

INDIANA GAS COMPANY, INC.

d/b/a VECTREN ENERGY DELIVERY OF INDIANA, INC.

A CENTERPOINT ENERGY COMPANY

(VECTREN NORTH)

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INDIANA UTILITY
REGULATORY COMMISSION

IURC CAUSE NO. 45468

DIRECT TESTIMONY

OF

STEVEN A. HOOVER

REGIONAL DIRECTOR OF GAS ENGINEERING

ON

GAS CAPITAL INVESTMENTS

SPONSORING PETITIONER'S EXHIBIT NO. 4,

ATTACHMENTS SAH-1 THROUGH SAH-7

Glossary of Acronyms

AACE	AACE International, formerly the Association for the Advancement of Cost Engineering International
AMI	Advanced Metering Infrastructure
AMR	Automated Meter Reading
BSCI	Bare Steel and Cast-Iron
BSCI Replacement Program	Bare Steel and Cast-Iron Asset Replacement Program
CenterPoint	CenterPoint Energy, Inc.
CIC	Change In Construction
CIP	Capital Investment Plan
Commission	Indiana Utility Regulatory Commission
Compliance Programs	Vectren North programs required to comply with federal mandates
Compliance Projects	Projects required to comply with federal mandates
Compliance Statute	Ind. Code Ch. 8-1-8.4
CSIA	Compliance and System Improvement Adjustment
CSIA Plan	CSIA 7 Year Plan
DIMP	Distribution Integrity Management Program
DMOD	Distribution Modernization
ERT	Encoder Receiver Transmitters
GSIR	Gas System Integrity and Reliability
Modernization Projects	Projects required to comply with federal mandates
O&M	Operating and Maintenance
Petitioner or Vectren North or The Company	Indiana Gas Company, Inc. d/b/a Vectren Energy Delivery of Indiana, Inc.
PHMSA	Pipeline and Hazardous Materials Safety Administration
Plan or 7 Year Plan	Seven-Year TDSIC Plan
SCADA	Supervisory Control and Data Acquisition
SIMP	Storage Integrity Management Program
SMOD	Gas Storage Modernization
TDSIC Statute	Ind. Code Ch. 8-1-39
TDSIC	Transmission, Distribution and Storage System Improvement Charge
TIMP	Transmission Integrity Management Program
TMOD	Transmission Modernization
Vectren	Vectren Corporation
Vectren North	Vectren Energy Delivery of Indiana, Inc.
Vectren Ohio	Vectren Energy Delivery of Ohio, Inc.
Vectren South	Southern Indiana Gas and Electric Company d/b/a Vectren Energy Delivery of Indiana, Inc

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DIRECT TESTIMONY OF STEVEN A. HOOVER

1 **I. INTRODUCTION**

2

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

4 A. My name is Steven A. Hoover. My address is 211 NW Riverside Drive, Evansville,
5 Indiana, 47708.

6

7 **Q. By whom are you employed?**

8 A. I am employed by Vectren Corporation ("Vectren"), a wholly owned subsidiary of
9 CenterPoint Energy, Inc. ("CenterPoint").

10

11 **Q. On whose behalf are you testifying in this proceeding?**

12 A. I am testifying on behalf of Indiana Gas Company, Inc. d/b/a Vectren Energy Delivery
13 of Indiana, Inc. ("Petitioner", "Vectren North" or "the Company"), which is a subsidiary
14 of Vectren.

15

16 **Q. What is your role with respect to Petitioner Vectren North?**

17 A. I am Regional Director of Gas Engineering for Vectren, which is the parent company
18 of Petitioner. I have the same role with two other utility subsidiaries of Vectren –
19 Southern Indiana Gas and Electric Company d/b/a Vectren Energy Delivery of Indiana,
20 Inc. ("Vectren South") and Vectren Energy Delivery of Ohio, Inc. ("Vectren Ohio").

21

22 **Q. Please describe your educational background.**

23 A. I received a Bachelor of Science degree in Mechanical Engineering Technology from

1 the University of Southern Indiana in 1990.

2

3 **Q. Please describe your professional experience.**

4 A. I began my career with Vectren in 1993 as a plant engineer in power generation. I
5 have held positions of increasing responsibility with Vectren as reliability engineer,
6 performance engineer, and production coordinator in power generation; engineering
7 manager of gas distribution engineering for the southwest Indiana division; chief
8 engineer of gas engineering; and director of gas and electric engineering. I became
9 Regional Director of Gas Engineering for Indiana and Ohio upon the merger of
10 CenterPoint and Vectren in 2019.

11

12 **Q. What are your present duties and responsibilities as Regional Director of Gas**
13 **Engineering?**

14 A. I am responsible for engineering, technical support, and capital management for the
15 gas utility operations of Vectren North, Vectren South and Vectren Ohio. My specific
16 responsibilities include gas transmission, distribution, and reservoir engineering; gas
17 transmission and reservoir project management; gas geospatial systems; and capital
18 investment management.

19

20 **Q. Have you ever testified before any state regulatory commission?**

21 A. Yes. I routinely provide testimony before the Indiana Utility Regulatory Commission
22 ("Commission") in the semi-annual filings of Vectren South in Cause No. 44429 and
23 Vectren North in Cause No. 44430 in support of capital investments related to gas
24 compliance and Transmission, Distribution and Storage System Improvement Charge
25 ("TDSIC") most recently for TDSIC-13. I have also testified before the Commission on

1 numerous other occasions, including in support of Vectren South's request for
2 approval of its original seven year electric TDSIC Plan in Cause No. 44910, as well as
3 in Cause Nos. 44910 TDSIC-1, 2, 3 and 4. In addition, I provided testimony on behalf
4 of Vectren South in Cause No. 45052 in support of the construction of the gas
5 transmission pipeline associated with the proposed combined cycle natural gas turbine
6 generation facility. Most recently I provided testimony on behalf of Vectren South in
7 Cause No. 45447 in support of capital investments associated with its rate case.

8

9 I have also testified before the Public Utilities Commission of Ohio on behalf of Vectren
10 Ohio.

11

12 **Q. What is the purpose of your testimony in this proceeding?**

13 A. I will discuss the significant gas capital infrastructure investments Vectren North is
14 including in this Cause. Specifically, my testimony will: 1) discuss the capital
15 investment planning process for Vectren North gas infrastructure; 2) describe the
16 capital investments completed since the last Vectren North Rate Case (Cause No.
17 43298); 3) describe capital investments in 2020 including those associated with
18 Vectren North's Compliance and System Improvement Adjustment ("CSIA") which
19 includes approved projects required to comply with federal mandates ("Compliance
20 Projects", "Compliance Programs", or "Modernization Projects") and the TDSIC Plan;
21 and 4) describe capital investments planned for 2021 including those to comply with
22 federal mandates by improving the safety and reliability of Vectren North's gas pipeline
23 systems, and others to improve system performance, support public projects, or
24 associated with new business and rural expansion of the gas distribution system.

1 **Q. Are you sponsoring any attachments in this proceeding?**

2 A. Yes. I am sponsoring the following attachments in this proceeding. In addition, 2021
3 Capital Investment Plan ("CIP") project estimates will be provided to the Commission
4 as work papers accompanying this filing.

5

6 • Petitioner's Exhibit No. 4, Attachment SAH-1: Vectren North 2006 – 2019 Non-
7 CSIA Large Capital Investments

8 • Petitioner's Exhibit No. 4, Attachment SAH-2: Vectren North 2014-2019 CSIA
9 Investments

10 • Petitioner's Exhibit No. 4, Attachment SAH-3: 44430 TDSIC-11 Vectren North
11 Petition (CONFIDENTIAL)

12 • Petitioner's Exhibit No. 4, Attachment SAH-4: Vectren North 2020 Capital
13 Investment Plan

14 • Petitioner's Exhibit No. 4, Attachment SAH-5: Vectren North 2021 Capital
15 Investment Plan (CONFIDENTIAL)

16 • Petitioner's Exhibit No. 4, Attachment SAH-6: Project Cost Estimate Example 1
17 (CONFIDENTIAL)

18 • Petitioner's Exhibit No. 4, Attachment SAH-7: Project Cost Estimate Example 2
19 (CONFIDENTIAL)

20

21 **Q. Were these attachments prepared by you or under your supervision?**

22 A. Yes.

23

24

1 **II. BACKGROUND**

2

3 **Q. Please describe Vectren North's gas utility operations.**

4 A. The Company owns, operates, and maintains approximately 12,982 miles of gas
5 distribution mains; 651 miles of gas transmission pipelines; numerous measurement
6 and pressure regulation stations; three liquid propane peaking facilities; five gas
7 storage fields; and various ancillary equipment and communications systems to serve
8 approximately 620,000 customers in the north central, central, and southeastern areas
9 of Indiana. In addition, Vectren North maintains fleet vehicles, multiple facilities, and
10 other items of property commonly used in the industry such as land, easements,
11 materials, and supplies.

12

13 **Q. Are Vectren North's gas assets in good operating condition and necessary to**
14 **provide safe and reliable service to its customers?**

15 A. Yes. Vectren North has been effectively and reliably providing service to the area for
16 decades and maintains its systems in good operating condition through maintenance
17 optimization and timely asset replacements in compliance with industry regulations,
18 prudent investment strategy, and available operational information. The programs and
19 methods the Company uses to identify, prioritize, and execute capital projects to
20 maintain and upgrade its gas infrastructure are discussed below in my testimony and
21 in further detail in the testimony of Petitioner's Witnesses Kate D. Porter and Sarah J.
22 Vyvoda.

23

24 **Q. Please describe Vectren North's Capital Investment Plan and the significant**
25 **capital investments included in this Cause.**

1 A. Vectren North's CIP consists of the ongoing programs and projects ("capital
2 investments") executed to maintain and improve its assets including:

- 3 • Gas transmission, distribution, and storage infrastructure
- 4 • Facilities
- 5 • Fleet
- 6 • Technology applications

7 For purposes of this proceeding, I am addressing all capital investments (except for
8 those information technology investments described by Petitioner's Witness Jeffrey S.
9 Myerson) made from December 31, 2006,¹ the date of rate base cut-off from the last
10 Vectren North Rate Case (Cause No. 43298), through the date of the projected rate
11 base cut-off from this proceeding, December 31, 2021. This will include projected
12 investments planned for 2020 and 2021. My testimony will separate the investments
13 into four groups: 1) significant non-CSIA investments made from the rate base cut-off
14 date of the last rate case through 2019; 2) CSIA-related investments made from 2014
15 through 2019; 3) investments made and planned in 2020; and 4) the 2021 CIP.
16 Discussion of the CSIA investments will be brief as the included programs and projects
17 have been discussed in detail in the bi-annual CSIA (or commonly referred to as
18 "TDSIC-x") filings in Cause No. 44430.

19

20 **Q. What is the Company's CSIA?**

21 A. The CSIA relates to and recovers costs in conjunction with the Company's seven-year

¹ The Commission's order dated February 13, 2008 in Cause No. 43298, approved a Stipulation and Settlement Agreement attached to the Order, which reflects a general rate base cutoff of December 31, 2006, adjusted for two projects that were placed in service at a later time – the Greensburg Pipeline and Greencastle Transmission Line Projects. Stipulation and Settlement Agreement, Appendix B, p. 2.

1 capital investment plan (the "CSIA Plan") to execute approved projects starting in 2014
2 and concluding in 2020. The CSIA Plan is comprised of a Compliance component
3 (governed under Ind. Code Ch. 8-1-8.4, the "Compliance Statute") and a TDSIC
4 component (governed under Ind. Code Ch. 8-1-39, the "TDSIC Statute"). The CSIA
5 Plan investments were described and approved in Vectren North's semi-annual
6 TDSIC-1 through TDSIC-12 cases covering the timeframe between January 1, 2014
7 and December 31, 2019. TDSIC-13 (filed October 1, 2020) and TDSIC-14 (targeted
8 to be filed April 1, 2021) will close out the initial CSIA Plan. The TDSIC Statute
9 provides that the utility must file a general rate case prior to the conclusion of a TDSIC
10 plan, and this case satisfies that obligation.

11
12 **Q. Please provide a brief description of the Compliance Programs.**

13 A. The Compliance Programs consist of individual projects to address specific federal
14 mandates associated with gas system safety. "Modernization" is an industry term used
15 to describe the general benefit of replacing aging assets or systems with new or
16 modern materials, equipment, and controls. The transmission modernization (or
17 "TMOD") program includes projects to verify the safety and reliability of pipelines
18 through testing, replacement, or partial replacements to allow for in-line inspections;
19 remediation of exposed pipeline segments; replacement of obsolete pressure
20 regulation or gas quality equipment; and the replacement or addition of remote
21 monitoring and controls. Distribution modernization (or "DMOD") projects primarily
22 consist of the replacement of aging infrastructure including un-protected coated steel
23 mains and service; obsolete pressure control and remote monitoring equipment; and
24 pipeline exposures. The Bare Steel and Cast Iron (or "BSCI") asset replacement
25 program is entirely composed of projects to replace bare steel and cast-iron mains and

1 services. The storage modernization (or "SMOD") program consists of projects to
2 remediate findings resulting from the assessment of storage wells and to construct or
3 replace equipment to facilitate the on-going well logging activities.

4

5 **Q. What is the difference between Compliance component projects and TDSIC**
6 **component projects that comprise the CSIA Plan?**

7 A. The CSIA Plan – which will conclude in 2020 - includes Compliance Projects to meet
8 federal mandates and specific TDSIC projects associated with system improvements,
9 public improvements, rural extensions, and targeted economic development.

10

11 **Q. Does the CSIA Plan represent the majority of investments made since the last**
12 **base rate case?**

13 A. Yes. Since the previous Vectren North Gas Rate Case filed in 2007, the Company
14 has invested in a variety of infrastructure improvement and new customer addition
15 projects. The primary investments from January 1, 2007 to December 31, 2013 were
16 related to BSCI asset replacement and transmission modernization with lesser
17 investments in general system improvement, public improvement, and customer
18 addition projects. Vectren North initiated its CSIA Plan in 2014 with approval in Cause
19 No. 44430 and projects completed under this plan constitute the majority of the capital
20 investments since the last rate case. Projects not included in the CSIA Plan were also
21 completed from 2014 through 2019. The various investment programs and projects
22 from January 2007 to 2021 will be discussed later in my testimony.

23

1 **Q. What procedures are in place to ensure that the amount reflected as utility plant**
2 **in service as of December 31, 2019 on Vectren North's books and records**
3 **represents the actual cost of utility plant in service as of that date?**

4 A. Vectren North maintains continuing property records using a structured capital work
5 order process and plant accounting application. Work orders are created for each
6 project in the plant accounting application and are approved by management before
7 costs are incurred and construction is initiated. Capital investment is also controlled
8 by an investment budget schedule approved and maintained by CenterPoint's officers
9 and Board of Directors. The construction work order procedure ensures the cost of
10 new construction is not transferred to utility plant in service until verification the assets
11 are in service. This verification is accomplished when field operating personnel submit
12 to plant accounting a report listing the actual quantities of the property units installed.
13 Similarly, Vectren North uses a retirement work order procedure that assures property
14 is removed from utility plant in service when the plant accounting department, upon
15 receipt from field operations, processes documentation that the retirement work is
16 completed.

17

18 **Q. What capital investments will your testimony cover?**

19 A. My testimony will focus primarily on investments in the gas system infrastructure.
20 However, I will briefly summarize investments in fleet, facilities, and technical systems
21 to present a more comprehensive view of the total utility plant in service. Other
22 witnesses will discuss planned 2021 infrastructure capital investments and programs
23 that influence capital expenditures as described below:

- 24 • Petitioner's Witness Sarah J. Vyvoda – Transmission Integrity Management
25 Program ("TIMP") and Storage Integrity Management Program ("SIMP")

- 1 • Petitioner's Witness Kate D. Porter – Distribution Integrity Management Program
2 ("DIMP")
3

4 **III. CAPITAL INVESTMENT PLANNING PROCESS**
5

6 **Q. Please describe the Company's capital investment planning process.**

7 A. Vectren North employs a standardized, robust planning and budgeting process that
8 engages stakeholders from integrity management, field operations, fleet, facilities,
9 finance, and engineering to develop and maintain the CIP. Engineering has overall
10 responsibility for the comprehensive CIP. Large corporate-level technology projects
11 are typically planned and managed by information technology and costs are allocated
12 to the appropriate business unit. Lower cost, locally managed technology applications
13 and equipment are planned and managed in Vectren North's budget.
14

15 The process begins with a review and update of the ten-year high-level capital budget
16 that incorporates financial targets and projected available capital funding. The ten-
17 year budget is primarily populated with spending categories and "program"
18 investments such as modernization, new business, and public improvement rather
19 than specific individual projects. Following high level adjustments to years six through
20 ten of the budget, years one through five are reviewed and revised incorporating
21 additional detail in the spending categories including specific known individual capital
22 projects with cost estimates greater than \$1M.
23

24 A detailed two-year budget plan is maintained to provide targets and guidance for the
25 finance, engineering, and operations teams to plan projects and activities for the

1 upcoming construction years. Year one of the two-year plan contains detailed specific
2 known project information, typically with estimates that are consistent with Association
3 for the Advancement of Cost Engineering ("AACE") Class 2 criteria as discussed later
4 in my testimony. The sum of individual project estimates for a given year will not
5 typically equal the annual total investment budget. Projects are identified, estimated,
6 and then selected based upon priority, the available capital funds for the various
7 categories, and the overall annual budget. Because it is not practical or feasible to
8 obtain exact alignment between the sum of individual project estimates with the
9 category or annual budget amount, the totals of project estimates in some categories
10 of work may exceed the total category budget amount.

11
12 **Q. Please describe the capital planning and project prioritization activities in more**
13 **detail.**

14 A. The Gas System Integrity and Reliability ("GSIR") department has responsibility for
15 identification and prioritization of most Compliance Projects. As described in detail in
16 the direct testimony of Petitioner's Witnesses Porter and Vyvoda, on an annual basis
17 GSIR will update the TIMP, DIMP, and SIMP risk models and evaluate current, new,
18 or changing areas of risk to Vectren North's gas system. As part of this process,
19 engineering and operations departments are consulted at a local level to identify new
20 issues (such as a pipeline exposure, equipment failure, etc.). GSIR will then
21 incorporate these new projects or risk changes into the plan and re-prioritize
22 accordingly.

23
24 Specific projects not identified by GSIR are determined through other traditional
25 means, e.g. by local engineering, operations, or gas system planning as those

1 departments execute their work. These projects generally fall into the standard
2 categories of public improvement, system improvement, and new business and are
3 derived either through internal input and external customer or third-party demand.
4 There are nuances between the various regulatory mechanisms and some "standard"
5 projects may be categorized in one of the recovery mechanisms if certain criteria are
6 met.

7

8 Public improvement and new business – customer or third-party initiated work –
9 categories are budgeted through a combination of historical expenditure evaluation
10 and an assessment of known projects for a specific construction year. Most of the
11 new business and much of the public improvement work is not known more than a few
12 months in advance and therefore, budgeting leans heavily on historical annual
13 investment data.

14

15 System improvement projects are generally executed to enhance the capacity or
16 reliability of the gas distribution and transmission systems and are typically identified
17 through work performed by engineering and gas system planning. Gas system
18 planning is part of the GSIR department and has primary responsibility for monitoring
19 system performance, long-range planning of system improvements, and operational
20 support for gas control, gas supply and engineering. Computerized hydraulic models
21 of the gas system are used by gas system planning and various engineering groups
22 within the company for many functions and analyses, including both capital and O&M
23 related asset expenditures associated with the following:

- 24 • Long-range capital budget planning to address asset changes and additions to
25 support load growth areas within the systems.

- 1 • Review of individual customer load additions/increases (typically industrial/large
2 commercial) or residential development additions as they are proposed or
3 identified (by sales/marketing or engineering) to ensure system integrity and
4 adequacy. Determine appropriate asset changes and additions to systems, if
5 necessary.
- 6 • Review of potential economic development projects identified by local or state
7 economic development agencies and communicated by internal sales/marketing
8 representatives.
- 9 • Review distribution systems/areas for pressure/supply concerns and determine
10 appropriate asset changes and additions to systems for mitigation.
- 11 • Review system capital and large-scale maintenance related activities/projects to
12 ensure successful completion. Determine appropriate asset additions, if
13 necessary. Determine system temporary configuration changes and gas supplier
14 impacts, if any.

15
16 **Q. How does the Company manage its capital investment plan on an annual basis?**

17 A. Engineering, Strategic Sourcing, and Construction Management teams communicate
18 and collaborate in multiple program, project, and budget/forecast status meetings
19 conducted throughout the year to provide the data, reports, and interaction necessary
20 to successfully manage the Plan execution. Each meeting has specific reporting and
21 deliverables which enable timely dissemination of project schedule and cost status,
22 early identification of project constraints, and the forum to proactively develop
23 adjustments to resources or schedules to assure Plan adherence. The Gas
24 Engineering business unit analyst facilitates monthly capital project review meetings
25 with Operations and Gas Engineering directors and managers to assess project

1 status, specific costs, project/category forecasts. Program summaries and progress
2 are communicated to executive staff at periodic capital review meetings including the
3 annual Fall program update of current year performance and the next year's program
4 plan. Additionally, a Working Committee comprised of representatives from
5 Operations, Strategic Sourcing, and Gas Engineering meets on a monthly basis to
6 review contractor performance, emergent project resource options (bidding
7 opportunities for new projects), bidding strategies, etc. On an ad hoc basis, further
8 discussions occur at the various management levels.

9

10 Project execution is managed in the field by qualified and experienced operations
11 supervisors, construction inspectors, and project engineers to ensure infrastructure is
12 installed according to the engineered plan, applicable codes, and approved
13 design/construction standards. In addition, Vectren North's Change In Construction
14 ("CIC") process provides an immediate communication path for assessing changes to
15 project scope, resources, material, or other impacts while the projects are under
16 construction. The CIC process also provides a structure for making decisions to
17 maintain project schedule and budget, or in some cases, deciding to change one or
18 both to ensure successfully meeting a project's safety, reliability, or modernization
19 objective.

20

21 **Q. Does Vectren North manage its capital investments at the project level?**

22 A. While Vectren North endeavors to manage costs at the project level, various factors
23 make this challenging: most assets are located below ground, many of the assets
24 were installed decades ago and historical information can be incomplete,
25 environmental conditions vary, unforeseeable conflicts arise with other below ground

1 facilities, etc. Construction bids are also a significant influence on project cost
2 management. Bids generally are in close alignment with estimated project labor, but
3 in some cases can be significantly higher or lower than estimated labor due to resource
4 constraints, industry climate, perceived project complexity, etc. This can result in
5 adjustments to individual project estimates and in aggregate may impact the annual
6 investment plan to account for increased or reduced project costs, i.e. projects may
7 be postponed, or other projects added based upon overall bid results. Therefore,
8 consistent with its past practice, Vectren North manages the costs for the Compliance
9 Plan at the integrity management program level: TMOD, DMOD, BSCI, and SMOD.

10

11 Similarly, Vectren North manages system improvement, public improvement, and new
12 business projects at both project and program level – balancing the need for individual
13 projects against the annual budget for this category of work. Public improvement and
14 new business investments are initiated by customers or other third parties. As
15 described previously, the budgets for these categories are based primarily on historical
16 data. Variance of actual expenditures from Plan, while typically small, can be
17 significant in any given year due to external factors such as the state of the economy,
18 housing market, interest rates, individual state budgets, etc.

19

20 **Q. Please describe how Vectren North manages customer-driven work, i.e. new**
21 **business and public improvement projects.**

22 A. New business and public improvement projects, which meet specific criteria, must be
23 performed. New business projects that are revenue-justified or where the customer
24 provides a contribution to cover the non-revenue justified cost are completed
25 regardless of whether the new business budget has been exceeded. Similarly, in most

1 cases, relocation of gas infrastructure in support of public improvement projects must
2 be performed to facilitate the completion of the road, sewer, or like projects executed
3 for the public good and to minimize the risk of damage to gas facilities resulting from
4 the public project. Most gas distribution facilities are located in public rights-of-way,
5 so efforts are made through conflict analysis and collaboration with the public entity to
6 adjust the public project plans to minimize the required relocation of the gas facilities
7 where possible.

8

9 **Q. Please describe how Vectren North manages capital investments in**
10 **transportation and equipment, facilities, and technology.**

11 A. A functional fleet, adequate building facilities, and modern technology is necessary to
12 support the Company's construction, operation, and maintenance of its gas
13 infrastructure. When evaluating capital investments for these assets, Vectren North
14 uses a total quality approach to sustain an adequate operational environment for
15 employees to meet the needs of the organization including providing a workplace and
16 equipment that allows for the attraction and retention of talent.

17

18 Vehicles and other mobile equipment are maintained and monitored to ensure long
19 useful lives. It is necessary to periodically replace vehicles and equipment due to age,
20 economics, or condition and the Company monitors vehicle mileage, condition, and
21 operating costs to optimize replacement timing. The Company's various building
22 structural, mechanical, and electrical systems are evaluated, maintained and replaced
23 based on age, functionality, and condition to ensure that they remain reliable for both
24 daily and 24-hour/7-day per week operations. Technology is similarly replaced or
25 updated as guided by industry standards, equipment/software obsolescence,

1 company standardization, and cybersecurity needs.

2

3 **Q. Please describe recurring capital investments.**

4 A. Recurring smaller annual capital investments that generally do not require engineering
5 or are not classified as individual projects will typically be grouped into spending
6 categories according to the work type. New service lines, service line replacements,
7 inside meter relocations, cathodic protection replacements, minor remote technology
8 – supervisory control and data acquisition (“SCADA”) equipment replacements, etc.
9 are completed under “blanket project” numbers.

10

11 **Q. Please describe how Vectren North prepares its recurring investment plan.**

12 A. The recurring annual capital investment budgets for each discrete work type are
13 developed from historical information and any anticipated specific increase or
14 decrease in expenditures anticipated on a particular task due to targeted accelerated
15 or decelerated replacement or other significant changes in the quantity of work. The
16 recurring project accounts are established for each operating center and individual
17 work order costs are charged to these accounts.

18

19 **Q. Please describe how Vectren North manages actual recurring capital**
20 **investments during each year relative to the plan of projected recurring**
21 **investments, with the understanding that investment priorities emerge during**
22 **the year that may not be specifically identified in the Plan.**

23 A. Vectren North endeavors to manage the recurring investments on target to the
24 established budget for each activity by increasing/decreasing the number of individual
25 tasks completed when possible. Some recurring investments such as installation of

1 new customer service lines may be less or more than the budgeted annual amount
2 due to economic factors outside of the Company's control. A strong residential
3 housing construction market may increase the number of services requested and
4 installed resulting in more actual expenditures than budgeted for this activity. In other
5 circumstances, an activity such as service replacements may be reduced in order to
6 spend more capital funds on inside meter move-outs if during the year it is determined
7 more risk can be mitigated by the meter relocations. To summarize, this work is
8 managed to the established budgets for each activity, but spending may be adjusted
9 based on changes in risk or priority determined throughout the year.

10

11 **Q. Has Vectren North been successful in managing its capital investment plan?**

12 A. Yes. Vectren North has managed its capital investment plan successfully as
13 demonstrated by the execution of the CSIA Plan since 2014 to meet the Company's
14 objectives in improving safety and reliability of the system. While some individual
15 projects exceed the estimate variance threshold established in collaboration with the
16 Indiana Office of the Utility Consumer Counselor ("OUCC"), the actual costs of many
17 other projects have been within or below the estimated cost. Compliance Program
18 expenditures have been very close to the approved overall category costs as
19 discussed in recent Cause No. 44430 TDSIC filings.

20

21 **IV. CAPITAL INVESTMENTS IN THIS CAUSE**

22

23 **Q. Please summarize the time periods and investments included in this Cause.**

24 A. As mentioned previously, the capital investments addressed in my testimony were
25 made between January 1, 2007 and December 31, 2019; are in progress or projected

1 in 2020; and are projected for 2021. I will focus primarily on the gas system
2 infrastructure improvements and briefly cover other general capital such as fleet,
3 buildings, and Vectren North-specific technology investments.

4

5 **Q. Have you reviewed the current calculation for Vectren North's Utility Plant in**
6 **Service as of December 31, 2019?**

7 A. Yes. Petitioner's Exhibit No. 18, Schedule B-1.1 demonstrates Vectren North's Total
8 Gross Utility Plant as of December 31, 2019 is \$2,668,997,719.

9

10 **Q. How does the current plant in service compare to the plant in service at the time**
11 **of Vectren North's last rate case?**

12 A. Table SAH-1: Gross Utility Plant Additions demonstrates between January 1, 2007
13 and December 31, 2019, Vectren North's Gross Plant Additions (before Accumulated
14 Depreciation activity and Other Rate Base Components) increased by
15 \$1,352,304,372. This change was primarily driven by the replacement or
16 modernization of existing facilities to ensure the continued provision of safe and
17 reliable service to existing customers, increases in facilities required to serve new
18 customers, and the installation of system improvements to ensure capacity, service
19 quality and reliability for increasing customer loads.

20

Table SAH-1: Gross Utility Plant Additions

		[A]	[B]	[C] = [B]-[A]
		Gross Utility Plant as of	Gross Utility Plant as of	Increase /
Line	Description	Cause No. 43298	December 31, 2019	(Decrease)
1	Intangible Plant	\$ 1,014,077	\$ 910,556	\$ (103,521)
2	Manufactured/Natural Gas Production Plant	11,353,272	12,214,386	861,114
3	Underground Storage Plant	35,206,245	45,400,243	10,193,998
4	Transmission Plant	57,409,734	332,418,390	275,008,656
5	Distribution Plant	1,154,507,071	2,167,078,067	1,012,570,996
6	General Plant	57,202,948	110,976,078	53,773,130
7	Total Gross Utility Plant	\$ 1,316,693,347	\$ 2,668,997,719	\$ 1,352,304,372

21

1 **Q. Please describe the types of investments in each of the Plant Categories listed**
2 **in Table SAH-1.**

3 A. Intangible Plant consists of non-physical assets such as franchises and consents,
4 patent rights, licenses, privileges, and computer software. Vectren North's intangible
5 plant assets primarily consist of software applications used for financial, engineering,
6 inventory, and operational management systems.

7
8 Manufactured/Natural Gas Production Plant includes assets used in Vectren North's
9 liquid propane ("LP") peaking plants. Also referred to as Propane-Air Natural Gas
10 peaking plants, the facilities are designed to vaporize stored liquid propane and mix it
11 with air and natural gas for injection into the nearby gas system to supplement gas
12 supply during peak usage times. The LP assets include land, storage tanks,
13 vaporization/mixing equipment, compressors, and coolers. Investments in the LP
14 plants are categorized as system improvement and some projects have been included
15 in the TDSIC plan.

16
17 Underground Storage Plant includes land, compressors, gas processing equipment,
18 wells, metering, pressure regulating, communications equipment, and other station
19 assets used for the injection, withdrawal, storage, and monitoring of gas in storage
20 reservoirs. Primary underground storage investment categories include SMOD
21 projects such as the plugging and abandonment of old wells, construction of new wells,
22 and installation of communications equipment; improvements including the
23 reconstruction of existing, or installation of new gas processing equipment; and
24 rehabilitation of existing compression equipment to maintain system reliability.

25

1 Transmission Plant includes land, pipelines, metering, pressure regulating,
2 communications equipment, and other station assets used for the movement of gas
3 from suppliers to storage, suppliers and storage to customers, and tying together
4 sources of gas supply to the point where it is reduced to distribution pressures.
5 Investments in transmission plant in the rate case period consists primarily of the
6 extension of new facilities to serve customers and execution of TMOD projects,
7 including replacements of pipelines, retrofit of pipelines for in-line inspections, and
8 reconstruction of regulator stations.

9

10 Distribution Plant includes land, mains, services, metering, pressure regulating,
11 communications equipment, and other station assets between the primary source of
12 supply and the point of delivery to the customer, which is not includable in the
13 transmission system. Primary distribution investment categories include gas main
14 extensions, new services, relocations of assets for public projects, system
15 improvements, and DMOD programs such as BSCI main replacements and
16 reconstruction of obsolete regulator stations.

17

18 General Plant includes gas utility assets not included in the other gas classifications
19 including transportation equipment (fleet), structures and improvements (buildings and
20 facilities), tools, and communication equipment.

21

22 **V. NON-CSIA CAPITAL INVESTMENTS 2007 - 2019**

23

24 **Q. Please identify and describe the more significant non-CSIA capital additions**
25 **constructed from the cutoff date in the last rate order through December 31,**

1 **2019 and included in this Cause.**

2 A. The cutoff date in Vectren North's last rate case was December 31, 2006, as adjusted
3 for two major projects – the Greensburg and Greencastle transmission lines - so this
4 question covers an extended period of time. The majority of the large project
5 investments from 2007 to the start of the CSIA in 2014 were for the replacement of
6 BSCI mains and services, installation of transmission mains for new industrial customer
7 loads, improvements to increase available system pressure and capacity for general
8 load increases, and relocation of facilities impacted by public projects. With the
9 approval of the CSIA Plan, BSCI and similar compliance investments and certain pre-
10 approved projects related to system improvement, public improvement, and rural
11 extensions were incorporated into that Plan. Non-CSIA capital investments from 2014
12 through 2019 were typically limited to new TDSIC-like projects – those not approved in
13 the CSIA Plan – and investments in Fleet and Facilities. I briefly describe the most
14 significant non-CSIA projects included in this Cause with capital investments exceeding
15 \$1,000,000 in my testimony and in Petitioner's Exhibit No. 4, Attachment SAH-1
16 Vectren North 2007-2019 Non-CSIA Large Capital Investments which identifies the
17 project number, project short description, category of work, project long description and
18 purpose, in-service date, and total investment in additions and cost of removals.

19
20 Four projects were constructed to support new business opportunities resulting in the
21 addition of new customer load to the Vectren North system. Fifteen projects were for
22 the replacement of bare steel or cast iron infrastructure. Four projects were for the
23 construction of new operations center. Eleven projects were for relocation of gas
24 facilities in conflict with other municipal or state road, water, or sewer reconstruction
25 projects.

1

2 Ten projects in the system improvement, gas modernization, and gas meter/regulation
3 categories were completed to replace older obsolete equipment, assets in poor
4 condition, or to upgrade existing assets to meet new in-line inspection standards.
5 Around 2013, Vectren North created the "Gas Modernization" category, but prior to
6 this time projects of this type were categorized as system improvement or gas
7 meter/regulator station depending on the asset. Six other system improvement
8 projects and one gas meter/regulator station project were constructed to increase
9 distribution or transmission system capacity or improve system pressures to support
10 general load increases.

11

12 Two system improvement projects – 06202753013 Greensburg Pipeline and
13 06202713012/06202753014 Greencastle 12" Transmission – were completed in
14 2007 but most of the capital expenditures were included in the prior Vectren North
15 Rate Case's rate base through a proforma filing. The two projects will be discussed
16 in more detail later in my testimony.

17

18 **Q. Please describe in more detail the three new business projects that resulted in**
19 **increased industrial load.**

20 A. Project 07575341014 was constructed to increase the system capacity to supply a
21 new prepared foods company in central Indiana. An eight-inch diameter, six-mile long
22 pipeline was constructed between two systems to increase capacity and a 1200' six-
23 inch main was built to supply the plant from the existing distribution system. Project
24 15595302041011 was for the construction of an eight-inch diameter, six-mile long
25 main to supply a stamping facility in Boone County. Project 13202802043011 was for

1 the construction of an eight-inch diameter, nearly three-mile long main to supply a
2 university co-generation project in northwestern Indiana. .

3

4 **Q. Please describe the eleven public improvement projects.**

5 A. Public improvement projects generally consist of the relocation of gas infrastructure to
6 facilitate the completion of the road, sewer, or like projects executed for the public
7 good and to minimize the risk of damage to gas facilities resulting from the public
8 project. The eleven large public projects 08592361010, 08575361010, 07575161013,
9 09592661525, 09592461532, 10592402061011, 10595702061212,
10 12583002061216, 11583002061011, 16595302061210, and 17583002061215
11 completed between 2007 and 2019 were located throughout the state and involved
12 relocations of gas mains and services for Indiana Department of Transportation
13 ("INDOT") and municipal projects in or around Madison, Rushville, Columbus,
14 Bloomington, Frankfort, Westfield, Carmel, and Avon. Additional details for each
15 project are contained in Petitioner's Exhibit No. 4, Attachment SAH-1 Vectren North
16 2007-2019 Non-CSIA Large Capital Investments.

17

18 **Q. Please describe the BSCI replacement program investments completed from**
19 **2007 through 2013.**

20 A. From 2007 through December 31, 2013, approximately \$92M in BSCI investments
21 were completed. About 230 miles of BSCI mains and 17,000 services were retired in
22 this timeframe and replaced with modern materials. Fifteen of the BSCI projects
23 completed between 2007 and 2013 exceeded \$1M in total costs. The projects are
24 listed in Petitioner's Exhibit No. 4, Attachment SAH-1 Vectren North 2007-2019 Non-
25 CSIA Large Capital Investments. Each project description includes the approximate

1 retired sizes and footage of mains retired and installed. About twenty-nine miles of
2 bare steel and cast iron were retired with the fifteen projects which were all part of
3 Vectren North's BSCI Replacement Program to mitigate risks associated with these
4 assets as described in Petitioner's Witness Porter's direct testimony.

5

6 **Q. Please describe the four operating center facilities projects in more detail.**

7 A. Projects 12A57502093013, 13A57502093065, 14A57502093042, and
8 16A57502093072 were for the construction of new operating center buildings in
9 Danville, Marion, Lafayette, and Clarksville. The existing buildings in each of these
10 locations were decades old, not designed to store and maintain modern service and
11 construction equipment, and too small to efficiently support the current local work force
12 of field operations and construction personnel, engineers, and support staff. The
13 Danville, Marion, and Clarksville buildings were entirely new construction while the
14 Lafayette building was acquired and reconstructed to meet Vectren North's specific
15 equipment and business needs.

16

17 **Q. Please describe the system improvement projects completed to mitigate or**
18 **identify risks associated with asset condition.**

19 Projects 11574102051210 Gas City-North B Street, 09203753527 Charlestown Pike,
20 and the 07202753601 Brazil Lateral projects were completed to replace portions of
21 coated steel pipelines experiencing corrosion and leaks due to coating failure or in the
22 case of the Brazil project – the original construction pipe segment welds were
23 completed using a process prone to cracking and leaks. Early vintage coated steel
24 lines can experience corrosion and leaks similar to bare steel mains. The
25 13202802013011 Upland Purchase Point Station and 13202802054012 Fairmount
26 Purchase Point Station projects were completed to mitigate corrosion issues with

1 station piping and to replace obsolete equipment. Portions of these older stations were
2 constructed in below-ground vaults which inherently collect and retain moisture
3 resulting in corrosion issues.

4

5 Four other system improvement projects – 13202802054013 Lafayette Taylor to
6 Wolcott Retrofit, 09203753601 HCJ-Moon Road RD STA.-ILI MODS,
7 10203702053011 Zionsville to Muncie ILI Mods, 11202802053017 Clarksville 16" RR
8 Replacement – were completed to comply with inspection requirements or to establish
9 the maximum allowable operating pressure of pipelines in accordance with
10 transmission integrity management regulations. As described by Petitioner's Witness
11 Sarah J. Vyvoda's testimony, in-line inspection is a method to inspect the pipelines
12 for defects which requires replacement of fittings, valves, and other ancillary
13 components to enable an inspection tool to travel through the pipeline and also, the
14 construction of tool launchers and receivers to introduce and remove the tools from
15 pipelines. Project 07202753610 Hydrotest VEDI-N Pipelines was for the modification
16 of various pipelines near Bloomington, Clarksville, Zionsville and Unionport to enable
17 pressure tests to assess pipeline condition and confirm the maximum allowable
18 operating pressure of the segments.

19

20 **Q. Please describe the system improvement projects completed to improve system**
21 **pressure and capacity.**

22 A. Little Chicago Road Station was for the construction of a new purchase point or
23 interconnection station between Vectren North and Panhandle Eastern Pipeline
24 Company to support the distribution system in and around Noblesville, IN. This area
25 was, and remains, a high growth part of the Vectren North system and the new station

1 introduced another source of gas to support the increased general customer load.

2

3 Project 13202802053011 Dana Purchase Point Meter Station Reconstruction was
4 required to support increasing demand in the Dana, IN system. The project consisted
5 of rebuilding the existing Vectren North and Panhandle Eastern Pipeline Company
6 interconnections to increase the system capacity. Project 17202802053013 Coopers
7 Lane Regulator Station Rebuild was required to support increasing system load in and
8 around a Jeffersonville, IN area industrial park.

9

10 The following four projects were all designed and constructed as part of a
11 comprehensive plan to support load growth in the Lafayette, IN area – (the “Lafayette
12 Area Project”):

- 13 • 16202802053011 Hendricks Co. Junction to Fox Station MAOP Increase. Modify
14 the existing Hendricks County Junction to Fox Station pipeline and rebuild the
15 stations to increase the pipeline maximum allowable operating pressure.
- 16 • 16202802053013 REX-Bainbridge Interconnect. Construct a new interconnection
17 between Rockies Express pipeline and existing Vectren North system.
- 18 • 16202802053015 Oakville Purchase Point – ANR. Construct a new
19 interconnection between American Natural Resources and Vectren North system.
- 20 • 15202802053015 REX Amo 20" Pipeline to Hendricks County Junction. Construct
21 a new interconnection with Rockies Express interstate transmission line and a new
22 twenty-inch diameter, eighteen-mile long pipeline to Vectren North's Hendricks
23 County Junction Station.

24 Computer modeling of the Vectren North systems in and around the system project
25 areas indicated existing customer load increases and new customer additions over the
26 years prior to this project's completion would result in lower than acceptable system

1 pressure and potential reliability issues if not addressed through a combination of
2 system improvements. Completion of the projects introduced additional gas sources
3 to the systems or reduced demand on existing supply points to proactively remediate
4 potential pressure issues and providing additional capacity to promote growth in the
5 surrounding areas.

6

7 **Q. Please describe in more detail the Lafayette Area Project.**

8 A. On October 1, 2015, Petitioner filed Cause No. 44430 TDSIC 3 (TDSIC-3) seeking
9 approval of, among other things, either the addition into the seven year Plan of an
10 infrastructure improvement project to be constructed in the Lafayette, IN area similar
11 to other TDSIC projects previously included in the Plan (the "Lafayette Area Project")
12 or, in the alternative, pre-approval of the Lafayette Area Project pursuant to Ind. Code
13 § 8-1-2-23. In the TDSIC-3 case, Petitioner's Witness Thomas L. Bailey explained
14 that economic growth is occurring in and around the Lafayette, Indiana
15 area and I testified in that case that based upon known and projected load growth in
16 the area, the modeling demonstrates that Petitioner would not be able to maintain
17 reliable service to Lafayette Area customers without making infrastructure investments
18 to increase the pressure on its transmission system. In addition, no party submitted
19 evidence disputing the need for the Lafayette Area Project. On March 30, 2016,
20 the Commission issued an Order rejecting the addition of the
21 Lafayette Area Project into the seven-year Plan, but pre-approving construction of the
22 project and recovery of costs associated therewith, provided the costs do not exceed
23 the \$67,335,191 estimated costs the Commission found reasonable. Specifically,
24 in ordering paragraph number 6, the Commission said,

25 "The Lafayette Area Project, as described herein and in Vectren
26 North's evidence, and the associated expenditure of funds in the amount

1 of the cost estimate of \$67,335,191 is approved. Petitioner is authorized
2 to include the Lafayette Area Project, upon its completion, in Petitioner's
3 net original cost rate base for ratemaking purposes up to the amount of
4 the approved estimate. However, if the actual cost exceeds the approved
5 estimate, then Petitioner shall have the burden to demonstrate that the
6 excess amount is reasonable and was prudently incurred in order to
7 include the excess in its rate base for ratemaking purposes.”
8
9

10 **Q. Did the costs to complete the Lafayette Area Project exceed the pre-approved**
11 **estimated cost of \$67,335,191?**

12 A. No. The consolidated cost to complete the projects – 16202802053011,
13 16202802053013, 16202802053015, and 15202802053015 - making up the Lafayette
14 Area Project was \$57,348,329 as submitted in Petitioner's Exhibit No. 4, Attachment
15 SAH-1 Vectren North 2007-2019 Non-CSIA Large Capital Investments and that is the
16 amount included for recovery in this case.
17

18 **Q. Please describe the Greensburg and Greencastle system improvement projects**
19 **in more detail.**

20 A. Both projects were discussed extensively in Vectren North's prior rate case and are
21 only summarized within my testimony. The Stipulation and Settlement Agreement
22 which was approved in that Order included estimated costs for both projects - \$28.3
23 million for the Greensburg project and \$12.6 million for the Greencastle project. There
24 was also a provision that Vectren North would late-file an exhibit showing actual costs
25 on both projects and the approved rates would be reduced to extent actual costs were
26 lower than estimated. Adjustments for cost increases for either project would not be
27 made to the approved rates, but would be addressed in the next rate case.
28

29 The Greensburg project was for the construction of a sixteen-inch diameter, twenty-
30 three mile long pipeline extending from north of Shelbyville to a manufacturing plant

northwest of Greensburg. An additional two and one-half miles of eight-inch pipeline was then extended to the city of Greensburg. An adjustment was made to rates for the project because incurred costs were lower, primarily because the two and one-half mile extension to Greensburg had not been completed in time for inclusion because of weather and easement acquisition delays. When the true-up was filed in the last rate case, \$24,259,325 was included for the portion of the Greensburg project that was in service at that time. The total final cost of the project was \$27,760,062 which is below the estimate of \$28.3 million included in the approved rate case settlement. The \$3.5M included in this case is the difference between the total project cost - \$27,760,062 and the amount included in the last rate case - \$24,259,325.

The Greencastle project was for the construction of approximately fourteen miles of twelve-inch pipeline from Carpentersville to Greencastle to replace an existing transmission line that required a pressure reduction due to integrity management concerns. The total cost of the project was \$15,776,941. The estimated project cost approved for inclusion in the prior case's rate base was \$12.6M. The \$3.1M in investments included in this case is primarily due to pipe and fitting material, right of way clearing, surveying, crop damage reimbursements, and construction route restoration exceeding the estimated costs.

VI. CSIA CAPITAL INVESTMENTS 2014 - 2019

Q. Please describe the plant additions from 2014 through 2019 attributed to the CSIA Plan.

A. Capital additions associated with the CSIA Plan were addressed in the bi-annual

1 TDSIC filings and Orders, and therefore I do not describe those projects in detail here.
2 CSIA investments in Compliance and TDSIC projects totaled approximately \$631M
3 through December 31, 2019. These investments in BSCI, TMOD, DMOD, SMOD, and
4 TDSIC public improvement, system improvement and rural extension projects are
5 recoverable pursuant to the Compliance and TDSIC Statutes and have been
6 submitted in the semi-annual TDSIC filings².

7

8 **Q. Please summarize the CSIA-related investments by category between 2014 and**
9 **2019.**

10 A. CSIA actual expenditures by category through December 31, 2019 are included in
11 Petitioner's Exhibit No. 4, Attachment SAH-2: Vectren North 2014 – 2019 CSIA
12 Investments.

13

14 **VII. 2020 CAPITAL INVESTMENT PLAN**

15

16 **Q. Please summarize the Company's 2020 CIP.**

17 A. For 2020, Vectren North budgeted \$170.8M in capital expenditures for gas
18 infrastructure, fleet, facilities, and technology improvements. Approximately \$78.7M in
19 Compliance Projects and \$17.5M in TDSIC projects comprised the majority of the
20 planned expenditures. The Compliance and TDSIC projects were identified in the
21 Cause No. 44430 TDSIC-11 Petition which was approved in the Commission's order
22 issued January 29, 2020 and is included as Petitioner's Exhibit No. 4, Attachment

² In accordance with the Compliance and TDSIC Statutes, eighty percent of the revenue requirement is recoverable in the CSIA, and the remaining twenty percent of the revenue requirement is deferred for recovery in the Company's base rate proceeding.

1 SAH-3 (CONFIDENTIAL). The remaining \$74.6M was budgeted for non-CSIA new
2 business, public improvement, system improvement, fleet, facilities, and technology.
3 Petitioner's Exhibit No. 4, Attachment SAH-4 Vectren North 2020 Capital Investment
4 Plan, provides the planned 2020 capital expenditures by major category.

5

6 **Q. Please describe the CSIA Plan portion of Vectren North's 2020 Capital**
7 **Investment Plan.**

8 The Vectren North CSIA for 2020 updated in TDSIC-11 on October 1, 2019 contains
9 the majority of planned capital investments the Company anticipated in 2020. The
10 Compliance and TDSIC projects were budgeted at the category levels historically
11 used for the CSIA as provided in TDSIC-11 and Petitioner's Exhibit No. 4,
12 Attachment SAH-4 Vectren North 2020 Capital Investment Plan. Anticipated full-
13 year investments for Compliance and TDSIC projects are approximately \$79.9M and
14 \$11.9M, respectively.

15

16 **Q. Please describe Vectren North's 2020 capital investments not included in the**
17 **CSIA Plan.**

18 A. In addition to the CSIA Plan investments, other capital investments to gas
19 transmission, distribution, and storage infrastructure; fleet; facilities; and intangible
20 plant will be incurred. Investments outside of the CSIA Plan were budgeted at the
21 category level as shown in Petitioner's Exhibit No. 4, Attachment SAH-4 Vectren North
22 2020 Capital Investment Plan. Individual project estimates were generally developed
23 as the "emergent" projects were identified during 2020. Projected non-CSIA
24 investments are currently anticipated to be \$85.9M.

25

26

1 **Q. Through November 2020 are Vectren North's actual expenditures in-line with the**
2 **2020 CIP previously developed?**

3 Yes, through November 2020, actual capital expenditures were \$160.8M and are
4 projected to be \$177.7M. The less than five percent increase in the total capital
5 forecast over the budget is primarily due to emergent and reprioritized project
6 expenditures in the modernization and public improvement categories.

7

8 **VIII. 2021 CAPITAL INVESTMENT PLAN**

9

10 **Q. Please summarize the 2021 CIP.**

11 A. Essentially, Vectren North has continued the practices and processes developed with
12 the CSIA Plan to produce the plan for capital investment in gas distribution,
13 transmission, and storage infrastructure for 2021). Most projects included within the
14 2021 CIP, whether Compliance Projects or TDSIC-like Projects – system
15 improvement, public improvement, and new business – were identified, to the extent
16 possible, several months to years in advance of construction. Similar to previous
17 years' CSIA Plans, the 2021 CIP consists of a mix of TMOD, DMOD, BSCI, SMOD,
18 new business, system improvement, and public improvement projects. In addition,
19 capital investments in fleet, facilities, and technology areas are included in the 2021
20 CIP. The total estimated capital investment for 2021 is \$212.2M. Investments in each
21 of the categories is shown in Petitioner's Exhibit No. 4, Attachment SAH-5 Vectren
22 North 2021 Capital Investment Plan (Confidential).

23

24 **Q. How were the investment amounts determined for the 2021 CIP?**

25 A. The 2021 CIP was developed using the same process and methods described earlier

1 in my testimony. Generally, the budget amounts established for 2021 were set to meet
2 objectives for pipeline replacement, retrofit, and upgrades of systems to improve
3 system safety and reliability and to support both anticipated and identified necessary
4 system improvements, public project relocation, and new business. Similarly, a
5 combination of historical expenditures in fleet, facilities, and technology along with
6 known specific investments in vehicles, structures, and software applications was
7 used to develop the capital budget amounts for 2021.

8

9 **Q. What are the estimated expenditures for the first six months of 2021 - January 1**
10 **through June 30?**

11 A. While factors out of Vectren North's control such as weather or pandemic-related
12 constraints may impact project schedules and expenditures, it is anticipated
13 approximately \$87.7M of investments will be incurred by June 30, 2021. Typically,
14 less construction work is completed in the early months of the year, January – March,
15 due to cold temperatures and corresponding ground conditions. From July 1 –
16 December 31, the remaining planned expenditures of \$124.5M in Vectren North are
17 anticipated to be completed.

18

19 **Q. Please describe the methodology utilized by Vectren North to develop estimates**
20 **for the projects that comprise the 2021 CIP.**

21 A. The standard estimate development cycle utilized by Vectren North consists of
22 development of preliminary estimates for most known projects eighteen to twenty-four
23 months in advance of a project's planned year of construction. Estimating resource
24 constraints, potential for changing site conditions, and potential fluctuations in labor
25 and material costs make it inefficient to perform detailed estimates for most projects

1 that are beyond an eighteen-month construction horizon. Preliminary estimates
2 incorporate the major cost components – labor, material, engineering, land acquisition,
3 etc. – but utilize assumptions around those components related to routes, construction
4 environment, labor availability, and material quantities and costs. Contingency is also
5 typically incorporated into the estimate to account for unknown factors.

6

7 Detailed engineering performed six to eighteen months ahead of planned construction
8 is intended to eliminate most assumptions and incorporate more certainty in the
9 estimate components through extensive research of historical work order information,
10 land acquisition, soil analysis, design locating, material and labor bids, etc. The
11 estimates resulting from detailed engineering are considered sufficiently accurate and
12 complete for the purpose of inclusion in the annual CIP. Projects are typically released
13 for competitive bids in the fall, prior to the construction year, which may affect
14 estimates based on contractor bid prices. This additional information can result in
15 increases or decreases in the cost estimates, which may in turn change the planned
16 portfolio of projects. Increased project estimates may reduce the overall number of
17 projects executed in the plan year while reduced estimates can result in additional
18 projects being prioritized into and completed in the plan year.

19

20 The project estimates in the 2021 CIP generally are in alignment with the “detailed
21 engineering” described above and are detailed and estimated consistent with the
22 recommended practices of AACE International, formerly the Association for the
23 Advancement of Cost Engineering International.

24

25

1 **Q. What is the AACE and why does Vectren North use this organization's**
2 **recommended practices for classifying the estimates?**

3 A. AACE is an association dedicated to furthering the concepts for total cost management
4 and cost engineering. The association is a recognized leader in the field of cost
5 estimating and has published many guides and recommended practices referenced
6 and utilized by a variety of industries to establish standardized criteria and ranges for
7 project estimates. Vectren North understands the need to provide accurate estimates
8 with the appropriate level of precision for the 2021 CIP and the AACE's recommended
9 practices establish a well-known and trusted framework to accomplish this
10 objective. AACE specifies five estimate classes, with Class 1 estimates representing
11 those projects that have greatest level of detail and an accuracy range of -10% to 15%
12 and Class 5 having the least amount of detail with an expected accuracy range of -
13 50% to 100%.

14

15 **Q. What AACE cost estimate class did Vectren North target for the projects in the**
16 **2021 CIP?**

17 A. The majority of projects planned for execution in 2021 were designed to meet a Class
18 2 estimate criteria. Class 2 estimates, which have accuracy ranges of - 15% to +20%,
19 balance the level of detail and confidence in design with appropriate engineering
20 resource utilization to ensure accurate estimates and work plans are developed for
21 projects to be executed in the next one to two years. The following table describes
22 the characteristics of Class 2 cost estimates:

23

	PRIMARY CHARACTERISTIC	SECONDARY CHARACTERISTIC		
ESTIMATE CLASS	MATURITY LEVEL OF PROJECT DEFINITION DELIVERABLES Expressed as % of complete definition	END USAGE Typical purpose of estimate	METHODOLOGY Typical estimating method	EXPECTED ACCURACY RANGE Typical variation in low and high ranges
Class 2	30% to 75%	Control or bid/tender	Detailed unit cost with forced detailed takeoff	L: -5% to -15% H: +5% to +20%

1 Note: The above table has been re-produced using data from "AACE International
2 Recommended Practice No.18R-97: COST ESTIMATE CLASSIFICATION
3 SYSTEM - AS APPLIED IN ENGINEERING, PROCUREMENT, AND
4 CONSTRUCTION FOR THE PROCESS INDUSTRIES, Rev. November 29,2011;
5 http://www.aacei.org/toc/toc_18R-97.pdf"

6 This level of detail is consistent with the requirements of the TDSIC Statute as they
7 have been construed by the Commission in previous orders. With this target criteria
8 established, the estimates were developed with a combination of internal and external
9 engineering resources using Vectren North's engineering systems and standards.

10
11 **Q. How were the project cost estimates developed?**

12 A. The process used for all project estimations considered material and labor quantities
13 associated with the defined scopes of work and Vectren North's Engineering and
14 Construction Standards. All estimators, whether internal Vectren North or external
15 resources, used a consistent set of base cost assumptions including appropriate labor
16 rates, material costs, and other factors such as complexity of the work and location.
17 Supplementing these base assumptions were additional activities and data sources,
18 including:

- 1 • Site visits with engineering teams to assess locational factors including
- 2 accessibility and other physical constraints. Where site visits were not
- 3 completed, aerial photography or geospatial data was utilized to assess
- 4 locational factors;
- 5 • Costs of recently completed projects of a similar scope;
- 6 • Material and equipment costs from Vectren North's inventory management
- 7 system supplemented as needed with recent pricing from vendors that supply
- 8 gas equipment to Vectren North; and
- 9 • Overhead costs and labor and material loadings from Vectren North's
- 10 accounting system.

11

12 **Q. What is the definition of contingency?**

13 A. AACE has defined contingency as an amount added to an estimate to allow for items,

14 conditions, or events for which the state, occurrence, or effect is uncertain and that

15 experience shows will likely result, in aggregate, in additional costs.

16

17 **Q. Has Vectren North included contingencies in the cost estimates?**

18 A. Yes. Estimates include a contingency placed on the labor, materials, and services.

19 Contingencies vary by project type and project based upon level of known scope and

20 site condition detail.³ The more data and information available for a particular project

21 will generally result in a lower contingency amount.

22

³ Most project estimates specifically identify "contingency" amounts or percentages. Some may simply include additional hours or units of work in a task estimate line such as "excavation".

1 **Q. How were contingencies used to improve the project estimates?**

2 A. Appropriate levels of contingencies were added to each project cost estimate
3 dependent upon the completeness of the work scope and detailed engineering and
4 complexity of the project. The level of contingency applied to estimates was not the
5 same for all projects. Projects with well-defined work scopes, complete detailed
6 engineering, and less complexity – simple gas distribution main replacements –
7 require less contingency. Projects such as gas transmission line replacement or
8 storage well drilling activities are larger in scope and complexity and generally received
9 a higher level of contingency.

10

11 **Q. Why is it important to include a contingency in an estimate?**

12 A. Vectren North intends to provide accurate and complete estimates for the 2021 CIP.
13 For projects that involve the installation of new or replacement of existing underground
14 utilities, there are many possible risks and uncertainties that could cause project cost
15 increases. This likelihood must be recognized in a fully transparent estimate and
16 Vectren North's contingency is intended to address project uncertainties.

17

18 **Q. Is it common estimating practice to include both contingency and the**
19 **application of class estimate ranges?**

20 A. Yes. A cost estimate is a prediction of the final, "most likely" cost of a project to be
21 completed in the future. This prediction carries risk and uncertainty which the estimate
22 ranges attempt to address by establishing potential minimum and maximum project
23 costs based on the level of definition of the project work scope. Contingency is a
24 necessary component of the cost estimate which is intended to address items that
25 cannot be quantified at the current level of project definition but will be necessary to

1 complete the project. The contingency enhances confidence that the project final cost
2 will be within the upper and lower limits of the estimate range.
3

4 **Q. Is Vectren North submitting the project cost estimates to support its 2021 CIP?**

5 A. Yes, two project cost estimate examples are attached to my testimony as, Petitioner's
6 Exhibit No. 4, Attachment SAH-6 Project Cost Estimate Example 1 (CONFIDENTIAL)
7 and Petitioner's Exhibit No. 4, Attachment SAH-7 Project Cost Estimate Example 2
8 (CONFIDENTIAL). All known project cost estimates will be submitted as work papers.
9 Estimate work papers are not provided for expected, but currently unknown,
10 "emergent" or general investment amounts included in the CIP and based upon
11 historical expenditure information.
12

13 **Q. What level of detail is included in the cost estimates?**

14 A. Vectren North has created a cost estimate for each currently identified project included
15 in the Plan. The cost estimates include line item break down of the costs of each
16 project including contract labor, material, internal labor, material and labor loadings,
17 engineering costs, land, and contingency. For further detail, refer to Petitioner's
18 Exhibit No. 4, Attachment SAH-6 and Petitioner's Exhibit No. 4, Attachment SAH-7
19 which contain example project estimates. All currently identified individual project
20 estimate information is included in my work papers.
21

22 **Q. What level of confidence does Vectren North have in its cost estimates?**

23 A. Vectren North has high confidence in the accuracy and completeness of the Plan's
24 project cost estimates. The majority of the projects were estimated to meet AACE
25 Class 2 estimate ranges of -15% to +20%.

1

2 **Q. Does Vectren North also attempt to keep the cost of individual projects to within**
3 **the Class 2 estimate ranges?**

4 A. Yes. As described previously in my testimony, the Company endeavors to manage
5 costs at a project level. However, various factors can make this extremely challenging
6 for many projects, including: the fact that most assets are below ground, varying
7 environmental conditions, conflicts with other below ground utilities, ongoing project
8 refinements and addition of infrastructure to comply with PHMSA regulations, etc.

9

10 **Q. Describe Compliance Program projects planned for 2021.**

11 A. Vectren North has identified a portfolio of projects to be constructed in 2021 as part of
12 the TMOD, DMOD, BSCI, and SMOD Compliance programs. The Compliance projects
13 have been categorized and are provided in Petitioner's Exhibit No. 4, Attachment SAH-
14 5 (Confidential). Included in each corresponding Schedule, currently known TMOD
15 (Schedule 2), DMOD (Schedule 3), BSCI (Schedule 4), and SMOD (Schedule 6)
16 project information is summarized including project number(s), category, location,
17 project short description, and current estimated cost. Vectren North has included
18 general project lines and total estimated costs in certain Schedules for emergent work
19 that may arise during 2021. As described previously, construction labor bids and other
20 factors may change project estimates significantly enough to result in more or fewer
21 projects being executed in 2021.

22

23 **Q. Describe planned system improvement, public improvement, and new business**
24 **projects for 2021.**

25 A. Vectren North has identified a portfolio of projects listed in Petitioner's Exhibit No. 4,
26 Attachment SAH-5 (Confidential), Schedule 5 (Other) for construction in 2021. While

1 there is typically some certainty around the system improvement project execution, a
2 portion of system improvement, new business, and public improvement projects are
3 only identified during the year they are constructed. Vectren North has included
4 general project lines and total estimated costs for emergent system improvement, new
5 business and public improvement projects based on historical annual expenditures in
6 these categories of work.

7

8 **Q. Are there any projects under consideration subject to a 20-year margin test?**

9 A. Yes, Vectren North has been evaluating two potential rural extension projects for 2021
10 that would be subject to the 20-year margin test. One project is in Plainfield and the
11 other in Georgetown.

12

13 **Q. What is the 20-year margin test?**

14 A. Indiana Code 8-1-39-11 provides for the extension "of service in rural areas without a
15 deposit or other adequate assurance of performance from the customer, to the extent
16 that the extension of service results in a positive contribution to the utility's overall cost
17 of service over a twenty (20) year period." This provision is incorporated into Vectren
18 North's tariff related to extension of service to customers in unincorporated areas
19 within its service territory.

20

21 **Q. Do the potential projects pass the 20-year margin test?**

22 A. The Plainfield project meets the 20-year margin test, but the Georgetown estimated
23 project cost significantly exceeds the 20-year margin as currently calculated. A
24 substantial contribution would be required by other units of local government and/or
25 economic development entities to justify construction of the Georgetown project.
26 However, because the project was introduced in prior TDSIC proceedings and has the

1 potential to be constructed in 2021, it is included in this case. The project estimates
2 and their associated 20-year margin calculations will be submitted as work papers.

3

4 **Q. Has construction for this project been started?**

5 A. No. Both projects are still under consideration and have not been started. The
6 Georgetown project in particular will require additional funding to proceed.

7

8 **Q. Are the anticipated costs for the potential rural extension projects included in**
9 **the new business 2021 CIP?**

10 A. Yes, the 2021 new business capital plan anticipates the projects will be completed in
11 2021. However, if these rural extension projects do not proceed until after 2021, it is
12 anticipated other projects will be undertaken; therefore, the total new business 2021
13 capital investment amount represents the total planned capital spending for all new
14 business projects. As described earlier in my testimony, various factors make
15 managing costs at the individual project level challenging and new business projects
16 are managed at both project and program level to balance the need for individual
17 projects against the annual budget for this category of work.

18

19 **Q. Please describe Vectren North's planned transportation and facilities**
20 **investments for 2021.**

21 Facilities investments will include building and building mechanicals investments
22 including roof replacements at multiple facilities, parking lot repaving at multiple
23 facilities, and general upgrades several Vectren North operating center buildings.
24 Transportation investments include the replacement of various vehicles, crew trucks,
25 equipment, and trailers.

26

1 **IX. CONCLUSION**

2

3 **Q. Please describe the benefits associated with the projects completed, in-**
4 **progress, or planned as part of Vectren North's capital investment plan.**

5 A. There are a number of benefits Vectren North and its customers realize upon
6 completion of capital investments in gas infrastructure. Replacement of certain assets,
7 BSCI or vintage plastic, obsolete risers, and ineffectively coated steel service lines
8 reduces leaks in Vectren North's system; the occurrence of future leaks and leak repair
9 work; and interruptions, inconveniences and disturbances to customers. The
10 remediation of issues such as exposures, shallow pipe, and the replacement of
11 obsolete equipment reduces risk on the system and enhances safety and reliability of
12 the pipeline system. Upgrades to system pressures allow for enhanced system
13 capacity and reliability. The use of modern materials allows for the installation of
14 superior equipment, such as excess flow valves, to enhance pipeline safety.
15 Additional operational efficiencies result from the retirement of regulator stations,
16 valves, casings, test stations for cathodic protection, and reduced frequency of leak
17 surveys. Enhancements to the transmission system by retrofitting pipelines for in-line
18 inspection assessment capability, pressure testing, or equipping valves with remote
19 controls allows Vectren North to ensure its transmission pipelines maintain safe and
20 reliable operation. Enhancements to gas storage field wells and gas processing
21 equipment improve the safety and reliability of this important gas supply management
22 asset. Activities to reduce facility damages as a result of excavation activity will
23 decrease the likelihood of a significant pipeline safety incident and enhance the
24 integrity of Vectren North's pipeline system. Expansion of the distribution system
25 through new business activities increases access to natural gas for homes and

1 businesses. Relocation of assets in support of public improvement projects is
2 beneficial to public entities as they make enhancements to infrastructure and
3 minimizes potential damage to Vectren North's assets during public project execution.
4 Ultimately, these types of improvements support compliance with pipeline safety
5 regulations and provide reliability and safety benefits to Vectren North's customers or
6 property owners that live in the vicinity of the projects.

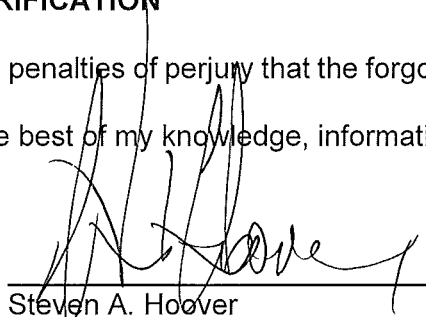
7

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

9 A. Yes, it does.

VERIFICATION

I, Steven A. Hoover, affirm under the penalties of perjury that the forgoing representations of fact in my Direct Testimony are true to the best of my knowledge, information and belief.



Steven A. Hoover

Dated: December 18, 2020

Attachment SAH-1 provided in Excel format

Attachment SAH-2 provided in Excel format

STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

**VERIFIED PETITION OF INDIANA GAS COMPANY, INC.)
D/B/A VECTREN ENERGY DELIVERY OF INDIANA, INC.)
FOR (1) APPROVAL OF AN ADJUSTMENT TO ITS GAS)
SERVICE RATES THROUGH ITS CSIA RATE)
SCHEDULE, (2) AUTHORITY TO DEFER 20% OF THE)
APPROVED EXPENDITURES FOR RECOVERY IN) CAUSE NO. 44430-TDSIC-11
PETITIONER'S NEXT GENERAL RATE CASE, AND (3))
APPROVAL OF PETITIONER'S UPDATED 7-YEAR)
PLAN, INCLUDING ACTUAL AND PROPOSED)
ESTIMATED CAPITAL EXPENDITURES AND CSIA)
COSTS, ALL PURSUANT TO IND. CODE CHPT. 8-1-8.4)
AND 8-1-39 AND THE COMMISSION'S ORDER IN)
CAUSE NO. 44429)**

VERIFIED PETITION

Indiana Gas Company, Inc. d/b/a Vectren Energy Delivery of Indiana, Inc. a CenterPoint Energy Company ("Vectren North" or "Petitioner") petitions the Indiana Utility Regulatory Commission ("Commission") for approval of (a) a Compliance and System Improvement Adjustment ("CSIA"), based on 80% of the calculated revenue requirement on recoverable investments and expenses associated with complying with federal mandates ("the Compliance Projects") and to improve safety, reliability or modernization of its gas pipeline systems ("TDSIC Projects"), in accordance with Ind. Code chpts. 8-1-8.4 and 8-1-39, as set forth in Petitioner's Exhibit No. 3, Attachment JCS-4 to be applicable for bills rendered beginning January 1, 2020 and to remain in effect until replaced in a subsequent filing; (b) the deferral of 20% of the calculated revenue requirement on recoverable investments for Compliance and TDSIC Projects; (c) an update to its seven (7) year plan (the "7 Year Plan") previously approved by the Commission including actual and projected capital and operation and maintenance ("O&M") expenditures associated with the Compliance Programs that exceed the amounts approved in Cause No. 44430 TDSIC-10 (the "TDSIC-10 Order"); and (d) an adjustment to Petitioner's authorized net operating income to reflect any approved earnings for purposes of Ind. Code § 8-1-2-42(g)(3). In

accordance with 170 IAC 1-1.1-8 and 1-1.1-9 of the Commission's Rules of Practice and Procedure, Petitioner submits the following information in support of this Petition:

Petitioner's Characteristics

1. Petitioner is an operating public utility, incorporated under the laws of the State of Indiana, with its principal office and place of business at One Vectren Square, Evansville, Indiana 47708. Petitioner is engaged in rendering gas service in the State of Indiana and owns, operates, manages, and controls plant and equipment within the State of Indiana used for the transmission, delivery, and furnishing of gas utility service to the public. Petitioner furnishes such gas utility service to approximately 570,000 retail customers.

2. Petitioner is a "public utility" within the meaning of Ind. Code §§ 8-1-39-4 and 8-1-2-1 and an "energy utility" within the meaning of Ind. Code §§ 8-1-2.5-2 and 8-1-8.4-3 and is subject to the jurisdiction of this Commission in the manner and to the extent provided by the Public Service Commission Act, as amended, and other pertinent laws of the State of Indiana.

Background and Relief Sought by Petitioner

3. On November 25, 2013, Vectren North filed a Petition, docketed as Cause No. 44430, for approval of its 7 Year Plan pursuant to Ind. Code § 8-1-39-10(a) and Ind. Code § 8-1-8.4-1 *et seq.* The Commission subsequently consolidated this Cause into Cause No. 44429 in which Vectren North's affiliate filed a similar proposal. In the August 27, 2014 Order in Cause No. 44429/44430 (the "44429 Order"), the Commission held: (a) the Compliance Projects in the 7 Year Plan are compliance projects undertaken to comply with federally mandated requirements; (b) the TDSIC Projects contained in year one of Vectren North's 7 Year Plan are "eligible transmission, distribution, and storage system improvements" within the meaning of Ind. Code § 8-1-39-2; (c) the 7 Year Plan is reasonable and approved; (d) Vectren North is authorized to

implement its CSIA Rate Schedule to recover 80% of the revenue requirement on eligible project investments; (e) Vectren North's proposed method of calculating a pretax return is approved; (f) the TDSIC Projects' and Compliance Projects' post in service costs may be deferred, with carrying costs, until such costs are recovered through the CSIA; (g) the CSIA may be assessed to residential customers as a fixed monthly charge; and (h) Vectren North may defer 20% of the revenue requirement on the 7 Year Plan's eligible and approved capital expenditures. The Indiana Court of Appeals affirmed the 44429 Order in its June 11, 2015 Memorandum Decision.

4. Consistent with the 44429 Order and Ind. Code § 8-1-39-9, Petitioner seeks periodic automatic adjustments of its CSIA every six months. The Commission has approved adjustments to the CSIA in orders issued in Cause No. 44430 TDSIC-1 ("TDSIC-1 Order"), Cause No. 44430 TDSIC-2 ("TDSIC-2 Order"), Cause No. 44430 TDSIC-3 ("TDSIC-3 Order"), Cause No. 44430 TDSIC-4 ("TDSIC-4 Order"), Cause No. 44430 TDSIC-5 ("TDSIC-5 Order"), Cause No. 44430 TDSIC-6 ("TDSIC-6 Order"), Cause No. 44430 TDSIC-7 ("TDSIC-7 Order"), Cause No. 44430 TDSIC-8 ("TDSIC-8 Order"), Cause No. 44430 TDSIC-9 ("TDSIC-9 Order") and the TDSIC-10 Order. In these orders and except as noted below, the Commission (1) held the projects contained in the applicable period of the 7 Year Plan constitute "eligible transmission, distribution, and storage system improvements" within the meaning of Indiana Code § 8-1-39-2; (2) approved Petitioner's updated 7 Year Plan, including the updated project lists, project cost estimates and the updated annual projected spends for the remaining years of the 7 Year Plan; (3) authorized Petitioner to recover 80% of the costs incurred in connection with the updated 7 Year Plan through the CSIA and to defer 20% of the costs incurred, including ongoing carrying charges on all deferred costs, for recovery in its next general rate case; (4) authorized Petitioner to implement a CSIA Rate Schedule that effectuates the timely recovery of 80% of eligible and approved capital and O&M expenditures resulting from TDSIC Projects and Compliance Projects; and (5) authorized Petitioner to adjust its net operating income for purposes of the earnings test

calculation pursuant to Ind. Code § 8-1-2-42(g)(3) by the approved amounts. The TDSIC-1 Order also approved the requested rate schedule allocation and allowed Petitioner to no longer make replacement program compliance filings under Cause No. 43298 and for such filings to instead be included with each April TDSIC.

5. The Commission did not approve recovery of costs associated with TDSIC Projects incurred during the period of July 1, 2014 through December 31, 2014 in the TDSIC-2 Order because the Petitioner withdrew its request for recovery of these costs to enable it to prepare and submit more detailed cost estimates associated with its plan updates required for the TDSIC Projects. Petitioner submitted additional evidence in TDSIC-3 and the Commission approved the TDSIC Projects for that period and the next six months except for a gas pipeline designed to ensure adequate supplies in and around Lafayette, Indiana and certain projects that were not specifically identified in the original 7 Year Plan or previously approved updates to the 7 Year Plan. In TDSIC-8, Petitioner also removed, and the Commission accordingly excluded, certain multiple unit TDSIC programs, as well as costs incurred during the period within those program categories. In TDSIC-10, Petitioner removed, and the Commission accordingly excluded, one TDSIC project, as well as costs incurred during the period within those project categories.

6. In accordance with Ind. Code §§ 8-1-8.4-7(c) and 8-1-39-9(a), and the 44429 Order, TDSIC-1 Order, TDSIC-2 Order, TDSIC-3 Order, TDSIC-4 Order, TDSIC-5 Order, TDSIC-6 Order, TDSIC-7 Order, TDSIC-8 Order, TDSIC-9 Order and TDSIC-10 Order (collectively the "TDSIC Orders"), Petitioner requests Commission approval of CSIA rates and charges to be applicable and made effective on January 1, 2020 and to remain in effect until replaced by different charges approved in a subsequent filing to effectuate the timely recovery of 80% of the revenue requirement on approved capital expenditures associated with the Compliance and TDSIC Projects and associated operating expenses inclusive of O&M expenses, depreciation,

and property tax expenses.¹ Vectren North also requests Commission approval of the capital investments associated with the Compliance and TDSIC Projects incurred through June 30, 2019 upon which the proposed CSIA charges are based, along with a reconciliation of actual recoveries and actual costs recoverable in the CSIA. Finally, Vectren North requests approval of an adjustment to its authorized net operating income to reflect any approved earnings for purposes of Ind. Code § 8-1-2-42(g)(3) as supported by Petitioner's Exhibit No. 3, Attachment JCS-2 and JCS-3.

7. In accordance with Ind. Code §§ 8-1-8.4-7(c) and 8-1-39-9(b), as well as the TDSIC Orders, Petitioner requests Commission approval of the deferral, until the Company's next base rate case, of 20% of the revenue requirement on approved capital expenditures associated with the Compliance and TDSIC Projects and associated operating expenses inclusive of O&M expenses, depreciation, and property tax expenses.

8. Petitioner's schedules showing the calculations underlying the proposed revenue requirement calculations related to eligible CSIA costs, both recoverable in the Company's CSIA and deferred, incurred through June 30, 2019 are attached hereto as Petitioner's Exhibit No. 3, Attachments JCS-1, JCS-2, and JCS-3.

9. In accordance with Ind. Code § 8-1-39-9(a)(2), Petitioner's 7 Year Plan is attached hereto as Petitioner's Exhibit No. 1, Attachment SAH-4 (Public), Attachment SAH-5 (Public), Attachment SAH-6 (Public), Attachment SAH-8 (Public), Attachment SAH-11 (Public), Petitioner's Exhibit No. 2, Attachment SJV-3, and as further set forth in its Case-in-Chief.

¹ Ind. Code § 8-1-39-12 provides that an order shall be issued not more than ninety (90) days after a Petition is filed. The Petitioner has agreed to waive this requirement in this proceeding to afford the Commission additional time to issue an order. As described in paragraph 22, Petitioner requests authority designed to make it financially whole despite this delay.

10. In accordance with Ind. Code § 8-1-39-9(a)(3), the projected effects of the CSIA on retail rates and charges are shown on Petitioner's Exhibit No. 3, Attachment JCS-6 attached hereto.

11. In accordance with Ind. Code § 8-1-39-9(a), a copy of this Verified Petition is being provided to the Indiana Office of Utility Consumer Counselor ("OUCC").

12. In accordance with Ind. Code § 8-1-39-9(c), Petitioner is not filing this petition within nine (9) months after the date on which the Commission issued an order changing Petitioner's basic rates and charges. The date of Petitioner's most recent retail gas base rate order was February 13, 2008. Petitioner will petition the Commission for review and approval of its basic rates and charges before the expiration of its 7 Year Plan.

13. In accordance with Ind. Code § 8-1-39-9(e), Petitioner has not filed a petition under Ind. Code § 8-1-39-9 within the last six (6) months

14. In accordance with Ind. Code § 8-1-39-9(f), Petitioner has, in its case-in-chief, provided specific justification for, and requests specific Commission approval of, actual and proposed estimated capital expenditures and CSIA costs in the updated 7 Year Plan.

15. In accordance with Ind. Code § 8-1-39-14(a), Petitioner's evidence provides its method of calculating the average aggregate increase in its total retail revenue attributable to the CSIA to determine whether the TDSIC portion of the CSIA will result in an average aggregate increase of more than two percent (2%) in a twelve month period. Petitioner's Exhibit No. 3, Attachment JCS-3, Schedule 8 Page 1 of 1 demonstrates that Petitioner's proposed TDSIC Component will not result in an average aggregate increase in Petitioner's total retail revenue of more than two percent (2%) in a twelve month period.

16. In accordance with the 44429 Order and TDSIC-4 Orders, Petitioner conducted a meeting among interested stakeholders on September 4, 2019 to discuss its Fall CSIA filing, including updates to and variances from the approved 7 Year Plan.

Applicable Law

17. Petitioner considers the provisions of the Public Service Commission Act, as amended, including Ind. Code chpts. 8-1-8.4 and 8-1-39 among others, to be applicable to the subject matter of this Petition and believes that such traditional statutes provide the Commission authority to approve the requested relief.

Petitioner's Counsel

18. The names and addresses of persons authorized to accept service of papers in this proceeding are:

Heather A. Watts (Atty. No. 35482-82)
Robert E. Heidorn (Atty. No. 14264-49)
P. Jason Stephenson (Atty. No. 21839-49)
CenterPoint Energy, Inc.
One Vectren Square
Evansville, IN 47708
Ms. Watts' Direct Dial: (812) 491-5119
Mr. Heidorn's Direct Dial: (812) 491-4203
Mr. Stephenson's Direct Dial: (812) 491-4231
Facsimile: (812) 491-4238
E-mail: Heather.Watts@centerpointenergy.com
Bob.Heidorn@centerpointenergy.com
Jason.Stephenson@centerpointenergy.com

Procedural Matters

19. The books and records of Petitioner supporting such data, calculation and allegations are available for inspection and review by the OUCC and the Commission.

20. Petitioner requests that the Commission approve a procedural schedule agreed to by the Petitioner and the OUCC and dispense with conducting a prehearing conference. The agreed schedule is as follows:

Date	Event
November 27, 2019	OUCC/Intervenors File Case-in-Chief
December 6, 2019	Petitioner's Rebuttal Testimony
Week of December 16, 2019	Hearing
December 20, 2019	Petitioner Submits Proposed Order
January 10, 2020	OUCC/Intervenors Submit Proposed Order
January 15, 2020	Petitioner Submits Reply to Proposed Orders

21. Ind. Code § 8-1-39-12 provides that (a) not more than ninety (90) days after a public utility files a petition under Ind. Code § 8-1-39-9, the Commission shall conduct a hearing and issue an order on the petition; and (b) not more than sixty (60) days after a public utility files a petition under Ind. Code § 8-1-39-9, the OUCC and other intervenors, if any, may: (1) examine the information to confirm that the proposed transmission, distribution, and storage system improvements comply with Ind. Code Ch. 8-1-39; and (2) report its findings to the Commission.

22. While the Petitioner is entitled to issuance of an order within ninety (90) days, Petitioner is proposing a schedule that affords the Commission one hundred and twenty (120) days. To avoid financial harm to Petitioner caused by agreeing to an additional thirty (30) days for this proceeding, Petitioner proposes that the month of January 2020 will be reconciled to the authorized revenue requirement ultimately approved in TDSIC-11, with any variances recovered in subsequent TDSIC proceedings (in this case, TDSIC-13).

Cause No. 45468

WHEREFORE, Indiana Gas Company, Inc. d/b/a Vectren Energy Delivery of Indiana, Inc. respectfully requests that the Commission promptly publish notice, make such other investigation and hold such hearings as are necessary or advisable and thereafter, make and enter an order in this Cause:

(a) Authorizing and approving the CSIA rates and charges set forth in Petitioner's Exhibit No. 3, Attachment JCS-4 to become effective January 1, 2020 and remain in effect until replaced in a subsequent filing;

(b) Authorizing and approving the deferral of 20% of the calculated revenue requirement on recoverable investments for Compliance and TDSIC Projects;

(c) Approving updates to Petitioner's 7 Year Plan to be described in more detail in its Case-in-Chief;

(d) Approving the procedural schedule agreed to among the OUCC and Petitioner;

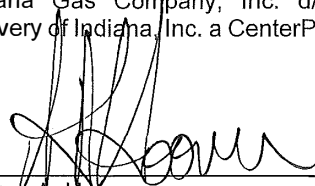
(e) Authorizing the CSIA costs to be recovered in the month of January 2020 to be reconciled to the authorized revenue requirement ultimately approved in TDSIC-11 with any variances recovered in subsequent TDSIC proceedings; and

(f) Granting to Petitioner such additional and further relief as may be deemed necessary or appropriate.

Cause No. 45468

DATED: this 1st day of October, 2019

Indiana Gas Company, Inc. d/b/a Vectren Energy
Delivery of Indiana, Inc. a CenterPoint Energy Company

A handwritten signature in black ink, appearing to read 'S. Hoover', is written over a horizontal line.


Steven A. Hoover
Regional Director of Gas Engineering

Cause No. 45468

CERTIFICATE OF SERVICE

The undersigned hereby certifies that the foregoing "Verified Petition" was served by electronic mail, upon Jeffrey Reed, the Indiana Office of Utility Consumer Counselor, PNC Center, 115 West Washington Street, Suite 1500 South, Indianapolis, Indiana, 46204, infomgt@oucc.in.gov and jreed@oucc.in.gov.

Dated: October 1, 2019


Heather A. Watts
Indiana Atty. No. 35482-82

Vectren North
Compliance Plan - Transmission Modernization Projects

Database Project Number	Oracle Project Number	Project Category	Division	OC	City	Project Short Description	Previous Planned Year (4/1/19)	Current Planned Year	Previous Estimate (4/1/19)	Current Estimate	Estimate Variance (\$)	Estimate Variance (%)	Timing Variance Commentary (Current Fall 2019 Filing)	Estimate Variance Commentary (Current Fall 2019 Filing)	Current Period Actual Spend (1/1/19 - 6/30/19)	Inception to Date Actual Spend (1/1/14 - 6/30/19)	Actual Spend Variance (\$)	Actual Spend Variance (%)	In-service? (Y or N)	Actual Spend Variance Commentary (Current Fall 2019 Filing)
3284	14202802054060	Odorizers	SE	Columbus	Seymour	Replace odorizer at Seymour PP	2018	2018											Y	
4291	18202802054012	Valves / Operators / Remote Cntrl	SE	Columbus	Columbus	Grandview 6" Valve Replmt	2018	2018											Y	A number of utilities were not identified until construction began and required an additional week of work by the contractor, inspector, etc. to work around. The utilities identified when construction started, were private electric and fiber facilities, which are not located via one call/911. These utilities were also not identified on available historical records. Vectren North became aware of and located the private facilities while on-site for the start of construction and spot holing for other activities. Credit to charges this period are due to accounting error - \$228k of charges were inadvertently applied to this work order prior to the last filing rather than 16202802049012 Pendleton Shelby Sta Project in SAH-8. This has been corrected in both work orders this filing.
3285	16202802054019	Pressure Test	SE	Bloomington	Bloomington	8"10" Dolan to IU Meter - Pressure test 1.80 miles of pipeline	2017	2017											Y	A casing was found shorted under a RR crossing and required insertion of a new segment of pipe and spacers. Additionally, undocumented fittings on the transmission line required replacement resulting in additional labor and material costs. A mechanical coupling at the Dolan station was found on pressure test, that trapped several pigs. Also had additional legal fees for ROW acquisition and restoration due to flooding. Charges this period for carryover restoration and legal fees.
3475	17202802054026	Pressure Test	NW	Wolcott	Wolcott	Wolcott Storage Field - Pressure test 3.50 miles of pipeline	2017	2017											Y	Project costs increased due to scope changes. Original scope was to replace leaking valve. However, once the project was started pipe seam anomalies were identified at four locations in the vicinity and cut outs/replacements were completed.
4205	17202802054029	Priority Pipe	NE	Lebanon	Zionsville	16" HCJ to Zionsville - Replace leaking valve	2018	2018											Y	Project costs increased due to scope changes. Original scope was to replace leaking valve. However, once the project was started pipe seam anomalies were identified at four locations in the vicinity and cut outs/replacements were completed.
4208	17202802054028	Priority Pipe	NW	Darville	Brownsburg	12" HCJ to Fox - Replace leaking insulator	2017	2017											Y	
3890	17202802054024	Priority Pipe	NW	Lafayette	Lafayette	8" NW3109 Linden Line Segment 1, 2, and 4 - Replace 12.15 miles of previously reconditioned 1942 and 1947 pipe and replace rectifier	2018	2018											Y	Crawfordsville to Lafayette 12" main. This project's actual cost exceeded the previous estimate primarily due to encountering rock that was not expected. Soil borings were performed along the route, but the rock was encountered at isolated locations where soil borings were not performed. Field investigation determined the need to replace some of the regulator station inlet piping at multiple locations due to unknown material specification and rebuild two stations where the new line supplies the de-rated existing main. Some costs were incurred due to delays caused by vendor supply issues (e.g. stoppie fitting availability).
4174	17202802054235	Priority Pipe	NW	Lafayette	Romney	Distribution support project for Linden replacement - Install 3,500' of 2" PE	2018	2018											Y	Required relocating of a regulator station because of easement issues was not included in the original design. Installed three additional main extensions to pick up 12 services to be removed from HP main to the MP main. The additional main extensions required acquisition of easement. Existing rocky condition under the creek was not considered in the original design which required a rock cutting machine and equipment, also several of the tie-in locations were deep which required shoring. Additional traffic control was required due to congestion on US231.
4175	18202802054213	Priority Pipe	NW	Lafayette	Romney	Distribution support project for Linden replacement - Derate parallel Linden 8" transmission pipeline to 60 psig	2018	2018											N	The project was to support the derate of one 8" HP transmission gas line from high pressure to medium pressure and replacement of a second 8" HP transmission gas line with 12" HP transmission gas line. Additional services were found to be connected to the main to be retired during the field investigation and required extending the medium pressure plastic gas main extension to support the transmission projects. An additional 1700' of 2" and 4" medium pressure plastic main and 41 services were added to the original scope of work due to the removal of farms taps tied onto the two - 8" HP transmission gas lines.
3078	17202802054022	ILI Retrofits	SE	Bloomington	Bloomington	10"16" Dolan to Needmore - ILI retrofit 24.97 miles of pipeline, pressure test 12.36 miles of pipeline, and two proving tool runs	2018	2018											Y	A new pipeline heater and additional electrical work was required at Needmore Station. The 10" line leaked during hydrotest and a section was required to be replaced. The 10" line and 16" were very dirty and required additional cleaning beyond normal. It was necessary to split the pressure test into 2 segments on the 10" pipeline due to weather concerns which increased construction and inspection labor.
3078	17202802054027	ILI Retrofits	SE	Bloomington	Bloomington	Distribution support project for 10"16" Dolan to Needmore retrofit - Install 9,229' of 2" PE, 81' of 4" PE, and 4,117' of 6" PE	2018	2018											Y	1,430 feet of new 2" PE main was installed as an addition to the project along Siebold Quarry Road. This was executed to eliminate 5 service farm taps off of the existing 8" HP main and also to eliminate a regulator station. An additional 720 feet of main was installed to convert three services to the distribution system from the existing 16" transmission line.

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3098	17202802054019	Priority Pipe	SE	Clarksville	Sellersburg	12" Holman to Airport Valve Cluster (NS5015) - Replace 1.00 miles of 8" pipeline with 12" pipe due to needed pressure test	2018	2018												Y	Project was completed on an accelerated schedule to ensure line was back in service for heating season resulting in additional labor charges. Also, portions of project were completed on Time & Material basis (hourly rates) due to work being performed in a heavy industrial area with significant heavy traffic.
3167	17202802054020	Pressure Test	SE	Franklin	Bargersville	16" Brooklyn TBS to Shelbyville - Pressure test 15.07 miles of pipeline	2018	2018												Y	Increased actual costs were primarily due to additional work required at Fulmer Station where historical drawings did not correctly indicate the existing piping configuration. Vectren North installed a 6" filter at Grassy Creek Station in lieu of 4" that was designed and several additional clearing/pig runs were required to remove liquids found in the pipeline.
3286	17202802054025	ILI Retrofits	NW	Danville	Crawfordsville	16" Mt Tabor to Risner - ILI retrofit 3.76 miles of pipeline, heater replacement, and proving tool run	2018	2018												Y	The existing heater failed over the winter prior to construction start that was not included in the original scope of work. During construction it was determined the filter would need to be replaced due to non-compliance with current codes. Two existing valves failed during startup and were required to be replaced.
4173	17202802054236	ILI Retrofits	NW	Crawfordsville	Crawfordsville	Distribution support project for 16" Mt. Tabor to Risner retrofit - install 3,000' of 4" PE	2018	2018												Y	Project was completed on an accelerated schedule. Also, project was completed on T & M due to work being performed in a heavy industrial area with significant heavy traffic.
4151	18202802054011	Casings	SE	Martinsville	Martinsville	Replace 10" pipeline with shorted casing under SR 39	2018	2018												Y	
4153	18202802054022	Obsolete Equipment	NE	Muncie	Dunkirk	Dunkirk TBS Heater Replacement	2018	2018												Y	Project was estimated as a completely new heater installation including piping changes. The new heater was designed to bolt up to the existing piping reducing installation costs.
4210	18202802054016	Miscellaneous	SE	Clarksville	Prospect	Install building over station equipment at Wallace Farms	2019	2019												N	Actual charges include preliminary engineering costs only.
3031	19202802054213	Obsolete Equipment	NE	Muncie	New Castle	Retire Joyner Farms Regulator Station 1645 in pit and install approximately 250' of 2" PE main to feed services	2019	2019												N	
3083	18202802054021	Gas Quality / Conditioning	SE	Clarksville	Crestwood	Install filter separator and odorizer at Crestwood PP	2019	2019												N	Project is trending approximately 30% over budget; engineering costs exceeded estimate due to complexity of project, costs for temporary odorizer and retirement of the existing odorizer exceeded estimate. Other utilities below ground assets not reflected on drawings were identified during construction increasing costs for locating and causing some changes to design. Station site is shared by multiple pipelines.
4088	17202802054016	Miscellaneous	SE	Clarksville	Crestwood	Crestwood Station Expansion	2019	2019												N	Actual charges include preliminary engineering and legal costs only.
3112	18202802054023	Pressure Test	NE	Anderson	Anderson	16" Anderson #2 to Layton Road - Pressure test 0.58 miles	2019	2019												N	Actual charges include preliminary engineering and partial material costs only.
3215	18202802054020	ILI Retrofits	SE	Clarksville	Clarksville	16" Applegate Ln. TBS to Holman LP - ILI retrofit 2.69 miles of pipeline, replace rectifier, and proving tool run	2019	2019												N	Actual charges include preliminary engineering and partial material costs only.
3419	18202802054024	Pressure Test	NE	Muncie	New Castle	8" Muncie to New Castle - install 1,600' of 10" pipeline under I-70 and pressure test 0.50 miles of pipeline	2019	2019												N	Actual charges include preliminary engineering and partial material costs only.
3033	18202802054030	Gas Quality / Conditioning	NW	Lafayette	Wolcott	Install gas chromatograph at Wolcott Storage Field	2019	2019						Estimate was revised based on final equipment selection and actual quotes for the material. After detailed technology review, it was determined to purchase and install equipment capable of analyzing water and H2S in addition to standard gas constituents. The analyzers cost twice as much as originally proposed equipment, but provide additional gas quality measurement capabilities determined to be necessary to monitor gas supply. The equipment necessitated the need for building design changes and a higher cost probe.					N	Actual charges include preliminary engineering costs only.	
3912	18202802054025	Obsolete Equipment	NE	Muncie	New Castle	10" New Castle River Rd Station - Rebuild due to two unsupported regulators	2019	2019												N	Actual charges include preliminary engineering and partial material costs only.
3916	18202802054028	ILI Retrofits	SE	Clarksville	Prospect	NS5011 12" Wallace Farms to Longview Beach - install filter separator connection at launcher	2019	2019												N	
4075	18202802054018	Pressure Test	SE	Bloomington	Bloomington	NS5055 8" Needmore PP to Bloomington South TBS - Pressure test 0.5 miles of pipeline and mitigate (7) pipeline exposures	2019	2019												N	Actual charges include preliminary engineering and partial material costs only.
3508	19202802054017	ILI Retrofits	NW	Lafayette	Lafayette	12" Taylor Pig Trap to Risner Stn. - ILI retrofit 25.63 miles of pipeline	2020	2020						During field inspection for detailed engineering, it was determined that the fittings at the river crossing in Crawfordsville were not able to be replaced without replacing the river crossing. The original estimate did not include a new HDD for the river crossing.					N	Actual charges include preliminary engineering and partial material costs only.	
3923	19202802054013	ILI Retrofits	NE	Muncie	Muncie	12" King Station (RS 274) to RS 220 (CR 400 Station) - ILI retrofit 1.69 miles of pipeline and replace 0.40 miles of 8" pipe with 12" pipe between RS 220 and ANR Muncie	2020	2020											N	Actual charges include preliminary engineering and partial material costs only.	
4294	18202802054029	ILI Retrofits	NW	Lafayette	Lafayette	16" Taylor to Wolcott - ILI retrofit 29.32 miles of pipeline	2019	2019												N	Actual charges include preliminary engineering and partial material costs only.
3217	TBD	ILI Retrofits	SE	Bloomington	Bloomington	12" Dolan to Hindustan - ILI retrofit 4.97 miles of pipeline, install launcher/receiver, and proving tool run	2020	N/A					Project reauthorized beyond the current Compliance Plan ending in 2020 to swap with Project ID 3190 due to upcoming INDOT construction schedule						N		

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3941	19202802054012	Gas Quality / Conditioning	SE	Franklin	Bargersville	Install gas chromatograph and filter separator at Bargersville PP	2020	2020						Estimate was revised based on final equipment selection and actual quotes for the material. After detailed technology review, it was determined to purchase and install equipment capable of analyzing water and H2S in addition to standard gas constituents. The analyzers cost twice as much as originally proposed equipment, but provide additional gas quality measurement capabilities determined to be necessary to monitor gas supply. The equipment necessitated the need for building design changes and a higher cost probe.					N	Actual charges include preliminary engineering costs only.
4298	19202802054016	Gas Quality / Conditioning	NW	Darville	Brownsburg	Install gas chromatograph at HCJ PP	2020	2020						Estimate was revised based on final equipment selection and actual quotes for the material. After detailed technology review, it was determined to purchase and install equipment capable of analyzing water and H2S in addition to standard gas constituents. The analyzers cost twice as much as originally proposed equipment, but provide additional gas quality measurement capabilities determined to be necessary to monitor gas supply. The equipment necessitated the need for building design changes and a higher cost probe.					N	Actual charges include preliminary engineering and partial material costs only.
4321	19202802054212	ILI Retrofits	SE	Clarksville	Clarksville	Distribution support project for Holman to Applegate retrofit - Install 1,242' of 4" PE main to create second feed	2019	2019											Y	Project substantially complete but not all charges have been incurred. Costs are trending slightly above estimate due to eliminating 3 existing first cut/farm tap services off of the high pressure main and reestablishing the affected customer services by installing service lines from the medium pressure distribution main.
3190	19202802054011	ILI Retrofits	SE	Martinsville	Martinsville	16" Martinsville to Hindustan - ILI retrofit, replace, and pressure test portions of 9.02 miles of pipeline and install launchers and receivers	N/A	2020					Project added to 2020 to retrofit pipeline that will be impacted by INDOF construction schedule						N	
4860	19202802054022	Casings	NE	Muncie	Muncie	Retire 16" casing on 12" King Station to RS 220 pipeline at CR 400 E	N/A	2019					Project added to 2019 to remove casing to assess pipeline after recent frost heaving						N	
4646	TBD	ILI Retrofits	SE	Grewfordsville	Grewfordsville	Distribution support project for Taylor to River retrofit - Install 2,100' of 6" PE to replace two services to distribution system	2020	N/A					Project cancelled - Project determined to not be needed to support Project ID 3508						N	
4616	TBD	ILI Retrofits	NE	Muncie	Muncie	Distribution support project for King to Hill-Muncie retrofit - Install 265'-612' PE to create second feed	2020	N/A					Project cancelled - Project determined to not be needed to support Project ID 3923						N	
3471	18202802054019	Gas Quality / Conditioning	SE	Columbus	St. Paul	Install gas chromatograph at REX PP	N/A	N/A											N	Actual charges include preliminary engineering costs only.
3246	18202802054017	ILI Retrofits	NW	Darville	Lebanon	12" HCJ to Lebanon LP - Install launcher/receiver barrels at two regulator stations and install one distribution support project in preparation for ILI retrofit 11.21 miles of pipeline and proving tool run in a later year	N/A	N/A											N	Actual charges include preliminary engineering costs only.
3164	18202802054014	Priority Pipe	NW	Greencastle	Greencastle	Replace 3.65 miles of 8" pipeline with 12" pipe due to needed pressure test	N/A	N/A											N	Actual charges include preliminary engineering costs only.
3424	18202802054015	Priority Pipe	NW	Terre Haute	Terre Haute	6" Margaret to Texas Gas PP - Replace 200' of pipeline due to unknown grade	N/A	N/A											N	Actual charges include preliminary engineering costs only.
3970	18202802054026	Gas Quality / Conditioning	SE	Franklin	Shelbyville	Install gas chromatograph at Shelbyville AAR PP	N/A	N/A											N	Actual charges include preliminary engineering costs only.
3167	17202802054226	Pressure Test	SE	Franklin	Whiteland	Distribution support project for 16" Brooklyn TBS to Shelbyville pressure test - Install 29,791' of 2" PE, 8,602' of 4" PE, 2,168 of 6" PE, and 9,149' of 8" PE	2018	2018											Y	
3064	15202802054019	Pressure Test	SE	Bloomington	Martinsville	12" HCJ to Martinsville Moon Rd - Pressure test 8.83 miles of pipeline	2016	2016											Y	
4290	18202802054027	Gas Quality / Conditioning	NW	Lafayette	Lafayette	Evonik Filter	2018	2018											Y	
3158	16202802054018	ILI Retrofits	SE	Clarksville	Clarksville	16" Holman LP to Ulica Station - ILI Retrofit 3.67 miles of pipeline and replace pipe segment with dent	2017	2017											Y	
3350	15202802054020	Priority Pipe	NW	Lafayette	Lafayette	12" CR 600 to McCarty Lane - Reroute 0.98 miles of pipeline due to several homes encroaching within easement near pipeline	2017	2017											Y	
3819	16202802054015	Casings	SE	Bloomington	Martinsville	10" Martinsville bore and replace shorted casing with 16" pipeline	2017	2017											Y	Contract material was less than originally estimated. Also, few construction difficulties were encountered, so not all of the contingency was used.
3888	17202802054014	Priority Pipe	NW	Lafayette	Linden	8" NW3109 Linden Line Segment 3 and 5 - Replace 5.78 miles of previously reconditioned 1942 pipe	2017	2017											Y	
3911	17202802054018	Priority Pipe	SE	Bloomington	Bloomington	16" Curry Pike to Needmore PP - Replace 600' of pipeline at 3rd Street in Bloomington due to ILI identified loss of wall thickness	2017	2017											Y	Actual contract construction labor bids exceeded the original estimates due to a high demand on labor resources in late 2017. The higher labor bids are attributed to the large quantity of transmission pipeline work in progress in the Midwest region in 2017 which placed a high demand on transmission crews. Project scope did not change.

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186	9581760	17595002050213	Bridge Crossings	NW	Terre Haute	Terre Haute	IN-TERRER HAUTE-MAPLE AVE --RELOCATE 4" STL BRIDGE CROSSING	2018	2018											Y	
215	8073900	17595002050224	Regulator Station	NW	Terre Haute	Terre Haute	IN-TERRER HAUTE-N 24TH ST RS 3400048--REBUILD REGULATOR STATION WITH OBSOLETE REGULATORS	2018	2018											Y	Restoration, traffic control, inspection and labor were less than the original estimate.
224	10623809	14585802050210	Ineffectively Coated Steel	NW	Crawfordsville	Crawfordsville	IN-CRAWFORDSVILLE-US231 AND 374 S --REPLACE 2,000' OF 2" STL INEFFECTIVELY COATED STL MAIN	2018	2018											Y	
266	14349323	17592402050218	Exposures	SE	Bloomington	Bloomington	IN-BLOOMINGTON-BARROW FARM --REMEDiate 8" HP STL MAIN EXPOSURE	2018	2018											Y	The rock bore was completed with fewer labor hours than originally anticipated. Labor and material cost reduction was also achieved by implementing an alternative plan to install pigable line fittings by controlling feed from other parts of the system allowing for the elimination of Mueller bottom-out fittings.
308	13504168	16595002050228	Obsolete Equipment	NW	Terre Haute	Terre Haute	IN-TERRER HAUTE-RS 34131951040 -- REPLACE OBSOLETE REGULATOR	2018	2018											Y	
451	14229729	17592402050210	Bridge Crossings	SE	Bedford	Shoals	IN-BLOOMINGTON-US 50 @ WHITE RIVER -- RELOCATE 6" STL BRIDGE CROSSING	2018	2018											Y	Approximately 440' less 6" STL main was required for rock bore below the river. This reduced labor and assessment costs.
1880	13495322	17595002050220	Casings	NW	Terre Haute	Terre Haute	IN-TERRER HAUTE-E HULMAN DR. & S. SR 46 -- REPLACE SHORTED 6" STL MAIN AND CASING	2018	2018											Y	Due to the difficulty of this project with its in locations 7 feet deep adjacent to a signaled intersection of a city street and a state highway, construction labor was much higher than estimated. Increased in traffic control at the intersections due to heavy traffic.
1891	14087853	17573302050210	Pressure Monitoring / SCADA / RTU	NE	Muncie	Muncie	IN-MUNCIE-W COUNTY ROAD 400 S -- INSTALL ERX	2018	2018											N	
1892	12430662	16573302050214	Pressure Monitoring / SCADA / RTU	NE	Muncie	Muncie	IN-MUNCIE-RS 57293001652 -- INSTALL ERX	2018	2018											N	
3641	14029068	16582102050218	Exposures	NE	Anderson	Anderson	IN-ANDERSON-SCATTERFIELD AT HILLCREST -- REMEDIATE 10" HP STL MAIN EXPOSURE	2018	2018											Y	Materials for the ERX equipment were previously purchased with other funds, only labor was charged to this project.
3647	13495630	17595002050212	Exposures	NW	Lebanon	Lebanon	IN-LEBANON-SOUTH OF E. MAIN ST & EAST OF S GRANT -- REMEDIATE 6" HP STL MAIN EXPOSURE	2018	2018											Y	Original estimate assumed more rock boring would be required. Less rock was encountered so labor/equipment charges were less than estimated.
3668	14677746	16592602050212	Exposures	SE	Columbus	Columbus	IN-COLUMBUS-W NATIONAL BLVD -- REMEDIATE 8" HP STL MAIN EXPOSURE	2018	2018											Y	
3673	14087812	17573302050212	Casings	NE	Muncie	Muncie	IN-MUNCIE-801 S ELLIOTT ST -- REPLACE SHORTED 6" STL MAIN AND CASING	2018	2018											N	
3675	12567872	17592602050214	Casings	SE	Columbus	Columbus	IN-COLUMBUS-800 S MARR RD -- REPLACE SHORTED 4" STL MAIN AND CASING	2018	2018											N	
3678	14023984	17573302050212	Casings	NE	Muncie	Muncie	IN-MUNCIE-3500 S COWMAN RD -- REPLACE SHORTED 10" HP STL MAIN AND CASING	2018	2018											Y	
3679	14029088	16573302050217	Casings	NE	Muncie	Muncie	IN-YORKTOWN-2107 NEBO ROAD -- REPLACE SHORTED 2" STL MAIN AND CASING	2018	2018											Y	
3760	14509330	17595002050210	Ineffectively Coated Steel	NW	Lafayette	West Lafayette	IN-WEST LAFAYETTE-WOOD ST -- REPLACE 1,765' OF 6" AND 2" INEFFECTIVELY COATED STL MAIN	2018	2018											Y	
3793	11366711	17592602050213	Casings	SE	Columbus	Columbus	IN-COLUMBUS-4735 INDIANAPOLIS RD-RETIRE 4" STL MAIN AND CASING AND INSTALL 1,014' OF 2" PE MAIN, RETIRE PIT REGULATOR STATION AND INSTALL 1,625' OF 4" PE MAIN	2018	2018											N	
3867	14166858	16595002050259	Obsolete Equipment	NW	Lafayette	Mulberry	IN-MULBERRY-JEFFERSON RD RS 6900025 -- REBUILD SINGLE FEED REGULATOR STATION DUE TO INOPERABLE CONTROL VALVE	2018	2018											Y	
3930	14591569	17575102050210	Priority Pipe	NE	Richmond	Richmond	IN-RICHMOND-SE PARKWAY AND AVON LANE -- REPLACE 3,100' OF 8" STL MAIN DUE TO GIRTH WELDS	2018	2018											Y	
4070	14348514	17592402050216	Exposures	SE	Bloomington	Bloomington	IN-BLOOMINGTON-N OF KETCHAM RD -- REMEDIATE 4" STL MAIN EXPOSURE AND REPLACE RECTIFIER AND GROUNDED	2018	2018											Y	
4206	15708724	18563302050214	Exposures	SE	Greenfield	Knightstown	IN-KNIGHTSTOWN-COUNTY LINE ROAD -- REMEDIATE 2" STL MAIN EXPOSURE	2018	2018											Y	
4214	15655310	18563302050210	Obsolete Equipment	SE	Shelbyville	Shelbyville	IN-SHELBYVILLE-REPLACE CONTROLLERS -- REPLACE (3) CONTROLLERS	2018	2018											Y	
4230	15791869	18573302050217	Exposures	NE	Muncie	Albany	IN-ALBANY-1100 E GOLF COURSE DR. -- REMEDIATE 2" PE EXPOSED MAIN	2018	2018											Y	
4239	15933089	18574102050219	Priority Pipe	NE	Marion	Marion	IN-MARION-NEBRASKA & 41ST -- RETIRE LEAKING VALVE	2018	2018											Y	
4243	15963963	18563302050221	Bridge Crossings	SE	Franklin	Trafalgar	IN-TRAFALGAR-S TOWER DR -- REMEDIATE 4" STL MAIN EXPOSURE	2018	2018											Y	
27	15248829	17573302050222	Exposures	NE	Muncie	Muncie	IN-MUNCIE-3400 SR 28 --REMEDiate EXPOSED 3" STL MAIN	2019	2019											Y	Additional fees was required to obtain the assessments.

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4164	1467773	17592602050215	Obsolete Equipment	SE	Columbus	Columbus	IN-COLUMBUS-SR 11 AT CR 850 S -STATION 31-098 -- REMEDIATE REMOTE RELIEF VALVE	2019	2019											N	
4179	15544050	18574102050217	Ineffectively Coated Steel	NE	Marion	Marion	IN-MARION-W 6TH ST -- REPLACE 1,066' OF 2" INEFFECTIVELY COATED STL MAIN	2019	2019											N	
4187	15580837	18583502050212	Shallow Pipe	SE	Franklin	Edinburgh	IN-EDINBURGH-HALLEY SW OF E MAIN CROSS ST & HOLLAND ST -- REPLACE 240' OF SHALLOW 3" STL MAIN	2019	2019											N	
4213	16064877	18592002050210	Casings	SE	Clarksville	Clarksville	IN-CLARKSVILLE-COOPERS LANE -- REPLACE SHORTED 4" STL MAIN AND CASING	2019	2019											N	Construction is in progress.
4231	14548073	17582402050215	Casings	SE	Marionville	Mooreville	IN-MOOREVILLE-SOUTH STREET @ RR -- REMEDIATE SHORTED 4" STL MAIN AND CASING	2019	2019											N	Added restoration costs to remove the temporary concrete surface from the excavated bore pit areas of which the new main was installed in the winter months at the request of the City of Mooreville and this addition also included the final asphalt surface restoration and grouting of the existing retired main within the RR ROW. The Construction start date was expedited and field activities started earlier than planned due to railroad permit issue date and requirements which provided a limited work timeframe from the date permit was issued. Additional excavation and restoration was required due to unstable soil conditions resulting in larger bore and catch pits. Jack and bore installation as specified by the RR requires excavations to the specified depth of main installation to place boring
4242	15949609	18574102050218	Bridge Crossings	NE	Huntington	Huntington	IN-HUNTINGTON-PARK DR -- REPLACE 6" STL MAIN ON BRIDGE UNDER NEW STRUCTURE WITH 6" PE	2019	2019											N	Construction is in progress.
4303	16248655	18595002050210	Casings	NW	Terre Haute	Terre Haute	IN-TERRE HAUTE-2310 S 19TH ST -- REPLACE SHORTED 10" STL MAIN AND CASING	2019	2019											N	
4354	16382820	18595002050215	Casings	NW	Frankfort	Frankfort	IN-FRANKFORT-72 N CR 500 E -- REPLACE SHORTED 2" STL MAIN AND CASING	2019	2019							The existing casing will not be replaced. The 2" plastic pipe will be direct buried which is less cost than new casing installation.				N	
4603	16304228	19592602050012	Obsolete Equipment	SE	Columbus	Taylorville	IN-TAYLORSVILLE-FRIENDSHIP DR -- RETIRE REGULATOR STATION 31000007 WITH REMOTE RELIEF VALVE AND INSTALL 360' OF 2" PE MAIN	2019	2019											N	
4702	16513107	19595002050210	Exposures	NW	Greencastle	Cloverdale	IN-CLOVERDALE-3244 E CR 900 S -- REMEDIATE EXPOSED AND SHALLOW 6" HP STL MAIN	2019	2019							Large directional drilling equipment was needed for deep bore under B&S and poor soil conditions identified during detailed engineering.				N	
4814	16627062	19595002050210	Priority Pipe	NW	Lafayette	Lafayette	IN-LAFAYETTE-I-65 AT SCHUYLER AVE -- REPLACE 6" STL MAIN AND 10" CASING WITH 8" STL TO ELIMINATE LEAK	2019	2019											N	Larger than anticipated directional drilling equipment was needed for deep bore under B&S and poor soil conditions encountered which increase time and cost to complete the HDD.
4818	16634098	19592002050210	Encroachments	SE	Madison	Madison	IN-MADISON-CRESTWOOD DR & BELLAIRE DR -- REPLACE 1-1/2" STL MAIN ENCRACMENT WITH 2" PE	2019	N/A					Project moved beyond the current Compliance Plan ending in 2021 to coordinate with RSCJ contract in area.						N	
4821	16647380	19573302050210	Priority Pipe	NE	Muncie	Eaton	IN-EATON-201 W INDIANA AVE -- REPLACE 2" STL MAIN AND CASING WITH 4" PE TO ELIMINATE LEAK	2019	2019											N	Project costs increased due to Railroad depth requirement of 10' vs 5' expected. Railroads are not consistent in depth or installation method requirements which can result in increased work in excess.
4825	16814492	19595302050210	Pressure Monitoring / SCADA / RTU	NW	Danville	Plainfield	IN-PLAINFIELD-1025 COLUMBIA RD -- REPLACE PRESSURE RECORDING CHART WITH ERX	N/A	2019					Project added to 2019 to add ERX to Plainfield system following upgrade						N	
4833	16974903	18583502050210	Casings	SE	Franklin	Whiteland	IN-WHITELAND-MAIN ST -- REPLACE SHORTED 3" STL MAIN AND CASING	N/A	2019					Project added to 2019 to replace or retired shorted casing that was unable to be remediated						N	
4835	16903865	19595302050212	Casings	NW	Crawfordsville	Crawfordsville	IN-CRAWFORDSVILLE-ELMORE ST -- REPLACE SHORTED 8" HP STL MAIN AND CASING	N/A	2019					Project added to 2019 to replace or retired shorted casing that was unable to be remediated						N	
146	15157404	18582102050217	Obsolete Equipment	NE	Elwood	Tipton	IN-TIPTON-1000 S MAIN ST-REBUILD METER SET	2020	2020											N	
182	9581922	17595002050223	Bridge Crossings	NW	Terre Haute	Terre Haute	IN-TERRE HAUTE-S 7TH ST & THOMPSON DITCH --RELOCATE 8" STL BRIDGE CROSSING	2020	2020											N	
190	9580238	17595002050227	Exposures	NW	Terre Haute	Clinton	IN-CLINTON-SR63 --REMEDIAE 6" STL MAIN EXPOSURE	2020	2020											N	
206	9697227	17595302050213	Bridge Crossings	NW	Danville	Avon	IN-AVON-6605 LAKE FOREST DR -- REMEDIATE 2" STL MAIN EXPOSURE	2020	2020											N	
207	9697235	17595302050215	Bridge Crossings	NW	Lebanon	Lebanon	IN-LEBANON-ELMWOOD @ REYNOLDS DITCH --RELOCATE 2" STL BRIDGE CROSSING	2020	2020											N	
238	9769493	17595002050210	Exposures	NW	Attica	Attica	IN-ATTICA-CANADA ST --REMEDIAE 4" STL MAIN EXPOSURE	2020	2020											N	
1394	N/A	963050001-20	Inside Meters	NE	N/A	N/A	2020 NE INSIDE METERS	2020	2020											N	
1407	N/A	963050003-20	Ineffectively Coated Steel	NE	N/A	N/A	2020 NE ISOLATED SERVICES	2020	2020											N	
1413	N/A	963050002-20	Ineffectively Coated Steel	NW	N/A	N/A	2020 NW ISOLATED SERVICES	2020	2020											N	
1421	N/A	963050003-20	Obsolete Equipment	NE	N/A	N/A	2020 NE OBSOLETE RISERS	2020	2020											N	
1437	N/A	963050002-20	Obsolete Equipment	NW	N/A	N/A	2020 NW OBSOLETE RISERS	2020	2020											N	
1627	16215406	18592402050221	Ineffectively Coated Steel	SE	Bloomington	Bloomington	IN-BLOOMINGTON-DOLAN STATION TO BRYANT PARK -- REPLACE 2-1/4' OF 6" INEFFECTIVELY COATED STL MAIN	2020	2020											N	
1711	16087450	18592402050218	Exposures	SE	Bedford	Bedford	IN-BEDFORD-SOUTH OF 22ND ST -- REMEDIATE 6" HP STL MAIN EXPOSURE	2020	2020						Estimate increase based on detailed engineering that includes cost for rock bore installation of approximately 965' of 8" HP Steel main to replace the existing exposed main. Also added were contingencies for easement survey and acquisition required for new main in-line.					N	
1712	16379315	18592402050225	Exposures	SE	Bedford	Bedford	IN-BEDFORD-111 N OLD SR 37 -- REMEDIATE 8" HP STL MAIN EXPOSURE IN-BEDFORD-111 N OLD SR 37 -- REMEDIATE (3) 8" HP STL MAIN EXPOSURE	2020	2020						Estimate increase based on detailed engineering that includes cost for rock bore installation of approximately 735' of 8" HP Steel main to replace the existing exposed main. Also added were contingencies for easement survey and acquisition required for new main in-line.					N	
2865	16087517	18583302050215	Exposures	SE	Rushville	Rushville	IN-RUSHVILLE-4697 RUNION RD -- REMEDIATE 2" STL MAIN EXPOSURE	2020	2019					Project was reprioritized because of the severity of the exposed pipe over the culvert. It is currently in construction.						N	
3723	13494428	18595002050215	Shallow Pipe	NW	Greencastle	Cloverdale	IN-CLOVERDALE-EAST OF US 231 SOUTH OF US 40 -- REPLACE 4,600' OF SHALLOW 6" AND 4" HP STL MAIN	2020	N/A					Project moved beyond the current Compliance Plan ending in 2020 to coordinate with future Transmission project						N	
3802	16087527	18592402050220	Exposures	SE	Madison	Madison	IN-MADISON-664 & 678 SPRING ST -- REMEDIATE EXPOSED 3/4" STL SERVICE LINE	2020	N/A					Project moved beyond the current Compliance Plan ending in 2020 to be worked with directly adjacent planned RSCJ projects.						N	
3822	13823897	17595002050213	Exposures	NW	Greencastle	Greencastle	IN-GREENCASTLE-RAVENWOOD DR -- REMEDIATE 2" STL MAIN EXPOSURE	2020	2020											N	
3835	16380007	18592402050229	Exposures	SE	Bedford	Bedford	IN-BEDFORD-WEST OF CEMENT PLANT RD -- REMEDIATE EXPOSED 8" HP STL MAIN	2020	2020						Estimate increase based on detailed engineering that includes cost for rock bore installation of approximately 255' of 8" HP Steel main to replace the existing exposed main. Also added were contingencies for easement survey and acquisition required for new main in-line.					N	

Database Project Number	Maximo Work Order Number	Oracle Project Number	Project Category	Division	OC	City	Project Short Description	Previous Planned Year (4/1/19)	Current Planned Year	Previous Estimate (4/1/19)	Current Estimate	Estimate Variance (\$)	Estimate Variance (%)	Timing Variance Commentary (Current Fall 2019 Filing)	Estimate Variance Commentary (Current Fall 2019 Filing)	Current Period Actual Spend (1/1/19 - 6/30/19)	Inception to Date Actual Spend (1/1/14 - 6/30/19)	Actual Spend Variance (\$)	Actual Spend Variance (%)	In-service? (Y or N)	Actual Spend Variance Commentary (Current Fall 2019 Filing)	
3836	16073885	18592402050216	Exposures	SE	Bedford	Bedford	IN-BEDFORD-SOUTH OF STEEL POINT LN --- REMEDIATE 4" HP STL MAIN EXPOSURE IN-BEDFORD-SOUTH OF STEEL POINT LN --- REMEDIATE (2) 8" HP STL MAIN EXPOSURE		2020	2020					Detailed engineering resulted in estimate increase to include cost for rock bore installation of approximately 1000' of 8" HP Steel main at the East Fork White River Crossing to replace the existing exposed main. Also added were costs for easement survey and acquisition for modified pipe route.					N		
3840	16073804	18592402050214	Exposures	SE	Bedford	Mitchell	IN-MITCHELL-WEST OF MITCHELL WATER TREATMENT FACILITY --- REMEDIATE 8" HP STL MAIN EXPOSURE	2020	2020						Additions include contingencies for rock bore installation of approximately 335' of 8" HP Steel main to replace the existing exposed main. Also added were contingencies for easement survey and acquisition.					N		
3864	14678262	17995602050212	Exposures	NW	Lafayette	Covington	IN-COVINGTON-SR136 --- REMEDIATE 4" HP STL MAIN EXPOSURE	2020	2020												N	
3884	14224984	17583602050210	Exposures	SE	Franklin	Franklin	IN-EDMUNDS-5002 S 325 E --- REMEDIATE 6" HP STL MAIN EXPOSURE	2020	2020												N	
3975	16355342	1859502050214	Ineffectively Coated Steel	NW	Danville	Brownsburg	IN-BROWNSBURG-BETWEEN E COLLEGE AVE & TILDEN RD AND S JEFFERSON ST & S SCHOOL ST --- REPLACE 3.316' OF 2" INEFFECTIVELY COATED STL MAIN	2020	2020						Increased traffic control by 1,200 hours due to work along former SR267 and school. Project was originally scoped to only replace the ineffectively coated steel, but detailed engineering determined need to elevate the pressure on remaining portion of the system and approximately 3,000 feet of this main was pre-1983 Aidi A plastic which is not updated and must be replaced. The number of service replacement increased from 52 to 138 due to the additional pipe replacement. This project is being completed in conjunction with the 2020 BSCG Brownsburg projects and when completed the 9 PSIG Brownsburg system will be eliminated.					N		
4099	15111389	18592402050212	Priority Pipe	SE	Bloomington	Bloomington	IN-ELOMINGTON-E STATE ROAD 45 --- INSTALL 2.510' OF 4" PE AND 2.310' OF 2" PE TO REPLACE 17 SERVICES CURRENTLY CONNECTED TO STORAGE FIELD LINES	2020	2020						Detailed engineering resulted in a reduction of approx. 1000' to the total original planned footage of 4" PE new main installation required for this project along State Road 45.					N		
4101	16355424	1859502050212	Obsolete Equipment	NW	Terre Haute	Pimento	IN-PIMENTO-E WEEKS DR RS 3400173 --- RETIRE REGULATOR STATION DUE TO OBSOLETE REGULATOR AND VALVES, AND ELEVATE PRESSURE OF DOWNSTREAM SYSTEM	2020	2020						Project scope changed to rebuild station and connect systems with 180 feet of main to be installed on the inlet side of the station. Eliminates need for sparging of the main and 60 services was not needed.					N		
4102	15131328	1859502050213	Obsolete Equipment	NW	Terre Haute	Terre Haute	IN-TERRE HAUTE-S 7TH ST & ROYSE DR RS 3400144 --- RETIRE REGULATOR STATION DUE TO OBSOLETE REGULATOR AND VALVES, AND ELEVATE PRESSURE OF DOWNSTREAM SYSTEM	2020	2020						The scope has been changed to replace the regulator station and not elevate the pressure of the downstream system					N		
4103	N/A	19202802050011	Ineffectively Coated Steel	NE	Muncie	Muncie	IN-MUNCIE-WEST OF KING STATION --- REPLACE 1.200' OF 16" HP INEFFECTIVELY COATED STL MAIN	2020	2020						Detailed engineering and field investigation determined HDD of their would require rock bore. Additional easements were also required to locate main at location optimal for HDD.					N		
4105	16203119	1859502050210	Priority Pipe	NW	Lebanon	Lebanon	IN-LEBANON-2620 N SR 39 --- REPLACE 300' OF 10" HP STL MAIN DUE TO PIPE GOUGE UNDER SPLIT SLEEVE	2020	2020												N	
4114	16712785	19995602050212	Obsolete Equipment	NW	Lafayette	Lafayette	IN-LAFAYETTE-CR W 300 S --- REPLACE RECTIFIER AND GROUND BED	2020	2020												N	
4155	16355795	18595602050210	Priority Pipe	NW	Lafayette	West Lafayette	IN-WEST LAFAYETTE-BEECH DR & HEMLOCK RD --- REMOVE INOPERABLE 4" STL VALVE	2020	2020						Added installation of 200' of 4" plastic to replace a section of 2" plastic within a 4" plastic system. Added two steel service replacements which would have become isolated services. Additional restoration included in estimate because the main is located within hard surface.					N		
4182	16355919	18595602050212	Obsolete Equipment	NW	Lafayette	Wabash	IN-WABASH-WEST OF N 9TH ST --- REMOVE 10' STL VALVE THAT SEPARATES PRESSURE SYSTEMS	2020	2020						Work is isolated to existing site within existing easement. Original estimate assumed the need for additional reg station space/easement.					N		
4204	16355964	1859502050214	Regulator Station	NW	Greencastle	Greencastle	IN-GREENCASTLE-S BLOOMINGTON ST RS 3900001 --- REBUILD REGULATOR STATION DUE TO CORROSION AND PITTING	2020	2020						Length of replacement reduced based on detailed engineering/field conditions.					N		
4224	16356015	18595602050213	Exposures	NW	Attica	Attica	IN-ATTICA-CR E 1160 N --- REMEDIATE 4" HP STL MAIN EXPOSURE	2020	2020						Estimate revised to include 400 feet of main installed to connect to adjacent system for reliability. Cost for for additional required for spot holes associated with long services - city requires paving entire lane.					N		
4228	16446062	19574102050212	Ineffectively Coated Steel	NE	Marion	Marion	IN-MARION-S OVERMAN AVE --- REPLACE 1.206' OF 2" INEFFECTIVELY COATED STL MAIN	2020	2020						A reduction was made to the restoration contingency as it was determined the majority of the new main install may likely be completed by way of loots.					N		
4232	15854439	16583602050214	Ineffectively Coated Steel	SE	Shelbyville	Shelbyville	IN-SHELBYVILLE-BETWEEN W MECHANIC ST AND W FRANKLIN ST --- REPLACE 2.585' OF 6" INEFFECTIVELY COATED STL MAIN	2020	2020						Detailed engineering determined additional main was in need of replacement - connected to same system - and new main route was revised based on field conditions adding to involvement factors.					N		
4244	16217245	18583302050216	Ineffectively Coated Steel	SE	Rushville	Straughn	IN-STRAUGHN-CR S 500 E --- REPLACE 6.475' OF 2" INEFFECTIVELY COATED STL MAIN	2020	2020												N	
4246	16446081	19574102050213	Ineffectively Coated Steel	NE	Marion	Fairmount	IN-FAIRMOUNT-S PENN ST --- REPLACE 3.787' OF 2" & 3" INEFFECTIVELY COATED STL MAIN	2020	2020						Detailed engineering determined additional main was in need of replacement - connected to same system - and new main route was revised based on field conditions adding to involvement factors.					N		
4277	16066788	18595602050214	Exposures	NW	Attica	Attica	IN-ATTICA-WEST OF CR N 820 E --- REMEDIATE 8" HP STL MAIN EXPOSURE	2020	2020						Length of replacement reduced based on detailed engineering/field conditions.					N		
4283	16446096	19582102050210	Ineffectively Coated Steel	NE	Elwood	Elwood	IN-ELWOOD-SR 37 SOUTH OF SR 28 SECTION 7 --- REPLACE 4.338' OF 8" HP INEFFECTIVELY COATED STL MAIN	2020	2020						Detailed engineering determined thirty additional easements were required because public ROW was inadequate to install main outside of pavement as originally planned.					N		
4367	16992550	19575102050212	Regulator Station	NE	Richmond	Richmond	IN-RICHMOND-SPRING GROVE HEIGHTS --- RETIRE REGULATOR STATION, RETIRE 3,500' OF 2" AND 3" LP STL MAIN, AND INSTALL 3,330' OF 2" MP PE MAIN	N/A	2020					Project added to 2020 to retire regulator station in pit, and replace 1950's vintage low pressure steel system with medium pressure plastic system. Project added to 2020 due to corrosion leaks.					N			
4823	16796372	TBD	Bridge Crossings	NE	Muncie	Muncie	IN-MUNCIE-E MCGALLARD RD --- REPLACE 4" STL BRIDGE CROSSING	N/A	2020					Project added to 2020 to eliminate known valves that separate MP and HP pressure systems.					N			
4850	TBD	TBD	Obsolete Equipment	NE	N/A	N/A	IN-NE DIVISION-ELIMINATE (1) MP TO HP PRESSURE SYSTEM SEPARATING VALVES	N/A	2020					Project added to 2020 to eliminate known valves that separate MP and HP pressure systems.					N			
4852	TBD	TBD	Obsolete Equipment	SE	N/A	N/A	IN-SE DIVISION-ELIMINATE (2) MP TO HP PRESSURE SYSTEM SEPARATING VALVES	N/A	2020					Project added to 2020 to eliminate known valves that separate MP and HP pressure systems.					N			
335	9946142	14595002050242	Exposures	NW	Terre Haute	Brazil	IN-BRAZIL-9146 N KENNEDY CROSSING RD --- REMEDIATE 4" STL MAIN EXPOSURE	2017	2017											Y	It was determined that with the existing dual main installed in the area, one main would be sufficient for the load, therefore services were transferred and the second exposed main was retired. No replacement was required.	
482	9495901	14592602050215	Casings	SE	Columbus	Columbus	IN-COLUMBUS-25TH AND NATIONAL ROAD US31-	2017	2017												Y	

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Compliance Plan - Distribution Modernization Projects

Database Project Number	Maximo Work Order Number	Oracle Project Number	Project Category	Division	OC	City	Project Short Description	Previous Planned Year (4/1/19)	Current Planned Year	Previous Estimate (4/1/19)	Current Estimate	Estimate Variance (\$)	Estimate Variance (%)	Timing Variance Commentary (Current Fall 2019 Filing)	Estimate Variance Commentary (Current Fall 2019 Filing)	Current Period Actual Spend (1/1/19 - 6/30/19)	Inception to Date Actual Spend (1/1/14 - 6/30/19)	Actual Spend Variance (\$)	Actual Spend Variance (%)	In-service? (Y or N)	Actual Spend Variance Commentary (Current Fall 2019 Filing)
1578	14561616	17582102050210	Ineffectively Coated Steel	NE	Elwood	Elwood	IN-ELWOOD/ALEXANDRIA-STATE ROAD 28 AND CR 600 WEST SECTION 1-- REPLACE 7,000' OF 6" & 8" HP INEFFECTIVELY COATED STL MAIN	2017	2017											Y	The Elwood main replacement was originally be completed as Project 1578. However, the project was separated into five projects (1578, 1579, 1580, 1581, and 4073), due to the large size and extended time frame to complete. Most of the easements were charged to 1578 which caused it to exceed the estimate. However, costs for all five projects is less than the total estimated project cost.
1580	14648796	17582102G50210	Ineffectively Coated Steel	NE	Elwood	Elwood	IN-ELWOOD/ALEXANDRIA-STATE ROAD 28 AND CR 500 WEST SECTION 3-- REPLACE 5,500' OF 6" & 8" HP INEFFECTIVELY COATED STL MAIN	2017	2017											Y	This project was 1 of 5 large projects to replace 8 inch main along a State Road 28. Easement costs, material contingency and overhead less than estimated.
1581	14701692	17582102G50212	Ineffectively Coated Steel	NE	Elwood	Elwood	IN-ELWOOD/ALEXANDRIA-STATE ROAD 28 AND CR 400 WEST SECTION 4-- REPLACE 8,000' OF 6" & 8" HP INEFFECTIVELY COATED STL MAIN	2017	2017											Y	This project was 1 of 5 large projects to replace 8 inch main along a State Road 28. Easement costs, material contingency and overhead less than estimated.
3671	13591777	16573302050212	Casings	NE	Muncie	Muncie	IN-MUNCIE-469 & BETHEL --- REPLACE SHORTED 8" STL MAIN AND CASING	2017	2017											Y	135 feet less 8 inch main than estimated was installed.
3763	13259892	17573302050210	Obsolete Equipment	NE	New Castle	New Castle	IN-NEW CASTLE-REDELMANS LAKE ON 350 S --- RETIRE REGULATOR STATION 49265001642 DUE TO OBSOLETE REGULATOR AND INSTALL 700' OF 2" PE IN-ELWOOD/ALEXANDRIA-STATE ROAD 28 AND CR 200 WEST SECTION 5 - REPLACE 6,000' OF 8" HP INEFFECTIVELY COATED STL MAIN	2017	2017											Y	
4073	14873259	17582102G50213	Ineffectively Coated Steel	NE	Elwood	Elwood	IN-ELWOOD/ALEXANDRIA-STATE ROAD 28 AND CR 200 WEST SECTION 5 - REPLACE 6,000' OF 8" HP INEFFECTIVELY COATED STL MAIN	2017	2017											Y	This project was 1 of 5 large projects to replace 8 inch main along a State Road 28. Easement costs, material contingency and overhead less than estimated.
295	13507960	17595502G50212	Obsolete Equipment	NW	Lafayette	West Point	IN-WESTPOINT-RS 29297000026 --- REPLACE OBSOLETE REGULATOR	2017	2017											Y	
267	9576046	19202802054020	Exposures	SE	Bloomington	Bloomington	IN-BLOOMINGTON-BENT PINE ESTATES --- REMEDIATE 8" HP STL MAIN EXPOSURE	2020	2020											N	
3902	14473489	18574102050210	Bridge Crossings	NE	Marion	La Fontaine	IN-LA FONTAINE-PARKER STREET-N-X-3902-MOD	N/A	2020					HP pipe needs to be relocate from the bridge.	Project cancelled - Pipeline previously lowered in 2018					N	
3938	46366247	48695393050243	Shallow Pipe	NW	Crawfordsville	Crawfordsville	IN-CRAWFORDSVILLE-WEST OF CR 5-200 E AND-- NORTH OF CR E-160 S --- REPLACE SHALLOW 8" HP STL MAIN	2020	N/A											N	
4466	46466999	TBD	Obsolete Equipment	SE	Columbus	Edinburgh	IN-EDINBURGH-MIDWAY DR - STATION 34-046 --- REMEDIATE REMOTE RELIEF VALVE	2049	N/A					Project cancelled - Regulator station to be retired with BSCI Group N-2357. Project to now be completed as part of BSCI Group Project N-2357	Project to be completed as part of TMOO Project ID 4075.					N	
4402	TBD	TBD	Obsolete Equipment	SE	Bloomington	Bloomington	IN-BLOOMINGTON-SR 37 & KETCHUM RD --- REPLACE RECTIFIER AND ANODE GROUNDBED	2019	N/A											N	
464	N/A	47692402056044	Bridge Crossings	SE	Bedford	Greene	IN-BLOOMINGTON US 50 & WHITE RIVER --- RELOCATE 6" STL BRIDGE CROSSING	2048	2048											N	Project created for preliminary spend for Project ID 464 - Costs were transferred to 464.
3731	14355175	17583302050210	Casings	SE	Rushville	Dunreith	IN-DUNREITH-S 225 W - S OF OLD US 40 --- REPLACE SHORTED 8" HP STL MAIN AND CASING	2018	2018											Y	
4166	15217721	17582102050214	Bridge Crossings	NE	Elwood	Alexandria	IN-ALEXANDRIA-INDIANA AVENUE --- RELOCATE 6" HP STL BRIDGE CROSSING DUE TO LEAK	2018	2018											Y	An additional 220 feet of 6 inch main was installed. Incurred more traffic control costs when lane closure was extended to over right and temporary traffic lights had to be rented. Additional restoration cost were incurred due to city requiring flow fill due to semi truck traffic.
122	13026983	16574102050213	Ineffectively Coated Steel	NE	Marion	Marion	IN-MARION-LINCOLN BLVD - MCCLURE TO PEARL ST - REPLACE 2,400' OF 4" STL MAIN	2017	2017											Y	Project was estimated to include nearly all mains being installed by open trench under asphalt but the contractor was able to install the main by Horizontal Directional Drilling, resulting in less restoration cost. Several services did not need to be replaced and were not included in the estimate.
452	8148927	14583302050218	Exposures	SE	Greenfield	Greenfield	IN-GREENFIELD-US 40 @ CR 300 --- REMEDIATE 6" HP STL MAIN EXPOSURE	2017	2017											Y	Material contingency for unknown fittings, variable material costs was not required. Easement costs were less than anticipated.
1579	14647961	17582102050212	Ineffectively Coated Steel	NE	Elwood	Elwood	IN-ELWOOD/ALEXANDRIA-STATE ROAD 28 AND CR 600 WEST SECTION 2-- REPLACE 5,500' OF 6" & 8" HP INEFFECTIVELY COATED STL MAIN	2017	2017											Y	While one phase of the project was over the estimated cost, overall the other three phases of this project were under estimated.
2105	12410335	15583502050210	Pressure Monitoring / SCADA / RTU	SE	Seymour	Seymour	IN-SEYMOUR --- INSTALL (5) ERX	2017	2017											Y	
216	15150310	17595002G50212	Regulator Station	NW	Terre Haute	Terre Haute	IN-TERRE HAUTE-PLUM ST RS 34000070 ---REBUILD REGULATOR STATION WITH OBSOLETE REGULATORS	2018	2018											Y	
265	14348607	17592402050219	Exposures	SE	Bloomington	Bloomington	IN-BLOOMINGTON-BARROWS FARM ---REMEDiate 8" HP STL MAIN EXPOSURE	2018	2018											Y	
330	13507922	16595002050253	Obsolete Equipment	NW	Terre Haute	Mecca	IN-MECCA-RS 38262951009 --- REPLACE OBSOLETE REGULATOR	2018	2018											Y	The project was expected to install 150 feet main, but only required 44 feet of main to remedy the exposure. This reduced the labor and material costs.
331	14276830	17595002G50215	Exposures	NW	Terre Haute	Terre Haute	IN-TERRE HAUTE-S US HIGHWAY 41-REMEDiate 6" STL MAIN EXPOSURE	2018	2018											Y	
3833	14017985	17592602050210	Casings	SE	Columbus	Columbus	IN-COLUMBUS-CR 650 SOUTH @ L&I R/R CROSSING --- REPLACE SHORTED 10" HP STL MAIN AND CASING	2017	2017											Y	The 10 inch Mueller stopple and 16 inch casing was not used which reduced the cost of installation and materials. Railroad flagging inspection and pipe x-raying ran significant lower than what was anticipated.
3903	14469772	17583302050213	Vintage Plastic	SE	Rushville	Mays	IN-MAYS-COUNTY ROAD 900N --- REPLACE 5,800' OF 3" AND 2" VINTAGE PLASTIC MAIN	2017	2017											Y	Original design was to trench in new main due to limited ROW and utility conflicts. Received approval from county to bore main under road which saved on restoration and spot hole costs. A change in construction was also done to re-route the main in the actual town avoid trenching, restoration and spot hole costs, avoiding our existing main and a sewer

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Vectren North
Compliance Plan - Bare Steel and Cast Iron Projects

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Database Project Number	Maximo Work Order Number	Oracle Project Number	Division	OC	City	Project Short Description	Estimated Installed Footage	Estimated Retired Footage	Estimated Project Services	Previous Planned Year (4/1/18)	Current Planned Year	Previous Estimate (4/1/18)	Current Estimate	Estimate Variance (\$)	Estimate Variance (%)	Timing Variance Commentary (Current Fall 2019 Filing)	Estimate Variance Commentary (Current Fall 2019 Filing)	Current Period Actual Spend (10/1/14 - 4/30/19)	Inception to Date Actual Spend (10/1/14 - 4/30/19)	Actual Spend Variance (\$)	Actual Spend Variance (%)	In-service? (Y or N)	Actual Spend Variance Commentary (Current Fall 2019 Filing)
N-1081	11082082	14583400522210	NE	AN	TIPTON	N-TIPTON-N1081-BSCI	6,875	6,565	106	2018	2018											Y	Restoration cost was higher than expected due to relocating main from green space to street because of utility conflict. The City of Tipton permit was also higher than anticipated.
N-1083	11082143	17582100522214	NE	AN	TIPTON	N-TIPTON-N1083-BSCI	5,580	6,110	77	2018	2018											Y	Due to difficulty of locating sewer lines, open trench installation was required for the entire project which increased the restoration and additional permit costs.
N-1085	14290795	17573300522212	NE	MU	HAGERSTOWN	N-HAGERSTOWN-N1085-BSCI	6,075	7,570	90	2018	2018											Y	Due to the trees located in the planned grassy areas, the installation of main was relocated to the sidewalk area causing an increase in restoration costs.
N-1090	11462463	14595500522212	NW	LA	FRANKFORT	N-FRANKFORT-N1090-BSCI	4,270	6,145	82	2018	2018											Y	
N-1091	13887405	15595700522210	NW	LA	FRANKFORT	N-FRANKFORT-N1091-BSCI	4,625	4,735	75	2018	2018											Y	
N-1102	12097884	15582100522210	NE	AN	ANDERSON	N-ANDERSON-N1102-BSCI	6,495	8,555	85	2018	2018											Y	Unable to locate sewers using standard methods requiring additional time and material to locate laterals through the sewer main. An additional 157' of unanticipated main installation was required to supply an alley north of the primary main - not indicated on historical records.
N-1106	13584395	16575100522212	NE	RI	RICHMOND	N-RICHMOND-N1106-BSCI	4,165	4,270	50	2018	2018											Y	
N-1163	13585084	16592600522210	SE	CO	COLUMBUS	N-COLUMBUS-N1163-BSCI	3,030	2,990	44	2018	2018											Y	
N-1164	15124046	17583300522221	SE	GF	KNIGHTSTOWN	N-KNIGHTSTOWN-N1164-BSCI	1,890	1,900	34	2018	2018											Y	Traffic was very congested which required daily traffic control. Restoration cost was higher than expected due to the Town requiring all hard surface spot holes and trench repairs to be completed using a concrete base due to impending repaving of street.
N-1173	13585158	16583300522210	SE	GF	CAMBRIDGE CITY	N-CAMBRIDGE CITY-N1173-BSCI	1,650	1,865	35	2018	2018											Y	Due to difficulty of locating sewer lines, open trench installation was required for a portion of the project which increased the restoration cost and impacted over time.
N-130	14271961	17566000522212	NW	TH	TERRE HAUTE	N-TERRE HAUTE-N130-BSCI	8,915	7,655	109	2018	2018											Y	S. 7th St. was scheduled for 2022 as a part of N-719, due to City of Terre Haute's repaving schedule this street had to be added to this project. This added an additional 5,185 feet of main and 69 services, poor subsurface was encountered changing their excavation depth from 18 inch to 30 inch which placed the services in the project area in conflict. Also, during the downtown area of the project, sewer lines could not be located causing open cut trenching, this increased hard surface restoration costs.
N-1471	13542507	16573300522210	NE	MU	MUNCIE	N-MUNCIE-N1471-BSCI	3,915	3,945	35	2018	2018											Y	Installed less main than anticipated in estimate.
N-1600	14699024	17592600522213	SE	CO	COLUMBUS	N-COLUMBUS-N1600-BSCI	6,845	9,980	94	2018	2018											Y	A portion of the project designed to be upgraded was found to be vintage plastic. This was not reflected on historical records. Vintage plastic is not updated and must be replaced. This added an additional 2,000' of main and 43 services to the project.
N-1654	13515913	16582100522212	NE	AN	ANDERSON	N-ANDERSON-N1654-BSCI	8,050	7,355	98	2018	2018											Y	Installed mains by boring in green space which resulted in less restoration versus pavement restoration.
N-201	1469742	17573300522213	NE	MU	MUNCIE	N-MUNCIE-N201-BSCI	4,505	4,875	29	2018	2018											Y	Due to difficulty of locating sewer lines and other utility conflict, a large portion of the project had to be open cut trenching which increased restoration costs.
N-2051	14293145	17562000522210	SE	CL	CLARKSVILLE	N-CLARKSVILLE-N2051-BSCI	4,600	4,390	91	2018	2018											Y	City code of ordinance required the resurfacing of four intersections and dual main was installed to avoid additional street resurfacing.
N-2052	14691914	17592000522212	SE	CL	CLARKSVILLE	N-CLARKSVILLE-N2052-BSCI	6,285	3,505	96	2018	2018											Y	The project did not encounter any difficulty which was completed in a timeframe less than was estimated resulting in less contract inspection time.
N-2055	13585962	16592000522213	SE	CL	JEFFERSONVILLE	N-JEFFERSONVILLE-N2055-BSCI	5,200	4,765	102	2018	2018											Y	
N-2091	13588818	16583300522212	SE	GF	GREENFIELD	N-GREENFIELD-N2091-BSCI	6,775	7,795	103	2018	2018											Y	
N-2097	14272050	17566000522213	NW	TH	GREENCASTLE	N-GREENCASTLE-N2097-BSCI	5,790	6,745	34	2018	2018											Y	Due to encountering rock, time and material was used for installation. Conflict with steam line required change in construction and additional cost. Additional restoration was required due to sidewalk replacements.
N-2119	14272110	17596300522217	NW	DA	CRAWFORDSVILLE	N-CRAWFORDSVILLE-N2119-BSCI	4,535	4,340	41	2018	2018											Y	During construction, full-time traffic control was necessary at an industrial area of US 291. Two large open excavation areas were needed to relocate line to its major intersections, this resulted in additional hard surface restoration of entire intersections.
N-2128	13705310	16583300522217	SE	GF	GREENFIELD	N-GREENFIELD-N2128-BSCI	6,270	4,185	111	2018	2018											Y	
N-2135	15943821	16592000522210	SE	CL	JEFFERSONVILLE	15943821-N-JEFFERSONVILLE-N2135-B	4,245	4,055	38	2018	2018											Y	Additional costs incurred due to a change in installation method - trench instead of HDD - that increased restoration costs for 3,130' of new 6" PE main in pavement. Trenching was required due to field identified contamination that required a 21" water main line. Also a large portion of the sewer locates were not possible to complete due to sewer blockage.
N-2148	14290745	17573300522210	NE	MU	HAGERSTOWN	N-HAGERSTOWN-N2148-BSCI	3,050	3,380	55	2018	2018											Y	
N-2181	13798237	16573300522219	NE	MU	MUNCIE	N-MUNCIE-N2181-BSCI	4,980	4,850	51	2018	2018											Y	
N-2182	13788366	16575100522213	NE	RI	RICHMOND	N-RICHMOND-N2182-BSCI	3,750	3,665	39	2018	2018											Y	Due to recently paved streets, dual main was installed under the sidewalk to avoid any street cuts. This resulted in required sidewalk restoration.
N-2184	13788346	16575100522214	NE	RI	RICHMOND	N-RICHMOND-N2184-BSCI	1,680	2,910	35	2018	2018											Y	
N-2189	13788398	16574100522212	NE	MR	HUNTINGTON	N-HUNTINGTON-N2189-BSCI	2,520	2,405	45	2018	2018											Y	Due to encountering less rock than anticipated, contractor was able to bore versus open cut trench resulting in less installation and restoration cost.
N-2191	13788515	16582100522218	NE	AN	ELWOOD	N-ELWOOD-N2191-BSCI	3,865	5,540	42	2018	2018											Y	
N-2257	14698304	17595500522212	NW	LA	FRANKFORT	N-FRANKFORT-N2257-BSCI	4,305	1,885	61	2018	2018											Y	The original design was to install 1800 feet of 8" plastic main under intermediate which had to be changed to 1800 feet of steel pipe due to federal highway. Requirements which increased material and installation cost.
N-2277	13381776	17582100522210	NE	AN	ANDERSON	N-FRANKFORT-N2277-BSCI	6,250	6,000	5	2018	2018											Y	
N-2291	1467058	17583300522213	SE	GF	RUSHVILLE	N-RUSHVILLE-N2291-BSCI	6,075	8,045	5	2018	2018											Y	Reduced project spend due to lower permit bid pricing.
N-2328	14721245	17592000522214	SE	CO	COLUMBUS	N-COLUMBUS-N2328-BSCI	5,630	5,355	71	2018	2018											Y	
N-2421	14694135	17582100522224	NE	AN	ANDERSON	N-ANDERSON-N2421-BSCI	2,840	5,355	54	2018	2018											Y	
N-387	14289914	17596300522210	NW	DA	DANVILLE	N-DANVILLE-N387-BSCI	4,580	4,445	53	2018	2018											Y	Due to difficulty of locating sewer lines, a considerable portion of this project was open cut trenching and the City of Danville required concrete to be poured over excavated areas, which increased restoration costs. Additional traffic control was also necessary due to working in a downtown area.
N-404	13584849	16573300522215	NE	MU	MUNCIE	N-MUNCIE-N404-BSCI	4,345	7,135	57	2018	2018											Y	Could not locate the sewers by traditional methods which required installation of main by open trench method increasing restoration costs.
N-435	13589255	16583300522215	SE	GF	GREENFIELD	N-GREENFIELD-N435-BSCI	6,190	6,455	125	2018	2018											Y	Several services were designed to be relocated from the back of the buildings to the front-side, this caused additional cost when several customer's inside fuel line were found not to be up to code during construction. Also, additional cost of inspector overtime was incurred.
N-464	8562666	14574100522216	NE	MR	HUNTINGTON	N-HUNTINGTON-N464-BSCI	5,500	6,600	109	2018	2018											Y	Due to encountering less rock than anticipated, contractor was able to bore versus open cut trench resulting in lower installation and restoration cost.
N-465	11462035	14574100522214	NE	MR	HUNTINGTON	N-HUNTINGTON-N465-BSCI	1,320	4,185	29	2018	2018											Y	Due to encountering less rock than anticipated, contractor was able to bore versus open cut trench resulting in less installation and restoration cost.
N-509	13589480	16583300522216	SE	GF	DUBLIN	N-DUBLIN-N509-BSCI	2,560	3,225	23	2018	2018											Y	
N-551	690249	13589200522210	NW	TH	TERRE HAUTE	N-TERRE HAUTE-N551-BSCI	8,010	4,780	118	2018	2018											Y	Due to difficulty of locating sewer lines, a considerable portion of this project was open cut trenching, which increased restoration costs. Additional traffic control was necessary due to job location. Time and material were applied due to project difficulty.
N-585	13589525	16592400522210	SE	BL	BLOOMINGTON	N-BLOOMINGTON-N585-BSCI	2,505	5,265	44	2018	2018											Y	An additional 500' of main and 6 services were installed to maintain feed to accommodate the planned retirement of the existing regulator station. Also, additional traffic control and restoration costs were incurred with the added main and services. 400' of additional main was installed to replace existing identified Alpha-A (vintage plastic) piping identified during construction. Installation of a new section of 6" plastic main approx. 100' along an SE was added to maintain gas supply for the system while the existing low pressure regulator station was retired. It was determined during construction that the existing 6" gas steel main and the 10" MP steel main were not tied together (which would have maintained the supply) and this added fee was necessary to retire the existing LP regulator station. The six services were on these additional segments of main.
N-586	12394992	15592400522213	SE	BL	BLOOMINGTON	N-BLOOMINGTON-N586-BSCI	5,460	6,555	99	2018	2018											Y	Additional costs incurred where the construction contractor had to install sections of 2" PE (approx. 1200') main by open cut trench instead of HDD due to proximity of existing utility which resulted in additional hard surface asphalt street restoration costs and added concrete sidewalk restoration costs. These conflicts were identified during construction and result from unknown depths of other utilities and relative accuracy of locating equipment. Also, approx. 300' of new 2" PE main was added to provide a tie in location and loop feed near 100' of used and reusing in.
N-589	14290878	17582100522213	NE	AN	ANDERSON	N-ANDERSON-N589-BSCI	7,230	5,760	141	2018	2018											Y	This project used in-house labor for installation, traffic control and inspection which resulted in lower overall cost of the project.
N-649	14296723	17592600522210	SE	CO	COLUMBUS	N-COLUMBUS-N649-BSCI	8,790	7,520	107	2018	2018											Y	
N-661	14698174	17596000522214	NW	TH	TERRE HAUTE	N-TERRE HAUTE-N661-BSCI	2,540	6,665	26	2018	2018											Y	Due to difficulty of locating sewer lines, the entire project required open cut trench versus bottom. This added to the cost of hard surface restoration.
N-678	12392927	15595500522216	NW	LA	LA FAYETTE	N-LA FAYETTE-N678-BSCI	13,090	8,435	184	2018	2018											Y	Installed 5 fewer services than estimated, project was installed with main on both sides of the street reducing restoration costs, less traffic control was needed than anticipated.
N-679	12392965	15595500522217	NW	LA	LA FAYETTE	N-LA FAYETTE-N679-BSCI	8,880	5,645	119	2018	2018											Y	
N-681	14271994	17595500522210	NW	LA	LA FAYETTE	N-LA FAYETTE-N681-BSCI	5,365	5,365	111	2018	2018												

Vectren North
Compliance Plan - Bare Steel and Cast Iron ProjectsPetitioner's Exhibit No. 1
Attachment SAH-6
Cause No. 44480-TD4-11
Vectren North
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Database Project Number	Mainline Work Order Number	Oracle Project Number	Division	OC	City	Project Short Description	Estimated Installed Footage	Estimated Retained Footage	Estimated Project Services	Previous Planned Year (4/1/19)	Current Planned Year	Previous Estimate (4/1/19)	Current Estimate	Estimate Variance (\$)	Estimate Variance (%)	Timing Variance Commentary (Current Fall 2019 Filing)	Estimate Variance Commentary (Current Fall 2019 Filing)	Current Period Actual Spend (1/1/19 - 4/30/19)	Inception to Date Actual Spend (1/1/14 - 4/30/19)	Actual Spend Variance (\$)	Actual Spend Variance (%)	In-service? (Y or N)	Actual Spend Variance Commentary (Current Fall 2019 Filing)
N-1156	1481384	17592402052213	SE	FL	MARTINSVILLE	IN-MARTINSVILLE-N-1156-BSCI	2,820	3,660	44	2019	2019											N	Actual charges include preliminary engineering and partial material costs only.
N-1185	14813607	17583302052214	SE	GF	KNIGHTSTOWN	IN-KNIGHTSTOWN-N-1185-BSCI	6,475	6,770	100	2019	2019											N	Construction in progress and is trending on target to estimate.
N-1170	14813660	17583302052215	SE	GF	KNIGHTSTOWN	IN-KNIGHTSTOWN-N-1170-BSCI	5,165	6,770	66	2019	2019											N	Construction in progress and is trending on target to estimate.
N-120	15584624	17592402052214	NE	AN	ELWOOD	IN-ELWOOD-N-120-BSCI	2,455	2,615	21	2019	2019											N	Actual charges include preliminary engineering and partial material costs only.
N-121	13542471	16581100205213	NE	AN	ELWOOD	IN-ELWOOD-N-121-BSCI	3,580	4,360	45	2019	2019											N	Actual charges include preliminary engineering and partial material costs only.
N-1450	15120962	17592402052214	NE	MU	MUNCIE	IN-MUNCIE-N-1450-BSCI	3,330	3,335	44	2019	2019											N	Construction in progress and is trending on target to estimate.
N-1458	1480894	17573302052216	NE	MU	PARKER CITY	IN-PARKER CITY-N-1458-BSCI	2,310	2,480	22	2019	2019											N	
N-1522	14293287	17592402052210	SE	IL	BEDFORD	IN-BEDFORD-N-1522-BSCI	5,705	5,580	66	2019	2019											Y	Additional hard surface restoration to install approx. 2,400' of new 2" and 4" PE main by open cut trench due to conflicts with existing utilities, additional assessments were required for new routes due to conflicts. Additional costs for contract inspection due to the overall construction schedule duration being increased to perform the open cut trench excavations for multiple segments of the new main installation.
N-1638	14698007	17592402052212	SE	CO	COLUMBUS	IN-COLUMBUS-N-1638-BSCI	5,360	3,700	63	2019	2019											Y	Construction in progress and is trending on target to estimate.
N-1713	14813854	17592402052215	SE	IL	BLOOMINGTON	IN-BLOOMINGTON-N-1713-BSCI	4,885	5,255	48	2019	2019											Y	Construction in progress and is trending on target to estimate.
N-1788	14809300	17582100205219	NE	AN	ANDERSON	IN-ANDERSON-N-1788-BSCI	7,115	5,220	111	2019	2019											N	Construction in progress and is trending on target to estimate.
N-1990	14811202	17592402052213	NW	LA	LAFAVETTE	IN-LAFAYETTE-N-1990-BSCI	2,650	2,755	15	2019	2019											N	Construction in progress and is trending on target to estimate.
N-2087	14878430	17583302052218	SE	GF	KNIGHTSTOWN	IN-KNIGHTSTOWN-N-2087-BSCI	6,175	6,175	10	2019	2019											N	Actual charges include preliminary engineering and partial material costs only.
N-2092	15588981	16583302052213	SE	GF	GREENFIELD	IN-GREENFIELD-N-2092-BSCI	4,580	2,340	44	2019	2019											Y	Construction in progress and is trending on target to estimate.
N-2093	15588078	16583302052214	SE	GF	GREENFIELD	IN-GREENFIELD-N-2093-BSCI	5,515	6,225	84	2019	2019											N	Actual charges include preliminary engineering and partial material costs only.
N-2117	15586386	16573302052216	NE	MU	MUNCIE	IN-MUNCIE-N-2117-BSCI	2,410	2,420	19	2019	2019											Y	Construction in progress and is trending on target to estimate.
N-2133	13709644	16583302052218	SE	GF	GREENFIELD	IN-GREENFIELD-N-2133-BSCI	5,260	5,260	45	2019	2019											Y	Construction in progress and is trending on target to estimate.
N-2139	14811295	17592402052214	NW	LA	FRANKFORT	IN-FRANKFORT-N-2139-BSCI	3,465	3,465	42	2019	2019											Y	Not all charges have been incurred.
N-2142	14813666	17592402052216	SE	FL	MARTINSVILLE	IN-MARTINSVILLE-N-2142-BSCI	5,330	5,255	83	2019	2019											N	Construction in progress and is trending on target to estimate.
N-2142	14809379	17583302052217	NE	MU	MUNCIE	IN-MUNCIE-N-2142-BSCI	1,920	3,805	35	2019	2019											N	Moved main into street from greenpace and trouble locating sewers
N-2147	14809581	17573302052218	NE	MU	HAGERSTOWN	IN-HAGERSTOWN-N-2147-BSCI	3,655	3,170	51	2019	2019											Y	It was necessary to move the installation from green space to street due to other utility conflicts resulting in higher restoration cost and additional 320 feet R' plastic pipe.
N-2145	14809613	17573302052219	NE	MU	MUNCIE	IN-MUNCIE-N-2145-BSCI	4,540	3,945	57	2019	2019											Y	Moved installation from street to greenpace.
N-2166	14809631	17573302052220	NE	MU	MUNCIE	IN-MUNCIE-N-2166-BSCI	2,775	2,795	44	2019	2019											Y	The sewer lines could not be located, additional camera work was required on T&M, and some open trench installation resulted in higher restoration cost.
N-2188	14814103	17592402052217	SE	CO	COLUMBUS	IN-COLUMBUS-N-2188-BSCI	4,735	4,170	72	2019	2019											N	Construction in progress and is trending on target to estimate.
N-2193	15738613	16582100205219	NE	AN	ELWOOD	IN-ELWOOD-N-2193-BSCI	1,910	2,375	36	2019	2019											N	Man was installed in greenpace instead of in the alley asphalt as anticipated.
N-2221	15510238	16581100205212	NE	AN	CHESTERFIELD	IN-CHESTERFIELD-N-2221-BSCI	5,295	4,770	71	2019	2019											N	Man was installed in greenpace instead of in the alley asphalt as anticipated.
N-2229	14810121	17575100205213	NE	RI	RICHMOND	IN-RICHMOND-N-2229-BSCI	5,560	5,560	88	2019	2019											N	Construction in progress and is trending on target to estimate.
N-2301	14815593	17592402052216	NW	DA	CRAWFORDSVILLE	IN-CRAWFORDSVILLE-N-2301-BSCI	9,860	3,665	100	2019	2019											N	Construction in progress and is trending on target to estimate.
N-2308	14812453	17595302052215	NW	DA	CRAWFORDSVILLE	IN-CRAWFORDSVILLE-N-2308-BSCI	10,865	8,835	158	2019	2019											N	Construction in progress and is trending on target to estimate.
N-2376	14878499	17583302052219	SE	GF	RUSHVILLE	IN-RUSHVILLE-N-2376-BSCI	2,300	3,115	29	2019	2019											Y	Additional costs incurred to open cut trench install the proposed new main as work crews were unable to locate sewer on W First St (State Highway 44) for the required 120' of new 2" plastic main. Restoration cost was increased because of hard surface trenching required across alley between S Harrison St and S Jackson St, S Jackson St entrance, S Pearl St entrance, S Smiley Ave entrance, S Columbia Ave entrance, and alley between S Columbia Ave and S McFarland St. Approximately a dozen resident sidewalk panels were replaced on W First St, sidewalk corner repairs at S Harrison, S Jackson, and S Pearl St. Additional 6 panels of sidewalk, curb, and gutter repair on S Jackson St, and a large trench in Alley east of S Harrison St because of nearby utilities. HOD was originally planned but could not be performed due to unlocatable sewers or conflicts with other utilities identified during construction.
N-2379	14878486	17583302052220	SE	GF	RUSHVILLE	IN-RUSHVILLE-N-2379-BSCI	9,360	8,755	9	2019	2019											Y	1560' of main was estimated to be trench on E 800N due to close proximity of existing main; however, contractor was able to bore a main without any issues. Additionally, the estimate covers the potential trench of E 1000N to 4700' of 2" main due to close proximity of existing main on south side of HWY and transportation on north side, but a Change in Construction to move the main to the north side of E 1000N was created and the contractor was able to bore the main with enough clearance from nearby telegraphpole utility. The duration of the project was estimated to take about 5-6 months but due to ease of install, the project went quickly and was completed in about 2 months.
N-2400	14818543	17592402052218	SE	CO	COLUMBUS	IN-COLUMBUS-N-2400-BSCI	3,765	3,180	59	2019	2019											Y	Actual charges include preliminary engineering and partial material costs only.
N-2417	14209370	17574100205212	NE	MB	MARION	IN-MARION-N-2417-BSCI	1,790	1,795	29	2019	2019											Y	Construction in progress and is trending on target to estimate.
N-2432	15296455	17592402052221	SE	CO	COLUMBUS	IN-COLUMBUS-N-2432-BSCI	1,015	2,105	11	2019	2019											N	Construction in progress and is trending on target to estimate.
N-2450	15714265	16592402052210	SE	IL	BLOOMINGTON	IN-BLOOMINGTON-N-2450-BSCI	1,650	1,625	3	2019	2019											N	Construction in progress and is trending on target to estimate.
N-2465	14818679	17594402052219	SE	IL	BLOOMINGTON	IN-BLOOMINGTON-N-2465-BSCI	3,335	3,275	20	2019	2019											N	Construction in progress and is trending on target to estimate.
N-2483	14810295	17573302052221	NE	MU	MUNCIE	IN-MUNCIE-N-2483-BSCI	3,140	2,125	51	2019	2019											N	Construction in progress and is trending on target to estimate.
N-381	14810245	17582100205220	NE	AN	ANDERSON	IN-ANDERSON-N-381-BSCI	6,960	9,940	117	2019	2019											Y	This is an old section of the town with difficulty of locating sewer lines. Required open cut trench installation of 6' main in the street, which resulted in higher restoration cost and traffic control.
N-382	14810295	17582100205221	NE	AN	ANDERSON	IN-ANDERSON-N-382-BSCI	5,410	8,735	77	2019	2019											Y	Installation moved from green space to the street to avoid conflict with fiber optics. Increased pavement restoration and the number of spot holes. In pavement for locate other utilities in the street.
N-405	14810360	17573302052222	NE	MU	MUNCIE	IN-MUNCIE-N-405-BSCI	2,860	7,335	50	2019	2019											Y	Increased pavement restoration and the number of spot holes. In pavement for locate other utilities in the street.
N-507	14878402	17583302052217	SE	GF	DUBLIN	IN-DUBLIN-N-507-BSCI	6,175	7,140	70	2019	2019											N	Construction in progress and is trending on target to estimate.
N-508	14818698	17583302052218	SE	GF	DUBLIN	IN-DUBLIN-N-508-BSCI	2,485	2,485	40	2019	2019											N	Construction in progress and is trending on target to estimate.
N-588	14818490	17582100205223	NE	AN	ANDERSON	IN-ANDERSON-N-588-BSCI	4,740	8,130	69	2019	2019											Y	Construction in progress and is trending on target to estimate.
N-618	12398635	16562602052212	SE	CO	COLUMBUS	IN-COLUMBUS-N-618-BSCI	3,495	6,080	79	2019	2019											Y	Construction in progress and is trending on target to estimate.
N-644	12398709	16562602052213	SE	CO	COLUMBUS	IN-COLUMBUS-N-644-BSCI	4,385	5,210	66	2019	2019											N	Construction in progress and is trending on target to estimate.
N-651	14818414	17573302052220	SE	CO	COLUMBUS	IN-COLUMBUS-N-651-BSCI	4,260	5,260	64	2019	2019											Y	Not all charges have been incurred.
N-710	14812684	17592402052219	NW	TH	TERRE HAUTE	IN-TERRE HAUTE-N-710-BSCI	2,550	1,290	72	2019	2019											N	Not all charges have been incurred.
N-712	14812687	17592402052220	TH	TERRE HAUTE	IN-TERRE HAUTE-N-712-BSCI	4,580	2,760	65	2019	2019												Y	Not all charges have been incurred.
N-713	14812653	17592402052221	NW	TH	TERRE HAUTE	IN-TERRE HAUTE-N-713-BSCI	9,260	6,440	137	2019	2019											N	Not all charges have been incurred.
N-718	14818699	17592402052222	TH	TERRE HAUTE	IN-TERRE HAUTE-N-718-BSCI	4,460	4,460	146	2019	2019												Y	Not all charges have been incurred.
N-842	14818631	17592402052220	SE	FL	MARTINSVILLE	IN-MARTINSVILLE-N-842-BSCI	11,535	10,410	146	2019	2019											Y	Not all charges have been incurred.
N-880	14810701	17575100205214	NE	RI	RICHMOND	IN-RICHMOND-N-880-BSCI	2,370	2,535	57	2019	2019											N	Construction in progress and is trending on target to estimate.
N-892	14810756	17575100205215	NE	RI	RICHMOND	IN-RICHMOND-N-892-BSCI	8,385	6,240	110	2019	2019											N	Construction in progress and is trending on target to estimate.
N-1082	14806760	17582100205216	NE	AN	TIPTON	IN-TIPTON-N-1082-BSCI	6,755	6,855	71	2020	2020											N	Estimate increased due to city of Anderson restoration/paving requirements
N-1098	15980348	16582100205214	NE	AN	ANDERSON	IN-ANDERSON-N-1098-BSCI	4,950	5,200	81	2020	2020											N	Anderson repaved a road so the extra cost is for installation of dual main in certain areas rather than repaving the roadway. Dual main cost is less than repaving.
N-1099	15980303	16582100205215	NE	AN	ANDERSON	IN-ANDERSON-N-1099-BSCI	5,600	5,600	87	2020	2020											N	Detailed research of project indicates only 2400' of new 2" main is required and retirement of 3640' of main. This will include only 29 services. This will lower our restoration cost and overall duration of job.
N-1101	16047482	18562100205222	NE	AN	ANDERSON	IN-ANDERSON-N-1101-BSCI	3,900	4,050	60	2020	2020											N	Estimate increased due to new restoration requirements and higher permitting cost by the city of Richmond. Scope changed after detailed field investigation to install additional 850' of main and retro additional 180' of main.
N-1107	16047883	18575100205216	NE	RI	RICHMOND	IN-RICHMOND-N-1107-BSCI	4,500	4,500	109	2020	2020											N	Recent added constraints to City of Richmond construction permitting requires repaving of the entire block from centerline to the curb 8' five or more inches are made in a block span. Due to limited non-paved right-of-way and various space constraints due to other utilities, for large parts of the projects require open-cut installation and therefore centerline to curb pavement restoration. Permit fees have also increased.
N-1115	14807116	17575100205212	NE	RI	RICHMOND	IN-RICHMOND-N-1115-BSCI	7,170	11,150	143	2020	2020											N	Additions include sections of dual main installations of approx. 800' of 2" PE main along Washington St to avoid trenching to cut the street.
N-1151	15974761	16582100205210	SE	FL	MARTINSVILLE	IN-MARTINSVILLE-N-1																	

Vectren North
Compliance Plan - Bare Steel and Cast Iron Projects

Database Project Number	Maximo Work Order Number	Oracle Project Number	Division	OC	City	Project Short Description	Estimated Installed Footage	Estimated Rusted Footage	Estimated Project Services	Previous Planned Year (4/1/19)	Current Planned Year	Previous Estimate (4/1/19)	Current Estimate	Estimate Variance (\$)	Estimate Variance (%)	Timing Variance Commentary (Current Fall 2019 Filing)	Estimate Variance Commentary (Current Fall 2019 Filing)	Current Period Actual Spend (1/1/19 - 4/30/19)	Inception to Date Actual Spend (1/1/14 - 6/30/19)	Actual Spend Variance (\$)	Actual Spend Variance (%)	In-service? (Y or N)	Actual Spend Variance Commentary (Current Fall 2019 Filing)
N-1154	15974854	1858302052212	SE	FL	MARTINSVILLE	IN-MARTINSVILLE-N-1154-BSCI	4,250	4,250	64	2020	2020						Estimate was decreased due to reduction in the quantity of hard surface restoration identified during field investigation - sidewalk replacement - along Court St.					N	
N-1158	14813519	17592402052214	SE	FL	MARTINSVILLE	IN-MARTINSVILLE-N-1158-BSCI	6,400	6,550	86	2020	2021						Project moved to 2021 to allow for coordination of a directly related public improvement project.					N	
N-1362	13584672	16673302052213	NE	MU	ALBANY	IN-ALBANY-N-1362-BSCI	7,100	7,775	73	2020	2020						Detailed engineering added 1175 feet of main and (6) services to the project. Existing main is in the street which will require additional restoration for retirement of mains and services.					N	Actual charges include preliminary engineering and partial material costs only.
N-1402	15980373	18673302052210	NE	MU	MUNCIE	IN-MUNCIE-N-1402-BSCI	6,718	6,718	92	2020	2020											N	
N-1403	14807358	17573302052216	NE	MU	MUNCIE	IN-MUNCIE-N-1403-BSCI	7,576	7,930	148	2020	2020											N	
N-1405	15980636	18673302052212	NE	MU	MUNCIE	IN-MUNCIE-N-1405-BSCI	8,890	13,005	74	2020	2020						Additional 3300 feet of main installed due to moving the main installations from the rear easements to the street for increased safety and reliability which increased cost of relocating services and surface restoration.					N	
N-1431	16049022	18574102052213	NE	MR	GAS CITY	IN-GAS CITY-N-1431-BSCI	5,515	5,970	106	2020	2020						Gas City recently required use of flowable fill as subgrade material and increased the cost cut permit costs. City also required complete repaving of alley of from S 3rd St to S 6th St. Additional 600 feet of main added to estimate for installation on C Street to avoid another alley repaving.					N	
N-1448	16049055	18575102052217	NE	RI	RICHMOND	IN-RICHMOND-N-1448-BSCI	4,800	5,000	74	2020	2021						Project reprioritized to 2021 due to risk assessment/priority. Several Easements Required.					N	
N-1467	15989631	18673302052214	NE	MU	MUNCIE	IN-MUNCIE-N-1467-BSCI	6,070	6,005	79	2020	2020						Estimate increased to install additional 920 feet of main and 21 services based on detailed engineering and field survey.					N	
N-1485	14810891	17573302052223	NE	MU	PARKER CITY	IN-PARKER CITY-N-1485-BSCI	5,025	5,285	62	2020	2020						Detailed engineering relocated the mains from alley to the green space resulted in lower restoration cost.					N	
N-1523	15975100	18592402052212	SE	BL	MITCHELL	IN-MITCHELL-N-1523-BSCI	2,450	2,450	34	2020	2020						Detailed engineering determined additional 500' of main required to connect to 60 psig system (rather than originally planned 20 psig system) for improved reliability.					N	
N-1552	15964389	18593020522110	NW	LE	FRANKFORT	IN-FRANKFORT-N-1552-BSCI	750	750	6	2020	2020						Detailed engineering review of ROW determined additional surveying and research was required to determine final route.					N	
N-1555	15964605	18595020522110	NW	LA	FRANKFORT	IN-FRANKFORT-N-1555-BSCI	9,685	7,275	46	2020	2020						Existing main easement was not adequate to install new main due to conflicts with adjacent buildings. New easements and additional 2460 feet of main and 15 services required for final route. 200' of vintage plastic was also identified and will be replaced as part of this project.					N	
N-1558	15980746	18673302052215	NE	MU	ALBANY	IN-ALBANY-N-1558-BSCI	4,945	6,280	74	2020	2020						Original estimate 1440 feet of main and 30 services based on detailed engineering - existing easement cannot be reused and main required to connect to adjacent system.					N	
N-1566	13705026	16673302052217	NE	MU	ALBANY	IN-ALBANY-N-1566-BSCI	6,035	5,005	98	2020	2020						City of Albany does not locate sewer lines. Estimate was increased for additional locating by Vicman and for anticipated open cut installation with restoration.					N	Actual charges include preliminary engineering and partial material costs only.
N-1581	14813731	17592602052215	SE	CO	COLUMBUS	IN-COLUMBUS-N-1581-BSCI	7,230	5,280	118	2020	2020						Estimate increased for addition of 500' of 2" PE on McKinley Ave was added to estimate the need for the DMCO N-X-3946 project planned for same year.					N	
N-1612	14813820	17592602052216	SE	CO	COLUMBUS	IN-COLUMBUS-N-1612-BSCI	3,800	3,800	58	2020	2020						Removed proposed 380' of 2" PE on Riverside Dr. The segment was installed on BSCI N-2481. Addition include a section of 80' of 2" PE main extension along Voland Drive to provide head for an existing service line replacement. Also added traffic control contingencies for the high traffic volume the exists along the limits of this project.					N	
N-1730	16049242	18574102052215	NE	MR	MARION	IN-MARION-N-1730-BSCI	2,245	2,245	34	2020	2020						Main and service quantities increased from original scope based on site conditions and detailed engineering.					N	
N-1769	15901543	16682102052213	NE	AN	ANDERSON	IN-ANDERSON-N-1769-BSCI	1,530	3,515	31	2020	2020						Field survey identified 10 inactive services from the original estimate.					N	
N-1781	16049283	18574102052216	NE	MR	GAS CITY	IN-GAS CITY-N-1781-BSCI	5,515	3,965	55	2020	2020						Detailed engineering identified additional 1515 feet of main, 4 ADA ramps, and flowable fill cost for all open trench and holes (as required by the City of Gas City).					N	
N-1788	15981591	18575102052212	NE	RI	RICHMOND	IN-RICHMOND-N-1788-BSCI	3,200	3,200	55	2020	2021						Recent added constraints to City of Richmond construction permitting requires repaving of the entire block from centerline to the curb 5' five or more holes are made in a block split. Due to limited non paved right-of-way and various space constraints due to other utilities, for large parts of the projects require open-cut installation and therefore centerline to curb pavement restoration. Permit fees have also increased.					N	
N-2053	15975169	18592002052212	SE	CL	CLARKSVILLE	IN-CLARKSVILLE-N-2053-BSCI	5,020	5,020	134	2020	2020						Estimate additions include sections of dual main installation along Carter Ave., approx. 400' of 2" PE main, Randolph Ave., approx. 600' of 2" PE main, and Taggart Ave., approx. 1000' of 2" PE main, to avoid street cuts and manufacturing per the City of Clarksville ordinance if the limited number of cuts is exceeded.					N	
N-2077	15987263	18595302052212	NW	DA	BROWNSBURG	IN-BROWNSBURG-N-2077-BSCI	6,290	5,570	92	2020	2020						Increased traffic control by 400 hours because of work on US36 and adjacent work in downtown Brownsburg Indiana. Added costs for the permitting and retirement of a railroad crossing. High restoration costs are anticipated due to the amount of hard surface area and streets in the area that have recently been reconstructed.					N	

Vectren North
Compliance Plan - Bare Steel and Cast Iron Projects

Database Project Number	Maximo Work Order Number	Oracle Project Number	Division	OC	City	Project Short Description	Estimated Installed Footage	Estimated Retired Footage	Estimated Project Services	Previous Planned Year (4/1/19)	Current Planned Year	Previous Estimate (4/1/19)	Current Estimate	Estimate Variance (\$)	Estimate Variance (%)	Timing Variance Commentary (Current Fall 2019 Filing)	Estimate Variance Commentary (Current Fall 2019 Filing)	Current Period Actual Spend (1/1/19 - 6/30/19)	Inception to Date Actual Spend (1/1/14 - 6/30/19)	Actual Spend Variance (\$)	Actual Spend Variance (%)	In-service? (Y or N)	Actual Spend Variance Commentary (Current Fall 2019 Filing)	
N-2143	16049365	18582102052223	NE	AN	ANDERSON	N-ANDERSON-N-2143-BSCI	5,500	5,500	81	2020	2020						Install additional 2925 feet of main and 36 services. Based on site visit and field survey. North Street was just paved which required us to install dual mains and additional sidewalk restorations.					N		
N-2149	15971183	18596020052212	NW	TH	TERRE HAUTE	N-TERRE HAUTE-N-2149-BSCI	5,700	4,200	88	2020	2020						Main and service quantities increased from original scope based on site conditions and detailed engineering.					N		
N-2150	15982614	18573302052223	NE	MU	MUNCIE	N-MUNCIE-N-2150-BSCI	2,800	2,335	40	2020	2020						Estimate increased for additional 2080 feet of main and three services based on site visit and field survey. Some additional main necessary to maintain system reliability.					N		
N-2155	16049405	18574102052217	NE	MR	MARION	N-MARION-N-2155-BSCI	1,900	1,900	29	2020	2020						Main and service quantities increased from original scope based on site conditions and detailed engineering.					N		
N-2158	15975205	18583502052213	SE	FL	MARTINSVILLE	N-MARTINSVILLE-N-2158-BSCI	5,410	5,410	95	2020	2020						Additions include a section of dual main along Harrison St, approx. 400' of 2" PE main, and Pike St, approx. 800' of 2" PE main, to avoid having to cut the streets. Added a main extension along Pike St, approx. 200' of 2" PE main, for a system loop and also added restoration contingencies for replacing existing sidewalks located at six locations along St. Clair St and Harrison St.					N		
N-2160	14814037	17592402052217	SE	FL	MARTINSVILLE	N-MARTINSVILLE-N-2160-BSCI	4,005	4,260	65	2020	2020												N	
N-2162	15975346	18583302052210	SE	GF	KNOXSTOWN	N-KNOXSTOWN-N-2162-BSCI	6,650	6,650	83	2020	2020						Additions include extending the proposed new 2" PE main 180' along Jefferson St to establish an optimal tie in location as well as extending the 2" PE main 160' along Morgan St to tie in at the existing 4" main at Adams St as well adding 245' of 2" PE, connecting the two proposed end of mains near resident 184 and resident 232 North St to provide a system loop.					N		
N-2187	15975519	18592002052213	SE	CL	CLARKSVILLE	N-CLARKSVILLE-N-2187-BSCI	2,540	2,540	73	2020	2020						Additions include sections of dual main installations along Carter Ave., approx. 800' of 2" PE main, and Sherwood Ave, approx. 900' of 2" PE main, to avoid having to cut the streets as the streets will require resurfacing per the City of Clarksville ordinances if the limited number of cuts is exceeded.					N		
N-2188	15975541	18592002052214	SE	CL	CLARKSVILLE	N-CLARKSVILLE-N-2188-BSCI	3,375	3,375	84	2020	2020						Additions include sections of dual main installations along McKinley Ave., approx. 1600' of 2" PE main, to avoid having to cut the streets as the streets will require resurfacing per the City of Clarksville ordinances if the limited number of cuts is exceeded.					N		
N-2203	15982894	18573302052224	NE	MU	MUNCIE	N-MUNCIE-N-2203-BSCI	4,700	4,700	70	2020	2020						Install additional 2925 feet of main and 36 services, based on site visit and field survey.					N		
N-2210	15971314	18596020052213	NW	TH	TERRE HAUTE	N-TERRE HAUTE-N-2210-BSCI	4,000	2,900	82	2020	2020						- Added dual main on one segment, 1,000' street is wide at 45', added full time traffic control due to two neighborhood schools. Due to history of obstructed sewers in Terre Haute estimate includes costs assuming 25% of the main will be open excavated increasing restoration costs.					N		
N-2260	15975566	18583302052212	SE	GF	GREENFIELD	N-GREENFIELD-N-2260-BSCI	5,150	5,135	69	2020	2020												N	
N-2275	14811412	17596002052218	NW	TH	GREENCASTLE	N-GREENCASTLE-N-2275-BSCI	6,865	6,815	109	2020	2020						Added 500' of main to replace additional bare steel identified, added full time traffic control on the longest segment, Arlington Ave. (3,500'), because this segment has a high traffic volume. Added additional restoration cost and three CP test stations.					N		
N-2278	14811473	17596302052214	NW	DA	DANVILLE	N-DANVILLE-N-2278-BSCI	10,625	11,465	147	2020	2020						Added 430' of main to serve a customer without crossing US36 due to traffic and restoration concerns in a busy street. Added 415' of main on Urban Street to serve a customer that was not identified in historical records. Added replacement of 135' of vintage plastic. Replaced additional 300' of plastic main versus reletting because the main was located within a bare steel section being replaced.					N		
N-2280	15971446	18596302052214	NW	DA	BROWNSBURG	N-BROWNSBURG-N-2280-BSCI	5,320	5,800	64	2020	2020						Additional traffic control due to the work on N. Green Street, former SR 267. Added restoration costs with anticipation of resurfacing W. Vermont Street due to recent public improvements.					N		
N-2281	15971473	18596302052215	NW	DA	BROWNSBURG	N-BROWNSBURG-N-2281-BSCI	3,100	3,600	67	2020	2020						Detailed engineering added several additional segments of vintage plastic totaling approximately 2,000'. Added costs for full time traffic control and ROW survey for former SR 267 which is 3,600'.					N		
N-2286	14814355	17592402052218	SE	CO	BEEFORD	N-BEEFORD-N-2286-BSCI	2,955	2,870	28	2020	2020						Estimate was decreased due to detailed field investigation indicating the quantity of hard surface restoration required within the limits of the project could be reduced as it was determined that existing sidewalks only exist within approximately 20% of the project and a large portion of the alleyways are not paved.					N		
N-2318	15971530	18596502052213	NW	LA	WEST LAFAYETTE	N-WEST LAFAYETTE-N-2318-BSCI	9,800	6,800	20	2020	2020												N	
N-2320	15971922	18596502052215	NW	LA	WEST LAFAYETTE	N-WEST LAFAYETTE-N-2320-BSCI	4,350	4,350	57	2020	2020												N	
N-2328	15972016	18596502052216	NW	LA	LAFAYETTE	N-LAFAYETTE-N-2328-BSCI	7,120	4,415	25	2020	2021						Project reauthorized to 2021 due to risk assessment/priority. Several Easements Required.					N		
N-2339	15974373	18596502052217	NW	LA	LAFAYETTE	N-LAFAYETTE-N-2339-BSCI	7,550	7,550	46	2020	2020						Portion of the project is being replaced by a public improvement project.					N		
N-2357	15975656	18592602052212	SE	CO	COLUMBUS	N-COLUMBUS-N-2357-BSCI	2,500	2,500	41	2020	2020						3160' of 2" plastic main was added based on integrity concerns with existing steel main on 19 th St, Midway St, and Orchard Ln. This footage also includes dual main on 19 th St to eliminate several street bores and restoration cost.					N		
N-2374	15976039	18592402052214	SE	BL	BLOOMINGTON	N-BLOOMINGTON-N-2374-BSCI	2,650	2,650	41	2020	2020												N	
N-2385	15980075	18592602052213	SE	CO	GREENSBURG	N-GREENSBURG-N-2385-BSCI	150	150	3	2020	2020						Additions include a section of dual main installation of 100' of 2" PE along Broadway St to avoid having to					N		

Drainage Project Number	Mainline Work Order Number	Drainage Project Number	Division	OC	City	Project Short Description	Estimated Installed Footage	Estimated Retired Footage	Estimated Project Services	Previous Planned Year (6/1/19)	Current Planned Year	Previous Estimate (4/1/19)	Current Estimate	Estimate Variance (\$)	Estimate Variance (%)	Timing Variance Commentary (Current Fall 2019 Filing)	Estimate Variance Commentary (Current Fall 2019 Filing)	Current Period Actual Spend (10/1/19 - 4/30/19)	Inception to Date Actual Spend (10/1/14 - 4/30/19)	Actual Spend Variance (\$)	Actual Spend Variance (%)	In-service? (Y or N)	Actual Spend Variance Commentary (Current Fall 2019 Filing)
N-2366	1508189	1856260202214	SE	CO	COLUMBUS	N-COLUMBUS-N-2366-BSCI	3,700	3,700	48	2020	2020						Added dual main on multiple streets, approximately 3,000', due to multiple utilities in the street. Added full time traffic control due to two neighborhood schools in the project area and two busy streets. Added 400' of 2" plastic and 435' of 6" plastic to provide adequate feeds to the project. Due to history of obstructed sewers in Terre Haute assumed 25% of the main will be open excavated increasing restoration costs.				N		
N-2401	1481660	1756260202219	SE	CO	COLUMBUS	N-COLUMBUS-N-2401-BSCI	3,800	3,800	55	2020	2020						Added dual main on multiple streets, approximately 3,000', due to multiple utilities in the street. Added full time traffic control due to two neighborhood schools in the project area and two busy streets. Added 400' of 2" plastic and 435' of 6" plastic to provide adequate feeds to the project. Due to history of obstructed sewers in Terre Haute assumed 25% of the main will be open excavated increasing restoration costs.				N		
N-2426	15083161	1857510202213	NE	RI	RICHMOND	N-RICHMOND-N-2426-BSCI	5,038	5,038	78	2020	2021						Project reprogrammed to 2021 due to risk assessment/emergency. Several Easements Required.						
N-466	15074440	18566020202214	NW	TH	TERRE HAUTE	N-TERRE HAUTE-N-466-BSCI	4,875	5,875	80	2020	2020						Added dual main on multiple streets, approximately 3,000', due to multiple utilities in the street. Added full time traffic control due to two neighborhood schools in the project area and two busy streets. Added 400' of 2" plastic and 435' of 6" plastic to provide adequate feeds to the project. Due to history of obstructed sewers in Terre Haute assumed 25% of the main will be open excavated increasing restoration costs.				N		
N-467	15074491	18566020202215	NW	TH	TERRE HAUTE	N-TERRE HAUTE-N-467-BSCI	4,300	4,300	65	2020	2020						Added dual main on multiple streets, approximately 3,000', due to multiple utilities in the street. Added full time traffic control due to two neighborhood schools in the project area and two busy streets. Added 400' of 2" plastic and 435' of 6" plastic to provide adequate feeds to the project. Due to history of obstructed sewers in Terre Haute assumed 25% of the main will be open excavated increasing restoration costs.				N		
N-668	15074579	18566020202216	NW	TH	TERRE HAUTE	N-TERRE HAUTE-N-668-BSCI	4,900	4,900	75	2020	2020						Added dual main on multiple streets, approximately 3,000', due to multiple utilities in the street. Added full time traffic control due to two neighborhood schools in the project area and two busy streets. Added 400' of 2" plastic and 435' of 6" plastic to provide adequate feeds to the project. Due to history of obstructed sewers in Terre Haute assumed 25% of the main will be open excavated increasing restoration costs.				N		
N-669	15074716	18566020202217	NW	TH	TERRE HAUTE	N-TERRE HAUTE-N-669-BSCI	5,200	5,915	84	2020	2020						Added dual main on multiple streets, approximately 4,000', due to multiple utilities in the street. Added full time traffic control due to two neighborhood schools in the project area. Due to history of obstructed sewers in Terre Haute assumed 25% of the main will be open excavated increasing restoration costs.				N		
N-897	1614222	1857510202218	NE	RI	RICHMOND	N-RICHMOND-N-897-BSCI	3,300	3,300	92	2020	2020						Detailed engineering determined additional 3568' of main and 15 services are required.				N		
N-898	15083211	1857510202214	NE	RI	RICHMOND	N-RICHMOND-N-898-BSCI	5,600	6,200	90	2020	2020						Recent added constraints to City of Richmond construction permitting requires regrading of the entire back from centerline to the curb 5' five or more holes are made in a block space. Due to limited non-paved right-of-way and various space constraints due to other utilities, for large parts of the projects require open cut installation and therefore centerline to curb pavement restoration. Permit fees have also increased. Also installing additional 1460' of main and 32 services based on detailed engineering.				N		
N-663	12396095	15596020202214	NW	TH	TERRE HAUTE	N-TERRE HAUTE-N-663-BSCI	4,145	5,245	90	2017	2017						The project was added because of main leaks and requested by Operations to be replaced. The project was prioritized to be constructed in 2020.				N		
N-884	12387544	1558210202217	NE	AN	ALEXANDRIA	N-ALEXANDRIA-N-884-BSCI	5,410	5,375	67	2017	2017										Y	The project required 1,200 feet of hand surface open cut versus boring on Maple Ave, this added to the restoration, traffic control, and inspection cost.	
N-885	12387683	1557510202212	NE	RI	RICHMOND	N-RICHMOND-N-885-BSCI	7,265	7,260	140	2017	2017										Y	There was no service added on this project, these relocations will occur on project N-887 in 2018. This resulted in fewer than anticipated restoration cost.	
N-2069	12842140	1557330202214	NE	MJ	MUNCIE	N-MUNCIE-N-2069-BSCI	4,440	4,965	54	2017	2017										Y	Deleted 180' of 2" PE and added 1 to N-2068 as keep needs maintenance.	
N-1114	14239647	1757510202210	NE	RI	RICHMOND	N-RICHMOND-N-1114-BSCI	3,990	3,990	68	2017	2017										Y		
N-1788	15081561	1857510202212	NE	RI	RICHMOND	N-RICHMOND-N-1788-BSCI	2,475	7,230	37	N/A	2020										N		
N-1792	1663489	1957410202210	NE	MR	MARION	N-HARTFORD CITY-WATER STREET-N-1792	13,460	11,290	127	N/A	2020										N		
N-2496	16922475	1959950202210	NW	LA	LAFAYETTE	N-FRANKFORT-BSCI-GROUP N-2496	2,870	2,605	26	N/A	2020										N		
N-1532	14810911	1759630202213	NW	DA	DANVILLE	N-DANVILLE-N-1532-BSCI	4,885	5,025	62	N/A	2020						Project reprogrammed to 2020 due to risk assessment/emergency.	Project was re-estimated in 2018, additional restoration costs added due to work in paved alleys.			N		
N-1958	12112150	1558210202213	NE	AN	ANDERSON	N-ELWOOD-BSCI-GROUP N-19	4,481	5,495	38	2016	2016										Y	RR crossing construction exceeded estimate by \$76,000 due to depth and space constraints. Inspection costs were also greater than estimated due to the increased duration of the project.	
N-584	11466519	1459240202213	SE	BL	BLOOMINGTON	N-BLOOMINGTON-N-584-BSCI	4,835	6,300	68	2016	2016										Y	Outstanding invoice for railroad permit and flagging was applied to the project in 2018. No other charges are anticipated for this project.	
N-107	12387192	15596020202210	NW	TH	TERRE HAUTE	N-TERRE HAUTE-N-107-BSCI	8,265	10,020	106	2017	2017										Y	Open trench main in alley between Walnut St. & Washington St. and open trench main on 7th St. & Morris St. Construction crew was unable to bore due to large storm tunnel on 7th St. other utilities in the area and bad sewer location. Also, additional 92 feet of 2 inch plastic main was extended down alley between N College Ave. & Walnut St. to catch 2 services. Additional 62 feet of 2 inch plastic main was extended down W 8th St. to catch 1 service. Additional 650 feet of 4 inch LP cast iron main and 10 services were replaced and MP plastic main in the alley between E 2nd St. & E 1st St. Furthermore, additional cost for restoration increased due to open trench main on streets referenced above, additional sign holders, saw cutting, flagman and inspector cost.	
N-1092	12387624	15596020202210	NW	LA	FRANKFORT	N-FRANKFORT-N-1092-BSCI	4,535	2,770	46	2017	2017										Y		
N-1093	11466461	14596020202213	NW	LA	FRANKFORT	N-FRANKFORT-N-1093-BSCI	10,090	9,080	91	2017	2017										Y		
N-1094	12387661	15596020202212	NW	LA	FRANKFORT	N-FRANKFORT-N-1094-BSCI	11,445	10,875	166	2017	2017										Y	Alley south of W. Morrison St. was estimated open cut with hand surface restoration, however the main was moved to true row of W. Morrison St., approximately 1,000 feet. Restoration on the project overall was significantly less than estimated because we did not have to open cut the long alley. Rebar not necessary on stretch of John St., main was retired and customer was served by another main.	
N-1096	12388038	15596020202213	NW	LA	FRANKFORT	N-FRANKFORT-N-1096-BSCI	13,715	8,870	173	2017	2017										Y	Restoration cost were lower than anticipated due to the installation of dual mains. Traffic control was also lower than anticipated.	
N-1148	12386973	1557330202210	NE	MJ	MUNCIE	N-MUNCIE-N-1148-BSCI	5,090	9,625	47	2017	2017										Y	The main was extended 185 feet to pick up two additional services. The inspector costs were more than estimated. The project had difficulty locating the sewer main and service laterals which resulted in more trenching that caused higher restoration costs.	
N-1150	12393340	1558330202212	SE	GF	RUSHVILLE	N-RUSHVILLE-N-1150-BSCI	4,839	5,240	97	2017	2017										Y		
N-1553	11462614	14596020202214	NW	LA	FRANKFORT	N-FRANKFORT-N-1553-BSCI	2,905	2,980	35	2017	2017										Y	Installed 325 feet less of main versus planned. Estimated for traffic control which was not needed.	
N-1557	11466997	1458210202210	NE	AN	ANDERSON	N-ANDERSON-N-1557-BSCI	4,380	9,425	86	2017	2017										Y	This project used in-house labor for installation, traffic control and inspection which resulted in lower overall cost of the project.	
N-1782	12387295	1557510202210	NE	RI	RICHMOND	N-RICHMOND-N-1782-BSCI	7,100	6,740	84	2017	2017										Y		
N-1802	13584714	1657330202212	NE	MJ	EATON	N-EATON-N-1802-BSCI	4,750	4,750	73	2017	2017										Y	An in-house inspector was used instead of a contractor which resulted in lower inspection cost. The project required minimal restoration as they were able to bore 100% of the main. Sewer locates were lower than estimated since we were able to bore through clearance from sewer main.	
N-1870	12393894	1558330202214	SE	GF	RUSHVILLE	N-RUSHVILLE-N-1870-BSCI	8,220	8,210	4	2017	2017										Y		
N-1967	12112240	1558210202214	NE	AN	ANDERSON	N-ANDERSON-N-1967-BSCI	6,920	13,125	146	2017	2017										Y		
N-202	15042099	1657330202212	NE	MJ	MUNCIE	N-MUNCIE-N-202-BSCI	1,440	4,755	38	2017	2017										Y		
N-203	12387179	1557330202212	NE	MJ	MUNCIE	N-MUNCIE-N-203-BSCI	6,520	5,645	125	2017	2017										Y		
N-2050	15045681	1656202020210	SE	CL	NEW ALBANY	N-NEW ALBANY-N-2050-BSCI	6,620	6,930	63	2017	2017										Y		
N-2054	15044509	16562020202215	SE	CL	NEW ALBANY	N-NEW ALBANY-N-2054-BSCI	4,450	4,450	63	2017	2017										Y		

Petitioner's Exhibit No. 1
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Database Project Number	Maximo Work Order Number	Oracle Project Number	Division	OC	City	Project Short Description	Estimated Installed Footage	Estimated Restored Footage	Estimated Project Services	Previous Planned Year (40/19)	Current Planned Year	Previous Estimate (4/19)	Current Estimate	Estimate Variance (\$)	Estimate Variance (%)	Timing Variance Commentary (Current Fall 2019 Filing)	Estimate Variance Commentary (Current Fall 2019 Filing)	Current Period Actual Spend (10/19 - 03/20)	Inception to Date Actual Spend (10/14 - 03/20)	Actual Spend Variance (\$)	Actual Spend Variance (%)	In-service? (Y or N)	Actual Spend Variance Commentary (Current Fall 2019 Filing)
N-2067	12840351	15575102502214	NE	R	RICHMOND	IN-RICHMOND-N-2067-BSCI	7,355	6,496	74	2017	2017											Y	Installed mains under sidewalk resulted in less restoration versus pavement installation and less traffic control was needed.
N-2068	12842011	15575102502215	NE	R	RICHMOND	IN-RICHMOND-N-2068-BSCI	4,165	3,640	53	2017	2017											Y	Installed mains under sidewalk resulted in less restoration versus pavement installation and less traffic control was needed.
N-2126	13709124	16062102502216	NE	AN	ANDERSON	IN-ANDERSON-N-2126-BSCI	5,720	4,040	67	2017	2017											Y	1,520' less main installed - avoided cutting of newly paved street, which also resulted in less traffic control and less traffic control costs
N-2189	13789165	16073302502217	NE	EA	EATON	IN-EATON-N-2189-BSCI	2,780	3,789	165	2017	2017											Y	Installed 298' less of main versus planned. The construction crew was able to bore most of the project which lowered restoration and installation costs
N-417	14293500	17583302502210	SE	GF	RUSHVILLE	IN-RUSHVILLE-N-417-BSCI	7,600	6,140	98	2017	2017											Y	Installed 298' less of main versus planned. The construction crew was able to bore most of the project which lowered restoration and installation costs
N-479	14294196	17583302502212	SE	GF	RUSHVILLE	IN-RUSHVILLE-N-479-BSCI	8,390	5,770	88	2017	2017											Y	Installed 298' less of main versus planned. The construction crew was able to bore most of the project which lowered restoration and installation costs
N-556	12392025	15959502502212	NW	TH	TERRE HAUTE	IN-TERRE HAUTE-N-556-BSCI	3,895	3,210	220	2017	2017											Y	Additional restoration work was required to replace a concrete sidewalk that was in conflict with the excavations required for the new main installation. Additional costs were also incurred as part of this project as a portion of the new main installation located on 14th St. was required to be installed in the street due to a 4" water main that was in conflict with the proposed main path, and had to be open cut instead of boring due to conflicts with utilities and they couldn't get good power locations. This also resulted in an increase in restoration cost due to the open cut and hard surface restoration. A small part of the project was charged IAM, due to many utilities that were not able to be located near the regulator station and a vacuum truck had to be used to excavate a trench to stop all of the lines running to the station on 13th St.
N-557	16821128	15959502502218	NW	TH	TERRE HAUTE	IN-TERRE HAUTE-N-557-BSCI	4,910	4,415	24	2017	2017											Y	
N-573	12623249	15592402502219	SE	BL	BLOOMINGTON	IN-BLOOMINGTON-N-573-BSCI	6,955	7,465	127	2017	2017											Y	
N-643	12398694	15592402502214	SE	BL	BEDFORD	IN-BEDFORD-N-643-BSCI	2,365	4,450	16	2017	2017											Y	
N-673	12392845	15959502502215	NW	LA	LAFAYETTE	IN-LAFAYETTE-N-673-BSCI	3,500	4,000	54	2017	2017											Y	
N-676	11462896	14595502502220	NW	LA	WEST LAFAYETTE	IN-WEST LAFAYETTE-N-676-BSCI	12,635	9,175	160	2017	2017											Y	Dual main installed on this project which resulted in fewer road cuts reducing restoration.
N-682	11462820	14595502502221	NW	LA	LAFAYETTE	IN-LAFAYETTE-N-682-BSCI	11,620	9,975	148	2017	2017											Y	Dual main installed on this project which resulted in fewer road cuts reducing restoration.
N-683	11462938	14595502502222	NW	LA	LAFAYETTE	IN-LAFAYETTE-N-683-BSCI	10,155	5,775	114	2017	2017											Y	Dual main installed on this project which resulted in fewer road cuts reducing restoration.
N-684	12393048	15959502502218	NW	LA	LAFAYETTE	IN-LAFAYETTE-N-684-BSCI	6,055	6,600	60	2017	2017											Y	
N-685	11463031	14595502502223	NW	LA	LAFAYETTE	IN-LAFAYETTE-N-685-BSCI	9,340	4,015	118	2017	2017											Y	
N-692	18170305	1259502502217	NW	TH	TERRE HAUTE	IN-TERRE HAUTE-N-692-BSCI	4,485	3,550	78	2018	2018											Y	Dual main installed on this project which resulted in fewer road cuts reducing restoration.
N-691	11462315	14595102502214	AN	AN	ANDERSON	IN-ANDERSON-N-691-BSCI	3,320	3,320	42	2018	2018											Y	The project encountered additional cost for inspectors and traffic control.

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Maximo Work Order Number	Oracle Project Number	Project Category	Division	OC	City	Project Short Description	Previous Planned Year (4/1/19)	Current Planned Year	Previous Estimate (4/1/19)	Current Estimate	Estimate Variance (\$)	Estimate Variance (%)	Timing Variance Commentary (Current Fall 2019 Filing)	Estimate Variance Commentary (Current Fall 2019 Filing)	Current Period Actual Spend (1/1/19-6/30/19)	Inception to Date Actual Spend (1/1/14-6/30/19)	Actual Spend Variance (\$)	Actual Spend Variance (%)	In-service? (Y or N)	Actual Spend Variance Commentary (Current Fall 2019 Filing)	
NA	17202802049011 17202802043011	Targeted Economic Development (aligned)	NE	RICHMOND	RICHMOND	IN-RICHMOND-HEARTLAND (Blue Buffalo) PET FOOD MANUFACTURING -INSTALL REG STATION, MAIN, SERVICE	2017	2017												N	
N/A	18202802049011	Economic Development	NW	DANVILLE	PLAINFIELD	IN-PLAINFIELD-UPS "CANDALPOINIS" TED-INSTALL PIPELINE, METER SET, REG STATIONS	2018	2018												Y	Not all charges have been incurred.
4703437	16675102051213	System Improvement	NE	RICHMOND	RICHMOND	IN-RICHMOND-ELKS ROAD-RETIRE 8" STEEL MAIN DUE TO LEAKS	2017	2017												Y	Increased costs were due to 8" valve leaking through requiring servicing to complete the retirement portion.
																			Y	Actual charges increased due a late scope changes necessitated by the road construction project which increased the 6" PE main installed by 180' and increased the amount reeled by 200'. Two spot elevation adjustments were requested by the drainage contractor after installation. Also contributing to the additional costs were additional sewer locations, extended traffic control, and special backfill/bedding materials not included in the original estimate.	
12827014	16595302061214	Public Improvement	NW	DANVILLE	WHITESTOWN	IN-WHITESTOWN-INDIANAPOLIS RD & WHITESTOWN PKWY- RELOCATE MAIN DUE TO ROUNDABOUT CONSTRUCTION PROJECT	2018	2018												Y	
236	TBD	Gas LP Plant	NW	N/A	LEBANON	IN-LEBANON-FLOW CONTROLLERS UPGRADE	2020	2020												N	
																				Y	Costs increased due to a change to the original plan which added approximately 300 additional feet of main to serve additional customers who were identified after the original estimate was created.
16126427	18592402044218	Rural Extension	SE	BLOOMINGTON	MOORESVILLE	IN-MOORESVILLE-NORTH FOREST GROVE RD SB560	2018	2018												Y	
																			Y	pipe being in worse condition than expected due to severe corrosion which required retirement/relocation of additional pipe than was originally planned. Unknown subsurface rock was encountered which required additional special equipment and additional time to excavate. Also, the scope expanded during construction to install an additional 210' of 8" PE main due to a conflict with a structure and eliminating the remaining steel segment to avoid isolating it between segments of PE main.	
12624179	16575102061210	Public Improvement	NE	RICHMOND	RICHMOND	IN-RICHMOND-E MAIN, 7TH, 10TH ST --RELOCATE MAINS	2018	2018												Y	Project costs exceeded the estimate due to an additional relocation (our original relocation bore was slightly too shallow) of the newly installed main which was determined to be in conflict with the new storm drainage system. This was due to an extremely congested ROW shared by multiple utilities.
12626850	17595302061215	Public Improvement	NW	DANVILLE	BROWNSBURG	IN-BROWNSBURG-GREEN ST - US 136 TO 56TH ST --RELOCATE MAIN	2018	2018												Y	This project required the following changes: 12" steel RR crossing from casing installation to bore including extra depth of ten feet. Traffic control was under estimated due to limited time that roadway could be closed, which caused temporary fill and re-excavation. Backfill was underestimated due to requirement for all hard surfaces to have flowable backfill and all other excavations were required to be backfilled with granular materials. An additional 440' of 8" PE main was added to replace obsolete main that was not included in the original estimate.
13390314	16595502061225	Public Improvement	NW	LAFAYETTE	LAFAYETTE	IN-LAFAYETTE-SAGAMORE PKWY PH 3--RELOCATE MAINS	2017	2017												Y	Project Scope was expanded through mutual agreement with the City of Lafayette to extend the 6" main approx. 400' to position it for future known development to avoid future cutting of pavement of new pavement.
14391209	17595502061216	Public Improvement	NW	LAFAYETTE	WEST LAFAYETTE	IN-WEST LAFAYETTE-STATE ST --SECT 1A, -RELOCATE MAIN AND SERVICES	2017	2017												Y	
15206958	18595502061214	Public Improvement	NW	LAFAYETTE	WEST LAFAYETTE	IN-WEST LAFAYETTE-STATE ST --SECT 6A -RELOCATE MAIN AND SERVICES	2018	2018												Y	
																			Y	Two additional conflicts were found with the 4" steel pipe during the construction phase which required relocation, including a service. These sections were originally thought to be un-conflicted. Secondly, the 6" steel creek bore had to be lengthened by 120' and deepened due to a late change by the project owner to the creek culvert headwall structure. This deepening required additional timelabor, excavating, and special shoring.	
15206965	18595502061215	Public Improvement	NW	LAFAYETTE	WEST LAFAYETTE	IN-WEST LAFAYETTE-STATE ST --SECT (6B-MCCORMICK RD.) - RELOCATE MAIN AND SERVICES	2018	2018												Y	estimate due to difficulty with the Purdue campus tunnel bore (exact dimensions and depth were unknown at the time of design), unknown private utility locations (customer's private utility locations were incomplete or unknown), extra installation depth was required at two locations due to private utility ducts being buried deeper than anticipated, and delays associated with other construction work in the area that conflicted with our work.
																			Y		
15206962	18595502061216	Public Improvement	NW	LAFAYETTE	WEST LAFAYETTE	IN-WEST LAFAYETTE-STATE ST --SECT (6B-STADIUM AVE.)- RELOCATE MAIN AND SERVICES	2018	2018												Y	
13331415	16592002044215	Rural Extension	SE	CLARKSVILLE	FLOYDS KNOBS	IN-FLOYDS KNOBS-LAURA LEIDOLF - SB560 PROJECT TO SERVE 18 POTENTIAL RESIDENTIAL CUSTOMERS	2017	2017												Y	
11198295	14583502051216	System Improvement	SE	FRANKLIN	FRANKLIN	11198295-IN-FRANKLIN-MAIN ST -	2014	2014												Y	
253	17200602006012	Gas Production & Storage	NW	N/A	WOLCOTT	IN-WOLCOTT-UPGRADE FLOW CONTROLLER	2018	2018												Y	Actual control valve selected was less than originally estimated.
																			Y	Scope changed by the City of Carmel. Original project was divided into two projects to be completed at different times.	
12410384	16583002061215	Public Improvement	NE	NOBLESVILLE	CARMEL	IN-CARMEL-96TH AND PRIORITY-RELOCATE MAIN FOR ROUNDABOUT PROJECT	2018	2018												Y	

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Maximo Work Order Number	Oracle Project Number	Project Category	Division	OC	City	Project Short Description	Previous Planned Year (4/1/19)	Current Planned Year	Previous Estimate (4/1/19)	Current Estimate	Estimate Variance (\$)	Estimate Variance (%)	Timing Variance Commentary (Current Fall 2019 Filing)	Estimate Variance Commentary (Current Fall 2019 Filing)	Current Period Actual Spend (1/1/19-6/30/19)	Inception to Date Actual Spend (1/1/14-6/30/19)	Actual Spend Variance (\$)	Actual Spend Variance (%)	In-service? (Y or N)	Actual Spend Variance Commentary (Current Fall 2019 Filing)
12624612	17575102G61210	Public Improvement	NE	RICHMOND	CENTERVILLE	IN-CENTERVILLE-US-40 -- RELOCATE MAIN FOR SEWER STRUCTURE REPLACEMENT PROJECT	2018	2018											Y	The actual costs exceeded the estimate due to the proposed tie-in point was found to be conflicted with a water main which was incorrectly located on the plans provided. This required the tie-in point to be moved to a different location which was much more complex due to extra depth of about 9 feet. The increased time and depth required exceeded the original estimated cost.
200	17200602006013	Gas Production & Storage	SE	BLOOMINGTON	BLOOMINGTON	IN-BLOOMINGTON-REPLACE DEHYDRATOR	2018	2018											Y	The existing contact tower could be retrofitted with new components and supplemented with a new reboller instead replacing contact tower as originally planned. Also, the glycol system piping was modified to work with the new components rather than completely replacing the piping as originally planned.
14470631	17583302044210	Rural Extension	SE	GREENFIELD	GREENFIELD	IN-GREENFIELD-2133 W - SB 560 PROJECT TO SERVE ONE RESIDENTIAL CUSTOMER	2017	2017											Y	
15258436	17583502044213	Rural Extension	SE	FRANKLIN	BARGERSVILLE	IN-BARGERSVILLE-4289 N BANTA RD - SB560 PROJECT TO SERVE ONE NEW RESIDENTIAL CUSTOMER	2017	2017											Y	
10767877	17595502G51210	System Improvement	NW	LAFAYETTE	LAFAYETTE	IN-LAFAYETTE-KOSSUTH ST --ELEVATE/RETEST GAS MAIN	2019	2020					Project moved out to 2020 due to seasonal time restraints, and adjacent project not completed.						N	
13807515	17595502G51212	System Improvement	NW	LAFAYETTE	WEST LAFAYETTE	IN-WEST LAFAYETTE - KLONDIKE AREA 1-ELEVATE/RETEST GAS MAIN	2019	2019											N	The scope of the project was changed and the uprate for the area was cancelled. Instead will install a temporary regulator station until main and services can be replaced.
15497686	1859502G51210	System Improvement	NW	LAFAYETTE	WEST LAFAYETTE	IN-WEST LAFAYETTE - KLONDIKE AREA 2-ELEVATE/RETEST GAS MAIN	2019	2019											N	The scope of the project was changed and the uprate plan/process including collaboration with the IURC Pipeline Safety Division. Due to the delays it was necessary to construct a temporary reg station and 2500' of 4" PE main to connect two in adjacent system last winter. Field investigation identified an additional 68 services beyond the quantity estimated that were tested, retested, or replaced.
15497693	1859502G51212	System Improvement	NW	LAFAYETTE	WEST LAFAYETTE	IN-WEST LAFAYETTE - KLONDIKE AREA--ELEVATE/RETEST GAS MAIN	2020	2020					Project moved out to 2020 due to seasonal time restraints	Estimate will likely be revised in TDSIC-12 due to recent experience with pressure elevation projects (Project 15497686 Lafayette - Klondike Area) which indicates the need for additional field investigation/research and service replacements.					N	
8664431	13592002061213	Public Improvement	SE	CLARKSVILLE	NEW ALBANY	IN-NEW ALBANY-2500 BLK CHARLESTOWN RD-RELOCATE GAS MAIN	N/A	2021					Project rescheduled by the City of New Albany. Plans not finalized and City still acquiring ROW.						N	
10845148	16573302061214	Public Improvement	NE	MUNCIE	MUNCIE	IN-MUNCIE-WHEELING AVE - RELOCATE MAIN	2019	2020					Rescheduled by City of Muncie.						N	
11539590	18592002G61212	Public Improvement	SE	CLARKSVILLE	NEW ALBANY	IN-NEW ALBANY-2100-3000BLK GRANT LINE RD - RELOCATE MAINS DUE TO STORM SEWER PROJECT	2018	2018					Project cancelled. Project Scope was changed by City of Terre Haute to avoid conflicts with gas facilities and no relocation needed.						N	
14242846	17595502G61214	Public Improvement	NW	TERRE HAUTE	TERRE HAUTE	IN-TERRE HAUTE-167 ST & HULMAN ST - RELOCATE MAIN DUE TO INTERSECTION IMPROVEMENT PROJECT	2019	2019											N	
12626703	17595302G61210	Public Improvement	NW	DANVILLE	AVON	IN-AVON-CR 200 N - DAN JONES TO RONALD REAGAN --RELOCATE MAINS DUE TO ROAD IMPROVEMENT PROJECT	2018	2018											Y	The actual cost for this project exceeded the estimate due to extra depth required to achieve and maintain the necessary clearance from adjacent conflicting utilities. The work was also impacted by excessive rain which slowed the work progress and resulted in higher labor costs and extended traffic control costs. The project is trending over estimate by roughly 50%. The actual bids exceeded the estimate.
12626778	17202802G53011	System Improvement	SE	CLARKSVILLE	JEFFERSONVILLE	IN-JEFFERSONVILLE-REBUILD RS #14-34-GTE IN-GREENWOOD SYSTEM IMPROVEMENT ON MULLINX RD AND UPRATE OUT OF GRASSY CREEK STATION	2019	2019											N	Construction in progress and is trending on large to estimate.
15438738	17583502G51011	System Improvement	SE	FRANKLIN	GREENWOOD	IN-FRANKFORT-WASHINGTON AVE --RELOCATE MAINS DUE TO ROAD RECONSTRUCTION PROJECT - PHASE 1	2018	2018											Y	Construction is completed however additional invoicing is expected.
13807492	17595502G61212	Public Improvement	NW	LAFAYETTE	FRANKFORT	IN-FRANKFORT-WASHINGTON AVE --RELOCATE MAINS DUE TO ROAD RECONSTRUCTION PROJECT - PHASE 2	2019	2019											N	
15656560	18595502G61217	Public Improvement	NW	LAFAYETTE	FRANKFORT	IN-FRANKFORT-WASHINGTON AVE --RELOCATE MAINS DUE TO ROAD RECONSTRUCTION PROJECT - PHASE 2	2020	2020											N	
13378033	16595302061224	Public Improvement	NW	DANVILLE	LEBANON	IN-LEBANON-INDIANAPOLIS AVE --PHASE II - RELOCATE MAINS DUE TO ROAD IMPROVEMENT PROJECT	2018	2018											Y	Actual cost is less than the estimated cost due to the original estimate being based on preliminary plans. Actual construction cost was based on final plans.
13198131	17592002G61210	Public Improvement	SE	CLARKSVILLE	NEW ALBANY	IN-NEW ALBANY- MT TABOR ROAD - RELOCATE MAINS DUE TO ROAD IMPROVEMENT PROJECT	2018	2018											Y	
15634137	18592002G61213	Public Improvement	SE	CLARKSVILLE	NEW ALBANY	IN-NEW ALBANY- MT TABOR ROAD PH 2 - RELOCATE MAINS DUE TO ROAD IMPROVEMENT PROJECT	2020	2021					Project rescheduled by the City of New Albany. Plans not finalized.						N	
13831950	18592002G61210	Public Improvement	SE	CLARKSVILLE	JEFFERSONVILLE	IN-JEFFERSONVILLE-VETERANS PARKWAY- PHASE 2-GAS MAIN RELOCATION	2018	2018											Y	Project costs exceeded the estimate due to a field scope change that changed the extents of the road work which resulted in one additional conflict lowering and the extension of another planned lowering from 14 feet in length to 60 feet in length. These field changes added significant labor and traffic control costs. The work site was also more complex than originally planned for due to heavy vehicular traffic and utility congestion which slowed the work progress.

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10518255	17583002G61213	Public Improvement	NE	NOBLESVILLE	SHERIDAN	IN-SHERIDAN-STATE ROAD 38 @ SIX POINTS ROAD-MAIN RELOCATE DUE TO INTERSECTION REBUILD	2019	2019											Y	Actual construction costs are under the original estimate due to partial reimbursement of relocation costs received for the portion of the main was located within easement.
42002644	47583502G61215	Public Improvement	SE	FRANKLIN	FRANKLIN	IN-FRANKLIN-EASTVIEW DRIVE --RELOCATE MAINS DUE TO NEW ROUNDABOUT PROJECT	2019	N/A					Project cancelled - new planned relocation project was incorporated into an adjacent System Improvement project for efficiency.						N	Project cancelled. The planned relocation project was incorporated into an adjacent System Improvement project for efficiency.
12265416	17583502G51012	System Improvement	SE	FRANKLIN	FRANKLIN	IN-FRANKLIN - NORTH AND EAST SIDE UPRATE	2018	2018											Y	
13758448	18202802G53013	System Improvement	NW	LAFAYETTE	FRANKFORT	IN-FRANKFORT-REBUILD STATION 2	2018	2019											Y	Construction in progress and is trending on target to estimate.
13894271	16583502061220	Public Improvement	SE	FRANKLIN	FAIRLAND	IN-SHELBYVILLE-FAIRLAND ROAD EXTENSION-MAUSOLEUM ROAD TO FAIRLAND - RELOCATE MAINS	2020	2020											N	
13894268	16583502061221	Public Improvement	SE	FRANKLIN	GREENWOOD	IN-GREENWOOD-STONES CROSSING ROAD RELOCATE MAINS DUE TO NEW ROUNDABOUT PROJECT	2020	2020											N	
221	TBD	Gas Production & Storage	SE	BLOOMINGTON	BLOOMINGTON	IN-BLOOMINGTON-H2S REMOVAL	2020	2020											N	Original estimate was based on a broad project scope. The actual work necessary to complete the project cost significantly less than originally estimated.
231	18200602G06013	Gas Production & Storage	SE	N/A	JEFFERSONVILLE	IN-JEFFERSONVILLE-ENGINE PRELUBE PUMPS	2018	2018											Y	
238	18200602G06011	Gas Production & Storage	SE	N/A	SELLERSBURG	IN-SELLERSBURG-REPLACE HP DRIP	2020	2020											N	Actual charges include preliminary engineering and partial material costs only
15297672	17583502G61210	Public Improvement	SE	FRANKLIN	FRANKLIN	IN-FRANKLIN-COUNTY ROAD 200 NORTH 114 --BETWEEN STATE ROAD 144 AND CENTER LINE ROAD-RELOCATE MAINS DUE TO ROAD IMPROVEMENT PROJECT	2018	2018											Y	
42002144	47583502G61212	Public Improvement	NW	TERRE-HAUTE	TERRE-HAUTE	IN-TERRE-HAUTE-SPRINGFIELD RD US-41 TO-221ST --RELOCATE MAINS DUE TO ROAD-WIDENING	2019	2019					Project cancelled. After completing the conflict analysis of the final plans it has been determined that there are no conflicts with Vectren facilities requiring relocation.					N	Project cancelled. After completing the conflict analysis of the final plans it has been determined that there are no conflicts with Vectren facilities requiring relocation.	
13494166	1795502G61219	Public Improvement	NW	LAFAYETTE	WEST LAFAYETTE	IN-WEST LAFAYETTE-UNDBERG RD - RELOCATE MAINS DUE TO ROAD IMPROVEMENT PROJECT	2020	2020											N	
12307076	16583502061228	Public Improvement	SE	FRANKLIN	GREENWOOD	IN-GREENWOOD-WORTHSVILLE RD --FROM US 31 WEST TO AVERITT ROAD- RELOCATE MAINS DUE TO ROAD WIDENING PROJECT	2019	2019					Late 2019 start is anticipated.						N	
12622403	17583002G61210	Public Improvement	NE	NOBLESVILLE	CARMEL	IN-CARMEL-GULFORD AVE CITY CENTER DR TO MAIN ST-RELOCATE MAIN DUE TO STREET WIDENING PROJECT	2018	2018											Y	
15598827	18595302G51214	System Improvement	NW	DANVILLE	PLAINFIELD	IN-PLAINFIELD-STAFFORD RD AREA 3 UPRATE GAS MAIN	2019	2019											N	Not all charges have been incurred.
15589890	18595302G51215	System Improvement	NW	DANVILLE	PLAINFIELD	IN-PLAINFIELD-STANLEY RD AREA 2 ELEVATE RETEST GAS MAIN	2019	2019											Y	Unforeseen utility conflicts caused extra depth main installation with TAM charges and 72 hours of traffic control.
15525323	18595302G51212	System Improvement	NW	DANVILLE	PLAINFIELD	IN-PLAINFIELD AREA 1 UPRATE GAS MAIN	2019	2019											Y	Not all charges have been incurred.
13494120	1859502G61210	Public Improvement	NW	LAFAYETTE	WEST LAFAYETTE	IN-WEST LAFAYETTE-RLONKIDE RD - RELOCATE MAINS DUE TO ROAD RECONSTRUCTION PROJECT	2018	2018											N	Construction in progress. Additional traffic control crews were needed due to the unexpected amount of heavy traffic and the difficulty and inability of contractor vehicles to exit the roadway. This necessitated traffic control (multiple crews in many cases) to be utilized for nearly 100% of the work. Additional contract labor was required for the main installation and associated tie-ins due to the unexpected extra depth of the main.
14000440	18595302G51213	System Improvement	NW	CRAWFORDSVILLE	LINDEN	IN-LINDEN-SR 231 --ELEVATE/RETEST GAS MAIN	2019	2020					Project moved out to 2020 due to seasonal time restrictions.						N	
12035020	17583502G61213	Public Improvement	SE	FRANKLIN	GREENWOOD	IN-GREENWOOD-SMITH VALLEY ROAD --AT MADISON AVENUE-RELOCATE MAINS DUE TO NEW ROUNDABOUT PROJECT	2018	2018											Y	
42002753	46583502G61209	Public Improvement	SE	FRANKLIN	GREENWOOD	IN-GREENWOOD-MADISON AVE RAPID-TRANSIT LANE-RELOCATE MAINS DUE TO RAPID-TRANSIT PROJECT	2020	2020					Project cancelled - Rapid transit line not moving forward.						N	
12623899	17575102G61212	Public Improvement	NE	RICHMOND	RICHMOND	IN-RICHMOND-PEACOCK RD -- RELOCATE MAIN	2018	2018											Y	Original estimate was for standard depth excavation. However main was found to be deeper than expected which caused contractor to expend additional labor, required a second excavator to accomplish the creek crossing, and additional special extra depth shoring to safely perform the work.
15440622	18595302G51210	System Improvement	NW	DANVILLE	BROWNSBURG	IN-BROWNSBURG-CR 700N --2018 ST MAIN-INSTALL 11,000 FT OF 6" PE MAIN TO ENSURE CAPACITY AND DELIVERABILITY TO AREA WEST OF EAGLE CREEK GOLF COURSE	2019	2019											Y	Estimates needed to cross 13 parcels original plan assumed installation in ROW, 200 extra hours needed for traffic control, TAM charges used for extra depth and shoring boxes.
10240617	16573302061203	Public Improvement	NE	MUNCIE	MUNCIE	IN-MUNCIE-NEBO RD - RELOCATE MAINS DUE TO ROAD WIDENING PROJECT	2020	2021					City has not scheduled their project work yet.						N	
11781094	165733061215	Public Improvement	NE	MUNCIE	DALEVILLE	IN-DALEVILLE-WALNUT SOUTH OF SR 67 - RELOCATE MAIN	2020	2021					City has not scheduled their project work yet.						N	
11840246	16583502061224	Public Improvement	SE	FRANKLIN	FRANKLIN	IN-FRANKLIN-ARVIN DR -- RELOCATE MAINS DUE TO NEW ROUNDABOUT PROJECT	2020	2020											N	
12002667	16583502061225	Public Improvement	SE	FRANKLIN	FRANKLIN	IN-FRANKLIN-CORAM --AT COMMERCE PARKWAY-RELOCATE MAINS DUE TO NEW ROUNDABOUT	2020	2020											N	
13198512	16592002061216	Public Improvement	SE	CLARKSVILLE	JEFFERSONVILLE	IN-JEFFERSONVILLE-SALEM NOBLE ROAD - RELOCATE MAINS DUE TO ROAD RECONSTRUCTION PROJECT	2019	2021					Project rescheduled by the City of Jeffersonville. Plans not finalized.						N	
12588723	46583502G61213	Public Improvement	SE	COLUMBUS	GREENSBURG	IN-GREENSBURG-VETERANS WAY-PHASE II - RELOCATE MAINS DUE TO ROAD CONSTRUCTION PROJECT	2019	2019											N	
13198230	16592002061217	Public Improvement	SE	CLARKSVILLE	JEFFERSONVILLE	IN-JEFFERSONVILLE-CHESTNUT ST-RELOCATE MAIN DUE TO CSO SEWER PROJECT	2020	2020											N	
8073722	14595002G50210	System Improvement	NW	TERRE HAUTE	TERRE HAUTE	IN-TERRE HAUTE-CLINTON RD (STOP 151)--ORISLETTE EQUIPMENT	2019	2019											N	
42002486	16542358	Public Improvement	NE	NOBLESVILLE	CARMEL	IN-CARMEL-HAMILTON COUNTY RELOCATE MAINS DUE TO BUS RAPID TRANSIT SYSTEM PROJECT	2019	2020					Project remains unscheduled by Hamilton County						N	
260	TBD	Gas Production & Storage	NW	N/A	WILCOX	IN-WILCOX-METABOLIC LEAK DETECTOR	2020	2020											N	

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46729488 16055567	47696302054244 19595302051219	System Improvement	NW	DANVILLE	BROWNSBURG	IN-BROWNSBURG-ACRE LN --ELEVATE/RETEST MAIN AND RETIRE REGULATOR STATION	2019	2020					Project moved out to 2020 due to seasonal time restraints	Per additional air services beyond those in our preliminary estimate were identified during detailed work order research/field investigation that need tested or replaced. Also, experience with recent and ongoing other pressure elevation projects indicate the need for additional field investigation/research contingency that has been included in the current estimate.					N	
15975625	19595302051011	System Improvement	NW	DANVILLE	ZIONSVILLE WHITESTOWN	IN-ZIONSVILLE-202 3" WSS (HALL TYPE "C" CONNECT 421 TO WHITESTOWN AND ANSON AREA NEAR AMAZON TO PROVIDE CAPACITY AND DELIVERABILITY TO AREA NORTH AND EAST OF ZIONSVILLE	2019	2019					Project delayed by multiple easement issues.						N	
10767696	17595302050210	System Improvement	NW	DANVILLE	PLAINFIELD	IN-PLAINFIELD-MAXWELLTON ST --ELEVATE/RETEST GAS MAIN	2020	2020											N	
15524008	18595502051215	System Improvement	NW	LAFAYETTE	LAFAYETTE	IN-LAFAYETTE-REBUILD STATION #59000019	2020	2020											N	
12822472	TBD	Public Improvement	NE	ANDERSON	ANDERSON	IN-ANDERSON LAKE-PHASE ONE - RELOCATE MAINS FOR NEW RESERVOIR/LAKE	2020	2021					Project details still being studied by the State of Indiana						N	
222	TBD	Gas Production & Storage	SE	BLOOMINGTON	BLOOMINGTON	REPLACE HINDUSTAN DEHY	2020	2020											N	
10767760	17595302051215	System Improvement	NW	LEBANON	LEBANON	IN-MOUNDS LAKE-PHASE THREE - RELOCATE MAINS FOR NEW RESERVOIR/LAKE	2020	2020											N	
12626874	TBD	System Improvement	SE	CLARKSVILLE	CHARLESTOWN	IN-CHARLESTOWN-INSTALL PIPE TO ENSURE CAPACITY AND DELIVERABILITY TO RIVER RIDGE AREA	2020	2020											N	
12627688	18592602051210	System Improvement	SE	COLUMBUS	COLUMBUS	IN-COLUMBUS-COLUMBUS' SOUTHSIDE "H" LOOP - INSTALL PIPE TO ENSURE CAPACITY AND DELIVERABILITY TO AREA SOUTH OF GLADSTONE AVENUE	2020	2020											N	
12622472	TBD	Public Improvement	NE	ANDERSON	ANDERSON	IN-MOUNDS LAKE-PHASE TWO - RELOCATE MAINS FOR NEW RESERVOIR/LAKE	2020	2021					Project details still being studied by the State of Indiana						N	
12622472	TBD	Public Improvement	NE	ANDERSON	ANDERSON	IN-MOUNDS LAKE-PHASE THREE - RELOCATE MAINS FOR NEW RESERVOIR/LAKE	2020	2021					Project details still being studied by the State of Indiana						N	
N/A	15202902051011	Automated Meter Reading (AMR)	North	N/A	VARIOUS	AUTOMATED METER READING	2015/16/17	2015/16/17											Y	
14800794	17595302044214	Rural Extension	NW	DANVILLE	DANVILLE	14800794-IN-DANVILLE-302 W COUNTY R	2018	2018											Y	
6525235	14595002061221	Public Improvement	NW	TERRE HAUTE	TERRE HAUTE	IN-TERRE HAUTE-FRUITRIDGE & HAYTHORNE INTERSECTION IMPROVEMENT-RELOCATE MAIN DUE TO INTERSECTION IMPROVEMENT PROJECT	2015	2015											Y	Project was originally estimated using standard footage pricing. However due to actual complexity of the work and construction conditions found, additional pressure testing was required along with additional excavations and restoration, which increased actual construction costs.
15660577	18562102045212	Economic Development	NE	ANDERSON	PENDLETON	IN-PENDLETON-4302 W 650 S-GMINS-SHELBY MATERIALS-SB 560- DISTRIBUTION	2018	2018											Y	
N/A	18202802049012	Targeted Economic Development	NE	ANDERSON	PENDLETON	IN-PENDLETON-4302 W 650 S-GMINS-SHELBY MATERIALS-SB 560- TRANSMISSION	2018	2018											Y	Cost variance due to additional easement requirements to construction station - original planned site could not be obtained. This resulted in station design changes increasing construction cost.
12117113	16575102051210	System Improvement	NE	RICHMOND	RICHMOND	IN-RICHMOND-REG STATION 1800-INSTALL REDUNDANT REG	2016	2016											Y	Project was estimated using a larger more expensive regulator. The regulator was later changed to a standard lower cost regulator.
15253207	18583002044210	Rural Extension	NE	NOBLESVILLE	WESTFIELD	15253207-IN-WESTFIELD-SB560 OFFSITE MAIN-OSBORNE TRAILS EXTENSION	2018	2018											N	Construction in progress and is trending on target to estimate.
16137456	18583302044212	Rural Extension	SE	GREENFIELD	MCCORDSVILLE	IN-MCCORDSVILLE-5601 W 500 N --SB560 WOLCOTT WATER REMOVAL SYSTEM ENHANCEMENTS FOR IMPROVED GAS DELIVERABILITY	2018	2018											Y	Actual costs include replacement of an existing 12" valve which was planned to stay.
EN267	16200602006011	Gas Production & Storage	NW	N/A	WOLCOTT		2016	2016											Y	Overage was due to scope change to add an additional 68 feet of 4 inch main to avoid cutting customer's driveway.
15539972	18583502044215	Rural Extension	SE	FRANKLIN	WHITELAND	15539972-IN-WHITELAND-SB560 6279 N	2018	2018											Y	
15880819	18583502044217	Rural Extension	SE	FRANKLIN	WHITELAND	IN-WHITELAND-SB560 6324 N 125 W --GMINS	2018	2018											Y	Additional costs for HK permit and preparation and unpermitted replacement of carrier pipe, resulting in additional excavations, material, backfill, restoration and labor costs.
11198275	14583502051214	System Improvement	NW	FRANKLIN	WHITELAND	IN-WHITELAND-PEARL ST - CASING SHORT	2017	2017											Y	
16161861	18583502044218	Rural Extension	SE	SHELBYVILLE	BOGGSTOWN	IN-BOGGSTOWN-5292 W 100 N-SB560	2018	2018											Y	
15704575	18592002044210	Rural Extension	SE	CLARKSVILLE	GEORGETOWN	IN-GEORGETOWN-SB560 KNOB HILL SECTION 3 OFFSITE --	2020	2020											N	
15626368	18592002044212	Rural Extension	SE	CLARKSVILLE	CHARLESTOWN	IN-CHARLESTOWN-SB560 BETHANY ROAD	2019	2020					Project is still being evaluated.	Estimate is preliminary customer still evaluating					N	
15335660	18592402044210	Rural Extension	SE	BLOOMINGTON	MOORESVILLE	15335660-IN-MOORESVILLE-2866 E WOOD	2018	2018											Y	
15518532	18592402044212	Rural Extension	SE	BLOOMINGTON	BLOOMINGTON	15518532-IN-BLOOMINGTON-4200 W TANG	2018	2018											Y	The original estimate did not include costs for removal or restoration of the existing roadway.
15853693	18592402044213	Rural Extension	SE	BLOOMINGTON	BLOOMINGTON	IN-BLOOMINGTON-SB560 5397 EARL YOUNG DR --GAS MAIN INSTALL	2018	2018											Y	Construction crews encountered shale rock formations during trench excavations which increased construction and spoils removal costs.
15668167	18592402044214	Rural Extension	SE	BLOOMINGTON	PARAGON	IN-PARAGON-8346 W LEWISVILLE RD --SB560 PROJECT	2018	2018											Y	
16161800	18592402044215	Rural Extension	SE	BLOOMINGTON	BLOOMINGTON	IN-BLOOMINGTON-MURFIELD PHASE 5 --SB560	2018	2018											Y	
16161858	18592402044216	Rural Extension	SE	BLOOMINGTON	BLOOMINGTON	IN-BLOOMINGTON-3519 N RUSSELL RD --SB560	2018	2018											Y	
16008940	18592602044210	Rural Extension	SE	COLUMBUS	GREENSBURG	IN-GREENSBURG-COUNTRY CLUB DR --SB560	2018	2018											Y	
16042418	18592602044213	Rural Extension	SE	COLUMBUS	COLUMBUS	IN-COLUMBUS-W 550 S --GMINS-SB560	2018	2018											Y	The original estimate was preliminary and included labor costs for complicated crossings of private properties and other utility facilities which were less difficult than planned and resulted in lower labor costs than estimated.
15658572	18592902044210	Rural Extension	SE	BLOOMINGTON	MOORESVILLE	15658572-IN-MOORESVILLE-9932 BRITTA	2018	2018											Y	
16160321	18593002044221	Rural Extension	NW	DANVILLE	LEBANON	IN-LEBANON-6425 N 150 W --SB560	2018	2018											N	
16161776	18595002044212	Rural Extension	NW	DANVILLE	CRAWFORDSVILLE	IN-CRAWFORDSVILLE-849 EAGLE WAY --SB560	2018	2018											Y	When project was released for construction it was found that the property had been subdivided which required the main to be extended beyond the original plan. This extension drove increased labor and materials costs for the project.

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15461035	18595302044210	Rural Extension	NW	DANVILLE	WHITESTOWN	IN-WHITESTOWN-SB560 WHITESTOWN PHASE 3 NORTH ---	2018	2018												N	Construction in progress and is trending on target to estimate incuase costs or contract inspection, however a contracted inspector was not utilized during construction. Original estimate also included service & main rather than main only and will be corrected in the next filing.
15461041	18595302044213	Rural Extension	NW	DANVILLE	WHITESTOWN	IN-WHITESTOWN PHASE 3 WEST-SB560	2018	2018												Y	Due to congestion of the work areas with other utilities additional labor was required to complete the installation, including additional time for locating of sewers.
15435795	18595302044214	Rural Extension	NW	DANVILLE	LINDEN	IN-LINDEN-1099 E 1000 N ---MAIN EXT. SB560	2018	2018												Y	costs for this project primarily due to three factors. 1. The estimated costs for all sewer locating were inadvertently excluded from the final estimate. 2. Due to the project owner's timing requirements and the planned resurfacing of the streets all crossings had to be completed in advance of the rest of the adjacent work which caused multiple inefficient mobilizations and demobilizations. 3. New tapping equipment was required due to the size and type of main pipe used which led to additional labor costs for an additional tapping crew to assist/train.
15864440	18595302044215	Rural Extension	NW	DANVILLE	LEBANON	IN-LEBANON-3860 S INDIANAPOLIS RD ---SB560	2018	2018												Y	
15524010	18595302044217	Rural Extension	NW	DANVILLE	WHITESTOWN	IN-WHITESTOWN-WALKER FARMS PHASE 1 - SB 560---GAS MAIN INSTALL	2018	2018												Y	
46274963	18595302044219	Rural Extension	NW	DANVILLE	PLAINFIELD	IN-PLAINFIELD-7380 SB560 SPRUCE CT. ---GMIN	2018	2018												N	
13992299	18595302044220	Rural Extension	NW	DANVILLE	PLAINFIELD	IN-PLAINFIELD-E CR 200 S AND S CR 450 E - (SB560)	2020	2020												N	
15533699	18583502044216	Rural Extension	SE	FRANKLIN	FRANKLIN	SB560 New Construction Grain Drier called N-FRANKLIN-SB560 UMBARGER FARM 600 E ---	2019	2019												N	
16327050	18583302044213	Rural Extension	SE	GREENFIELD	MCCORDSVILLE	16327050-IN-MCCORDSVILLE-6443 N 700	2018	2018												Y	Actual costs were less than the original estimate due to a \$7200 (approx.) credit being applied to the WO in the form of a customer contribution.
15540182	18583502044212	Rural Extension	SE	FRANKLIN	MARTINSVILLE	15540182-IN-MARTINSVILLE-5685 N BAN	2018	2018												Y	
16222516	18583502044219	Rural Extension	SE	FRANKLIN	BARGERSVILLE	16222516-IN-BARGERSVILLE-SB560 5844	2018	2018												Y	Actual costs exceeded estimated cost due to additional main required due to inaccurate historical records on existing main termination. This resulted in an additional 145 feet of main being required to reach the customer's property line where the service was to be connected. In addition to the extra main, additional survey and site engineering was required.
16282907	18595302044224	Rural Extension	NW	DANVILLE	WHITESTOWN	16282907-IN-WHITESTOWN-200 LAUGHNER	2018	2018												Y	With actual cost of this project is less than the estimate due to better than expected construction conditions which which resulted in less labor expense.
16302693	18595302044223	Rural Extension	NW	DANVILLE	LEBANON	16302693-IN-LEBANON-3701 S INDIANAP	2018	2018												Y	Project formerly bundled as Phase I and Phase II - Phase II separate project 17141212
16299522	18595502044212	Rural Extension	NW	DANVILLE	KIRKLIN	16299522-IN-KIRKLIN-444 W HENRY RD ---SB560 MAIN EXT	2018	2018												Y	Project formerly bundled as Phase I and Phase II - Phase II separate project 17141212
16275861	18595302044225	Rural Extension	NW	DANVILLE	WHITESTOWN	IN-WHITESTOWN-WALKER FARMS PHASE 2 ---SB560-GAS MAIN INSTALL	2019	2019												N	
16382585	18595302044226	Rural Extension	NW	DANVILLE	PLAINFIELD	IN-PLAINFIELD-SB560-TATTERSALL AREA-PHASE 1-INSTALL MAIN	2019	2019												N	
17141212	19595302044222	Rural Extension	NW	DANVILLE	PLAINFIELD	IN-PLAINFIELD-SB560 TATTERSALL AREA-PHASE 2-INSTALL MAIN	N/A	2020												N	Project formerly bundled as Phase I and II under 16382585 - Phase II now a separate project 17141212
16340382	18583502044220	Rural Extension	SE	FRANKLIN	MARTINSVILLE	16340382-IN-MARTINSVILLE-SB560 3024	N/A	2019												Y	
16261644	18583502044221	Rural Extension	SE	FRANKLIN	FRANKLIN	16261644-IN-FRANKLIN-SB560 0 W STAT	N/A	2019												Y	
16326636	18592402044220	Rural Extension	SE	BLOOMINGTON	BLOOMINGTON	16326636-IN-BLOOMINGTON-CPG SB560 S	N/A	2019												Y	
16401288	19583502044210	Rural Extension	SE	FRANKLIN	BARGERSVILLE	16401288-IN-BARGERSVILLE-SB560 5689	N/A	2019												Y	
16544287	1959202044212	Rural Extension	SE	CLARKSVILLE	SELLERSBURG	16544287-IN-SELLERSBURG-7004 COUNTY	N/A	2019												Y	
16803251	19595302044217	Rural Extension	NW	DANVILLE	CAMRY	16803251-IN-CAMRY-10356 LEASES CORN	N/A	2019												Y	
16812175	19595302044219	Rural Extension	NW	DANVILLE	LEBANON	16812175-IN-LEBANON-6475 S 275 E ---	N/A	2019												Y	
16534439	19595502044210	Rural Extension	NW	LAFAYETTE	LAFAYETTE	16534439-IN-SB560 BUCK CREEK-7401 U	N/A	2019												Y	
16453335	19595502044212	Rural Extension	NW	LAFAYETTE	LAFAYETTE	16453335-IN-WEST LAFAYETTE-1638 STA	N/A	2019												N	
16448876	19583302044215	Rural Extension	SE	GREENFIELD	GREENFIELD	IN-GREENFIELD-380 N ---GMIN SB560 MOHAWK	N/A	2019												N	
N/A	15202902051011	Rural Extension	North	N/A	VARIOUS	AUTOMATED METER READING	2015/16/1	2015/16/1												Y	
16453335	18595302044219	Rural Extension	North	FRANKFORT	MILLERSBURG	IN-MILLERSBURG-340 N CR 250 W ---SB560	N/A	N/A												N	
12627700	17583502051210	System Improvement	SE	FRANKLIN	GREENWOOD	IN-GREENWOOD-INCREASE WEST SIDE-RED OUT-OF-TRUCKERS-WORLD-RECOMPANION TO 1-66 (PH) PROJECTS (assessments/prior costs only portion)	N/A	N/A												Y	
11266888	15592602051210	System Improvement	North	COLUMBUS	SEYMOUR	IN-SEYMOUR-1335 S OBRIEN ---	N/A	N/A												N	Cancelled project received credit to write off prior actual capital spend.
44991499	17595502051210	Public Improvement	NW	LAFAYETTE	WEST LAFAYETTE	IN-WEST LAFAYETTE-STATE ST ---SECT 10--RELOCATE MAIN-AND-SERVICES-Over Street Project Street Relocation, 4'-6" STL (7050) - 4" PE (7025), 4" STL (830), 4" PE (8270), 4" STL (8490) - 2" PE (4020) services lines (7)	N/A	N/A												N	Cancelled project received credit to write off prior actual capital spend.
12257581	18595302044212	Rural Extension	NW	DANVILLE	NEW MARKET	New Market Phase 2	2016	2016												Y	
13390269	16595502051011	System Improvement	NW	LAFAYETTE	LAFAYETTE	IN-LAFAYETTE-MCCARTY LANE ---SYSTEM IMPROVEMENT TO ENSURE DELIVERABILITY TO THE SR 26 EAST PORTION OF THE SYSTEM	2017													Y	
233	17200602005011	Gas LP Plant	NW	N/A	LEBANON	IN-LEBANON-FIRE DETECTION	2017													Y	The scope of work included in the original estimate was much larger than what was determined necessary by detailed engineering for the Lebanon Plant. The reduced scope in fire protection upgrades resulted in lower actual costs.

Maximo Work Order Number	Oracle Project Number	Project Category	Division	OC	City	Project Short Description	Previous Planned Year (4/1/19)	Current Planned Year	Previous Estimate (4/1/19)	Current Estimate	Estimate Variance (\$)	Estimate Variance (%)	Timing Variance Commentary (Current Fall 2019 Filing)	Estimate Variance Commentary (Current Fall 2019 Filing)	Current Period Actual Spend (1/1/19-6/30/19)	Inception to Date Actual Spend (1/1/14-6/30/19)	Actual Spend Variance (\$)	Actual Spend Variance (%)	In-service? (Y or N)	Actual Spend Variance Commentary (Current Fall 2019 Filing)
		System Improvement	SE	COLUMBUS	SEYMOUR	IN-SEYMOUR-SET NEW MP R/S AT END OF CUMMINS LATERAL TO ENSURE DELIVERABILITY TO NEW CNG STATION	2018												Y	Estimate versus actuals were favorable for easements, station site, and restoration costs.
13198200	16592002G61210	Public Improvement	SE	CLARKSVILLE	JEFFERSONVILLE	IN-JEFFERSONVILLE-TENTH STREET IMPROVEMENTS-GAS MAIN RELOCATION	2017	2017											Y	The original estimate included work to be completed by contract resources, traffic control, and restoration. The scope was changed which reduced the amount of man that required relocation. Additionally, the road contractor had already removed part of the pavement and performed some excavating which resulted in less work needing to be done by our crews. The work was completed with internal crews rather than contract resources and since the work area was already closed to traffic for other work, traffic control and restoration were not required.
14391302	17595502G61214	Public Improvement	NW	LAFAYETTE	WEST LAFAYETTE	IN-WEST LAFAYETTE-STATE ST --SECT 1C- RELOCATE MAIN AND SERVICES	2017	2017												
14391357	17595502G61220	Public Improvement	NW	LAFAYETTE	WEST LAFAYETTE	IN-WEST LAFAYETTE-STATE ST --SECT 3	2018	2018											Y	
12307318	17592402G61210	Public Improvement	SE	BLOOMINGTON	BLOOMINGTON	IN-BLOOMINGTON-GORDON PIKE/RHORER ROAD- RELOCATE MAIN	2017	2017											Y	Project costs increased due to scope changes by the city and additional work items found in the construction phase after completion of the original estimate. These changes resulted in 250 feet of additional 2 inch main and 485 feet of additional 4 inch main to be installed. Excavation of subterranean rock took longer than anticipated.
45148964	17592602G44210	Rural Extension	SE	COLUMBUS	COLUMBUS	IN-COLUMBUS-6010 S INTERNATIONAL DR - SB560 PROJECT TO SERVE NEW COMMERCIAL CUSTOMER	2017	2017											Y	
12559987	17595302G44210	Rural Extension	NW	DANVILLE	WHITESTOWN	IN-WHITESTOWN-PHASE 1 - SB560 PROJECT TO SERVE A BREWERY	2017	2017											Y	
13970016	17595302G44212	Rural Extension	NW	DANVILLE	WHITESTOWN	IN-WHITES TOWN-PHASE II-SB560 PROJECT TO SERVE POTENTIAL RESIDENTIAL CUSTOMERS	2017	2017											Y	
13687759	17592002G45212	Targeted Economic Development	SE	CLARKSVILLE	JEFFERSONVILLE	IN-JEFFERSONVILLE-SALEM RD GATEWAY - TED PROJECT TO SERVE 17 PROPOSED COMMERCIAL LOTS AND APT.	2017	2017											Y	esement estimated but not required and inspection less than estimated. Solid rock had been reported in this area based on previous sewer and water line projects. We discovered the solid rock layer at approximately 4' deep, just below our gas installation depth and estimated for an easement acquisition that we later decided to buy within public R/W.
12439551	15583502G51217	System Improvement	SE	FRANKLIN	FRANKLIN	IN-FRANKLIN-GRAHAM RD --BUILD AND INSTALL REG STA	2016												Y	Project scope estimate predicated on redesigning of inlet pipe for tie-in due to excessive depth and additional costs associated with setting heater which was delivered after job was completed. Construction was performed during the winter (since had to condemn for easement) and progress was slow due to extreme weather. Since contract was on a T&M basis, the construction costs were higher.
NA	15202802G53014	System Improvement	NW	DANVILLE	AVON	REGULATOR STATION ATRC100S AND 12" TRANSMISSION	2016	2016											Y	Original estimate included multiple, deep, long side services. Scope was changed to dual main to eliminate these services. This also eliminated hard surface restoration. A planned, very difficult, culvert crossing was actually much simpler than anticipated which resulted in less labor than estimated.
10926023	16583502G61215	Public Improvement	SE	FRANKLIN	FRANKLIN	IN-FRANKLIN-SR 44 / JEFFERSON STREET --RELOCATE GAS MAINS DUE TO ROAD IMPROVEMENT PROJECT	2017	2017											Y	Actual costs less than estimate due to ability to stay out of roadway for most of the route. This reduced restoration cost for asphalt and traffic control cost. Also was estimated with a 10% maner contingency due to unknowns expected in the uprate. The job went better than expected and material contingency was not needed and crews were able to perform leak surveys quicker than estimated.
10767761	17595302G51210	System Improvement	NW	LEBANON	LEBANON	IN-LEBANON-W CR 300 N --INSTALL AND ELEVATE/RETEST GAS MAIN	2018												Y	
10767763	17595302G51212	System Improvement	NW	LEBANON	LEBANON	IN-LEBANON-SPENCER AVE --INSTALL GAS MAIN - THREE TIEINS ALLOW INCREASE CAPACITY AND DELIVERABILITY TO ENABLE ELIMINATION OF REGULATOR STATION	2017												Y	
10786933	15583302G51215	System Improvement	SE	GREENFIELD	MT. COMFORT	IN-MT COMFORT - UPRATE GREENFIELD-FORTVILLE 125 PSIG SYSTEM TO 275 PSIG PHASE 2 - IN-FRANKLIN-SR 44 / JEFFERSON STREET --RELOCATE GAS MAINS ON SR 44	2017	2017											Y	
13605608	16583502G61232	Public Improvement	SE	FRANKLIN	FRANKLIN	IN-RICHMOND-HEARTLAND - 4876 W INDUSTRIES RD - TED PROJECT TO SERVE ONE INDUSTRIAL CUSTOMER	2017	2017											Y	
15164869	17575102G45210	Targeted Economic Development	NE	RICHMOND	RICHMOND	IN-LEBANON-MERIDIAN ST-RELOCATE GAS MAIN	2017	2017											Y	
46936989	14595402G61210	Public Improvement	NW	LEBANON	LEBANON	IN-SHELBYVILLE-HALE ROAD AT MILLER AVENUE	2014	2014											Y	
55135957	15583502G51218	System Improvement	SE	FRANKLIN	SHELBYVILLE	IN-GREENWOOD-E MAIN ST @ I-65--RELOCATE GAS CROSSING	2015	2015											Y	
54213950	15583502G61217	Public Improvement	SE	FRANKLIN	GREENWOOD	IN-UNIONVILLE-6800 N TUNNEL RD	2015	2015											Y	
56051480	15592402G44213	Rural Extension	SE	BLOOMINGTON	UNIONVILLE	IN-ANDERSON-8TH STREET AT CENTRAL AVENUE - RELOCATE MAIN DUE TO BRIDGE REPLACEMENT	2017	2017											Y	
44236428	16764102G41240	Targeted Economic Development	NE	RICHMOND	RICHMOND	IN-RICHMOND-4876 W INDUSTRIES RD --TED PROJECT TO SERVE ONE INDUSTRIAL CUSTOMER	NA												Y	
12112510	17595502G51215	System Improvement	NW	LAFAYETTE	WILLIAMSPORT	IN-WILLIAMSPORT-22"PSIG SYSTEM WITH 15 PSIG CUSTOMER-PHASE II WILL PROVIDE 60PSIG MAOP FEED DIRECTLY TO CUSTOMER	2018												Y	

Database Project Number	Oracle Project Number	Project Category	Division	Storage Field	OC	City	Project Short Description	Previous Planned Year (4/1/19)	Current Planned Year	Previous Estimate (4/1/19)	Current Estimate	Estimate Variance (\$)	Estimate Variance (%)		Timing Variance Commentary (Current Fall 2019 Filing)	Estimate Variance Commentary (Current Fall 2019 Filing)	Current Period Actual Spend (1/1/19-6/30/19)	Inception to Date Actual Spend (1/1/14-6/30/19)	Actual Spend Variance (\$)	Actual Spend Variance (%)	In-service? (Y or N)	Actual Spend Variance Commentary (Current Fall 2019 Filing)	
4198	18200602055016	Equipment	SE	Unionville	Unionville	Unionville	Replace well head UND-068 Ward #4	2018	2018												Y	Actual costs included modification to the existing flow line which was required because the wellhead was required to be extended 2' higher. Also, wireline was required to kill the well instead of water because it would not hold the water. In addition, a pulldown rig was required because there was a solid plug set inside the wellhead which had to be drilled out.	
4197	18200602055017	Equipment	SE	Unionville	Unionville	Unionville	Replace well head UND-054 Davis #1	2018	2018												N	Additional costs included modification to the existing flow line which was required because the wellhead was required to be extended 2' higher. Wireline was required to kill the well instead of water because the well would not hold the water. A pulldown rig was required because there was a solid plug discovered inside the wellhead during construction which had to be drilled out.	
4194	18200602055014	Well Construction / Remediation	SE	Hindustan	Hindustan	Hindustan	Replace well head UND-027 Fulford #1	2018	2018												Y	Actual costs are for estimates only.	
4342	18200602055011	Well Construction / Remediation	SE	Unionville	Unionville	Unionville	Remediate defect at UND-509 Year #1 well	2019	2019												N	Actual charges include construction access only.	
4300	18200602055015	Well Construction / Remediation	SE	Unionville	Unionville	Unionville	Plug and abandon UND-017 Osa Young #1 well	2019	2019												Y	Project changed from a plug and abandon to deepening and recompleting the well. The well was able to be used to better identify the boundary of the storage field. The additional costs include additional casings and drilling required for the deepening.	
3979	18200602055012	Well Construction / Remediation	SE	Sellersburg	Sellersburg	Sellersburg	Plug and abandon SEK-020 Garvey #3 well	2018	2018												Y		
4192	18200602055011	Well Construction / Remediation	SE	Sellersburg	Sellersburg	Sellersburg	Plug and abandon SEK-003 Ogdesty #01 well	2018	2018												Y		
4800	TBD	Pressure Monitoring / SCADA / RTU	NE	Wolcott	Wolcott	Wolcott	Install Phase 2 of remote pressure monitoring at Wolcott	2020	2019						Project reprogrammed to complete work on an entire field in 2019 based on risk assessment/priority. Will install monitoring system on all wells at once rather than in phases.						N		
4801	TBD	Pressure Monitoring / SCADA / RTU	SE	Unionville	Unionville	Unionville	Install Phase 2 of remote pressure monitoring at Unionville	2020	2020													N	
4799	TBD	Pressure Monitoring / SCADA / RTU	NE	Wolcott	Wolcott	Wolcott	Install Phase 1 of remote pressure monitoring at Wolcott	2020	2019						Project reprogrammed to complete work on an entire field in 2019 based on risk assessment/priority. Will install monitoring system on all wells at once rather than in phases.						N		
4308	TBD	Pressure Monitoring / SCADA / RTU	SE	Unionville	Unionville	Unionville	Install Phase 1 of remote pressure monitoring at Unionville	2019	2020						Project reprogrammed to complete work on a field in 2020. Will install monitoring system on all wells at once rather than in phases.						N		
4310	TBD	Pressure Monitoring / SCADA / RTU	SE	Hindustan	Hindustan	Hindustan	Install Phase 1 and Phase 2 of remote pressure monitoring at Hindustan	2019	2020						Project reprogrammed to complete work on a field in 2020. Will install monitoring system on all wells at once rather than in phases.						N		
4195	18200602055015	Well Construction / Remediation	NW	Wolcott	Wolcott	Wolcott	Install casing liner WOT-G21 Goss #7	2018	2018												Y	Project scope was changed to include replacement of the existing wellhead. Inspection of the existing wellhead and casing construction determined the wellhead would need to be replaced with the casing liner. Replacement of the casing only would not allow well logging capability with the existing wellhead. The wellhead was replaced so the liner could be inserted into the production string, while still being able to monitor the pressure on the gas carrying liner and the annular space between the production string and liner.	
4193	18200602055013	Well Construction / Remediation	SE	Sellersburg	Sellersburg	Sellersburg	Install casing liner SEK-006 Garvey #4	2019	2019												N		
4191	18200602055011	Well Construction / Remediation	SE	Unionville	Unionville	Unionville	Install 2 well access roads at Unionville Storage Field	2019	2020												N	Actual charges include preliminary engineering and partial material costs only.	
4022	18200602055020	Emergency Response	NW	Wolcott	Wolcott	Wolcott	Emergency well access improvement - Install well access roads at Wolcott Storage Field	N/A	N/A												N	Actual charges include preliminary engineering and partial material costs only.	
4202	18200602055018	Well Construction / Remediation	SE	Unionville	Unionville	Unionville	Drill new observation well at Unionville Storage Field	2018	2018												Y		
4292	18200602055019	Well Construction / Remediation	SE	Unionville	Unionville	Unionville	Drill new observation well at Unionville Storage Field	2019	2020												N	Actual charges include preliminary engineering and partial material costs only.	
4343	18200602055016	Well Construction / Remediation	NE	Wolcott	Wolcott	Wolcott	Drill new observation well in northern lobe of Wolcott Storage Field	2019	2019						Project reprogrammed to 2020						N	Actual costs are for estimates only.	
4347	TBD	Well Construction / Remediation	NE	Wolcott	Wolcott	Wolcott	Cement and recomplete WOT-054 County Line Farms well	2020	2020												N		
4058	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4059	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4060	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4061	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4062	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4063	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4064	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4065	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4066	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4067	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4068	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4069	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4070	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4071	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4072	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4073	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4074	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4075	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4076	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4077	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4078	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4079	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4080	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4081	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4082	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4083	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4084	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4085	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4086	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4087	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4088	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4089	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4090	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4091	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4092	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4093	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4094	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4095	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4096	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4097	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4098	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4099	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4100	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4101	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4102	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4103	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4104	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4105	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4106	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4107	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4108	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4109	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4110	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4111	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4112	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4113	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4114	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4115	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4116	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4117	TBD	Pressure Monitoring / SCADA / RTU	Unionville	Unionville	Unionville	Unionville	Install 1.2 remote monitoring units at Unionville	N/A	N/A												N/A		
4																							

Cause No. 45468

Petitioner's Exhibit No. 2
Attachment SJV-3
Cause No. 44430-TDSIC-11
Vectren North
Page 1 of 1

Vectren North Compliance Projects O&M Summary - 7 Year Plan Update

Prior plan - Fall 2018

Funding Category	2014 Actuals	2015 Actuals	2016 Actuals	2017 Actuals	2018 Plan	2019 Plan	2020 Plan	7-year Total
Transmission IM	\$5,301,223	\$7,532,355	\$7,363,556	\$10,235,691	\$ 8,300,000	\$ 10,969,919	\$ 8,750,000	\$58,452,744
Distribution IM	\$1,580,399	\$615,408	\$1,341,712	\$3,987,863	\$ 4,000,000	\$ 3,692,498	\$ 3,500,000	\$18,717,880
Facility Damages	\$383,150	\$1,175,038	\$2,042,202	\$3,009,756	\$ 2,300,000	\$ 2,726,795	\$ 2,350,000	\$13,986,941
Operator Qualification/Training	\$0	\$403,469	\$630,797	\$720,479	\$ 900,000	\$ 1,018,729	\$ 950,000	\$4,623,474
Safety Management System	\$0	\$33,006	\$126,040	\$256,348	\$ 250,000	\$ 343,887	\$ 525,000	\$1,534,281
Storage Field Safety				\$1,866,251	\$ 1,637,000	\$ 1,810,000	\$ 1,945,000	\$7,258,251
Total	\$7,264,772	\$9,759,277	\$11,504,306	\$20,076,388	\$17,387,000	\$20,561,828	\$18,020,000	\$104,573,572

Plan update 10-02-2019 - Fall CSIA-11

Funding Category	2014 Actuals	2015 Actuals	2016 Actuals	2017 Actuals	2018 Actuals	2019 Plan	2020 Plan	7-year Total
Transmission IM	\$5,301,223	\$7,532,355	\$7,363,556	\$10,235,691	\$8,500,659	\$10,349,582	\$15,854,666	\$65,137,732
Distribution IM	\$1,580,399	\$615,408	\$1,341,712	\$3,987,863	\$6,160,783	\$ 4,591,000	\$5,145,940	\$23,423,105
Facility Damages	\$383,150	\$1,175,038	\$2,042,202	\$3,009,756	\$2,343,657	\$ 2,726,795	\$1,689,024	\$13,369,622
Operator Qualification/Training	\$0	\$403,469	\$630,797	\$720,479	\$875,158	\$ 1,018,729	\$964,066	\$4,612,698
Safety Management System	\$0	\$33,006	\$126,040	\$256,348	\$191,567	\$200,000	\$346,467	\$1,153,429
Storage Field Safety				\$1,866,251	\$1,792,654	\$ 1,810,000	\$ 1,945,000	\$7,413,905
Total	\$7,264,772	\$9,759,277	\$11,504,307	\$20,076,388	\$19,864,479	\$20,696,106	\$25,945,163	\$115,110,491

Attachment SAH-4 provided in Excel format

Attachment SAH-5 (PUBLIC) provided in Excel format

Attachment SAH-6 (CONFIDENTIAL) provided separately

Attachment SAH-7 (CONFIDENTIAL) provided separately