Teal bar from Jul 18 to Oct 5]																											
12		2.3 DGS Approval of Investment Grade Audit	14d	10/8/2018	10/25/2018	[Red bar from Oct 8 to Oct 25]																											
13		2.4 DGS Awards ESG with Full Execution of GESA Contract	7d	10/26/2018	11/5/2018	[Red bar from Oct 26 to Nov 5]																											
14		3 Design Development Submission	33d	11/6/2018	12/20/2018	[Blue bar from Nov 6 to Dec 20]																											
15		3.1 Prepare and Submission of Design Documents	23d	11/6/2018	12/6/2018	[Red bar from Nov 6 to Dec 6]																											
16		3.2 DGS Review and Approval of Documents	10d	12/7/2018	12/20/2018	[Red bar from Dec 7 to Dec 20]																											
17		3.3 Submission and Approval of Required Permits	20d	11/6/2018	12/3/2018	[Blue bar from Nov 6 to Dec 3]																											
18		4 Procurement and Implementation	97d	12/21/2018	5/8/2019	[Blue bar from Dec 21 to May 8]																											
19		4.1 Procurement and Release of LED Lighting Fixtures	10d	12/21/2018	1/3/2019	[Blue bar from Dec 21 to Jan 3]																											
20		4.2 Procurement and Release of Long Lead Time Equipment	10d	12/21/2018	1/3/2019	[Blue bar from Dec 21 to Jan 3]																											
21		4.3 Procurement and Release of Equipment and Material Orders	31d	12/21/2018	2/1/2019	[Red bar from Dec 21 to Feb 1]																											
22		4.4 Kick off & Progress Meetings for Implementation Phase	1d	12/21/2018	12/21/2018	[Blue dot at Dec 21]																											
23		4.5 All Materials and Equipment Received for Implementation	66d	2/4/2019	5/6/2019	[Red bar from Feb 4 to May 6]																											
24		5 Commencement of Onsite Work	169d	3/6/2019	10/28/2019	[Black bar from Mar 6 to Oct 28]																											
25		5.1 Electrical Measures	160d	3/6/2019	10/15/2019	[Purple bar from Mar 6 to Oct 15]																											
26		5.1.1 Mobilization and Implementation	160d	3/6/2019	10/15/2019	[Blue bar from Mar 6 to Oct 15]																											
27		5.1.1.1 Facility Lighting Upgrade - Interior	160d	3/6/2019	10/15/2019	[Red bar from Mar 6 to Oct 15]																											
28		5.1.1.2 Facility Lighting Upgrade - Exterior	160d	3/6/2019	10/15/2019	[Red bar from Mar 6 to Oct 15]																											



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SCI Muncy - Sample Project Schedule						February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November
ID	ECM No.	Task Name	Duration	Start	Finish																						
29		5.1.1.3 Facility Lighting - Site Lighting	45d	5/8/2019	7/9/2019																						
30		5.1.1.4 Lighting Sensors	38d	7/10/2019	8/30/2019																						
31		5.1.1.5 Solar Panel Field	120d	3/18/2019	8/30/2019																						
32		5.2 Facility Mechanical / Thermal Building Systems	125d	5/7/2019	10/28/2019																						
33		5.2.1 Mobilization and Implementation	125d	5/7/2019	10/28/2019																						
34		5.2.1.1 Steam Trap Replacements	120d	5/7/2019	10/21/2019																						
35		5.2.1.2 Replace Window AC Units with Split AC Systems at (Admini Building)	120d	5/7/2019	10/21/2019																						
36		5.2.1.3 Exhaust Hood Controls at Dietary Building	30d	5/7/2019	6/17/2019																						
37		5.2.1.4 Replace Refrigeration Compressors with High Efficiency - Non HCFC Units	30d	5/7/2019	6/17/2019																						
38		5.2.1.5 Convert Housing Unit (B) to Natural Gas.	120d	5/7/2019	10/21/2019																						
39		5.2.1.6 Replace Steam and Condensate Lines of the West Loop	120d	5/7/2019	10/21/2019																						
40		5.2.1.7 Energy Management System - (EMS) Upgrade Implementation	120d	5/7/2019	10/21/2019																						
41		5.2.1.8 Replacement of Windows within Buildings: A, C, E, G & H	125d	5/7/2019	10/28/2019																						
42		5.2.1.8.1 Building A	25d	5/7/2019	6/10/2019																						
43		5.2.1.8.2 Building C	25d	6/11/2019	7/15/2019																						
44		5.2.1.8.3 Building E	25d	7/16/2019	8/19/2019																						
45		5.2.1.8.4 Building G	25d	8/20/2019	9/23/2019																						
46		5.2.1.8.5 Building H	25d	9/24/2019	10/28/2019																						
47		5.3 ESCO Recommended ECMs	125d	5/7/2019	10/28/2019																						
48		5.3.1 Mobilization and Implementation	125d	5/7/2019	10/28/2019																						
49		5.3.1.1 Water Conservation and Controls	125d	5/7/2019	10/28/2019																						
50		5.3.1.2 Walk - in Freezer & Cooler Controls	30d	5/7/2019	6/17/2019																						
51		6 Final Inspection of All Construction	84d	7/10/2019	11/4/2019																						
52		6.1 Punch list	30d	7/10/2019	8/20/2019																						
53		6.2 Commissioning	30d	7/10/2019	8/20/2019																						
54		6.3 Customer Training	30d	8/21/2019	10/1/2019																						
55		6.4 As Built and O&M Manuals	24d	10/2/2019	11/4/2019																						
56		7 Final Completion of all ECMs	1d	11/5/2019	11/5/2019																						
57		7.1 Final Completion of all ECMs	1d	11/5/2019	11/5/2019																						

2-5.4 Qualifications Forms

(See specific suggested sheets/pages below. Note also that “Entity’s Resource Availability” shall be as of the date of the Technical Submission)

A *The Evaluation Committee will consider the degree to which the Quote provides experienced and qualified personnel capable of designing and implementing the scope of work on the project, including training Funding Agency staff once the work is complete.*

GESA Contractor (Suggested number of sheets/pages: 10 sheets, or if GESA Contractor is a Joint Venture, no more than 5 sheets per joint partner. Also, one single-sided 11x17 sheet for organization chart plus 1 sheet per person.)

1. *Provide clear and concise information that will demonstrate the following qualifications:*

a. *Management Team Individual Qualifications (6 person limit)*

(1).Describe project responsibilities, time with firm, experience with GESA projects, educational or technical training, LEED accredited projects, and any other information relevant to the evaluation of the individual.

b. *Offeror’s Financial Ability to Provide Guarantee*

(1).Offeror shall provide: most recent available independently audited financial statements for private corporations and/or Form 10-K on file with the Securities and Exchange Commission (SEC); Annual Shareholder's report for public companies, as applicable, to demonstrate their financial ability to provide guarantees of energy savings of at least \$5,000,000 (no third party insurance will be permitted); and a history of at least five (5) other project guarantees and the dollar amount of those projects. Offeror should not include any ECM or cost information on the Project in this portion of the Technical Submission; if ECMs or costs are included, the Quote will be rejected, and there will be no opportunity to correct the Quote.

c. *Offeror’s Resource Availability (Capacity)*

(1).As defined by the following equation, reported in US Dollars: (average of the last 3 years gross sales) minus (the average of next 3 years committed backlog). Committed backlog is defined as all committed contract balances for the next 3 years as of the date of the Technical Submission.

(2).If the Offeror is a legally combined entity, the formula shall represent the pro-rata share of each member per the legal agreement.



**Response to Request for Quotes for a Guaranteed Energy Savings Project at
SCI Muncy, Project No. GESA 2017-2**

*Example: If A and B are a Joint Venture, A is 60% and B is 40%, then the reported availability should be 0.6 * A's availability + 0.4 * B's availability.*

d. Offeror's Statement of Readiness and Commitment of Resources

(1). Provide a written statement confirming the persons identified in this RFQ are available and will be committed to the Project for the time period(s) referenced in the above RFQ Project Schedule, and that the Resource Availability reported above will be committed to the Project, as referenced in the RFQ Project Schedule and Work Plan.

e. Offeror's Notification of Default and Debarment.

(1). Provide a listing including owner, project, date, and explanation of any contract default or debarment within the last 5 years.

2-5.4.A.1 GESA Contractor Qualification Forms

Entity's experience with GESA projects

Energy Systems Group has implemented over 475 Guaranteed Energy Savings Projects totaling over 2.5 billion dollars since 1994. Our proposed team for SCI Muncy has worked on numerous Guaranteed Energy Savings Agreement projects and has over 308 combined years of experience. Many of those projects are highlighted on the team's individual qualifications sheets. Energy Systems Group is quite knowledgeable with the PA GESA process. In Pennsylvania our proposed team has recently completed the \$20M SCI Dallas GESA, which was determined by PA DOC to be a very successful project. The SCI Dallas project took place within a Pennsylvania Correctional Facility and our team was praised by the SCI Dallas staff for implementing a successful, safe, project in adherence with the security guidelines established by the Facility. ESG has also been selected to implement the PA Department of Conservation and Natural Resources (DCNR) Western Region project encompassing more than 20 DCNR locations throughout Western Pennsylvania. **ESG has one of the best records for meeting or exceeding GESA project savings projections out of all the Energy Service companies operating within Pennsylvania.**

a. Management Team Individual Qualifications

Energy Systems Group's management team's individual qualifications are included on the following pages for your review. Listed below are the number of years of experience developing and implementing GESA type projects for our core team assigned to SCI Muncy.

Team Member	Years of Experience
Tony Prelec	22
Steve Richmond	31
Mahesh Bala, Ph.D.	31
Scott Gracely	29
Dan Khuu	25
Jerry Elmlblad	34

Tony Prelec

Account Executive



ESG Tenure

6 years

Years of Experience

22 years

Education

Parkway Technical School

Pennsylvania State University

Business Administration – Darden
Graduate School of Business

Indiana University (1999-2000)

University of Southern Indiana (1982-
1984)

Special Courses Attended

- Conceptual Selling
- Miller Heiman Strategic Selling
- Certified Trainer Program
- Influential Selling
- Energy and Environmental Selling
- SPIN Selling
- Siemens Apogee Training
- Profit Specialist Training

Contact

tprelec@energysystemsgroup.com

Tony joined Energy Systems Group (ESG) on March 4, 2013, as an Account Executive. As such, Tony oversees all phases of the Performance Contracting process and focuses the team to ensure customer satisfaction throughout the project development, implementation, and measurement and verification.

He is responsible for designing energy management programs, asset management programs, and guaranteed energy savings contracts for municipal, county, and state government.

Tony leads the project engineers and project managers in the developing project solutions, cost and energy savings, and a project plan and schedule.

Employment History

PEPCO Energy Services – Two (2) Years – Responsible for developing and securing Guaranteed Energy Savings and Performance Contracts for K-12, Higher Education, Health Care and Local Government vertical markets throughout the State of Pennsylvania.

Siemens Industry, Inc. – Building Technologies Group – Three (3) Years - Responsible for developing and securing Guaranteed Energy Savings, Performance Contracts for the K-12, High Education, and Local Government vertical markets.

Past Projects within the Past Six (6) Years

Conewago Valley School District	Educational	\$430,690
Elizabethtown College, PA	Educational	\$2,293,713
Lampeter Strasburg School District	Educational	\$1,634,286
Slippery Rock Area School District	Educational	\$2,404,967
Sun Votech	Educational	\$1,634,286
Carlisle Borough, PA	Municipal	\$754,288
SCI Dallas, Dallas PA	Correctional	\$20,300,000
City of Middletown, NY	Municipal	\$12,500,000

Gerald Emblad

Corrections Specialist



Jerry is an Account Executive that specializes in Corrections, DOC and DRC for Energy Systems Group.

Roles & Responsibility

Jerry administers and manages performance based contracts. He works on every stage of a project, from the preliminary proposal to the completion of the project. He prepares and negotiates orders, develops the initial scope of work, creates contracts, prepares documents, and writes contract letters for prospective clients.

Jerry is also responsible for the development and growth of ESG's Correctional Energy Business. He assists Regional Directors and Account Executives with Correctional Energy Business account development and customer satisfaction.

Experience & Qualifications

Jerry has over 34 years of experience in energy-related professions. He has developed and administered energy reduction methods for industrial, commercial, and residential buildings. Before joining ESG, Jerry held the position of Energy Programs Coordinator for the Michigan Department of Corrections, where he provided major energy reductions projects for their 952 buildings with a budget of \$54 million. He has also worked for the State of Michigan's All-Agency Energy Committee and for the State's Energy Performance Contracts Committee as an Energy Performance Contract Compliance Inspector and as an Energy Use Reduction coordinator. He is also a member of the 2009 Michigan Boiler Rules Committee for the national Boiler Rules Code.

Jerry regularly presents at national energy conferences and at Michigan Physical Plant conferences, where he covers a wide range of energy topics. He has advised private companies, governments, and individuals interested in the purchase, maintenance and operations of large scale buildings. He's also assisted them with energy savings devices, operational techniques, and energy performance contracts.

Jerry has a wealth of expertise in many areas of building sciences and a strong background working in the mechanical, structural, and energy fields. He was one of the founding members of Michigan's natural gas bulk purchasing consortium. He's worked on a variety of projects, including ones that incorporated photovoltaic, wind, solar, lighting, electrical, water/sewer, and boiler energy technologies.

Recent Correctional Projects

- State of Michigan DOC
- State of Ohio DRC
- State of Pennsylvania DOC
- State of Wyoming DOC

Publications

Featured in four nationally publicized magazines pertaining to innovative energy strategies and the MDOC energy reductions measures (*Business Excellence Magazine; Corrections Forum; Correctional News; and American Correctional Association*)

Awards

- 2006 Michigan Department of Corrections Professional Excellence Award
- 2009 American Correctional Association Best in Business Award for Energy
- 2009 Michigan's Governors Energy Award for the Department of Corrections

Contact

jemblad@energysystemsgroup.com

Steve Richmond

Project Delivery Manager



Steve joined Energy Systems Group (ESG) in January, 2015 as the Delivery Operations Manager for the Northeast Region. He manages, directs, coordinates and mentors the project management group to ensure that project goals are being met timely and on budget from conceptual design to customer acceptance. Steve manages labor, material, project modifications, estimate reviews, scope reviews, contractors and suppliers for proposals, and works with the engineering group to develop changes to ensure financial achievement goals. Steve establishes staffing needs for the construction group as required to meet business plan; arrange for recruitment or assignment of construction personnel; ensure smooth transition between engineering and project manager. He also provides guidance and advice in the selection of the subcontractors and vendors to deliver the project per our requirements and standards. Steve maintains technical relationships with subcontractors, vendors and customers within the territory to ensure consistent quality installations of products. Steve also establishes and coordinates operational procedures and processes related to project management, risk management & reviews, customer satisfaction, and the financial responsibilities of the projects ensuring smooth communications and transitions between the customer, sales and engineering.

ESG Tenure

3-years

Years of Experience

30-years

Education

Bachelors Degree in Industrial Technology with a Specialization in Mechanical Contracting – Kean University

Leadership and Professional Affiliations

Association of Energy Engineers (AEE)
 Certified Manager, (CEM)
 LEED – Green Associate Certification
 OSHA 20 for Construction Industry

Contact

srichmond@energysystemsgroup.com

Employment History

Johnson Controls – Fourteen (14) Years - Managed the profitable execution of Performance Contracting and Solutions Major Retrofit projects. Ensured that all assigned projects were completed accurately, on-time, within budget and scope of the contract. Maintained profitability goals and positive cash flow. Prepared and delivered clear performance expectations, performance reviews and development plans for direct reports.

Honeywell – Five (5) Years - Responsibilities included project development and estimating, sales assistance, planning, implementation, closeout and customer satisfaction. Experience in food processing, hospitals, office buildings, pharmaceutical, education (elementary, secondary and higher education), hotels, telecommunications, automotive, co-generation and local, county and state government.

Past Projects within the Past Six (6) Years

Elk Lake School District, PA	Educational	\$10,800,000
University of Maryland	Educational	\$20,000,000
Galludet University, DC	Educational	\$12,000,000
RSU—74 (High School in Maine)	Educational	\$ 3,000,000
Port Authority of NY & NJ	Municipal	\$ 6,000,000
West Virginia DOC	Corrections	\$18,000,000
State Correctional Institute—Dallas	Corrections	\$20,000,000
Aberdeen Proving Grounds 1thru 6	Educational	\$53,000,000
Wernersville State Hospital, PA	Municipal	\$ 9,200,000
Virginia DOC	Corrections	\$52,000,000
Beecher Road Elementary School	Educational	\$12,000,000
Howard County, MD	Municipal	\$13,600,000
Mercer County, WV	Municipal	\$ 9,000,000
Ocean City, MD	Municipal	\$ 4,500,000
Delaware State University	Educational	\$11,200,000

Mahesh Bala, Ph.D.

Engineering Manager



Mahesh joined Energy Systems Group (ESG) on May 21, 2007. As the Engineering Manager, Mahesh manages the audit process, develops scope of work for projects, estimates project costs, provides technical assistance during construction, and reviews mechanical design. He has supervisory role over audits and engineering and oversees all phases of the Energy Performance Contracting (EPC) process and focuses the team to ensure customer satisfaction throughout the project development, implementation, and measurement and verification.

Dr. Bala is recognized as one of the most innovative developers in the industry. He has successfully developed and managed over \$500 million in energy performance contacting projects.

As a member of professional organizations such as ASHRAE and AEE, Dr. Bala has been published in peer reviewed journals, for conferences, including articles that have appeared in trade publications.

ESG Tenure

11 years

Years of Experience

30 years

Education

Bachelor's degree in Mechanical Engineering - Regional Engineering College
Master's degree in Mechanical Engineering – University of Alabama
Ph. D Mechanical Engineering – Virginia Tech

Certifications

Certified Energy Manager
LEED Certification

Engineering License (P.E.)

Maryland, DC, Virginia, Delaware, New York, New Jersey, Pennsylvania, New Hampshire, Vermont, Maine, Connecticut, Massachusetts, and Rhode Island

Contact

mbala@energysystemsgroup.com

Past Projects within the Past Six (6) Years (Cumulative)

Educational	\$30,200,000
State Government	\$13,300,000
Local Municipalities	\$26,100,000
Water/Water Filtration Plants	\$ 6,500,000
Corrections	\$20,000,000
Hospitals	\$ 3,000,000

Scott Gracely

Senior Project Manager



Scott joined Energy Systems Group (ESG) in April 2015 as Project Manager with ESG with responsibility for managing the delivery phase of the SCI Dallas project. He is responsible for implementing performance contracts for educational, government, commercial, and industrial facilities. Scott assists in the design of mechanical systems and calculation of energy savings and Responsible for estimating equipment and installation cost. Scott maintains knowledge of the latest and highest efficiency equipment and control strategies and develops creative approaches through project design to gain maximum energy and operational savings for HVAC systems, electrical systems, pneumatics, and industrial process systems via performance contracting. While at SCI Dallas Scott was the main point of contact with Department of General Services and Department of Corrections for the Commonwealth of Pennsylvania.

Employment History

Johnson Controls - Seven (7) Years - Solutions Construction Manager - Responsible for all onsite coordination and implementation of Facility Improvement Measures, liaison with customers and subcontractors for administering Energy Service PC Projects, provide administration and documentation support with sustaining all project milestones

IMC Construction Company - Sixteen (16) Years - Senior Project Manager – Responsible for the administration Administered Design Guild, GMP, Lump Sum Construction Management Projects completed successful projects with multiple vertical markets/industries.

Norwood Industrial Construction Company - Two (2) Years - Project Manager/ Onsite Coordinator – Analyzed and evaluated all project data and specifications; organized and disseminated documentation; conducted daily inspections to ensure compliance with schedule milestone dates and quality control. Designed automated systems for tracking project submission documentation. Maintained supporting liaison project responsibilities with Client Representatives, A/E Professionals, and Subcontractor Personnel.

Past Projects within the Past Six (6) Years

Whitehall Coplay ASD Phase III	Educational	\$ 8,000,000
Stroudsburg ASD	Educational	\$ 5,000,000
Greenwich ASD	Educational	\$ 1,000,000
University of Maryland	Educational	\$20,000,000
City of Baltimore	Municipal	\$ 7,000,000
SCI Dallas	Correctional	\$20,300,000
PSHMC Phase I	Hospital	\$ 7,000,000
PSHMC Phase II	Hospital	\$ 3,000,000
Solar Park	Solar	\$64,000,000
Aberdeen Proving Ground IV	Military	\$53,000,000

ESG Tenure

3 years

Years of Experience

28 years

Education

Bachelors in Geology – California University of Pennsylvania, PA

Project Management (completed coursework) – Penn State University

Certifications

LEED Certification

Contact

sgracely@energysystemsgroup.com

Dan Khuu

Senior Performance Engineer



Dan joined Energy Systems Group (ESG) in May 2011, as a Senior Performance Engineer. He is responsible for creative approach and design to gain maximum energy and operational savings for HVAC systems, electrical systems, pneumatics, and industrial process systems via performance contracting. Knowledgeable about the latest and highest efficiency equipment and control strategies.

Dan surveys facilities to determine energy savings potential and is responsible for estimating equipment and installation cost, as well as daily communication with subcontractors regarding installation.

Responsible for the overall administrative and technical management of performance-based projects, from preliminary proposal to project completion. Preparation and negotiation of purchase orders; and preparation of initial scope of work, contract, bid documents, and contract letters for prospective clients.

Employment History

Honeywell International - Four (4) years - Performed total energy management solution and feasibility studies for commercial institutions. Involved with all aspects of business: financing, engineering, installation and maintenance. Promoted operational and capital savings, increased current business volume, secured margin. Determined profitability of projects, assisted in market planning, and assessed region manning levels.

Johnson Controls - Seven (7) Years - Accountable for promoting operational and capital savings, increasing current business volume and secured margin. Determined profitability of projects, assisted in market planning, and assessed region manning levels. Provided energy, operational cost reduction, and service offering analysis of multiple, complex projects, gathered energy consumption and system efficiency data.

Past Projects within the Past Six (6) Years

Beecher Road School, CT	Educational	\$14,000,000
Carmel School District, NY	Educational	\$ 7,360,000
South Orange Town School	Educational	\$ 4,300,000
White Plains School District	Educational	\$11,200,000
Berned Knox School District	Educational	\$ 1,100,000
Croton Harmon School District	Educational	\$ 3,540,000
Monroe Woodbury, NY	Municipal	\$12,000,000
Beecher Road School, CT	Municipal	\$12,800,000
City of Middletown, NY	Municipal	\$13,500,000
City of Reading, PA	Municipal	\$ 3,500,000
Scranton Cultural Center, PA	Municipal	\$ 1,500,000
University of Massachusetts, MA	University	\$40,000,000
WPI, MA	University	\$ 6,000,000
SCI Dallas, PA	Correctional	\$20,000,000

ESG Tenure

6 years

Years of Experience

24 years

Education

Rochester Institute of Technology

Bachelor of Science in Energy
Mechanical Engineer

State University of Farmingdale

Associate of Applied Science –
HVAC/Mechanical Technology

Certifications

Certified Energy Manager

Leadership and Professional Affiliations

Association of Energy Engineers (AEE)

Contact

dkhuu@energysystemsgroup.com

b. Entity's financial ability to provide guarantee

ESG's audited financial statements which demonstrate our financial ability to provide savings guarantees are located on the USB copy of the Technical section due to the size of the report. ESG is a successful and prominent energy services company that was founded in 1994. The company is a wholly-owned subsidiary of Vectren Corporation, an investor-owned gas and electric utility whose stock trades on the NYSE under the symbol VVC. ESG's business is focused on energy-efficiency and sustainability projects with state and local government customers and the federal government. Our projects are secured by payment and performance bonds from our long-time surety, Liberty Mutual. Listed below are the RFQ requested five ESG projects and their project value and the annual guaranteed savings value.

FIVE ESG PROJECTS AND THEIR SAVINGS GUARANTEES		
Project	Project Value	Guaranteed Annual Savings
SCI Dallas, Dallas PA	\$19,957,577	\$2.09M
Kentucky Department of Corrections	\$12,665,428	\$1.13M
Howard County	\$8,200,000	\$488K
City of Middletown	\$12,700,000	\$1.05M
Beecher Road	\$14,300,000	\$210K

c. Entity's Resource Availability (Capacity)

Energy Systems Group is in a growth mode and continues to add additional personnel on a monthly basis thus allowing for more capacity on a regular basis. Listed below is the DGS recommended completed Capacity Calculation.

CAPACITY CALCULATION	
3 Year Average Sales	\$247,241,270
3 Year Average Committed Backlog	-\$182,195,913
Capacity	\$65,045,357

d. Entity's Statement of Readiness and Commitment of Resources per the RFQ Project Schedule

Energy Systems Group, LLC certifies that all personnel assigned to this project as listed on our organizational chart, included in Section 2-5.1 Project Management Team Overview, are fully committed to this project and will be 100% available to fulfill all obligations concerning the implementation of this project as outlined in Section 2-5.3

e. Entity's Notification of Default or Debarment

This statement is to certify that Energy Systems Group, LLC (ESG) certifies it is not currently under suspension or debarment by the Commonwealth of Pennsylvania, or any other state or federal government. There are no indictments or convictions related to ESG, its officials or any other individuals who have or have had an ownership stake in ESG for the last five years.



PO Box 285
Portersville, PA 16051
724.996.7970 – phone
812.492.8541 - fax

May 3, 2018

Becky Tomlinson
403 North Office Building
401 North Street
Harrisburg, Pennsylvania 17120

Subject: ***“Proposers Notification and Statement as Required in the Response to Request for Proposal (RFP) for A Guaranteed Energy Savings Contract at SCI Muncy - DGS GESA #2017-2”***

Dear Ms. Tomlinson:

Energy Systems Group, LLC (ESG), is pleased to provide our written statement for the above referenced Energy Savings Improvement Program at SCI Muncy. As requested in the RFQ, the following is submitted.

Section 2-5.4.d Proposer Statement of Readiness and Commitment of Resources

Per the Request of the RFP DGS GESA#2017-2, This letter is to certify that Energy Systems Group, LLC (“ESG”) is confirming that the persons ESG has identified in the RFP Response are available and will be committed to the project for the time period(s) referenced in *Section 2-5.3 Project Schedule of the response*, and that the Resource Availability referenced in *Section 2-5.4.c of the response*, will be committed to the projects, as referenced in the RFP Project Schedule and Work Plan.

Section 2-5.4.e Proposers Notification of Default and Debarment

Per the Request of the RFP DGS GESA#2017-2, this letter is to certify that Energy Systems Group, LLC (“ESG”) is not currently under suspension or debarment by the Commonwealth of Pennsylvania, any other state or the federal government. There are no indictments or convictions related to ESG, its officials or any individuals who have or have had an ownership stake in ESG in the last five years

Thank you for your time and consideration. We look forward to your acceptance of our qualifications and the opportunity to compete in the next stage of the process.

Sincerely,

A handwritten signature in black ink, appearing to read "Gregory F. Collins", written over a white background.

Gregory F. Collins
President

2. *Design – Consultant*

(Suggested number of sheets/pages: 4 sheets, plus 1 sheet per person)

a. *Firm's Experience on GESA projects.*

(1) Include date(s), location, owner, owner contact, project amount, and description. Complete and/or incomplete projects may be submitted. Discuss status of project and if completed as originally scheduled.

b. *Individual Qualifications (4 person limit)*

(1) Describe project responsibilities, time with firm, and experience with GESA projects, educational or technical training, and any other information relevant to the evaluation of the individual.

c. *Firm's Statement of Readiness and Commitment of Resources per the RFQ Project Schedule*

(1) Provide a written statement confirming the person(s) identified in this RFQ are available and will be committed to the Project for the time period(s) as described in the RFQ Project Schedule.

d. *Entity's Notification of Default or Debarment.*

(1) Provide a listing including owner, project, date, and explanation of any contract default or debarment within the last 5 years.



a. Firm's Experience with GESA projects

Note: Since we only worked on one GESA Project over \$5M we listed additional ones valued slightly less than \$5M

Design Consultant-ICS Consulting

ESG has chosen ICS Consulting for the SCI Muncy project because of their experience working in correctional facilities. They also have a vast knowledge of large facilities serviced by steam distribution systems and understand critical aspects of ways to reduce energy consumption and enhance performance of all systems.

ICS Consulting-Past GESA Experience

Pennsylvania State Police Headquarters Building

Date: 2016
Owner: Pennsylvania State Police
Contact: David Newman
Amount: \$4.96 Million
Description: Complete HVAC system retrofit, lighting upgrades, building envelope improvements, domestic water fixture upgrades, training
Status: In Construction

Wernersville State Hospital

Date: 2010
Owner: Wernersville State Hospital
Contact: Wernersville State Hospital
Amount: \$9.32 Million
Description: Central boiler plant modifications, chiller plant upgrades, laundry improvements, steam distribution system upgrades, motor replacements, lighting upgrades, building envelope improvements, domestic water fixture upgrades, kitchen equipment upgrades, training
Status: Completed on schedule

Penn State Hershey Medical Center

Date: 2009
Owner: Hershey Medical Center
Contact: Kevin Kanoff
Amount: \$4.95 Million
Description: Steam distribution system upgrades, control upgrades, AHU heat recovery installations, CAV to VAV retrofits, lighting upgrades, building envelope improvements, training
Status: Completed on schedule

b. Individual Qualifications

Tim Guider

Project Responsibilities: Senior Mechanical Engineer

Time with Firm: 2 years

Experienced with GESA projects: Yes

Education or Training: MBA Finance & M.S. Mechanical Engineering, Lehigh University. Bachelor of Science in Physics, Moravian College

Relevant Information: Tim manages a team of engineers and construction professionals to produce full technical and financial solutions for ICS clients.

Gene Alligood

Project Responsibilities: Developer / Project Manager

Time with Firm: 1 year

Experienced with GESA projects: Yes

Education or Training: Certified Energy Auditor (CEA), ASHRAE Design Courses

Relevant Information: Gene worked as Director of Mechanical Services for a large national design-build mechanical contractor for over 10 years, with a focused on GESA projects. Overall, he has 30+ years in the mechanical design-build industry.

Phil Solomon

Project Responsibilities: Northeast General Manager, PE

Time with Firm: 2 years

Experienced with GESA projects: Yes

Education or Training: Bachelor of Science Mechanical Engineering with Economics Concentration, Virginia Tech.

Relevant Information: Phil is responsible for leading the ICS Engineering Office in Media Pennsylvania.

c. Statement of Readiness and Commitment of Resources

ICS confirms the person(s) identified in the RFQ response are available and will be committed to the project for the duration described in the project schedule.

d. Entity's Notification of Default or Debarment

ICS has not defaulted on any contracts and has not been disbarred within the past five years.

Sub-Contractor: Conexus Building Controls (PA-SB)

ESG selected Conexus, because they are currently servicing the controls at SCI Muncy and have a detailed understanding of all the ways the controls can be enhanced to save not only energy but improve the users interface.

1. Experience on GESA Projects over \$5M

Note: As a Subcontractor we do not always know the total value of the project, therefore amounts shown reflect our portion of the overall GESA project

SCI Rockview, Bellefonte, PA

Date: 2009
Owner: Commonwealth of PA-Department of Corrections
Contact: John Stover: 814/355-4874
Amount: \$510,000
Number of Buildings: 13 buildings
Number of Points: 5,000 approx.
Description: HVAC/ BAS Upgrades
Status: Completed

SCI Huntingdon, Huntingdon, PA

Date: 2011
Owner: Commonwealth of PA-Department of Corrections
Contact: Christian (Chee) Stone: 814/643-2400
Amount: \$519,000
Number of Buildings: 14 buildings
Number of Points: 5,000 approx.
Description: HVAC/ BAS Upgrades
Status: Completed

Pottstown School District, Pottstown, PA

Date: 2013
Owner: Pottstown School District
Contact: Bob Kripplebauer: 610/323-8200
Amount: \$765,530
Number of Buildings: 6 Buildings
Number of Points: 20,000 approx.
Description: HVAC/ BAS Upgrades
Status: Completed

Letterkenny Army Depot

Date: 2014
Owner: Honeywell/SES
Contact: Dallas Wheat: 817/897-4466
Amount: Confidential
Number of Buildings: 17
Number of Points: 20,000 + approx.
Description: HVAC/ BAS Upgrades
Status: In Progress-99% complete

Carlisle War College/US Army Heritage and Education Center, Carlisle, PA

Date: 2016
Owner: Noresco
Contact: David Johnson: 717/525-4326
Amount: Confidential
Number of Buildings: 6
Number of Points: 20,000 approx
Description: HVAC/ BAS Upgrades
Status: In Progress-99% complete

2. *Superintendent's Qualifications*

Brad Himelright

Project Responsibilities: Project Manager

Time with Firm: 17 Years

Experienced with GESA projects: Yes

Education or Training: Electrical Degree / Penn College of Technology, 20+ Years in The Electrical Trade, Journeyman's License

Relevant information: The job responsibilities of our Project Manager are as follows: Plan, budget, oversee and document all aspects of the project. Provide leadership and management for project both onsite and in owner meetings. Determine manpower needs, manage contract and job costs and ensure positive customer and subcontractor relations. Confirm compliance with contractual and quality standards while maximizing profitability, customer satisfaction and timely close out of jobs. Track job milestones and communicate them with senior project manager.

3. *Statement of Readiness and Commitment of Resources*

Conexus, Inc., personnel identified are available and will be committed to the project for the time period referenced in the RFP Project Schedule.

4. *Workman's Compensation Experience Modification Rating*

Penn National Security Ins. Co
Policy Number: WP9-0649212-11

EMR 2017 – 0.84
EMR 2016 – 1.00
EMR 2015 – 1.396

5. *Entity's Notification of Default or Debarment*

Conexus, Inc., has not been debarred and is not in default of any contract.

Sub-Contractor: H2O Applied Technologies
Water & Steam Traps (PA-SB)



ESG select H2O Applied Technologies because they have worked on many of our past projects with great success and they have experience working within correctional facilities.

1. Experience on GESA Projects over \$5M

Note: As a Subcontractor we do not always know the total value of the project, therefore amounts shown reflect our portion of the overall GESA project

Chester County Correctional Facility

Date: 2015
Owner: Chester County PA
Contact: Subcontractor to Constellation
Amount: \$1,311,928
Description: Domestic Fixtures (Standard and Penal), Kitchen Equipment Retrofits, Steam Traps, Steam Insulation, Laundry Ozone System
Status: Completed

Lackawanna County Correctional Facility

Date: 2015
Owner: Lackawanna County PA
Contact: Subcontract to McClure
Amount: \$942,416
Description: Domestic Fixtures (Standard and Penal), Laundry Ozone System
Status: Completed

DPW Warren State Hospital

Date: 2010
Owner: State of Pennsylvania
Contact: Subcontractor to Johnson Controls
Amount: \$623,500
Description: Steam traps
Status: Completed

Selinsgrove Center

Date: 2011
Owner: Selinsgrove Center
Contact: Subcontract to McClure
Amount: \$505,716
Description: Steam traps, steam insulation
Status: Completed

2. Superintendent Qualifications

Richard Johnson, CEM

Project Responsibilities: Senior Project Manager Development Engineer

Time with Firm: 13 years

Experienced with GESA projects: yes

Education or Training: Bachelor of Science, Mechanical Engineering from the University of Massachusetts

Relevant Information: Mr. Johnson has been the Project Manager for over 60 projects (\$30 Million) of water and energy conservation measures.

3. Statement of Readiness and Commitment of Resources

H2O Applied Technologies LLC (H2O) team members assigned to the PA Capitol Complex Project are available and will be committed to the Project for the duration as describe in the project schedule.

4. Workman's Compensation Experience Modification Rating

2014 – 1.00

2015 – 1.00

2016 – 1.00

2017 - .92

5. Entity's Notification of Default or Debarment

H2O has not defaulted on any of its contracts and has never been debarred.

Sub-Contractor: HUNT Consulting Solar PV (PA-SDB)

ESG selected Hunt Consulting because of their excellent track record of performance on our other projects and their ability to consistently exceed the customer's expectations.

1. Experience on GESA Projects over \$5M

Note: As a Subcontractor we do not always know the total value of the project, therefore amounts shown reflect our portion of the overall GESA project

Keystone Building and PA Judicial Center

Date: 4/2017 – 3/2018
Owner: PA DGS (Prime Contractor – The Efficiency Network)
Contact: Bobby Hall, Sr. PM, (412) 429-8888 ext. 168
Amount: \$1,471,708
Description: More than 11,500 interior and exterior fixtures
Status: Completed

Jefferson Memorial Hospital

Date: 2013
Owner: Jefferson Memorial Hospital (Prime Contractor – Limbach Company)
Contact: Kevin Conley, Sr. PM (412) 616-1425
Amount: \$1,009,137
Description: More than 13,000 interior and exterior fixtures
Status: Completed

2. Superintendent's Qualifications

Mark Davis

Project Responsibilities: Project Manager
Time with Firm: 12 years
Experienced with GESA projects: yes
Education or Training: Master Electrician, OSHA-30, First Aid, CPR, Confined Space, High Reach, Forklift Training, DALI Controls Certified, Procore and E-Builder certified. Relevant information: QC/ME, Critical Path Scheduling, Inventory Control

Talbert Simpson

Project Responsibilities: Site Supervisor
Time with Firm: 7 years
Experienced with GESA projects: not with GESA, but managed similar seven figure projects nation wide
Education or Training: Master Electrician, OSHA-30, First Aid, CPR, Confined Space, High Reach, Forklift Training
Relevant information: Supervise field personnel, handle material and equipment logistics, oversight if installation work, project reporting and project close-out

3. *Statement of Readiness and Commitment of Resources*

HUNT Consulting personnel identified are available and will be committed to the project for the time period referenced in the RFP Project Schedule.

4. *Workman's Compensation Experience Modification Rating*

Chesapeake Employers Insurance Company

Policy Number: 4696043

2014 – 0.76

2015 – 0.76

2016 – 1.07

2017 – 1.22

2018 – 0.95

5. *Entity's Notification of Default or Debarment*

HUNT Consulting has never been disbarred or had any defaults levied against it or any of its entities.

**Sub-Contractor: Intelligent Conservation Systems, Inc.
Plumbing (PA-SB)**



ESG select Intelligent Conservation Systems, Inc. (ICS) because they completed the successful water conservation scope at SCI Dallas. ICS has additionally completed well over one hundred correctional institution projects around the US, including at least five within the state of Pennsylvania which have resulted in ICS becoming the most experienced water controls contractor in the entire US.

1. Experience on GESA Projects over \$5M

Note: As a Subcontractor we do not always know the total value of the project, therefore amounts shown reflect our portion of the overall GESA project

SCI Dallas - PA

Date: 2015
Owner: Pennsylvania Department of Corrections
Contact: Scott Gracely - ESG
Amount: \$3,272,157
Description: The scope of work for SCI Dallas was the retrofit of more than 1,100 inmate toilet and lavatory valves and over 290 inmate shower valves with I-CON electronic plumbing controls and touchscreen officer control with an I-CON computer system. Also included in the scope is the replacement of all the existing staff fixtures. Currently saving over \$1,000,000 in water, sewer, and gas costs annually.
Status: Completed

Warren and Lebanon Correctional Institution

Date: 2016
Owner: Ohio Department of Corrections and Rehabilitation
Contact: Dave Radanof - ESG
Amount: \$3,411,080
Description: The scope of work for this project included work in two different correctional institutes in the State of Ohio. Between the two facilities the scope involved retrofitting existing mechanical flush valves, lavatory manifolds and shower controls, with new electronic water saving controls in all inmate areas of the facility. Over 2202 inmate toilet valves were retrofitted with ICON electronic water saving controls. Additionally, over 1468 lavatory valves were retrofitted with electronic manifold valves, 106 inmate showers were retrofitted with electronic shower valves. Also included in the project involved replacing 220 staff fixtures were replaced with new high efficiency toilets.
Status: Completed

Allegheny County Jail, PA

Date: 2011
Owner: Allegheny County PA
Contact: Scott Emerton – Noresco
Amount: \$3,120,000
Description: The scope of work for Allegheny County Jail was retrofitting of all existing mechanical flush valves, lavatory manifolds and shower controls, with new electronic water saving controls in all inmate areas of the facility. 1,513 inmate toilets, 1,464 lavatories and 342 showers
Status: Completed

Indiana State Prison

Date: 2014
Owner: Indiana Department of Corrections
Contact: Kevin Orme- Indiana DOC
Amount: \$3,100,000
Description: The scope of work for Indiana State Prison was retrofitting of all existing mechanical flush valves, lavatory manifolds and shower controls, with new electronic water saving controls in all inmate areas of the facility. 1,602 inmate toilets, 1572 lavatories and 193 showers were retrofitted with ICON electronic water saving controls. 67 toilets, 50 urinals, 77 faucets and 26 showers were retrofitted with low consumption units.
Status: Completed

2. Superintendent's Qualifications

Brett Tarr

Project Responsibilities: Project Manager
Time with Firm: 10 years
Experienced with GESA projects: Yes
Education or Training: Master Certificate in Applied Project Management '10; OSHA 30
25 Years in the design and construction industry; 5 Years in water conservation installation for correctional projects
Relevant information: Supervise field personnel, handle material and equipment logistics, conduct subcontractor and safety meetings, perform M&V, conduct training with facility staff and complete O&M Documentation

3. Statement of Readiness and Commitment of Resources

Intelligent Conservation Systems, Inc. personnel identified are available and will be committed to the project for the time-period referenced in the RFP Project Schedule.

4. Workman's Compensation Experience Modification Rating

BB&T Insurance Services, Inc.
Policy Numbers: ZLP61M5520017I5, BA1D04628817TEC, ZUP81M5607A17I5, HNUB1D08877717
These policies are for Commercial, Automotive, Umbrella, Workers Compensation, respectively
Over the last four annual policy cycles, ICS's EMR Rating has been:
2015 - 0.88
2016 - 0.89
2017 - 1.61
2018 - 1.58

5. Entity's Notification of Default or Debarment

Intelligent Conservation Systems, Inc. has not been debarred and is not in default of any contract.

**Sub-Contractor: Lighting Services, Inc.
Lighting (PA-SDB)**



ESG selected Lighting Services because they have experience working within correctional facilities and they have an excellent track record of successful past projects.

1. Experience on GESA Projects over \$5M

Note: As a Subcontractor we do not always know the total value of the project, therefore amounts shown reflect our portion of the overall GESA project

Bethel Park School District

Date: 2015
Owner: Bethel Park School District
Contact: Robert Kovalan - Trane
Amount: \$781,503
Description: More than 6,100 interior and exterior fixtures
Status: Completed

Eastern Mennonite University

Date: 2017
Owner: Eastern Mennonite University
Contact: Stan Mashinski - Siemens
Amount: \$388,323
Description: More than 1,154 interior and exterior fixtures
Status: Completed

Georgia World Congress Center

Date: 2017
Owner: Georgia World Congress Center
Contact: Cameron Griffith - Trane
Amount: \$3,399,000
Description: More than 5,000 exterior fixtures
Status: Completed

Woodland Hills School District

Date: 2017
Owner: Woodland Hills School District
Contact: Roshelle Fennell – Reynolds Energy
Description: More than 1,033 exterior fixtures
Status: Completed



2. Superintendent’s Qualifications

Mike Rohm

Project Responsibilities: Supervisor
Time with Firm: 16 years
Experienced with GESA projects: no
Education or Training: NALMCO CLEP certification, Portland Lakes Career Center, US Army – Sergeant Infantry
Relevant information: Supervise field personnel, handle material and equipment logistics, oversight of installation work, project reporting and project close-out.

Jeffery Kinney

Project Responsibilities: Supervisor
Time with Firm: 3 years
Experienced with GESA projects: no
Education or Training: AEE CLEP certification, State of Tennessee Master Electrician and Contractor, Lenoir Community College
Relevant information: Supervise field personnel, handle material and equipment logistics, oversight if installation work, project reporting and project closeout.

Thomas Petrey

Project Responsibilities: Supervisor
Time with Firm: 9 years
Experienced with GESA projects: no
Education or Training: AEE CLEP certification holds Electrical Contractor licenses in multiple states
Relevant information: Supervise field personnel, handle material and equipment logistics, oversight if installation work, project reporting and project closeout.

Scott Dennison

Project Responsibilities: Supervisor
Time with Firm: 11 years
Experienced with GESA projects: no
Education or Training: AEE CLEP certification, OSHA 30-hour
Relevant information: Supervise field personnel, handle material and equipment logistics, oversight if installation work, project reporting and project closeout.

3. Statement of Readiness and Commitment of Resources

All Lighting Services Inc. personnel identified are available and will be committed to the project for the time period referenced in the RFP Project Schedule.

4. Workman’s Compensation Experience Modification Rating

2012 – 0.99	2016 – 2.20
2013 – 0.99	2017 – 1.69
2014 – 2.29	2018 – 0.99
2015 – 2.20	

5. Entity’s Notification of Default or Debarment

Lighting Services Inc. has not been debarred and is not in default of any contract.

Sub-Contractor: Melink Corporation-Kitchen Hood Controllers

ESG has partnered with Melink on many of our past projects and they do an excellent job of reducing unnecessary energy consumption in applications where kitchen hoods are used on a daily basis.

1. Experience on GESA Projects over \$5M

Note: As a Subcontractor we do not always know the total value of the project, therefore amounts shown reflect our portion of the overall GESA project

County of Riverside Prison (California)

Date: 2018
Contact: Climatec
Amount: \$74,226
Description: Total HP = 23.5 HP & (5) Fans
Status: In Progress

Chillicothe Correctional Institute

Date: 2012
Contact: Honeywell Building Solutions
Amount: \$77,560
Description: Total HP = 33 HP & (9) Fans
Status: Completed

Maryland Juvenile Corrections Centers (4 locations)

Date: 2016
Owner: Maryland Corrections
Contact: Johnson Controls
Amount: \$115,864
Description: Controls in the following locations: Victor Cullen Correctional; Baltimore Juvenile, Lower Eastern State Correctional, Charles Hickey Correctional
Status: Completed

2. Key Personnel and Superintendent Qualifications

Ron Butsch

Project Responsibilities: Sales Engineer
Time with Firm: 6.5 years
Experienced with GESA projects: Yes
Education or Training: Northern Kentucky University
Relevant information: Sales Engineer focused on review of calculated Energy Savings, Cost Estimation, Closeout

Greg Reynolds

Project Responsibilities: Project Manager
Time with Firm: 3 years
Experienced with GESA projects: No
Education or Training: Ohio University
Relevant information: Resource and logistic coordination

Jeremy Holcomb

Project Responsibilities: Applications Engineer
Time with Firm: 9 years
Experienced with GESA projects: Yes
Education or Training: Applications Engineer
Relevant Information: System design and technical support

Name: Todd Dostal

Project Responsibilities: Field Supervisor
Time with Firm: 11 years
Experienced with GESA projects: Yes
Education or Training: AEE Certification, CLEP, OSHA 30-hour
Relevant information: Supervise field personnel, handle material and equipment logistics, oversee project installation, project reporting and project closeout.

3. *Statement of Readiness and Commitment of Resources*

Melink Corporation personnel identified are available and will be committed to the project for the time period referenced in the RFP Project Schedule.

4. *Workman's Compensation Experience Modification Rating*

2010-2014 = 0.82
2015 - 1.09
2016 – 0.82
2017 – 0.98

5. *Entity's Notification of Default or Debarment*

Melink Corporation has not been debarred and is not in default of any contract.

**Sub-Contractor: Air Management Technologies Inc.
Mechanical (PA-SDB)**



ESG selected Air Management systems because of their past successful track record and their in depth knowledge of HVAC/Mechanical systems.

1. Experience on GESA Projects over \$5M

Note: As a Subcontractor we do not always know the total value of the project, therefore amounts shown reflect our portion of the overall GESA project

Scranton and Reading State Office Buildings

Date: August 2009
Owner: State of Pennsylvania
Contact: Subcontractor to ESCO 717-856-7611
Amount: \$102,900.00
Description: Air Balancing
Status: Completed

Pennsylvania State Police Headquarters

Date: March 2017
Owner: State of Pennsylvania
Contact: Subcontract to ESCO 717-856-7611
Amount: \$2,084,297.00
Description: HVAC System and Control Upgrades
Status: To be completed 4/14/18

2. Superintendent Qualifications

Jeffrey S. Houtz

Project Responsibilities: Project Manager/Foreman, supervise field personnel, maintain schedules, inspection of work, insure safety on job sites

Time with Firm: 8 years

Experienced with GESA projects: no

Education or Training: Certified Journeyman Plumber/Pipefitter Local 520

3. Statement of Readiness and Commitment of Resources

Air Management Technologies Inc. stands ready and able to provide manpower and expertise to complete the SCI Muncy Project. Air Management Technologies Inc. is a member of Local Union 520 Steam and Pipe Fitters out of Harrisburg as well as National Service Agreement that permits Air Management Technologies Inc. to pull additional manpower as needed to augment our permanent workforce from any Steam and Pipefitter Union Hall throughout the United States. Local Steam and Pipefitters Unions provide manpower from pipe fitters to control and mechanical equipment technicians.

4. *Workman's Compensation Experience Modification Rating*

2014 – 0.811
2015 – 0.893
2016 – 0.880
2017 – 0.851
2018 – 0.792

5. *Entity's Notification of Default or Debarment*

Air Management Technologies Inc. has never been disbarred or had any defaults levied against it or any of its entities.

Sub-Contractor: HC Hood Co., Inc.- Windows

ESG selected HC Hood Company, because they are a certified Small Diverse Business and have an excellent track record of providing window installations.

1. Experience on GESA Projects over \$5M

Note: As a Subcontractor we do not always know the total value of the project, therefore amounts shown reflect our portion of the overall GESA project

DLA General Purpose Warehouse New Cumberland, PA

Date: 2014
Owner: US Federal Department of Defense Contact: Carothers Contracting
Amount: \$35,995.00
Description: Supplied and installed blast and curtain wall storefronts
Status: Completed

Ft Indiantown Gap Aircraft Maintenance Building

Date: 2014
Owner: Commonwealth of PA
Contact: Boro Construction
Amount: \$549,500.00
Description: supplied and installed fire rated aluminum, curtain walls and storefronts
Status: Completed

Penn State Westgate Academic Center

Date: 2018
Owner: Penn State University
Contact: Penn State University
Amount: \$43,620.00
Description: Supplied and installed curtain wall
Status: Completed

Butler Readiness Center

Date: 2018
Owner: Commonwealth of PA
Contact: JM Young Contractor
Description: Supplied and installed and replaced windows with impact resistant thermal windows Status:
In Progress

2. Superintendent Qualifications

Chuck Probst

Project Responsibilities: Foreman Time with Firm: 4 years
Experienced with State/Federal projects: yes
Education or Training: 10 years union glazier, OSHA 30
Relevant information: Supervise field personnel, handle material and equipment logistics, oversight if installation work, project reporting and project close-out.

Kevin Vancil

Project Responsibilities: Foreman Time with Firm: 1 years

Experienced with state/federal projects: yes Education or Training: glazier 5 years. OSHA 30

3. *Statement of Readiness and Commitment of Resources*

Personnel identified are available and will be committed to the project for the time period referenced.

4. *Workman's Compensation Experience Modification Rating*

Nationwide Policy Number:

WC00000098803Y

This policy is for work performed in PA.

2015 – 0.836

2016 – 0.91

2017 – 1.10

Nationwide shows that our policy has been in effect since 12/30/2017 and there have been no claims.

5. *Entity's Notification of Default or Debarment*

HoodCo, Inc has not been debarred and is not in default of any contract.

***ENERGY SYSTEMS GROUP, LLC
AND SUBSIDIARIES***

Consolidated Financial Report

December 31, 2017, 2016, and 2015

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INDEPENDENT AUDITOR'S REPORT



**HARDING, SHYMANSKI
& COMPANY, P.S.C.**

Certified Public Accountants
and Consultants

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An Independently
Owned Member,
RSM US Alliance

To the Board of Directors
Energy Systems Group, LLC and Subsidiaries

Report on the Financial Statements

We have audited the accompanying consolidated financial statements of Energy Systems Group, LLC and Subsidiaries which comprise the consolidated balance sheets as of December 31, 2017, 2016, and 2015, the related consolidated statements of operations and member's equity and cash flows for the years then ended, and the related notes to the consolidated financial statements (collectively, the financial statements).

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

INDEPENDENT AUDITOR'S REPORT (CONTINUED)

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.



Opinion

In our opinion, the financial statements referred to on the previous page present fairly, in all material respects, the financial position of Energy Systems Group, LLC and Subsidiaries, as of December 31, 2017, 2016, and 2015, and the results of its operations and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Harding, Slymanski & Company, P.S.C.

Evansville, Indiana
February 21, 2018

ENERGY SYSTEMS GROUP, LLC AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

December 31, 2017, 2016, and 2015

(In thousands)	2017	2016	2015
ASSETS			
Current Assets			
Cash and cash equivalents	\$ 49,356	\$ 79,622	\$ 46,639
Contracts and accounts receivable	19,392	27,607	25,107
Notes receivable	89	106	85
Due from affiliate	1,652	603	37
Costs and estimated earnings in excess of billings on uncompleted contracts	17,843	8,726	15,314
Pre-contract costs	10,192	6,793	3,879
Other current assets	7,461	9,325	6,748
Total current assets	105,985	132,782	97,809
Other Assets			
Investment in affiliate	-	-	152
Goodwill	29,740	29,740	29,740
Other intangible assets, net of accumulated amortization of \$2,660, \$1,951, and \$1,242	10,481	11,190	11,899
	40,221	40,930	41,791
Property and Equipment, Net	11,235	9,898	20,399
	\$ 157,441	\$ 183,610	\$ 159,999

See notes to consolidated financial statements.

ENERGY SYSTEMS GROUP, LLC AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS (CONTINUED)

December 31, 2017, 2016, and 2015

(In thousands)	2017	2016	2015
LIABILITIES AND MEMBER'S EQUITY			
Current Liabilities			
Accounts payable, including retainage of \$10,675, \$8,655, and \$4,764	\$ 38,140	\$ 24,317	\$ 23,311
Billings in excess of costs and estimated earnings on uncompleted contracts	36,195	37,622	29,234
Accrued expenses and taxes	<u>14,545</u>	<u>13,161</u>	<u>10,399</u>
Total current liabilities	88,880	75,100	62,944
Long-Term Notes Payable to Affiliate	-	45,000	45,000
Other Liabilities	<u>2,627</u>	<u>2,857</u>	<u>2,379</u>
Total liabilities	91,507	122,957	110,323
Member's Equity	<u>65,934</u>	<u>60,653</u>	<u>49,676</u>
	<u>\$ 157,441</u>	<u>\$ 183,610</u>	<u>\$ 159,999</u>

See notes to consolidated financial statements.

ENERGY SYSTEMS GROUP, LLC AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS AND MEMBER'S EQUITY

Years Ended December 31, 2017, 2016, and 2015

(In thousands)	2017	2016	2015
Revenues	\$ 281,820	\$ 260,000	\$ 199,903
Cost of Revenues	<u>214,385</u>	<u>196,872</u>	<u>155,775</u>
Gross profit	67,435	63,128	44,128
Operating Expenses	<u>52,445</u>	<u>50,666</u>	<u>41,866</u>
Operating income	<u>14,990</u>	<u>12,462</u>	<u>2,262</u>
Other Income (Expenses)			
Interest, net	256	(1,711)	(571)
Other, net	<u>35</u>	<u>118</u>	<u>16</u>
	<u>291</u>	<u>(1,593)</u>	<u>(555)</u>
Equity in Earnings of Unconsolidated Affiliate	<u>-</u>	<u>108</u>	<u>262</u>
Net income	15,281	10,977	1,969
Member's equity at beginning of year	60,653	49,676	47,707
Member dividend	<u>(10,000)</u>	<u>-</u>	<u>-</u>
Member's equity at end of year	<u>\$ 65,934</u>	<u>\$ 60,653</u>	<u>\$ 49,676</u>

See notes to consolidated financial statements.

ENERGY SYSTEMS GROUP, LLC AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

Years Ended December 31, 2017, 2016, and 2015

(In thousands)	2017	2016	2015
Cash Flows from Operating Activities			
Net income	\$ 15,281	\$ 10,977	\$ 1,969
Adjustments to reconcile net income to net cash provided by operating activities			
Depreciation	1,128	1,714	1,913
Amortization	709	709	710
(Gain) loss on sale of property and equipment	(20)	(212)	20
Impairment loss	766	2,174	-
Equity in earnings of unconsolidated affiliate	-	(108)	(262)
Unconsolidated affiliate dividends	-	260	1,250
Changes in assets and liabilities:			
Decrease (increase)			
Contracts and accounts receivable	8,215	(2,500)	(7,490)
Costs and estimated earnings in excess of billings on uncompleted contracts	(9,117)	6,588	(7,365)
Pre-contract costs	(3,399)	(2,914)	1,024
Other current assets	1,864	(1,477)	(2,746)
Increase (decrease)			
Accounts payable	13,823	1,006	5,375
Billings in excess of costs and estimated earnings on uncompleted contracts	(1,427)	8,388	19,366
Accrued expenses and taxes	1,384	1,662	2,197
Other liabilities	(230)	478	444
Net cash provided by operating activities	28,977	26,745	16,405

See notes to consolidated financial statements.

ENERGY SYSTEMS GROUP, LLC AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

Years Ended December 31, 2017, 2016, and 2015

(In thousands)	2017	2016	2015
Cash Flows from Investing Activities			
Proceeds from sales and pending sales of property and equipment	\$ 37	\$ 8,585	\$ 12
Purchases of property and equipment	(3,248)	(1,760)	(514)
Payments (collections) on note receivable	17	(21)	(10)
Net advances to affiliate	(1,049)	(566)	(15,329)
Net cash provided by (used in) investing activities	(4,243)	6,238	(15,841)
Cash Flows from Financing Activities			
Proceeds from (principal payments on) affiliate long-term borrowings	(45,000)	-	45,000
Member dividend	(10,000)	-	-
Net cash provided by (used in) financing activities	(55,000)	-	45,000
Net increase (decrease) in cash and cash equivalents	(30,266)	32,983	45,564
Cash and cash equivalents at beginning of year	79,622	46,639	1,075
Cash and cash equivalents at end of year	<u>\$ 49,356</u>	<u>\$ 79,622</u>	<u>\$ 46,639</u>
Supplemental Disclosure of Cash Flow Information			
Cash payments for:			
Interest	<u>\$ 885</u>	<u>\$ 1,711</u>	<u>\$ 582</u>
Supplemental Schedule of Noncash Investing and Financing Activities			
Property and equipment transferred to other current assets in accordance with the deposit method	<u>\$ -</u>	<u>\$ 1,100</u>	<u>\$ -</u>

See notes to consolidated financial statements.

ENERGY SYSTEMS GROUP, LLC AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

December 31, 2017, 2016, and 2015

(In thousands)

Note 1 – Nature of Business and Significant Accounting Policies

Nature of Business

Energy Systems Group, LLC and Subsidiaries (Company), an Indiana limited liability corporation, is a comprehensive energy services and performance contracting company providing energy, facility, and financial solutions to commercial, industrial, governmental, and institutional customers. In addition, the Company builds, owns, and operates certain renewable energy producing assets. Revenues related to construction and other energy related services accounted for the following percentages of the Company's total revenues for the respective years ended:

	<u>Construction</u>	<u>Other Energy Related Services</u>
December 31, 2017	90%	10%
December 31, 2016	89%	11%
December 31, 2015	85%	15%

The Company's operations are based throughout the contiguous United States, primarily in the Midwest, Mid-Atlantic, and Southern regions.

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its subsidiaries. All significant intercompany accounts and transactions have been eliminated in consolidation.

Concentration of Credit Risk

Financial instruments, which potentially subject the Company to concentrations of credit risk, consist principally of cash and cash equivalents, contracts and accounts receivable. At times, such cash and cash equivalents in banks may be in excess of the Federal Deposit Insurance Corporation insurance limit.

Cash and Cash Equivalents

For purposes of reporting the consolidated statements of cash flows, the Company considers all cash accounts, which are not subject to withdrawal restrictions or penalties, and all highly liquid debt instruments purchased with a maturity of three months or less to be cash equivalents. The amounts invested with the member's Parent classified as cash and cash equivalents at December 31, 2017, 2016, and 2015 were \$49,357, \$79,339, and \$44,870, respectively.

ENERGY SYSTEMS GROUP, LLC AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

December 31, 2017, 2016, and 2015

(In thousands)

Note 1 – Nature of Business and Significant Accounting Policies (Continued)

Revenue and Cost Recognition

Income from construction contracts is recognized by the percentage-of-completion method. The percentage-of-completion is determined by relating the actual cost of work performed to date to the current estimated total cost of the respective contracts. The length of the Company's contracts varies.

Contract costs include all direct material and labor costs and those indirect costs related to contract performance, such as indirect labor, supplies, tools, repairs, and depreciation.

Provisions for estimated losses on uncompleted contracts are made in the period in which such losses are determined. Changes in job performance, job conditions, and estimated profitability, including those arising from contract penalty provisions and final contract settlements, may result in revisions to costs and income and are recognized in the period in which the revisions are determined. Profit incentives are included in revenue when their realization is reasonably assured.

The asset, "costs and estimated earnings in excess of billings on uncompleted contracts," represents revenue recognized in excess of amounts billed. The liability, "billings in excess of costs and estimated earnings on uncompleted contracts," represents billings in excess of revenue recognized.

Pre-contract costs incurred for a specific anticipated contract are capitalized and included in the project cost estimate. Upon award of the contract, revenue is recognized on these costs by the percentage-of-completion method. Pre-contract costs are expensed when it is determined that the award of the contract is doubtful.

Revenues from operations and maintenance contracts and measurement and verification contracts are recognized under the straight-line method over the performance period of the contract.

Revenues from commodity sales are recognized when earned, upon delivery of the commodity to the customer.

Contracts and Accounts Receivable

Contracts and accounts receivable are customer obligations due under normal trade terms. The Company attempts to minimize contracts receivable credit risk by reviewing customer credit history before extending credit and by monitoring customers' credit exposure on a continuing basis. The direct charge-off method is used to account for losses in collection of contracts and accounts receivable, when applicable. Bad debt expense consists of accounts written-off, net of recoveries. An allowance for uncollectible contracts and accounts receivable is considered unnecessary by management.

ENERGY SYSTEMS GROUP, LLC AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

December 31, 2017, 2016, and 2015

(In thousands)

Note 1 – Nature of Business and Significant Accounting Policies (Continued)

Property, Equipment, and Depreciation

Property and equipment are stated at cost. Provisions for depreciation of property and equipment have been computed on the straight-line method over the estimated useful life.

Amortization of leasehold improvement assets is computed on the straight-line method over the shorter of the useful life of the asset or the life of the lease.

Long-Lived Assets

Long-lived assets are reviewed for impairment in accordance with guidance issued by the Financial Accounting Standards Board (FASB). The Company records impairment losses on long-lived assets when events and circumstances indicate that the assets might be impaired and the undiscounted cash flows estimated to be generated by those assets are less than the carrying amounts of those assets. Impairment losses are measured by comparing the estimated fair value of the assets to their carrying amount.

During the year ended December 31, 2017, the Company determined that certain assets' carrying value exceeded their net realizable value and thus were written down to zero. Impairment losses for the year ended December 31, 2017 were \$766.

On December 15, 2016, the Company entered into an agreement to sell its membership interest in ESG Biofuels (JC). The purchase price was \$3,100, which included \$1,100 in cash with \$2,000 contingent upon ESG Biofuels (JC)'s application with the Environmental Protection Agency to become a Renewable Identification Numbers generator being accepted. In accordance with ASC 360-20, the Company accounted for the sale of the membership interest and its underlying real estate assets using the deposit method. The \$1,100 in cash was received by December 31, 2016, and was included as a deposit liability in accrued expenses and taxes. All rights and title of the membership interest and its underlying real estate assets transferred to the buyer at December 15, 2016. At December 31, 2016, subject to collectability assessment, the contingent payment of \$2,000 was fully reserved. During 2017, the Renewable Identification Number application with the Environmental Protection Agency was not accepted. As of December 31, 2017, the timeframe for the contingent payment has expired and the Company has removed the contingent payment and deposit liability, as well as the related reserve from its balance sheet.

There were no impairment losses for the year ended December 31, 2015.

Goodwill and Other Intangible Assets

Goodwill and other intangible assets having an indefinite life are tested for impairment, at least annually, using a fair value based approach. Intangible assets with finite lives are being amortized on the straight-line method over their estimated useful life.

ENERGY SYSTEMS GROUP, LLC AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

December 31, 2017, 2016, and 2015

(In thousands)

Note 1 – Nature of Business and Significant Accounting Policies (Continued)

Investment in Affiliate and Construction Joint Venture

During 2012, the Company entered into a partnership agreement to form a construction joint venture. The equity method of accounting was used for the joint venture. Under the equity method of accounting, the Company's share of the net income of the affiliate was recognized as income in the Company's income statement and added to the investment account. Also, capital contributions made to the affiliate were treated as an increase to the investment account and dividends received from the affiliate were treated as a reduction in the investment account.

The Company owned 50 percent of the affiliate. During 2016, the construction joint venture dissolved upon project completion. Condensed financial information of the affiliate as of and for the years ended December 31, 2016 and 2015 is as follows:

	<u>2016</u>	<u>2015</u>
Current assets	<u>\$ -</u>	<u>\$ 1,755</u>
Current liabilities	<u>\$ -</u>	<u>\$ 1,451</u>
Energy Systems Group, LLC interest	\$ -	\$ 152
Non-Energy Systems Group, LLC interest	<u>-</u>	<u>152</u>
Total member's equity	<u>\$ -</u>	<u>\$ 304</u>
Sales	<u>\$ 542</u>	<u>\$ 9,296</u>
Energy Systems Group, LLC equity in net income	\$ 108	\$ 262
Non-Energy Systems Group, LLC equity in net income	<u>108</u>	<u>262</u>
Total net income	<u>\$ 216</u>	<u>\$ 524</u>

Subsequent Events Evaluation

Since the Company is a subsidiary of a public entity, management has evaluated subsequent events through February 21, 2018, which represents the date the member's Parent's consolidated financial statements were issued.

ENERGY SYSTEMS GROUP, LLC AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

December 31, 2017, 2016, and 2015

(In thousands)

Note 1 – Nature of Business and Significant Accounting Policies (Continued)

Use of Estimates

The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America (U.S. GAAP) requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

Recent Accounting Pronouncements

Leases

In February 2016, the FASB issued new accounting guidance for the recognition, measurement, presentation and disclosure of leasing arrangements. This ASU requires the recognition of lease assets and liabilities for those leases currently classified as operating leases while also refining the definition of a lease. In addition, lessees will be required to disclose key information about the amount, timing, and uncertainty of cash flows arising from leasing arrangements. This ASU is effective for the interim and annual reporting periods beginning January 1, 2019, although it can be early adopted, with a modified retrospective approach for leases that commenced prior to the date of adoption. The Company is currently evaluating the standard to determine the impact it will have on the financial statements and will adopt the guidance effective January 1, 2019.

Revenue Recognition from Contracts with Customers

In May 2014, the FASB issued new accounting guidance to clarify the principles for recognizing revenue and to develop a common revenue standard for U. S. GAAP. The amendments in this guidance state an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. This new guidance requires improved disclosures to help users of financial statements better understand the nature, amount, timing, and uncertainty of revenue that is recognized. The guidance can be applied retrospectively to each prior reporting period presented (full retrospective method) or retrospectively with a cumulative effect adjustment to retained earnings for initial application of the guidance at the date of initial adoption (modified retrospective method). The Company plans to adopt the guidance under the modified retrospective method. The cumulative effect adjustment to retained earnings is expected to be \$1,300.

In July 2015, the FASB approved a one year deferral that became effective through an ASU in August and changed the effective date to annual reporting periods beginning after December 15, 2017, including interim periods, with early adoption permitted, but not before the original effective date of December 15, 2016.

ENERGY SYSTEMS GROUP, LLC AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

December 31, 2017, 2016, and 2015

(In thousands)

Note 1 – Nature of Business and Significant Accounting Policies (Continued)

Recent Accounting Pronouncements (Continued)

Revenue Recognition from Contracts with Customers (Continued)

The Company has finalized the assessment process of all revenue streams for the standard's impact on the Consolidated Balance Sheets, Consolidated Statements of Operations, and disclosures and has identified all material revenue streams. The Company has determined that all material revenue streams fall under the scope of the standard. The standard has resulted in no significant changes to the Company's pattern of revenue recognition. Updates to processes and controls have been implemented related to uninstalled materials. The Company has adopted the guidance effective January 1, 2018.

Note 2 – Contracts and Accounts Receivable

Contracts and accounts receivable are expected to be collected within one year from the consolidated balance sheet dates.

Contracts and accounts receivable at December 31, 2017, 2016, and 2015 consisted of the following:

	<u>2017</u>	<u>2016</u>	<u>2015</u>
Contracts and accounts receivable			
Completed contracts	\$ 1,798	\$ 8,733	\$ 553
Contracts-in-process	11,399	14,223	20,589
Retainages	<u>6,195</u>	<u>4,651</u>	<u>3,965</u>
	<u>\$ 19,392</u>	<u>\$ 27,607</u>	<u>\$ 25,107</u>

ENERGY SYSTEMS GROUP, LLC AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

December 31, 2017, 2016, and 2015

(In thousands)

Note 3 – Costs and Estimated Earnings on Uncompleted Contracts

Costs and estimated earnings on uncompleted contracts at December 31, 2017, 2016, and 2015 consisted of the following:

	<u>2017</u>	<u>2016</u>	<u>2015</u>
Costs incurred on uncompleted contracts	\$ 291,519	\$ 258,736	\$ 145,654
Estimated earnings	<u>68,235</u>	<u>66,905</u>	<u>37,160</u>
	359,754	325,641	182,814
Less billings to date	<u>(378,106)</u>	<u>(354,537)</u>	<u>(196,734)</u>
	<u>\$ (18,352)</u>	<u>\$ (28,896)</u>	<u>\$ (13,920)</u>

Included in the accompanying consolidated balance sheets under the following captions:

	<u>2017</u>	<u>2016</u>	<u>2015</u>
Costs and estimated earnings in excess of billings on uncompleted contracts	\$ 17,843	\$ 8,726	\$ 15,314
Billings in excess of costs and estimated earnings on uncompleted contracts	<u>(36,195)</u>	<u>(37,622)</u>	<u>(29,234)</u>
	<u>\$ (18,352)</u>	<u>\$ (28,896)</u>	<u>\$ (13,920)</u>

ENERGY SYSTEMS GROUP, LLC AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 2017, 2016, and 2015

(In thousands)

Note 4 – Intangible Assets

Intangible assets at December 31, 2017, 2016, and 2015 consisted of the following:

	<u>2017</u>	<u>2016</u>	<u>2015</u>
Intangible assets, subject to amortization:			
Customer relationships	\$ 7,096	\$ 7,096	\$ 7,096
Intangible assets, not subject to amortization:			
ESPC licenses	6,045	6,045	6,045
Goodwill	<u>29,740</u>	<u>29,740</u>	<u>29,740</u>
	42,881	42,881	42,881
Accumulated amortization	<u>(2,660)</u>	<u>(1,951)</u>	<u>(1,242)</u>
	<u>\$ 40,221</u>	<u>\$ 40,930</u>	<u>\$ 41,639</u>

Amortization expense for the three years ended December 31, 2017, 2016, and 2015 was \$709, \$709, and \$710, respectively. The estimated amortization expense expected to be charged to income over each of the next five years is \$709.

ENERGY SYSTEMS GROUP, LLC AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

December 31, 2017, 2016, and 2015

(In thousands)

Note 5 – Property and Equipment

Property and equipment at December 31, 2017, 2016, and 2015 consisted of the following:

	<u>2017</u>	<u>2016</u>	<u>2015</u>
Equipment	\$ 4,814	\$ 5,331	\$ 4,955
Leasehold improvements	12,284	13,977	27,678
Construction-in-progress	<u>2,499</u>	<u>455</u>	<u>54</u>
	19,597	19,763	32,687
Accumulated depreciation	<u>(8,362)</u>	<u>(9,865)</u>	<u>(12,288)</u>
	<u>\$ 11,235</u>	<u>\$ 9,898</u>	<u>\$ 20,399</u>

Depreciation expense for the three years ended December 31, 2017, 2016, and 2015 was \$1,128, \$1,714, and \$1,913, respectively.

Note 6 – Commitments and Contingencies

At December 31, 2017, 2016, and 2015, the Company had outstanding surety bonds of approximately \$755,000, \$688,000, and \$528,000, respectively, for its performance, payment, and energy savings guarantees. The Company's member's Parent has entered into an agreement to guarantee up to \$25,000 for the payment of amounts due for these surety bonds, should the Company default on its obligations to complete construction, pay vendors and subcontractors, or achieve energy savings guarantees. Upon final acceptance, payment and performance bonds are replaced with maintenance bonds at ten percent of the original face value and remain in effect during the one-year warranty period. Energy savings guarantee bonds are for various lengths and are reduced annually based upon the amount of guarantee met. In addition, the Company's member's Parent has outstanding performance guarantees for certain projects related to construction, energy services, and operations. If events arise that indicate required performance under the guarantees, the Company would record a liability.

Generally, guaranteed savings, whereby the Company guarantees that the customer will achieve certain levels of energy savings over a specified number of years and warranty agreements accompany the contracts. The Company has determined based on historical results that an energy guarantee reserve is unnecessary.

ENERGY SYSTEMS GROUP, LLC AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 2017, 2016, and 2015

(In thousands)

Note 7 – Litigation

The Company is involved in lawsuits, claims, investigations, and proceedings, which arise in the ordinary course of business. If management believes that a loss arising from these matters is probable and can be reasonably estimated, a loss is recorded. As additional information becomes available, these matters are assessed and the estimates are revised, if necessary. Based on currently available information, management believes that the ultimate outcome of these matters, individually and in the aggregate, will not have a material adverse effect on the Company's business, financial condition, or results of operation.

Note 8 – Fair Value of Financial Instruments

Certain assets and liabilities are recorded at fair value.

FASB *Accounting Standards Codification (ASC) 820, Fair Value Measurements and Disclosures*, provides the framework for measuring fair value. That framework provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements).

The asset's or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs.

For the years ended December 31, 2017, 2016, and 2015, the application of valuation techniques applied to similar assets and liabilities has been consistent. The following is a description of the valuation methodology used for instruments measured at fair value:

Cash, cash equivalents, receivables, accounts payable, accrued expenses, and payables – Carrying amount approximates fair value because of the short maturity of those instruments.

Fair Value on a Nonrecurring Basis

Certain assets and liabilities are measured at fair value on a nonrecurring basis; that is, the instruments are not measured at fair value on an ongoing basis but are subject to fair value adjustments in certain circumstances (for example, when there is evidence of impairment).

In accordance with FASB guidance related to impairments of long-lived assets, a long-lived asset with a carrying amount of \$766 was fully impaired using Level 2 measurements, resulting in an impairment charge of \$766, which was included in operating expenses for the year ended December 31, 2017.

ENERGY SYSTEMS GROUP, LLC AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 2017, 2016, and 2015

(In thousands)

Note 8 – Fair Value of Financial Instruments (Continued)

Fair Value on a Nonrecurring Basis (Continued)

During 2016, a long-lived asset with a carrying amount of \$3,274, was partially impaired. The impairment was based on the final expected sales price of \$1,100, resulting in an impairment charge of \$2,174, which was included in operating expenses for the year ended December 31, 2016. The asset was included in other current assets as of December 31, 2016.

Note 9 – Parent Financial Services and Security Agreement

The Company and its member's Parent have entered into a financial services and security agreement whereby the Parent provides cash management services to the Company in the form of short and long-term loans and investment of excess cash balances.

The Company has a short-term borrowing credit facility with its member's Parent with a borrowing limit of \$35,000. Interest on short-term notes payable are based on the rate per annum equal to the lender's weighted average daily cost of funds, 1.89 percent at December 31, 2017. There were no outstanding borrowings at December 31, 2017, 2016, and 2015. The Company's advances to the member's Parent at December 31, 2017, 2016, and 2015 were \$49,357, \$79,339, and \$44,870, respectively, and meet the criteria for a cash equivalent and have been included as such in the consolidated balance sheets.

The Company also has a long-term borrowing credit facility with its member's Parent with a borrowing limit of \$45,000. Interest on long-term notes payable is based on the rate per annum equal to the lender's weighted average rate of its bonds, 4.35 percent at December 31, 2017, and due monthly. At December 31, 2016 and 2015, the Company had outstanding long-term borrowings of \$45,000. There were no outstanding long-term borrowings under this credit facility at December 31, 2017.

Note 10 – Income Taxes

The limited liability companies (LLCs) are not tax-paying entities for income tax purposes. Income from the LLCs is taxed to its member (Vectren Corporation) on its corporate return; therefore, there is no tax provision provided on income for the LLCs.

Management evaluated the Company's uncertain tax positions and concluded that the Company had taken no uncertain tax positions that require adjustment to the consolidated financial statements.

ENERGY SYSTEMS GROUP, LLC AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 2017, 2016, and 2015

(In thousands)

Note 11 – Employee Incentive Plans

The Company has a defined contribution plan with a profit-sharing component for all employees. Discretionary profit-sharing contributions to the plan are made when certain conditions are met. Additionally, employees are auto enrolled in the defined contribution plan at five percent, unless they affirmatively elect not to participate, a portion of which is matched by the Company. The Company's contribution for the three years ended December 31, 2017, 2016, and 2015 was \$3,684, \$3,299, and \$2,951, respectively.

Note 12 – Related Party Transactions

At December 31, 2017, 2016, and 2015, the Company had a short-term net receivable due from its member's Parent of \$1,652, \$603, and \$37, respectively.

At December 31, 2017, there were no long-term note payable amounts outstanding. At December 31, 2016 and 2015, the Company had long-term notes payable to affiliate of \$45,000.

For the years ended December 31, 2017, 2016, and 2015, the Company had net related party interest income (expense) of \$225, (\$1,715), and (\$585), respectively.

The member's Parent provides certain services for which the Company is not charged.

ENERGY SYSTEMS GROUP, LLC AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS December 31, 2017, 2016, and 2015

(In thousands)

Note 13 – Leases

The Company leases certain property and equipment under noncancelable operating lease agreements expiring on various dates through 2027. At December 31, 2017, aggregate future minimum rental payments required under the noncancelable operating leases are as follows:

<u>Years Ending December 31,</u>	
2018	\$ 1,375
2019	1,124
2020	916
2021	731
2022	690
Thereafter	<u>3,046</u>
	<u>\$ 7,882</u>

Total rental expense under all operating leases for the three years ended December 31, 2017, 2016, and 2015 was \$1,679, \$1,485, and \$1,553, respectively.

Note 14 – Major Customers and Large Contracts and Accounts Receivable

Major customers and large contracts and accounts receivable are those greater than ten percent of the respective total.

During the year ended December 31, 2017, the Company had two major customers from which revenues totaled \$72,960. During the years ended December 31, 2016 and 2015, the Company had one major customer from which revenues totaled \$28,675 and \$23,800, respectively.

At December 31, 2017 and 2016, large contracts receivable balances from two customers totaled \$5,890 and \$12,025, respectively. At December 31, 2015, large contracts receivable balances from one customer totaled \$4,181.

Banking Reference:

Fifth/Third
PO Box 778
Evansville, IN
47705-0778

Contact: Jennifer Raibley
Phone: (812) 456-3812
General Acct: 101480880

Trade References:

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Phone: (513) 563-4911
Fax: (513) 563-5017

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433 North 36th Street
Lafayette, Indiana 47905
Phone: (765) 446-2343
Fax: (661) 825-8895

Columbia Pipe & Supply Co
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Chicago, IL 60673-1236
Phone: (888) 361-4700
Fax: (773) 927-8415

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Fax: (630) 834-9427

Office Depot
PO Box 30292
Salt Lake City UT 84130-0292
Phone: (800) 729-7744
Fax: (801) 779-7425

Solar Turbines Inc.
PO Box 85376
San Diego, CA 92186-5376
Phone: (630) 527-1700
Fax: (858) 694-6891

The Trane Company
Attn: Chris Dayton
3600 Pammel Creek Road
LaCrosse, WI 54601
Phone: (608) 787-4346
Fax: (608) 787-2409

WW Grainger Inc.
Dept 272-
839447653 Acct #
Palatine IL 60038-0001 Phone:
(847) 793-5200
Fax: (847) 647-2060

Section 1: 10-K (10-K)

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES
EXCHANGE ACT OF 1934

For the fiscal year ended **December 31, 2017**

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES
EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission file number: **1-15467**

VECTREN CORPORATION

(Exact name of registrant as specified in its charter)



INDIANA

(State or other jurisdiction of incorporation or organization)

35-2086905

(IRS Employer Identification No.)

One Vectren Square

(Address of principal executive offices)

47708

(Zip Code)

Registrant's telephone number, including area code: **812-491-4000**

Securities registered pursuant to Section 12(b) of the Act:

Title of each class

Name of each exchange on which registered

Securities registered pursuant to Section 12(g) of the Act: **NONE**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer

Accelerated filer

Non-accelerated filer
(Do not check if a smaller reporting company)

Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).
Yes No

The aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold, or the average bid and asked price of such common equity, as of June 30, 2017, was \$4,842,190,088.

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date.

Common Stock - Without Par Value

Class

83,040,212

Number of Shares

January 31, 2018

Date

Documents Incorporated by Reference

Certain information in the Company's definitive Proxy Statement for the 2018 Annual Meeting of Shareholders, which will be filed with the Securities and Exchange Commission pursuant to Regulation 14A, not later than 120 days after the end of the fiscal year, is incorporated by reference in Part III of this Form 10-K.

Definitions

Administration: President Trump's Administration

IRP: Integrated Resource Plan

AFUDC: allowance for funds used during construction	kV: Kilovolt
ASC: Accounting Standards Codification	MDth / MMDth: thousands / millions of dekatherms
ASU: Accounting Standards Update	MISO: Midcontinent Independent System Operator
BTU / MMBTU: British thermal units / millions of BTU	MCF / BCF: thousands / billions of cubic feet
DOT: Department of Transportation	MW: megawatts
EPA: Environmental Protection Agency	MWh / GWh: megawatt hours / thousands of megawatt hours (gigawatt hours)
FAC: Fuel Adjustment Clause	NERC: North American Electric Reliability Corporation
FASB: Financial Accounting Standards Board	OCC: Ohio Office of the Consumer Counselor
FERC: Federal Energy Regulatory Commission	OUCC: Indiana Office of the Utility Consumer Counselor
GAAP: Generally Accepted Accounting Principles	PHMSA: Pipeline and Hazardous Materials Safety Administration
GCA: Gas Cost Adjustment	PUCO: Public Utilities Commission of Ohio
IURC: Indiana Utility Regulatory Commission	TCJA: Tax Cuts and Jobs Act
IRC: Internal Revenue Code	Throughput: combined gas sales and gas transportation volumes
IDEM: Indiana Department of Environmental Management	XBRL: eXtensible Business Reporting Language

Access to Information

Vectren Corporation makes available all SEC filings and recent annual reports free of charge through its website at www.vectren.com as soon as reasonably practicable after electronically filing or furnishing the reports to the SEC, or by request, directed to Investor Relations at the mailing address, phone number, or email address that follows:

Mailing Address:
One Vectren Square
Evansville, Indiana 47708

Phone Number:
(812) 491-4000

Investor Relations Contact:
David E. Parker
Director, Investor Relations
vvcir@vectren.com

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PART I

ITEM 1. BUSINESS

Description of the Business

Vectren Corporation (the Company or Vectren), an Indiana corporation, is an energy holding company headquartered in Evansville, Indiana. The Company's wholly owned subsidiary, Vectren Utility Holdings, Inc. (Utility Holdings or VUHI), serves as the intermediate holding company for three public utilities: Indiana Gas Company, Inc. (Indiana Gas or Vectren Energy Delivery of Indiana - North), Southern Indiana Gas and Electric Company (SIGECO or Vectren Energy Delivery of Indiana - South), and Vectren Energy Delivery of Ohio, Inc. (VEDO). Utility Holdings also has other assets that provide information technology and other services to the three utilities. Utility Holdings' consolidated operations are collectively referred to as the Utility Group. Both Vectren and Utility Holdings are holding companies as defined by the Energy Policy Act of 2005. Vectren was incorporated under the laws of Indiana on June 10, 1999.

Indiana Gas provides energy delivery services to approximately 592,400 natural gas customers located in central and southern Indiana. SIGECO provides energy delivery services to approximately 145,200 electric customers and approximately 111,500 gas customers located near Evansville in southwestern Indiana. SIGECO also owns and operates electric generation assets to serve its electric customers and optimizes those assets in the wholesale power market. Indiana Gas and SIGECO generally do business as Vectren Energy Delivery of Indiana. VEDO provides energy delivery services to approximately 318,100 natural gas customers located near Dayton in west-central Ohio.

The Company, through Vectren Enterprises, Inc. (Enterprises), is involved in nonutility activities in two primary business areas: Infrastructure Services and Energy Services. Infrastructure Services provides underground pipeline construction and repair services. Energy Services provides energy performance contracting and sustainable infrastructure, such as renewables, distributed generation, and combined heat and power projects. Enterprises also has other legacy businesses that have investments in energy-related opportunities and services and other investments. All of the above is collectively referred to as the Nonutility Group. Enterprises supports the Company's regulated utilities by providing infrastructure services.

Narrative Description of the Business

The Company segregates its operations into three groups: the Utility Group, the Nonutility Group, and Corporate and Other. At December 31, 2017, the Company had \$6.2 billion in total assets, with \$5.5 billion attributed to the Utility Group, and \$0.7 billion attributed to the Nonutility Group. Net income for the year ended December 31, 2017, was \$216.0 million, or \$2.60 per share of common stock, with net income of \$175.8 million attributed to the Utility Group, \$41.1 million attributed to the Nonutility Group, and a net loss of \$0.9 million attributed to Corporate and Other. Net income for the year ended December 31, 2016, was \$211.6 million, or \$2.55 per share of common stock. For further information regarding the activities and assets of operating segments within these Groups, refer to Note 20 in the Company's Consolidated Financial Statements included in Item 8. Following is a more detailed description of the Utility Group and Nonutility Group.

Utility Group

The Utility Group consists of the Company's regulated operations and other operations that provide information technology and other support services to those regulated operations. The Company segregates its regulated operations between a Gas Utility Services operating segment and an Electric Utility Services operating segment. The Gas Utility Services segment includes the operations of Indiana Gas, VEDO, and SIGECO's natural gas distribution business and provides natural gas distribution and transportation services to nearly two-thirds of Indiana and about 20 percent of Ohio, primarily in the west-central area. The Electric Utility Services segment includes the operations of SIGECO's electric transmission and distribution services, which provides electric transmission and distribution services to southwestern Indiana, and includes its power generating and wholesale power operations. In total, these regulated operations supply natural gas and electricity to over one million customers. Following is a more detailed description of the Utility Group's Gas Utility and Electric Utility operating segments.

Gas Utility Services

In 2017, the Company supplied natural gas service to approximately 1,022,000 Indiana and Ohio customers, including 934,800 residential, 85,500 commercial, and 1,700 industrial and other contract customers. Gas utility customers served were approximately 1,014,000 in 2016 and 1,004,800 in 2015.

The Company's service area contains diversified manufacturing and agriculture-related enterprises. The principal industries served include automotive assembly, parts and accessories; feed, flour and grain processing; metal castings, plastic products; gypsum products; electrical equipment, metal specialties, glass and steel finishing; pharmaceutical and nutritional products; gasoline and oil products; ethanol; and coal mining. The largest Indiana communities served are Evansville, Bloomington, Terre Haute, suburban areas surrounding Indianapolis and Indiana counties near Louisville, Kentucky. The largest community served outside of Indiana is Dayton, Ohio.

Revenues

The Company receives gas revenues by selling gas directly to customers at approved rates or by transporting gas through its pipelines at approved rates to customers that have purchased gas directly from other producers, brokers, or marketers. Total throughput was 219.3 MMDth for the year ended December 31, 2017. Gas sold and transported to residential and commercial customers was 97.1 MMDth representing 44 percent of throughput. Gas transported or sold to industrial and other contract customers was 122.2 MMDth representing 56 percent of throughput.

For the year ended December 31, 2017, gas utility revenues were \$812.7 million, of which residential customers accounted for 67 percent and commercial accounted for 22 percent. Industrial and other contract customers accounted for 11 percent of revenues. Rates for transporting gas generally provide for the same margins earned by selling gas under applicable sales tariffs.

Availability of Natural Gas

The volumes of gas sold are seasonal and affected by variations in weather conditions. To meet seasonal demand, the Company's Indiana gas utilities have storage capacity at eight active underground gas storage fields and three propane plants. Periodically, purchased natural gas is injected into storage. The injected gas is then available to supplement contracted and manufactured volumes during periods of peak requirements. The volumes of gas per day that can be delivered during peak demand periods for each utility are located in "Item 2 Properties."

Natural Gas Purchasing Activity in Indiana

The Indiana utilities enter into short-term and long-term contracts with third party suppliers to purchase natural gas. Certain contracts are firm commitments under five and ten-year arrangements. During 2017, the Company, through its utility subsidiaries, purchased all of its gas supply from third parties and 67 percent was from a single third party.

Natural Gas Purchasing Activity in Ohio

On April 30, 2008, the PUCO issued an order which approved an exit from the merchant function in the Company's Ohio service territory. As a result, substantially all of the Company's Ohio customers purchase natural gas directly from retail gas marketers rather than from the Company. Exiting the merchant function has not had a material impact on earnings or financial condition.

Total Natural Gas Purchased Volumes

In 2017, Utility Holdings purchased 66.1 MMDth volumes of gas at an average cost of \$4.02 per Dth inclusive of demand charges. The average cost of gas per Dth purchased for the previous four years was \$3.75 in 2016, \$3.96 in 2015, \$5.42 in 2014, and \$4.60 in 2013.

Electric Utility Services

In 2017, the Company supplied electric service to approximately 145,200 Indiana customers, including approximately 126,400 residential, 18,600 commercial, and 200 industrial and other customers. Electric utility customers served were approximately 144,400 in 2016 and 143,600 in 2015.

The principal industries served include plastic products; automotive assembly and steel finishing; pharmaceutical and nutritional products; automotive glass; gasoline and oil products; ethanol; and coal mining.

Revenues

For the year ended December 31, 2017, retail electricity sales totaled 4,757.6 GWh, resulting in revenues of approximately \$527.2 million. Residential customers accounted for 38 percent of 2017 revenues; commercial 29 percent; industrial 31 percent; and other 2 percent. In addition, in 2017 the Company sold 463.2 GWh through wholesale activities principally to the Midcontinent Independent System Operator (MISO). Wholesale revenues, including transmission-related revenue, totaled \$42.4 million in 2017.

System Load

Total load for each of the years 2013 through 2017 at the time of the system summer peak, and the related reserve margin, is presented below in MW.

Date of summer peak load	7/21/2017	6/22/2016	7/29/2015	8/27/2014	8/30/2013
Total load at peak	1,042	1,096	1,088	1,095	1,102
Generating capability	1,248	1,248	1,248	1,298	1,298
Purchase supply (effective capacity)	36	37	37	38	38
Interruptible contracts & direct load control	53	75	72	71	48
Total power supply capacity	1,337	1,360	1,357	1,407	1,384
Reserve margin at peak	28%	24%	25%	22%	25%

The winter peak load for the 2016-2017 season of approximately 822 MW occurred on December 15, 2016. The prior year winter peak load for the 2015-2016 season was approximately 868 MW, occurring on January 13, 2016.

Generating Capability

Installed generating capability as of December 31, 2017, was rated at 1,248 MW. Coal-fired generating units provide 1,000 MW of capacity, natural gas or oil-fired turbines used for peaking or emergency conditions provide 245 MW, and a landfill gas electric generation project provides 3 MW. Electric generation for 2017 was fueled by coal (97 percent), natural gas (2 percent), and landfill gas (less than 1 percent). Oil was used only for testing of gas/oil-fired peaking units. The Company generated approximately 4,578 GWh in 2017. Further information about the Company's owned generation is included in "Item 2 Properties."

Coal for coal-fired generating stations has been supplied from operators of nearby coal mines as there are substantial coal reserves in the southern Indiana area. Approximately 2.1 million tons were purchased for generating electricity during 2017. This compares to 1.9 million tons and 2.5 million tons purchased in 2016 and 2015, respectively. The utility's coal inventory was approximately 800 thousand tons at both December 31, 2017 and 2016.

Coal Purchases

The average cost of coal per ton purchased and delivered for the last five years was \$53.88 in 2017, \$54.24 in 2016, \$55.22 in 2015, \$55.18 in 2014, and \$58.38 in 2013. Entering 2014, SIGECO had in place staggered term coal contracts with Vectren Fuels and one other supplier to provide supply for its generating units. During 2014, SIGECO entered into separate negotiations with Vectren Fuels and Sunrise Coal, LLC (Sunrise Coal), an Indiana-based wholly owned subsidiary of Hallador Energy Company, to modify its existing contracts as well as enter into new long-term contracts in order to secure its supply of coal with specifications that support its compliance with the Mercury and Air Toxins Rule. Subsequent to the sale of Vectren Fuels to Sunrise Coal in August 2014, all such contracts were assigned to Sunrise Coal and the Company purchases substantially all of its coal from Sunrise Coal.

Firm Purchase Supply

As part of its power portfolio, SIGECO is a 1.5 percent shareholder in the Ohio Valley Electric Corporation (OVEC), and based on its participation in the Inter-Company Power Agreement (ICPA) between OVEC and its shareholder companies, many of whom are regulated electric utilities, SIGECO has the right to 1.5 percent of OVEC's generating capacity output, which is approximately 32 MWs. Per the ICPA, SIGECO is charged demand charges which are based on OVEC's operating expenses, including its financing costs. Those demand charges are available to pass through to customers under SIGECO's fuel adjustment clause. Under the ICPA, and while OVEC's plants are operating, SIGECO is severally responsible for its share of OVEC's debt obligations. Based on OVEC's current financing, SIGECO's 1.5 percent share of OVEC's debt obligation equates to approximately \$21 million. Recently, due to concerns regarding the potential default of one of OVEC's shareholders that holds a 4.9 percent interest under the ICPA, Moody's downgraded OVEC to Ba1 and Standard and Poor's revised its BBB- rating outlook from stable to negative. OVEC has represented it has both liquidity and financing capability that will allow it to continue to operate and provide power to its participating members, who include American Electric Power, Duke Energy, and PPL Corporation. In 2017, the Company purchased approximately 141 GWh from OVEC. If a default were to occur by a member, any reallocation of the existing debt requires consent of the remaining ICPA participants. If any such reallocation were to occur, SIGECO would expect to recover any related costs through the fuel adjustment clause, as it does currently for its 1.5 percent share.

In April 2008, the Company executed a capacity contract with Benton County Wind Farm, LLC to purchase as much as 30 MW from a wind farm located in Benton County, Indiana, with IURC approval. The contract expires in 2029. In 2017, the Company purchased approximately 78 GWh under this contract.

In December 2009, the Company executed a 20 year power purchase agreement with Fowler Ridge II Wind Farm, LLC to purchase as much as 50 MW of energy from a wind farm located in Benton and Tippecanoe Counties in Indiana, with the approval of the IURC. In 2017, the Company purchased 142 GWh under this contract. In total, wind resources provided 4 percent of total GWh sourced.

MISO Related Activity

The Company is a member of the MISO, a FERC approved regional transmission organization. The MISO serves the electric transmission needs of much of the Midcontinent region and maintains operational control over the Company's electric transmission facilities as well as other utilities in the region. The Company is an active participant in the MISO energy markets,

where it bids its generation into the Day Ahead and Real Time markets and procures power for its retail customers at Locational Marginal Pricing (LMP) as determined by the MISO market. MISO-related purchase and sale transactions are recorded using settlement information provided by the MISO. These purchase and sale transactions are accounted for on a net hourly position. Net purchases in a single hour are recorded as purchased power in *Cost of fuel & purchased power* and net sales in a single hour are recorded in *Electric utility revenues*. During 2017, in hours when purchases from the MISO were in excess of generation sold to the MISO, the net purchases were 494 GWh. During 2017, in hours when sales to the MISO were in excess of purchases from the MISO, the net sales were 463 GWh.

Interconnections

The Company has interconnections with Louisville Gas and Electric Company, Duke Energy Shared Services, Inc., Indianapolis Power & Light Company, Hoosier Energy Rural Electric Cooperative, Inc., and Big Rivers Electric Corporation providing the ability to simultaneously interchange approximately 900 MW during peak load periods. The Company, as required as a member of the MISO, has turned over operational control of the interchange facilities and its own transmission assets to the MISO. The Company in conjunction with the MISO must operate the bulk electric transmission system in accordance with NERC Reliability Standards. As a result, interchange capability varies based on regional transmission system configuration, generation dispatch, seasonal facility ratings, and other factors. The Company is in compliance with reliability standards promulgated by the NERC. Additionally, the Company is audited against those standards from time to time with no material issues or findings to date.

Competition

See a discussion on competition within the utility industry in "Item 1A Risk Factors, Utility Operating Risks" which is incorporated by reference herein.

Regulatory, Environmental, and Sustainability Matters

See "Item 7 Management's Discussion and Analysis of Results of Operations and Financial Condition" regarding the Company's regulatory environment, environmental, and sustainability matters.

Nonutility Group

The Company is involved in nonutility activities in two primary business areas: Infrastructure Services and Energy Services.

Infrastructure Services

Infrastructure Services provides underground pipeline construction and repair services through wholly owned subsidiaries Miller Pipeline, LLC (Miller or Miller Pipeline) and Minnesota Limited, LLC (Minnesota Limited). Infrastructure Services provides services to many utilities, including the Company's utilities, as well as other industries. Infrastructure Services generated approximately \$996 million in revenues for 2017, compared to \$813 million in 2016 and \$843 million in 2015.

Backlog represents the amount of revenue the Company expects to realize from work to be performed in the future on uncompleted contracts, including new contractual agreements on which work has not begun. Infrastructure Services operates primarily under two types of contracts, blanket contracts and bid contracts. Using blanket contracts, customers are not contractually committed to specific volumes of services, however the Company expects to be chosen to perform work needed by a customer in a given time frame. These contracts are typically awarded on an annual or multi-year basis. For blanket work, backlog represents an estimate of the amount of revenue that the Company expects to realize from work to be performed in the next twelve months on existing contracts or contracts the Company reasonably expects to be renewed or awarded based upon recent history or discussions with customers. Under bid contracts, customers are contractually committed to a specific service to be performed for a specific price, whether in total for a project or on a per unit basis. At December 31, 2017, Infrastructure Services had an estimated backlog of blanket contracts of \$480 million and a backlog of bid contracts of \$245 million, for a total backlog of \$725 million. The estimated backlog at December 31, 2016 was \$435 million for blanket contracts and \$290 million for bid contracts, for a total of \$725 million.

The backlog amounts above reflect estimates of revenues to be realized. Projects included in backlog can be subject to delays or cancellation as a result of regulatory requirements, adverse weather conditions, customer requirements, among other factors, which could cause actual revenue amounts to differ significantly from the estimates and revenues to be realized in periods other than originally expected.

See “Item 7 Management’s Discussion and Analysis of Results of Operations and Financial Condition” regarding additional narrative of Infrastructure Services business matters.

Energy Services

Performance-based energy contracting operations and sustainable infrastructure, such as renewables, distributed generation and combined heat and power projects, are performed through Energy Systems Group, LLC (ESG), which is a wholly owned subsidiary of the Company. ESG assists schools, hospitals, governmental facilities, and other private institutions with reducing energy and maintenance costs by upgrading their facilities with energy-efficient equipment. ESG is also involved in developing sustainable infrastructure projects. ESG operates throughout the United States. ESG generated revenues of approximately \$282 million in 2017, compared to \$260 million in 2016 and \$200 million in 2015. ESG’s backlog of fixed price construction projects at December 31, 2017 was \$180 million, compared to \$234 million at December 31, 2016.

See “Item 7 Management’s Discussion and Analysis of Results of Operations and Financial Condition” regarding additional narrative of Energy Services business matters.

Other Businesses

The Company has an investment in and loans to ProLiance Holdings, LLC (ProLiance). On June 18, 2013, ProLiance Holdings exited the natural gas marketing business through the disposition of certain of the net assets, along with the long-term pipeline and storage commitments, of its energy marketing business, ProLiance Energy, LLC to a subsidiary of Energy Transfer Partners, ETC Marketing, Ltd. The Company's remaining investment in ProLiance relates to an investment in LA Storage, LLC. Consistent with its ownership percentage, the Company is allocated 61 percent of ProLiance’s profits and losses; however, governance and voting rights remain at 50 percent for each member; and therefore, the Company accounts for its investment in ProLiance using the equity method of accounting. Additional information regarding the investment in ProLiance is included in Note 5 in the Company's Consolidated Financial Statements included in Item 8.

The Other Businesses group also includes a variety of other legacy investments. Details of these investments are included in Note 6 in the Company's Consolidated Financial Statements included in Item 8.

Personnel

As of December 31, 2017, the Company and its consolidated subsidiaries had approximately 5,500 employees. Of those employees, 700 are subject to collective bargaining arrangements negotiated by Utility Holdings and 2,800 are subject to collective bargaining arrangements negotiated by Infrastructure Services.

Utility Holdings

In July 2017, the Company reached a three-year labor agreement with Local 1393 of the International Brotherhood of Electrical Workers and United Steelworkers of America Locals 12213 and 7441, ending December 1, 2020. This labor agreement relates to employees of Indiana Gas.

In April 2016, the Company reached a three-year labor agreement with Local 702 of the International Brotherhood of Electrical Workers, ending June 30, 2019. This labor agreement relates to employees of SIGECO.

In June 2015, the Company reached a three-year agreement with Local 175 of the Utility Workers Union of America, ending October 31, 2018. This labor agreement relates to employees of VEDO.

In May 2015, the Company reached a three-year agreement with Local 135 of the Teamsters, Chauffeurs, Warehousemen, and Helpers Union, ending September 23, 2018. This labor agreement relates to employees of SIGECO.

Infrastructure Services

The Company, through its Infrastructure Services subsidiaries, negotiates various trade agreements through contractor associations. The two primary associations are the Distribution Contractors Association (DCA) and the Pipeline Contractors Association (PLCA). These trade agreements are with a variety of construction unions including Laborer's International Union of North America, International Union of Operating Engineers, United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry, and Teamsters. The trade agreements through the DCA have varying expiration dates in 2020, 2021 and 2022. The trade agreements through the PLCA expire at various times in 2020. In addition, these subsidiaries have various project agreements and small local agreements. These agreements expire upon completion of a specific project or on various dates throughout the year.

ITEM 1A. RISK FACTORS

The Company is actively engaged in long-term strategic planning through initiative assessment, development and execution. The strategic planning process consistently engages the Company's Board of Directors and is updated as the Company's strategic environment changes. The result of that process is regularly communicated to all stakeholders, including investors, through a robust Investor Relations program. Further, the Company has a strong compliance and risk management program that promotes a culture of compliance. The Company is, however, subject to a variety of risks including execution on its strategies. Investors should consider carefully the following factors that could cause the Company's operating results and financial condition to be materially adversely affected.

Corporate Risks

Vectren is a holding company, and its assets consist primarily of investments in its subsidiaries.

Dividends on the Company's common stock depend on the earnings, financial condition, capital requirements and cash flow of its subsidiaries, principally Utility Holdings and Enterprises, and the distribution or other payment of earnings from those entities to the Company. Should the earnings, financial condition, capital requirements, cash flow, or legal requirements applicable to them restrict their ability to pay dividends or make other payments to the Company, its ability to pay dividends on its common stock could be limited and its stock price could be adversely affected. The Company's results of operations, future growth, and earnings and dividend goals also will depend on the performance of its subsidiaries. Additionally, certain of the Company's lending arrangements contain restrictive covenants, including the maintenance of a total debt to total capitalization ratio.

A deterioration of current economic conditions may have adverse impacts.

Economic conditions may have some negative impact on both gas and electric industrial and commercial customers. This impact may include volatility and unpredictability in the demand for natural gas and electricity, tempered growth strategies, significant conservation measures, and perhaps plant closures, production cutbacks, or bankruptcies. Economic conditions may also cause reductions in residential and commercial customer counts and lower revenues. It is also possible that an uncertain economy could affect costs including pension costs, interest costs, and uncollectible accounts expense. Economic and commodity price declines may be accompanied by a decrease in demand for products and services offered by nonutility operations and therefore lower revenues for those products and services. The economic conditions may have some negative impact on spending for utility and pipeline construction projects, demand for natural gas, and electricity, and spending on performance contracting and sustainable infrastructure expansion. It is also possible that unfavorable conditions could lead to the impairment of Company assets, including its investment in ProLiance Holdings.

Financial market volatility could have adverse impacts.

The capital and credit markets may experience volatility and disruption. If market disruption and volatility occurs, there can be no assurance the Company will not experience adverse effects, which may be material. These effects may include, but are not limited to, difficulties in accessing the short and long-term debt capital markets and the commercial paper market, increased

borrowing costs associated with short-term debt obligations, higher interest rates in future financings, and a smaller potential pool of investors and funding sources. Finally, there is no assurance the Company will have access to the equity capital markets to obtain financing when necessary or desirable.

Change to United States laws, regulations, and policy may not have desired effects.

Policy and/or legislative changes in the areas of, among others, energy, comprehensive tax reform, environmental regulation, and/or infrastructure expenditures (including preference toward domestically sourcing expenditures) could have material impacts on the financial performance or condition of the Company. In addition, the Company’s implementation of policy changes may or may not be received favorably by the Company’s stakeholders and/or government officials advocating policy change, both of which have reputational risk.

There have been substantial changes to the Internal Revenue Code, some of which may have impacts materially different than current estimates.

On December 22, 2017, the United States government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (“the TCJA”), which significantly reforms the Internal Revenue Code (“IRC”). The estimated impact of the TCJA in these statements is based on management’s current knowledge and assumptions and recognized impacts could be different from current estimates based on actual results and further analysis of the new law.

A downgrade (or negative outlook) in or withdrawal of Vectren’s credit ratings could negatively affect its ability to access capital and its cost.

The following table shows the current ratings assigned to the Company and its rated subsidiaries by Moody’s and Standard & Poor’s:

	Current Rating	
	Moody’s	Standard & Poor’s
Vectren Corporation's corporate credit rating	not rated	A-
Utility Holdings and Indiana Gas senior unsecured debt	A2	A-
Utility Holdings commercial paper program	P-1	A-2
SIGECO’s senior secured debt	Aa3	A

The current outlook for both Moody's and Standard & Poor’s is stable. Both rating agencies categorize the ratings of the above securities as investment grade. A security rating is not a recommendation to buy, sell, or hold securities. The rating is subject to revision or withdrawal at any time, and each rating should be evaluated independently of any other rating. Standard & Poor’s and Moody’s lowest level investment grade rating is BBB- and Baa3, respectively.

If the rating agencies downgrade the Company’s credit ratings, particularly below investment grade, or initiate negative outlooks thereon, or withdraw the Company's ratings or, in each case, the ratings of its subsidiaries, it may significantly limit the Company's access to the debt capital markets and the commercial paper market, and the Company’s borrowing costs would likely increase. In addition, the Company would likely be required to pay a higher interest rate in future financings, and its potential pool of investors and funding sources would likely decrease. Finally, there is no assurance that the Company will have access to the equity capital markets to obtain financing when necessary or desirable.

The Company will need to raise capital through additional debt financing or by issuing additional equity securities.

The Company will need to raise additional capital in the future. Executing upon the Company's generation transition plan, as more fully discussed herein, will increase the need for the Company to raise additional capital. The Company may raise additional funds through public equity or debt offerings or other financings. The issuance of equity securities, including securities that are convertible into or exchangeable for, or that represent the right to receive, common stock, will dilute the value of the Company's common stock. New debt financing the Company enters into may involve covenants that restrict the Company's operations more than current outstanding debt and credit facilities. These restrictive covenants could include limitations on additional borrowings, specific restrictions on the use of the Company's assets, as well as prohibitions or limitations on the Company's ability to create liens, pay dividends, receive distributions from subsidiaries, redeem stock, or make investments. These factors could hinder the Company's access to capital markets and therefore limit or delay the Company's ability to carry out capital expenditures.

Utility Operating Risks

Vectren's gas and electric utility sales are concentrated in the Midwest.

The operations of the Company's regulated utilities are concentrated in central and southern Indiana and west-central Ohio and are therefore impacted by changes in the Midwest economy in general and changes in particular industries concentrated in the Midwest. These industries include automotive assembly, parts and accessories; feed, flour and grain processing; metal castings, plastic products; gypsum products; electrical equipment, metal specialties, glass and steel finishing; pharmaceutical and nutritional products; gasoline and oil products; ethanol; and coal mining. Changing market conditions, including changing regulation, changes in market prices of oil or other commodities, or changes in government regulation and assistance, may cause certain industrial customers to reduce or cease production and thereby decrease consumption of natural gas and/or electricity.

Vectren's regulated utilities operate in an increasingly competitive industry, which may affect its future earnings.

The utility industry has been undergoing structural change for several years, resulting in increasing competitive pressure faced by electric and gas utility companies. Increased competition, including those from cogeneration, private generation, solar, and other renewables opportunities for customers, may create greater risks to the stability of the Company's earnings generally and may in the future reduce its earnings from retail electric and gas sales. In this regard, the deployment and commercialization of technologies, such as private renewable energy sources, cogeneration facilities, and energy storage, have the potential to change the nature of the utility industry and reduce demand for the Company's electric and gas products and services. If the Company is not able to appropriately adapt to structural changes in the utility industry as a result of the development of these technologies, this may have an adverse effect on the Company's financial condition and results of operations. Additionally, several states, including Ohio, have passed legislation that allows customers to choose their electricity supplier in a competitive market. Indiana has not enacted such legislation. Ohio regulation also provides for choice of commodity providers for all gas customers. The Company has implemented this choice for its gas customers in Ohio. The state of Indiana has not adopted any regulation requiring gas choice in the Company's Indiana service territories; however, the Company operates under approved tariffs permitting certain industrial and commercial large volume customers to choose their commodity supplier. The Company cannot provide any assurance that increased competition or other changes in legislation, regulation or policies will not have a material adverse effect on its business, financial condition or results of operations.

A significant portion of Vectren's electric utility sales are space heating and cooling. Accordingly, its operating results may fluctuate with variability of weather.

The Company's electric utility sales are sensitive to variations in weather conditions. In this regard, many customers rely on electricity to heat and cool their homes and businesses and, as a result, the Company's results of operations may be adversely affected by warmer-than-normal heating season weather or colder-than-normal cooling season weather. Accordingly, demand for electricity used for heating purposes is generally at its highest during the peak heating season of October through March and is directly affected by the severity of the winter weather. The Company forecasts utility sales on the basis of normal weather. Since the Company does not have a weather-normalization mechanism for its electric operations, significant variations

from normal weather could have a material impact on its earnings. However, the impact of weather on the gas operations in the Company's Indiana territories has been significantly mitigated through the implementation of a normal temperature adjustment mechanism. Additionally, the implementation of a straight fixed variable rate design mitigates most weather variations related to Ohio residential and commercial gas sales.

Vectren's utilities are exposed to increasing regulation, including pipeline safety, environmental, and cybersecurity regulation.

The Company's utilities are subject to regulation by federal, state, and local regulatory authorities and are exposed to public policy decisions that may negatively impact the Company's earnings. In particular, the Company is subject to regulation by the FERC, the NERC, the EPA, the IURC, the PUCO, the DOT, including PHMSA, the Department of Energy (DOE), the Occupational Safety and Health Administration (OSHA), and the Department of Homeland Security (DHS). These authorities regulate many aspects of its generation, transmission and distribution operations, including construction and maintenance of facilities, operations, and safety. In addition, the IURC, the PUCO, and the FERC approve its utility-related debt and equity issuances, regulate the rates the Company's utilities can charge customers, the rate of return the Company's utilities are authorized to earn, and their ability to timely recover gas and fuel costs and investments in infrastructure. Further, there are consumer advocates and other parties that may intervene in regulatory proceedings and affect regulatory outcomes.

Trends Toward Stricter Standards

With the historical trend toward stricter standards, greater regulation, more extensive permit requirements, and an increase in the number and types of assets operated that are subject to regulation, the Company's investment in infrastructure and the associated operating costs have increased and may increase in the future.

Pipeline Safety Considerations

The Company monitors and maintains its natural gas distribution system to ensure that natural gas is delivered in a safe, efficient, and reliable manner. The Company's natural gas utilities are currently engaged in replacement programs in both Indiana and Ohio, the primary purpose of which is preventive maintenance and continual renewal and improvement. The Pipeline Safety, Regulatory Certainty and Job Creation Act of 2011 (Pipeline Safety Law) was signed into law on January 3, 2012 and on March 18, 2016 PHMSA published a notice of proposed rulemaking on the safety of gas transmission and gathering lines. The rule, expected to be finalized in 2019, addresses many of the remaining requirements of the 2011 Pipeline Safety Act, with a particular focus on extending integrity management rules to address a much larger portion of the natural gas infrastructure and adds requirements to address broader threats to the integrity of a pipeline system. In December 2016, PHMSA issued interim final rules related to integrity management for storage operations. While some compliance costs remain uncertain, these rules result in further investment in pipeline inspections, and where necessary, additional investments in pipeline and storage infrastructure. As such, the rule results in increased levels of operating expenses and capital expenditures associated with the Company's natural gas distribution and transmission systems as evidenced by recent regulatory filings and resulting Commission Orders in Indiana and Ohio for Indiana Gas, SIGECO, and VEDO.

Environmental Considerations

The Company's utility operations and properties are subject to extensive environmental regulation pursuant to a variety of federal, state, and local laws and regulations. These environmental regulations impose, among other things, restrictions, liabilities, and obligations in connection with the storage, transportation, treatment, and disposal of hazardous substances and limit airborne emissions from electric generating facilities, including particulate matter, sulfur dioxide (SO₂), nitrogen oxide (NO_x), mercury, and non-hazardous substances such as coal combustion residuals, among others. Environmental legislation/regulation also requires that facilities, sites, and other properties associated with the Company's operations be operated, maintained, abandoned, and reclaimed to the satisfaction of applicable regulatory authorities, including but not limited to a risk of potentially significant remediation costs from Company's coal ash ponds and related litigation. Once taken out of service, the Company's coal ash ponds must be closed in a manner acceptable to regulatory authorities. Ash pond remediation has been the subject of civil lawsuits for electric utilities. The Company's current costs to comply with these laws and regulations are significant to its results of operations and financial condition. Moreover, these compliance costs will substantially change the nature of the Company's generation fleet, as outlined in the Company's preferred integrated resource plan (IRP) and electric generation transition plan.

Climate Change Considerations

The Company and the State of Indiana are subject to the requirements of the Clean Power Plan (CPP) rule, which requires a 32 percent reduction in carbon emissions from 2005 levels. While implementation of the rule remains uncertain due to the U.S. Supreme Court stay that was granted in February 2016 to delay the regulation while being challenged in court and a more recent proposal from the EPA which, if finalized, would result in the repeal of the CPP, regulations as written in the final rule may substantially affect both the costs and operating characteristics of the Company's fossil fuel generating plans and natural gas distribution business. In addition to regulatory risk, the Company may be subject to climate change lawsuits which could result in substantial penalties or damages. Moreover, evolving investor sentiment related to the use of fossil fuels and initiatives to restrict continued production of fossil fuels may have substantial impacts on the Company's electric generation and natural gas distribution businesses.

Evolving Physical Security and Cybersecurity Standards and Considerations

The frequency, size and variety of physical security and cybersecurity threats against companies with critical infrastructure continues to grow, as do the evolving frameworks, standards and regulations intended to keep pace with and address these threats. There continues to be a marked increase in interest from both federal and state regulatory agencies related to physical security and cybersecurity in general, and specifically in critical infrastructure sectors, including the electric and natural gas sectors. The Company has dedicated internal and third party physical security and cybersecurity teams and maintains vigilance with regard to the communication and assessment of physical security and cybersecurity risks and the measures employed to protect information technology assets, critical infrastructure, the Company and its customers from these threats. Physical security and cybersecurity threats, however, constantly evolve in attempts to identify and capitalize on any weakness or unprotected areas. If these measures were to fail or if a breach were to occur, it could result in impairment or loss of critical functions, operating reliability, customer, or other confidential information. The ultimate effects, which are difficult to quantify with any certainty, are partially limited through insurance.

Increasing regulation and infrastructure replacement programs could affect Vectren's utility rates charged to customers, its costs, and its profitability.

Any additional expenses or capital incurred by the Company's utilities, as it relates to complying with increasing regulation and other infrastructure replacement activities are expected to be recovered from customers in its service territories through increased rates. Increased rates have an impact on the economic health of the communities served. New regulations could also negatively impact industries in the Company's service territories.

The Company's utilities' ability to obtain rate increases and to maintain current authorized rates of return depends in part on continued interpretation of laws within the current regulatory framework. There can be no assurance the Company will be able to obtain rate increases, or rate supplements, or earn currently authorized rates of return. Indiana and Ohio have passed laws allowing utilities to recover a significant amount of the costs of complying with federal mandates or other infrastructure replacement expenditures, and in Ohio, other capital investments outside of a base rate proceeding. However, these activities may have a short-term adverse impact on the Company's cash flow and financial condition.

In addition, failure to comply with new or existing laws and regulations may result in fines, penalties, or injunctive measures and may not be recoverable from customers and could result in a material adverse effect on the Company's financial condition and results of operations.

Vectren's regulated energy delivery operations are subject to various risks.

A variety of hazards and operations risks, such as leaks, accidental explosions, and mechanical problems, are inherent in the Company's gas and electric distribution and transmission activities. If such events occur, they could cause substantial financial losses and result in injury to or loss of human life, significant damage to property, environmental pollution, and impairment of operations. The location of pipelines, storage facilities, and the electric grid near populated areas, including residential areas, commercial business centers, and industrial sites, could increase the level of damages resulting from these risks. These activities may subject the Company to litigation or administrative proceedings from time to time. Such litigation or proceedings could result in substantial monetary judgments, fines, or penalties or be resolved on unfavorable terms. In accordance with customary industry practices, the Company maintains insurance against a significant portion, but not all, of these risks and

losses. To the extent the occurrence of any of these events is not fully covered by insurance, it could adversely affect the Company's financial condition and results of operations.

Vectren's regulated power supply operations are subject to various risks.

The Company's electric generating facilities are subject to operational risks that could result in unscheduled plant outages, unanticipated operation and maintenance expenses, and increased purchase power costs. Such operational risks can arise from circumstances such as facility shutdowns due to equipment failure or operator error; interruption of fuel supply or increased prices of fuel as contracts expire; disruptions in the delivery of electricity; inability to comply with regulatory or permit requirements; labor disputes; and natural disasters. Further, the Company's coal supply is purchased largely from a single, unrelated party and, although the coal supply is under long-term contract, the loss of this supplier could impact operations.

Executing the Company's electric generation transition plan is subject to various risks.

The Company's electric generation transition plan, discussed further herein, introduces the need for regulatory authority in order to provide timely recovery of new capital investments, as well as costs of retiring the current generation fleet, including decommissioning costs, costs of removal, and any remaining unrecovered costs of retired assets. Given the significance of the plan, there is inherent risk associated with the construction of new generation, including the ability to procure resources needed to build at a reasonable cost, scarcity of resources and labor, ability to appropriately estimate costs of new generation, and the effects of potential construction delays and cost overruns. As long as the plan is prudently implemented, such risks, if they materialize, would be expected to be favorably addressed through the regulatory process. Additionally, operating risks associated with the transition plan may arise such as workforce retention, development and training, and the ability to meet capacity requirements.

The Company participates in the MISO.

The Company is a member of the MISO, which serves the electric transmission needs of much of the Midcontinent region and maintains operational control over the Company's electric transmission facilities, as well as other utilities in the region. As a result of such control, the Company's continued ability to import power, when necessary, and export power to the wholesale market has been, and may continue to be, impacted.

The need to expend capital for improvements to the regional electric transmission system, both to the Company's facilities as well as to those facilities of adjacent utilities, over the next several years could be significant. The Company timely recovers its investment in certain new electric transmission projects that benefit the MISO infrastructure at a FERC approved rate of return.

Also, the MISO allocates operating costs and the cost of multi-value projects throughout the region to its participating utilities such as the Company's regulated electric utility, and such costs are significant. Adjustments to these operating costs, including adjustments that result from participants entering or leaving the MISO, could cause increases or decreases to customer bills. The Company timely recovers its portion of MISO operating expenses as tracked costs.

Volatility in the wholesale price of natural gas, coal, and electricity could reduce earnings and working capital.

The Company's regulated operations have limited exposure to commodity price risk for transactions involving purchases and sales of natural gas, coal, and purchased power for the benefit of retail customers due to current state regulations, which, subject to compliance with those regulations, allow for recovery of the cost of such purchases through natural gas and fuel cost adjustment mechanisms. However, significant volatility in the price of natural gas, coal, or purchased power may cause existing customers to conserve or motivate them to switch to alternate sources of energy as well as cause new home developers, builders, and new customers to select alternative sources of energy. Decreases in volumes sold could reduce earnings. The decrease would be more significant in the absence of constructive regulatory orders, such as those authorizing revenue decoupling, lost margin recovery, and other innovative rate designs. A decline in new customers could impede growth in future earnings. In addition, during periods when commodity prices are higher than historical levels, working capital costs could increase due to higher carrying costs of inventories and cost recovery mechanisms, and customers may have trouble paying

higher bills leading to increased bad debt expenses. Additionally, significant oil price fluctuations and impact on the ability to continue shale gas drilling may impact the price of natural gas and purchased power.

Increased conservation efforts and technology advances, which result in improved energy efficiency or the development of alternative energy sources, may result in reduced demand for the Company's energy products and services.

The trend toward increased conservation and technological advances, including installation of improved insulation and the development of more efficient furnaces and air conditioners and other heating and cooling devices as well as lighting, may reduce the demand for energy products. Prices for natural gas are subject to fluctuations in response to changes in supply and other market conditions. During periods of high energy commodity costs, the Company's prices generally increase, which may lead to customer conservation. Federal and state regulation may require mandatory conservation measures, which would reduce the demand for energy products. Certain federal or state regulation may also impose restrictions on building construction and design in efforts to increase conservation which may reduce demand for natural gas and electricity. In addition, the Company's customers, especially large commercial and industrial customers, may choose to employ various technological advances to develop alternative energy sources, such as the construction and development of wind power, solar technology, or electric cogeneration facilities. Increased conservation efforts and the utilization of technological advances to increase energy efficiency or to develop alternate energy sources could lead to a reduction in demand for the Company's energy products and services, which could have an adverse effect on its revenues and overall results of operations. Similar to many states, Indiana has permitted small customers to engage in net metering for several years. In 2017, the Indiana Legislature passed a bill that provided for the phase out of subsidies being provided to those customers. The Company has experienced some growth in these applications, but the overall level of net metering on its system remains relatively low.

Nonutility Operating Risks

The performance of Vectren's nonutility businesses is subject to certain risks.

Execution of the Company's nonutility business strategies and the success of efforts to invest in and develop new opportunities in the nonutility business area are subject to a number of risks. These risks include, but are not limited to, the effects of weather; changing market conditions, including changes in market prices for various forms of energy; failure of installed performance contracting products to operate as planned; failure to properly estimate the cost to construct projects; loss of key management and knowledge-based employees, including the inability to attract and retain qualified employees; the inability to effectively maintain regulatory compliance programs; potential legislation or regulations that may limit CO₂ and other greenhouse gas emissions; operating accidents that may require environmental remediation; creditworthiness of customers and joint venture partners; changes in federal, state or local legal and regulatory requirements, such as changes in tax laws or rates; and environmental or cybersecurity regulations.

The Company's nonutility businesses support its regulated utilities pursuant to service contracts by providing infrastructure services. In most instances, the Company's ability to maintain these service contracts depends upon regulatory discretion, and there can be no assurance it will be able to obtain future service contracts, or that existing arrangements will not be revisited.

Nonutility infrastructure services operations could be adversely affected by a number of factors.

Infrastructure Services results are dependent on a number of factors. The industry is competitive and contracts are subject to a bidding process. Should Infrastructure Services be unsuccessful in bidding contracts, results of operations could be impacted. Infrastructure Services enters into a variety of contracts, some of which are fixed price. Through competitive bidding, the volume of contracted work could vary significantly from year to year. Further, to the extent there are unanticipated cost increases in completion of the contracted work, the profit margin realized on any single project could be reduced. Additionally, Infrastructure Services contributes to several multiemployer pension plans under collective bargaining agreements with unions representing employees covered by those agreements. A significant increase to the funding requirements could adversely impact financial condition, results of operations, and cash flows. Changes in legislation and regulations impacting the sectors in which the customers served by Infrastructure Services operate could impact operating results. Other risks include, but are not limited to: failure to properly construct pipeline infrastructure; cancellation of projects by customers and/or reductions in the scope of the projects; changes in the timing of projects; the inability to obtain materials and equipment required to perform

services from suppliers and manufacturers; and changes in the market prices of oil and natural gas that would affect the demand for infrastructure construction and/or the project margin realized on projects.

Nonutility energy services operations could be adversely affected by a number of factors.

Energy Services results are dependent on a number of factors. The industry is competitive and many of the contracts are subject to a bidding process. Should Energy Services be unsuccessful in bidding contracts for certain federal Indefinite Delivery/Indefinite Quantity (IDIQ) contracts, results of operations could be impacted. Through competitive bidding, the volume of contracted work could vary significantly from year to year. Further, to the extent there are unanticipated cost increases in completion of the contracted work, the profit margin realized on any single project could be reduced. Changes in legislation, regulations and government policies impacting the customers served by Energy Services, could impact operating results. Other risks include, but are not limited to: continuation of the federal Energy Savings Performance Contracting (ESPC) and Utility Energy Services Contract (UESC) programs; the inability of customers to finance projects; risks associated with projects owned or operated; failure to appropriately design, construct, or operate projects; and cancellation of projects by customers and/or reductions in the scope of the projects.

Other Corporate Operating Risks

Vectren is exposed to physical and financial risks related to the uncertainty of climate change.

A changing climate creates uncertainty and could result in broad changes, both physical and financial in nature, to the Company's service territories. These impacts could include, but are not limited to, population shifts; changes in the level of annual rainfall; changes in the overall average temperature; and changes to the frequency and severity of weather events such as thunderstorms, wind, tornadoes, and ice storms that can damage infrastructure. Such changes could impact the Company in a number of ways including the number and type of customers in the Company's service territories; an increase to the cost of providing service; an increase in the amount of service interruptions; impacts to the Company's workforce; and an increase in the likelihood of capital expenditures to replace damaged infrastructure.

To the extent climate change impacts a region's economic health, it may also impact the Company's revenues, costs, and capital structure and thus the need for changes to rates charged to regulated customers. Rate changes themselves can impact the economic health of the communities served and may in turn adversely affect the Company's operating results. Customers' energy needs vary with weather conditions. To the extent weather conditions are affected by climate change, customers' energy use could increase or decrease. Increased energy use due to weather changes may require additional generating resources, transmission, and other infrastructure to serve increased load. Decreased energy use may require the Company to retire current infrastructure that is no longer needed.

In Note 18 of the Company's Consolidated Financial Statements included in Item 8, the Company discusses the upcoming 2018 sustainability report, which discusses in greater detail the Company's climate change and carbon strategy.

Vectren's nonutility operations have performance and warranty obligations, some of which are guaranteed by Vectren.

In the normal course of business, certain subsidiaries of the Company issue performance bonds and other forms of assurance that commit them to timely install infrastructure, operate facilities, pay vendors or subcontractors, and support warranty obligations. Vectren Corporation, as the parent company, will from time to time guarantee its subsidiaries' commitments. These guarantees do not represent incremental consolidated obligations; rather, they represent parental guarantees of subsidiary obligations in order to allow those subsidiaries the flexibility to conduct business without posting other forms of collateral. The Company has not been called upon to satisfy any obligations pursuant to these parental guarantees.

Vectren's nonutility operations face a customer concentration risk.

From time to time, revenues and total outstanding receivables from various customers of Infrastructure Services may individually account for more than 5 percent of the Company's consolidated operating revenues and receivables, respectively. While the Company believes that the loss of any one customer would not have a material impact on its financial position or results of

operations, the loss of a customer of this significance or a significant decline in related customer revenues could have an adverse effect on the results of operations and cash flows of Infrastructure Services.

From time to time, Vectren is subject to material litigation and regulatory proceedings.

From time to time, the Company may be subject to material litigation and regulatory proceedings, including matters involving compliance with federal and state laws, regulations or other matters. There can be no assurance that the outcome of these matters will not have a material adverse effect on the Company's business, prospects, corporate reputation, results of operations, or financial condition.

The investment performance of pension plan holdings and other factors impacting pension plan costs could impact Vectren's liquidity and results of operations.

The costs associated with the Company sponsored retirement plans, including certain multiemployer plans at Infrastructure Services, are dependent on a number of factors, such as the rates of return on plan assets; discount rates; the level of interest rates used to measure funding levels; changes in actuarial assumptions including assumed mortality; future government regulations; changes in plan design, and Company contributions. In addition, the Company could be required to provide for significant funding of these defined benefit pension plans. Such cash funding obligations could have a material impact on liquidity by reducing cash flows for other purposes and could negatively affect results of operations.

Catastrophic events, such as terrorist attacks, acts of civil unrest, and acts of God, may adversely affect Vectren's facilities and operations, corporate reputation, financial condition and results from operations.

Catastrophic events such as fires, earthquakes, explosions, floods, ice storms, tornadoes, terrorist acts, cyber attacks or similar occurrences could adversely affect the Company's facilities, operations, corporate reputation, financial condition and results of operations. Either a direct act against Company-owned generating facilities or transmission and distribution infrastructure or an act against the infrastructure of neighboring utilities or interstate pipelines that are used by the Company to transport power and natural gas could result in the Company being unable to deliver natural gas or electricity for a prolonged period. Additionally, an act against the Company's nonutility businesses could result in the Company being unable to provide utility infrastructure services, performance-based energy contracting services, or sustainable infrastructure services. In the event of a severe disruption resulting from such events, the Company has contingency plans and employs crisis management to respond and recover operations. Despite these measures, if such an occurrence were to occur, results of operations and financial condition could be materially adversely affected.

Cyber attacks or similar occurrences may adversely affect Vectren's facilities, operations, corporate reputation, financial condition and results of operations.

The Company relies on information technology networks, telecommunications, and systems to, among other things, 1) operate its generating facilities; 2) engage in asset management and customer service activities; 3) process, transmit and store sensitive electronic information including intellectual property, proprietary business information and that of the Company's suppliers and business partners, personally identifiable information of customers and employees, and data with respect to invoicing and the collection of payments, accounting, procurement, and supply chain activities, and 4) process financial information and results of operations for internal reporting purposes and to comply with financial reporting, legal, and tax requirements. Despite the Company's security measures, any information technology system may be vulnerable to attacks by hackers or breached due to malfeasance, employee error, sabotage, or other disruptions. Security breaches, extended outage or general disruption of this information technology infrastructure could lead to system disruptions, business interruption, generating facility shutdowns or unauthorized disclosure of confidential information. In particular, any data loss or information security lapses resulting in the compromise of personal information or the improper use or disclosure of sensitive or classified information could result in claims, remediation costs, regulatory sanctions against the Company, loss of current and future contracts, and serious harm to the Company's reputation. While the Company has implemented policies, procedures, protective technologies, and controls to prevent and detect these activities, not all disruptions and misconduct may be prevented. In the event of a severe infrastructure system disruption or generating facility shutdown resulting from such events, the Company has contingency plans and employs crisis management to respond and recover operations. Despite these measures, if such an attack or security breach were to

occur, results of operations and financial condition could be materially adversely affected. The ultimate effects, which are difficult to quantify with any certainty, are partially limited through insurance.

Workforce risks could affect Vectren's financial results.

The Company is subject to various workforce risks, including but not limited to, the risk that it will be unable to 1) attract and retain qualified and diverse personnel; 2) effectively transfer the knowledge and expertise of an aging workforce to new personnel as those workers retire; 3) react to a pandemic illness; 4) manage the migration to more defined contribution employee benefit packages; and 5) that it will be unable to reach collective bargaining arrangements with the unions that represent certain of its workers, which could result in work stoppages.

Vectren's ability to effectively manage its third party contractors, agents, and business partners could have a significant impact on the Company's business and reputation.

The Company relies on third party contractors and other agents and business partners to perform some of the services provided to its customers, as well as assist with the monitoring of physical security and cybersecurity functions. Any misconduct by these third parties, or the Company's inability to properly manage them, could adversely impact the provision of services to customers and the quality of services provided. Misconduct could include fraud or other improper activities, such as falsifying records and violations of laws. Other examples could include the failure to comply with the Company's policies and procedures or with government procurement regulations, regulations regarding the use and safeguarding of classified or other protected information, legislation regarding the pricing of labor and other costs in government contracts, laws and regulations relating to environmental, health or safety matters, lobbying or similar activities, and any other applicable laws or regulations. Any data loss or information security lapses resulting in the compromise of personal information or the improper use or disclosure of sensitive or classified information could result in claims, remediation costs, regulatory sanctions against the Company, loss of current and future contracts, and serious harm to its reputation. Although the Company has implemented policies, procedures, and controls to prevent and detect these activities, these precautions may not prevent all misconduct, and as a result, the Company could face unknown risks or losses. The Company's failure to comply with applicable laws or regulations or misconduct by any of its contractors, agents, or business partners could damage its reputation and subject it to fines and penalties, restitution or other damages, loss of current and future customer contracts and suspension or debarment from contracting with federal, state or local government agencies, any of which would adversely affect the business and future results.

Vectren may not have adequate insurance coverage for all potential liabilities.

Natural risks, as well as other hazards associated with the Company's operations, can cause significant personal injury or loss of life, severe damage to and destruction of property, plant and equipment, contamination of, or damage to, the environment and suspension of operations. The Company maintains an amount of insurance protection management believes is appropriate, but there can be no assurance that the amount of insurance will be sufficient or effective under all circumstances and against all hazards or liabilities to which the Company may be subject. A claim for which the Company is not adequately insured could materially harm the Company's financial condition. Further, due to the cyclical nature of the insurance markets, management cannot provide assurance that insurance coverage will continue to be available on terms similar to those presently in place.

Emerging technologies may create disruption to utility services.

New and emerging technology may enable new approaches or choices for capacity and energy services that pressure or even disrupt how utilities provide services. Commercial technologies that successfully advance "electrifying" aspects of the economy such as transportation or space heating could negatively impact the demand for the Company's utility natural gas delivery and nonutility infrastructure services business. The Company may be unable to quickly adapt to rapid change resulting from artificial intelligence, blockchain, Internet of Things (IoT) and other advanced technologies that may result in a reduction in demand for utility services or disruptive changes for how customers select their energy sources. The Company's inclusion of fossil fuels in its portfolio may be viewed by some customers and capital markets as reason to select other energy options which new technology may enable.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Gas Utility Services

Indiana Gas owns and operates five active gas storage fields located in Indiana covering 61,124 acres of land with an estimated ready delivery from storage capability of 6.79 BCF of gas with maximum peak day delivery capabilities of 164,000 MCF per day. Indiana Gas also owns and operates three liquified petroleum (propane) air-gas manufacturing plants located in Indiana with the ability to store 1.5 million gallons of propane and manufacture for delivery of 33,000 MCF of manufactured gas per day. In addition to its company-owned storage and propane capabilities, Indiana Gas has 15.1 BCF of interstate natural gas pipeline storage service with a maximum peak day delivery capability of 230,000 MMBTU per day. Indiana Gas' gas delivery system includes approximately 13,200 miles of distribution and transmission mains, all of which are in Indiana except for pipeline facilities extending from points in northern Kentucky to points in southern Indiana so that gas may be transported to Indiana and sold or transported by Indiana Gas to customers in Indiana.

SIGECO owns and operates three active underground gas storage fields located in Indiana covering 6,100 acres of land with an estimated ready delivery from storage capability of 7.03 BCF of gas with maximum peak day delivery capabilities of 109,000 MCF per day. In addition to its company owned storage delivery capabilities, SIGECO has 0.4 BCF of interstate natural gas pipeline storage service with a maximum peak day delivery capability of 17,000 MMBTU per day. SIGECO's gas delivery system includes 3,300 miles of distribution and transmission mains, all of which are located in Indiana.

VEDO has 7.6 BCF of interstate natural gas pipeline storage service with a maximum peak day delivery capability of 200,000 MMBTU per day. The Company has released its Ohio storage service to those retail gas marketers supplying VEDO with natural gas, and those suppliers are responsible for the demand charges. VEDO's gas delivery system includes 5,600 miles of distribution and transmission mains, all of which are located in Ohio.

Electric Utility Services

SIGECO's installed generating capacity as of December 31, 2017, was rated at 1,248 MW. SIGECO's coal-fired generating facilities are the A.B. Brown Generating Station (AB Brown) with two units totaling 490 MW of combined capacity, located in Posey County approximately eight miles east of Mt. Vernon, Indiana; the F.B. Culley Generating Station (Culley) with two units totaling 360 MW of combined capacity; and Warrick Unit 4 (Warrick) with 150 MW of capacity. Both the Culley and Warrick Stations are located in Warrick County near Yankeetown, Indiana. SIGECO's gas-fired turbine peaking units are: two 80 MW gas turbines (Brown Unit 3 and Brown Unit 4) located at AB Brown; one Broadway Avenue Gas Turbine located in Evansville, Indiana with a capacity of 65 MW; and two Northeast Gas Turbines located northeast of Evansville in Vanderburgh County, Indiana with a combined capacity of 20 MW. The Brown Unit 3 and Broadway Avenue Unit 2 turbines are also equipped to burn oil. Total capacity of SIGECO's five gas turbines is 245 MW, and these units are generally used only for reserve, peaking, or emergency purposes. SIGECO also has a landfill gas electric generation project in Pike County, Indiana with a total generation capability of 3 MW.

SIGECO's transmission system consists of 1,028 circuit miles of 345kV, 138kV and 69kV lines. The transmission system also includes 34 substations with an installed capacity of 4,900 megavolt amperes (Mva). The electric distribution system includes 4,543 circuit miles of lower voltage overhead lines and 462 trench miles of conduit containing 2,405 circuit miles of underground distribution cable. The distribution system also includes 85 distribution substations with an installed capacity of 2,100 Mva and 54,919 distribution transformers with an installed capacity of 2,440 Mva.

SIGECO owns utility property outside of Indiana approximating 24 miles of 138kV and 345kV electric transmission lines, which are included in the 1,028 circuit miles discussed above. These assets are located in Kentucky and interconnect with Louisville Gas and Electric Company's transmission system at Cloverport, Kentucky and with Big Rivers Electric Cooperative at Sebree, Kentucky.

Property Serving as Collateral

SIGECO's properties are subject to the lien of the First Mortgage Indenture dated as of April 1, 1932, between SIGECO and Bankers Trust Company, as Trustee, and Deutsche Bank, as successor Trustee, as supplemented by various supplemental indentures.

ITEM 3. LEGAL PROCEEDINGS

The Company is party to various legal proceedings and audits and reviews by taxing authorities and other government agencies arising in the normal course of business. In the opinion of management, there are no legal proceedings or other regulatory reviews or audits pending against the Company likely to have a material adverse effect on its financial position, results of operations, or cash flows. See the notes to the consolidated financial statements regarding commitments and contingencies, environmental matters, and rate and regulatory matters. The consolidated financial statements are included in "Item 8 Financial Statements and Supplementary Data."

ITEM 4. MINE SAFETY DISCLOSURES

Not Applicable.

PART II

ITEM 5. MARKET FOR COMPANY'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS, AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Data, Dividends Paid, and Holders of Record

The Company's common stock trades on the New York Stock Exchange under the symbol "VVC." For each quarter in 2017 and 2016, the high and low sales prices for the Company's common stock as reported on the New York Stock Exchange and dividends paid are presented below.

	Cash Dividend	Common Stock Price Range	
		High	Low
<u>2017</u>			
First Quarter	\$0.420	\$59.03	\$51.50
Second Quarter	\$0.420	\$62.79	\$58.03
Third Quarter	\$0.420	\$68.30	\$57.48
Fourth Quarter	\$0.450	\$69.86	\$64.00
<u>2016</u>			
First Quarter	\$0.400	\$51.00	\$39.43
Second Quarter	\$0.400	\$52.68	\$46.96
Third Quarter	\$0.400	\$53.33	\$47.87
Fourth Quarter	\$0.420	\$53.05	\$46.52

On November 2, 2017 the board of directors declared a dividend of \$0.45 per share, payable on December 1, 2017, to common shareholders of record on November 15, 2017.

As of January 31, 2018, there were 7,759 registered shareholders of the Company's common stock.

Quarterly Share Purchases

Periodically, the Company purchases shares from the open market to satisfy share requirements associated with the Company's share-based compensation plans; however, no such open market purchases were made during the quarter ended December 31, 2017.

Dividend Policy

Common stock dividends are payable at the discretion of the Board of Directors, out of legally available funds. The Company's policy is to target a 60 to 65 percent consolidated payout ratio; however, this percentage has varied and could continue to vary due to short-term earnings volatility. The Company has increased its dividend for 58 consecutive years. While the Company is under no contractual obligation to do so, it intends to continue to pay dividends and to increase the dividend annually. Nevertheless, should the Company's financial condition, operating results, capital requirements, or other relevant factors change, future dividend payments, and the amounts of these dividends, will be reassessed.

ITEM 6. SELECTED FINANCIAL DATA

The following selected financial data is derived from the Company's audited consolidated financial statements and should be read in conjunction with those financial statements and notes thereto contained in this Form 10-K.

	Year Ended December 31,				
<i>(In millions, except per share data)</i>	2017	2016	2015	2014	2013
Operating Data:					
Operating revenues	\$ 2,657.3	\$ 2,448.3	\$ 2,434.7	\$ 2,611.7	\$ 2,491.2
Operating income	\$ 318.4	\$ 381.5	\$ 361.8	\$ 314.5	\$ 333.6
Net income	\$ 216.0	\$ 211.6	\$ 197.3	\$ 166.9	\$ 136.6
Weighted average common shares outstanding	83.0	82.8	82.7	82.5	82.3
Fully diluted common shares outstanding	83.0	82.8	82.7	82.5	82.4
Basic earnings per share					
on common stock	\$ 2.60	\$ 2.55	\$ 2.39	\$ 2.02	\$ 1.66
Diluted earnings per share					
on common stock	\$ 2.60	\$ 2.55	\$ 2.39	\$ 2.02	\$ 1.66
Dividends per share on common stock	\$ 1.710	\$ 1.620	\$ 1.540	\$ 1.460	\$ 1.425
Balance Sheet Data:					
Total assets	\$ 6,239.3	\$ 5,800.7	\$ 5,400.0	\$ 5,137.8	\$ 5,079.5
Long-term debt, net	\$ 1,738.7	\$ 1,589.9	\$ 1,712.9	\$ 1,339.1	\$ 1,767.9
Common shareholders' equity	\$ 1,849.3	\$ 1,768.1	\$ 1,683.8	\$ 1,606.6	\$ 1,554.3

As further discussed in Note 8 of the Consolidated Financial Statements included in Item 8 herein, net income in 2017 include a \$45.3 million net tax benefit associated with the impact of the federal corporate income tax rate reduction on the revaluation of the Company's non rate-regulated deferred income tax balance as of December 31, 2017. Also, reflected in net income is a non-recurring charge of \$45.3 million, after tax, or \$69.7 million in operating income for the non-recurring multi-year contribution to the Vectren Foundation in 2017.

Results include the loss on disposition and operating results of Coal Mining in 2014 and the loss on disposition and operating results attributable to the Company's investment in ProLiance in 2013. Coal Mining results for the year ended December 31, 2014, inclusive of the loss on sale, were a loss of \$21.1 million. ProLiance results for the year ended December 31 2013, inclusive of the loss on sale, were a loss of \$26.8 million.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF RESULTS OF OPERATIONS AND FINANCIAL CONDITION

Executive Summary of Consolidated Results of Operations

In this discussion and analysis, the Company analyzes contributions to consolidated earnings and earnings per share from its Utility Group and Nonutility Group separately. Because each group operates independently and offers different energy related products and services, the analysis separately addresses the opportunities and risks that arise from each group's distinct competencies and business strategies.

The Utility Group generates revenue primarily from the delivery of natural gas and electric service to its customers. The primary source of cash flow for the Utility Group results from the collection of customer bills and payment for goods and services procured for the delivery of gas and electric services. The Company segregates its regulated utility operations between a Gas Utility Services operating segment and an Electric Utility Services operating segment. The activities of, and revenues and cash flows generated by, the Nonutility Group are closely linked to the utility industry, and the results of those operations are generally impacted by factors similar to those impacting the overall utility industry. In addition, there are other operations, referred to herein as Corporate and Other, that include unallocated corporate expenses such as advertising and certain charitable contributions, among other activities.

The Company has a disclosure committee consisting of senior management as well as financial management. The committee is actively involved in the preparation and review of the Company's SEC filings.

Results for the year ended December 31, 2017 were earnings of \$216.0 million, or \$2.60 per share, compared to earnings of \$211.6 million, or \$2.55 per share for the year ended December 31, 2016 and \$197.3 million, or \$2.39 per share for the year ended December 31, 2015.

Use of Non-GAAP Performance Measures and Per Share Measures

Results Excluding Non-recurring Activity

This discussion and analysis contains non-GAAP financial measures that exclude the results related to the revaluation of deferred income taxes as of December 31, 2017 as a result of the Tax Cuts and Jobs Act ("TCJA") that was signed into law on December 22, 2017, and a 2017 expense related to a non-recurring multi-year contribution to the Vectren Foundation, a 501(c)(3) charitable organization, affiliated with but separate from Vectren Corporation.

Management uses net income and earnings per share (EPS), excluding non-recurring activity, to evaluate its results. Management believes analyzing underlying and ongoing business trends is aided by the removal of this non-recurring activity and the rationale for using such non-GAAP measures is that the Company would not expect these items to be indicative of ongoing operations. Management believes this presentation provides the best representation of the overall results and certain components of the financial statements for ongoing operations.

A material limitation associated with the use of these measures is that measures excluding non-recurring activity does not include all activity recognized in accordance with GAAP. Management compensates for this limitation by prominently displaying a reconciliation of these non-GAAP performance measures to their closest GAAP performance measures. This display also provides financial statement users the option of analyzing results as management does or by analyzing GAAP results.

Contribution to Vectren's basic EPS

Per share earnings contributions of the Utility Group, Nonutility Group and Corporate and Other are presented and are non-GAAP measures. Such per share amounts are based on the earnings contribution of each group included in the Company's consolidated results divided by the Company's basic average shares outstanding during the period. The earnings per share of the groups do not represent a direct legal interest in the assets and liabilities allocated to the groups; instead they represent a direct equity interest in the Company's assets and liabilities as a whole. These non-GAAP measures are used by management to evaluate the performance of individual businesses. In addition, other items giving rise to period over period variances, such as weather, may be presented on an after tax and per share basis. These amounts are calculated at a statutory tax rate divided by the Company's basic average shares outstanding during the period. Accordingly, management believes these measures are

useful to investors in understanding each business' contribution to consolidated earnings per share and in analyzing consolidated period to period changes and the potential for earnings per share contributions in future periods. Per share amounts of the Utility Group and the Nonutility Group are reconciled to the GAAP financial measure of basic EPS by combining the two. Any resulting differences are attributable to results from Corporate and Other operations. The non-GAAP financial measures disclosed by the Company should not be considered a substitute for, or superior to, financial measures calculated in accordance with GAAP, and the financial results calculated in accordance with GAAP.

The following table reconciles net income, basic EPS and certain components of the financial statements from the GAAP measure to the non-GAAP measure for non-recurring activity in 2017.

	Twelve Months Ended December 31, 2017			
	GAAP Measure	Deferred Tax Revaluation (Gain) / Loss	Other Operating Charge	Non-GAAP Measure
<i>(In millions, except EPS)</i>				
<u>Consolidated</u>				
Net Income	\$ 216.0	\$ (45.3)	\$ 45.3	\$ 216.0
Basic EPS	\$ 2.60	\$ (0.55)	\$ 0.55	\$ 2.60
<u>Utility Group</u>				
Net Income	\$ 175.8	\$ (23.2)	\$ 23.2	\$ 175.8
Basic EPS	\$ 2.12	\$ (0.28)	\$ 0.28	\$ 2.12
<u>Utility Group Segments</u>				
Gas Utility - Net Income	\$ 115.5	\$ (27.3)	\$ —	\$ 88.2
Electric Utility - Net Income	\$ 75.2	\$ —	\$ —	\$ 75.2
Other Utility Ops - Net Income	\$ (14.9)	\$ 4.1	\$ 23.2	\$ 12.4
<u>Nonutility Group</u>				
Net Income	\$ 41.1	\$ (22.3)	\$ 22.1	\$ 40.9
Basic EPS	\$ 0.49	\$ (0.27)	\$ 0.27	\$ 0.49
<u>Corp & Other</u>				
Net Income	\$ (0.9)	\$ 0.2	\$ —	\$ (0.7)
Basic EPS	\$ (0.01)	\$ —	\$ —	\$ (0.01)
<u>Other Operating Expense</u>				
Consolidated	\$ 1,115.9	\$ —	\$ (69.7)	\$ 1,046.2
Utility Group	\$ 370.4	\$ —	\$ (35.7)	\$ 334.7
<u>Income Tax Expense</u>				
Consolidated	\$ 46.4	\$ 45.3	\$ 24.4	\$ 116.1
Utility Group	\$ 60.7	\$ 23.2	\$ 12.5	\$ 96.4
Nonutility Group	\$ (13.5)	\$ 22.3	\$ 11.9	\$ 20.7
Corp & Other	\$ (0.8)	\$ (0.2)	\$ —	\$ (1.0)

Non-recurring Activity

Impact of Tax Reform on Income Tax Expense

As discussed in Note 8 in the Company's Consolidated Financial Statements included in Item 8, on December 22, 2017, comprehensive federal tax reform was enacted, referred to as the Tax Cuts and Jobs Act ("TCJA").

As a result of the TCJA, results reflect a net tax benefit of \$45.3 million for the period ending December 31, 2017. This benefit is associated with the impact of the federal corporate income tax rate reduction on the Company's non rate-regulated deferred tax balances resulting in a \$23.2 million benefit for the Utility Group, \$22.3 million benefit for the Nonutility businesses, and \$0.2 million expense for Corp & Other. The portion of the benefit attributable to Utility Group operations relates to assets of the Gas Utility Services segment which are not included for regulatory rate making purposes, such as goodwill associated with past acquisitions, that is not reflected in customer rates

Non-recurring Other Operating

Reflected in the consolidated financial statements within Other Operating expense is a non-recurring multi-year contribution to the Vectren Foundation, a 501(c)(3) charitable organization, totaling \$69.7 million. The Utility Group contributed \$35.7 million to the Vectren Foundation which is reflected in Other Operating expense. The Utility Group contribution is reflected in the results of the Other Utility Operations segment. The Nonutility Group contributed \$34.0 million to the Vectren Foundation and that is also reflected in Other Operating expense in the Consolidated Statements of Income.

Consolidated Results

Net income and earnings per share, in total and by group, for the years ended December 31, 2017, 2016, and 2015 follow:

<i>(In millions, except per share data)</i>	Year Ended December 31,		
	2017	2016	2015
Net income	\$ 216.0	\$ 211.6	\$ 197.3
Attributed to:			
Utility Group	\$ 175.8	\$ 173.6	\$ 160.9
Nonutility Group	41.1	36.9	36.3
Corporate & Other	(0.9)	1.1	0.1
Basic EPS	\$ 2.60	\$ 2.55	\$ 2.39
Attributed to:			
Utility Group	\$ 2.12	\$ 2.10	\$ 1.95
Nonutility Group	0.49	0.44	0.44
Corporate & Other	(0.01)	0.01	—

Utility Group

For the year ended December 31, 2017, the Utility Group earnings were \$175.8 million, compared to \$173.6 million in 2016 and \$160.9 million in 2015. Utility Group results in 2017 compared to 2016 reflect increased earnings from the returns on continued investment in the gas infrastructure investment programs in both Indiana and Ohio. Results also reflect the expected decrease in usage of a large electric customer that completed its transition to a co-generation facility and lower electric margins as both heating and cooling degree days in 2017 were lower than in 2016. Results in 2016 compared to 2015 reflect increased earnings from the returns on the gas infrastructure replacement programs in Indiana and Ohio gas infrastructure investment programs and increases in large customer usage.

Gas utility services

The gas utility services segment earned \$115.5 million during the year ended December 31, 2017, compared to \$76.1 million in 2016 and \$64.4 million in 2015. Excluding the tax benefit from the revaluation of deferred income taxes related to acquisition goodwill not included in customer rates for the Ohio operations of \$27.3 million, gas utility segment earnings were \$88.2 million in 2017. The improved results in the periods presented reflect increased returns on the Indiana and Ohio infrastructure replacement programs and large customer margins. In 2016, these increases were somewhat offset by lower late fee revenue resulting from lower natural gas prices.

Electric utility services

The electric utility services segment earned \$75.2 million during 2017, compared to \$84.7 million in 2016 and \$82.6 million in 2015. Results in 2017 reflect the expected decrease in large customer margin as a customer completed its transition to a co-generation facility, resulting in lower usage of approximately 610 GWh in 2017 compared to 2016. Electric results, which are not protected by weather normalizing mechanisms, reflect a \$3.3 million decrease related to weather in 2017 compared to 2016. Results in 2016 compared to 2015 reflect a favorable impact of weather on retail electric margin, which management estimates the after tax impact to be approximately \$1.8 million.

Other utility operations

In 2017, the loss from other utility operations was \$14.9 million, compared to earnings of \$12.8 million in 2016 and \$13.9 million in 2015. Excluding the \$27.3 million after-tax impact of the expense associated with the multi-year contribution to the Vectren Foundation as funded by VUHI and the related revaluation of deferred taxes, earnings in 2017 were \$12.4 million. The higher earnings in 2015 were driven primarily by a lower effective income tax rate from increased research and development tax credits for certain qualifying information technology assets.

Nonutility Group

Results for the Nonutility Group were earnings of \$41.1 million in 2017, \$36.9 million in 2016, and \$36.3 million in 2015. Results in 2017 improved due to strong performance at Infrastructure Services, reflecting the large Ohio pipeline project completed in 2017, as well as other transmission pipeline projects, as compared to 2016. Results in 2016 compared to 2015 reflect an increase in earnings from Infrastructure Services in the distribution services area as gas utilities across the country make significant investments in gas infrastructure systems. Results in 2017 reflect the tax benefit from the revaluation of deferred taxes on the Nonutility businesses, as well as a non-recurring charge for the multi-year contribution to the Vectren Foundation as funded by the Nonutility business.

Dividends

Dividends declared for the year ended December 31, 2017 were \$1.71 per share, compared to \$1.62 per share in 2016 and \$1.54 per share in 2015. In December 2017, the Company's board of directors increased its quarterly dividend to \$0.45 per share from \$0.42 per share. The increase marks the 58th consecutive year Vectren and predecessor companies have increased annual dividends paid.

Detailed Discussion of Results of Operations

Following is a more detailed discussion of the results of operations of the Company's Utility and Nonutility operations. The detailed results of operations for these groups are presented and analyzed before the reclassification and elimination of certain intersegment transactions necessary to consolidate those results into the Company's *Consolidated Statements of Income*.

Results of Operations of the Utility Group

The Utility Group is composed of Utility Holdings' operations, which consists of the Company's regulated utility operations and other operations that provide information technology and other support services to those regulated operations. Regulated operations consist of a natural gas distribution business and an electric transmission and distribution business. The natural gas distribution business provides natural gas distribution and transportation services to nearly two-thirds of Indiana and about 20 percent of Ohio, primarily in the west-central area. The electric transmission and distribution business provides electric distribution services primarily to southwestern Indiana, and its power generating and wholesale power operations. In total, these regulated operations supply natural gas and/or electricity to over one million customers. Utility Group operating results before certain intersegment eliminations follow:

	Year Ended December 31,		
<i>(In millions, except per share data)</i>	2017	2016	2015
OPERATING REVENUES			
Gas utility	\$ 812.7	\$ 771.7	\$ 792.6
Electric utility	569.6	605.8	601.6
Other	0.3	0.3	0.3
Total operating revenues	1,382.6	1,377.8	1,394.5
OPERATING EXPENSES			
Cost of gas sold	271.5	266.7	305.4
Cost of fuel & purchased power	171.8	183.6	187.5
Other operating	370.4	333.6	339.1
Depreciation & amortization	234.5	219.1	208.8
Taxes other than income taxes	55.9	58.3	57.1
Total operating expenses	1,104.1	1,061.3	1,097.9
OPERATING INCOME	278.5	316.5	296.6
Other income - net	30.6	26.3	18.7
Interest expense	72.6	69.7	66.3
INCOME BEFORE INCOME TAXES	236.5	273.1	249.0
Income taxes	60.7	99.5	88.1
NET INCOME	\$ 175.8	\$ 173.6	\$ 160.9
CONTRIBUTION TO VECTREN BASIC EPS	\$ 2.12	\$ 2.10	\$ 1.95

The Regulatory Environment

Gas and electric operations are regulated by the IURC, with regard to retail rates and charges, terms of service, accounting matters, financing, and certain other operational matters specific to its Indiana customers (the operations of SIGECO and Indiana Gas). The retail gas operations of VEDO are subject to regulation by the PUCO.

Rate Design Strategies

Sales of natural gas and electricity to residential and commercial customers are largely seasonal and are impacted by weather. Trends in the average consumption among natural gas residential and commercial customers have tended to decline as more efficient appliances and furnaces are installed, and as the Company's utilities have implemented conservation programs. In the Company's two Indiana natural gas service territories, normal temperature adjustment (NTA) and decoupling mechanisms largely mitigate the effect that would otherwise be caused by variations in volumes sold to these customers due to weather and changing consumption patterns. The Ohio natural gas service territory has a straight fixed variable rate design for its residential customers. This rate design, which was fully implemented in February 2010, mitigates approximately 90 percent of the Ohio service territory's weather risk and risk of decreasing consumption specific to its small customer classes.

In all natural gas service territories, the commissions have authorized bare steel and cast iron replacement programs. In Indiana, state laws were passed in 2012 and 2013 that expand the ability of utilities to recover, outside of a base rate proceeding, certain costs of federally mandated projects and other significant gas distribution and transmission infrastructure replacement investments. Legislation was passed in 2011 in Ohio that supports the investment in other capital projects, allowing

the utility to defer the impacts of these investments until its next base rate case. The Company has received approval to implement these mechanisms in both states.

In 2017, SIGECO's electric service territory started recovering certain costs of significant electric distribution and transmission infrastructure replacement investments. The electric service territory also currently recovers certain transmission investments outside of base rates. The electric service territory has neither an NTA nor a decoupling mechanism; however, rate designs provide for a lost margin recovery mechanism that works in tandem with conservation initiatives.

Tracked Operating Expenses

Gas costs and fuel costs incurred to serve Indiana customers are two of the Company's most significant operating expenses. Rates charged to natural gas customers in Indiana contain a gas cost adjustment clause (GCA). The GCA clause allows the Company to timely charge for changes in the cost of purchased gas, inclusive of unaccounted for gas expense based on actual experience and subject to caps that are based on historical experience. Electric rates contain a fuel adjustment clause (FAC) that allows for timely adjustment in charges for electric energy to reflect changes in the cost of fuel. The net energy cost of purchased power, subject to an approved variable benchmark based on The New York Mercantile Exchange (NYMEX) natural gas prices, is also timely recovered through the FAC.

GCA and FAC procedures involve periodic filings and IURC hearings to establish price adjustments for a designated future period. The procedures also provide for inclusion in later periods of any variances between actual recoveries representing the estimated costs and actual costs incurred. Since April 2010, the Company has not been the supplier of natural gas in its Ohio territory.

The IURC has also applied the statute authorizing GCA and FAC procedures to reduce rates when necessary to limit net operating income to a level authorized in its last general rate order through the application of an earnings test. In the periods presented, the Company has not been impacted by the earnings test.

In Indiana, gas pipeline integrity management operating costs, costs to fund energy efficiency programs, MISO costs, and the gas cost component of uncollectible accounts expense based on historical experience are recovered by mechanisms outside of typical base rate recovery. In addition, certain operating costs, including depreciation associated with federally mandated investments, gas and electric distribution and transmission infrastructure replacement investments, and regional electric transmission assets not in base rates are also recovered by mechanisms outside of typical base rate recovery.

In Ohio, expenses such as uncollectible accounts expense, costs associated with exiting the merchant function, and costs associated with the infrastructure replacement program and other gas distribution capital expenditures are subject to recovery outside of base rates.

Revenues and margins in both states are also impacted by the collection of state mandated taxes, which primarily fluctuate with gas and fuel costs.

Base Rate Orders

SIGECO's electric territory received an order in April 2011, with rates effective May 2011, and its gas territory received an order and implemented rates in August 2007. Indiana Gas received an order and implemented rates in February 2008, and VEDO received an order in January 2009, with implementation in February 2009. The orders authorize a return on equity ranging from 10.15 percent to 10.40 percent. The authorized returns reflect the impact of rate design strategies that have been authorized by these state commissions.

See the Rate and Regulatory Matters section of this discussion and analysis for more specific information on significant proceedings involving the Company's utilities over the last three years.

Utility Group Margin

Throughout this discussion, the terms Gas utility margin and Electric utility margin are used. Gas utility margin is calculated as *Gas utility revenues* less the *Cost of gas sold*. Electric utility margin is calculated as *Electric utility revenues* less *Cost of fuel & purchased power*. The Company believes Gas utility and Electric utility margins are better indicators of relative contribution than revenues since gas prices and fuel and purchased power costs can be volatile and these are generally collected on a dollar-for-dollar basis from customers.

In addition, the Company separately reflects regulatory expense recovery mechanisms within Gas utility margin and Electric utility margin. These amounts represent dollar-for-dollar recovery of other operating expenses. The Company utilizes these approved regulatory mechanisms to recover variations in operating expenses from the amounts reflected in base rates and are generally expenses that are subject to volatility. Following is a discussion and analysis of margin generated from regulated utility operations.

Gas Utility Margin

Gas utility margin and throughput by customer type follows:

	Year Ended December 31,		
(In millions)	2017	2016	2015
Gas utility revenues	\$ 812.7	\$ 771.7	\$ 792.6
Cost of gas sold	271.5	266.7	305.4
Total gas utility margin	\$ 541.2	\$ 505.0	\$ 487.2
Margin attributed to:			
Residential & commercial customers	\$ 412.3	\$ 385.9	\$ 360.8
Industrial customers	73.9	67.1	61.4
Other	8.4	7.4	9.3
Regulatory expense recovery mechanisms	46.6	44.6	55.7
Total gas utility margin	\$ 541.2	\$ 505.0	\$ 487.2
Sold & transported volumes in MMDth attributed to:			
Residential & commercial customers	97.1	97.2	104.9
Industrial customers	122.2	127.0	125.3
Total sold & transported volumes	219.3	224.2	230.2

Gas utility margins were \$541.2 million for the year ended December 31, 2017, and compared to 2016, increased \$36.2 million. Gas margin was favorably impacted by increased returns on infrastructure replacement programs in Indiana and Ohio of \$25.4 million, increases in large customer margin of \$4.9 million, and increases associated with small customer count growth of \$3.0 million. With rate designs that substantially limit the impact of weather on small customer margin, the warmer than normal weather in the first quarter of 2017 decreased sold and transported volumes, but only had a slight unfavorable impact on small customer margin compared to 2016. Heating degree days were 90 percent of normal in Ohio and 80 percent of normal in Indiana, compared to 93 percent of normal in Ohio and 84 percent of normal in Indiana in 2016.

Gas utility margins were \$505.0 million for the year ended December 31, 2016, and compared to 2015, increased \$17.8 million, or \$28.2 million excluding regulatory expense recovery mechanisms. Gas margin was favorably impacted by increased returns on increased infrastructure replacement programs of \$25.9, increases in large customer margin of \$3.0 million, and increases associated with small customer count growth of \$2.7 million. With rate designs that substantially limit the impact of weather on margin, heating degree days that were 93 percent of normal in Ohio and 84 percent of normal in Indiana during 2016, compared to 95 percent of normal in Ohio and 88 percent of normal in Indiana during 2015, had only a slight unfavorable impact on small customer margin. However, warmer weather did decrease sold and transported volumes which contributed \$11.1 million lower regulatory expense recovery margin and a corresponding decrease in operating expenses. Results in 2016 also reflect lower miscellaneous margin largely driven by a decrease in late fee revenue as a result of lower gas prices.

Electric Utility Margin (Electric utility revenues less Cost of fuel & purchased power)

Electric utility margin and volumes sold by customer type follows:

<i>(In millions)</i>	Year Ended December 31,		
	2017	2016	2015
Electric utility revenues	\$ 569.6	\$ 605.8	\$ 601.6
Cost of fuel & purchased power	171.8	183.6	187.5
Total electric utility margin	\$ 397.8	\$ 422.2	\$ 414.1
Margin attributed to:			
Residential & commercial customers	\$ 254.9	\$ 261.2	\$ 258.6
Industrial customers	96.9	112.1	109.7
Other	5.6	5.8	4.5
Regulatory expense recovery mechanisms	9.6	13.7	9.6
Subtotal: retail	\$ 367.0	\$ 392.8	\$ 382.4
Wholesale power & transmission system margin	30.8	29.4	31.7
Total electric utility margin	\$ 397.8	\$ 422.2	\$ 414.1
Electric volumes sold in GWh attributed to:			
Residential & commercial customers	2,638.8	2,729.0	2,714.4
Industrial customers	2,096.5	2,722.3	2,721.5
Other customers	22.3	22.9	22.2
Total retail volumes	4,757.6	5,474.2	5,458.1
Wholesale	463.2	136.1	337.8
Total volumes sold	5,220.8	5,610.3	5,795.9

Retail

Electric retail utility margins were \$367.0 million for the year ended December 31, 2017 and, compared to 2016, decreased by \$25.8 million. Results reflect a decrease in large customer margin of \$15.2 million, primarily due to the completion of a large customer transitioning to a cogeneration facility resulting in lower usage of approximately 610 GWh in 2017. Electric margin, which is not protected by weather normalizing mechanisms, reflects a \$5.4 million decrease in customer margin related to weather as heating degree days were 80 percent of normal compared to 84 percent of normal in 2016 and cooling degree days were 111 percent of normal compared to 125 percent of normal in 2016. Margin from regulatory expense recovery mechanism decreased \$4.1 million in 2017.

Electric retail utility margins were \$392.8 million for the year ended December 31, 2016 and, compared to 2015, increased by \$10.4 million. Electric margin reflects a \$3.0 million increase from weather in small customer margin as cooling degree days were 125 percent of normal in 2016 compared to 111 percent of normal in 2015. As energy conservation initiatives continue, the Company's lost revenue recovery mechanism related to electric conservation programs contributed increased margin of \$2.4 million compared to the prior year, however was offset by a decrease in small customer usage of \$1.2 million. Results also reflect an increase in large customer usage of \$2.2 million largely driven by timing of customer plant maintenance resulting in lower customer throughput in 2015. Margin from regulatory expense recovery mechanisms increased \$4.1 million as operating expenses associated with the electric conservation programs increased.

Margin from Wholesale Electric Activities

The Company earns a return on electric transmission projects constructed by the Company in its service territory that meet the criteria of the MISO's regional transmission expansion plans and also markets and sells its generating and transmission capacity to optimize the return on its owned assets. Substantially all off-system sales are generated in the MISO Day Ahead and Real Time markets when sales into the MISO in a given hour are greater than amounts purchased for native load. Further detail of MISO off-system margin and transmission system margin follows:

<i>(In millions)</i>	Year Ended December 31,		
	2017	2016	2015
MISO Transmission system margin	\$ 25.5	\$ 25.1	\$ 25.5
MISO Off-system margin	5.3	4.3	6.2
Total wholesale margin	\$ 30.8	\$ 29.4	\$ 31.7

Transmission system margin associated with qualifying projects, including the reconciliation of recovery mechanisms, and other transmission system operations, totaled \$25.5 million during 2017, compared to \$25.1 million in 2016 and \$25.5 million in 2015. The Company has invested \$157.7 million in qualifying projects. The net plant balance for these projects totaled \$133.5 million at December 31, 2017. These projects include an interstate 345 kV transmission line that connects the Company's A.B. Brown Generating Station to a generating station in Indiana owned by Duke Energy to the north and to a generating station in Kentucky owned by Big Rivers Electric Corporation to the south; a substation; and another transmission line. These projects earn a FERC approved equity rate of return on the net plant balance and recover operating expenses. In September 2016, the FERC issued a final order authorizing the transmission owners to receive a 10.32 percent base ROE plus, a separately approved 50 basis point adder, compared to the previously authorized 12.38 percent. The Company has reflected these outcomes in its financial statements. The 345 kV project is the largest of these qualifying projects, with an original cost of \$106.8 million that earned the FERC approved equity rate of return.

For the year ended December 31, 2017, margin from off-system sales was \$5.3 million, compared to \$4.3 million in 2016 and \$6.2 million in 2015. The base rate changes implemented in May 2011 require wholesale margin from off-system sales earned above or below \$7.5 million per year is to be shared equally with customers. Results, net of sharing for the periods presented, were favorable in 2017 compared to 2016, reflecting higher market prices due primarily to higher natural gas prices.

Utility Group Operating Expenses

Other Operating

For the year ended December 31, 2017, *Other operating* expenses were \$370.4 million, and compared to 2016, increased \$36.8 million primarily related to the commitment to fund the Vectren Foundation for a multi-year period in an amount totaling \$35.7 million. Excluding pass through costs, which decreased \$3.1 million, and the \$35.7 million funding for the Vectren Foundation, operating expenses increased \$4.2 million primarily from higher performance-based compensation expense driven by an increase in the Company's stock price.

For the year ended December 31, 2016, *Other operating* expenses were \$333.6 million, and compared to 2015, decreased \$5.5 million. Excluding pass through costs, which accounted for \$4.5 million of the decrease in operating expenses in 2016, other operating expenses decreased \$1.0 million compared to 2015.

Depreciation & Amortization

For the year ended December 31, 2017, *Depreciation and amortization* expense was \$234.5 million, compared to \$219.1 million in 2016 and \$208.8 million in 2015. Results in the periods presented reflect increased utility plant investments placed into service primarily related to gas infrastructure programs in Indiana and Ohio.

Taxes Other Than Income Taxes

Taxes other than income taxes decreased \$2.4 million in 2017 compared to 2016 and increased \$1.2 million in 2016 compared to 2015. The decrease in 2017 was primarily related to property taxes. Fluctuations in the periods presented are also driven by fluctuations in revenues and related revenue taxes.

Other Income-Net

Other income-net reflects income of \$30.6 million in 2017, compared to \$26.3 million in 2016 and \$18.7 million in 2015. Results are primarily driven by increased allowance for funds used during construction (AFUDC) of approximately \$5.1 million in 2017 compared to 2016, and \$4.2 million in 2016 compared to 2015. The increased AFUDC in the periods presented is driven by increased capital expenditures related to gas utility infrastructure replacement investments.

Income Taxes

For the year ended December 31, 2017, Utility Group federal and state income taxes were \$60.7 million, compared to \$99.5 million in 2016 and \$88.1 million in 2015. The decrease in tax expense in 2017 compared to 2016 is due primarily to the tax benefit from the revaluation of deferred income taxes related non-rate regulated balances in an amount totaling \$23.2 as a result of the TJCA enacted on December 22, 2017, and lower income before taxes as a result of the multi-year funding of the Vectren Foundation. The increase in income taxes in 2016 compared to 2015 is primarily due to increased income in 2016 and research and development tax credits recognized in 2015.

Gas Rate and Regulatory Matters

Regulatory Treatment of Investments in Natural Gas Infrastructure Replacement

The Company monitors and maintains its natural gas distribution system to ensure natural gas is delivered in a safe and efficient manner. The Company's natural gas utilities are currently engaged in programs to replace bare steel and cast iron infrastructure and other activities in both Indiana and Ohio to mitigate risk, improve the system, and comply with applicable regulations, many of which are the result of federal pipeline safety requirements. Laws passed in both Indiana and Ohio provide utilities the opportunity to timely recover costs of federally mandated projects and other infrastructure improvement projects outside of a base rate proceeding.

Indiana Senate Bill 251 (Senate Bill 251) provides a framework to recover 80 percent of federally mandated costs through a periodic rate adjustment mechanism outside of a general rate case. Such costs include a return on the federally mandated capital investment, based on the overall rate of return most recently approved by the IURC, through a base rate case or other proceeding, along with recovery of depreciation and other operating costs associated with these mandates. The remaining 20 percent of those costs is deferred for future recovery in the utility's next general rate case.

Indiana Senate Bill 560 (Senate Bill 560) supplements Senate Bill 251 described above, and provides for cost recovery outside of a base rate proceeding for projects that either improve electric and gas system reliability and safety or are economic development projects that provide rural areas with access to gas service. Provisions of the legislation require, among other things, requests for recovery include a seven-year project plan. Once the plan is approved by the IURC, 80 percent of such costs are eligible for current recovery using a periodic rate adjustment mechanism. Recoverable costs include a return on the investment that reflects the current capital structure and associated costs, with the exception of the rate of return on equity, which remains fixed at the rate determined in the Company's last rate case. Recoverable costs also include recovery of depreciation and other operating expenses. The remaining 20 percent of project costs are deferred for future recovery in the utility's next general rate case, which must be filed before the expiration of the seven-year plan. The adjustment mechanism is capped at an annual increase in retail revenues of no more than two percent.

Ohio House Bill 95 (House Bill 95) permits a natural gas utility to apply for recovery of much of its capital expenditure program. This legislation also allows for the deferral of costs, such as depreciation, property taxes, and debt-related post-in-service carrying costs until recovery is approved by the PUCO.

Indiana Recovery and Deferral Mechanisms

The Company's Indiana natural gas utilities received Orders in 2008 and 2007 associated with the most recent base rate cases. These Orders authorized the deferral of financial impacts associated with bare steel and cast iron replacement activities. The Orders provide for the deferral of depreciation and post-in-service carrying costs on qualifying projects totaling \$20 million annually at Indiana Gas and \$3 million annually at SIGECO. The debt-related post-in-service carrying costs are currently recognized in the *Consolidated Statements of Income*. The recording of post-in-service carrying costs and depreciation deferral is limited by individual qualifying project to three years after being placed into service at SIGECO and four years after being placed into service at Indiana Gas. At December 31, 2017 and December 31, 2016, the Company has regulatory assets totaling \$22.7 million and \$21.9 million, respectively, associated with the deferral of depreciation and debt-related post-in-service carrying cost activities. Beginning in 2014, all bare steel and cast iron replacement activities are now part of the Company's seven-year capital investment plan discussed below.

Requests for Recovery under Indiana Regulatory Mechanisms

In August 2014, the IURC issued an Order approving the Company's seven-year capital infrastructure replacement and improvement plan (the Plan), beginning in 2014, and the proposed accounting authority and recovery. Compliance projects and other infrastructure improvement projects were approved pursuant to Senate Bill 251 and 560, respectively. As provided in the two laws, the Order approved semi-annual filings for rate recovery of 100 percent of the costs, inclusive of return, related to these capital investments and operating expenses, with 80 percent of the costs, including a return, recovered currently via an approved tracking mechanism and 20 percent of the costs deferred and recovered in the Company's next base rate proceeding. In addition, the Order established guidelines to annually update the seven-year capital investment plan. Finally, the Order approved the Company's proposal to recover eligible costs assigned to the residential customer class via a fixed monthly charge per residential customer.

In March 2016, the IURC issued an Order re-approving approximately \$890 million of the Company's gas infrastructure modernization projects requested in the third update of the Plan, and approving the inclusion in rates of actual investments made through June 30, 2015. While most of the proposed capital spend has been approved as proposed, approximately \$80 million of future projects were not approved for recovery through the mechanisms pursuant to these filings. Specifically, the Company proposed to add a new project to its Plan pursuant to Senate Bill 560 totaling approximately \$65 million. The project, which is now complete, consists of a 20-mile transmission line and other related investments required to support industrial customer growth and ongoing system reliability in the Lafayette, Indiana area, as well as allows the Company to further diversify its gas supply portfolio via access to shale gas in the Marcellus and Utica reserves, was excluded for recovery under the Plan. The IURC stated because the project was not in the original plan filed in 2013, it does not qualify for cost recovery under Senate Bill 560. In the Order, the IURC did pre-approve the project for rate base inclusion upon the filing of the next base rate case. On April 27, 2017, the Indiana Court of Appeals affirmed the IURC Order. The Company does not expect similar issues related to updating future plan filings as the project inclusion process is now better understood by all parties.

Subsequent to the March 2016 Order, the Company has received additional Orders approving plan investments. On January 24, 2018, the IURC issued an order (January 2018 order) approving the inclusion in rates of investments made from January 2017 to June 2017. Through the January 2018 Order, approximately \$482 million of the approved capital investment has been incurred and included for recovery. The January 2018 Order also approved the Company's plan update, which now totals \$995 million through 2020. The plan increase, totaling \$105 million since inception, is for additional investments related to pipeline safety and compliance requirements under Senate Bill 251.

In December 2016, PHMSA issued interim final rules related to integrity management for storage operations. Efforts are underway to implement the new requirements. Further, the Company reviewed the Underground Natural Gas Storage Safety Recommendations from a joint Department of Energy and PHMSA led task force. On August 3, 2017, the Company filed for authority to recover the associated costs using the mechanism allowed under Senate Bill 251. The request includes approximately \$15 million of operating expenses and \$17 million of capital investments over a four-year period beginning in 2018. The Company received the IURC Order approving the request for recovery on December 28, 2017. The Company does not have company-owned storage operations in Ohio.

At December 31, 2017 and December 31, 2016, the Company has regulatory assets related to the Plan totaling \$78.0 million and \$51.1 million, respectively.

Ohio Recovery and Deferral Mechanisms

The PUCO Order approving the Company's 2009 base rate case in the Ohio service territory authorized a distribution replacement rider (DRR). The DRR's primary purpose is recovery of investments in utility plant and related operating expenses associated with replacing bare steel and cast iron pipelines, as well as certain other infrastructure investments. This rider is updated annually for qualifying capital expenditures and allows for a return on those capital expenditures based on the rate of return approved in the 2009 base rate case. In addition, deferral of depreciation and the ability to accrue debt-related post-in-service carrying costs is also allowed until the related capital expenditures are included in the DRR. The Order also initially established a prospective bill impact evaluation on the annual deferrals. On February 19, 2014, the PUCO issued an Order approving a Stipulation entered into by the PUCO Staff and the Company which provided for the extension of the DRR for the recovery of costs incurred through 2017 and expanded the types of investment covered by the DRR to include recovery of certain other infrastructure investments. The Order limits the resulting DRR fixed charge per month for residential

and small general service customers to specific graduated levels through 2017. The capital expenditure plan is subject to the graduated caps on the fixed DRR monthly charge applicable to residential and small general service customers approved in the Order. In the event the Company exceeds these caps, amounts in excess can be deferred for future recovery. The Order also approved the Company's commitment that the DRR can only be further extended as part of a base rate case. In total, the Company has made capital investments on projects that are now in-service under the DRR totaling \$321.1 million as of December 31, 2017, of which \$261.1 million has been approved for recovery under the DRR through December 31, 2016. Regulatory assets associated with post-in-service carrying costs and depreciation deferrals were \$31.2 million and \$24.4 million at December 31, 2017 and December 31, 2016, respectively. In August 2017, the Company received approval to adjust the DRR rates, effective December 31, 2017, for recovery of costs incurred through December 31, 2016.

The PUCO has also issued Orders approving the Company's filings under Ohio House Bill 95. These Orders approve deferral of the Company's Ohio capital expenditure program for items not covered by the DRR as well as expenditures necessary to comply with PUCO rules, regulations, orders, and system expansion to some new customers. Ohio House Bill 95 Orders also established a prospective bill impact evaluation on the cumulative deferrals, limiting the total deferrals at a level which would equal \$1.50 per residential and small general service customer per month. At December 31, 2017 and December 31, 2016, the Company has regulatory assets totaling \$66.1 million and \$41.9 million, respectively, associated with the deferral of depreciation, post-in-service carrying costs, and property taxes. As of December 31, 2017, the Company's deferrals have not reached this bill impact cap. On May 1, 2017, the Company submitted its most recent annual report required under its House Bill 95 Order. This report covers the Company's capital expenditure program through calendar year 2017.

Vectren Ohio Gas Rate Case

On February 21, 2018, the Company submitted a pre-filing notice with the PUCO indicating it plans to request an increase in its base rate charges for VEDO's distribution business in its 17 county service area in west-central Ohio. The filing is necessary to recover the costs of capital investments made over the past ten years, much of which has been deferred as part of the Company's capital expenditure program under Ohio House Bill 95. Also in the filing, the Company seeks approval for the continuation of the DRR mechanism. The Company will file the case-in-chief at the end of March 2018, and expects an order by early 2019.

Pipeline and Hazardous Materials Safety Administration (PHMSA)

In March 2016, PHMSA published a notice of proposed rulemaking (NOPR) on the safety of gas transmission and gathering lines. The proposed rule addresses many of the remaining requirements of the 2011 Pipeline Safety Act, with a particular focus on extending integrity management rules to address a much larger portion of the natural gas infrastructure and adds requirements to address broader threats to the integrity of a pipeline system. The Company continues to evaluate the impact these proposed rules will have on its integrity management programs and transmission and distribution systems. Progress on finalizing the rule continues to work through the administrative process. The rule is expected to be finalized in 2019 and the Company believes the costs to comply with the new rules would be considered federally mandated and therefore should be recoverable under Senate Bill 251 in Indiana and eligible for deferral under House Bill 95 in Ohio.

Electric Rate and Regulatory Matters

Electric Requests for Recovery under Senate Bill 560

The provisions of Senate Bill 560, as described in the Gas Rate & Regulatory Matters footnote for gas projects, are the same for qualifying electric projects. On February 23, 2017, the Company filed for authority to recover costs related to its electric system modernization plan, using the mechanism allowed under Senate Bill 560. The electric system modernization plan includes investments to upgrade portions of the Company's network of substations, transmission and distribution systems, to enhance reliability and allow the grid to accept advanced technology to improve the information and service provided to customers. The filing requested the recovery of associated capital expenditures estimated to be approximately \$500 million over the seven-year period beginning in 2017.

On September 20, 2017, the IURC issued an Order approving the settlement agreement reached between the Company, the OUCC and a coalition of industrial customers on May 18, 2017. The settlement agreement reduced the plan spend to \$446 million, with defined annual caps on recoverable capital investments. The majority of the reduction relating to the removal of advanced metering infrastructure (AMI or digital meters) from the plan. However, deferral of the costs for AMI was agreed

upon in the settlement whereby the company can move forward with deployment in the near-term. In removing it from the plan, the request for cost recovery for the AMI project will not occur until the next base rate review proceeding, which would be expected to be filed by the end of 2023. The settlement agreement also addresses how the eligible costs would be recoverable in rates, with a cap on the residential and small general service fixed monthly charge per customer in each semi-annual filing. The remaining costs to residential and small general service customers would be recovered via a volumetric energy charge. The settlement agreement also addresses that semi-annual filings are to be made August 1, based on capital investments and expenses through the period ended April 30, and February 1, based on capital investments and expenses through October 31. The parties agreed in the settlement that the Company would make its first semi-annual filing on August 1, 2017, with additional time allotted subsequent to the plan case order for intervening parties to review the filing and to address any changes to the settlement agreement.

On August 1, 2017, the Company filed with the IURC its initial request for approval of the revenue requirement associated with a capital investment of \$7.1 million through April 30, 2017. On December 20, 2017, the IURC issued an Order approving the initial rates necessary to begin cash recovery of 80 percent of the revenue requirement, inclusive of return, with the remaining 20 percent deferred for recovery in the utility's next general rate case. On February 1, 2018, the Company submitted its second semi-annual filing, seeking approval of the recovery in rates of investments made of approximately \$31 million through October 31, 2017. As of December 31, 2017, the Company has regulatory assets related to the Electric TDSIC plan totaling \$4.3 million.

Renewable Generation Resources

On August 30, 2017, the IURC issued an Order approving the Company's request to recover costs related to the construction of three solar projects, using the mechanism allowed under Senate Bill 29, which allows for timely recovery of costs and expenses incurred during the construction and operation of clean energy projects. These investments, presented as part of the Company's Integrated Resource Plan (IRP) submitted in December 2016, allow the Company to add approximately 4 MW of universal solar generation, rooftop solar generation, and 1 MW of battery storage resources to its portfolio. See more information on the IRP below in Environmental & Sustainability Matters. The approved cost of the projects cannot exceed the approximate \$16 million estimate submitted by the Company, without seeking further Commission approval.

SIGECO Electric Environmental Compliance Filing

On January 28, 2015, the IURC issued an Order approving the Company's request for approval of capital investments in its coal-fired generation units to comply with new EPA mandates related to mercury and air toxic standards (MATS) effective in 2015 and to address an outstanding Notice of Violation (NOV) from the EPA pertaining to its A.B. Brown generating station sulfur trioxide emissions. The MATS rule sets emission limits for hazardous air pollutants for existing and new coal-fired power plants and identifies the following broad categories of hazardous air pollutants: mercury, non-mercury hazardous air pollutants (primarily arsenic, chromium, cobalt, and selenium), and acid gases (hydrogen cyanide, hydrogen chloride, and hydrogen fluoride). The rule imposes mercury emission limits for two sub-categories of coal and proposed surrogate limits for non-mercury and acid gas hazardous air pollutants.

As of December 31, 2017, \$30 million has been spent on equipment to control mercury in both air and water emissions, and \$40 million to address the issues raised in the NOV. The Order approved the Company's request for deferred accounting treatment, as supported by provisions under Indiana Senate Bill 29 and Senate Bill 251. The accounting treatment includes the deferral of depreciation and property tax expense related to these investments, accrual of post-in-service carrying costs, and deferral of incremental operating expenses related to compliance with these standards. These costs will be included for recovery no later than the next rate case. The initial phase of the projects went into service in 2014, with the remaining investment going into service in 2016. As of December 31, 2017, the Company has approximately \$12.8 million deferred related to depreciation and operating expenses, and \$4.7 million deferred related to post-in-service carrying costs. MATS compliance was required beginning April 16, 2015, and the Company continues to operate in full compliance with the MATS rule.

In June 2015, Joint Appellants' Citizens Action Coalition of Indiana, Inc., Sierra Club, Inc., and Valley Watch, Inc. (the appellants) challenged the IURC's January 2015 Order. On October 29, 2015, the Indiana Court of Appeals issued an opinion

that affirmed the IURC's findings with regard to equipment required to comply with MATS and certain national pollutant discharge elimination system rules but remanded the case to the IURC to determine whether a certificate of public convenience and necessity (CPCN) should be issued for the equipment required by the NOV. On June 22, 2016, the IURC issued an Order granting the Company a CPCN for the NOV required equipment. On July 21, 2016, the appellants initiated an appeal of the IURC's June 22, 2016 Order challenging the findings made by the IURC. On February 14, 2017, the Indiana Court of Appeals affirmed the IURC's June 22, 2016 Order.

On February 20, 2018, the Company filed a request to commence recovery, under Senate Bill 251, of its already approved investments associated with the MATS and NOV Compliance Projects, including recovery of the authorized deferred balance. As proposed, recovery would reflect 80 percent of the authorized costs, including a return, recovery of depreciation and incremental operating expenses, and recovery of the prior deferred balance over a proposed period of 15 years. The remaining 20 percent will be deferred until the Company's next base rate proceeding. No procedural schedule has been set, but the Company would expect an order in the first quarter of 2019.

SIGECO Electric Demand Side Management (DSM) Program Filing

On March 28, 2014, Indiana Senate Bill 340 was signed into law. The legislation allows for industrial customers to opt out of participating in energy efficiency programs and as a result of this legislation, most of the Company's eligible industrial customers have since opted out of participation in the applicable energy efficiency programs.

Indiana Senate Bill 412 (Senate Bill 412) requires electricity suppliers to submit energy efficiency plans to the IURC at least once every three years. Senate Bill 412 also requires the recovery of all program costs, including lost revenues and financial incentives associated with those plans and approved by the IURC. The Company made its first filing pursuant to this bill in June 2015, which proposed energy efficiency programs for calendar years 2016 and 2017. On March 23, 2016, the IURC issued an Order approving the Company's 2016-2017 energy efficiency plan. The Order provided for cost recovery of program and administrative expenses and included performance incentives for reaching energy savings goals. The Order also included a lost margin recovery mechanism that would have limited recovery related to new programs to the shorter of four years or the life of the installed energy efficiency measure. Prior electric energy efficiency orders did not limit lost margin recovery in this manner. This ruling followed other IURC decisions implementing the same lost margin recovery limitation with respect to other electric utilities in Indiana. The Company appealed this lost margin recovery restriction based on the Company's commitment to promote and drive participation in its energy efficiency programs.

On March 7, 2017, the Indiana Court of Appeals reversed the IURC finding on the Company's 2016-2017 energy efficiency plan that the four year cap on lost margin recovery was arbitrary and the IURC failed to properly interpret the governing statute requiring it to review the utility's originally submitted DSM proposal and either approve or reject it as a whole, including the proposed lost margin recovery. The case was remanded to the IURC for further proceedings. On June 13, 2017, the Company filed additional testimony supporting the plan. In response to the proposals to cap lost margin recovery, the Company filed supplemental testimony that supported lost margin recovery based on the average measure life of the plan, estimated at nine years, on 90 percent of the direct energy savings attributed to the programs. Testimony of intervening parties was filed on July 26, 2017, opposing the Company's proposed lost margin recovery. An evidentiary hearing was held in September 2017. On December 20, 2017, the Commission issued an order approving the DSM Plan for 2016-2017 including the recovery of lost margins consistent with the Company's proposal. On January 22, 2018, certain intervening parties initiated an appeal to the Indiana Court of Appeals. An appeal schedule has not been set, and while no assurance as to the ultimate outcome can be provided, based upon the record of the proceedings, as well as the findings in the Commission's order, the Company expects to prevail in this appeal.

On April 10, 2017, the Company submitted its request for approval to the IURC of its Energy Efficiency Plan for calendar years 2018 through 2020. Consistent with prior filings, this filing included a request for continued cost recovery of program and administrative expenses, including performance incentives for reaching energy savings goals and continued recovery of lost margins consistent with the modified proposal in the 2016-2017 plan. Filed testimony of intervening parties was received on July 26, 2017, opposing the Company's proposed lost margin recovery. An evidentiary hearing was held in September 2017. On December 28, 2017, the Commission issued an order approving the 2018 through 2020 Plan, inclusive of recovery of lost margins consistent with the Order issued on December 20, 2017. On January 26, 2018, certain intervening parties initiated an appeal to the Indiana Court of Appeals. An appeal schedule has not been set, and while no assurance as to the ultimate

outcome can be provided, based upon the record of the proceedings, as well as the findings in the Commission's order, the Company expects to prevail in this appeal.

For the twelve months ended December 31, 2017, 2016, and 2015, the Company recognized electric utility revenue of \$11.6 million, \$11.1 million, and \$10.1 million, respectively, associated with lost margin recovery approved by the Commission.

FERC Return on Equity (ROE) Complaints

On November 12, 2013, certain parties representing a group of industrial customers filed a joint complaint with the FERC under Section 206 of the Federal Power Act against the MISO and various MISO transmission owners, including SIGECO (first complaint case). The joint parties sought to reduce the 12.38 percent base ROE used in the MISO transmission owners' rates, including SIGECO's formula transmission rates, to 9.15 percent covering the refund period from November 12, 2013 through February 11, 2015 (first refund period). On September 28, 2016, the FERC issued a final order authorizing a 10.32 percent base ROE for the first refund period and prospectively through the date of the order in a second complaint case as detailed below.

A second customer complaint case was filed on February 11, 2015 covering the refund period from February 12, 2015 through May 11, 2016 (second refund period). An initial decision from the FERC administrative law judge on June 30, 2016, authorized a base ROE of 9.70 percent for the second refund period. The FERC was expected to rule on the proposed order in the second complaint case in 2017, which would authorize a base ROE for this period and prospectively from the date of the order. The timing of such action is uncertain.

Separately, on January 6, 2015, the FERC approved a MISO transmission owner joint request for an adder to the approved ROE. Under FERC regulations, transmission owners that are part of a Regional Transmission Organization (RTO) such as the MISO are authorized to earn an incentive of 50 basis points above the FERC approved ROE. The adder is applied retroactively from January 6, 2015 through May 11, 2016 and prospectively from the September 28, 2016 order in the first complaint case.

The Company has reflected these results in its financial statements. As of December 31, 2017, the Company had invested approximately \$157.7 million in qualifying projects. The net plant balance for these projects totaled \$133.5 million at December 31, 2017.

On April 14, 2017, the U.S. Court of Appeals for the District of Columbia circuit vacated the FERC Opinion in a prior case that established a new methodology for calculating ROE. This methodology was utilized in the final order in the Company's first complaint case, and the initial decision in the Company's second complaint case. The Appeals Court stated that FERC did not prove the existing ROE was not just and reasonable, failed to provide any reasoned basis for their selected ROE, and remanded to the FERC for further justification of its ROE calculation. The Company will continue to monitor this proceeding and evaluate any potential impacts on the Company's complaint cases but would not expect them to be material.

Electric Generation Transition Plan

As required by Indiana regulation, the Company filed its 2016 Integrated Resource Plan (IRP) with the IURC on December 16, 2016. The State requires each electric utility to perform and submit an IRP that uses economic modeling to consider the costs and risks associated with available resource options to provide reliable electric service for the next twenty-year period. During 2016, the Company held three public stakeholder meetings to gather input and feedback as well as communicate results of the IRP process as it progressed. In developing its IRP, the Company considered both the cost to continue operating its existing generation units in a manner that complies with current and anticipated future environmental requirements, as well as various resource alternatives, such as the use of energy efficiency programs and renewable resources as part of its overall generation portfolio. After submission, parties to the IRP provided comments on the plan. While the IURC does not approve or reject the IRP, the process involves the issuance of a staff report that provides comments on the IRP. The final report was issued on November 2, 2017. The Company has taken the comments provided in the report into consideration in its generation resource plans.

The Company's IRP considered a broad range of potential resources and variables and is focused on ensuring it offers a reliable, reasonably priced generation portfolio as well as a balanced energy mix. Consistent with the recommendations

presented in the Company's Integrated Resource Plan and as a direct result of significant environmental investments required to comply with current regulations, the Company plans to retire a significant portion of its generating fleet by the end of 2023. On February 20, 2018, the Company filed a petition seeking authorization from the Commission to construct a new 800-900 MW natural gas combined cycle generating facility to replace this capacity at an approximate cost of \$900 million, which includes the cost of a new natural gas pipeline to serve the plant. The Company is requesting a CPCN authorizing construction timelines and costs of new generation resources, as well as necessary unit retrofits, to implement the generation transition process. In that filing, the Company seeks approval of its generation plan, including the authority to defer the cost of new generation, including the ability to accrue AFUDC and defer depreciation until the facility is placed in base rates.

As a part of this same proceeding, the Company seeks recovery under Senate Bill 251 of costs to be incurred for environmental investments to be made at its F.B. Culley generating plant to comply with Effluent Limitation Guidelines and Coal Combustion Residuals rules. The F.B. Culley investments, estimated to be approximately \$90 million, will begin in 2019 and will allow the F.B. Culley Unit 3 generating facility to comply with environmental requirements and continue to provide generating capacity to the Company's electric customers. Under Senate Bill 251, the Company is seeking recovery of 80 percent of the approved costs, including a return, using a tracking mechanism, with the remaining 20 percent of the costs deferred for recovery in the Company's next base rate proceeding. The Company expects an order from the Commission in this proceeding by the first half of 2019.

On February 20, 2018, the Company announced it is finalizing details to install an additional 50 MW of universal solar energy, consistent with its IRP. The Company will seek authority from the IURC pursuant to Senate Bill 29 to recover the costs associated with the project.

In addition, the Company intends to continue to offer energy efficiency programs annually. Similarly, as discussed in more detail below, the extension of preliminary compliance deadlines related to ELG implementation are not expected to have a significant impact on the Company's long term preferred generation plan.

On September 21, 2017, the Company and Alcoa agreed to continue the joint ownership and operation of Warrick Unit 4 through 2023. This aligns with the Company's long-term electric generation strategy, and the expected exit at the end of 2023 is consistent with the IRP which reflects having completed all planned unit retirements and bringing new resources online by that date.

Environmental and Sustainability Matters

The Company initiated a corporate sustainability program in 2012 with the publication of the initial corporate sustainability report. Since that time, the Company continues to develop strategies that focus on environmental, social and governance (ESG) factors that contribute to the long-term growth of a sustainable business model. The sustainability policies and efforts, and in particular its policies and procedures designed to ensure compliance with applicable laws and regulations, are directly overseen by the Company's Corporate Responsibility and Sustainability Committee, as well as vetted with the Company's Board of Directors. Further discussion of key goals, strategies, and governance practices can be found in the Company's current sustainability report, at www.vectren.com/sustainability, which received core level certification from the Global Reporting Initiative.

In furtherance of the Company's commitment to a sustainable business model, and as detailed further below, the Company is transitioning its electric generation portfolio from nearly total reliance on baseload coal to a fully diversified and balanced portfolio of fuels that will provide long term electric supply needs in a safe and reliable manner while dramatically lowering emissions of carbon and the carbon intensity of its electric generating fleet. If authorized by the Commission, by 2024 the Company plans to construct a new natural gas combined cycle plant to replace four coal-fired units totaling over 700 MWs which, when combined with its planned 54 MWs of new renewable generation, will achieve a 60 percent reduction in carbon emissions from 2005 levels and reduce carbon intensity to 980 lbs CO₂ / MMBTU and position the Company to comply with future carbon emission reduction requirements. In addition to diversification of its fuel portfolio, the Company's also seeking authorization to significantly upgrade wastewater treatment for its remaining coal-fired unit and exploring opportunities to continue to recycle ash from its coal ash ponds. This generation diversification strategy aligns with the Company's ongoing

investments in new electric infrastructure through the approved \$450 million grid modernization program, and is set forth in more detail in the Company's upcoming 2018 corporate sustainability report.

Further, as part of its commitment to a culture of compliance excellence and continuous improvement, the Company continues to enhance its Safety Management System (SMS) which was implemented several years ago. The risk analysis and process review provides valuable input into the assessment process used to drive the ongoing infrastructure improvement plans being executed by the Company's gas and electric utilities.

The Company is subject to extensive environmental regulation pursuant to a variety of federal, state, and municipal laws and regulations. These environmental regulations impose, among other things, restrictions, liabilities, and obligations in connection with the storage, transportation, treatment, and disposal of hazardous substances and limit airborne emissions from electric generating facilities including particulate matter, sulfur dioxide (SO₂), nitrogen oxide (NO_x), and mercury, among others. Environmental legislation and regulation also requires that facilities, sites, and other properties associated with the Company's operations be operated, maintained, abandoned, and reclaimed to the satisfaction of applicable regulatory authorities. The Company's current costs to comply with these laws and regulations are significant to its results of operations and financial condition. Similar to the costs associated with federal mandates in the Pipeline Safety Law, Senate Bill 251 is also applicable to federal environmental mandates impacting SIGECO's electric operations.

Coal Ash Waste Disposal, Ash Ponds and Water

Coal Combustion Residuals Rule

In April 2015, the EPA finalized its Coal Combustion Residuals (CCR) rule which regulates ash as non-hazardous material under Subtitle D of the Resource Conservation and Recovery Act (RCRA). The final rule allows beneficial reuse of ash and the majority of the ash generated by the Company's generating plants will continue to be reused. As it relates to the CCR Rule, the Water Infrastructure Improvements for the Nation (WIIN) Act, was passed in December 2016 by Congress that would provide for enforcement of the federal program by states under approved state programs rather than citizen suits. Additionally, aspects of the CCR rule are currently being challenged by multiple parties in judicial review proceedings. In August, the EPA issued guidance to states to clarify their ability to implement the Federal CCR rule through state permit programs as allowed in the WIIN Act legislation. Alternative compliance mechanisms for groundwater, corrective action and other areas of the rule could be granted under the regulatory oversight of a state enforced program. On September 14, 2017, the EPA announced its intent to reconsider portions of the Federal CCR rule in line with the guidance issued to states. While the state program development and EPA reconsideration move forward, the existing CCR compliance obligations remain in effect.

Under the existing CCR rule, the Company is required to complete a series of integrity assessments, including seismic modeling given the Company's facilities are located within two seismic zones, and groundwater monitoring studies to determine the remaining service life of the ponds and whether a pond must be retrofitted with liners or closed in place, with bottom ash handling conversions completed. In late 2015, using general utility industry data, the Company prepared cost estimates for the retirement of the ash ponds at the end of their useful lives, based on its interpretation of the closure alternatives contemplated in the final rule. The resulting estimates ranged from approximately \$35 million to \$80 million. These estimates contemplated final capping and monitoring costs of the ponds at both F.B. Culley and A.B. Brown generating stations. These rules are not applicable to the Company's Warrick generating unit, as this unit has historically been part of a larger generating station that predominantly serves an adjacent industrial facility.

Throughout 2016 and 2017, the Company has continued to refine site specific estimates and now estimates the costs to be in the range of \$45 million to \$135 million. Significant factors impacting the resulting cost estimates include the closure time frame and the method of closure. Current estimates contemplate complete removal under the assumption of beneficial reuse of the ash at A.B. Brown, as well as implications of the Company's preferred IRP. Ongoing analysis, the continued refinement of assumptions, or the inability to beneficially reuse the ash, either from a technological or economical perspective, could result in estimated costs in excess of the current range.

As of December 31, 2017, the Company had recorded an approximate \$40 million asset retirement obligation (ARO). The recorded ARO reflects the present value of the approximate \$45 million in estimated costs in the range above. These assumptions and estimations are subject to change in the future and could materially impact the amount of the estimated ARO.

In order to maintain current operations of the ponds, the Company spent approximately \$17 million on the reinforcement of the ash pond dams and other operational changes in 2016 to meet the more stringent 2,500 year seismic event structural and safety standard in the CCR rule.

Effluent Limitation Guidelines (ELGs)

Under the Clean Water Act, the EPA sets technology-based guidelines for water discharges from new and existing electric generation facilities. In September, 2015, the EPA finalized revisions to the existing steam electric ELGs setting stringent technology-based water discharge limits for the electric power industry. The EPA focused this rulemaking on wastewater generated primarily by pollution control equipment necessitated by the comprehensive air regulations, specifically setting strict water discharge limits for arsenic, mercury and selenium for scrubber waste waters. The ELGs will be implemented when existing water discharge permits for the plants are renewed, with compliance activities expected to commence where operations continue, within the 2018-2023 time frame. The ELGs work in tandem with the aforementioned CCR requirements, effectively prohibiting the use of less costly lined sediment basin options for disposal of coal combustion residuals, and virtually mandate conversions to dry bottom ash handling.

At the time of ELG finalization, the wastewater discharge permit for the A.B. Brown power plant had an expiration date of October 2016 and, for the F.B. Culley plant, a date of December 2016, and final renewals were issued by the Indiana Department of Environmental Management (IDEM) in February 2017 and March 2017, respectively. As part of the permit renewals, the Company requested alternate compliance dates for ELGs, which were approved by IDEM. For plants identified in the Company's preferred IRP to be retired prior to December 31, 2023, the Company has requested those plants would not require new treatment technology, which was approved by IDEM provided the Company notifies IDEM within one year of issuance of the renewal of its intent to retire the unit. For the F.B. Culley 3 plant, the Company requested a 2020 compliance date for dry bottom ash and 2023 compliance date for flue gas desulfurization wastewater, which was approved by IDEM and finalized in the permit renewal. Discussion of these environmental investments at the F.B. Culley 3 plant are included in the generation transition plan in Footnote 17 in the Company's Consolidated Financial Statements included in Item 8.

On April 13, 2017, as part of the Administration's regulatory reform initiative, which is focused on the number and nature of regulations, the EPA granted petitions to reconsider the ELG rule, and indicated it would stay the current implementation deadlines in the rule during the pendency of the reconsideration. The EPA has also sought a stay of the current judicial review litigation in federal district court. The court has yet to grant the indefinite stay sought by EPA, and instead placed the parties on a periodic status update schedule. On September 13, 2017, EPA finalized a rule postponing certain interim compliance dates by two years, but did not postpone the final compliance deadline of December 31, 2023. As the Company does not currently have short-term ELG implementation deadlines in its recently renewed wastewater discharge permits, the Company does not anticipate immediate impacts from the EPA's two-year extension of preliminary implementation deadlines due to the longer compliance time frames granted by IDEM, and will continue to work with IDEM to evaluate further implementation plans. Moreover, the Company believes the two year extension of the ELG preliminary implementation deadlines and reconsideration process does not impact its preferred generation plan as modeled in the IRP because the final compliance deadline of December 31, 2023 is still in place and enhanced wastewater treatment for scrubber discharge water will still be required by a reconsidered ELG rule even if the EPA revises stringency levels.

Cooling Water Intake Structures

Section 316(b) of the Clean Water Act requires generating facilities use the "best technology available" (BTA) to minimize adverse environmental impacts on a body of water. More specifically, Section 316(b) is concerned with impingement and entrainment of aquatic species in once-through cooling water intake structures used at electric generating facilities. A final rule was issued by the EPA on May 19, 2014. The final rule does not mandate cooling water tower retrofits but requires that IDEM conduct a case-by-case assessment of BTA for each facility. The final rule lists seven presumptive technologies which would qualify as BTA. These technologies range from intake screen modifications to cooling water tower retrofits. Ecological and technology assessment studies must be completed prior to determining BTA for the Company's facilities. The Company is currently undertaking the required ecological studies and anticipates timely compliance in 2021-2022. To comply, the Company believes capital investments will likely be in the range of \$4 million to \$8 million.

Air Quality

Ozone NAAQS

On November 26, 2014, the EPA proposed to tighten the current National Ambient Air Quality Standard (NAAQS) for ozone from the current standard of 75 parts per billion (ppb) to a level within the range of 65 to 70 ppb. On October 1, 2015, the EPA finalized a new NAAQS for ozone at the high end of the range, or 70 ppb. On September 16, 2016, Indiana submitted its initial determination to the EPA recommending counties in southwest Indiana, specifically Vanderburgh, Posey and Warrick, be declared in attainment of the new more stringent ozone standard based upon air monitoring data from 2014-2016. In November 2017, EPA finalized its designations of Vanderburgh, Posey, and Warrick counties as being in attainment with the current 70 ppb standard.

One Hour SO₂ NAAQS

On February 16, 2016, the EPA notified states of the commencement of a 120 day consultation period between IDEM and the EPA with respect to the EPA's recommendations for new non-attainment designations for the 2010 One Hour SO₂ NAAQS. Identified on the list was Posey County, Indiana, where the Company's A.B. Brown Generating Station is located. While the Company is in compliance with all applicable SO₂ limits in its permits, the Company reached an agreement with IDEM on voluntary measures the Company was able to implement without significant incremental costs to ensure Posey County remains in attainment with the 2010 One Hour SO₂ NAAQS. The Company's coal-fired generating fleet is 100 percent scrubbed for SO₂ and 90 percent controlled for NO_x.

Climate Change and Carbon Strategy

Vectren remains committed to responsible environmental stewardship and conservation efforts. Vectren's generation transition plan, as set forth in its generation and compliance filing, is a balanced approach toward environmental stewardship and conservation goals, supplying service at a reasonable cost, and operating in compliance with water, air and solid waste regulations, while dramatically reducing the Company's carbon emission from its electric generating fleet. The Company's generation transition plan will result in a 60 percent reduction in carbon emissions from 2005 to 2024 even in the absence of a mandatory greenhouse gas reduction requirement. While the status of the Clean Power Plan (CPP) regulation is uncertain given the legal challenges it faces and pending proposal to repeal the CPP which, if finalized, would likely result in more litigation, the Company's generation transition plan positions it to comply with the CPP, its replacement rule, or future carbon legislation. Moreover, the Company's actions in reducing its carbon emissions 60 percent from 2005 levels by 2024 is consistent with the international community's goal of preventing global temperatures from rising more than two degrees Celsius by the year 2100.

While regulatory uncertainties predominate with respect to the status of the CPP, the Company continues to believe that Congress should set a broad national climate change policy with the following elements:

- An inclusive scope that involves all sectors of the economy and sources of greenhouse gases, and recognizes early actions and investments made to mitigate greenhouse gas emissions;
- Provisions for enhanced use of renewable energy sources as a supplement to baseload generation including effective energy conservation, demand side management, and generation efficiency measures;
- Inclusion of incentives for research and development and investment in advanced clean coal technology; and
- A strategy supporting alternative energy technologies and biofuels and continued increase in the domestic supply of natural gas and oil to reduce dependence on foreign oil.

Current Initiatives to Increase Conservation & Reduce Emissions

Even in the absence of a federal mandatory requirement to reduce greenhouse gases, the Company is committed to a policy that reduces greenhouse gas emissions and conserves energy usage. Evidence of this commitment includes:

- Since 2005 and through 2017, the Company has achieved a reduction in emissions of CO₂ of 30 percent (on a tonnage basis) through the retirement of F.B. Culley Unit 1, expiration of municipal contracts, electric conservation, the addition of renewable generation, and the installation of more efficient dense pack turbine technology. The three year average emission reduction for the period 2015 to 2017 is 35 percent from 2005 levels.

- Focusing the Company's mission statement and purpose on corporate sustainability and the need to help customers conserve and manage energy costs. Vectren's annual sustainability report continues to receive Core level certification by the Global Reporting Initiative and demonstrates the Company's commitment to sustainability and transparency in operations. The Company's current sustainability report can be found at www.vectren.com/sustainability;
- Implementing home and business energy efficiency initiatives in the Company's Indiana and Ohio gas utility service territories such as offering rebates on high efficiency furnaces, programmable thermostats, and insulation and duct sealing;
- Implementing home and business energy efficiency initiatives in the electric service territory such as rebate programs on central air conditioning units, LED lighting, home weatherization and energy audits;
- Building a renewable energy portfolio to complement base load generation in advance of mandated renewable energy portfolio standards;
- Evaluating potential carbon requirements with regard to new generation, other fuel supply sources, and future environmental compliance plans;
- Further reducing the Company's carbon footprint by building a more sustainable vehicle fleet with lower overall fuel consumption;
- Reducing methane emissions through becoming a founding partner in the EPA Natural Gas STAR Methane Challenge Program. The Company's primary method for reducing methane emissions is through continued replacement of bare steel and cast iron gas distribution pipeline assets;
- Working with the Company's gas supply administrator in Indiana to maximize the amount of natural gas delivered to our customers that has been sourced from members of The Environmental Partnership, an organization that includes many of the major oil and gas producers in the U.S and who have committed to continuously improving the industry's environmental performance;
- Developing renewable energy and energy efficiency performance contracting projects through its Energy Services segment; and
- Helping energy producers install pipes that allow for more natural gas power generation and reduced gas flaring as well as serving distribution integrity management programs that reduce methane leaks, through its Infrastructure Services segment.

Clean Power Plan

On August 3, 2015, the EPA released its final Clean Power Plan rule (CPP) which required a 32 percent reduction in carbon emissions from 2005 levels. This would result in a final emission rate goal for Indiana of 1,242 lb CO₂/MWh to be achieved by 2030 and implemented through a state implementation plan. The final rule was published in the Federal Register on October 23, 2015, and that action was immediately followed by litigation initiated by Indiana and 23 other states as a coalition challenging the rule. In January 2016, the reviewing court denied the states' and other parties requests to stay the implementation of the CPP pending completion of judicial review. On January 26, 2016, 29 states and state agencies, including the 24 state coalition referenced above, filed a request for immediate stay of implementation of the rule with the U.S. Supreme Court. On February 9, 2016, the U.S. Supreme Court granted the stay request to delay the implementation of the regulation while being challenged in court. Oral argument was held in September 2016. The stay will remain in place while the lower court concludes its review. In March 2017, as part of the ongoing regulatory reform efforts of the Administration, the EPA filed a motion with the U.S. Court of Appeals for the District of Columbia circuit to suspend litigation pending the EPA's reconsideration of the CPP rule, which was granted on April 28, 2017. Moreover, as indicated above, in October, 2017, EPA published its proposal to repeal the CPP. Comments to the repeal proposal are due in April 2018. EPA's repeal proposal was quickly followed by an advanced notice of proposed rulemaking intended to solicit public comments on issues related to formulating a CPP replacement rule, which are similarly due in April 2018. Repeal without replacement of the CPP could create potential litigation risk arising from the absence of direct federal regulation in this area that courts have previously determined preempt common law nuisance claims.

Impact of Legislative Actions & Other Initiatives is Unknown

At this time, compliance costs and other effects associated with reductions in GHG emissions or obtaining renewable energy sources remain uncertain. However, Vectren's generation transition plan, as set forth in its electric generation and compliance filing, will achieve 60 percent reductions in 2005 GHG emission levels by 2025, positioning the Company to comply with future regulatory or legislative actions with respect to mandatory GHG reductions.

In addition to the federal programs, the United States and 194 other countries agreed by consensus to limit GHG emissions beginning after 2020 in the 2015 United Nations Framework Convention on Climate Change Paris Agreement. The United States has proposed a 26-28 percent GHG emission reduction from 2005 levels by 2025. The Administration has indicated it intends to withdraw the United States' participation, however the Agreement provides that parties cannot petition to withdraw until November 2019. Since 2005 through 2017, the Company has achieved reduced emissions of CO₂ by an average of 35 percent (on a tonnage basis), and will increase that total to 60 percent at the conclusion of its generation transition plan, well above the 32 percent reduction that would be required under the CPP. While the litigation and the EPA's reconsideration of the CPP rules remains uncertain, the Company will continue to monitor regulatory activity regarding GHG emission standards that may affect its electric generating units.

Manufactured Gas Plants

In the past, the Company operated facilities to manufacture natural gas. Given the availability of natural gas transported by pipelines, these facilities have not been operated for many years. Under current environmental laws and regulations, those that owned or operated these facilities may now be required to take remedial action if certain contaminants are found above the regulatory thresholds.

In the Indiana Gas service territory, the existence, location, and certain general characteristics of 26 gas manufacturing and storage sites have been identified for which the Company may have some remedial responsibility. A remedial investigation/ feasibility study (RI/FS) was completed at one of the sites under an agreed upon order between Indiana Gas and the IDEM, and a Record of Decision was issued by the IDEM in January 2000. The remaining sites have been submitted to the IDEM's Voluntary Remediation Program (VRP). The Company has identified its involvement in five manufactured gas plant sites in SIGECO's service territory, all of which are currently enrolled in the IDEM's VRP. The Company is currently conducting some level of remedial activities, including groundwater monitoring at certain sites.

The Company has accrued the estimated costs for further investigation, remediation, groundwater monitoring, and related costs for the sites. While the total costs that may be incurred in connection with addressing these sites cannot be determined at this time, the Company has recorded cumulative costs that it has incurred or reasonably expects to incur totaling approximately \$44.2 million (\$23.9 million at Indiana Gas and \$20.3 million at SIGECO). The estimated accrued costs are limited to the Company's share of the remediation efforts and are therefore net of exposures of other potentially responsible parties (PRP).

With respect to insurance coverage, Indiana Gas has received approximately \$20.8 million from all known insurance carriers under insurance policies in effect when these plants were in operation. Likewise, SIGECO has settlement agreements with all known insurance carriers and has received approximately \$15.7 million of the expected \$15.8 million in insurance recoveries.

The costs the Company expects to incur are estimated by management using assumptions based on actual costs incurred, the timing of expected future payments, and inflation factors, among others. While the Company's utilities have recorded all costs which they presently expect to incur in connection with activities at these sites, it is possible that future events may require remedial activities which are not presently foreseen and those costs may not be subject to PRP or insurance recovery. As of December 31, 2017 and December 31, 2016, approximately \$2.5 million and \$2.9 million, respectively, of accrued, but not yet spent, costs are included in Other Liabilities related to the Indiana Gas and SIGECO sites.

Results of Operations of the Nonutility Group

The Nonutility Group operates in two primary business areas: Infrastructure Services and Energy Services. Infrastructure Services provides underground pipeline construction and repair services. Energy Services provides energy performance contracting and sustainable infrastructure, such as renewables, distributed generation, and combined heat and power projects. Enterprises has other legacy businesses that have investments in energy-related opportunities and services, among other investments. All of the above is collectively referred to as the Nonutility Group.

The Nonutility Group results were earnings of \$41.1 million for the year ended December 31, 2017, compared to earnings of \$36.9 million for the year ended December 31, 2016, and earnings of \$36.3 million for the year ended December 31, 2015. 2017 results reflect the tax benefit from the revaluation of deferred taxes on the Nonutility businesses, as well as the multi-year contribution to the Vectren Foundation as funded by the Nonutility business.

<i>(In millions, except per share amounts)</i>	Year Ended December 31,		
	2017	2016	2015
NET INCOME	\$ 41.1	\$ 36.9	\$ 36.3
CONTRIBUTION TO VECTREN BASIC EPS	\$ 0.49	\$ 0.44	\$ 0.44
NET INCOME (LOSS) ATTRIBUTED TO:			
Infrastructure Services	\$ 32.3	\$ 25.0	\$ 29.7
Energy Services	10.7	12.5	7.3
Other Businesses	(1.9)	(0.6)	(0.7)

Infrastructure Services

Infrastructure Services provides underground pipeline construction and repair services through wholly owned subsidiaries Miller Pipeline, LLC (Miller or Miller Pipeline) and Minnesota Limited, LLC (Minnesota Limited). Inclusive of holding company costs, earnings from Infrastructure Services operations for the year ended December 31, 2017 were \$32.3 million compared to \$25.0 million in 2016, and \$29.7 million in 2015. Total Infrastructure Services revenues in 2017 were \$996 million compared to \$813 million in 2016 and \$843 million in 2015. At December 31, 2017, Infrastructure Services had an estimated backlog of blanket contracts of \$480 million and bid contracts of \$245 million, for a total backlog of \$725 million. This compares to an estimated backlog of \$725 million at December 31, 2016 and \$665 million at December 31, 2015.

The distribution portion of the Infrastructure Services' operation performed well in 2017, as gas utilities across the country continued to make significant investments in gas infrastructure systems. This growth trend is expected to continue as utilities continue to execute infrastructure programs.

Results for the transmission portion of the business have improved significantly in 2017, driven by the large transmission pipeline project in Ohio as well as other pipeline projects completed throughout the year. Though the timing and recurrence of these large projects is less predictable, they demonstrate expertise in this area and provide strong revenues. Infrastructure Services is positioned well to do this work, but the focus remains on the recurring integrity, station, and maintenance work, opportunities for large transmission pipeline construction projects will continue to be pursued. The fundamental business model related to the long cycle of integrity, station, and maintenance work in the transmission sector remains unchanged. Demand remains high due to aging infrastructure and evolving safety and reliability regulations.

Backlog represents the amount of gross revenue the Company expects to realize from work to be performed in the future on uncompleted contracts, including new contractual agreements on which work has not begun. Infrastructure Services operates primarily under two types of contracts, blanket contracts and bid contracts. Using blanket contracts, customers are not contractually committed to specific volumes of services, however the Company expects to be chosen to perform work needed by a customer in a given time frame. These contracts are typically awarded on an annual or multi-year basis. For blanket work, backlog represents an estimate of the amount of gross revenue the Company expects to realize from work to be performed in

the next twelve months on existing contracts or contracts the Company reasonably expects to be renewed or awarded based upon recent history or discussions with customers. Under bid contracts, customers are contractually committed to a specific service to be performed for a specific price, whether in total for a project or on a per unit basis.

The backlog amounts above reflect estimates of revenues to be realized. Projects included in backlog can be subject to delays or cancellation as a result of regulatory requirements, adverse weather conditions, customer requirements, among other factors, which could cause actual revenue amounts to differ significantly from the estimates and/or revenues to be realized in periods other than originally expected.

In 2016, the estimated depreciable lives for certain pieces of equipment at Minnesota Limited, LLC were reevaluated and extended due to a change in service life of the equipment. As a result of this evaluation, the Company extended the estimated useful life of certain pieces of equipment effective January 1, 2016. The effect of this change in estimate was a reduction of annual depreciation expense of approximately \$9.6 million but did not have a material impact on net income as these costs are fully reflected in bids as costs to recover.

Energy Services

Energy Services provides energy performance contracting and sustainable infrastructure, such as renewables, distributed generation, and combined heat and power projects through its wholly owned subsidiary Energy Systems Group, LLC (ESG). Inclusive of holding company costs, Energy Services' operations were earnings of \$10.7 million in 2017, \$12.5 million in 2016 and \$7.3 million in 2015. Energy Services' achieved revenues of \$282 million in 2017, which exceeded record revenues of \$260 million in 2016, and revenue of \$200 million in 2015. The lower results in 2017 are primarily driven by earnings in 2016 of \$5.5 million from tax code section 179D (Section 179D) tax deductions which allowed for federal tax deductions related to achieved energy efficiency savings. Section 179D provisions expired on December 31, 2016. On February 9, 2018, a one year extension of Section 179D was approved, making available deductions for 2017. Though not included in 2018 consolidated earnings guidance given the single year extension of the provision, a current estimate for such impact is approximately \$4 to \$6 million. Though not assured, efforts continue to secure this benefit in the future.

At December 31, 2017, the backlog of fixed price signed contracts is \$180 million, compared to \$234 million on December 31, 2016, and \$226 million on December 31, 2015. The list of projects at December 31, 2017 where ESG has been selected and there is a high degree of confidence that the stated work will be performed, or sales funnel, remains high at approximately \$430 million. The Company's long-term view of the performance contracting and sustainable infrastructure opportunities remains strong with an expected continued national focus on energy conservation and security, renewable energy, and sustainability as power prices across the country rise and customer focus on new, efficient, clean sources of energy grows.

Inclusive in the acquisition of FBU from Chevron on April 1, 2014, were several Indefinite Delivery / Indefinite Quantity (IDIQ) contracts with federal government agencies including energy savings performance contracting (ESPC) contracts with the U.S. Department of Energy and U.S. Army Corps of Engineers. On a periodic basis, the contracts are extended and/or subject to a recomplete process. The recomplete process for the U.S. Army Corps of Engineers contract was completed and awarded to ESG in May 2015. The U.S. Department of Energy IDIQ contract has been extended through the end of 2019. The U.S. Department of Energy ESPC contract was awarded in the first quarter of 2017.

Other Businesses

ProLiance

The Company has an investment in ProLiance Holdings, LLC (ProLiance or ProLiance Holdings). On June 18, 2013, ProLiance Holdings exited the natural gas marketing business through the disposition of certain of the net assets, along with the long-term pipeline and storage commitments, of its energy marketing business, ProLiance Energy, LLC (ProLiance Energy) to a subsidiary of Energy Transfer Partners, ETC Marketing, Ltd (ETC). ProLiance Energy's customers included, among others, the Company's Indiana utilities as well as Citizens' utilities. The Company's remaining investment in ProLiance relates primarily to an investment in LA Storage, LLC (LA Storage). Consistent with its ownership percentage, the Company is allocated 61 percent of ProLiance's profits and losses; however, governance and voting rights remain at 50 percent for each member; and therefore, the Company accounts for its investment in ProLiance using the equity method of accounting.

At December 31, 2017, ProLiance had approximately \$38.2 million of capitalization on its balance sheet, comprised of \$31.0 million in member's equity and \$7.2 million in a note payable. The capitalization primarily supports its investment in LA Storage. The Company's investment in ProLiance at December 31, 2017 totals \$23.2 million and is comprised of \$18.9 million of equity and a \$4.4 million note receivable.

LA Storage

ProLiance Transportation and Storage, LLC (PT&S), a subsidiary of ProLiance, and Sempra Energy International, a subsidiary of Sempra Energy, through a joint venture, have a 100 percent interest in a development project for salt-cavern natural gas storage facilities known as LA Storage. PT&S is the minority member with a 25 percent interest, which it accounts for using the equity method. The project, which includes a pipeline system, is expected to include 12-19 Bcf of storage capacity, and has the potential for further expansion. This pipeline system is currently connected with several interstate pipelines, including the Cameron Interstate Pipeline operated by Sempra Pipelines & Storage, and can connect area liquefied natural gas regasification terminals to an interstate natural gas transmission system and storage facilities.

Approximately 12 Bcf of the storage, which comprises three of the four FERC certified caverns, is fully tested but additional work is required to further develop the caverns. The timing and extent of development of these caverns is dependent on market conditions, including pricing, need for storage capacity, and development of the liquefied natural gas market, among other factors. To date, development activity has been modest due to current low demand for storage facilities. The development of the storage market and related pricing are critical assumptions in the analysis of the recoverability of the investment's carrying value.

Other Businesses

Other Businesses results were a loss of \$1.9 million in 2017, compared to a loss of \$0.6 million in 2016 and a loss of \$0.7 million in 2015. The greater loss in 2017 is a result of the revaluation of deferred tax assets as a result of the TCJA.

Impact of Recently Issued Accounting Guidance

Revenue Recognition

In May 2014, the FASB issued new accounting guidance to clarify the principles for recognizing revenue and to develop a common revenue standard for GAAP. The amendments in this guidance state an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. This new guidance requires improved disclosures to help users of financial statements better understand the nature, amount, timing, and uncertainty of revenue that is recognized. The guidance can be applied retrospectively to each prior reporting period presented (full retrospective method) or retrospectively with a cumulative effect adjustment to retained earnings for initial application of the guidance at the date of initial adoption (modified retrospective method). The Company plans to adopt the guidance under the modified retrospective method. The cumulative effect adjustment to retained earnings will be immaterial.

In July 2015, the FASB approved a one year deferral that became effective through an ASU in August and changed the effective date to annual reporting periods beginning after December 15, 2017, including interim periods, with early adoption permitted, but not before the original effective date of December 15, 2016.

The Company has finalized the assessment process of all revenue streams for the standard's impact on the Consolidated Balance Sheets, Consolidated Statements of Operations, and disclosures and has identified all material revenue streams. The Company has determined that all material revenue streams fall under the scope of the standard. The standard will result in no significant changes to the Company's pattern of revenue recognition. The Company has adopted the guidance effective January 1, 2018.

Leases

In February 2016, the FASB issued new accounting guidance for the recognition, measurement, presentation and disclosure of leasing arrangements. This ASU requires the recognition of lease assets and liabilities for those leases currently classified as operating leases while also refining the definition of a lease. In addition, lessees will be required to disclose key information about the amount, timing, and uncertainty of cash flows arising from leasing arrangements. This ASU is effective for the interim and annual reporting periods beginning January 1, 2019, although it can be early adopted, with a modified retrospective approach for leases that commenced prior to the date of adoption. The Company is currently evaluating the standard to determine the impact it will have on the financial statements and will adopt the guidance effective January 1, 2019.

Stock Compensation

In March 2016, the FASB issued new accounting guidance intended to simplify several aspects of accounting for share-based payment transactions, including the income tax consequences. This ASU was effective for annual periods beginning after December 15, 2016, and interim periods therein. Most of the Company's share-based awards are settled via cash payments and were therefore not impacted by this standard. The Company's adoption of this standard did not have a material impact on the financial statements.

Presentation of Net Periodic Pension and Postretirement Benefit Costs

In March 2017, the FASB issued new accounting guidance to improve the presentation of net periodic pension and postretirement benefit costs. This ASU is effective for annual periods beginning after December 15, 2017, and relevant interim periods. This ASU requires the Company to report the service cost component in the same line items as other compensation costs arising from services rendered by the pertinent employees during the period. The other components of net benefit cost are required to be presented in the income statement separately from the service cost component and outside of income from operations. Capitalization of net benefit cost is limited to only the service cost component of benefit costs, when applicable.

The ASU requires retrospective presentation of the service and non-service costs components in the income statement and prospective application regarding the capitalization of only the service cost component of net benefit costs. The Company has finalized its assessment of the standard and the adoption will have an immaterial impact on the financial statements. The Company has adopted the guidance effective January 1, 2018.

Other Recently Issued Standards

Management believes other recently issued standards, which are not yet effective, will not have a material impact on the Company's financial condition, results of operations, or cash flows upon adoption.

Critical Accounting Policies

Management is required to make judgments, assumptions, and estimates that affect the amounts reported in the consolidated financial statements and the related disclosures that conform to accounting principles generally accepted in the United States. The footnotes to the consolidated financial statements describe the significant accounting policies and methods used in their preparation. Certain estimates are subjective and use variables that require judgment. These include the estimates to perform goodwill and other asset impairments tests and to determine pension and postretirement benefit obligations. The Company makes other estimates related to the effects of regulation that are critical to the Company's financial results but that are less likely to be impacted by near term changes. Other estimates that significantly affect the Company's results, but are not necessarily critical to operations, include depreciating utility and nonutility plant, valuing asset retirement obligations, and estimating uncollectible accounts, unbilled revenues, and deferred income taxes, among others. Actual results could differ from these estimates.

Impairment Review of Investments and Long-Lived Assets

Property, plant and equipment along with other long-lived assets are reviewed as facts and circumstances indicate that the carrying amount may be impaired. In the Company's regulated businesses, this impairment review primarily involves consideration of the likelihood of abandonment and a potentially related disallowance as well as the actions of regulators in the jurisdictions in which the Company operates. For the Company's non-regulated businesses, this impairment review involves the

comparison of an asset's (or group of assets') carrying value to the estimated future cash flows the asset (or asset group) is expected to generate over a remaining life. If this evaluation were to conclude that the carrying value is impaired, an impairment charge would be recorded based on the difference between the carrying amount and its fair value (less costs to sell for assets to be disposed of by sale).

The Company has both debt and equity investments in unconsolidated entities. When events occur that may cause an investment to be impaired, the Company performs both a qualitative and quantitative review of that investment and when necessary performs an impairment analysis. An impairment analysis of notes receivable usually involves the comparison of the investment's estimated free cash flows to the stated terms of the note, or in certain cases for notes that are collateral dependent, a comparison of the collateral's fair value to the carrying amount of the note. An impairment analysis of equity investments involves comparison of the investment's estimated fair value to its carrying amount and an assessment of whether any decline in fair value is "other than temporary." Fair value is estimated using market comparisons, appraisals, and/or discounted cash flow analysis.

Calculating free cash flows and fair value using the above methods is subjective and requires judgment concerning growth assumptions, longevity of cash flows, and discount rates (for fair value calculations), among others.

Goodwill & Intangible Assets

The Company performs an annual impairment analysis of its goodwill, most of which resides in the Gas Utility Services operating segment, at the beginning of each year, and more frequently if events or circumstances indicate that an impairment loss may have been incurred. Impairment tests are performed at the reporting unit level. The Company has determined its Gas Utility Services operating segment to be the level at which impairment is tested as its reporting units are similar. Nonutility Group impairment testing for its Infrastructure Services and Energy Services segments are also performed at the operating segment level. An impairment test requires fair value to be estimated. The Company used a discounted cash flow model and other market based information to estimate the fair value of its Gas Utility Services, Infrastructure Services, and Energy Services operating segments, and those estimated fair values are compared to their carrying amount, including goodwill. The estimated fair value has been substantially in excess of the carrying amount in each of the last three years and therefore resulted in no impairment.

Estimating fair value using a discounted cash flow model is subjective and requires judgment in applying a discount rate, growth assumptions, company expense allocations, and longevity of cash flows. A 100 basis point increase in the discount rate utilized to calculate the Gas Utility Services, Infrastructure Services, and Energy Services segment fair value also would have resulted in no impairment charge.

The Company also annually tests non-amortizing intangible assets for impairment and amortizing intangible assets are tested on an event and circumstance basis. During the last three years, these tests yielded no impairment charges.

Pension & Other Postretirement Obligations

The Company estimates the expected return on plan assets, discount rate, rate of compensation increase, and future health care costs, among other inputs, and obtains actuarial estimates to assess the future potential liability and funding requirements of the Company's pension and postretirement plans. Detailed information about the assumptions the Company used to develop 2017 periodic benefit cost are included in Note 9 to the Company's Consolidated Financial Statements included in Item 8. To estimate the 2017 obligation and 2018 costs, the Company used the following weighted average assumptions: a discount rate of approximately 3.61 percent; an expected return on plan assets of 7.00 percent; a rate of compensation increase of 3.50 percent; and an inflation assumption of 2.50 percent. The discount rate was based on benchmark interest rates and expected rate of return on plan assets was determined using a building block approach.

Future changes in health care costs, work force demographics, interest rates, asset values or plan changes could significantly affect the estimated cost of these future benefits. Management currently estimates the pension and postretirement cost to be approximately \$6.7 million in 2018.

Management estimates that a 50 basis point increase in the discount rate used to estimate retirement costs generally decreases periodic benefit cost by approximately \$1.6 million.

Regulation

At each reporting date, the Company reviews current regulatory trends in the markets in which it operates. This review involves judgment and is critical in assessing the recoverability of regulatory assets as well as the ability to continue to account for its activities based on the criteria set forth in FASB guidance related to accounting for the effects of certain types of regulation. Based on the Company's current review, it believes its regulatory assets are probable of recovery. If all or part of the Company's operations cease to meet the criteria, a write-off of related regulatory assets and liabilities could be required. In addition, the Company would be required to determine any impairment to the carrying value of its utility plant and other regulated assets and liabilities. In the unlikely event of a change in the current regulatory environment, such write-offs and impairment charges could be significant.

Financial Condition

Within the Company's consolidated group, Utility Holdings primarily funds the short-term and long-term financing needs of the Utility Group operations, and Vectren Capital Corporation (Vectren Capital) funds short-term and long-term financing needs of the Nonutility Group and corporate operations. Vectren Corporation guarantees Vectren Capital's debt, but does not guarantee Utility Holdings' debt. Vectren Capital's long-term debt, including current maturities outstanding at December 31, 2017 approximated \$260 million. Vectren Capital's short-term obligations outstanding at December 31, 2017 approximated \$70 million. Utility Holdings' outstanding long-term and short-term borrowing arrangements are jointly and severally guaranteed by its wholly owned subsidiaries and regulated utilities SIGECO, Indiana Gas, and VEDO. Utility Holdings' long-term debt, including current maturities, and short-term obligations outstanding at December 31, 2017 approximated \$1,195 million and \$180 million, respectively. Additionally, prior to Utility Holdings' formation, Indiana Gas and SIGECO funded their operations separately, and therefore, have long-term debt outstanding funded solely by their operations. SIGECO will also occasionally issue new tax-exempt debt to fund qualifying pollution control capital expenditures. Total Indiana Gas and SIGECO long-term debt, including current maturities, outstanding at December 31, 2017, was approximately \$385 million.

The Company's common stock dividends are primarily funded by utility operations. Nonutility operations have demonstrated profitability and the ability to generate cash flows. These cash flows are primarily reinvested in other nonutility investments, but are also used to fund a portion of the Company's dividends, and from time to time may be reinvested in utility operations or used for corporate expenses.

Vectren Corporation's corporate credit rating is A-, as rated by S&P Global Ratings (S&P Global). Moody's Investors Services (Moody's) does not provide a rating for Vectren Corporation. The credit ratings of the senior unsecured debt of Utility Holdings, SIGECO, and Indiana Gas, at December 31, 2017, were A-/A2 as rated by S&P Global and Moody's, respectively. The credit ratings on SIGECO's secured debt are A/Aa3. Utility Holdings' commercial paper has a credit rating of A-2/P-1. The current outlook of both S&P Global and Moody's is stable. A security rating is not a recommendation to buy, sell, or hold securities. The rating is subject to revision or withdrawal at any time, and each rating should be evaluated independently of any other rating. S&P Global and Moody's lowest level investment grade rating is BBB- and Baa3, respectively.

The Company's consolidated equity capitalization objective is 45-55 percent of long-term capitalization. This objective may have varied, and will vary, depending on particular business opportunities, capital spending requirements, execution of long-term financing plans, and seasonal factors that affect the Company's operations. The Company's equity to long-term capitalization ratio was 50 percent and 51 percent as of December 31, 2017 and 2016, respectively. Long-term capitalization includes long-term debt, including current maturities, as well as common shareholders' equity.

Both long-term and short-term borrowing arrangements contain customary default provisions; restrictions on liens, sale-leaseback transactions, mergers or consolidations, and sales of assets; and restrictions on leverage, among other restrictions. Multiple debt agreements contain a covenant that the ratio of consolidated total debt to consolidated total capitalization will not exceed 65 percent. As of December 31, 2017, the Company was in compliance with all debt covenants.

Available Liquidity

The Company's A-/A2 investment grade credit ratings have allowed it to access the capital markets as needed, and as evidenced by past financing transactions, the Company believes it will have the ability to continue to do so. The Company anticipates funding future capital expenditures and dividends principally through internally generated funds, supplemented with incremental external debt and equity financing. Access to both the short-term and long-term capital markets is expected to be a significant source of funding for capital requirements as the resources required for capital investment remain uncertain for a variety of factors including, but not limited to, uncertainty in environmental and safety policies and regulations, growth of the regulated business, and growth of Infrastructure Services and Energy Services. To the extent that events beyond the Company's control create uncertainty in capital markets, cost of capital and ability to access capital markets may be affected.

Utility Holdings routinely seeks approval at the IURC and the PUCO for long-term financing authority at the individual utility level. This authority allows for the flexibility for each utility to issue debt and equity securities to third parties or to issue debt and equity securities to Utility Holdings and thus receive some of the proceeds from various Utility Holdings issuances to third parties on the same terms as those obtained by Utility Holdings. The majority of the long-term debt needs of the utilities is expected to be met through these debt issuances by Utility Holdings, some or all of which are then reloaned to the individual utilities. On June 21, 2017 an Order for long-term financing authority of \$70 million of long-term debt and \$65 million of equity financing was received from the PUCO for VEDO and expires in June 2018. On February 22, 2017, orders for long-term financing authority of \$160 million and \$200 million of long-term debt, and \$120 million and \$180 million of equity financing, were received from the IURC for SIGECO and Indiana Gas, respectively. These orders expire in March 2019.

Consolidated Short-Term Borrowing Arrangements

On July 14, 2017, Utility Holdings closed on renegotiated credit agreements with existing lenders. These credit agreements mature on July 14, 2022 and replaced bank credit agreements that had an original maturity date of October 31, 2019. Utility Holdings' new credit facility totals \$400 million with a \$10 million swing line sublimit and a \$20 million letter of credit sublimit. The Utility Holdings credit agreement is jointly and severally guaranteed by its wholly owned subsidiaries Indiana Gas, SIGECO, and VEDO and is a backup facility for Utility Holdings' commercial paper program. Vectren Capital's new credit facility totals \$200 million with a \$40 million swing line sublimit and a \$80 million letter of credit sublimit. The Vectren Capital credit agreement funds the short-term borrowing needs of the Company's corporate and nonutility operations and is guaranteed by Vectren Corporation.

The total \$600 million of short-term borrowing capacity between the two lines remains unchanged; however, the Utility Holdings credit agreement commitment was increased by \$50 million as compared to the prior credit agreement, and the Vectren Capital credit agreement commitment was decreased by \$50 million as compared to the prior credit agreement.

As reduced by borrowings currently outstanding, approximately \$220 million was available for the Utility Group operations and \$130 million was available for the wholly owned Nonutility Group and corporate operations at December 31, 2017.

The Company has historically funded the short-term borrowing needs of Utility Group's operations through the commercial paper market but maintains the ability to use the Utility Holdings' short-term borrowing facility when necessary. Throughout the years presented, Utility Holdings has successfully placed commercial paper as needed. Following is certain information regarding these short-term borrowing arrangements:

<i>(In millions)</i>	Utility Group Borrowings			Nonutility Group Borrowings		
	2017	2016	2015	2017	2016	2015
As of Year End						
Balance Outstanding	\$ 179.5	\$ 194.4	\$ 14.5	\$ 70.0	\$ —	\$ —
Weighted Average Interest Rate	1.92%	1.05%	0.55%	2.68%	N/A	N/A
Annual Average						
Balance Outstanding	\$ 172.4	\$ 59.8	\$ 53.8	\$ 12.2	\$ 0.2	\$ 24.8
Weighted Average Interest Rate	1.30%	0.71%	0.38%	2.44%	1.60%	1.33%
Maximum Month End Balance Outstanding	\$ 238.7	\$ 194.4	\$ 121.5	\$ 70.0	\$ 6.3	\$ 69.1

New Share Issues

The Company may periodically issue new common shares to satisfy the dividend reinvestment plan, and other employee benefit plan requirements. New issuances provided additional liquidity of \$6.3 million in both 2017 and 2016 and \$6.2 million in 2015.

Impact of Tax Reform on Liquidity

The Company has realized cash flow benefits from tax legislation, such as the Protecting Americans from Tax Hikes (Path Act) enacted in 2015, that allowed for immediate expensing of 50% of capital expenditures through 2017 for tax purposes. Such accelerated expense recognition reduced tax payments due to the government. The TCJA enacted on December 22, 2017, which eliminates the accelerated expensing provisions for regulated utilities and reduces the corporate tax rate to 21 percent, will reduce liquidity by 1) reducing the Utility Group's ability to accelerate expense for capital expenditures for tax purposes and 2) reducing cash collected from customers due to the lower tax rate. The Company expects that the reduced federal corporate income tax rate will result in reduced taxes owed by the Nonutility Group, increasing liquidity.

Potential Uses of Liquidity

Pension Funding Obligations

For the twelve months ended December 31, 2017, the Company did not contribute to its qualified pension plans. As of the most recent valuation report date for the Company's qualified pension plans, assets were 116 percent of the target liability for ERISA purposes and 92 percent for accounting purposes. The Company expects to make contributions totaling \$3.5 million to its qualified pension plans in 2018.

Performance Guarantees & Product Warranties

In the normal course of business, wholly owned subsidiaries, such as Energy Systems Group, LLC (ESG), a subsidiary of the Energy Services operating segment, issue payment and performance bonds and other forms of assurance that commit them to timely install infrastructure, operate facilities, pay vendors and subcontractors, and support warranty obligations.

Specific to ESG's role as a general contractor in the performance contracting industry, at December 31, 2017, there are 66 open surety bonds supporting future performance. The average face amount of these obligations is \$9.8 million, and the largest obligation has a face amount of \$75.9 million. The maximum exposure from these obligations is limited to the level of uncompleted work and further limited by bonds issued to ESG by various contractors. At December 31, 2017, approximately 29 percent of work was yet to be completed on projects with open surety bonds. A significant portion of these open surety bonds will be released within one year. In instances where ESG operates facilities, project guarantees extend over a longer period. In addition to its performance obligations, ESG also warrants the functionality of certain installed infrastructure generally for one year and the associated energy savings over a specified number of years.

Based on a history of meeting performance obligations and installed products operating effectively, no liability or cost has been recognized for the periods presented as the Company assesses the likelihood of loss as remote. Since inception, ESG has paid a de minimis amount on energy savings guarantees.

Corporate Guarantees & Other Support

The Company issues parent level guarantees to certain vendors and customers of its wholly owned subsidiaries. These guarantees do not represent incremental consolidated obligations; but rather, represent guarantees of subsidiary obligations in order to allow those subsidiaries the flexibility to conduct business without posting other forms of collateral. At December 31, 2017, parent level guarantees support a maximum of \$373 million of ESG's performance contracting commitments, warranty obligations, project guarantees, and energy savings guarantees. Given the infrequent occurrence of any performance shortfalls historically on any of these commitments, no reserve for a potential liability has been deemed warranted.

Further, an energy facility operated by ESG and managed by Keenan Ft. Detrick Energy, LLC (Keenan), is governed by an operations agreement. Under this agreement, all payment obligations to Keenan are also guaranteed by the Company. The Company guarantee of the Keenan operations agreement does not state a maximum guarantee. Due to the nature of work performed under this contract, the Company cannot estimate a maximum potential amount of future payments but assesses the likelihood of loss as remote based on, primarily, the nature of the project.

The Company has not been called on to perform under these guarantees historically. While there can be no assurance that performance under these provisions will not be required in the future, the Company believes that the likelihood of a material amount being incurred under these provisions is remote given the nature of the projects, the manner in which the savings estimates are developed, and the fact that the value of the guarantees decrease over time as actual savings are achieved by the customer.

The Company from time to time, and primarily through Vectren Capital, issues letters of credit that support consolidated operations. At December 31, 2017, letters of credit outstanding total \$36.3 million.

Planned Capital Expenditures & Investments

During 2017 capital expenditures and other investments approximated \$603 million, of which approximately \$550 million related to Utility Group expenditures. This compares to 2016 where consolidated capital expenditures and investments were approximately \$542 million with \$500 million attributed to the Utility Group and 2015 where consolidated capital expenditures and investments were approximately \$477 million with \$398 million attributed to the Utility Group. Planned Utility Group capital expenditures, including contractual purchase commitments, for the five-year period 2018 - 2022 are expected to total approximately \$590 million in 2018, \$595 million in 2019, \$560 million in 2020, \$735 million in 2021, and \$920 million in 2022. Expenditures are expected to be higher beginning in 2021 due to the construction of the combined cycle generating facility. This plan contains the best estimate of the resources required for known regulatory compliance and the generation transition plan; however, many environmental and pipeline safety standards are subject to change in the near term. Such changes could materially impact planned capital expenditures.

Planned Nonutility Group capital expenditures, including contractual purchase commitments, for the five-year period 2018 - 2022 are expected to total between \$75 million and \$125 million annually.

Contractual Obligations

The following is a summary of contractual obligations at December 31, 2017:

<i>(In millions)</i>	Total	2018	2019	2020	2021	2022	Thereafter
Long-term debt ⁽¹⁾	\$ 1,838.7	\$ 100.0	\$ 60.0	\$ 100.0	\$ 55.0	\$ 79.6	\$ 1,444.1
Short-term debt	249.5	249.5	—	—	—	—	—
Long-term debt interest commitments	1,198.1	83.1	76.3	71.0	69.1	66.6	832.0
Plant, nonutility plant, and other purchase commitments	51.0	25.0	7.1	5.5	5.4	4.0	4.0
Operating leases	40.0	14.2	10.2	4.9	2.7	2.3	5.7
Total ⁽²⁾	\$ 3,377.3	\$ 471.8	\$ 153.6	\$ 181.4	\$ 132.2	\$ 152.5	\$ 2,285.8

(1) The debt due in 2018 is comprised of debt issued by Utility Holdings.

(2) The Company has other long-term liabilities that total approximately \$285 million. This amount is comprised of the following: pension obligations \$49 million; postretirement obligations \$36 million; deferred compensation and share-based compensation obligations \$79 million; asset retirement obligations \$107 million; and other obligations including unrecognized tax benefits, and environmental remediation obligations, totaling \$14 million. Based on the nature of these items, their expected settlement dates cannot be estimated.

The Company's regulated utilities have both firm and non-firm commitments, some of which are between five and twenty year agreements, to purchase natural gas, coal, and electricity, as well as certain transportation and storage rights. Costs arising from these commitments, while significant, are pass-through costs, generally collected dollar-for-dollar from retail customers through regulator-approved cost recovery mechanisms.

Comparison of Historical Sources & Uses of Liquidity

Operating Cash Flow

The Company's primary source of liquidity to fund capital requirements has been cash generated from operations, which totaled \$498.8 million in 2017, compared to \$524.1 million in 2016 and \$505.2 million in 2015.

The \$25.3 million decrease in operating cash flow in 2017 compared to 2016 is driven primarily by timing of cash flow related to Nonutility Group large projects, partially offset by increased cash flow provided by the Utility Group. The \$18.9 million increase in operating cash flow in 2016 compared to 2015 is driven primarily by increased earnings and by changes in certain working capital accounts that reflect weather impacts, specifically the decreases in accounts receivable, recoverable/refundable fuel and natural gas costs.

Financing Cash Flow

Net cash flow from financing activities was \$43.0 million for the year ended December 31, 2017 and net cash flow required for financing activities was \$21.0 million and \$47.3 million for the years ended December 31, 2016, and 2015, respectively. In the current year, the Company raised \$198.5 million in the private placement capital market to fund Utility Group capital expenditures and retired \$75 million on Nonutility Group debt as planned. Unutilized Nonutility Group short-term borrowing capacity was the primary source that funded the retirement. In 2016, the Company had an increase of short-term borrowings which was partially offset by the retirement of \$73 million in long-term debt. In 2015, the Company issued \$385.5 million in long-term debt, which was partially offset by the retirement of \$170 million in long-term debt, and an increased amount of short-term borrowings paid. The Company's operating cash flow funded over 67 percent of capital expenditures and dividends in 2017, over 77 percent in 2016, and 83 percent in 2015. Certain recently completed financing transactions are more fully described below.

Investing Cash Flow

Cash flow required for investing activities was \$593.8 million in 2017, \$509.2 million in 2016, and \$469.6 million in 2015. The primary use of cash in all periods presented reflect utility and nonutility capital expenditures. Capital expenditures increased in 2017 as compared to 2016 by \$60.6 million, and also increased in 2016 as compared to 2015 by \$65.1 million. The increase in capital expenditures is attributable to greater expenditures for gas infrastructure improvement projects and environmental compliance.

Utility Holdings Long-Term Debt Issuance

On July 14, 2017, Utility Holdings entered into a private placement Note Purchase Agreement pursuant to which institutional investors agreed to purchase the following tranches of notes: (i) \$100 million of 3.26 percent Guaranteed Senior Notes, Series A, due August 28, 2032 and (ii) \$100 million of 3.93 percent Guaranteed Senior Notes, Series B, due November 29, 2047. The notes are jointly and severally guaranteed by Indiana Gas, SIGECO, and VEDO, wholly owned subsidiaries of Utility Holdings.

The Series A note proceeds were received on August 28, 2017 and the Series B proceeds were received on November 29, 2017.

SIGECO Variable Rate Tax-Exempt Bonds

On September 14, 2017, the Company, through SIGECO, executed a Bond Purchase and Covenants Agreement (Purchase and Covenants Agreement) providing SIGECO the ability to remarket and/or refinance approximately \$152 million of tax-exempt bonds at a variable rate based on one month LIBOR through May 1, 2023 (except for one bond that matures on January 1, 2022).

Bonds remarketed through the Bond Purchase and Covenants Agreement included three issuances that were mandatorily tendered to the Company on September 14, 2017. These were

- 2013 Series C Notes with a principal of \$4.6 million and a final maturity date of January 1, 2022;
- 2013 Series D Notes with a principal of \$22.5 million and a final maturity date of March 1, 2024; and
- 2013 Series E Notes with a principal of \$22.0 million and final maturity date of May 1, 2037.

Through the Purchase and Covenants Agreement, on September 22, 2017, SIGECO also extended the mandatory tender date of its variable rate 2014 Series B Notes with a principal of \$41.3 million and final maturity date of July 1, 2025. (The original tender date was September 24, 2019).

The Purchase and Covenants Agreement provides the option, subject to satisfaction of customary conditions precedent, for the lenders to purchase from SIGECO and for SIGECO to convert to a variable rate other currently outstanding fixed rate, tax-exempt bonds that are callable at SIGECO's option in March 2018 (2013 Series A Notes totaling \$22.2 million due March 1, 2038) and May 2018 (2013 Series B Notes totaling \$39.6 million due by May 1, 2043).

The Company, through SIGECO, executed forward starting interest rate swaps during 2017 providing that on January 1, 2020, the Company will begin hedging the variability in interest rates on the 2013 Series A, B, and E Notes, as described in Note 10, through final maturity dates. The swaps contain customary terms and conditions and generally provide offset for changes in the one month LIBOR rate. Other interest rate variability that may arise through the Purchase and Covenants Agreement, such as variability caused by changes in tax law or SIGECO's credit rating, among others, may result in an actual interest rate above or below the anticipated fixed rate. Regulatory orders require SIGECO to include the impact of its interest rate risk management activities, such as gains and losses arising from these swaps, in its cost of capital utilized in rate cases and other periodic filings.

Vectren Capital Unsecured Note Retirements

On December 15, 2017 and March 11, 2016, Vectren Capital senior unsecured notes matured totaling \$75 million and \$60 million, respectively. Interest rates on the matured bonds were 3.48 percent and 6.92 percent, respectively. The repayment of debt was funded from the Company's cash on hand and Nonutility short-term borrowing arrangements.

SIGECO Bond Retirement

On June 1, 2016, a \$13 million SIGECO bond matured. The First Mortgage Bond, which was a portion of an original \$25 million public issuance sold on June 1, 1986, carried a fixed interest rate of 8.875 percent. The repayment of debt was funded from the Company's commercial paper program.

Mandatory Tenders

At December 31, 2017, certain series of SIGECO bonds, aggregating \$124.0 million are subject to mandatory tenders prior to the bonds' final maturities. \$38.2 million will be tendered in 2020 and \$85.8 million will be tendered in 2023.

Call Options

At December 31, 2017, certain series of SIGECO bonds, aggregating \$84.1 million may be called at SIGECO's option. \$61.8 million is callable in 2018, as previously noted, and \$22.3 million is callable in 2019.

Forward-Looking Information

A "safe harbor" for forward-looking statements is provided by the Private Securities Litigation Reform Act of 1995 (Reform Act of 1995). The Reform Act of 1995 was adopted to encourage such forward-looking statements without the threat of litigation, provided those statements are identified as forward-looking and are accompanied by meaningful cautionary statements identifying important factors that could cause the actual results to differ materially from those projected in the statement. Certain matters described in Management's Discussion and Analysis of Results of Operations and Financial Condition are forward-looking statements. Such statements are based on management's beliefs, as well as assumptions made by and information currently available to management. When used in this filing, the words "believe", "anticipate", "endeavor", "estimate", "expect", "objective", "projection", "forecast", "goal", "likely", and similar expressions are intended to identify forward-looking statements. In addition to any assumptions and other factors referred to specifically in connection with such forward-looking statements, factors that could cause the Company's actual results to differ materially from those contemplated in any forward-looking statements include, among others, the following:

- Factors affecting utility operations such as unfavorable or unusual weather conditions; catastrophic weather-related damage; unusual maintenance or repairs; unanticipated changes to coal and natural gas costs; unanticipated changes to gas transportation and storage costs, or availability due to higher demand, shortages, transportation problems or other developments; environmental or pipeline incidents; transmission or distribution incidents; unanticipated changes to electric energy supply costs, or availability due to demand, shortages, transmission problems or other developments; or electric transmission or gas pipeline system constraints.
- New or proposed legislation, litigation and government regulation or other actions, such as changes in, rescission of or additions to tax laws or rates, pipeline safety regulation and environmental laws and regulations, including laws governing air emissions, carbon, waste water discharges and the handling and disposal of coal combustion residuals that could impact the continued operation, and/or cost recovery of generation plant costs and related assets. Compliance with respect to these regulations could substantially change the operation and nature of the Company's utility operations.
- Catastrophic events such as fires, earthquakes, explosions, floods, ice storms, tornadoes, terrorist acts, physical attacks, cyber attacks, or other similar occurrences could adversely affect the Company's facilities, operations, financial condition, results of operations, and reputation.
- Approval and timely recovery of new capital investments related to the electric generation transition plan, discussed further herein, including timely approval to build and own generation, ability to meet capacity requirements, ability to procure resources needed to build new generation at a reasonable cost, ability to appropriately estimate costs of new generation, the effects of construction delays and cost overruns, ability to fully recover the investments made in retiring portions of the current generation fleet, scarcity of resources and labor, and workforce retention, development and training.
- Increased competition in the energy industry, including the effects of industry restructuring, unbundling, and other sources of energy.
- Regulatory factors such as uncertainty surrounding the composition of state regulatory commissions, adverse regulatory changes, unanticipated changes in rate-setting policies or procedures, recovery of investments and costs made under regulation, interpretation of regulatory-related legislation by the IURC and/or PUCO and appellate courts that review decisions issued by the agencies, and the frequency and timing of rate increases.

- *Financial, regulatory or accounting principles or policies imposed by the Financial Accounting Standards Board; the Securities and Exchange Commission; the Federal Energy Regulatory Commission; state public utility commissions; state entities which regulate electric and natural gas transmission and distribution, natural gas gathering and processing, electric power supply; and similar entities with regulatory oversight.*
- *Economic conditions including the effects of inflation, commodity prices, and monetary fluctuations.*
- *Economic conditions, including increased potential for lower levels of economic activity; uncertainty regarding energy prices and the capital and commodity markets; volatile changes in the demand for natural gas, electricity, and other nonutility products and services; economic impacts of changes in business strategy on both gas and electric large customers; lower residential and commercial customer counts; variance from normal population growth and changes in customer mix; higher operating expenses; and reductions in the value of investments.*
- *Volatile natural gas and coal commodity prices and the potential impact on customer consumption, uncollectible accounts expense, unaccounted for gas and interest expense.*
- *Volatile oil prices and the potential impact on customer consumption and price of other fuel commodities.*
- *Direct or indirect effects on the Company's business, financial condition, liquidity and results of operations resulting from changes in credit ratings, changes in interest rates, and/or changes in market perceptions of the utility industry and other energy-related industries.*
- *The performance of projects undertaken by the Company's nonutility businesses and the success of efforts to realize value from, invest in and develop new opportunities, including but not limited to, the Company's Infrastructure Services, Energy Services, and remaining ProLiance Holdings assets.*
- *Factors affecting Infrastructure Services, including the level of success in bidding contracts; fluctuations in volume and mix of contracted work; mix of projects received under blanket contracts; unanticipated cost increases in completion of the contracted work; funding requirements associated with multiemployer pension and benefit plans; changes in legislation and regulations impacting the industries in which the customers served operate; the effects of weather; failure to properly estimate the cost to construct projects; the ability to attract and retain qualified employees in a fast growing market where skills are critical; cancellation and/or reductions in the scope of projects by customers; credit worthiness of customers; ability to obtain materials and equipment required to perform services; and changing market conditions, including changes in the market prices of oil and natural gas that would affect the demand for infrastructure construction.*
- *Factors affecting Energy Services, including unanticipated cost increases in completion of the contracted work; changes in legislation and regulations impacting the industries in which the customers served operate; changes in economic influences impacting customers served; failure to properly estimate the cost to construct projects; risks associated with projects owned or operated; failure to appropriately design, construct, or operate projects; the ability to attract and retain qualified employees; cancellation and/or reductions in the scope of projects by customers; changes in the timing of being awarded projects; credit worthiness of customers; lower energy prices negatively impacting the economics of performance contracting business; and changing market conditions.*
- *Employee or contractor workforce factors including changes in key executives, collective bargaining agreements with union employees, aging workforce issues, work stoppages, or pandemic illness.*
- *Risks associated with material business transactions such as acquisitions and divestitures, including, without limitation, legal and regulatory delays; the related time and costs of implementing such transactions; integrating operations as part of these transactions; and possible failures to achieve expected gains, revenue growth and/or expense savings from such transactions.*
- *Costs, fines, penalties and other effects of legal and administrative proceedings, settlements, investigations, claims, including, but not limited to, such matters involving compliance with federal and state laws and interpretations of these laws.*

The Company undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of changes in actual results, changes in assumptions, or other factors affecting such statements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The Company is exposed to various business risks associated with commodity prices, interest rates, and counter-party credit. These financial exposures are monitored and managed by the Company as an integral part of its overall risk management program. The Company's risk management program includes, among other things, the occasional use of

derivatives. The Company will, from time to time, execute derivative contracts in the normal course of operations while buying and selling commodities and when managing interest rate risk.

The Company has a risk management committee that consists of senior management as well as financial and operational management. The committee is actively involved in identifying risks as well as reviewing and authorizing risk mitigation strategies.

Commodity Price Risk

Regulated Operations

The Company's regulated operations have limited exposure to commodity price risk for transactions involving purchases and sales of natural gas, coal and purchased power for the benefit of retail customers due to current state regulations, which subject to compliance with those regulations, allow for recovery of the cost of such purchases through natural gas and fuel cost adjustment mechanisms. Constructive regulatory orders, such as those authorizing lost margin recovery, other innovative rate designs, and recovery of unaccounted for gas and other gas related expenses, also mitigate the effect gas costs may have on the Company's financial condition. Although the Company's regulated operations are exposed to limited commodity price risk, natural gas and coal prices have other effects on working capital requirements, interest costs, and some level of price-sensitivity in volumes sold or delivered. Indiana Gas and SIGECO hedge up to 50 percent of annual natural gas purchases for each Company utilizing a variety of terms with forward purchase arrangements up to 5 years and physical fixed-price purchases up to 10 years in duration. Indiana Gas also utilizes financial products, including call options. Such option contracts are generally short-term in nature and are insignificant in terms of value and volume at December 31, 2017 and 2016.

Wholesale Power Marketing

The Company's wholesale power marketing activities undertake strategies to optimize electric generating capacity beyond that needed for native load. In recent years, the primary strategy involves the sale of generation into the MISO Day Ahead and Real-time markets. The Company accounts for any energy contracts that are derivatives at fair value with the offset marked to market through earnings. No derivative positions were outstanding on December 31, 2017 and 2016.

For retail sales of electricity, the Company receives the majority of its NO_x and SO₂ allowances at zero cost through an allocation process. Based on arrangements with regulators, wholesale operations can purchase allowances from retail operations at current market values, the value of which is distributed back to retail customers through a MISO cost recovery tracking mechanism. Wholesale operations are therefore at risk for the cost of allowances, which may be volatile. The Company manages this risk by purchasing allowances from retail operations as needed and occasionally from other third parties in advance of usage.

Other Operations

Other commodity-related operations are exposed to commodity price risk associated with gasoline/diesel through third party suppliers. Occasionally, the Company will hedge a portion of such requirements using financial instruments and using physically settled forward purchase contracts. However, during the years presented, such utilization has not been significant.

Interest Rate Risk

The Company is exposed to interest rate risk associated with its borrowing arrangements. Its risk management program seeks to reduce the potentially adverse effects that market volatility may have on interest expense. As of December 31, 2017, debt subject to interest rate volatility was approximately 16 percent. To further manage this exposure, the Company may also use derivative financial instruments and currently has outstanding hedging instruments that mitigate interest rate volatility beginning in 2020.

Market risk is estimated as the potential impact resulting from fluctuations in interest rates on adjustable rate borrowing arrangements exposed to short-term interest rate volatility. During 2017 and 2016, the weighted average combined borrowings

under these arrangements approximated \$241 million and \$101 million, respectively. At December 31, 2017, combined borrowings under these arrangements were \$340 million. As of December 31, 2016 combined borrowings under these arrangements were \$236 million. Based upon average borrowing rates under these facilities during the years ended December 31, 2017 and 2016, an increase of 100 basis points (one percentage point) in the rates would have increased interest expense by approximately \$2.4 million in 2017 and \$1.0 million in 2016.

Other Risks

By using financial instruments and physically settled fixed price forward contracts to manage risk, the Company creates exposure to counter-party credit risk and market risk. The Company manages exposure to counter-party credit risk by entering into contracts with companies that can be reasonably expected to fully perform under the terms of the contract. Counter-party credit risk is monitored regularly and positions are adjusted appropriately to manage risk. Further, tools such as netting arrangements and requests for collateral are also used to manage credit risk. Market risk is the adverse effect on the value of a financial instrument that results from a change in commodity prices or interest rates. The Company attempts to manage exposure to market risk associated with commodity contracts and interest rates by establishing parameters and monitoring those parameters that limit the types and degree of market risk that may be undertaken.

The Company's customer receivables associated with utility operations are primarily derived from residential, commercial, and industrial customers located in Indiana and west central Ohio. However, some exposure from nonutility operations extends throughout the United States. The Company manages credit risk associated with its receivables by continually reviewing creditworthiness and requests cash deposits or refunds cash deposits based on that review. Credit risk associated with certain investments is also managed by a review of creditworthiness and receipt of collateral. In addition, credit risk for the Company's utilities is mitigated by regulatory orders that allow recovery of all uncollectible accounts expense in Ohio and the gas cost portion of uncollectible accounts expense in Indiana based on historical experience.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

MANAGEMENT'S RESPONSIBILITY FOR THE FINANCIAL STATEMENTS

Vectren Corporation's management is responsible for establishing and maintaining adequate internal control over financial reporting. Those control procedures underlie the preparation of the consolidated balance sheets, statements of income, comprehensive income, cash flows, and common shareholders' equity, and related footnotes contained herein.

These consolidated financial statements were prepared in conformity with accounting principles generally accepted in the United States and follow accounting policies and principles applicable to regulated public utilities. The integrity and objectivity of these consolidated financial statements, including required estimates and judgments, is the responsibility of management.

These consolidated financial statements are also subject to an evaluation of internal control over financial reporting conducted under the supervision and with the participation of management, including the Chief Executive Officer and Chief Financial Officer. Based on that evaluation, conducted under the framework in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, the Company concluded that its internal control over financial reporting was effective as of December 31, 2017. Management certified this in its Sarbanes Oxley Section 302 certifications, which are filed as exhibits to this 2017 Form 10-K.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of Vectren Corporation:

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Vectren Corporation and subsidiaries (the “Company”) as of December 31, 2017 and 2016, the related consolidated statements of income, comprehensive income, common shareholders’ equity and cash flows for each of the three years in the period ended December 31, 2017, and the related notes and the schedule listed in the Index at Item 15 (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2017, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company’s internal control over financial reporting as of December 31, 2017, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 21, 2018, expressed an unqualified opinion on the Company’s internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ DELOITTE & TOUCHE LLP
Indianapolis, Indiana
February 21, 2018

We have served as the Company’s auditor since 2002.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of Vectren Corporation:

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Vectren Corporation and subsidiaries (the “Company”) as of December 31, 2017, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements and financial statement schedule as of and for the year ended December 31, 2017, of the Company and our report dated February 21, 2018, expressed an unqualified opinion on those consolidated financial statements and financial statement schedule.

Basis for Opinion

The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ DELOITTE & TOUCHE LLP
Indianapolis, Indiana
February 21, 2018

VECTREN CORPORATION AND SUBSIDIARY COMPANIES
CONSOLIDATED BALANCE SHEETS
(In millions)

	At December 31,	
	2017	2016
<u>ASSETS</u>		
Current Assets		
Cash & cash equivalents	\$ 16.6	\$ 68.6
Accounts receivable - less reserves of \$5.1 & \$6.0, respectively	262.9	225.3
Accrued unbilled revenues	207.1	172.4
Inventories	126.6	129.9
Recoverable fuel & natural gas costs	19.2	29.9
Prepayments & other current assets	47.0	52.7
Total current assets	679.4	678.8
Utility Plant		
Original cost	7,015.4	6,545.4
Less: accumulated depreciation & amortization	2,738.7	2,562.5
Net utility plant	4,276.7	3,982.9
Investments in unconsolidated affiliates	19.7	20.4
Other utility & corporate investments	43.7	34.1
Other nonutility investments	9.6	16.1
Nonutility plant - net	464.1	423.9
Goodwill	293.5	293.5
Regulatory assets	416.8	308.8
Other assets	35.8	42.2
TOTAL ASSETS	\$ 6,239.3	\$ 5,800.7

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

VECTREN CORPORATION AND SUBSIDIARY COMPANIES
CONSOLIDATED BALANCE SHEETS
(In millions)

	At December 31,	
	2017	2016
<u>LIABILITIES & SHAREHOLDERS' EQUITY</u>		
Current Liabilities		
Accounts payable	\$ 366.2	\$ 302.2
Accrued liabilities	222.3	207.7
Short-term borrowings	249.5	194.4
Current maturities of long-term debt	100.0	124.1
Total current liabilities	938.0	828.4
Long-term Debt - Net of Current Maturities	1,738.7	1,589.9
Deferred Credits & Other Liabilities		
Deferred income taxes	491.3	905.7
Regulatory liabilities	937.2	453.7
Deferred credits & other liabilities	284.8	254.9
Total deferred credits & other liabilities	1,713.3	1,614.3
Commitments & Contingencies (Notes 7, 17-20)		
Common Shareholders' Equity		
Common stock (no par value) - issued & outstanding 83.0 & 82.9 shares, respectively	736.9	729.8
Retained earnings	1,113.7	1,039.6
Accumulated other comprehensive (loss)	(1.3)	(1.3)
Total common shareholders' equity	1,849.3	1,768.1
TOTAL LIABILITIES & SHAREHOLDERS' EQUITY	\$ 6,239.3	\$ 5,800.7

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

VECTREN CORPORATION AND SUBSIDIARY COMPANIES
CONSOLIDATED STATEMENTS OF INCOME
(In millions, except per share amounts)

	Year Ended December 31,		
	2017	2016	2015
OPERATING REVENUES			
Gas utility	\$ 812.7	\$ 771.7	\$ 792.6
Electric utility	569.6	605.8	601.6
Nonutility	1,275.0	1,070.8	1,040.5
Total operating revenues	2,657.3	2,448.3	2,434.7
OPERATING EXPENSES			
Cost of gas sold	271.5	266.7	305.4
Cost of fuel & purchased power	171.8	183.6	187.5
Cost of nonutility revenues	444.2	363.4	355.0
Other operating	1,115.9	932.2	909.2
Depreciation & amortization	276.2	260.0	256.3
Taxes other than income taxes	59.3	60.9	59.5
Total operating expenses	2,338.9	2,066.8	2,072.9
OPERATING INCOME	318.4	381.5	361.8
OTHER INCOME			
Equity in earnings (losses) of unconsolidated affiliates	(1.1)	(0.2)	(0.6)
Other income – net	32.8	28.7	20.3
Total other income	31.7	28.5	19.7
Interest expense	87.7	85.5	84.5
INCOME BEFORE INCOME TAXES	262.4	324.5	297.0
Income taxes	46.4	112.9	99.7
NET INCOME	\$ 216.0	\$ 211.6	\$ 197.3
WEIGHTED AVERAGE AND DILUTED COMMON SHARES			
OUTSTANDING	83.0	82.8	82.7
BASIC AND DILUTED EARNINGS PER SHARE OF COMMON STOCK	\$ 2.60	\$ 2.55	\$ 2.39

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

VECTREN CORPORATION AND SUBSIDIARY COMPANIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In millions)

	Year Ended December 31,		
	2017	2016	2015
NET INCOME	\$ 216.0	\$ 211.6	\$ 197.3
Pension & other benefits			
Amounts arising during the year	(5.6)	(10.1)	1.2
Reclassifications to periodic cost	5.4	4.7	6.9
Deferrals to regulatory assets	0.2	5.3	(8.0)
Pension & other benefits costs, net of tax	—	(0.1)	0.1
OTHER COMPREHENSIVE INCOME (LOSS), NET OF TAX	—	(0.1)	0.1
TOTAL COMPREHENSIVE INCOME	\$ 216.0	\$ 211.5	\$ 197.4

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

VECTREN CORPORATION AND SUBSIDIARY COMPANIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In millions)

	Year Ended December 31,		
	2017	2016	2015
CASH FLOWS FROM OPERATING ACTIVITIES			
Net income	\$ 216.0	\$ 211.6	\$ 197.3
Adjustments to reconcile net income to cash from operating activities:			
Depreciation & amortization	276.2	260.0	256.3
Deferred income taxes & investment tax credits	19.0	100.1	80.4
Provision for uncollectible accounts	5.9	6.9	8.1
Expense portion of pension & postretirement benefit cost	5.4	3.6	6.8
Other non-cash items - net	12.9	7.8	7.3
Changes in working capital accounts:			
Accounts receivable & accrued unbilled revenues	(80.9)	(39.6)	(15.4)
Inventories	3.3	3.9	(15.2)
Recoverable/refundable fuel & natural gas costs	10.7	(37.8)	15.2
Prepayments & other current assets	5.7	22.9	20.3
Accounts payable, including to affiliated companies	65.9	40.7	(0.5)
Accrued liabilities	15.6	22.7	(0.9)
Employer contributions to pension & postretirement plans	(4.6)	(19.6)	(26.5)
Changes in noncurrent assets	(40.6)	(44.0)	(21.9)
Changes in noncurrent liabilities	(11.7)	(15.1)	(6.1)
Net cash from operating activities	498.8	524.1	505.2
CASH FLOWS FROM FINANCING ACTIVITIES			
Proceeds from:			
Long-term debt, net of issuance costs	198.5	—	385.5
Dividend reinvestment plan & other common stock issuances	6.3	6.3	6.2
Requirements for:			
Dividends on common stock	(141.9)	(134.2)	(127.3)
Retirement of long-term debt	(75.0)	(73.0)	(170.0)
Other financing activities	—	—	0.2
Net change in short-term borrowings	55.1	179.9	(141.9)
Net cash from financing activities	43.0	(21.0)	(47.3)
CASH FLOWS FROM INVESTING ACTIVITIES			
Proceeds from sale of assets and other collections	11.3	33.0	27.5
Requirements for:			
Capital expenditures, excluding AFUDC equity	(602.6)	(542.0)	(476.9)
Other costs	(3.4)	(5.2)	(14.3)
Changes in restricted cash	0.9	5.0	(5.9)
Net cash from investing activities	(593.8)	(509.2)	(469.6)
Net change in cash & cash equivalents	(52.0)	(6.1)	(11.7)
Cash & cash equivalents at beginning of period	68.6	74.7	86.4
Cash & cash equivalents at end of period	\$ 16.6	\$ 68.6	\$ 74.7

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

VECTREN CORPORATION AND SUBSIDIARY COMPANIES
CONSOLIDATED STATEMENTS OF COMMON SHAREHOLDERS' EQUITY
(In millions, except per share amounts)

	Common Stock		Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total
	Shares	Amount			
Balance at January 1, 2015	82.6	\$ 715.7	\$ 892.2	\$ (1.3)	\$ 1,606.6
Net income			197.3		197.3
Other comprehensive income (loss)				0.1	0.1
Common stock:					
Issuance: option exercises & dividend reinvestment plan	0.2	6.2			6.2
Dividends (\$1.540 per share)			(127.3)		(127.3)
Other		0.9			0.9
Balance at December 31, 2015	82.8	722.8	962.2	(1.2)	1,683.8
Net income			211.6		211.6
Other comprehensive income (loss)				(0.1)	(0.1)
Common stock:					
Issuance: option exercises & dividend reinvestment plan	0.1	6.3			6.3
Dividends (\$1.620 per share)			(134.2)		(134.2)
Other		0.7			0.7
Balance at December 31, 2016	82.9	729.8	1,039.6	(1.3)	1,768.1
Net income			216.0		216.0
Other comprehensive income (loss)					—
Common stock:					
Issuance: dividend reinvestment plan	0.1	6.3			6.3
Dividends (\$1.710 per share)			(141.9)		(141.9)
Other		0.8			0.8
Balance at December 31, 2017	83.0	\$ 736.9	\$ 1,113.7	\$ (1.3)	\$ 1,849.3

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

VECTREN CORPORATION AND SUBSIDIARY COMPANIES NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

1. Organization and Nature of Operations

Vectren Corporation (the Company or Vectren), an Indiana corporation, is an energy holding company headquartered in Evansville, Indiana. The Company's wholly owned subsidiary, Vectren Utility Holdings, Inc. (Utility Holdings or VUHI), serves as the intermediate holding company for three public utilities: Indiana Gas Company, Inc. (Indiana Gas or Vectren Energy Delivery of Indiana - North), Southern Indiana Gas and Electric Company (SIGECO or Vectren Energy Delivery of Indiana - South), and Vectren Energy Delivery of Ohio, Inc. (VEDO). Utility Holdings also has other assets that provide information technology and other services to the three utilities. Utility Holdings' consolidated operations are collectively referred to as the Utility Group. Both Vectren and Utility Holdings are holding companies as defined by the Energy Policy Act of 2005. Vectren was incorporated under the laws of Indiana on June 10, 1999.

Indiana Gas provides energy delivery services to approximately 592,400 natural gas customers located in central and southern Indiana. SIGECO provides energy delivery services to approximately 145,200 electric customers and approximately 111,500 gas customers located near Evansville in southwestern Indiana. SIGECO also owns and operates electric generation assets to serve its electric customers and optimizes those assets in the wholesale power market. Indiana Gas and SIGECO generally do business as Vectren Energy Delivery of Indiana. VEDO provides energy delivery services to approximately 318,100 natural gas customers located near Dayton in west-central Ohio.

The Company, through Vectren Enterprises, Inc. (Enterprises), is involved in nonutility activities in two primary business areas: Infrastructure Services and Energy Services. Infrastructure Services provides underground pipeline construction and repair services. Energy Services provides energy performance contracting and sustainable infrastructure, such as renewables, distributed generation, and combined heat and power projects. Enterprises also has other legacy businesses that have investments in energy-related opportunities and services and other investments. All of the above is collectively referred to as the Nonutility Group. Enterprises supports the Company's regulated utilities by providing infrastructure services.

2. Summary of Significant Accounting Policies

In applying its accounting policies, the Company makes judgments, assumptions, and estimates that affect the amounts reported in these consolidated financial statements and related footnotes. Examples of transactions for which estimation techniques are used include valuing pension and postretirement benefit obligations, deferred tax obligations, unbilled revenue, uncollectible accounts, regulatory assets and liabilities, asset retirement obligations, and derivatives and other financial instruments. Estimates also impact the depreciation of utility and nonutility plant and the testing of goodwill and other assets for impairment. Recorded estimates are revised when better information becomes available or when actual amounts can be determined. Actual results could differ from current estimates.

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries, after appropriate elimination of intercompany transactions. The Infrastructure Services segment, through wholly owned subsidiaries Miller Pipeline, LLC and Minnesota Limited, LLC, provides underground pipeline construction and repair services for customers that include Vectren Utility Holdings' utilities. In accordance with consolidation guidance under ASC 980, fees incurred by Vectren Utility Holdings and its subsidiaries for these pipeline construction and repair services, are appropriately not eliminated in consolidation.

Subsequent Events Review

Management performs a review of subsequent events for any events occurring after the balance sheet date but prior to the date the financial statements are issued.

Cash & Cash Equivalents

Highly liquid investments with an original maturity of three months or less at the date of purchase are considered cash equivalents. Cash and cash equivalents are stated at cost plus accrued interest to approximate fair value.

Allowance for Uncollectible Accounts

The Company maintains allowances for uncollectible accounts for estimated losses resulting from the inability of its customers to make required payments. The Company estimates the allowance for uncollectible accounts based on a variety of factors including the length of time receivables are past due, the financial health of its customers, unusual macroeconomic conditions, and historical experience. If the financial condition of its customers deteriorates or other circumstances occur that result in an impairment of customers' ability to make payments, the Company records additional allowances as needed.

Inventories

In most circumstances, the Company's inventory components are recorded using an average cost method; however, natural gas in storage at the Company's Indiana utilities are recorded using the Last In – First Out (LIFO) method. Inventory related to the Company's regulated operations is valued at historical cost consistent with ratemaking treatment. Materials and supplies are recorded as inventory when purchased and subsequently charged to expense or capitalized to plant when installed.

Property, Plant & Equipment

Both the Company's *Utility Plant* and *Nonutility Plant* is stated at historical cost, inclusive of financing costs and direct and indirect construction costs, less accumulated depreciation and when necessary, impairment charges. The cost of renewals and betterments that extend the useful life are capitalized. Maintenance and repairs, including the cost of removal of minor items of property and planned major maintenance projects, are charged to expense as incurred.

Utility Plant & Related Depreciation

Both the IURC and PUCO allow the Company's utilities to capitalize financing costs associated with *Utility Plant* based on a computed interest cost and a designated cost of equity funds. These financing costs are commonly referred to as AFUDC and are capitalized for ratemaking purposes and for financial reporting purposes instead of amounts that would otherwise be capitalized when acquiring nonutility plant. The Company reports both the debt and equity components of AFUDC in *Other – net* in the *Consolidated Statements of Income*.

When property that represents a retirement unit is replaced or removed, the remaining historical value of such property is charged to *Utility Plant*, with an offsetting charge to *Accumulated depreciation*, resulting in no gain or loss. Costs to dismantle and remove retired property are recovered through the depreciation rates as determined by the IURC and PUCO.

The Company's portion of jointly owned *Utility Plant*, along with that plant's related operating expenses, is presented in these financial statements in proportion to the ownership percentage.

Nonutility Plant & Related Depreciation

The depreciation of *Nonutility Plant* is charged against income over its estimated useful life, using the straight-line method of depreciation. When nonutility property is retired, or otherwise disposed of, the asset and accumulated depreciation are removed, and the resulting gain or loss is reflected in income, typically impacting operating expenses.

Impairment Reviews

Property, plant and equipment along with other long-lived assets are reviewed as facts and circumstances indicate that the carrying amount may be impaired. This impairment review involves the comparison of an asset's (or group of assets') carrying value to the estimated future cash flows the asset (or asset group) is expected to generate over a remaining life. If this evaluation were to conclude that the carrying value is impaired, an impairment charge would be recorded based on the difference between the carrying amount and its fair value (less costs to sell for assets to be disposed of by sale) as a charge to operations or discontinued operations.

Investments in Unconsolidated Affiliates

Investments in unconsolidated affiliates where the Company has significant influence are accounted for using the equity method of accounting. The Company's share of net income or loss from these investments is recorded in *Equity in earnings (losses) of*

unconsolidated affiliates. Dividends are recorded as a reduction of the carrying value of the investment when received. *Investments in unconsolidated affiliates* where the Company does not have significant influence are accounted for using the cost method of accounting. Dividends associated with cost method investments are recorded as *Other income – net* when received. Investments are reviewed as facts and circumstances indicate that the carrying amount may be impaired. This impairment review involves the comparison of an investment's fair value to its carrying value. Investments, when necessary, include adjustments for declines in value judged to be other than temporary.

Goodwill

Goodwill recorded on the *Consolidated Balance Sheets* results from business acquisitions and is based on a fair value allocation of the businesses' purchase price at the time of acquisition. Goodwill is charged to expense only when it is impaired. The Company tests its goodwill for impairment at an operating segment level because the components within the segments are similar. These tests are performed at least annually and at the beginning of each year. Impairment reviews consist of a comparison of fair value to the carrying amount. If the fair value is less than the carrying amount, an impairment loss is recognized in operations. No goodwill impairments have been recorded during the periods presented.

Regulation

Retail public utility operations affecting Indiana customers are subject to regulation by the IURC, and retail public utility operations affecting Ohio customers are subject to regulation by the PUCO. The Company's accounting policies give recognition to the ratemaking and accounting practices authorized by these agencies.

Refundable or Recoverable Gas Costs & Cost of Fuel & Purchased Power

All metered gas rates in Indiana contain a gas cost adjustment clause that allows the Company to charge for changes in the cost of purchased gas. Metered electric rates contain a fuel adjustment clause that allows for adjustment in charges for electric energy to reflect changes in the cost of fuel. The net energy cost of purchased power, subject to a variable benchmark based on NYMEX natural gas prices, is also recovered through regulatory proceedings. The Company records any under-or-over-recovery resulting from gas and fuel adjustment clauses each month in revenues. A corresponding asset or liability is recorded until the under-or-over-recovery is billed or refunded to utility customers. The cost of gas sold is charged to operating expense as delivered to customers, and the cost of fuel and purchased power for electric generation is charged to operating expense when consumed.

Regulatory Assets & Liabilities

Regulatory assets represent certain incurred costs, which will result in probable future cash recoveries from customers through the ratemaking process. Regulatory liabilities represent probable expenditures by the Company for removal costs or future reductions in revenues associated with amounts that are to be credited to customers through the ratemaking process. The Company continually assesses the recoverability of costs recognized as regulatory assets and liabilities and the ability to recognize new regulatory assets and liabilities associated with its regulated utility operations. Given the current regulatory environment in its jurisdictions, the Company believes such accounting is appropriate.

The Company collects an estimated cost of removal of its utility plant through depreciation rates established in regulatory proceedings. The Company records amounts expensed in advance of payments as a *Regulatory liability* because the liability does not meet the threshold of an asset retirement obligation.

Postretirement Obligations & Costs

The Company recognizes the funded status of its pension plans and postretirement plans on its balance sheet. The funded status of a defined benefit plan is its assets (if any) less its projected benefit obligation (PBO), which reflects service accrued to date and includes the impact of projected salary increases (for pay-related benefits). The funded status of a postretirement plan is its assets (if any) less its accumulated postretirement benefit obligation (APBO), which reflects accrued service to date. To the extent this obligation exceeds amounts previously recognized in the statement of income, the Company records a *Regulatory asset* for that portion related to its rate regulated utilities. To the extent that excess liability does not relate to a rate regulated utility, the offset is recorded as a reduction to equity in *Accumulated other comprehensive income*.

The annual cost of all postretirement plans is recognized in operating expenses or capitalized to plant following the direct labor of current employees. Specific to pension plans, the Company uses the projected unit credit actuarial cost method to calculate

service cost and the PBO. This method projects the present value of benefits at retirement and allocates that cost over the projected years of service. Annual service cost represents one year's benefit accrual while the PBO represents benefits allocated to previously accrued service. For other postretirement plans, service cost is calculated by dividing the present value of a participant's projected postretirement benefits into equal parts based upon the number of years between a participant's hire date and first eligible retirement date. Annual service cost represents one year's benefit accrual while the APBO represents benefit allocated to previously accrued service. To calculate the expected return on pension plan assets, the Company uses the plan assets' market-related value and an expected long-term rate of return. For the majority of the Company's pension plans, the fair market value of the assets at the balance sheet date is adjusted to a market-related value by recognizing the change in fair value experienced in a given year ratably over a five-year period. Interest cost represents the annual accretion of the PBO and APBO at the discount rate. Actuarial gains and losses outside of a corridor (equal to 10 percent of the greater of the benefit obligation and the market-related value of assets) are amortized over the expected future working lifetime of active participants (except for plans where almost all participants are inactive). Prior service costs related to plan changes are amortized over the expected future working lifetime (or to full eligibility date for postretirement plan other than pensions) of the active participants at the time of the amendment.

Asset Retirement Obligations

A portion of removal costs related to interim retirements of gas utility pipeline and utility poles, certain asbestos-related issues, and reclamation activities meet the definition of an asset retirement obligation (ARO). The Company records the fair value of a liability for a legal ARO in the period in which it is incurred. When the liability is initially recorded, the Company capitalizes a cost by increasing the carrying amount of the related long-lived asset. The liability is accreted, and the capitalized cost is depreciated over the useful life of the related asset. Upon settlement of the liability, the Company settles the obligation for its recorded amount or incurs a gain or loss. To the extent regulation is involved, regulatory assets and liabilities result when accretion and amortization is adjusted to match rates established by regulators and any gain or loss is subject to deferral.

Product Warranties, Performance Guarantees & Other Guarantees

Liabilities and expenses associated with product warranties and performance guarantees are recognized based on historical experience at the time the associated revenue is recognized. Adjustments are made as changes become reasonably estimable. The Company does not recognize the fair value of an obligation at inception for these guarantees because they are guarantees of the Company's own performance and/or product installations.

While not significant for the periods presented, the Company does recognize the fair value of an obligation at the inception of a guarantee in certain circumstances. These circumstances would include executing certain indemnification agreements and guaranteeing operating lease residual values, the performance of a third party, or the indebtedness of a third party.

Energy Contracts & Derivatives

The Company will periodically execute derivative contracts in the normal course of operations while buying and selling commodities to be used in operations, optimizing its generation assets, and managing risk. A derivative is recognized on the balance sheet as an asset or liability measured at its fair market value and the change in the derivative's fair market value depends on the intended use of the derivative and resulting designation.

When an energy contract that is a derivative is designated and documented as a normal purchase or normal sale (NPNS), it is exempt from mark-to-market accounting. Such energy contracts include Real Time and Day Ahead purchase and sale contracts with the MISO, certain natural gas purchases, and wind farm and other electric generating contracts.

When the Company engages in energy contracts and financial contracts that are derivatives and are not subject to the NPNS or other exclusions, such contracts are recorded at market value as current or noncurrent assets or liabilities depending on their value and when the contracts are expected to be settled. Contracts and any associated collateral with counter-parties subject to master netting arrangements are presented net in the *Consolidated Balance Sheets*. The offset resulting from carrying the derivative at fair value on the balance sheet is charged to earnings unless it qualifies as a hedge or is subject to regulatory accounting treatment. The offset to contracts affected by regulatory accounting treatment, which include most of the Company's executed energy and financial contracts, are marked to market as a regulatory asset or liability. Market value for derivative contracts is determined using quoted market prices from independent sources or from internal models. As of and for the periods presented, derivative activity is not material to these financial statements.

Income Taxes

As discussed in Note 8 in the Company's Consolidated Financial Statements included in Item 8, on December 22, 2017, comprehensive federal tax legislation was enacted, referred to as the Tax Cuts and Jobs Act ("TCJA").

Deferred income taxes are provided for temporary differences between the tax basis (adjusted for related unrecognized tax benefits, if any) of an asset or liability and its reported amount in the financial statements. Deferred tax assets and liabilities are computed based on the currently-enacted statutory income tax rates that are expected to be applicable when the temporary differences are scheduled to reverse. The Company's rate regulated utilities recognize regulatory liabilities, to the extent considered in ratemaking, for deferred taxes provided in excess of the current statutory tax rate and regulatory assets for deferred taxes provided at rates less than the current statutory tax rate. Such tax-related regulatory assets and liabilities are reported at the revenue requirement level and amortized to income as the related temporary differences reverse, generally over the lives of the related properties. A valuation allowance is recorded to reduce the carrying amounts of deferred tax assets unless it is more likely than not that the deferred tax assets will be realized.

Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return are recorded only when the more-likely-than-not recognition threshold is satisfied and measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement. The Company reports interest and penalties associated with unrecognized tax benefits within *Income taxes* in the *Consolidated Statements of Income* and reports tax liabilities related to unrecognized tax benefits as part of *Deferred credits & other liabilities*.

Investment tax credits (ITCs) are deferred and amortized to income over the approximate lives of the related property. Production tax credits (PTCs) are recognized as energy is generated and sold based on a per kilowatt hour rate prescribed in applicable federal and state statutes.

Revenues

Most revenues are recognized as products and services are delivered to customers. Some nonutility revenues are recognized using the percentage of completion method. The Company records revenues for services and goods delivered but not billed at the end of an accounting period in *Accrued unbilled revenues*.

MISO Transactions

With the IURC's approval, the Company is a member of the MISO, a FERC approved regional transmission organization. The MISO serves the electrical transmission needs of much of the Midcontinent region and maintains operational control over the Company's electric transmission facilities as well as that of other utilities in the region. The Company is an active participant in the MISO energy markets, bidding its owned generation into the Day Ahead and Real Time markets and procuring power for its retail customers at Locational Marginal Pricing (LMP) as determined by the MISO market.

MISO-related purchase and sale transactions are recorded using settlement information provided by the MISO. These purchase and sale transactions are accounted for on a net hourly position. Net purchases in a single hour are recorded in *Cost of fuel & purchased power* and net sales in a single hour are recorded in *Electric utility revenues*. On occasion, prior period transactions are resettled outside the routine process due to a change in the MISO's tariff or a material interpretation thereof. Expenses associated with resettlements are recorded once the resettlement is probable and the resettlement amount can be estimated. Revenues associated with resettlements are recognized when the amount is determinable and collectability is reasonably assured.

The Company also receives transmission revenue that results from other members' use of the Company's transmission system. These revenues are also included in *Electric utility revenues*. Generally, these transmission revenues along with costs charged by the MISO are considered components of base rates and any variance from that included in base rates is recovered from / refunded to retail customers through tracking mechanisms.

Share-Based Compensation

The Company grants share-based awards to certain employees and board members. Liability classified share-based compensation awards are re-measured at the end of each period based on an expected settlement date fair value. Equity classified share-based compensation awards are measured at the grant date, based on the fair value of the award. Expense

associated with share-based awards is recognized over the requisite service period, which generally begins on the date the award is granted through the earlier of the date the award vests or the date the employee becomes retirement eligible.

Excise & Utility Receipts Taxes

Excise taxes and a portion of utility receipts taxes are included in rates charged to customers. Accordingly, the Company records these taxes received as a component of operating revenues, which totaled \$29.1 million in 2017, \$28.3 million in 2016, and \$29.4 million in 2015. Expense associated with excise and utility receipts taxes are recorded as a component of *Taxes other than income taxes*.

Operating Segments

The Company's chief operating decision maker is the Chief Executive Officer. The Company uses net income calculated in accordance with generally accepted accounting principles as its most relevant performance measure. The Company has three operating segments within its Utility Group, three operating segments in its Nonutility Group, and a Corporate and Other segment.

Fair Value Measurements

Certain assets and liabilities are valued and disclosed at fair value. Financial assets include securities held in trust by the Company's pension plans. Nonfinancial assets and liabilities include the initial measurement of an asset retirement obligation or the use of fair value in goodwill, intangible assets, and long-lived assets impairment tests. FASB guidance provides the framework for measuring fair value. That framework provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are described as follows:

Level 1	Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets that the Company has the ability to access.
Level 2	<p>Inputs to the valuation methodology include</p> <ul style="list-style-type: none"> · quoted prices for similar assets or liabilities in active markets; · quoted prices for identical or similar assets or liabilities in inactive markets; · inputs other than quoted prices that are observable for the asset or liability; · inputs that are derived principally from or corroborated by observable market data by correlation or other means. <p>If the asset or liability has a specified (contractual) term, the Level 2 input must be observable for substantially the full term of the asset or liability.</p>
Level 3	Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

The asset or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used maximize the use of observable inputs and minimize the use of unobservable inputs.

3. Utility & Nonutility Plant

The original cost of *Utility Plant*, together with depreciation rates expressed as a percentage of original cost, follows:

<i>(In millions)</i>	At December 31,			
	2017		2016	
	Original Cost	Depreciation Rates as a Percent of Original Cost	Original Cost	Depreciation Rates as a Percent of Original Cost
Gas utility plant	\$ 3,969.6	3.4%	\$ 3,587.5	3.4%
Electric utility plant	2,833.5	3.3%	2,752.0	3.3%
Common utility plant	59.0	3.2%	56.3	3.2%
Construction work in progress	70.7	—	63.0	—
Asset retirement obligations	82.6	—	86.6	—
Total original cost	\$ 7,015.4		\$ 6,545.4	

SIGECO and Alcoa Generating Corporation (AGC), a subsidiary of Alcoa, Inc. (Alcoa), own a 300 MW unit at the Warrick Power Plant (Warrick Unit 4) as tenants in common. SIGECO's share of the cost of this unit at December 31, 2017, is \$191.0 million with accumulated depreciation totaling \$119.7 million. AGC and SIGECO share equally in the cost of operation and output of the unit. SIGECO's share of operating costs is included in *Other operating expenses* in the *Consolidated Statements of Income*.

Nonutility Plant, net of accumulated depreciation and amortization follows:

<i>(In millions)</i>	At December 31,	
	2017	2016
Vehicles & equipment	\$ 220.2	\$ 207.4
Computer hardware & software	156.5	121.8
Land & buildings	77.1	77.9
All other	10.3	16.8
Nonutility plant - net	\$ 464.1	\$ 423.9

Nonutility Plant is presented net of accumulated depreciation and amortization of \$506.9 million and \$460.8 million as of December 31, 2017 and 2016, respectively. For the years ended December 31, 2017, 2016, and 2015, the Company capitalized interest totaling \$1.2 million, \$1.0 million, and \$0.4 million, respectively, on nonutility plant construction projects.

In 2016, the estimated depreciable lives for certain pieces of equipment at Minnesota Limited, LLC were reevaluated and extended due to a change in service life of the equipment. As a result of this evaluation, the Company extended the estimated useful life of certain pieces of equipment effective January 1, 2016. The effect of this change in estimate was a reduction of annual depreciation expense of approximately \$9.6 million.

4. Regulatory Assets & Liabilities

Regulatory Assets

Regulatory assets consist of the following:

<i>(In millions)</i>	At December 31,	
	2017	2016
Future amounts recoverable from ratepayers related to:		
Benefit obligations (See Note 9)	\$ 102.8	\$ 102.6
Net deferred income taxes (See Note 8)	6.2	(17.1)
Asset retirement obligations & other	24.3	—
	133.3	85.5
Amounts deferred for future recovery related to:		
Cost recovery riders & other	142.4	91.6
	142.4	91.6
Amounts currently recovered in customer rates related to:		
Indiana authorized trackers	75.9	64.2
Ohio authorized trackers	28.4	22.2
Loss on reacquired debt & hedging costs	22.7	24.1
Deferred coal costs and other	14.1	21.2
	141.1	131.7
Total regulatory assets	\$ 416.8	\$ 308.8

Of the \$141 million currently being recovered in customer rates, no amounts are earning a return. The weighted average recovery period of regulatory assets currently being recovered in base rates, which totals \$23 million, is 20 years. The remainder of the regulatory assets are being recovered timely through periodic recovery mechanisms. The Company has rate orders for all deferred costs not yet in rates and therefore believes that future recovery is probable.

Assets arising from benefit obligations represent the funded status of retirement plans less amounts previously recognized in the statement of income. The Company records a *Regulatory asset* for that portion related to its rate regulated utilities. See Note 09.

Regulatory assets for asset retirement obligations are a result of costs incurred for expected retirement activity for the Company's ash ponds beyond what has been recovered in rates. The Company believes the recovery of these assets are probable as the costs are currently being recovered in rates.

Regulatory Liabilities

At December 31, 2017 and 2016, the Company had regulatory liabilities of approximately \$937 million and \$454 million, respectively, \$477 million and \$452 million of which related to cost of removal obligations, and at December 31, 2017, \$459 million to deferred taxes. The deferred tax related regulatory liability is primarily the result of the \$446 million revaluation of deferred taxes at December 31, 2017 at the reduced federal corporate tax rate. These regulatory liabilities are expected to be refunded to customers over time following state regulator approval.

5. Investment in ProLiance Holdings, LLC

The Company has an investment in ProLiance Holdings, LLC (ProLiance), an affiliate of the Company and Citizens Energy Group (Citizens). Much of the ProLiance business was sold on June 18, 2013 when ProLiance exited the natural gas marketing business through the disposition of certain of the net assets of its energy marketing business, ProLiance Energy, LLC. The Company's remaining investment in ProLiance relates primarily to an investment in LA Storage, LLC (LA Storage). Consistent with its ownership percentage, the Company is allocated 61 percent of ProLiance's profits and losses; however, governance and voting rights remain at 50 percent for each member, and therefore, the Company accounts for its investment in ProLiance using the equity method of accounting.

The Company's remaining investment at December 31, 2017, shown at its 61 percent ownership share of the individual net assets of ProLiance, is as follows.

<i>(In millions)</i>	As of December 31, 2017
Cash	\$ 0.8
Investment in LA Storage	22.4
Total investment in ProLiance	\$ 23.2
Included in:	
Investments in unconsolidated affiliates	\$ 18.8
Other nonutility investments	\$ 4.4

LA Storage, LLC Storage Asset Investment

ProLiance Transportation and Storage, LLC (PT&S), a subsidiary of ProLiance, and Sempra Energy International (SEI), a subsidiary of Sempra Energy (SE), through a joint venture, have a 100 percent interest in a development project for salt-cavern natural gas storage facilities known as LA Storage. PT&S is the minority member with a 25 percent interest, which it accounts for using the equity method. The project, which includes a pipeline system, is expected to include 12-19 Bcf of storage capacity, and has the potential for further expansion. This pipeline system is currently connected with several interstate pipelines, including the Cameron Interstate Pipeline operated by Sempra Pipelines & Storage, and can connect area liquefied natural gas regasification terminals to an interstate natural gas transmission system and storage facilities.

Approximately 12 Bcf of the storage, which comprises three of the four FERC certified caverns, is fully tested but additional work is required to further develop the caverns. The timing and extent of development of these caverns and pipeline system is dependent on market conditions, including pricing, need for storage and transmission capacity, and development of the liquefied natural gas market, among other factors. To date, development activity has been modest due to the current low demand for storage facilities. The development of the storage market and related pricing are critical assumptions in the analysis of the recoverability of the investment's carrying value. At December 31, 2017 and 2016, ProLiance's investment in the joint venture was \$36.8 million and \$36.7 million, respectively.

6. Nonutility Legacy Holdings

Within the nonutility group, there are legacy investments involved in other ventures. As of December 31, 2017 and 2016, total remaining legacy investments, other than the investment in ProLiance, included in the Other Businesses portfolio totaled \$6.7 million and \$7.0 million, respectively.

For the period presented, the remaining investment relates to a debt security related to the sale of commercial real estate of \$5.1 million and other investments of \$1.6 million. During 2015, the Company sold its investment in commercial real estate property and holds a debt security related to that transaction.

7. Intangible Assets

Intangible assets, which are included in *Other assets*, consist of the following:

(In millions)	At December 31,			
	2017		2016	
	Amortizing	Non-amortizing	Amortizing	Non-amortizing
Customer-related assets	\$ 18.6	\$ —	\$ 20.9	\$ —
Market-related assets	6.6	6.0	—	13.0
Intangible assets, net	\$ 25.2	\$ 6.0	\$ 20.9	\$ 13.0

Effective January 1, 2017, the Company reclassified an approximate \$7 million market-related asset from non-amortizing to amortizing. As of December 31, 2017, the weighted average remaining life for amortizing customer-related assets is 13 years. These amortizing intangible assets have no significant residual values. Intangible assets are presented net of accumulated amortization totaling \$14.6 million for customer-related assets and \$4.3 million for market-related assets at December 31, 2017 and \$12.0 million for customer-related assets and \$4.5 million for market-related assets at December 31, 2016. Annual amortization associated with intangible assets totaled \$2.6 million in 2017, \$2.5 million in 2016 and \$3.1 million in 2015. Amortization should approximate (in millions) \$2.6 per year from 2018 through 2022. Intangible assets are primarily in the Nonutility Group.

8. Income Taxes

Tax Cuts and Jobs Act

On December 22, 2017, the United States government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (“TCJA”). The TCJA makes broad and complex changes to the Internal Revenue Code (“IRC”), many of which are effective on January 1, 2018, including, but not limited to, (1) reducing the Federal corporate income tax rate from 35 percent to 21 percent, (2) eliminating the use of bonus depreciation for regulated utilities, while permitting full expensing of qualified property for non-regulated entities, (3) eliminating the domestic production activities deduction previously allowable under Section 199 of the IRC, (4) creating a new limitation on the deductibility of interest expense for non-regulated businesses, (5) eliminating the corporate Alternative Minimum Tax (“AMT”) and changing how existing AMT credits can be realized, (6) limiting the deductibility of certain executive compensation, (7) restricting the deductibility of entertainment and lobbying-related expenses, (8) requiring regulated entities to employ the average rate assumption method (“ARAM”) to refund excess deferred taxes created by the rate change to their customers, and (9) changing the rules under Section 118 of the IRC regarding taxability of contributions made by government or civic groups.

Consolidated results reflect a net tax benefit of \$45.3 million for the period ending December 31, 2017 from the enactment of the TCJA. This benefit is associated with the impact of the corporate rate reduction on the Company’s deferred income tax balances resulting in a \$23.2 million benefit for the Utility Group, \$22.3 million benefit for the Nonutility businesses, and \$0.2 million expense for Corporate & Other. The portion of the benefit attributable to Utility Group operations relates to assets which are not included for regulatory rate making purposes, such as goodwill associated with past acquisitions.

In addition, the reduction in the federal corporate rate results in \$333.4 million in excess federal deferred income taxes for the Utility Group.

The Company's gas and electric utilities currently recover corporate income tax expense in Commission approved rates charged to customers. The IURC and PUCO both issued orders which initiated proceedings to investigate the impact of the TCJA on utility companies and customers within each state. In addition, both Commissions have ordered each utility to establish regulatory assets and liabilities to record all estimated impacts of tax reform starting January 1, 2018. The Company is complying with both orders. In Indiana, the IURC held an initial conference of parties on February 6, 2018, and an order was issued by the Commission on February 16, 2018, outlining the process the utility companies are to follow. In accordance with the order, the Company expects to initiate proceedings to effect the timely reduction in customer bills due to the lower corporate federal income tax rate in the very near term. In Ohio, in response to the PUCO's request for comments from utilities, Vectren

submitted its response indicating that the issues should be address in its base rate case, for which the pre-filing notice was filed February 21, 2018.

A reconciliation of the federal statutory rate to the effective income tax rate follows:

	Year Ended December 31,		
	2017	2016	2015
Statutory rate:	35.0 %	35.0 %	35.0 %
State & local taxes-net of federal benefit	3.4	2.8	3.6
Deferred tax revaluation-tax law change	(17.3)	—	—
Amortization of investment tax credit	(0.2)	(0.3)	(0.2)
Domestic production deduction	(1.4)	(0.4)	(1.0)
Energy efficiency building deductions	—	(1.7)	(2.3)
Research and development credit	(0.3)	(0.6)	(1.6)
Other tax credits	(0.1)	(0.1)	(0.1)
All other-net	(1.4)	0.1	0.2
Effective tax rate	17.7 %	34.8 %	33.6 %

On February 9, 2018, through the signing into law of the Bipartisan Budget Act of 2018, Section 179D of the Internal Revenue Code, which provides for the energy efficiency commercial buildings tax deduction, was retroactively extended to 2017 for one year. Any impacts will be reflected in 2018 results pursuant to ASC 740 related to accounting for retroactive effects of legislation.

Significant components of the net deferred tax liability follow:

<i>(In millions)</i>	At December 31,	
	2017	2016
Noncurrent deferred tax liabilities (assets):		
Depreciation & cost recovery timing differences	\$ 593.7	\$ 902.4
Regulatory assets recoverable through future rates	7.9	17.6
Alternative minimum tax carryforward	(12.2)	(29.3)
Employee benefit obligations	(9.3)	(8.1)
Net operating loss & other carryforwards (net of valuation allowances)	(4.1)	(3.2)
U.S. federal charitable contributions carryforwards	(12.2)	—
Regulatory liabilities to be settled through future rates	(116.2)	(15.9)
Impairments	(0.6)	(2.5)
Deferred fuel costs-net	16.2	25.9
Other-net	28.1	18.8
Net noncurrent deferred tax liability	\$ 491.3	\$ 905.7

At December 31, 2017 and 2016, investment tax credits totaling \$1.2 million and \$1.6 million respectively, are included in *Deferred credits & other liabilities*. At December 31, 2017, the Company has alternative minimum tax credit carryforwards which do not expire. The TCJA eliminated the alternative minimum tax after 2017. Pursuant to the TCJA, the Company will be able to recover its alternative minimum tax carryforwards in future periods.

In addition, the Company has \$4.1 million in state net operating losses and \$12.2 million in U.S. federal charitable contributions carryforwards, which will expire in 5 to 20 years. The net operating loss carryforward and other carryforwards were reduced for the impacts of unrecognized tax benefits and a valuation allowance relating primarily to state net operating loss carryforwards. At December 31, 2017 and 2016, the valuation allowance was \$10.1 million and \$8.3 million, respectively.

The components of income tax expense follow:

<i>(In millions)</i>	Year Ended December 31,		
	2017	2016	2015
Current:			
Federal	\$ 20.5	\$ 6.8	\$ 10.8
State	6.9	6.0	8.5
Total current taxes	27.4	12.8	19.3
Deferred:			
Federal	16.7	97.6	79.0
State	2.7	3.6	2.0
Total deferred taxes	19.4	101.2	81.0
Amortization of investment tax credits	(0.4)	(1.1)	(0.6)
Total income tax expense	\$ 46.4	\$ 112.9	\$ 99.7

Uncertain Tax Positions

Unrecognized tax benefits for all periods presented were not material to the Company. The net liability on the *Consolidated Balance Sheet* for unrecognized tax benefits inclusive of interest and penalties totaled \$1.3 million and \$1.2 million, respectively, at December 31, 2017 and 2016.

The Company and/or certain of its subsidiaries file income tax returns in the U.S. federal jurisdiction and various states. The Internal Revenue Service (IRS) has concluded examinations of the Company's U.S. federal income tax returns for tax years through December 31, 2012. The State of Indiana, the Company's primary state tax jurisdiction, has conducted examinations of state income tax returns for tax years through December 31, 2010. The statutes of limitations for assessment of federal income tax and Indiana income tax have expired with respect to tax years through 2014 except to the extent of refunds claimed on amended tax returns. The statutes of limitations for assessment of the 2013 tax year related to the amended federal return will expire in 2020. The statutes of limitations for assessment of the 2009 and 2011 through 2014 tax years related to the amended Indiana income tax returns will expire in 2018 through 2020.

Indiana Senate Bill 1

In March 2014, Indiana Senate Bill 1 was signed into law. This legislation phases in a 1.6 percent rate reduction to the Indiana Adjusted Gross Income Tax Rate for corporations over a six year period. Pursuant to this legislation, the tax rate will be lowered by 0.25 percent each year for the first five years and 0.35 percent in year six beginning on July 1, 2016 to the final rate of 4.9 percent effective July 1, 2021. Pursuant to FASB guidance, the Company accounted for the effect of the change in tax law on its deferred taxes in the first quarter of 2014, the period of enactment. The impact was not material to results of operations.

9. Retirement Plans & Other Postretirement Benefits

At December 31, 2017, the Company maintains three closed qualified defined benefit pension plans, a nonqualified supplemental executive retirement plan (SERP), and a postretirement benefit plan. The defined benefit pension plans and postretirement benefit plan, which cover eligible full-time regular employees, are primarily noncontributory. The postretirement benefit plan includes health care and life insurance benefits which are a combination of self-insured and fully insured programs. The qualified pension plans and the SERP are aggregated under the heading "Pension Benefits." The postretirement benefit plan is presented under the heading "Other Benefits."

Net Periodic Benefit Costs

A summary of the components of net periodic benefit cost for the three years ended December 31, 2017 follows:

(In millions)	Pension Benefits			Other Benefits		
	2017	2016	2015	2017	2016	2015
Service cost	\$ 6.5	\$ 7.0	\$ 7.9	\$ 0.2	\$ 0.3	\$ 0.4
Interest cost	13.7	14.7	14.6	1.5	1.7	2.0
Expected return on plan assets	(21.0)	(22.8)	(22.5)	—	—	—
Amortization of prior service cost (benefit)	0.4	0.4	0.7	(2.4)	(2.9)	(3.0)
Amortization of actuarial loss	7.4	7.2	8.5	—	—	0.7
Settlement charge	2.1	—	0.6	—	—	—
Net periodic benefit cost (benefit)	\$ 9.1	\$ 6.5	\$ 9.8	\$ (0.7)	\$ (0.9)	\$ 0.1

A portion of the net periodic benefit cost disclosed in the table above is capitalized as *Utility Plant* following the allocation of current employee labor costs. Costs capitalized in 2017, 2016, and 2015 are estimated at \$3.0 million, \$1.9 million, and \$3.1 million, respectively.

The Company decreased the weighted average discount rate used to measure periodic cost from 4.31 percent in 2016 to 4.07 percent in 2017 due to lower benchmark interest rates that approximated the expected duration of the Company's benefit obligations as of that valuation date. The Company derives its discount rate by identifying a theoretical settlement portfolio of high quality corporate bonds sufficient to provide for the plans' projected benefit payments. For fiscal year 2018, the weighted average discount rate assumption will decrease to 3.61 percent for the defined benefit pension plans, based on decreased benchmark interest rates.

The weighted averages of significant assumptions used to determine net periodic benefit costs follow:

	Pension Benefits			Other Benefits		
	2017	2016	2015	2017	2016	2015
Discount rate	4.07%	4.31%	4.05%	4.04%	4.21%	3.95%
Rate of compensation increase	3.50%	3.50%	3.50%	N/A	N/A	N/A
Expected return on plan assets	7.00%	7.50%	7.50%	N/A	N/A	N/A
Expected increase in Consumer Price Index	N/A	N/A	N/A	2.50%	2.50%	2.50%

The Company uses a "building block" approach to develop an expected long-term rate of return. In 2017, the Company lowered to 7.0 percent this long-term assumption based on continued lower interest rates. The 2018 assumption is also 7.0 percent. Health care cost trend rate assumptions do not have a material effect on the service and interest cost components of benefit costs. The Company's plans limit its exposure to increases in health care costs to annual changes in the Consumer Price Index (CPI). Any increase in health care costs in excess of the CPI increase is the responsibility of the plan participants.

Projected Benefit Obligations

A reconciliation of the Company's benefit obligations at December 31, 2017 and 2016 follows:

<i>(In millions)</i>	Pension Benefits		Other Benefits	
	2017	2016	2017	2016
Projected benefit obligation, beginning of period	\$ 350.4	\$ 348.3	\$ 40.5	\$ 43.5
Service cost – benefits earned during the period	6.5	7.0	0.2	0.3
Interest cost on projected benefit obligation	13.7	14.7	1.5	1.7
Plan participants' contributions	—	—	1.2	1.1
Plan amendments	1.4	—	—	—
Actuarial loss (gain)	25.4	8.7	1.3	(1.6)
Settlement loss	0.5	—	—	—
Benefit payments	(31.4)	(28.3)	(4.7)	(4.5)
Projected benefit obligation, end of period	\$ 366.5	\$ 350.4	\$ 40.0	\$ 40.5

The increase in the projected benefit obligation in 2017 is primarily due to a decrease in the discount rate used to measure the obligation at year end. The accumulated benefit obligation for all defined benefit pension plans was \$356.5 million and \$339.8 million at December 31, 2017 and 2016, respectively. The accumulated benefit obligation as of a date is the actuarial present value of benefits attributed by the pension benefit formula to employee service rendered prior to that date and based on current and past compensation levels. The accumulated benefit obligation differs from the projected benefit obligation disclosed in the table above in that it includes no assumptions about future compensation levels.

Material Assumptions

The benefit obligation as of December 31, 2017 and 2016 was calculated using the following weighted average assumptions:

	Pension Benefits		Other Benefits	
	2017	2016	2017	2016
Discount rate	3.61%	4.07%	3.57%	4.04%
Rate of compensation increase	3.50%	3.50%	N/A	N/A
Expected increase in Consumer Price Index	N/A	N/A	2.50%	2.50%

For the projected benefit obligation calculation at December 31, 2017, the mortality assumed for determining future lump sums reflects the latest IRS mortality table (2019) and the latest mortality improvement scales released by the Society of Actuaries. To calculate the 2017 ending postretirement benefit obligation, medical claims costs in 2018 were assumed to be 7.0 percent higher than those incurred in 2017. That trend, beginning at 7.0 percent in 2018, is assumed to reach its ultimate trending increase of 5.0 percent by 2025 and remain level thereafter. A one-percentage point increase or decrease in assumed health care cost trend rates would have changed the benefit obligation by approximately \$0.2 million.

Plan Assets

A reconciliation of the Company's plan assets at December 31, 2017 and 2016 follows:

<i>(In millions)</i>	Pension Benefits		Other Benefits	
	2017	2016	2017	2016
Plan assets at fair value, beginning of period	\$ 304.5	\$ 296.9	\$ —	\$ —
Actual return on plan assets	41.9	19.7	—	—
Employer contributions	1.1	16.2	3.5	3.4
Plan participants' contributions	—	—	1.2	1.1
Benefit payments	(31.4)	(28.3)	(4.7)	(4.5)
Fair value of plan assets, end of period	\$ 316.1	\$ 304.5	\$ —	\$ —

The Company's overall investment strategy for its retirement plan trusts is to maintain investments in a diversified portfolio, comprised of primarily equity and fixed income investments, which are further diversified among various asset classes. The diversification is designed to minimize the risk of large losses while maximizing total return within reasonable and prudent levels.

of risk. The investment objectives specify a targeted investment allocation for the pension plans of 60 percent equities, 35 percent debt, and 5 percent for other investments, including real estate. Both the equity and debt securities have a blend of domestic and international exposures. Objectives do not target a specific return by asset class. The portfolios' return is monitored in total. Following is a description of the valuation methodologies used for trust assets measured at fair value.

Mutual Funds

The fair values of mutual funds are derived from the daily closing price as reported by the fund as these instruments have active markets (Level 1 inputs).

Common Collective Trust Funds (CTF's)

The Company's plans have investments in trust funds similar to mutual funds in that they are created by pooling of funds from investors into a common trust and such funds are managed by a third party investment manager. These trust funds typically give investors a wider range of investment options through this pooling of funds than those generally available to investors on an individual basis. However, unlike mutual funds, these trusts are not publicly traded in an active market. The funds are valued at the net asset value of the underlying investments. The net asset value is used as a practical expedient to estimate fair value. In relation to these investments, there are no unfunded commitments. Also, the Plan can exchange shares with minimal restrictions, however, certain events may exist where share exchanges are restricted for up to 31 days.

The fair values of the Company's pension and other retirement plan assets at December 31, 2017 and December 31, 2016 by asset category and by fair value hierarchy are as follows:

<i>(In millions)</i>	As of December 31, 2017			
	Level 1	Level 2	Level 3	Total
Domestic equity funds	\$ 140.2	\$ —	\$ —	\$ 140.2
International equity funds	46.8	—	—	46.8
Bond funds	43.6	—	—	43.6
Real estate, commodity & other funds	6.2	—	4.5	10.7
Investments measured at net asset value (a)	—	—	—	74.8
Total plan investments	\$ 236.8	\$ —	\$ 4.5	\$ 316.1

<i>(In millions)</i>	As of December 31, 2016			
	Level 1	Level 2	Level 3	Total
Domestic equity funds	\$ 135.1	\$ —	\$ —	\$ 135.1
International equity funds	42.0	—	—	42.0
Bond funds	44.6	—	—	44.6
Real estate, commodity & other funds	6.0	—	4.4	10.4
Investments measured at net asset value (a)	—	—	—	72.4
Total plan investments	\$ 227.7	\$ —	\$ 4.4	\$ 304.5

(a) In accordance with Subtopic 820-10, certain investments that were measured at net asset value per share, or its equivalent, have not been classified in the fair value hierarchy.

Guaranteed Annuity Contract

One of the Company's pension plans is party to a group annuity contract with John Hancock Life Insurance Company (John Hancock). At December 31, 2017 and 2016, the estimate of undiscounted funds necessary to satisfy John Hancock's remaining obligation was \$4.2 million and \$4.0 million, respectively. If funds retained by John Hancock are not sufficient to satisfy retirement payments due to these retirees, the shortfall must be funded by the Company. The composite investment return, net of manager fees and other charges for the years ended December 31, 2017 and 2016 was 3.25 percent and 3.60 percent, respectively. The Company values this illiquid investment using long-term interest rate and mortality assumptions, among others, and is therefore considered a Level 3 investment. There is no unfunded commitment related to this investment.

A roll forward of the fair value of the guaranteed annuity contract calculated using Level 3 valuation assumptions follows:

<i>(In millions)</i>	2017	2016
Fair value, beginning of year	\$ 4.4	\$ 4.3
Unrealized gains related to investments still held at reporting date	0.2	0.2
Purchases, sales & settlements, net	(0.1)	(0.1)
Fair value, end of year	\$ 4.5	\$ 4.4

Funded Status

The funded status of the plans as of December 31, 2017 and 2016 follows:

<i>(In millions)</i>	Pension Benefits		Other Benefits	
	2017	2016	2017	2016
Qualified Plans				
Projected benefit obligation, end of period	\$ (343.4)	\$ (329.7)	\$ (40.0)	\$ (40.5)
Fair value of plan assets, end of period	316.1	304.5	—	—
Funded Status of Qualified Plans, end of period	(27.3)	(25.2)	(40.0)	(40.5)
Projected benefit obligation of SERP Plan, end of period	(22.9)	(20.6)	—	—
Total funded status, end of period	\$ (50.2)	\$ (45.8)	\$ (40.0)	\$ (40.5)
<i>Accrued liabilities</i>	\$ 1.1	\$ 1.2	\$ 4.1	\$ 4.5
<i>Deferred credits & other liabilities</i>	\$ 49.1	\$ 44.6	\$ 35.9	\$ 36.0

Expected Cash Flows

The Company expects to make contributions totaling \$3.5 million to the qualified pension plans in 2018. In addition, the Company expects to make contributions totaling approximately \$1.1 million into the SERP plan and approximately \$2.9 million into the postretirement plan.

Estimated retiree pension benefit payments, including the SERP, projected to be required during the years following 2017 are approximately (in millions) \$28.8 in 2018, \$43.0 in 2019, \$30.1 in 2020, \$27.3 in 2021, \$28.6 in 2022, and \$132.7 in years 2023-2027. Expected benefit payments projected to be required for postretirement benefits during the years following 2017 (in millions) are approximately \$4.1 in 2018, \$4.4 in 2019, \$4.7 in 2020, \$4.9 in 2021, \$4.9 in 2022, and \$23.1 in years 2023-2027.

Prior Service Cost and Actuarial Gains and Losses

Following is a roll forward of prior service cost and actuarial gains and losses.

<i>(In millions)</i>	Pensions		Other Benefits	
	Prior Service Cost	Net (Gain) or Loss	Prior Service Cost	Net (Gain) or Loss
Balance at January 1, 2015	\$ 2.0	\$ 111.7	\$ (17.1)	\$ 10.9
Amounts arising during the period	0.5	6.9	—	(8.6)
Reclassification to benefit costs	(0.7)	(8.5)	3.0	(0.7)
Balance at December 31, 2015	\$ 1.8	\$ 110.1	\$ (14.1)	\$ 1.6
Amounts arising during the period	—	11.7	—	(1.6)
Reclassification to benefit costs	(0.4)	(7.2)	2.9	—
Balance at December 31, 2016	\$ 1.4	\$ 114.6	\$ (11.2)	\$ —
Amounts arising during the period	1.3	3.1	—	1.2
Reclassification to benefit costs	(0.4)	(7.4)	2.4	—
Balance at December 31, 2017	\$ 2.3	\$ 110.3	\$ (8.8)	\$ 1.2

Following is a reconciliation of the amounts in *Accumulated other comprehensive income* (AOCI) and *Regulatory assets* related to retirement plan obligations at December 31, 2017 and 2016.

<i>(In millions)</i>	2017		2016	
	Pensions	Other Benefits	Pensions	Other Benefits
Prior service cost	\$ 2.3	\$ (8.8)	\$ 1.4	\$ (11.2)
Unamortized actuarial loss	110.3	1.2	114.6	—
	112.6	(7.6)	116.0	(11.2)
Less: <i>Regulatory asset</i> deferral	(110.2)	7.4	(113.6)	11.0
AOCI before taxes	\$ 2.4	\$ (0.2)	\$ 2.4	\$ (0.2)

Related to pension plans, \$0.5 million of prior service cost and \$8.5 million of actuarial gain/loss is expected to be amortized to cost in 2018. Related to other benefits, no actuarial gain/loss is expected to be amortized to periodic cost in 2018, and \$2.2 million of prior service cost is expected to reduce costs in 2018.

Multiemployer Benefit Plan

The Company, through its Infrastructure Services operating segment, participates in several industry wide multiemployer pension plans for its union employees which provide for monthly benefits based on length of service. The risks of participating in multiemployer pension plans are different from the risks of participating in single-employer pension plans in the following respects: 1) assets contributed to the multiemployer plan by one employer may be used to provide benefits to employees of other participating employers, 2) if a participating employer stops contributing to the plan, the unfunded obligations of the plan allocable to such withdrawing employer may be borne by the remaining participating employers, and 3) if the Company ceases its participation in its multiemployer pension plans, the Company may be required to pay those plans an amount based on its allocable share of the underfunded status of the plan, referred to as a withdrawal liability.

Expense is recognized as payments are accrued for work performed or when withdrawal liabilities are probable and estimable. Expense associated with multiemployer plans was \$42.1 million, \$35.0 million and \$32.7 million for the years ended December 31, 2017, 2016, and 2015, respectively. During 2017, the Company made contributions to these multiemployer plans on behalf of employees that participate in approximately 250 local unions. Contracts with these unions are negotiated with trade agreements through two primary contractor associations. These trade agreements have varying expiration dates ranging from 2017 through 2021. The average contribution related to these local unions was less than \$0.2 million, and the largest contribution was \$4.8 million. Multiple unions can contribute to a single multiemployer plan. The Company made contributions to at least 50 plans in 2017, six of which are considered significant plans based on, among other things, the amount of the contributions, the number of employees participating in the plan, and the funded status of the plan.

The Company's participation in the significant plans is outlined in the following table. The Employer Identification Number (EIN) / Pension Plan Number column provides the EIN and three digit pension plan numbers. The most recent Pension Protection Act Zone Status available in 2017 and 2016 is for the plan year end at January 31, 2017 and 2016 for the Central Pension Fund, May 31, 2017 and 2016 for the Indiana Laborers Fund, December 31, 2016 and 2015 for the Pipeline Industry Benefit Fund, December 31, 2016 and 2015 for the Laborers District Council & Contractors' Pension Fund of Ohio, July 31, 2016 and 2015 for the Ohio Operating Engineers Pension Fund and April 30, 2017 and 2016 for the Operating Engineers Local 324 Fringe Benefit Fund respectively. The Company's participation in the significant plans is outlined in the following table. Generally, plans in the red zone are less than 65 percent funded, plans in the yellow zone are less than 80 percent funded and plans in the green zone are at least 80 percent funded. The FIP/RP Status Pending / Implemented column indicates plans for which a funding improvement plan ("FIP") or rehabilitation plan ("RP") is either pending or has been implemented. The multiemployer contributions listed in the table below are the Company's multiemployer contributions made in 2017, 2016, and 2015.

Federal law requires pension plans in endangered status to adopt a FIP aimed at restoring the financial health of the plan. In December 2014, the Multiemployer Pension Reform Act of 2014 was passed and permanently extended the Pension Protection Act of 2006 multiemployer plan critical and endangered status funding rules, among other things, including providing a provision for a plan sponsor to suspend or reduce benefit payments to preserve plans in critical and declining status.

(In millions)

Pension Fund	EIN/Pension Plan Number	Pension Protection Act Zone Status		FIP/RP Status Pending/Implemented	Multiemployer Contributions			Surcharge Imposed
		2017	2016		2017	2016	2015	
Central Pension Fund	36-6052390-001	Green	Green	No	\$9.3	\$7.4	\$7.2	No
Indiana Laborers Pension Fund (1)	35-6027150-001	Yellow	Yellow	Implemented	5.0	4.4	4.1	No
Pipeline Industry Benefit Fund	73-6146433-001	Green	Green	No	4.9	3.0	4.0	No
Laborers District Fund of Ohio	31-6129964-001	Green	Green	No	3.3	2.0	1.5	No
Ohio Operating Engineers Pension Fund	31-6129968-001	Green	Green	No	2.8	2.1	2.2	No
Operating Eng. Local 324 Fund (2)	38-1900637-001	Red	Yellow	Implemented	2.5	1.6	1.6	No
Other					14.3	14.5	12.1	
Total Contributions					\$42.1	\$35.0	\$32.7	

(1) The Indiana Laborers Pension Fund was in “endangered” status for the Plan Year ending May 31, 2017. In an effort to improve the Plan’s funding situation, the trustees adopted a FIP on December 17, 2015 and updated on December 20, 2016. The funding improvement period is June 1, 2017 to May 31, 2027 or the date the Fund’s actuary certifies it has emerged from endangered status.

(2) The Operating Engineers Local #324 Fringe Benefits Fund was certified to be in "critical" status for the plan year ending April 30, 2017. In an effort to improve the Plan's funding situation, on March 17, 2011, the trustees adopted a Plan Amendment, which reduced benefit accruals, eliminated some ancillary benefits, and adopted a rehabilitation plan that will be effective from May 1, 2013 through April 30, 2023 or until the Plan is no longer in critical status. On April 27, 2015, the trustees updated the rehabilitation plan to change the annual standard for meeting the requirements of the rehabilitation plan. The annual standard is that actuarial projections updated for each year show the Fund is expected to remain solvent for a 20-year projection period.

While not considered significant to the Company, there are two plans in red zone status receiving Company contributions. There are five plans where Company contributions exceed 5 percent of each plan's total contributions and one of these plans was considered significant to the Company.

Defined Contribution Plan

The Company also has defined contribution retirement savings plans qualified under sections 401(a) and 401(k) of the Internal Revenue Code and include an option to invest in Vectren common stock, among other alternatives. During 2017, 2016 and 2015, the Company made contributions to these plans of \$13.2 million, \$12.1 million, and \$11.0 million, respectively.

10. Borrowing Arrangements

Long-Term Debt

Long-term senior unsecured obligations and first mortgage bonds outstanding by subsidiary follow:

<i>(In millions)</i>	At December 31,	
	2017	2016
Utility Holdings		
Fixed Rate Senior Unsecured Notes		
2018, 5.75%	\$ 100.0	\$ 100.0
2020, 6.28%	100.0	100.0
2021, 4.67%	55.0	55.0
2023, 3.72%	150.0	150.0
2026, 5.02%	60.0	60.0
2028, 3.20%	45.0	45.0
2032, 3.26%	100.0	—
2035, 6.10%	75.0	75.0
2035, 3.90%	25.0	25.0
2041, 5.99%	35.0	35.0
2042, 5.00%	100.0	100.0
2043, 4.25%	80.0	80.0
2045, 4.36%	135.0	135.0
2047, 3.93%	100.0	—
2055, 4.51%	40.0	40.0
Total Utility Holdings	1,200.0	1,000.0
Indiana Gas		
Fixed Rate Senior Unsecured Notes		
2025, Series E, 6.53%	10.0	10.0
2027, Series E, 6.42%	5.0	5.0
2027, Series E, 6.68%	1.0	1.0
2027, Series F, 6.34%	20.0	20.0
2028, Series F, 6.36%	10.0	10.0
2028, Series F, 6.55%	20.0	20.0
2029, Series G, 7.08%	30.0	30.0
Total Indiana Gas	96.0	96.0
SIGECO		
First Mortgage Bonds		
2022, 2013 Series C, current adjustable rate 1.565%, tax-exempt	4.6	4.6
2024, 2013 Series D, current adjustable rate 1.565%, tax-exempt	22.5	22.5
2025, 2014 Series B, current adjustable rate 1.565%, tax-exempt	41.3	41.3
2029, 1999 Series, 6.72%	80.0	80.0
2037, 2013 Series E, current adjustable rate 1.565%, tax-exempt	22.0	22.0
2038, 2013 Series A, 4.00%, tax-exempt	22.2	22.2
2043, 2013 Series B, 4.05%, tax-exempt	39.6	39.6
2044, 2014 Series A, 4.00% tax-exempt	22.3	22.3
2055, 2015 Series Mt. Vernon, 2.375%, tax-exempt	23.0	23.0
2055, 2015 Series Warrick County, 2.375%, tax-exempt	15.2	15.2
Total SIGECO	292.7	292.7

	At December 31,	
<i>(In millions)</i>	2017	2016
Vectren Capital Corp.		
Fixed Rate Senior Unsecured Notes		
2017, 3.48%	—	75.0
2019, 7.30%	60.0	60.0
2022, 3.33%	75.0	75.0
2025, 4.53%	50.0	50.0
2030, 3.90%	75.0	75.0
Total Vectren Capital Corp.	260.0	335.0
Total long-term debt outstanding	1,848.7	1,723.7
Current maturities of long-term debt	(100.0)	(124.1)
Debt issuance costs	(9.4)	(9.0)
Unamortized debt premium & discount-net	(0.6)	(0.7)
Total long-term debt-net	\$ 1,738.7	\$ 1,589.9

Utility Holdings Long-Term Debt Issuance

On July 14, 2017, Utility Holdings entered into a private placement Note Purchase Agreement pursuant to which institutional investors agreed to purchase the following tranches of notes: (i) \$100 million of 3.26 percent Guaranteed Senior Notes, Series A, due August 28, 2032 and (ii) \$100 million of 3.93 percent Guaranteed Senior Notes, Series B, due November 29, 2047. The notes are jointly and severally guaranteed by Indiana Gas, SIGECO, and VEDO, wholly owned subsidiaries of Utility Holdings.

The Series A note proceeds were received on August 28, 2017 and the Series B proceeds were received on November 29, 2017.

SIGECO Variable Rate Tax-Exempt Bonds

On September 14, 2017, the Company, through SIGECO, executed a Bond Purchase and Covenants Agreement (Purchase and Covenants Agreement) providing SIGECO the ability to remarket and/or refinance approximately \$152 million of tax-exempt bonds at a variable rate based on one month LIBOR through May 1, 2023 (except for one bond that matures on January 1, 2022).

Bonds remarketed through the Bond Purchase and Covenants Agreement included three issuances that were mandatorily tendered to the Company on September 14, 2017. These were

- 2013 Series C Notes with a principal of \$4.6 million and a final maturity date of January 1, 2022;
- 2013 Series D Notes with a principal of \$22.5 million and a final maturity date of March 1, 2024; and
- 2013 Series E Notes with a principal of \$22.0 million and final maturity date of May 1, 2037.

Through the Purchase and Covenants Agreement, on September 22, 2017 SIGECO also extended the mandatory tender date of its variable rate 2014 Series B Notes with a principal of \$41.3 million and final maturity date of July 1, 2025. (The original tender date was September 24, 2019).

The Purchase and Covenants Agreement provides the option, subject to satisfaction of customary conditions precedent, for the lenders to purchase from SIGECO and for SIGECO to convert to a variable rate other currently outstanding fixed rate, tax-exempt bonds that are callable at SIGECO's option in March 2018 (2013 Series A Notes totaling \$22.2 million due March 1, 2038) and May 2018 (2013 Series B Notes totaling \$39.6 million due by May 1, 2043).

The Company, through SIGECO, executed forward starting interest rate swaps during 2017 providing that on January 1, 2020, the Company will begin hedging the variability in interest rates on the 2013 Series A, B, and E Notes, as described in Note 10, through final maturity dates. The swaps contain customary terms and conditions and generally provide offset for changes in the one month LIBOR rate. Other interest rate variability that may arise through the Purchase and Covenants Agreement, such as variability caused by changes in tax law or SIGECO's credit rating, among others, may result in an actual interest rate above or

below the anticipated fixed rate. Regulatory orders require SIGECO to include the impact of its interest rate risk management activities, such as gains and losses arising from these swaps, in its cost of capital utilized in rate cases and other periodic filings.

Vectren Capital Unsecured Note Retirements

On December 15, 2017 and March 11, 2016, Vectren Capital senior unsecured notes matured totaling \$75 million and \$60 million, respectively. Interest rates on the matured bonds were 3.48 percent and 6.92 percent, respectively. The repayment of debt was funded from the Company's cash on hand and Nonutility short-term borrowing arrangements.

SIGECO Bond Retirement

On June 1, 2016, a \$13 million SIGECO bond matured. The First Mortgage Bond, which was a portion of an original \$25 million public issuance sold on June 1, 1986, carried a fixed interest rate of 8.875 percent. The repayment of debt was funded from the Company's commercial paper program.

Mandatory Tenders

At December 31, 2017, certain series of SIGECO bonds, aggregating \$124.0 million are subject to mandatory tenders prior to the bonds' final maturities. \$38.2 million will be tendered in 2020 and \$85.8 million will be tendered in 2023.

Call Options

At December 31, 2017, certain series of SIGECO bonds, aggregating \$84.1 million may be called at SIGECO's option. \$61.8 million is callable in 2018, as previously noted, and \$22.3 million is callable in 2019.

Future Long-Term Debt Sinking Fund Requirements and Maturities

The annual sinking fund requirement of SIGECO's first mortgage bonds is 1 percent of the greatest amount of bonds outstanding under the Mortgage Indenture. This requirement may be satisfied by certification to the Trustee of unfunded property additions in the prescribed amount as provided in the Mortgage Indenture. SIGECO met the 2017 sinking fund requirement by this means and, expects to also meet this requirement in 2018 in this manner. Accordingly, the sinking fund requirement is excluded from *Current liabilities* in the *Consolidated Balance Sheets*. At December 31, 2017, \$1.5 billion of SIGECO's utility plant remained unfunded under SIGECO's Mortgage Indenture. SIGECO's gross utility plant balance subject to the Mortgage Indenture approximated \$3.4 billion at December 31, 2017.

Consolidated maturities of long-term debt during the five years following 2017 (in millions) are \$100 in 2018, \$60 in 2019, \$100 in 2020, \$55 in 2021, \$80 in 2022, and \$1,444 thereafter.

Debt Guarantees

Vectren Corporation guarantees Vectren Capital's debt, but does not guarantee Utility Holdings' debt. Vectren Capital's long-term debt outstanding at December 31, 2017 was \$260 million. Vectren Capital had \$70 million short-term obligations outstanding at December 31, 2017. Utility Holdings' outstanding long-term and short-term borrowing arrangements are jointly and severally guaranteed by its wholly owned subsidiaries and regulated utilities Indiana Gas, SIGECO, and VEDO. Utility Holdings' long-term debt and short-term obligations outstanding at December 31, 2017 approximated \$1.2 billion and \$180 million, respectively.

Covenants

Both long-term and short-term borrowing arrangements contain customary default provisions; restrictions on liens, sale-leaseback transactions, mergers or consolidations, and sales of assets; and restrictions on leverage, among other restrictions. Multiple debt agreements contain a covenant that the ratio of consolidated total debt to consolidated total capitalization will not exceed 65 percent. As of December 31, 2017, the Company was in compliance with all debt covenants.

Short-Term Borrowings

On July 14, 2017, Utility Holdings closed on renegotiated credit agreements with existing lenders. These credit agreements mature on July 14, 2022 and replaced bank credit agreements that had an original maturity date of October 31, 2019. Utility Holdings' new credit facility totals \$400 million with a \$10 million swing line sublimit and a \$20 million letter of credit sublimit. The Utility Holdings credit agreement is jointly and severally guaranteed by its wholly owned subsidiaries Indiana Gas, SIGECO, and VEDO and is a backup facility for Utility Holdings' commercial paper program. Vectren Capital's new credit facility totals

\$200 million with a \$40 million swing line sublimit and a \$80 million letter of credit sublimit. The Vectren Capital credit agreement funds the short-term borrowing needs of the Company's corporate and nonutility operations and is guaranteed by Vectren Corporation.

The total \$600 million of short-term borrowing capacity between the two lines remains unchanged; however, the Utility Holdings credit agreement commitment was increased by \$50 million as compared to the prior credit agreement, and the Vectren Capital credit agreement commitment was decreased by \$50 million as compared to the prior credit agreement.

As reduced by borrowings currently outstanding, approximately \$220 million was available for the Utility Group operations and \$130 million was available for the wholly owned Nonutility Group and corporate operations at December 31, 2017.

The Company has historically funded the short-term borrowing needs of Utility Holdings' operations through the commercial paper market but maintains the ability to use the Utility Holdings' short-term borrowing facility when necessary. Throughout the years presented, Utility Holdings has successfully placed commercial paper as needed. Following is certain information regarding these short-term borrowing arrangements:

<i>(In millions)</i>	Utility Group Borrowings			Nonutility Group Borrowings		
	2017	2016	2015	2017	2016	2015
As of Year End						
Balance Outstanding	\$ 179.5	\$ 194.4	\$ 14.5	\$ 70.0	\$ —	\$ —
Weighted Average Interest Rate	1.92%	1.05%	0.55%	2.68%	N/A	N/A
Annual Average						
Balance Outstanding	\$ 172.4	\$ 59.8	\$ 53.8	\$ 12.2	\$ 0.2	\$ 24.8
Weighted Average Interest Rate	1.30%	0.71%	0.38%	2.44%	1.60%	1.33%
Maximum Month End Balance Outstanding	\$ 238.7	\$ 194.4	\$ 121.5	\$ 70.0	\$ 6.3	\$ 69.1

11. Common Shareholders' Equity

Authorized, Reserved Common and Preferred Shares

At December 31, 2017 and 2016, the Company was authorized to issue 480 million shares of common stock and 20 million shares of preferred stock. Of the authorized common shares, approximately 4.6 million shares at December 31, 2017 and 2016 were reserved by the board of directors for issuance through the Company's share-based compensation plans, benefit plans, and dividend reinvestment plan. At December 31, 2017 and 2016, there were 392.4 million and 392.5 million, respectively, of authorized shares of common stock and all authorized shares of preferred stock, available for a variety of general corporate purposes, including future public offerings to raise additional capital.

12. Earnings Per Share

The Company uses the two class method to calculate earnings per share (EPS). The two class method is an earnings allocation formula that treats a participating security as having rights to earnings that otherwise would have been available to common shareholders. Under the two class method, earnings for a period are allocated between common shareholders and participating security holders based on their respective rights to receive dividends as if all undistributed book earnings for the period were distributed. The amount of net income attributable to participating securities is immaterial.

Basic EPS is computed by dividing net income attributable to only the common shareholders by the weighted-average number of common shares outstanding for the period. Diluted EPS includes the impact of stock options and other equity based instruments to the extent the effect is dilutive.

The following table illustrates the basic and dilutive EPS calculations for the three years ended December 31, 2017:

<i>(In millions, except per share data)</i>	Year Ended December 31,		
	2017	2016	2015
Numerator:			
Reported net income (Numerator for Basic and Diluted EPS)	\$ 216.0	\$ 211.6	\$ 197.3
Denominator:			
Weighted-average common shares outstanding (Basic and Diluted EPS)	83.0	82.8	82.7
Basic and diluted earnings per share	\$ 2.60	\$ 2.55	\$ 2.39

For the periods presented, all equity based instruments were dilutive and immaterial.

13. Accumulated Other Comprehensive Income

A summary of the components of and changes in *Accumulated other comprehensive income* for the past three years follows:

<i>(In millions)</i>	2015		2016		2017		
	Beginning of Year Balance	Changes During Year	End of Year Balance	Changes During Year	End of Year Balance	Changes During Year	End of Year Balance
Pension & other benefit costs	(2.2)	0.1	(2.1)	(0.1)	(2.2)	—	(2.2)
Deferred income taxes	0.9	—	0.9	—	0.9	—	0.9
Accumulated other comprehensive income (loss)	\$ (1.3)	\$ 0.1	\$ (1.2)	\$ (0.1)	\$ (1.3)	\$ —	\$ (1.3)

14. Share-Based Compensation & Deferred Compensation Arrangements

The Company has share-based compensation programs to encourage corporate and subsidiary officers, key non-officer employees, and non-employee directors to remain with the Company and to more closely align their interests with those of the Company's shareholders. Under these programs, the Company issues both performance-based and time-vested awards. All share-based compensation programs are shareholder approved. Currently, awards issued to a majority of the officers are performance-based, accrue dividends that are also subject to performance measures, and are settled in cash. In addition, the Company maintains a deferred compensation plan for officers and non-employee directors where participants can invest earned compensation and vested share-based awards in phantom Company stock units, among other options. Certain vesting grants provide for accelerated vesting if there is a change in control or upon the participant's retirement.

Following is a reconciliation of the total cost associated with share-based awards recognized in the Company's financial statements to its after tax effect on net income:

<i>(In millions)</i>	Year Ended December 31,		
	2017	2016	2015
Total cost of share-based compensation	\$ 40.2	\$ 30.0	\$ 19.4
Less capitalized cost	8.6	7.0	4.8
Total in other operating expense	31.6	23.0	14.6
Less income tax benefit in earnings	12.3	9.0	5.7
After tax effect of share-based compensation	\$ 19.3	\$ 14.0	\$ 8.9

Share-Based Awards & Other Awards

The vesting of awards issued to officers is contingent upon meeting total return and return on equity performance objectives. Grants to officers generally vest at the end of a three-year performance period. Based on performance objectives, the number of awards could double or could be entirely forfeited.

Non-employee directors receive a portion of their fees in share-based awards. These awards to non-employee directors are not

performance-based and generally vest over one year. The majority of officers and non-employee directors must choose

between either settling awards in cash or deferring awards into a deferred compensation plan (where the value is eventually withdrawn in cash). The number of such awards that may settle in shares, but are accounted for as liability awards due to their potential to be taken in cash when withdrawn from the deferred compensation plan, was approximately or less than 100,000 units as of December 31, 2017, 2016 and 2015.

Most officer, non-officer employee, and non-employee director awards are accounted for as liability awards at their settlement date fair value. The limited number of share awards to certain subsidiary officers that must be settled in shares are accounted for in equity at their grant date fair value.

A summary of the status of awards separated between those accounted for as liabilities and equity as of December 31, 2017 and 2016, and changes during the years ended December 31, 2017 and 2016, follow:

	Equity Awards		Liability Awards	
	Units	Wtd. Avg. Grant Date Fair value	Units	Fair value
Awards at January 1, 2016	15,373	\$ 31.63	646,487	
Granted	4,052	30.19	448,176	
Vested	(11,711)	30.19	(462,203)	
Forfeited	(1,382)	31.87	(20,880)	
Awards at December 31, 2016	6,332	\$ 33.42	611,580	\$ 52.15
Granted	1,779	36.29	385,776	
Vested	(7,648)	33.25	(395,452)	
Forfeited	—	—	(8,364)	
Awards at December 31, 2017	463	\$ 46.21	593,540	\$ 65.02

As of December 31, 2017, there was \$14.2 million of total unrecognized compensation cost associated with outstanding grants. That cost is expected to be recognized over a weighted-average period of 1.1 years. The total fair value of shares vested for liability awards during the years ended December 31, 2017, 2016, and 2015 was \$25.1 million, \$23.7 million, and \$16.6 million, respectively. The total fair value of equity awards vesting during the years ended December 31, 2017, 2016, and 2015 was \$0.5 million, \$0.6 million, \$1.1 million, respectively.

Deferred Compensation Plans

The Company has nonqualified deferred compensation plans, which permit eligible officers and non-employee directors to defer portions of their compensation and vested share-based compensation. A record keeping account is established for each participant, and the participant chooses from a variety of measurement funds for the deemed investment of their accounts. The measurement funds are similar to the funds in the Company's corporate defined contribution plan and include an investment in phantom stock units of the Company. The account balance fluctuates with the investment returns on those funds. The liability associated with these plans totaled \$61.4 million and \$40.9 million at December 31, 2017 and 2016 respectively. Other than \$1.2 million and \$0.9 million which is classified in *Accrued liabilities* at December 31, 2017 and 2016, respectively, the liability is included in *Deferred credits & other liabilities*. The impact of these plans on *Other operating* expenses was expense of \$13.1 million in 2017, \$4.3 million in 2016 and \$0.1 million in 2015. The amount recorded in earnings related to the investment activities in Vectren phantom stock associated with these plans during the years ended December 31, 2017, 2016, and 2015, was expense of \$10.1 million, expense of \$3.8 million, and income of \$0.4 million, respectively.

The Company has certain investments currently funded primarily through corporate-owned life insurance policies. These investments, which are consolidated, are available to pay deferred compensation benefits. These investments are also subject to the claims of the Company's creditors. The cash surrender value of these policies included in *Other corporate & utility investments* on the *Consolidated Balance Sheets* were \$42.2 million and \$33.1 million at December 31, 2017 and 2016, respectively. Those investments generated earnings of \$5.9 million in 2017, earnings of \$3.5 million in 2016, and losses of \$2.1 million in 2015. This activity is reflected in *Other operating expenses*.

15. Commitments & Contingencies

Commitments

Future minimum lease payments required under operating leases that have initial or remaining noncancelable lease terms in excess of one year during the five years following 2017 and thereafter (in millions) are \$14.2 in 2018, \$10.1 in 2019, \$4.9 in 2020, \$2.7 in 2021, \$2.3 in 2022, and \$5.8 thereafter. Total lease expense, for these type of commitments, (in millions) was \$16.5 in 2017, \$13.0 in 2016, and \$11.1 in 2015.

The Company's regulated utilities have both firm and non-firm commitments, some of which are between five and twenty year agreements, to purchase natural gas, coal, and electricity, as well as certain transportation and storage rights. Costs arising from these commitments, while significant, are pass-through costs, generally collected dollar-for-dollar from retail customers through regulator-approved cost recovery mechanisms.

Performance Guarantees & Product Warranties

In the normal course of business, wholly owned subsidiaries, such as Energy Systems Group, LLC (ESG), a subsidiary of the Energy Services operating segment, issue payment and performance bonds and other forms of assurance that commit them to timely install infrastructure, operate facilities, pay vendors and subcontractors, and support warranty obligations.

Specific to ESG's role as a general contractor in the performance contracting industry, at December 31, 2017, there are 66 open surety bonds supporting future performance. The average face amount of these obligations is \$9.8 million, and the largest obligation has a face amount of \$75.9 million. The maximum exposure from these obligations is limited to the level of uncompleted work and further limited by bonds issued to ESG by various contractors. At December 31, 2017, approximately 29 percent of work was yet to be completed on projects with open surety bonds. A significant portion of these open surety bonds will be released within one year. In instances where ESG operates facilities, project guarantees extend over a longer period. In addition to its performance obligations, ESG also warrants the functionality of certain installed infrastructure generally for one year and the associated energy savings over a specified number of years.

Based on a history of meeting performance obligations and installed products operating effectively, no liability or cost has been recognized for the periods presented as the Company assesses the likelihood of loss as remote. Since inception, ESG has paid a de minimis amount on energy savings guarantees.

Corporate Guarantees & Other Support

The Company issues parent level guarantees to certain vendors and customers of its wholly owned subsidiaries. These guarantees do not represent incremental consolidated obligations; but rather, represent guarantees of subsidiary obligations in order to allow those subsidiaries the flexibility to conduct business without posting other forms of collateral. At December 31, 2017, parent level guarantees support a maximum of \$373 million of ESG's performance contracting commitments, warranty obligations, project guarantees, and energy savings guarantees. Given the infrequent occurrence of any performance shortfalls historically on any of these commitments, no reserve for a potential liability has been deemed warranted.

Further, an energy facility operated by ESG and managed by Keenan Ft. Detrick Energy, LLC (Keenan), is governed by an operations agreement. Under this agreement, all payment obligations to Keenan are also guaranteed by the Company. The Company guarantee of the Keenan operations agreement does not state a maximum guarantee. Due to the nature of work performed under this contract, the Company cannot estimate a maximum potential amount of future payments but assesses the likelihood of loss as remote based on, primarily, the nature of the project.

The Company has not been called on to perform under these guarantees historically. While there can be no assurance that performance under these provisions will not be required in the future, the Company believes that the likelihood of a material amount being incurred under these provisions is remote given the nature of the projects, the manner in which the savings estimates are developed, and the fact that the value of the guarantees decrease over time as actual savings are achieved.

The Company from time to time, and primarily through Vectren Capital, issues letters of credit that support consolidated operations. At December 31, 2017, letters of credit outstanding total \$36.3 million.

Legal & Regulatory Proceedings

The Company is party to various legal proceedings, audits, and reviews by taxing authorities and other government agencies arising in the normal course of business. In the opinion of management, there are no legal proceedings or other regulatory reviews or audits pending against the Company that are likely to have a material adverse effect on its financial position, results of operations or cash flows.

16. Gas Rate and Regulatory Matters

Regulatory Treatment of Investments in Natural Gas Infrastructure Replacement

The Company monitors and maintains its natural gas distribution system to ensure natural gas is delivered in a safe and efficient manner. The Company's natural gas utilities are currently engaged in programs to replace bare steel and cast iron infrastructure and other activities in both Indiana and Ohio to mitigate risk, improve the system, and comply with applicable regulations, many of which are the result of federal pipeline safety requirements. Laws passed in both Indiana and Ohio provide utilities the opportunity to timely recover costs of federally mandated projects and other infrastructure improvement projects outside of a base rate proceeding.

Indiana Senate Bill 251 (Senate Bill 251) provides a framework to recover 80 percent of federally mandated costs through a periodic rate adjustment mechanism outside of a general rate case. Such costs include a return on the federally mandated capital investment, based on the overall rate of return most recently approved by the IURC, through a base rate case or other proceeding, along with recovery of depreciation and other operating costs associated with these mandates. The remaining 20 percent of those costs is deferred for future recovery in the utility's next general rate case.

Indiana Senate Bill 560 (Senate Bill 560) supplements Senate Bill 251 described above, and provides for cost recovery outside of a base rate proceeding for projects that either improve electric and gas system reliability and safety or are economic development projects that provide rural areas with access to gas service. Provisions of the legislation require, among other things, requests for recovery include a seven-year project plan. Once the plan is approved by the IURC, 80 percent of such costs are eligible for current recovery using a periodic rate adjustment mechanism. Recoverable costs include a return on the investment that reflects the current capital structure and associated costs, with the exception of the rate of return on equity, which remains fixed at the rate determined in the Company's last rate case. Recoverable costs also include recovery of depreciation and other operating expenses. The remaining 20 percent of project costs are deferred for future recovery in the utility's next general rate case, which must be filed before the expiration of the seven-year plan. The adjustment mechanism is capped at an annual increase in retail revenues of no more than two percent.

Ohio House Bill 95 (House Bill 95) permits a natural gas utility to apply for recovery of much of its capital expenditure program. This legislation also allows for the deferral of costs, such as depreciation, property taxes, and debt-related post-in-service carrying costs until recovery is approved by the PUCO.

Indiana Recovery and Deferral Mechanisms

The Company's Indiana natural gas utilities received Orders in 2008 and 2007 associated with the most recent base rate cases. These Orders authorized the deferral of financial impacts associated with bare steel and cast iron replacement activities. The Orders provide for the deferral of depreciation and post-in-service carrying costs on qualifying projects totaling \$20 million annually at Indiana Gas and \$3 million annually at SIGECO. The debt-related post-in-service carrying costs are currently recognized in the *Consolidated Statements of Income*. The recording of post-in-service carrying costs and depreciation deferral is limited by individual qualifying project to three years after being placed into service at SIGECO and four years after being placed into service at Indiana Gas. At December 31, 2017 and December 31, 2016, the Company has regulatory assets totaling \$22.7 million and \$21.9 million, respectively, associated with the deferral of depreciation and debt-related post-in-service carrying cost activities. Beginning in 2014, all bare steel and cast iron replacement activities are now part of the Company's seven-year capital investment plan discussed below.

Requests for Recovery under Indiana Regulatory Mechanisms

In August 2014, the IURC issued an Order approving the Company's seven-year capital infrastructure replacement and improvement plan (the Plan), beginning in 2014, and the proposed accounting authority and recovery. Compliance projects and other infrastructure improvement projects were approved pursuant to Senate Bill 251 and 560, respectively. As provided in the two laws, the Order approved semi-annual filings for rate recovery of 100 percent of the costs, inclusive of return,

related to these capital investments and operating expenses, with 80 percent of the costs, including a return, recovered currently via an approved tracking mechanism and 20 percent of the costs deferred and recovered in the Company's next base rate proceeding. In addition, the Order established guidelines to annually update the seven-year capital investment plan. Finally, the Order approved the Company's proposal to recover eligible costs assigned to the residential customer class via a fixed monthly charge per residential customer.

In March 2016, the IURC issued an Order re-approving approximately \$890 million of the Company's gas infrastructure modernization projects requested in the third update of the Plan, and approving the inclusion in rates of actual investments made through June 30, 2015. While most of the proposed capital spend has been approved as proposed, approximately \$80 million of future projects were not approved for recovery through the mechanisms pursuant to these filings. Specifically, the Company proposed to add a new project to its Plan pursuant to Senate Bill 560 totaling approximately \$65 million. The project, which is now complete, consists of a 20-mile transmission line and other related investments required to support industrial customer growth and ongoing system reliability in the Lafayette, Indiana area, as well as allows the Company to further diversify its gas supply portfolio via access to shale gas in the Marcellus and Utica reserves, was excluded for recovery under the Plan. The IURC stated because the project was not in the original plan filed in 2013, it does not qualify for cost recovery under Senate Bill 560. In the Order, the IURC did pre-approve the project for rate base inclusion upon the filing of the next base rate case. On April 27, 2017, the Indiana Court of Appeals affirmed the IURC Order. The Company does not expect similar issues related to updating future plan filings as the project inclusion process is now better understood by all parties.

Subsequent to the March 2016 Order, the Company has received additional Orders approving plan investments. On January 24, 2018, the IURC issued an order (January 2018 order) approving the inclusion in rates of investments made from January 2017 to June 2017. Through the January 2018 Order, approximately \$482 million of the approved capital investment has been incurred and included for recovery. The January 2018 Order also approved the Company's plan update, which now totals \$995 million through 2020. The plan increase, totaling \$105 million since inception, is for additional investments related to pipeline safety and compliance requirements under Senate Bill 251.

In December 2016, PHMSA issued interim final rules related to integrity management for storage operations. Efforts are underway to implement the new requirements. Further, the Company reviewed the Underground Natural Gas Storage Safety Recommendations from a joint Department of Energy and PHMSA led task force. On August 3, 2017, the Company filed for authority to recover the associated costs using the mechanism allowed under Senate Bill 251. The request includes approximately \$15 million of operating expenses and \$17 million of capital investments over a four-year period beginning in 2018. The Company received the IURC Order approving the request for recovery on December 28, 2017. The Company does not have company-owned storage operations in Ohio.

At December 31, 2017 and December 31, 2016, the Company has regulatory assets related to the Plan totaling \$78.0 million and \$51.1 million, respectively.

Ohio Recovery and Deferral Mechanisms

The PUCO Order approving the Company's 2009 base rate case in the Ohio service territory authorized a distribution replacement rider (DRR). The DRR's primary purpose is recovery of investments in utility plant and related operating expenses associated with replacing bare steel and cast iron pipelines, as well as certain other infrastructure investments. This rider is updated annually for qualifying capital expenditures and allows for a return on those capital expenditures based on the rate of return approved in the 2009 base rate case. In addition, deferral of depreciation and the ability to accrue debt-related post-in-service carrying costs is also allowed until the related capital expenditures are included in the DRR. The Order also initially established a prospective bill impact evaluation on the annual deferrals. On February 19, 2014, the PUCO issued an Order approving a Stipulation entered into by the PUCO Staff and the Company which provided for the extension of the DRR for the recovery of costs incurred through 2017 and expanded the types of investment covered by the DRR to include recovery of certain other infrastructure investments. The Order limits the resulting DRR fixed charge per month for residential and small general service customers to specific graduated levels through 2017. The capital expenditure plan is subject to the graduated caps on the fixed DRR monthly charge applicable to residential and small general service customers approved in the Order. In the event the Company exceeds these caps, amounts in excess can be deferred for future recovery. The Order also approved the Company's commitment that the DRR can only be further extended as part of a base rate case. In total, the Company has made capital investments on projects that are now in-service under the DRR totaling \$321.1 million as of

December 31, 2017, of which \$261.1 million has been approved for recovery under the DRR through December 31, 2016. Regulatory assets associated with post-in-service carrying costs and depreciation deferrals were \$31.2 million and \$24.4 million at December 31, 2017 and December 31, 2016, respectively. In August 2017, the Company received approval to adjust the DRR rates, effective December 31, 2017, for recovery of costs incurred through December 31, 2016.

The PUCO has also issued Orders approving the Company's filings under Ohio House Bill 95. These Orders approve deferral of the Company's Ohio capital expenditure program for items not covered by the DRR as well as expenditures necessary to comply with PUCO rules, regulations, orders, and system expansion to some new customers. Ohio House Bill 95 Orders also established a prospective bill impact evaluation on the cumulative deferrals, limiting the total deferrals at a level which would equal \$1.50 per residential and small general service customer per month. At December 31, 2017 and December 31, 2016, the Company has regulatory assets totaling \$66.1 million and \$41.9 million, respectively, associated with the deferral of depreciation, post-in-service carrying costs, and property taxes. As of December 31, 2017, the Company's deferrals have not reached this bill impact cap. On May 1, 2017, the Company submitted its most recent annual report required under its House Bill 95 Order. This report covers the Company's capital expenditure program through calendar year 2017.

Vectren Ohio Gas Rate Case

On February 21, 2018, the Company submitted a pre-filing notice with the PUCO indicating it plans to request an increase in its base rate charges for VEDO's distribution business in its 17 county service area in west-central Ohio. The filing is necessary to recover the costs of capital investments made over the past ten years, much of which has been deferred as part of the Company's capital expenditure program under Ohio House Bill 95. Also in the filing, the Company seeks approval for the continuation of the DRR mechanism. The Company will file the case-in-chief at the end of March 2018, and expects an order by early 2019.

Pipeline and Hazardous Materials Safety Administration (PHMSA)

In March 2016, PHMSA published a notice of proposed rulemaking (NOPR) on the safety of gas transmission and gathering lines. The proposed rule addresses many of the remaining requirements of the 2011 Pipeline Safety Act, with a particular focus on extending integrity management rules to address a much larger portion of the natural gas infrastructure and adds requirements to address broader threats to the integrity of a pipeline system. The Company continues to evaluate the impact these proposed rules will have on its integrity management programs and transmission and distribution systems. Progress on finalizing the rule continues to work through the administrative process. The rule is expected to be finalized in 2019 and the Company believes the costs to comply with the new rules would be considered federally mandated and therefore should be recoverable under Senate Bill 251 in Indiana and eligible for deferral under House Bill 95 in Ohio.

17. Electric Rate and Regulatory Matters

Electric Requests for Recovery under Senate Bill 560

The provisions of Senate Bill 560, as described in the Gas Rate & Regulatory Matters footnote for gas projects, are the same for qualifying electric projects. On February 23, 2017, the Company filed for authority to recover costs related to its electric system modernization plan, using the mechanism allowed under Senate Bill 560. The electric system modernization plan includes investments to upgrade portions of the Company's network of substations, transmission and distribution systems, to enhance reliability and allow the grid to accept advanced technology to improve the information and service provided to customers. The filing requested the recovery of associated capital expenditures estimated to be approximately \$500 million over the seven-year period beginning in 2017.

On September 20, 2017, the IURC issued an Order approving the settlement agreement reached between the Company, the OUCC and a coalition of industrial customers on May 18, 2017. The settlement agreement reduced the plan spend to \$446 million, with defined annual caps on recoverable capital investments. The majority of the reduction relating to the removal of advanced metering infrastructure (AMI or digital meters) from the plan. However, deferral of the costs for AMI was agreed upon in the settlement whereby the company can move forward with deployment in the near-term. In removing it from the plan, the request for cost recovery for the AMI project will not occur until the next base rate review proceeding, which would be expected to be filed by the end of 2023. The settlement agreement also addresses how the eligible costs would be recoverable in rates, with a cap on the residential and small general service fixed monthly charge per customer in each semi-annual filing. The remaining costs to residential and small general service customers would be recovered via a volumetric

energy charge. The settlement agreement also addresses that semi-annual filings are to be made August 1, based on capital investments and expenses through the period ended April 30, and February 1, based on capital investments and expenses through October 31. The parties agreed in the settlement that the Company would make its first semi-annual filing on August 1, 2017, with additional time allotted subsequent to the plan case order for intervening parties to review the filing and to address any changes to the settlement agreement.

On August 1, 2017, the Company filed with the IURC its initial request for approval of the revenue requirement associated with a capital investment of \$7.1 million through April 30, 2017. On December 20, 2017, the IURC issued an Order approving the initial rates necessary to begin cash recovery of 80 percent of the revenue requirement, inclusive of return, with the remaining 20 percent deferred for recovery in the utility's next general rate case.

On February 1, 2018, the Company submitted its second semi-annual filing, seeking approval of the recovery in rates of investments made of approximately \$31 million through October 31, 2017.

As of December 31, 2017, the Company has regulatory assets related to the Electric TDSIC plan totaling \$4.3 million.

Renewable Generation Resources

On August 30, 2017, the IURC issued an Order approving the Company's request to recover costs related to the construction of three solar projects, using the mechanism allowed under Senate Bill 29, which allows for timely recovery of costs and expenses incurred during the construction and operation of clean energy projects. These investments, presented as part of the Company's Integrated Resource Plan (IRP) submitted in December 2016, allow the Company to add approximately 4 MW of universal solar generation, rooftop solar generation, and 1 MW of battery storage resources to its portfolio. See more information on the IRP below in Environmental & Sustainability Matters. The approved cost of the projects cannot exceed the approximate \$16 million estimate submitted by the Company, without seeking further Commission approval.

SIGECO Electric Environmental Compliance Filing

On January 28, 2015, the IURC issued an Order approving the Company's request for approval of capital investments in its coal-fired generation units to comply with new EPA mandates related to mercury and air toxic standards (MATS) effective in 2015 and to address an outstanding Notice of Violation (NOV) from the EPA pertaining to its A.B. Brown generating station sulfur trioxide emissions. The MATS rule sets emission limits for hazardous air pollutants for existing and new coal-fired power plants and identifies the following broad categories of hazardous air pollutants: mercury, non-mercury hazardous air pollutants (primarily arsenic, chromium, cobalt, and selenium), and acid gases (hydrogen cyanide, hydrogen chloride, and hydrogen fluoride). The rule imposes mercury emission limits for two sub-categories of coal and proposed surrogate limits for non-mercury and acid gas hazardous air pollutants.

As of December 31, 2017, \$30 million has been spent on equipment to control mercury in both air and water emissions, and \$40 million to address the issues raised in the NOV. The Order approved the Company's request for deferred accounting treatment, as supported by provisions under Indiana Senate Bill 29 and Senate Bill 251. The accounting treatment includes the deferral of depreciation and property tax expense related to these investments, accrual of post-in-service carrying costs, and deferral of incremental operating expenses related to compliance with these standards. These costs will be included for recovery no later than the next rate case. The initial phase of the projects went into service in 2014, with the remaining investment going into service in 2016. As of December 31, 2017, the Company has approximately \$12.8 million deferred related to depreciation and operating expenses, and \$4.7 million deferred related to post-in-service carrying costs. MATS compliance was required beginning April 16, 2015, and the Company continues to operate in full compliance with the MATS rule.

In June 2015, Joint Appellants' Citizens Action Coalition of Indiana, Inc., Sierra Club, Inc., and Valley Watch, Inc. (the appellants) challenged the IURC's January 2015 Order. On October 29, 2015, the Indiana Court of Appeals issued an opinion that affirmed the IURC's findings with regard to equipment required to comply with MATS and certain national pollutant discharge elimination system rules but remanded the case to the IURC to determine whether a certificate of public convenience and necessity (CPCN) should be issued for the equipment required by the NOV. On June 22, 2016, the IURC issued an Order granting the Company a CPCN for the NOV required equipment. On July 21, 2016, the appellants initiated an appeal of the

IURC's June 22, 2016 Order challenging the findings made by the IURC. On February 14, 2017, the Indiana Court of Appeals affirmed the IURC's June 22, 2016 Order.

On February 20, 2018, the Company filed a request to commence recovery, under Senate Bill 251, of its already approved investments associated with the MATS and NOV Compliance Projects, including recovery of the authorized deferred balance. As proposed, recovery would reflect 80 percent of the authorized costs, including a return, recovery of depreciation and incremental operating expenses, and recovery of the prior deferred balance over a proposed period of 15 years. The remaining 20 percent will be deferred until the Company's next base rate proceeding. No procedural schedule has been set, but the Company would expect an order in the first quarter of 2019.

SIGECO Electric Demand Side Management (DSM) Program Filing

On March 28, 2014, Indiana Senate Bill 340 was signed into law. The legislation allows for industrial customers to opt out of participating in energy efficiency programs and as a result of this legislation, most of the Company's eligible industrial customers have since opted out of participation in the applicable energy efficiency programs.

Indiana Senate Bill 412 (Senate Bill 412) requires electricity suppliers to submit energy efficiency plans to the IURC at least once every three years. Senate Bill 412 also requires the recovery of all program costs, including lost revenues and financial incentives associated with those plans and approved by the IURC. The Company made its first filing pursuant to this bill in June 2015, which proposed energy efficiency programs for calendar years 2016 and 2017. On March 23, 2016, the IURC issued an Order approving the Company's 2016-2017 energy efficiency plan. The Order provided for cost recovery of program and administrative expenses and included performance incentives for reaching energy savings goals. The Order also included a lost margin recovery mechanism that would have limited recovery related to new programs to the shorter of four years or the life of the installed energy efficiency measure. Prior electric energy efficiency orders did not limit lost margin recovery in this manner. This ruling followed other IURC decisions implementing the same lost margin recovery limitation with respect to other electric utilities in Indiana. The Company appealed this lost margin recovery restriction based on the Company's commitment to promote and drive participation in its energy efficiency programs.

On March 7, 2017, the Indiana Court of Appeals reversed the IURC finding on the Company's 2016-2017 energy efficiency plan that the four year cap on lost margin recovery was arbitrary and the IURC failed to properly interpret the governing statute requiring it to review the utility's originally submitted DSM proposal and either approve or reject it as a whole, including the proposed lost margin recovery. The case was remanded to the IURC for further proceedings. On June 13, 2017, the Company filed additional testimony supporting the plan. In response to the proposals to cap lost margin recovery, the Company filed supplemental testimony that supported lost margin recovery based on the average measure life of the plan, estimated at nine years, on 90 percent of the direct energy savings attributed to the programs. Testimony of intervening parties was filed on July 26, 2017, opposing the Company's proposed lost margin recovery. An evidentiary hearing was held in September 2017. On December 20, 2017, the Commission issued an order approving the DSM Plan for 2016-2017 including the recovery of lost margins consistent with the Company's proposal. On January 22, 2018, certain intervening parties initiated an appeal to the Indiana Court of Appeals. An appeal schedule has not been set, and while no assurance as to the ultimate outcome can be provided, based upon the record of the proceedings, as well as the findings in the Commission's order, the Company expects to prevail in this appeal.

On April 10, 2017, the Company submitted its request for approval to the IURC of its Energy Efficiency Plan for calendar years 2018 through 2020. Consistent with prior filings, this filing included a request for continued cost recovery of program and administrative expenses, including performance incentives for reaching energy savings goals and continued recovery of lost margins consistent with the modified proposal in the 2016-2017 plan. Filed testimony of intervening parties was received on July 26, 2017, opposing the Company's proposed lost margin recovery. An evidentiary hearing was held in September 2017. On December 28, 2017, the Commission issued an order approving the 2018 through 2020 Plan, inclusive of recovery of lost margins consistent with the Order issued on December 20, 2017. On January 26, 2018, certain intervening parties initiated an appeal to the Indiana Court of Appeals. An appeal schedule has not been set, and while no assurance as to the ultimate outcome can be provided, based upon the record of the proceedings, as well as the findings in the Commission's order, the Company expects to prevail in this appeal.

For the twelve months ended December 31, 2017, 2016, and 2015, the Company recognized electric utility revenue of \$11.6 million, \$11.1 million, and \$10.1 million, respectively, associated with lost margin recovery approved by the Commission.

FERC Return on Equity (ROE) Complaints

On November 12, 2013, certain parties representing a group of industrial customers filed a joint complaint with the FERC under Section 206 of the Federal Power Act against the MISO and various MISO transmission owners, including SIGECO (first complaint case). The joint parties sought to reduce the 12.38 percent base ROE used in the MISO transmission owners' rates, including SIGECO's formula transmission rates, to 9.15 percent covering the refund period from November 12, 2013 through February 11, 2015 (first refund period). On September 28, 2016, the FERC issued a final order authorizing a 10.32 percent base ROE for the first refund period and prospectively through the date of the order in a second complaint case as detailed below.

A second customer complaint case was filed on February 11, 2015 covering the refund period from February 12, 2015 through May 11, 2016 (second refund period). An initial decision from the FERC administrative law judge on June 30, 2016, authorized a base ROE of 9.70 percent for the second refund period. The FERC was expected to rule on the proposed order in the second complaint case in 2017, which would authorize a base ROE for this period and prospectively from the date of the order. The timing of such action is uncertain.

Separately, on January 6, 2015, the FERC approved a MISO transmission owner joint request for an adder to the approved ROE. Under FERC regulations, transmission owners that are part of a Regional Transmission Organization (RTO) such as the MISO are authorized to earn an incentive of 50 basis points above the FERC approved ROE. The adder is applied retroactively from January 6, 2015 through May 11, 2016 and prospectively from the September 28, 2016 order in the first complaint case.

The Company has reflected these results in its financial statements. As of December 31, 2017, the Company had invested approximately \$157.7 million in qualifying projects. The net plant balance for these projects totaled \$133.5 million at December 31, 2017.

On April 14, 2017, the U.S. Court of Appeals for the District of Columbia circuit vacated the FERC Opinion in a prior case that established a new methodology for calculating ROE. This methodology was utilized in the final order in the Company's first complaint case, and the initial decision in the Company's second complaint case. The Appeals Court stated that FERC did not prove the existing ROE was not just and reasonable, failed to provide any reasoned basis for their selected ROE, and remanded to the FERC for further justification of its ROE calculation. The Company will continue to monitor this proceeding and evaluate any potential impacts on the Company's complaint cases but would not expect them to be material.

Electric Generation Transition Plan

As required by Indiana regulation, the Company filed its 2016 Integrated Resource Plan (IRP) with the IURC on December 16, 2016. The State requires each electric utility to perform and submit an IRP that uses economic modeling to consider the costs and risks associated with available resource options to provide reliable electric service for the next twenty-year period. During 2016, the Company held three public stakeholder meetings to gather input and feedback as well as communicate results of the IRP process as it progressed. In developing its IRP, the Company considered both the cost to continue operating its existing generation units in a manner that complies with current and anticipated future environmental requirements, as well as various resource alternatives, such as the use of energy efficiency programs and renewable resources as part of its overall generation portfolio. After submission, parties to the IRP provided comments on the plan. While the IURC does not approve or reject the IRP, the process involves the issuance of a staff report that provides comments on the IRP. The final report was issued on November 2, 2017. The Company has taken the comments provided in the report into consideration in its generation resource plans.

The Company's IRP considered a broad range of potential resources and variables and is focused on ensuring it offers a reliable, reasonably priced generation portfolio as well as a balanced energy mix. Consistent with the recommendations presented in the Company's Integrated Resource Plan and as a direct result of significant environmental investments required to comply with current regulations, the Company plans to retire a significant portion of its generating fleet by the end of 2023. On February 20, 2018, the Company filed a petition seeking authorization from the Commission to construct a new 800-900 MW

natural gas combined cycle generating facility to replace this capacity at an approximate cost of \$900 million, which includes the cost of a new natural gas pipeline to serve the plant. The Company is requesting a CPCN authorizing construction timelines and costs of new generation resources, as well as necessary unit retrofits, to implement the generation transition process. In that filing, the Company seeks approval of its generation plan, including the authority to defer the cost of new generation, including the ability to accrue AFUDC and defer depreciation until the facility is placed in base rates.

As a part of this same proceeding, the Company seeks recovery under Senate Bill 251 of costs to be incurred for environmental investments to be made at its F.B. Culley generating plant to comply with Effluent Limitation Guidelines and Coal Combustion Residuals rules. The F.B. Culley investments, estimated to be approximately \$90 million, will begin in 2019 and will allow the F.B. Culley Unit 3 generating facility to comply with environmental requirements and continue to provide generating capacity to the Company's electric customers. Under Senate Bill 251, the Company is seeking recovery of 80 percent of the approved costs, including a return, using a tracking mechanism, with the remaining 20 percent of the costs deferred for recovery in the Company's next base rate proceeding. The Company expects an order from the Commission in this proceeding by the first half of 2019.

On February 20, 2018, the Company announced it is finalizing details to install an additional 50 MW of universal solar energy, consistent with its IRP. The Company will seek authority from the IURC pursuant to Senate Bill 29 to recover the costs associated with the project.

In addition, the Company intends to continue to offer energy efficiency programs annually. Similarly, as discussed in more detail below, the extension of preliminary compliance deadlines related to ELG implementation are not expected to have a significant impact on the Company's long term preferred generation plan.

On September 21, 2017, the Company and Alcoa agreed to continue the joint ownership and operation of Warrick Unit 4 through 2023. This aligns with the Company's long-term electric generation strategy, and the expected exit at the end of 2023 is consistent with the IRP which reflects having completed all planned unit retirements and bringing new resources online by that date.

18. Environmental and Sustainability Matters

The Company initiated a corporate sustainability program in 2012 with the publication of the initial corporate sustainability report. Since that time, the Company continues to develop strategies that focus on environmental, social and governance (ESG) factors that contribute to the long-term growth of a sustainable business model. The sustainability policies and efforts, and in particular its policies and procedures designed to ensure compliance with applicable laws and regulations, are directly overseen by the Company's Corporate Responsibility and Sustainability Committee, as well as vetted with the Company's Board of Directors. Further discussion of key goals, strategies, and governance practices can be found in the Company's current sustainability report, at www.vectren.com/sustainability, which received core level certification from the Global Reporting Initiative.

In furtherance of the Company's commitment to a sustainable business model, and as detailed further below, the Company is transitioning its electric generation portfolio from nearly total reliance on baseload coal to a fully diversified and balanced portfolio of fuels that will provide long term electric supply needs in a safe and reliable manner while dramatically lowering emissions of carbon and the carbon intensity of its electric generating fleet. If authorized by the Commission, by 2024 the Company plans to construct a new natural gas combined cycle plant to replace four coal-fired units totaling over 700 MWs which, when combined with its planned 54 MWs of new renewable generation, will achieve a 60 percent reduction in carbon emissions from 2005 levels and reduce carbon intensity to 980 lbs CO₂ / MMBTU and position the Company to comply with future carbon emission reduction requirements. In addition to diversification of its fuel portfolio, the Company's also seeking authorization to significantly upgrade wastewater treatment for its remaining coal-fired unit and exploring opportunities to continue to recycle ash from its coal ash ponds. This generation diversification strategy aligns with the Company's ongoing investments in new electric infrastructure through the approved \$450 million grid modernization program, and is set forth in more detail in the Company's upcoming 2018 corporate sustainability report.

Further, as part of its commitment to a culture of compliance excellence and continuous improvement, the Company continues to enhance its Safety Management System (SMS) which was implemented several years ago. The risk analysis and process review provides valuable input into the assessment process used to drive the ongoing infrastructure improvement plans being executed by the Company's gas and electric utilities.

The Company is subject to extensive environmental regulation pursuant to a variety of federal, state, and municipal laws and regulations. These environmental regulations impose, among other things, restrictions, liabilities, and obligations in connection with the storage, transportation, treatment, and disposal of hazardous substances and limit airborne emissions from electric generating facilities including particulate matter, sulfur dioxide (SO₂), nitrogen oxide (NO_x), and mercury, among others. Environmental legislation and regulation also requires that facilities, sites, and other properties associated with the Company's operations be operated, maintained, abandoned, and reclaimed to the satisfaction of applicable regulatory authorities. The Company's current costs to comply with these laws and regulations are significant to its results of operations and financial condition. Similar to the costs associated with federal mandates in the Pipeline Safety Law, Senate Bill 251 is also applicable to federal environmental mandates impacting SIGECO's electric operations.

Coal Ash Waste Disposal, Ash Ponds and Water

Coal Combustion Residuals Rule

In April 2015, the EPA finalized its Coal Combustion Residuals (CCR) rule which regulates ash as non-hazardous material under Subtitle D of the Resource Conservation and Recovery Act (RCRA). The final rule allows beneficial reuse of ash and the majority of the ash generated by the Company's generating plants will continue to be reused. As it relates to the CCR Rule, the Water Infrastructure Improvements for the Nation (WIIN) Act, was passed in December 2016 by Congress that would provide for enforcement of the federal program by states under approved state programs rather than citizen suits. Additionally, aspects of the CCR rule are currently being challenged by multiple parties in judicial review proceedings. In August, the EPA issued guidance to states to clarify their ability to implement the Federal CCR rule through state permit programs as allowed in the WIIN Act legislation. Alternative compliance mechanisms for groundwater, corrective action and other areas of the rule could be granted under the regulatory oversight of a state enforced program. On September 14, 2017, the EPA announced its intent to reconsider portions of the Federal CCR rule in line with the guidance issued to states. While the state program development and EPA reconsideration move forward, the existing CCR compliance obligations remain in effect.

Under the existing CCR rule, the Company is required to complete a series of integrity assessments, including seismic modeling given the Company's facilities are located within two seismic zones, and groundwater monitoring studies to determine the remaining service life of the ponds and whether a pond must be retrofitted with liners or closed in place, with bottom ash handling conversions completed. In late 2015, using general utility industry data, the Company prepared cost estimates for the retirement of the ash ponds at the end of their useful lives, based on its interpretation of the closure alternatives contemplated in the final rule. The resulting estimates ranged from approximately \$35 million to \$80 million. These estimates contemplated final capping and monitoring costs of the ponds at both F.B. Culley and A.B. Brown generating stations. These rules are not applicable to the Company's Warrick generating unit, as this unit has historically been part of a larger generating station that predominantly serves an adjacent industrial facility.

Throughout 2016 and 2017, the Company has continued to refine site specific estimates and now estimates the costs to be in the range of \$45 million to \$135 million. Significant factors impacting the resulting cost estimates include the closure time frame and the method of closure. Current estimates contemplate complete removal under the assumption of beneficial reuse of the ash at A.B. Brown, as well as implications of the Company's preferred IRP. Ongoing analysis, the continued refinement of assumptions, or the inability to beneficially reuse the ash, either from a technological or economical perspective, could result in estimated costs in excess of the current range.

As of December 31, 2017, the Company had recorded an approximate \$40 million asset retirement obligation (ARO). The recorded ARO reflects the present value of the approximate \$45 million in estimated costs in the range above. These assumptions and estimations are subject to change in the future and could materially impact the amount of the estimated ARO.

In order to maintain current operations of the ponds, the Company spent approximately \$17 million on the reinforcement of the ash pond dams and other operational changes in 2016 to meet the more stringent 2,500 year seismic event structural and safety standard in the CCR rule.

Effluent Limitation Guidelines (ELGs)

Under the Clean Water Act, the EPA sets technology-based guidelines for water discharges from new and existing electric generation facilities. In September, 2015, the EPA finalized revisions to the existing steam electric ELGs setting stringent technology-based water discharge limits for the electric power industry. The EPA focused this rulemaking on wastewater generated primarily by pollution control equipment necessitated by the comprehensive air regulations, specifically setting strict water discharge limits for arsenic, mercury and selenium for scrubber waste waters. The ELGs will be implemented when existing water discharge permits for the plants are renewed, with compliance activities expected to commence where operations continue, within the 2018-2023 time frame. The ELGs work in tandem with the aforementioned CCR requirements, effectively prohibiting the use of less costly lined sediment basin options for disposal of coal combustion residuals, and virtually mandate conversions to dry bottom ash handling.

At the time of ELG finalization, the wastewater discharge permit for the A.B. Brown power plant had an expiration date of October 2016 and, for the F.B. Culley plant, a date of December 2016, and final renewals were issued by the Indiana Department of Environmental Management (IDEM) in February 2017 and March 2017, respectively. As part of the permit renewals, the Company requested alternate compliance dates for ELGs, which were approved by IDEM. For plants identified in the Company's preferred IRP to be retired prior to December 31, 2023, the Company has requested those plants would not require new treatment technology, which was approved by IDEM provided the Company notifies IDEM within one year of issuance of the renewal of its intent to retire the unit. For the F.B. Culley 3 plant, the Company requested a 2020 compliance date for dry bottom ash and 2023 compliance date for flue gas desulfurization wastewater, which was approved by IDEM and finalized in the permit renewal. Discussion of these environmental investments at the F.B. Culley 3 plant are included in the generation transition plan in Footnote 17 in the Company's Consolidated Financial Statements included in Item 8.

On April 13, 2017, as part of the Administration's regulatory reform initiative, which is focused on the number and nature of regulations, the EPA granted petitions to reconsider the ELG rule, and indicated it would stay the current implementation deadlines in the rule during the pendency of the reconsideration. The EPA has also sought a stay of the current judicial review litigation in federal district court. The court has yet to grant the indefinite stay sought by EPA, and instead placed the parties on a periodic status update schedule. On September 13, 2017, EPA finalized a rule postponing certain interim compliance dates by two years, but did not postpone the final compliance deadline of December 31, 2023. As the Company does not currently have short-term ELG implementation deadlines in its recently renewed wastewater discharge permits, the Company does not anticipate immediate impacts from the EPA's two-year extension of preliminary implementation deadlines due to the longer compliance time frames granted by IDEM, and will continue to work with IDEM to evaluate further implementation plans. Moreover, the Company believes the two year extension of the ELG preliminary implementation deadlines and reconsideration process does not impact its preferred generation plan as modeled in the IRP because the final compliance deadline of December 31, 2023 is still in place and enhanced wastewater treatment for scrubber discharge water will still be required by a reconsidered ELG rule even if the EPA revises stringency levels.

Cooling Water Intake Structures

Section 316(b) of the Clean Water Act requires generating facilities use the "best technology available" (BTA) to minimize adverse environmental impacts on a body of water. More specifically, Section 316(b) is concerned with impingement and entrainment of aquatic species in once-through cooling water intake structures used at electric generating facilities. A final rule was issued by the EPA on May 19, 2014. The final rule does not mandate cooling water tower retrofits but requires that IDEM conduct a case-by-case assessment of BTA for each facility. The final rule lists seven presumptive technologies which would qualify as BTA. These technologies range from intake screen modifications to cooling water tower retrofits. Ecological and technology assessment studies must be completed prior to determining BTA for the Company's facilities. The Company is currently undertaking the required ecological studies and anticipates timely compliance in 2021-2022. To comply, the Company believes capital investments will likely be in the range of \$4 million to \$8 million.

Air Quality

Ozone NAAQS

On November 26, 2014, the EPA proposed to tighten the current National Ambient Air Quality Standard (NAAQS) for ozone from the current standard of 75 parts per billion (ppb) to a level within the range of 65 to 70 ppb. On October 1, 2015, the EPA finalized a new NAAQS for ozone at the high end of the range, or 70 ppb. On September 16, 2016, Indiana submitted its initial determination to the EPA recommending counties in southwest Indiana, specifically Vanderburgh, Posey and Warrick, be declared in attainment of the new more stringent ozone standard based upon air monitoring data from 2014-2016. In November 2017, EPA finalized its designations of Vanderburgh, Posey, and Warrick counties as being in attainment with the current 70 ppb standard.

One Hour SO₂ NAAQS

On February 16, 2016, the EPA notified states of the commencement of a 120 day consultation period between IDEM and the EPA with respect to the EPA's recommendations for new non-attainment designations for the 2010 One Hour SO₂ NAAQS. Identified on the list was Posey County, Indiana, where the Company's A.B. Brown Generating Station is located. While the Company is in compliance with all applicable SO₂ limits in its permits, the Company reached an agreement with IDEM on voluntary measures the Company was able to implement without significant incremental costs to ensure Posey County remains in attainment with the 2010 One Hour SO₂ NAAQS. The Company's coal-fired generating fleet is 100 percent scrubbed for SO₂ and 90 percent controlled for NO_x.

Climate Change and Carbon Strategy

On August 3, 2015, the EPA released its final Clean Power Plan rule (CPP) which required a 32 percent reduction in carbon emissions from 2005 levels. This would result in a final emission rate goal for Indiana of 1,242 lb CO₂/MWh to be achieved by 2030 and implemented through a state implementation plan. The final rule was published in the Federal Register on October 23, 2015, and that action was immediately followed by litigation initiated by Indiana and 23 other states as a coalition challenging the rule. In January 2016, the reviewing court denied the states' and other parties requests to stay the implementation of the CPP pending completion of judicial review. On January 26, 2016, 29 states and state agencies, including the 24 state coalition referenced above, filed a request for immediate stay of implementation of the rule with the U.S. Supreme Court. On February 9, 2016, the U.S. Supreme Court granted the stay request to delay the implementation of the regulation while being challenged in court. Oral argument was held in September 2016. The stay will remain in place while the lower court concludes its review. In March 2017, as part of the ongoing regulatory reform efforts of the Administration, the EPA filed a motion with the U.S. Court of Appeals for the District of Columbia circuit to suspend litigation pending the EPA's reconsideration of the CPP rule, which was granted on April 28, 2017. Moreover, as indicated above, in October, 2017, EPA published its proposal to repeal the CPP. Comments to the repeal proposal are due in April 2018. EPA's repeal proposal was quickly followed by an advanced notice of proposed rulemaking intended to solicit public comments on issues related to formulating a CPP replacement rule, which are similarly due in April 2018. Repeal without replacement of the CPP could create potential litigation risk arising from the absence of direct federal regulation in this area that courts have previously determined preempt common law nuisance claims.

Impact of Legislative Actions & Other Initiatives is Unknown

At this time, compliance costs and other effects associated with reductions in GHG emissions or obtaining renewable energy sources remain uncertain. However, Vectren's generation transition plan, as set forth in its electric generation and compliance filing, will achieve 60 percent reductions in 2005 GHG emission levels by 2025, positioning the Company to comply with future regulatory or legislative actions with respect to mandatory GHG reductions.

In addition to the federal programs, the United States and 194 other countries agreed by consensus to limit GHG emissions beginning after 2020 in the 2015 United Nations Framework Convention on Climate Change Paris Agreement. The United States has proposed a 26-28 percent GHG emission reduction from 2005 levels by 2025. The Administration has indicated it intends to withdraw the United States' participation, however the Agreement provides that parties cannot petition to withdraw until November 2019. Since 2005 through 2017, the Company has achieved reduced emissions of CO₂ by an average of 35 percent (on a tonnage basis), and will increase that total to 60 percent at the conclusion of its generation transition plan, well above the 32 percent reduction that would be required under the CPP. While the litigation and the EPA's reconsideration of the

CPP rules remains uncertain, the Company will continue to monitor regulatory activity regarding GHG emission standards that may affect its electric generating units.

Manufactured Gas Plants

In the past, the Company operated facilities to manufacture natural gas. Given the availability of natural gas transported by pipelines, these facilities have not been operated for many years. Under current environmental laws and regulations, those that owned or operated these facilities may now be required to take remedial action if certain contaminants are found above the regulatory thresholds.

In the Indiana Gas service territory, the existence, location, and certain general characteristics of 26 gas manufacturing and storage sites have been identified for which the Company may have some remedial responsibility. A remedial investigation/ feasibility study (RI/FS) was completed at one of the sites under an agreed upon order between Indiana Gas and the IDEM, and a Record of Decision was issued by the IDEM in January 2000. The remaining sites have been submitted to the IDEM's Voluntary Remediation Program (VRP). The Company has identified its involvement in five manufactured gas plant sites in SIGECO's service territory, all of which are currently enrolled in the IDEM's VRP. The Company is currently conducting some level of remedial activities, including groundwater monitoring at certain sites.

The Company has accrued the estimated costs for further investigation, remediation, groundwater monitoring, and related costs for the sites. While the total costs that may be incurred in connection with addressing these sites cannot be determined at this time, the Company has recorded cumulative costs that it has incurred or reasonably expects to incur totaling approximately \$44.2 million (\$23.9 million at Indiana Gas and \$20.3 million at SIGECO). The estimated accrued costs are limited to the Company's share of the remediation efforts and are therefore net of exposures of other potentially responsible parties (PRP).

With respect to insurance coverage, Indiana Gas has received approximately \$20.8 million from all known insurance carriers under insurance policies in effect when these plants were in operation. Likewise, SIGECO has settlement agreements with all known insurance carriers and has received approximately \$15.7 million of the expected \$15.8 million in insurance recoveries.

The costs the Company expects to incur are estimated by management using assumptions based on actual costs incurred, the timing of expected future payments, and inflation factors, among others. While the Company's utilities have recorded all costs which they presently expect to incur in connection with activities at these sites, it is possible that future events may require remedial activities which are not presently foreseen and those costs may not be subject to PRP or insurance recovery. As of December 31, 2017 and December 31, 2016, approximately \$2.5 million and \$2.9 million, respectively, of accrued, but not yet spent, costs are included in Other Liabilities related to the Indiana Gas and SIGECO sites.

19. Fair Value Measurements

The carrying values and estimated fair values using primarily Level 2 assumptions of the Company's other financial instruments follow:

<i>(In millions)</i>	At December 31,			
	2017		2016	
	Carrying Amount	Est. Fair Value	Carrying Amount	Est. Fair Value
Long-term debt	\$ 1,838.7	\$ 1,981.2	\$ 1,714.0	\$ 1,835.8
Short-term borrowings & notes payable	249.5	249.5	194.4	194.4
Cash & cash equivalents	16.6	16.6	68.6	68.6
Natural gas purchase instrument assets ⁽¹⁾	0.5	0.5	—	—
Natural gas purchase instrument liabilities ⁽²⁾	4.5	4.5	—	—
Interest rate swap liabilities ⁽³⁾	1.4	1.4	—	—
Restricted cash	—	—	0.9	0.9

⁽¹⁾ Presented in "Other utility & corporate investments" on the Consolidated Balance Sheets.

⁽²⁾ Presented in "Deferred credits & other liabilities" on the Consolidated Balance Sheets.

⁽³⁾ Presented in "Deferred credits & other liabilities" on the Consolidated Balance Sheets.

Certain methods and assumptions must be used to estimate the fair value of financial instruments. The fair value of the Company's long-term debt was estimated based on the quoted market prices for the same or similar issues or on the current rates offered to the Company for instruments with similar characteristics. Because of the maturity dates and variable interest rates of short-term borrowings and cash & cash equivalents, those carrying amounts approximate fair value. Because of the inherent difficulty of estimating interest rate and other market risks, the methods used to estimate fair value may not always be indicative of actual realizable value, and different methodologies could produce different fair value estimates at the reporting date.

Under current regulatory treatment, call premiums on reacquisition of utility-related long-term debt are generally recovered in customer rates over the life of the refunding issue. Accordingly, any reacquisition of this debt would not be expected to have a material effect on the Company's results of operations.

The Company's Indiana gas utilities entered into four five-year forward purchase arrangements to hedge the variable price of natural gas for a portion of the Company's gas supply. These arrangements, approved by the IURC, replaced normal purchase or normal sale long-term physical fixed-price purchases. The Company values these contracts using a pricing model that incorporates market-based information, and are classified within Level 2 of the fair value hierarchy. Gains and losses on these derivative contracts are deferred as regulatory liabilities or assets and are refunded to or collected from customers through the Company's respective gas cost recovery mechanisms.

The Company, through SIGECO, executed forward starting interest rate swaps during 2017 providing that on January 1, 2020, the Company will begin hedging the variability in interest rates on the 2013 Series A, B, and E Notes, as described in Note 10, through final maturity dates. The Company values these contracts using a pricing model that incorporates market-based information, and are classified within Level 2 of the fair value hierarchy. Regulatory orders require SIGECO to include the impact of its interest rate risk management activities, such as gains and losses arising from these swaps, in its cost of capital utilized in rate cases and other periodic filings.

Because of the nature of certain other investments and lack of a readily available market, it is not practical to estimate the fair value of these financial instruments at specific dates without considerable effort and cost. At December 31, 2017 and 2016, the fair value for these financial instruments was not estimated. The carrying value of these investments at December 31, 2017 and 2016 was approximately \$9.6 million and \$16.1 million, respectively.

20. Segment Reporting

The Company segregates its operations into three groups: 1) Utility Group, 2) Nonutility Group, and 3) Corporate and Other.

The Utility Group is comprised of Vectren Utility Holdings, Inc.'s operations, which consist of the Company's regulated operations and other operations that provide information technology and other support services to those regulated operations. The Company segregates its regulated operations between a Gas Utility Services operating segment and an Electric Utility Services operating segment. The Gas Utility Services segment provides natural gas distribution and transportation services to nearly two-thirds of Indiana and to west central Ohio. The Electric Utility Services segment provides electric distribution services primarily to southwestern Indiana, and includes the Company's power generating and wholesale power operations. Regulated operations supply natural gas and/or electricity to over one million customers. In total, the Utility Group is comprised of three operating segments: Gas Utility Services, Electric Utility Services, and Other operations.

During the periods presented, the Nonutility Group had the following operating segments: Infrastructure Services, Energy Services, and Other Businesses. Energy Services, through the wholly owned subsidiary Energy Systems Group, LLC, provides energy performance contracting and sustainable infrastructure, such as renewables, distributed generation, and combined heat and power projects. The Infrastructure Services segment, through wholly owned subsidiaries Miller Pipeline, LLC and Minnesota Limited, LLC, provides underground pipeline construction and repair services for customers that include Vectren Utility Holdings' utilities. Fees incurred by Vectren Utility Holdings and its subsidiaries for these pipeline construction and repair services totaled \$157.1 million in 2017, \$117.8 million in 2016, and \$109.5 million in 2015. The increase in 2017 is due to a large pipeline project that Minnesota Limited was awarded in a competitive process.

Corporate and Other includes unallocated corporate expenses such as advertising and certain charitable contributions, among other activities, that benefit the Company's other operating segments. Total assets in all periods presented reflect the retrospective impacts of the adoption in 2015 of ASU 2015-17, Balance Sheet Classification of Deferred Taxes and the retrospective impacts of the adoption in 2016 of ASU 2015-03, Presentation of Debt Issuance Costs. Net income is the measure of profitability used by management for all operations. Information related to the Company's business segments is summarized as follows:

	Year Ended December 31,		
<i>(In millions)</i>	2017	2016	2015
Revenues			
Utility Group			
Gas Utility Services	\$ 812.7	\$ 771.7	\$ 792.6
Electric Utility Services	569.6	605.8	601.6
Other Operations	45.6	42.2	40.7
Eliminations	(45.3)	(41.9)	(40.4)
Total Utility Group	1,382.6	1,377.8	1,394.5
Nonutility Group			
Infrastructure Services	996.1	813.3	843.3
Energy Services	281.8	260.0	199.9
Total Nonutility Group	1,277.9	1,073.3	1,043.2
Eliminations, net of Corporate & Other Revenues	(3.2)	(2.8)	(3.0)
Consolidated Revenues	\$ 2,657.3	\$ 2,448.3	\$ 2,434.7
Profitability Measures - Net Income			
Utility Group Net Income			
Gas Utility Services	\$ 115.5	\$ 76.1	\$ 64.4
Electric Utility Services	75.2	84.7	82.6
Other Operations	(14.9)	12.8	13.9
Total Utility Group Net Income	175.8	173.6	160.9
Nonutility Group Net Income (Loss)			
Infrastructure Services	32.3	25.0	29.7
Energy Services	10.7	12.5	7.3
Other Businesses	(1.9)	(0.6)	(0.7)
Total Nonutility Group Net Income	41.1	36.9	36.3
Corporate & Other Net Income	(0.9)	1.1	0.1
Consolidated Net Income	\$ 216.0	\$ 211.6	\$ 197.3

	Year Ended December 31,		
<i>(In millions)</i>	2017	2016	2015
Amounts Included in Profitability Measures			
Depreciation & Amortization			
Utility Group			
Gas Utility Services	\$ 118.9	\$ 108.1	\$ 98.6
Electric Utility Services	89.5	87.1	85.6
Other Operations	26.1	23.9	24.6
Total Utility Group	234.5	219.1	208.8
Nonutility Group			
Infrastructure Services	39.7	38.2	44.5
Energy Services	1.9	2.5	2.7
Other Businesses	0.1	0.2	0.3
Total Nonutility Group	41.7	40.9	47.5
Consolidated Depreciation & Amortization	\$ 276.2	\$ 260.0	\$ 256.3
Interest Expense			
Utility Group			
Gas Utility Services	\$ 43.0	\$ 40.1	\$ 35.8
Electric Utility Services	25.8	27.0	27.8
Other Operations	3.8	2.6	2.7
Total Utility Group	72.6	69.7	66.3
Nonutility Group			
Infrastructure Services	13.8	12.8	16.0
Energy Services	0.6	1.9	1.2
Other Businesses	1.0	0.9	1.2
Total Nonutility Group	15.4	15.6	18.4
Corporate & Other	(0.3)	0.2	(0.2)
Consolidated Interest Expense	\$ 87.7	\$ 85.5	\$ 84.5
Income Taxes			
Utility Group			
Gas Utility Services	\$ 25.4	\$ 47.1	\$ 40.8
Electric Utility Services	41.4	50.1	49.3
Other Operations	(6.1)	2.3	(2.0)
Total Utility Group	60.7	99.5	88.1
Nonutility Group			
Infrastructure Services	(12.9)	17.9	19.6
Energy Services	(1.5)	(3.5)	(7.7)
Other Businesses	0.9	0.3	1.5
Total Nonutility Group	(13.5)	14.7	13.4
Corporate & Other	(0.8)	(1.3)	(1.8)
Consolidated Income Taxes	\$ 46.4	\$ 112.9	\$ 99.7

	Year Ended December 31,		
<i>(In millions)</i>	2017	2016	2015
Capital Expenditures			
Utility Group			
Gas Utility Services	\$ 391.4	\$ 358.5	\$ 291.2
Electric Utility Services	105.3	106.4	87.6
Other Operations	57.9	39.0	25.7
Non-cash costs & changes in accruals	(3.7)	(7.1)	(6.2)
Total Utility Group	550.9	496.8	398.3
Nonutility Group			
Infrastructure Services	48.4	43.2	78.1
Energy Services	3.2	1.8	0.5
Other Businesses, net of eliminations	0.1	0.2	—
Total Nonutility Group	51.7	45.2	78.6
Consolidated Capital Expenditures	\$ 602.6	\$ 542.0	\$ 476.9

	At December 31,		
<i>(In millions)</i>	2017	2016	2015
Assets			
Utility Group			
Gas Utility Services	\$ 3,457.8	\$ 3,091.0	\$ 2,706.9
Electric Utility Services	1,820.3	1,788.4	1,778.3
Other Operations, net of eliminations	220.1	161.5	107.5
Total Utility Group	5,498.2	5,040.9	4,592.7
Nonutility Group			
Infrastructure Services	552.6	513.9	554.5
Energy Services	155.8	182.7	160.3
Other Businesses, net of eliminations and reclassifications	59.1	53.3	64.0
Total Nonutility Group	767.5	749.9	778.8
Corporate & Other	449.1	628.4	742.4
Eliminations	(475.5)	(618.5)	(713.9)
Consolidated Assets	\$ 6,239.3	\$ 5,800.7	\$ 5,400.0

21. Additional Balance Sheet & Operational Information

Inventories consist of the following:

	At December 31,	
<i>(In millions)</i>	2017	2016
Gas in storage – at LIFO cost	\$ 36.0	\$ 37.0
Coal & oil for electric generation - at average cost	43.1	42.6
Materials & supplies	46.2	48.9
Other	1.3	1.4
Total inventories	\$ 126.6	\$ 129.9

Based on the average cost of gas purchased during December, the cost of replacing inventories carried at LIFO cost is less than the carrying value at December 31, 2017 by \$2.0 million. Based on the average cost of gas purchased during December, the cost of replacing inventories carried at LIFO cost exceeded carrying value at December 31, 2016 by \$1.0 million.

Prepayments & other current assets consist of the following:

<i>(In millions)</i>	At December 31,	
	2017	2016
Prepaid gas delivery service	\$ 26.6	\$ 26.4
Prepaid taxes	3.8	8.2
Other prepayments & current assets	16.6	18.1
Total prepayments & other current assets	\$ 47.0	\$ 52.7

Investments in unconsolidated affiliates consist of the following:

<i>(In millions)</i>	At December 31,	
	2017	2016
ProLiance Holdings, LLC	\$ 18.9	\$ 19.2
Other nonutility partnerships & corporations	0.6	1.0
Other utility investments	0.2	0.2
Total investments in unconsolidated affiliates	\$ 19.7	\$ 20.4

Other utility & corporate investments consist of the following:

<i>(In millions)</i>	At December 31,	
	2017	2016
Cash surrender value of life insurance policies	\$ 42.2	\$ 33.1
Restricted cash & other investments	1.5	1.0
Total other utility & corporate investments	\$ 43.7	\$ 34.1

Goodwill by operating segment follows:

<i>(In millions)</i>	At December 31,	
	2017	2016
Utility Group		
Gas Utility Services	\$ 205.0	\$ 205.0
Nonutility Group		
Infrastructure Services	58.8	58.8
Energy Services	29.7	29.7
Consolidated goodwill	\$ 293.5	\$ 293.5

Accrued liabilities consist of the following:

<i>(In millions)</i>	At December 31,	
	2017	2016
Refunds to customers & customer deposits	\$ 51.4	\$ 49.4
Accrued taxes	55.7	46.5
Accrued interest	19.6	18.2
Deferred compensation & post retirement benefits	6.4	6.6
Accrued salaries & other	89.2	87.0
Total accrued liabilities	\$ 222.3	\$ 207.7

Asset retirement obligations included in *Deferred credits and other liabilities* in the Consolidated Balance Sheets roll forward as follows:

<i>(In millions)</i>	2017	2016
Asset retirement obligation, January 1	\$ 106.7	\$ 82.0
Accretion	4.3	3.8
Changes in estimates, net of cash payments	(4.0)	20.9
Asset retirement obligation, December 31	107.0	106.7

Equity in earnings (losses) of unconsolidated affiliates consists of the following:

<i>(In millions)</i>	Year Ended December 31,		
	2017	2016	2015
ProLiance Holdings, LLC	\$ (0.3)	\$ (0.5)	\$ (0.8)
Other	(0.8)	0.3	0.2
Total equity in earnings (losses) of unconsolidated affiliates	\$ (1.1)	\$ (0.2)	\$ (0.6)

Other income (expense) – net consists of the following:

<i>(In millions)</i>	Year Ended December 31,		
	2017	2016	2015
AFUDC – borrowed funds	\$ 24.8	\$ 20.3	\$ 16.3
AFUDC – equity funds	2.6	2.2	2.6
Nonutility plant capitalized interest	1.2	1.0	0.4
Interest income, net	1.0	1.3	1.3
Other nonutility investment impairment charges	—	—	(0.1)
All other income	3.2	3.9	(0.2)
Total other income – net	\$ 32.8	\$ 28.7	\$ 20.3

Supplemental Cash Flow Information:

<i>(In millions)</i>	Year Ended December 31,		
	2017	2016	2015
Cash paid (received) for:			
Interest	\$ 86.4	\$ 86.6	\$ 84.2
Income taxes	9.6	(3.6)	4.8

As of December 31, 2017 and 2016, the Company has accruals related to utility and nonutility plant purchases totaling approximately \$28.6 million and \$30.0 million, respectively.

22. Impact of Recently Issued Accounting Guidance

Revenue Recognition

In May 2014, the FASB issued new accounting guidance to clarify the principles for recognizing revenue and to develop a common revenue standard for GAAP. The amendments in this guidance state an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. This new guidance requires improved disclosures to help users of financial statements better understand the nature, amount, timing, and uncertainty of revenue that is recognized. The guidance can be applied retrospectively to each prior reporting period presented (full retrospective method) or retrospectively with a cumulative effect adjustment to retained earnings for initial application of the guidance at the date of initial adoption (modified retrospective method). The Company plans to adopt the guidance under the modified retrospective method. The cumulative effect adjustment to retained earnings will be immaterial.

In July 2015, the FASB approved a one year deferral that became effective through an ASU in August and changed the effective date to annual reporting periods beginning after December 15, 2017, including interim periods, with early adoption permitted, but not before the original effective date of December 15, 2016.

The Company has finalized the assessment process of all revenue streams for the standard's impact on the Consolidated Balance Sheets, Consolidated Statements of Operations, and disclosures and has identified all material revenue streams. The Company has determined that all material revenue streams fall under the scope of the standard. The standard will result in no significant changes to the Company's pattern of revenue recognition. The Company has adopted the guidance effective January 1, 2018.

Leases

In February 2016, the FASB issued new accounting guidance for the recognition, measurement, presentation and disclosure of leasing arrangements. This ASU requires the recognition of lease assets and liabilities for those leases currently classified as operating leases while also refining the definition of a lease. In addition, lessees will be required to disclose key information about the amount, timing, and uncertainty of cash flows arising from leasing arrangements. This ASU is effective for the interim and annual reporting periods beginning January 1, 2019, although it can be early adopted, with a modified retrospective approach for leases that commenced prior to the date of adoption. The Company is currently evaluating the standard to determine the impact it will have on the financial statements and will adopt the guidance effective January 1, 2019.

Stock Compensation

In March 2016, the FASB issued new accounting guidance intended to simplify several aspects of accounting for share-based payment transactions, including the income tax consequences. This ASU was effective for annual periods beginning after December 15, 2016, and interim periods therein. Most of the Company's share-based awards are settled via cash payments and were therefore not impacted by this standard. The Company's adoption of this standard did not have a material impact on the financial statements.

Presentation of Net Periodic Pension and Postretirement Benefit Costs

In March 2017, the FASB issued new accounting guidance to improve the presentation of net periodic pension and postretirement benefit costs. This ASU is effective for annual periods beginning after December 15, 2017, and relevant interim periods. This ASU requires the Company to report the service cost component in the same line items as other compensation costs arising from services rendered by the pertinent employees during the period. The other components of net benefit cost are required to be presented in the income statement separately from the service cost component and outside of income from operations. Capitalization of net benefit cost is limited to only the service cost component of benefit costs, when applicable.

The ASU requires retrospective presentation of the service and non-service costs components in the income statement and prospective application regarding the capitalization of only the service cost component of net benefit costs. The Company has finalized its assessment of the standard and the adoption will have an immaterial impact on the financial statements. The Company has adopted the guidance effective January 1, 2018.

Other Recently Issued Standards

Management believes other recently issued standards, which are not yet effective, will not have a material impact on the Company's financial condition, results of operations, or cash flows upon adoption.

23. Quarterly Financial Data (Unaudited)

Information in any one quarterly period is not indicative of annual results due to the seasonal variations common to the Company's utility operations. Summarized quarterly financial data for 2017 and 2016 follows:

<i>(In millions, except per share amounts)</i>	Q1	Q2	Q3	Q4
2017				
Operating revenues	\$ 624.5	\$ 630.7	\$ 691.2	\$ 711.0
Operating income	101.4	72.8	107.5	36.8
Net income	55.4	37.6	61.9	61.2
Earnings per share:				
Basic and Diluted	\$ 0.67	\$ 0.45	\$ 0.75	\$ 0.74
2016				
Operating revenues	\$ 584.8	\$ 533.7	\$ 631.0	\$ 699.0
Operating income	92.2	63.9	105.5	120.7
Net income	48.3	32.3	61.4	69.6
Earnings per share:				
Basic and Diluted	\$ 0.58	\$ 0.39	\$ 0.74	\$ 0.84

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Changes in Internal Controls over Financial Reporting

During the quarter ended December 31, 2017, there have been no changes to the Company's internal controls over financial reporting that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

As of December 31, 2017, the Company conducted an evaluation under the supervision and with the participation of the Chief Executive Officer and Chief Financial Officer of the effectiveness and the design and operation of the Company's disclosure controls and procedures. Based on that evaluation, the Chief Executive Officer and the Chief Financial Officer have concluded that the Company's disclosure controls and procedures are effective as of December 31, 2017, to ensure that information required to be disclosed in reports filed or submitted under the Exchange Act is:

- 1) recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and
- 2) accumulated and communicated to management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Management's Report on Internal Control over Financial Reporting

Vectren Corporation's management is responsible for establishing and maintaining adequate internal control over financial reporting. Under the supervision and with the participation of management, including the Chief Executive Officer and Chief Financial Officer, the Company conducted an evaluation of the effectiveness of its internal control over financial reporting based on the framework in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on that evaluation under the framework in *Internal Control - Integrated Framework (2013)*, the Company concluded that its internal control over financial reporting was effective as of December 31, 2017.

The effectiveness of internal control over financial reporting as of December 31, 2017, has been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report which is included in Item 8 of this annual report.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by Part III, Item 10 of this Form 10-K is incorporated by reference herein, and made part of this Form 10-K, from the Company's Proxy Statement for its 2018 Annual Meeting of Shareholders, which will be filed with the Securities and Exchange Commission pursuant to Regulation 14A, within 120 days after the end of the fiscal year. The Company's executive officers are the same as those named executive officers detailed in the Proxy Statement.

Corporate Code of Conduct

The Company's Corporate Governance Guidelines; the charters for each committee of the Board of Directors; its Corporate Code of Conduct that covers the Company's Board members, officers and employees; and its Board Code of Ethics and Code of Conduct that also applies to the Company's Board members are available in the Corporate Governance section of the Company's website, www.vectren.com. The Corporate Code of Conduct (titled "Corp Code of Conduct") contains specific acknowledgments pertaining to executive officers. A separate code of conduct (titled "Board Code of Ethics & Code of Conduct") contains specific codes of ethics pertaining to the Board of Directors. A copy will be mailed upon request to Investor Relations, One Vectren Square, Evansville, Indiana 47708. The Company will disclose any amendments to the Corporate Code of Conduct/Board Code of Ethics & Code of Conduct or waivers of the Corporate Code of Conduct on behalf of the Company's directors or officers including, but not limited to, the principal executive officer, principal financial and accounting officer, and persons performing similar functions on the Company's website at the Internet address set forth above promptly following the date of such amendment or waiver and such information will also be available by mail upon request to the address listed above.

ITEM 11. EXECUTIVE COMPENSATION

Information required by Part III, Item 11 of this Form 10-K is incorporated by reference herein, and made part of this Form 10-K, from the Company's Proxy Statement for its 2018 Annual Meeting of Shareholders, which will be filed with the Securities and Exchange Commission pursuant to Regulation 14A, within 120 days after the end of the fiscal year.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Except with respect to equity compensation plan information of the Registrant, which is included herein, the information required by Part III, Item 12 of this Form 10-K is incorporated by reference herein, and made part of this Form 10-K, from the Company's Proxy Statement for its 2018 Annual Meeting of Shareholders, which will be filed with the Securities and Exchange Commission pursuant to Regulation 14A, within 120 days after the end of the fiscal year.

Shares Issuable under Share-Based Compensation Plans

As of December 31, 2017, the following shares were authorized to be issued under share-based compensation plans:

Plan category	A	B	C
	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by security holders	—	\$ —	3,257,946 ⁽¹⁾
Equity compensation plans not approved by security holders	—	—	—
Total	—	\$ —	3,257,946

(1) After December 31, 2017, and as of February 23, 2018, the following share-based units were issued under the Plan: 144,200 to named and non-named executive officers of the Company, and 15,820 to members of the Board of Directors. Based upon the performance measure of the 2015 grant, as approved by the Compensation and Benefits Committee of the Board of Directors on February 23, 2018, 90,116 share-based units were issued to named and non-named executive officers, including former retirees whose 2015 grants also remained subject to performance.

The At-Risk Compensation Plan was approved by Vectren Corporation common shareholders after the merger forming Vectren and was most recently amended and reapproved at the 2016 annual meeting of shareholders.

ITEM 13. CERTAIN RELATIONSHIPS, RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

Information required by Part III, Item 13 of this Form 10-K is incorporated by reference herein, and made part of this Form 10-K, from the Company's Proxy Statement for its 2018 Annual Meeting of Shareholders, which will be filed with the Securities and Exchange Commission pursuant to Regulation 14A, within 120 days after the end of the fiscal year.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Information required by Part III, Item 14 of this Form 10-K is incorporated by reference herein, and made part of this Form 10-K, from the Company's Proxy Statement for its 2018 Annual Meeting of Shareholders, which will be filed with the Securities and Exchange Commission pursuant to Regulation 14A, within 120 days after the end of the fiscal year.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

List of Documents Filed as Part of This Report

Consolidated Financial Statements

The consolidated financial statements and related notes, together with the reports of Deloitte & Touche LLP, appear in Part II “Item 8 Financial Statements and Supplementary Data” of this Form 10-K.

Supplemental Schedules

For the years ended December 31, 2017, 2016, and 2015, the Company’s Schedule II -- Valuation and Qualifying Accounts Consolidated Financial Statement Schedules is presented herein. The report of Deloitte & Touche LLP on the schedule may be found in Item 8. All other schedules are omitted as the required information is inapplicable or the information is presented in the Consolidated Financial Statements or related notes in Item 8.

**SCHEDULE II
Vectren Corporation and Subsidiaries
VALUATION AND QUALIFYING ACCOUNTS AND RESERVES**

Column A	Column B	Column C		Column D	Column E
Description	Balance at Beginning of Year	Additions		Deductions from Reserves, Net	Balance at End of Year
		Charged to Expenses	Charged to Other Accounts		
<i>(In millions)</i>					
VALUATION AND QUALIFYING ACCOUNTS:					
Year 2017 – Accumulated provision for					
uncollectible accounts	\$ 6.0	\$ 5.9	\$ —	\$ 6.8	\$ 5.1
Year 2016 – Accumulated provision for					
uncollectible accounts	\$ 5.6	\$ 6.9	\$ —	\$ 6.5	\$ 6.0
Year 2015 – Accumulated provision for					
uncollectible accounts	\$ 6.0	\$ 8.1	\$ —	\$ 8.5	\$ 5.6
Year 2017 – Reserve for impaired					
notes receivable	\$ 0.6	\$ 0.4	\$ —	\$ —	\$ 1.0
Year 2016 – Reserve for impaired					
notes receivable	\$ 0.2	\$ 0.4	\$ —	\$ —	\$ 0.6
Year 2015 – Reserve for impaired					
notes receivable	\$ —	\$ 0.2	\$ —	\$ —	\$ 0.2

List of Exhibits

The Company has incorporated by reference herein certain exhibits as specified below pursuant to Rule 12b-32 under the Exchange Act. Exhibits for the Company attached to this filing filed electronically with the SEC are listed below. Exhibits for the Company are listed in the Index to Exhibits.

Vectren Corporation Form 10-K Attached Exhibits

The following Exhibits were filed electronically with the SEC with this filing.

<u>Exhibit Number</u>	<u>Document</u>
21.1	List of Company's Significant Subsidiaries
23.1	Consent of Independent Registered Public Accounting Firm
31.1	Chief Executive Officer Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Chief Financial Officer Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32	Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema
101.CAL	XBRL Taxonomy Calculation Linkbase
101.DEF	XBRL Taxonomy Extension Definition Linkbase
101.LAB	XBRL Taxonomy Extension Labels Linkbase
101.PRE	XBRL Taxonomy Extension Presentation Linkbase

INDEX TO EXHIBITS

3. Articles of Incorporation and By-Laws

- 3.1 Amended and Restated Articles of Incorporation of Vectren Corporation effective March 31, 2000. (Filed and designated in Current Report on Form 8-K filed April 14, 2000, File No. 1-15467, as Exhibit 4.1.)
- 3.2 [Code of By-Laws of Vectren corporation as most recently amended as of October 1, 2017 \(filed and designated in Form 8-K, dated September 25, 2017, File No. 1-15467, as Exhibit 3.1\)](#)

4. Instruments Defining the Rights of Security Holders, Including Indentures

- 4.1 Mortgage and Deed of Trust dated as of April 1, 1932 between Southern Indiana Gas and Electric Company and Bankers Trust Company, as Trustee, and Supplemental Indentures thereto dated August 31, 1936, October 1, 1937, March 22, 1939, July 1, 1948, June 1, 1949, October 1, 1949, January 1, 1951, April 1, 1954, March 1, 1957, October 1, 1965, September 1, 1966, August 1, 1968, May 1, 1970, August 1, 1971, April 1, 1972, October 1, 1973, April 1, 1975, January 15, 1977, April 1, 1978, June 4, 1981, January 20, 1983, November 1, 1983, March 1, 1984, June 1, 1984, November 1, 1984, July 1, 1985, November 1, 1985, June 1, 1986. (Filed and designated in Registration No. 2-2536 as Exhibits B-1 and B-2; in Post-effective Amendment No. 1 to Registration No. 2-62032 as Exhibit (b)(4)(ii), in Registration No. 2-88923 as Exhibit 4(b)(2), in Form 8-K, File No. 1-3553, dated June 1, 1984 as Exhibit (4), File No. 1-3553, dated March 24, 1986 as Exhibit 4-A, in Form 8-K, File No. 1-3553, dated June 3, 1986 as Exhibit (4).) July 1, 1985 and November 1, 1985 (Filed and designated in Form 10-K, for the fiscal year 1985, File No. 1-3553, as Exhibit 4-A.) November 15, 1986 and January 15, 1987. (Filed and designated in Form 10-K, for the fiscal year 1986, File No. 1-3553, as Exhibit 4-A.) December 15, 1987. (Filed and designated in Form 10-K, for the fiscal year 1987, File No. 1-3553, as Exhibit 4-A.) December 13, 1990. (Filed and designated in Form 10-K, for the fiscal year 1990, File No. 1-3553, as Exhibit 4-A.) April 1, 1993. (Filed and designated in Form 8-K, dated April 13, 1993, File No. 1-3553, as Exhibit 4.) June 1, 1993 (Filed and designated in Form 8-K, dated June 14, 1993, File No. 1-3553, as Exhibit 4.) [May 1, 1993. \(Filed and designated in Form 10-K, for the fiscal year 1993, File No. 1-3553, as Exhibit 4\(a\).\)](#) [July 1, 1999. \(Filed and designated in Form 10-Q, dated August 16, 1999, File No. 1-3553, as Exhibit 4\(a\).\)](#) [March 1, 2000. \(Filed and designated in Form 10-K for the year ended December 31, 2001, File No. 1-15467, as Exhibit 4.1.\)](#) [August 1, 2004. \(Filed and designated in Form 10-K for the year ended December 31, 2004, File No. 1-15467, as Exhibit 4.1.\)](#) [October 1, 2004. \(Filed and designated in Form 10-K for the year ended December 31, 2004, File No. 1-15467, as Exhibit 4.2.\)](#) [April 1, 2005 \(Filed and designated in Form 10-K for the year ended December 31, 2007, File No 1-15467, as Exhibit 4.1\)](#) [March 1, 2006 \(Filed and designated in Form 10-K for the year ended December 31, 2007, File No 1-15467, as Exhibit 4.2\)](#) [December 1, 2007 \(Filed and designated in Form 10-K for the year ended December 31, 2007, File No 1-15467, as Exhibit 4.3\)](#) [August 1, 2009 \(Filed and designated in Form 10-K, for the year ended December 31, 2009, File No. 1-15467, as Exhibit 4.1\)](#) [April 1, 2013 \(filed and designated in Form 8-K, dated April 30, 2013, File No. 1-15467, as Exhibit 4.1\)](#) [September 1, 2014 \(filed and designated in Form 8-K dated September 25, 2014 File No. 1-15467, as Exhibit 4.1\)](#) [September 1, 2015 \(filed and designated in Form 8-K dated September 10, 2015 File No. 1-15467, as Exhibit 4.1\)](#)
- 4.2 Indenture dated February 1, 1991, between Indiana Gas and U.S. Bank Trust National Association (formerly known as First Trust National Association, which was formerly known as Bank of America Illinois, which was formerly known as Continental Bank, National Association. Inc.'s. (Filed and designated in Current Report on Form 8-K filed February 15, 1991, File No. 1-6494.); First Supplemental Indenture thereto dated as of February 15, 1991. (Filed and designated in Current Report on Form 8-K filed February 15, 1991, File No. 1-6494, as Exhibit 4(b).); Second Supplemental Indenture thereto dated as of September 15, 1991, (Filed and designated in Current Report on Form 8-K filed September 25, 1991, File No. 1-6494, as Exhibit 4(b).); Third supplemental Indenture thereto dated as of September 15, 1991 (Filed and designated in Current Report on Form 8-K filed September 25, 1991, File No. 1-6494, as Exhibit 4(c).); Fourth Supplemental Indenture thereto dated as of December 2, 1992, (Filed and designated in Current Report on Form 8-K filed December 8, 1992, File No. 1-6494, as Exhibit 4(b).); [Fifth Supplemental Indenture thereto dated as of December 28, 2000, \(Filed and designated in Current Report on Form 8-K filed December 27, 2000, File No. 1-6494, as Exhibit 4.\)](#)

- 4.3 [Indenture dated October 19, 2001, among Vectren Utility Holdings, Inc., Indiana Gas Company, Inc., Southern Indiana Gas and Electric Company, Vectren Energy Delivery of Ohio, Inc., and U.S. Bank Trust National Association. \(Filed and designated in Form 8-K, dated October 19, 2001, File No. 1-16739, as Exhibit 4.1\); First Supplemental Indenture, dated October 19, 2001, between Vectren Utility Holdings, Inc., Indiana Gas Company, Inc., Southern Indiana Gas and Electric Company, Vectren Energy Delivery of Ohio, Inc., and U.S. Bank Trust National Association. \(Filed and designated in Form 8-K, dated October 19, 2001, File No. 1-16739, as Exhibit 4.2\); Second Supplemental Indenture, among Vectren Utility Holdings, Inc., Indiana Gas Company, Inc., Southern Indiana Gas and Electric Company, Vectren Energy Delivery of Ohio, Inc., and U.S. Bank Trust National Association. \(Filed and designated in Form 8-K, dated November 29, 2001, File No. 1-16739, as Exhibit 4.1\); Third Supplemental Indenture, among Vectren Utility Holdings, Inc., Indiana Gas Company, Inc., Southern Indiana Gas and Electric Company, Vectren Energy Delivery of Ohio, Inc., and U.S. Bank Trust National Association. \(Filed and designated in Form 8-K, dated July 24, 2003, File No. 1-16739, as Exhibit 4.1\); Fourth Supplemental Indenture, among Vectren Utility Holdings, Inc., Indiana Gas Company, Inc., Southern Indiana Gas and Electric Company, Vectren Energy Delivery of Ohio, Inc., and U.S. Bank Trust National Association. \(Filed and designated in Form 8-K, dated November 18, 2005, File No. 1-16739, as Exhibit 4.1\). Form of Fifth Supplemental Indenture, among Vectren Utility Holdings, Inc., Indiana Gas Company, Inc., Southern Indiana Gas & Electric Company, Vectren Energy Delivery of Ohio, Inc., and U.S. Bank Trust National Association. \(Filed and designated in Form 8-K, dated October 16, 2006, File No. 1-16739, as Exhibit 4.1\). Sixth Supplemental Indenture, dated March 10, 2008, among Vectren Utility Holdings, Inc., Indiana Gas Company, Inc., Southern Indiana Gas and Electric Company, Vectren Energy Delivery of Ohio, Inc., and U.S. Bank National Association \(Filed and designated in Form 8-K, dated March 10, 2008, File No. 1-16739, as Exhibit 4.1\)](#)
- 4.4 [Note Purchase Agreement, dated March 11, 2009, among Vectren Capital, Corp., Vectren Corporation and each of the purchasers named therein. \(Filed and designated in Form 8-K dated March 16, 2009 File No. 1-15467, as Exhibit 4.5\)](#)
- 4.5 [Note Purchase Agreement, dated April 7, 2009, among Vectren Utility Holdings, Inc., Indiana Gas Company, Inc., Southern Indiana Gas and Electric Company and Vectren Energy Delivery of Ohio, Inc. and the purchasers named therein. \(Filed and designated in Form 8-K dated April 7, 2009 File No. 1-15467, as Exhibit 4.5\)](#)
- 4.6 [Note Purchase Agreement, dated September 9, 2010, among Vectren Capital, Corp., Vectren Corporation and the purchasers named therein. \(Filed and designated in Form 8-K dated September 10, 2010 File No. 1-15467, as Exhibit 4.1\)](#)
- 4.7 [Note Purchase Agreement, dated April 5, 2011, among Vectren Utility Holdings, Inc., Indiana Gas Company, Inc., Southern Indiana Gas and Electric Company and Vectren Energy Delivery of Ohio, Inc. and the purchasers named therein. \(Filed and designated in Form 8-K dated April 8, 2011 File No. 1-15467, as Exhibit 4.1\)](#)
- 4.8 [Note Purchase Agreement, dated November 15, 2011, among Vectren Utility Holdings, Inc., Indiana Gas Company, Inc., Southern Indiana Gas and Electric Company and Vectren Energy Delivery of Ohio, Inc. and the purchasers named therein. \(Filed and designated in Form 8-K dated November 17, 2011 File No. 1-15467, as Exhibit 4.1\)](#)
- 4.9 [Note Purchase Agreement, dated December 20, 2012, among Vectren Utility Holdings, Inc., Indiana Gas Company, Inc., Southern Indiana Gas and Electric Company and Vectren Energy Delivery of Ohio, Inc. and the purchasers named therein. \(Filed and designated in Form 8-K dated December 21, 2012 File No. 1-15467, as Exhibit 4.1\)](#)
- 4.10 [Note Purchase Agreement, dated August 22, 2013, among Vectren Utility Holdings, Inc., Indiana Gas Company, Inc., Southern Indiana Gas and Electric Company, and Vectren Energy Delivery of Ohio, Inc., and the purchasers named therein. \(Filed and designated in Form 8-K dated August 2, 2013, File No. 1-15467, as Exhibit 4.1\)](#)
- 4.11 [Note Purchase Agreement, dated June 11, 2015, between Vectren Utility Holding, Inc., Indiana Gas](#)

Company, Inc., Southern Indiana Gas and Electric Company, Vectren Energy Delivery of Ohio, Inc. and each of the purchasers named therein. (Filed and designated in Form 8-K dated June 12, 2015 File No. 1-15467, as Exhibit 4.1).

4.12 Note Purchase Agreement, dated June 11, 2015, between Vectren Capital, Corp., Vectren Corporation and each of the purchasers named therein. (Filed and designated in Form 8-K dated June 12, 2015 File No. 1-15467, as Exhibit 4.2).

- 4.13 [Note Purchase Agreement, dated July 14, 2017, between Vectren Utility Holdings, Inc. \(VUHI\), certain subsidiaries of VUHI as guarantors and each of the purchasers named therein. \(Filed and designated in Form 8-K dated July 17, 2017 File No. 1-15467, as Exhibit 4.1\).](#)
- 4.14 [Bond Purchase and Covenants Agreement, dated September 14, 2017, between Southern Indiana Gas and Electric Company and PNC Bank, National Association. \(Filed and designated in Form 8-K dated September 25, 2017, File No 1-5467, as Exhibit 4.1\).](#)

10. Material Contracts

- 10.1 [Vectren Corporation At Risk Compensation Plan effective May 1, 2001, \(as most recently amended and restated as of May 24, 2016\). \(Filed and designated in Form 10-Q for the quarter ended June 30, 2016, File No. 1-15467, as Exhibit 10.1.\)](#)
- 10.2 [Vectren Corporation Non-Qualified Deferred Compensation Plan, as amended and restated effective January 1, 2001. \(Filed and designated in Form 10-K, for the year ended December 31, 2001, File No. 1-15467, as Exhibit 10.32.\)](#)
- 10.3 [Vectren Corporation Non-Qualified Deferred Compensation Plan, effective January 1, 2005. \(Filed and designated in Form 8-K dated September 29, 2008, File No. 1-15467, as Exhibit 10.3.\)](#)
- 10.4 [Vectren Corporation Unfunded Supplemental Retirement Plan for a Select Group of Management Employees \(As Amended and Restated Effective January 1, 2005\). \(Filed and designated in Form 8-K dated December 17, 2008, File No. 1-15467, as Exhibit 10.1.\)](#)
- 10.5 [Vectren Corporation Specimen Waiver, effective October 3, 2013, to the Vectren Corporation Unfunded Supplemental Retirement Plan for a Select Group of Management Employees. \(Filed and designated in Form 10-Q for the quarter ended September 30, 2013, File No. 1-15467, as Exhibit 10.1\)](#)
- 10.6 [Vectren Corporation Nonqualified Defined Benefit Restoration Plan \(As Amended and Restated Effective January 1, 2005\). \(Filed and designated in Form 8-K dated December 17, 2008, File No. 1-15467, as Exhibit 10.2.\)](#)
- 10.7 [Vectren Corporation specimen change in control agreement dated December 31, 2011. \(Filed and designated in Form 8-K, dated January 5, 2012, File No. 1-15467, as Exhibit 10.1\)](#)
- 10.8 [Amendment Number One to the Vectren Corporation specimen change in control agreement dated December 31, 2012. \(Filed and designated in Form 10-K for the year ended December 31, 2012, File No. 1-15467, as Exhibit 10.1\)](#)
- 10.9 [Vectren Corporation Executive Severance Plan dated December 31, 2011, as most recently amended and restated as of February 21, 2017. \(Filed in Form 10-K herewith as Exhibit 10.11\). The severance plan differs among the named executive officers only to the extent where severance benefits are provided in the amount of two times base salary for Mr. Chapman and one and one half times base salary for Messer's Schach and Christian and Ms. Hardwick.](#)
- 10.10 [Gas Sales and Portfolio Administration Agreement between Indiana Gas Company, Inc. and ProLiance Energy, LLC, effective April 1, 2012. \(Filed and designated in Form 10-K for the year ended December 31, 2012, File No. 1-15467, as Exhibit 10.3\)](#)
- 10.11 [Gas Sales and Portfolio Administration Agreement between Southern Indiana Gas and Electric Company and ProLiance Energy, LLC, effective April 1, 2012. \(Filed and designated in Form 10-K for the year ended December 31, 2012, File No. 1-15467, as Exhibit 10.4\)](#)
- 10.12 [Formation Agreement among Indiana Energy, Inc., Indiana Gas Company, Inc., IGC Energy, Inc., Indiana Energy Services, Inc., Citizens Energy Group, Citizens Energy Services Corporation and ProLiance Energy, LLC, effective March 15, 1996. \(Filed and designated in Form 10-Q for the quarterly period ended March 31, 1996, File No. 1-9091, as Exhibit 10-C.\)](#)
- 10.13 [Amendment Number Two to the Vectren Corporation Change in Control Agreement \(specimen\), dated October 1, 2014. The specimen agreement differs among the named executive officers only to the extent change in control benefits are provided in the amount of three times base salary and bonus for Mr. Chapman and two times base salary and bonus for Mr. Christian, Mr. Schach and Ms. Hardwick. \(Filed and designated in Form 8-K, dated September 29, 2014, File No. 1-5467, as Exhibit 10.1\)](#)
- 10.14 [Vectren Corporation At Risk Compensation Plan Stock Unit Awards Award Agreement \(Officer\) -](#)

- 10.15 [Grant Agreement for Non-Employee Director Stock Grant - specimen, dated December 31, 2014. \(Filed and designated in Form 8-K, dated January 2, 2015, File No. 1-5467, as Exhibit 10.1\)](#)
- 10.16 [Coal Supply Agreement for A.B. Brown Generating Station between Southern Indiana Gas and Electric Company and Vectren Fuels, Inc., effective January 1, 2015. Contract assigned to Sunrise Coal, LLC. on August 29, 2014. \(Filed and designated in Form 10-Q dated March 31, 2015, File No. 1-15467, as Exhibit 10.2.\) Portions of the document have been omitted and filed separately pursuant to a request for confidential treatment filed with the Securities and Exchange Commission which was granted.](#)
- 10.17 [Coal Supply Agreement for F.B. Culley Generating Station between Southern Indiana Gas and Vectren Fuels, Inc., effective January 1, 2015. Contract assigned to Sunrise Coal, LLC. on August 29, 2014. \(Filed and designated in Form 10-Q dated March 31, 2015, File No. 1-15467, as Exhibit 10.3.\) Portions of the document have been omitted and filed separately pursuant to a request for confidential treatment filed with the Securities and Exchange Commission which was granted.](#)
- 10.18 [Coal Supply Agreement for Warrick 4 Generating Station between Southern Indiana Gas and Electric Company and Vectren Fuels, Inc., effective January 1, 2015. Contract assigned to Sunrise Coal, LLC. on August 29, 2014. \(Filed and designated in Form 10-Q dated March 31, 2015, File No. 1-15467, as Exhibit 10.4.\) Portions of the document have been omitted and filed separately pursuant to a request for confidential treatment filed with the Securities and Exchange Commission which was granted.](#)
- 10.19 [Vectren Director and Officer Indemnification Agreement \(specimen\) Deferred Compensation Plan, as amended and restated effective January 1, 2001. \(Filed and designated in Form 10-K, for the year ended December 31, 2015, File No. 1-15467, as Exhibit 10.26\)](#)
- 10.20 [Vectren Corporation At Risk Compensation Plan specimen unit award agreement for officers, effective January 1, 2017. \(Filed in Form 10-K as Exhibit 10.24 on February 23, 2017\)](#)
- 10.21 [Credit Agreement, dated as of July 14, 2017, among Vectren Utility Holdings, Inc., as borrower \(VUHI\); certain subsidiaries of VUHI, as guarantors; Bank of America, N.A., as administrative agent, swing line lender and a letter of credit issuer; Wells Fargo Bank, National Association, JPMorgan Chase Bank, N.A. and MUFG Union Bank, N.A., as co-syndication agents and letter of credit issuers; and the other lenders named therein. \(Filed and designated in Form 8-K dated July 17, 2017 File No. 1-5467, as Exhibit 10.1\).](#)
- 10.22 [Credit Agreement, dated as of July 14, 2017, among Vectren Capital, Corp., as borrower; Vectren Corporation, as guarantor; Bank of America, N.A., as administrative agent, swing line lender and a letter of credit issuer; Wells Fargo Bank, National Association, JPMorgan Chase Bank, N.A. and MUFG Union Bank, N.A., as co-syndication agents and letter of credit issuers; and the other lenders named therein. \(Filed and designated in Form 8-K dated July 17, 2017 File No. 1-5467, as Exhibit 10.2\).](#)
- 10.23 [Amendment to Agreement for Unit Four, made effective as of September 21, 2017, by and between Alcoa Power Generating Inc., and Southern Indiana Gas and Electric Company. \(Filed and Designated in Form 8-K dated September 25, 2017, File No. 1-15467, as Exhibit 10.1\).](#)

21. Subsidiaries of the Company

[The list of the Company's significant subsidiaries is attached hereto as Exhibit 21.1. \(Filed herewith.\)](#)

23. Consents of Experts and Counsel

[The consents of Deloitte & Touche LLP are attached hereto as Exhibit 23.1. \(Filed herewith.\)](#)

31. Certification Pursuant To Section 302 of the Sarbanes-Oxley Act of 2002

[Chief Executive Officer Certification Pursuant to Section 302 of the Sarbanes-Oxley Act Of 2002 is attached hereto as Exhibit 31.1 \(Filed herewith.\)](#)

[Chief Financial Officer Certification Pursuant to Section 302 of the Sarbanes-Oxley Act Of 2002 is attached hereto as Exhibit 31.2 \(Filed herewith.\)](#)

32. Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

[Certification Pursuant To Section 906 of the Sarbanes-Oxley Act Of 2002 is attached hereto as Exhibit 32 \(Filed herewith.\)](#)

101 Interactive Data File

101.INS XBRL Instance Document (Filed herewith.)

101.SCH XBRL Taxonomy Extension Schema (Filed herewith.)

101.CAL XBRL Taxonomy Extension Calculation Linkbase (Filed herewith.)

101.DEF XBRL Taxonomy Extension Definition Linkbase (Filed herewith.)

101.LAB XBRL Taxonomy Extension Labels Linkbase (Filed herewith.)

101.PRE XBRL Taxonomy Extension Presentation Linkbase (Filed herewith.)

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

VECTREN CORPORATION

Dated February 21, 2018
Chapman

/s/ Carl L.

Carl L. Chapman,
Chairman, President, and Chief Executive Officer

Pursuant to the requirements of the Securities and Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in capacities and on the dates indicated.

Signature	Title	Date
<u>/s/ Carl L. Chapman</u> Carl L. Chapman	Chairman, President, and Chief Executive Officer (Principal Executive Officer)	<u>February 21, 2018</u>
<u>/s/ M. Susan Hardwick</u> M. Susan Hardwick	Executive Vice President and Chief Financial Officer (Principal Accounting and Financial Officer)	<u>February 21, 2018</u>
<u>/s/ Derrick Burks</u> Derrick Burks	Director	<u>February 21, 2018</u>
<u>/s/ James H. DeGraffenreidt, Jr.</u> James H. DeGraffenreidt, Jr.	Director	<u>February 21, 2018</u>
<u>/s/ John D. Engelbrecht</u> John D. Engelbrecht	Director	<u>February 21, 2018</u>
<u>/s/ Anton H. George</u> Anton H. George	Director	<u>February 21, 2018</u>

<u>/s/ Robert G. Jones</u> Robert G. Jones	Director	<u>February 21, 2018</u>
<u>/s/ Patrick K. Mullen</u> Patrick K. Mullen	Director	<u>February 21, 2018</u>
<u>/s/ R. Daniel Sadlier</u> R. Daniel Sadlier	Director	<u>February 21, 2018</u>
<u>/s/ Michael L. Smith</u> Michael L. Smith	Director	<u>February 21, 2018</u>
<u>/s/ Teresa J. Tanner</u> Teresa J. Tanner	Director	<u>February 21, 2018</u>
<u>/s/ Jean L. Wojtowicz</u> Jean L. Wojtowicz	Director	<u>February 21, 2018</u>

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Section 2: EX-21.1 (EXHIBIT 21.1)

Exhibit 21.1

VECTREN CORPORATION

Subsidiaries

Wholly Owned Subsidiaries:

<u>Name of Entity</u>	<u>State of Incorporation/ Jurisdiction</u>	<u>Doing Business As</u>
Vectren Utility Holdings, Inc.	Indiana	
Southern Indiana Gas and Electric Company	Indiana	Vectren Energy Delivery of Indiana, Inc.
Indiana Gas Company, Inc.	Indiana	Vectren Energy Delivery of Indiana, Inc.
Vectren Energy Delivery of Ohio, Inc.	Ohio	
Vectren Capital, Corp.	Indiana	
Vectren Enterprises, Inc.	Indiana	
Vectren Energy Marketing and Services, Inc.	Indiana	
Vectren Energy Services Corporation	Indiana	
Energy Systems Group, LLC	Indiana	
Vectren Utility Services, Inc.	Indiana	
Vectren Infrastructure Services Corporation	Indiana	
Miller Pipeline, LLC	Indiana	
Minnesota Limited, LLC	Minnesota	
Vectren Financial Group, Inc.	Indiana	

Southern Indiana Properties, Inc.	Indiana
Energy Realty, Inc.	Indiana
Vectren Ventures, Inc.	Indiana
Vectren Affiliated Utilities, Inc.	Indiana
Vectren Coal Mining, Inc.	Indiana
Vectren Solutions, Inc.	Indiana

Less than Wholly Owned Subsidiaries:

<u>Name of Entity</u>	<u>State of Incorporation/ Jurisdiction</u>	<u>Doing Business As</u>
ProLiance Holdings, LLC	Indiana	

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Section 3: EX-23.1 (EXHIBIT 23.1)

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement Nos. 333-175243, 333-163828, 333-135429, 333-118399, 333-61252, 333-33684, and 333-33608 on Form S-8 and in Registration Statement No. 333-200051 on Form S-3ASR of our reports dated February 21, 2018, relating to the consolidated financial statements and financial statement schedule of Vectren Corporation and subsidiaries, and the effectiveness of Vectren Corporation and subsidiaries' internal control over financial reporting, appearing in this Annual Report on Form 10-K of Vectren Corporation for the year ended December 31, 2017.

/s/ Deloitte & Touche LLP
Indianapolis, Indiana
February 21, 2018

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Section 4: EX-31.1 (EXHIBIT 31.1)

Exhibit 31.1

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

CHIEF EXECUTIVE OFFICER CERTIFICATION

I, Carl L. Chapman, certify that:

1. I have reviewed this Annual Report on Form 10-K of Vectren Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 21, 2018

/s/ Carl L. Chapman

Carl L. Chapman

Chairman, President, and Chief Executive Officer

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Section 5: EX-31.2 (EXHIBIT 31.2)

Exhibit 31.2

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

CHIEF FINANCIAL OFFICER CERTIFICATION

I, M. Susan Hardwick, certify that:

1. I have reviewed this Annual Report on Form 10-K of Vectren Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
- (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
- (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 21, 2018

/s/ M. Susan Hardwick

M. Susan Hardwick

Executive Vice President and Chief Financial Officer

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Section 6: EX-32.2 (EXHIBIT 32.2)

Exhibit 32

CERTIFICATION PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

CERTIFICATION

By signing below, each of the undersigned officers hereby certifies pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to his knowledge, (i) this Annual Report on Form 10-K fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and (ii) the information contained in this report fairly presents, in all material respects, the financial condition and results of operations of Vectren Corporation.

Signed this 21st day of February, 2018.

/s/ M. Susan Hardwick

(Signature of Authorized Officer)

M. Susan Hardwick

(Typed Name)

Executive Vice President and Chief Financial Officer

/s/ Carl L. Chapman

(Signature of Authorized Officer)

Carl L. Chapman

(Typed Name)

Chairman, President, and Chief Executive Officer

(Title)

(Title)

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