

SOUTHERN INDIANA GAS AND ELECTRIC COMPANY
d/b/a VECTREN ENERGY DELIVERY OF INDIANA, INC.
A CENTERPOINT ENERGY COMPANY
(VECTREN SOUTH)

IURC CAUSE NO. 45447

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 South programs required to comply with federal mandates
Compliance Projects	Approved 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	Approved projects required to comply with federal mandates
O&M	Operating and Maintenance
Petitioner or Vectren South or The Company	Southern Indiana Gas and Electric Company 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
TDISC 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.

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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 Southern Indiana Gas and Electric Company d/b/a
13 Vectren Energy Delivery of Indiana, Inc. ("Petitioner", "Vectren South" or "the
14 Company"), which is a subsidiary of Vectren.

15

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

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 Indiana Gas Company, Inc. d/b/a Vectren Energy Delivery of Indiana, Inc. ("Vectren
20 North") 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.

7

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

10

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

12 A. I will discuss the significant gas capital infrastructure investments Vectren South is
13 including in this Cause. Specifically, my testimony will: 1) discuss the capital
14 investment planning process for Vectren South gas infrastructure; 2) describe the
15 capital investments completed since the last Vectren South Rate Case (Cause No.
16 43112); 3) describe capital investments in 2020 including those associated with
17 Vectren South's Compliance and System Improvement Adjustment ("CSIA") which
18 includes approved projects required to comply with federal mandates ("Compliance
19 Projects", "Compliance Programs", or "Modernization Projects") and the TDSIC Plan;
20 and 4) describe capital investments planned for 2021 including those to comply with
21 federal mandates by improving the safety and reliability of Vectren South's gas pipeline
22 systems, and others to improve system performance, support public projects, or
23 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 South 2006 – 2019 Non-
7 CSIA Large Capital Investments

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

10 • Petitioner's Exhibit No. 4, Attachment SAH-3: 44429 TDSIC-11_Vectren
11 South_Petition_CONFIDENTIAL

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

14 • Petitioner's Exhibit No. 4, Attachment SAH-5: Vectren South 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.

1 **II. BACKGROUND**

2
3 **Q. Please describe Vectren South's gas utility operations.**

4 A. The Company owns, operates, and maintains approximately 3,106 miles of gas
5 distribution mains; 131 miles of gas transmission pipelines; numerous measurement
6 and pressure regulation stations; three gas storage fields; and various ancillary
7 equipment and communications systems to serve approximately 113,000 customers
8 in nine counties in southwest Indiana. In addition, Vectren South maintains fleet
9 vehicles, multiple facilities, and other items of property commonly used in the industry
10 such as land, easements, materials, and supplies.

11
12 **Q. Are Vectren South's gas assets in good operating condition and necessary to**
13 **provide safe and reliable service to its customers?**

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

22
23 **Q. Please describe Vectren South's Capital Investment Plan and the significant**
24 **capital investments included in this Cause.**

25 A. Vectren South's CIP consists of the ongoing programs and projects ("capital

investments") executed to maintain and improve its assets including:

- Gas transmission, distribution, and storage infrastructure
- Facilities
- Fleet
- Technology applications

For purposes of this proceeding, I am addressing all capital investments (except for those information technology investments described by Petitioner's Witness Jeffrey S. Myerson) made from October 31, 2006,¹ the date of rate base cut-off from the last Vectren South Rate Case (Cause No. 43112), through the date of the projected rate base cut-off from this proceeding, December 31, 2021. This will include projected investments planned for 2020 and 2021. My testimony will separate the investments into four groups: 1) significant non-CSIA investments made from the rate base cut-off date of the last rate case through 2019; 2) CSIA-related investments made from 2014 through 2019; 3) investments made and planned in 2020; and 4) the 2021 CIP. Discussion of the CSIA investments will be brief as the included programs and projects have been discussed in detail in the bi-annual CSIA (or commonly referred to as "TDSIC-x") filings in Cause No. 44429.

Q. What is the Company's CSIA?

A. The CSIA relates to and recovers costs in conjunction with the Company's seven year capital investment plan (the "CSIA Plan") to execute approved projects starting in 2014 and concluding in 2020. The CSIA Plan is comprised of a Compliance component

¹ Commission's order dated August 1, 2007 in Cause No. 43112, page 5. Vectren South's net original cost rate base in the last rate case was filed as of March 31, 2006; at the hearing, the Company submitted an updated calculation of Petitioner's original cost rate base as of October 31, 2006.

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

9

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

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

1 replace equipment to facilitate the on-going well logging activities.

2

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

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

8

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

11 A. Yes. Since the previous Vectren South Gas Rate Case filed in 2006, the Company
12 has invested in a variety of infrastructure improvement and new customer addition
13 projects. The primary investments starting November 1, 2006 to December 31, 2013
14 were related to BSCI asset replacement and general system improvement, public
15 improvement, and customer addition projects. Vectren South initiated its CSIA Plan
16 in 2014 under approval in Cause No. 44429 and projects completed under this plan
17 constitute the majority of the capital investments since the last rate case. Projects not
18 included in the CSIA Plan were also completed from 2014 through 2019. The various
19 investment programs and projects from November 2006 to 2021 will be discussed later
20 in my testimony.

21

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

25 A. Vectren South maintains continuing property records using a structured capital work

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

13
14 **Q. What capital investments will your testimony cover?**

15 A. My testimony will focus primarily on investments in the gas system infrastructure.
16 However, I will briefly summarize investments in fleet, facilities, and technical systems
17 to present a more comprehensive view of the total rate base. Other witnesses will
18 discuss planned 2021 technical infrastructure capital investments and programs that
19 influence capital expenditures as described below:

- 20 • Petitioner's Witness Sarah J. Vyvoda – Transmission Integrity Management
21 Program ("TIMP") and Storage Integrity Management Program ("SIMP")
- 22 • Petitioner's Witness Kate D. Porter – Distribution Integrity Management Program
23 ("DIMP")

1 **III. CAPITAL INVESTMENT PLANNING PROCESS**

2
3 **Q. Please describe the Company's capital investment planning process.**

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

11
12 The process begins with a high level review and update of the ten-year high-level
13 capital budget that incorporates financial targets and projected available capital
14 funding. The ten-year budget is primarily populated with spending categories and
15 "program" investments such as modernization, new business, and public improvement
16 rather than specific individual projects. Following high level adjustments to years six
17 through ten of the budget, years one through five are reviewed and revised
18 incorporating additional detail in the spending categories including specific known
19 individual capital projects with cost estimates greater than \$1M.

20
21 A detailed two-year budget plan is maintained to provide targets and guidance for the
22 finance, engineering, and operations teams to plan projects and activities for the
23 upcoming construction years. Year one of the two-year plan contains detailed specific
24 known project information, typically with estimates that are consistent with Association
25 for the Advancement of Cost Engineering ("AACE") Class 2 criteria as discussed later

1 in my testimony. The sum of individual project estimates for a given year will not
2 typically equal the annual total investment budget. Projects are identified, estimated,
3 and then selected based upon priority, the available capital funds for the various
4 categories, and the overall annual budget. Because it is not practical or feasible to
5 obtain exact alignment between the sum of individual project estimates with the
6 category or annual budget amount, the totals of project estimates in some categories
7 of work may exceed the total category budget amount.

8

9 **Q. Please describe the capital planning and project prioritization activities in more**
10 **detail.**

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

20

21 Specific projects not identified by GSIR are determined through other traditional
22 means, e.g. by local engineering, operations, or gas system planning as those
23 departments execute their work. These projects generally fall into the standard
24 categories of public improvement, system improvement, and new business and are
25 derived either through internal input and external customer or third-party demand.

1 There are nuances between the various regulatory mechanisms and some "standard"
2 projects may be categorized in one of the recovery mechanisms if certain criteria are
3 met.

4
5 Public improvement and new business – customer or third-party initiated work –
6 categories are budgeted through a combination of historical expenditure evaluation
7 and an assessment of known projects for a specific construction year. Most of the
8 new business and much of the public improvement work is not known more than a few
9 months in advance and therefore, budgeting leans heavily on historical annual
10 investment data.

11
12 System improvement projects are generally executed to enhance the capacity or
13 reliability of the gas distribution and transmission systems and are typically identified
14 through work performed by engineering and gas system planning. Gas system
15 planning is part of the GSIR department and has primary responsibility for monitoring
16 system performance, long-range planning of system improvements, and operational
17 support for gas control, gas supply and engineering. Computerized hydraulic models
18 of the gas system are used by gas system planning and various engineering groups
19 within the company for many functions and analyses, including both capital and O&M
20 related asset expenditures associated with the following:

- 21 • Long-range capital budget planning to address asset changes and additions to
22 support load growth areas within the systems.
- 23 • Review of individual customer load additions/increases (typically industrial/large
24 commercial) or residential development additions as they are proposed or

1 identified (by sales/marketing or engineering) to ensure system integrity and
2 adequacy. Determine appropriate asset changes and additions to systems, if
3 necessary.

- 4 • Review of potential economic development projects identified by local or state
5 economic development agencies and communicated by internal sales/marketing
6 representatives.

- 7 • Review distribution systems/areas for pressure/supply concerns and determine
8 appropriate asset changes and additions to systems for mitigation.

- 9 • Review system capital and large-scale maintenance related activities/projects to
10 ensure successful completion. Determine appropriate asset additions, if
11 necessary. Determine system temporary configuration changes and gas supplier
12 impacts, if any.

13
14 **Q. How does the Company manage its capital investment plan on an annual basis?**

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

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

8

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

19

20 **Q. Does Vectren South manage its capital investments at the project level?**

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

1 costs for the Compliance Plan at the integrity management program level: TMOD,
2 DMOD, BSCI, and SMOD.

3
4 Similarly, Vectren South manages system improvement, public improvement, and new
5 business projects at both project and program level – balancing the need for individual
6 projects against the annual budget for this category of work. Public improvement and
7 new business investments are initiated by customers or other third parties. As
8 described previously, the budgets for these categories are based primarily on historical
9 data. Variance of actual expenditures from Plan, while typically small, can be
10 significant in any given year due to external factors such as the state of the economy,
11 housing market, interest rates, individual state budgets, etc.

12
13 **Q. Please describe how Vectren South manages customer-driven work, i.e. new**
14 **business and public improvement projects.**

15 A. New business and public improvement projects, which meet specific criteria, must be
16 performed. New business projects that are revenue-justified or where the customer
17 provides a contribution to cover the non-revenue justified cost are completed
18 regardless of whether the new business budget has been exceeded. Similarly, in most
19 cases, relocation of gas infrastructure in support of public improvement projects must
20 be performed to facilitate the completion of the road, sewer, or like projects executed
21 for the public good and to minimize the risk of damage to gas facilities resulting from
22 the public project. Most gas distribution facilities are located in public rights-of-way,
23 so efforts are made through conflict analysis and collaboration with the public entity to
24 adjust the public project plans to minimize the required relocation of the gas facilities
25 where possible.

1 **Q. Please describe how Vectren South manages capital investments in**
2 **transportation and equipment, facilities, and technology.**

3 A. A functional fleet, adequate facilities, and modern technology is necessary to support
4 the Company's construction, operation, and maintenance of its gas infrastructure.
5 When evaluating capital investments for these assets, Vectren South uses a total
6 quality approach to sustain an adequate operational environment for employees to
7 meet the needs of the organization including providing a workplace and equipment
8 that allows for the attraction and retention of talent.

9
10 Vehicles and other mobile equipment are maintained and monitored to ensure long
11 useful lives. It is necessary to periodically replace vehicles and equipment due to age,
12 economics, or condition and the Company monitors vehicle mileage, condition, and
13 operating costs to optimize replacement timing. The Company's various building
14 structural, mechanical, and electrical systems are evaluated, maintained and replaced
15 based on age, functionality, and condition to ensure that they remain reliable for both
16 daily and 24-hour/7-day per week operations. Technology is similarly replaced or
17 updated as guided by industry standards, equipment/software obsolescence,
18 company standardization, and cybersecurity needs.

19
20 **Q. Please describe recurring capital investments.**

21 A. Recurring smaller annual capital investments that generally do not require engineering
22 or are not classified as individual projects will typically be grouped into spending
23 categories according to the work type. New service lines, service line replacements,
24 inside meter relocations, cathodic protection replacements, minor remote technology
25 – supervisory control and data acquisition ("SCADA") equipment replacements, etc.

1 are completed under "blanket project" numbers.

2

3 **Q. Please describe how Vectren South prepares its recurring investment plan.**

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

10

11 **Q. Please describe how Vectren South manages actual recurring capital**
12 **investments during each year relative to the plan of projected recurring**
13 **investments, with the understanding that investment priorities emerge during**
14 **the year that may not be specifically identified in the Plan.**

15 A. Vectren South endeavors to manage the recurring investments on target to the
16 established budget for each activity by increasing/decreasing the number of individual
17 tasks completed when possible. Some recurring investments such as installation of
18 new customer service lines may be less or more than the budgeted annual amount
19 due to economic factors outside of the Company's control. A strong residential
20 housing construction market may increase the number of services requested and
21 installed resulting in more actual expenditures than budgeted for this activity. In other
22 circumstances, an activity such as service replacements may be reduced in order to
23 spend more capital funds on inside meter move-outs if during the year it is determined
24 more risk can be mitigated by the meter relocations. To summarize, this work is
25 managed to the established budgets for each activity, but spending may be adjusted

1 based on changes in risk or priority determined throughout the year.

2

3 **Q. Has Vectren South been successful in managing its capital investment plan?**

4 A. Yes. Vectren South has managed its capital investment plan successfully as
5 demonstrated by the execution of the CSIA Plan since 2014 to meet the Company's
6 objectives in improving safety and reliability of the system. While some individual
7 projects exceed the estimate variance threshold established in collaboration with the
8 Indiana Office of the Utility Consumer Counselor ("OUCC"), the actual costs of many
9 other projects have been within or below the estimated cost. Compliance Program
10 expenditures have been very close to the approved overall category costs as
11 discussed in recent Cause No. 44429 TDSIC filings.

12

13

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

15

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

17 A. As mentioned previously, the capital investments addressed in my testimony were
18 made between November 1, 2006 and December 31, 2019; are in progress or
19 projected in 2020; and are projected for 2021. I will focus primarily on the gas system
20 infrastructure improvements and briefly cover other general capital such as fleet,
21 facilities, and Vectren South-specific technology investments.

22

23 **Q. Have you reviewed the current calculation for Vectren South's Rate Base as of**
24 **December 31, 2019?**

25 A. Yes. Petitioner's Exhibit No. 18, Schedule B-1.1 demonstrates Vectren South's Total

1 Rate Base as of December 31, 2019 is \$386,442,852.

2

3 **Q. How does the current plant in service compare to the plant in service at the time**
4 **of Vectren South's last rate case?**

5 A. Table SAH-1: Gross Utility Plant Additions demonstrates between November 1, 2006
6 and December 31, 2019, Vectren South's Gross Plant Additions (before Accumulated
7 Depreciation activity and Other Rate Base Components) increased by \$324,232,412.
8 This change was primarily driven by the replacement or modernization of existing
9 facilities to ensure the continued provision of safe and reliable service to existing
10 customers, increases in facilities required to serve new customers, and the installation
11 of system improvements to ensure capacity, service quality and reliability for
12 increasing customer loads.

13

Table SAH-1: Gross Utility Plant Additions

Line	Description	[A]		[B]		[C] = [B]-[A]	
		Gross Utility Plant as of		Gross Utility Plant as of		Increase / (Decrease)	
		October 31, 2006		December 31, 2019			
1	Intangible Plant	\$	10,508	\$	10,508	\$	0
2	Natural Gas Production Plant		54,245		54,245		0
3	Underground Storage Plant		12,511,135		24,514,283		12,003,148
4	Transmission Plant		29,628,735		108,259,489		78,630,754
5	Distribution Plant		141,541,903		357,965,922		216,424,019
6	General Plant		7,561,654		15,794,335		8,232,681
7	General Plant - Common		4,512,459		13,454,268		8,941,808
8	Total Gross Utility Plant	\$	195,820,638	\$	520,053,050	\$	324,232,412

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

16 A. Intangible Plant consists of non-physical assets such as franchises and consents,
17 patent rights, licenses, privileges, and computer software. Vectren South's intangible
18 plant assets primarily consist of software applications used for financial, engineering,
19 inventory, and operational management systems.

1 Natural Gas Production Plant includes assets used in natural gas production wells.
2 Vectren South has minimal gas production assets.

3
4 Underground Storage Plant includes land, compressors, gas processing equipment,
5 wells, metering, pressure regulating, communications equipment, and other station
6 assets used for the injection, withdrawal, storage, and monitoring of gas in storage
7 reservoirs. Primary underground storage investment categories include SMOD
8 projects such as the plugging and abandonment of old wells, construction of new wells,
9 and installation of communications equipment; improvements including the
10 reconstruction of existing, or installation of new gas processing equipment; and
11 rehabilitation of existing compression equipment to maintain system reliability.

12
13 Transmission Plant includes land, pipelines, metering, pressure regulating,
14 communications equipment, and other station assets used for the movement of gas
15 from suppliers to storage, suppliers and storage to customers, and tying together
16 sources of gas supply to the point where it is reduced to distribution pressures.
17 Investments in transmission plant in the rate case period consists primarily of the
18 extension of new facilities to serve customers and execution of TMOD projects,
19 including replacements of pipelines, retrofit of pipelines for in-line inspections, and
20 reconstruction of regulator stations.

21
22 Distribution Plant includes land, mains, services, metering, pressure regulating,
23 communications equipment, and other station assets between the primary source of
24 supply and the point of delivery to the customer, which is not includable in the
25 transmission system. Primary distribution investment categories include gas main

1 extensions, new services, relocations of assets for public projects, system
2 improvements, and DMOD programs such as BSCI main replacements and
3 reconstruction of obsolete regulator stations.

4

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

8

9 General Plant – Common includes assets used for both the gas and electric utilities.
10 Only the gas utility allocation of buildings, vehicles, tools, and communications
11 equipment used for both gas and electric operations are included in this Plant
12 category. Petitioner's Witness Bell covers the split between gas and electric.

13

14

15 **V. NON-CSIA CAPITAL INVESTMENTS 2006 - 2019**

16

17 **Q. Please identify and describe the more significant non-CSIA capital additions**
18 **constructed from November 1, 2006 through December 31, 2019 and included in**
19 **this Cause.**

20 **A.** The cutoff date in Vectren South's last rate case was October 31, 2006 so this question
21 covers an extended period of time. The majority of the investments from late 2006 to
22 the start of the CSIA in 2014 were for the replacement of BSCI mains and services, and
23 installation of transmission mains for new industrial customer loads. With the approval
24 of the CSIA Plan, BSCI and similar compliance investments and certain pre-approved
25 projects related to system improvement, public improvement, and rural extensions were

1 incorporated into that Plan. Non-CSIA capital investments from 2014 through 2019
2 were typically limited to new TDSIC-like projects – those not approved in the CSIA Plan
3 – and investments in Fleet and Facilities. I will describe the most significant non-CSIA
4 projects included in this Cause with capital investments exceeding \$1,000,000 in
5 Petitioner's Exhibit No. 4, Attachment SAH-1 Vectren South 2006-2019 Non-CSIA
6 Large Capital Investments which identifies the project number, project short
7 description, category of work, total amount of additions and cost of removals, in-service
8 date, and project description and purpose.

9
10 Four of the projects were constructed to support economic development through the
11 addition of new industrial customer load to the Vectren South System. Three projects
12 were to complete the Advanced Metering Infrastructure (“AMI”) and Automated
13 Metering Reading (“AMR”) implementation in the Vectren South service area. Two
14 projects were for the replacement of bare steel infrastructure. Two projects were for
15 the construction of new facilities or improvements to existing facilities – Wagner Master
16 Plan and Bergdolt Training Center. While the gas utility allocation for each of the
17 facilities’ projects is less than \$1M, the total cost for each project exceeded \$1M and
18 therefore are included in my testimony. Two projects were for the overhaul of the
19 Oliver Storage Field compressors.

20
21 **Q. Please describe the four economic development projects that resulted in**
22 **increased industrial load in more detail.**

23 A. Projects 07202743014 and 08203743012 were constructed to supply gas for a plant
24 in southern Indiana. An eight-inch diameter, five-mile-long pipeline – Project
25 08203743012 – was constructed to transport gas from an interstate pipeline into the

1 Vectren South transmission system and an eight-inch diameter, one-mile-long lateral
2 – Project 07202743014 – was constructed from Vectren South's existing system to the
3 new facility. A portion of the gas capacity on the pipeline interconnected with the
4 interstate pipeline was reserved as part of Vectren South's gas supply plan.
5 Accordingly, the construction costs were partially funded through a special contract
6 with this customer and only the portion of the pipeline costs associated with the
7 Vectren South capacity are included in this rate case.

8

9 Project 08203743014 was for the construction of approximately one quarter mile of
10 six-inch steel main from an existing sixteen-inch Vectren South transmission pipeline
11 to serve the new plant in southern Indiana.

12

13 Project 16585401051011 was for the construction of approximately three and one half
14 miles of eight-inch high pressure steel gas main, a new gas distribution regulating
15 station, and six-inch medium pressure polyethylene gas main to increase pressure
16 and capacity to the system that supplies an industrial park in southern Indiana.
17 Modeling of the system in, and around, the industrial park indicated existing customer
18 load increases and new customer additions over the years prior to this project's
19 completion in 2018 would result in lower than acceptable system pressure and
20 potential reliability issues. Completion of this project introduced another gas source
21 to the system remediating potential pressure issues and providing additional capacity
22 to promote growth in the industrial park and surrounding area.

1 **Q. Please describe the BSCI replacement program investments completed from**
2 **2007 through 2013.**

3 A. From late 2006 through December 31, 2013, approximately \$19M in BSCI investments
4 were completed. Approximately 61 miles of BSCI mains and 3,400 services were
5 retired in this timeframe and replaced with modern materials. The largest BSCI
6 projects completed in this timeframe were projects 08585452804 and
7 10585701052212. Project 08585452804 retired approximately thirty-seven thousand
8 feet of aging cast-iron mains, associated services, and two low pressure regulator
9 stations in the vicinity of Boeke Road and Morgan Avenue in Evansville, IN. The cast-
10 iron main was replaced with approximately thirty thousand feet of modern polyethylene
11 mains and services. Project 10585701052212 retired approximately twenty-four
12 thousand feet of high-pressure bare steel main and replaced it with approximately
13 twenty-five thousand feet of coated steel main southeast of Vincennes, IN. These
14 projects were part of Vectren South's BSCI Replacement Program created to mitigate
15 risks associated with BSCI assets as described in Petitioner's Witness Porter's direct
16 testimony.

17
18 **Q. Please describe the three automated metering projects in more detail.**

19 A. Projects 17202901051012, 17202901051013, and 16202901051011 are for the
20 various phases of design and installation of AMR and AMI in the VEDS gas system.
21 Project 16202901051011 was for the retrofit of approximately 20,000 existing gas
22 meters with encoder receiver transmitters ("ERT") and acquisition of a mobile data
23 collector to allow remote meter reading to reduce meter reading expense while
24 increasing the accuracy of the data. Project 17202901051012 was for the installation
25 of new gas meters with the required ERTs. Project 17202901051013 was for the gas

1 allocation of the implementation costs for the installed AMI communication
2 infrastructure.

3

4 **Q. Please describe the two facilities projects in more detail.**

5 A. Project 07A57500025 Wagner Master Plan was for capital improvements to the
6 Wagner Operations Center building in Evansville, IN. This project was a remodel
7 initiated in 2007 and completed in 2008 at the NP Wagner Building located in
8 Evansville, IN. The building was originally constructed in 1991 and the multi-year
9 remodel project was to upgrade, change, and modify the building layout, design, and
10 mechanical equipment to accommodate the growing workforce and needs of the
11 business and employees to ensure usefulness and reliability as the primary gas and
12 electric operations center for Vectren South's largest municipal service area. Project
13 17A57501000041 was to construct a new 15,500 square foot combined gas/electric
14 training center for Vectren South personnel at the existing Bergdolt operations
15 storage/training site in Evansville, IN. This building was constructed to provide
16 facilities for both classroom and hands-on instruction for gas training in a controlled
17 environment. This facility was built to meet the needs of the training department, follow
18 all codes and local zoning regulations, and to meet Energy Star standards. This site
19 was centrally located within the service territory, using property already owned by
20 Vectren South, to reduce travel time for technicians attending training, maximizing
21 their productivity. The costs included in this Cause for the facilities are only the gas
22 utility allocations.

23

24 **Q. Please describe the two Oliver Storage Field compressor projects.**

25 A. Oliver Storage Field is a reservoir facility with approximately 1,250,000 mcf of working

1 gas located approximately twenty miles west of Evansville, IN. The field consists of
2 sixty-three wells, two compressors, and various gas quality processing equipment.
3 The field is instrumental in providing cost-effective gas reserves for the Vectren South
4 system during the winter heating season and for strategic pipeline project support at
5 other times of the year. The two compressors, which are capable of both pressurizing
6 gas entering the field to increase usable volume and gas exiting the field to extract
7 more of the reserves, are original 1954 vintage equipment and require periodic
8 maintenance to ensure reliability. The annual inspection of Compressor #2 in 2018
9 identified the need for Project 18200601006017 to complete a major overhaul or
10 rebuild of the primary mechanical components: crankshaft, bearings, and cylinders.
11 The annual inspection in 2018 also identified significant engine wear on Compressor
12 #1 which initiated Project 19200601006011 to perform a major overhaul at the
13 completion of the work on Compressor #2.

14
15
16 **VI. CSIA CAPITAL INVESTMENTS 2014 - 2019**

17
18 **Q. Please describe the plant additions from 2014 through 2019 attributed to the**
19 **CSIA Plan.**

20 **A.** Capital additions associated with the CSIA Plan were addressed in the bi-annual
21 TDSIC filings and Orders, and therefore I do not describe those projects in detail here.
22 CSIA investments in Compliance and TDSIC projects totaled approximately \$208M
23 through December 31, 2019. These investments in BSCI, TMOD, DMOD, SMOD, and
24 TDSIC public improvement, system improvement and rural extension projects are
25 recoverable pursuant to the Compliance and TDSIC Statutes and have been

submitted in the semi-annual TDSIC filings².

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

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

VII. 2020 CAPITAL INVESTMENT PLAN

Q. Please summarize the Company's 2020 CIP.

A. For 2020, Vectren South budgeted \$48.5M in capital expenditures for gas infrastructure, fleet, facilities, and technology improvements. Approximately \$32.1M in Compliance Projects and \$3.0M in TDSIC projects comprised the majority of the planned expenditures. The Compliance and TDSIC projects were identified in the Cause No. 44429 TDSIC-11 Petition which was approved in the Commission's order issued January 29, 2020 and is included as Petitioner's Exhibit No. 4, Attachment SAH-3 (CONFIDENTIAL). The remaining \$13.4M was budgeted for non-CSIA new business, public improvement, system improvement, fleet, facilities, and technology. Petitioner's Exhibit No. 4, Attachment SAH-4 Vectren South 2020 Capital Investment Plan, provides the planned 2020 capital expenditures by major category.

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 **Q. Please describe the CSIA Plan portion of Vectren South's 2020 Capital**
2 **Investment Plan**

3 The Vectren South CSIA for 2020 updated in TDSIC-11 on October 1, 2019 contains
4 the majority of planned capital investments the Company anticipated in 2020.

5 Anticipated full-year investments for Compliance and TDSIC projects are
6 approximately \$32.3M and \$1.1M, respectively.

7
8 **Q. Please describe Vectren South's 2020 capital investments not included in the**
9 **CSIA Plan.**

10 A. In addition to the CSIA Plan investments, other capital investments to gas
11 transmission, distribution, and storage infrastructure; fleet; facilities; and intangible
12 plant will be incurred. Investments outside of the CSIA Plan were budgeted at the
13 category level as shown in Petitioner's Exhibit No. 4, Attachment SAH-4 Vectren
14 South 2020 Capital Investment Plan. Individual project estimates were generally
15 developed as the "emergent" projects were identified during 2020. Projected non-
16 CSIA investments are currently anticipated to be \$18.0M.

17
18 **Q. Through September 2020 are Vectren South's actual expenditures in-line with**
19 **the 2020 CIP previously developed?**

20 Yes, through September 2020, actual capital expenditures were \$36.8M and are
21 projected to be \$51.4M.

1 **VIII. 2021 CAPITAL INVESTMENT PLAN**

2
3 **Q. Please summarize the 2021 CIP.**

4 A. Essentially, Vectren South has continued the practices and processes developed with
5 the CSIA Plan to produce the plan for capital investment in gas distribution,
6 transmission, and storage infrastructure for 2021). Most projects included within the
7 2021 CIP, whether Compliance Projects or TDSIC-like Projects – system
8 improvement, public improvement, and new business – were identified, to the extent
9 possible, several months to years in advance of construction. Similar to previous
10 years' CSIA Plans, the 2021 CIP consists of a mix of TMOD, DMOD, BSCI, SMOD,
11 new business, system improvement, and public improvement projects. In addition,
12 capital investments in fleet, facilities, and technology areas are include in the 2021
13 CIP. The total estimated capital investment for 2021 is \$50.1M. Investments in each
14 of the categories is shown in Petitioner's Exhibit No. 4, Attachment SAH-5 Vectren
15 South 2021 Capital Investment Plan (Confidential).

16
17 **Q. How were the investment amounts determined for the 2021 CIP?**

18 A. The 2021 CIP was developed using the same process and methods described earlier
19 in my testimony. Generally, the budget amounts established for 2021 were set to meet
20 objectives for pipeline replacement, retrofit, and upgrades of systems to improve
21 system safety and reliability and to support both anticipated and identified necessary
22 system improvements, public project relocation, and new business. Similarly, a
23 combination of historical expenditures in fleet, facilities, and technology along with
24 known specific investments in vehicles, structures, and software applications was
25 used to develop the capital budget amounts for 2021.

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

3 A. While factors out of Vectren South's control such as weather or pandemic-related
4 constraints can impact project schedules and expenditures, it is anticipated
5 approximately \$20M of investments will be incurred by June 30, 2021. Typically, less
6 construction work is completed in the early months of the year, January – March, due
7 to cold temperatures and corresponding ground conditions. From July 1 – December
8 31, the remaining planned expenditures of \$30M in Vectren South are anticipated to
9 be completed.

10
11 **Q. Please describe the methodology utilized by Vectren South to develop estimates**
12 **for the projects that comprise the 2021 CIP.**

13 A. The standard estimate development cycle utilized by Vectren South consists of
14 development of preliminary estimates for most known projects eighteen to twenty-four
15 months in advance of a project's planned year of construction. Estimating resource
16 constraints, potential for changing site conditions, and potential fluctuations in labor
17 and material costs make it inefficient to perform detailed estimates for most projects
18 that are beyond an eighteen-month construction horizon. Preliminary estimates
19 incorporate the major cost components – labor, material, engineering, land acquisition,
20 etc. – but utilize assumptions around those components related to routes, construction
21 environment, labor availability, and material quantities and costs. Contingency is also
22 typically incorporated into the estimate to account for unknown factors.

23
24 Detailed engineering performed six to eighteen months ahead of planned construction
25 is intended to eliminate most assumptions and incorporate more certainty in the

1 estimate components through extensive research of historical work order information,
2 land acquisition, soil analysis, design locating, material and labor bids, etc. The
3 estimates resulting from detailed engineering are considered sufficiently accurate and
4 complete for the purpose of inclusion in the annual CIP. Projects are typically released
5 for competitive bids in the fall, prior to the construction year, which may affect
6 estimates based on contractor bid prices. This additional information can result in
7 increases or decreases in the cost estimates.

8

9 The project estimates in the 2021 CIP generally are in alignment with the "detailed
10 engineering" described above and are detailed and estimated consistent with the
11 recommended practices of AACE International, formerly the Association for the
12 Advancement of Cost Engineering International.

13

14 **Q. What is the AACE and why does Vectren South use this organization's**
15 **recommended practices for classifying the estimates?**

16 A. AACE is an association dedicated to furthering the concepts for total cost management
17 and cost engineering. The association is a recognized leader in the field of cost
18 estimating and has published many guides and recommended practices referenced
19 and utilized by a variety of industries to establish standardized criteria and ranges for
20 project estimates. Vectren South understands the need to provide accurate estimates
21 with the appropriate level of precision for the 2021 CIP and the AACE's recommended
22 practices establish a well-known and trusted framework to accomplish this
23 objective. AACE specifies five estimate classes, with Class 1 estimates representing
24 those projects that have greatest level of detail and an accuracy range of -10% to 15%
25 and Class 5 having the least amount of detail with an expected accuracy range of -

1 50% to 100%.

2

3 **Q. What AACE cost estimate class did Vectren South target for the projects in the**
4 **2021 CIP?**

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

	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%

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

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

1 **Q. How were the project cost estimates developed?**

2 A. The process used for all project estimations considered material and labor quantities
3 associated with the defined scopes of work and Vectren South's Engineering and
4 Construction Standards. All estimators, whether internal Vectren South or external
5 resources, used a consistent set of base cost assumptions including appropriate labor
6 rates, material costs, and other factors such as complexity of the work and location.
7 Supplementing these base assumptions were additional activities and data sources:

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

18
19 **Q. What is the definition of contingency?**

20 A. AACE has defined contingency as an amount added to an estimate to allow for items,
21 conditions, or events for which the state, occurrence, or effect is uncertain and that
22 experience shows will likely result, in aggregate, in additional costs.

23
24 **Q. Has Vectren South included contingencies in the cost estimates?**

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

1 Contingencies vary by project type and project based upon level of known scope and
2 site condition detail.³ The more data and information available for a particular project
3 will generally result in a lower contingency amount.

4
5 **Q. How were contingencies used to improve the project estimates?**

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

14

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

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

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

3 A. Yes. A cost estimate is a prediction of the final, “most likely” cost of a project to be
4 completed in the future. This prediction carries risk and uncertainty which the estimate
5 ranges attempt to address by establishing potential minimum and maximum project
6 costs based on the level of definition of the project work scope. Contingency is a
7 necessary component of the cost estimate which is intended to address items that
8 cannot be quantified at the current level of project definition but will be necessary to
9 complete the project. The contingency enhances confidence that the project final cost
10 will be within the upper and lower limits of the estimate range.

11

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

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

20

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

22 A. Vectren South has created a cost estimate for each currently identified project included
23 in the Plan. The cost estimates include line item break down of the costs of each
24 project including contract labor, material, internal labor, material and labor loadings,
25 engineering costs, land, and contingency. For further detail, refer to Petitioner's

1 Exhibit No. 4, Attachment SAH-7 and Petitioner's Exhibit No. 4, Attachment SAH-8
2 which contain example project estimates. All currently identified individual project
3 estimate information is included in my work papers.

4
5 **Q. What level of confidence does Vectren South have in its cost estimates?**

6 A. Vectren South has high confidence in the accuracy and completeness of the Plan's
7 project cost estimates. Projects were estimated to meet AACE Class 2 estimate
8 ranges of -15% to +20%.

9
10 **Q. Does Vectren South also attempt to keep the cost of individual projects to within**
11 **the Class 2 estimate ranges?**

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

17
18 **Q. Describe Compliance Program projects planned for 2021.**

19 A. Vectren South has identified a portfolio of projects to be constructed in 2021 as part of
20 the TMOD, DMOD, BSCI, and SMOD Compliance programs. The Compliance projects
21 have been categorized and are provided in Petitioner's Exhibit No. 4, Attachment SAH-
22 5 (Confidential). Included in each corresponding Schedule, currently known TMOD
23 (Schedule 2), DMOD (Schedule 3), BSCI (Schedule 4), and SMOD (Schedule 6)
24 project information is summarized including project number(s), category, location,
25 project short description, and current estimated cost. Vectren South has included

1 general project lines and total estimated costs in certain Schedules for emergent work
2 that may arise during 2021.

3

4 **Q. Describe planned system improvement, public improvement, and new business**
5 **projects for 2021.**

6 A. Vectren South has identified a portfolio of projects listed in Petitioner's Exhibit No. 4,
7 Attachment SAH-5 (Confidential), Schedule 5 (Other) for construction in 2021. While
8 there is typically some certainty around the system improvement project execution, a
9 portion of system improvement, new business, and public improvement projects are
10 only identified during the year they are constructed. Vectren South has included
11 general project lines and total estimated costs for emergent system improvement, new
12 business and public improvement projects based on historical annual expenditures in
13 these categories of work.

14

15 **Q. Please describe Vectren South's planned transportation and facilities**
16 **investments for 2021.**

17 Facilities investments will include building and building mechanicals investments
18 including new garage construction at the Boonville Service Center, HVAC investments
19 at the Service Support Center, office and mechanical upgrades at the Washington
20 Service Center, roof replacement at the NP Wagner Complex, and Restroom/Locker
21 room remodels at the NP Wagner Complex. Transportation investments include the
22 replacement of various vehicles, crew trucks, equipment, and trailers

1 **IX. CONCLUSION**

2
3 **Q. Please describe the benefits associated with the projects completed, in-**
4 **progress, or planned as part of Vectren South's capital investment plan.**

5 A. There are a number of benefits Vectren South 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 South's system; the occurrence of future leaks and leak
9 repair 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 South 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 South'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 South'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 South's customers or
6 property owners that live in the vicinity of the projects.

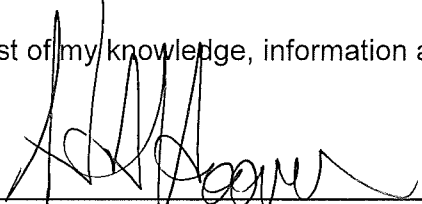
7

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: October 30, 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 SOUTHERN INDIANA GAS)
AND ELECTRIC COMPANY 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 PETITIONER'S NEXT GENERAL) CAUSE NO. 44429-TDSIC-11
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

Southern Indiana Gas and Electric Company d/b/a Vectren Energy Delivery of Indiana, Inc. a CenterPoint Energy Company ("Vectren South" or "Petitioner") petitions the Indiana Utility Regulatory Commission ("Commission") for approval of (a) the Compliance and System Improvement Adjustment ("CSIA") charges, based on 80% of the calculated revenue requirement on recoverable investments and expenses associated with complying with federal mandates ("Compliance Projects") and to improve safety, reliability or modernization of its gas pipeline systems ("TDSIC Projects"), in accordance with Ind. Code chpt. 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 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 and TDSIC Projects that exceed the amounts approved in Cause No. 44429 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 110,000 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 South filed a Petition, docketed as Cause No. 44429, 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 with Cause No. 44430 in which Vectren South'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 South'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 South is authorized to

implement its CSIA Rate Schedule to recover 80% of the revenue requirement on eligible project investments; (e) Vectren South'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 South 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 adjustment of its CSIA every six months. The Commission has approved adjustments to the CSIA in orders issued in Cause No. 44429 TDISC-1 ("TDSIC-1 Order"), Cause No. 44429 TDSIC-2 ("TDSIC-2 Order"), Cause No. 44429 TDSIC-3 ("TDSIC-3 Order"), Cause No. 44429 TDSIC-4 ("TDSIC-4 Order"), Cause No. 44429 TDSIC-5 ("TDSIC-5 Order"), Cause No. 44429 TDSIC-6 ("TDSIC-6 Order"), Cause No. 44429 TDSIC-7 ("TDSIC-7 Order"), Cause No. 44429 TDSIC-8 ("TDSIC-8 Order"), Cause No. 44429 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 improvement" within the meaning of Ind. 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 approved 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. 44231 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 the automated meter reading ("AMR") project for Vectren South's gas only customers 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.

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, TDISC-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 South 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 South 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, Attachments 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 August 1, 2007. 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 Order, 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)
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Mr. Stephenson's Direct Dial: (812) 491-4231
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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 upon 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 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 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).

WHEREFORE, Southern Indiana Gas and Electric Company 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; and

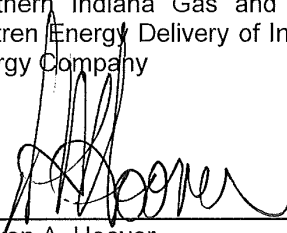
(d) Approving the procedural schedule agreed to among the OUCC and Petitioner;

(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;

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

DATED: this 1st day of October, 2019

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

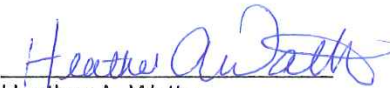
A handwritten signature in black ink, appearing to read 'S. Hoover', is written over a horizontal line.

Steven A. Hoover
Regional Director of Gas Engineering

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 South
Compliance Plan - Transmission Modernization Projects

Database Project Number	Oracle Project Number	Project Category	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)
4236	18202801054014	Valves / Operators / Remote Cntrl	Rockport	Richland City	Replace two 3" isolation valves at Midway Storage Field	2018	2018											Y	
4171	18202801054011	Obsolete Equipment	Mt. Vernon	Mt. Vernon	Install filter separator at Oliver Storage Field	2018	2018											Y	The cost of fabrication of the field assembly was higher than estimated. The filterseparator was configured to feed both into and out of the station to ensure equipment reliability.
4326	18202801054020	Priority Pipe	Mt. Vernon	Mt. Vernon	Repair leak on 8" pipeline in Oliver Storage Field	2018	2018											Y	
3154	16202801054013	ILI Retrofits	Evansville	Evansville	12" Kasson to Hwy 41 - ILI retrofit 6.65 miles of pipeline, install filters at 7 regulator stations, install filter at one compressor, remediate pipeline exposure, and proving tool run	2017	2017											Y	Project was able to be completed with less engineering than estimated.
3409	14202801054017	ILI Retrofits	Evansville	Evansville	16" Kasson to Copperline - ILI retrofit 6.57 miles of pipeline, install filters at 5 regulator stations, and remediate pipeline exposure	2017	2017											Y	Actual charges were less than estimate due to the planned drill through rock only being required for 100 feet instead of 755 feet as estimated. In addition, engineering costs and overheads were less than estimated.
3104	17202801054017	Pressure Monitoring / SCADA / RTU	Mt. Vernon	Mt. Vernon	Install SCADA and controllers at North Posey Station	2019	2019											Y	
3376	17202801054018	Miscellaneous	Mt. Vernon	Mt. Vernon	Remove monolithic insulator at AB Brown	2018	2018											Y	
3396	17202801054015	Odorizers	Vincennes	Vincennes	Hart St. Odorizer Replacement	2018	2018											Y	Credit to project is due to correction of charges - reallocation to other odorizer projects
3462	17202801054019	ILI Retrofits	Mt. Vernon	Mt. Vernon	16" Copperline to ABB - ILI retrofit 8.57 miles of pipeline, pressure test 0.20 miles of pipeline, and proving tool run	2018	2018											Y	Construction costs were less than estimated
3463	17202801054020	ILI Retrofits	Mt. Vernon	Mt. Vernon	16" Copperline to SABIC - ILI retrofit 16.26 miles of pipeline and proving tool run	2018	2018											Y	Construction costs were less than estimated
3816	17202801054016	Regulator Station	Evansville	Evansville	Rebuild Levee Station	2018	2018											Y	Additional costs included unplanned disposal of odorant that could not be re-used as planned. Also costs were also incurred for design changes on electrical conduit, foundations, and additional pipe replacement.
3397	18202801054015	Odorizers	Washington	Edwardsport	Edwardsport TGT odorizer replacement	2018	2018											Y	Actual labor costs to complete work were less than estimated.
3398	18202801054019	Regulator Station	Washington	Oaktown	Oaktown TGT regulator station rebuild and odorizer replacement	N/A	N/A											N	
3399	18202801054018	Odorizers	Washington	Petersburg	Petersburg TGT odorizer replacement	2018	2018											Y	Actual labor costs to complete work were less than estimated.
4168	18202801054017	Odorizers	Vincennes	Bicknell	Bicknell TGT Odorizer Replacement	2018	2018											Y	Actual labor costs to complete work were less than estimated.
4169	18202801054016	Odorizers	Vincennes	Freelandville	Freelandville Odorizer Replacement	2018	2018											Y	Actual labor costs to complete work were less than estimated.
3464	18202801054013	ILI Retrofits	Rockport	Midway	12" Midway to MGT - ILI retrofit 8.89 miles of pipeline, replace rectifier, and pressure test 8.89 miles of pipeline	2019	2019											N	Project is trending around 25% less than estimated. Pipeline pigging and x-ray costs are less than estimated.
3080	19202801054012	Odorizers	Evansville	Elberfeld	Elberfeld Odorizer Replacement	2020	2020						Estimate is based on detailed engineering identifying the need to relocate a power pole, modifying the Scada system, as well as new odorant taps.					N	Actual charges include preliminary engineering and partial material costs only
3131	19202801054014	Odorizers	Ft. Branch	Ft. Branch	Ft. Branch Odorizer Replacement	2020	2020											N	Actual charges include preliminary engineering and partial material costs only
4250	18202801054213	ILI Retrofits	Evansville	Evansville	Distribution support project for 16" Kasson to Copperline retrofit- Install 500' of 2" PE to eliminate reg station connected to Transmission line	2019	2019											N	Project is in construction and trending to \$60,000 over estimate. Retirement of regulator station 059, 40' of 16" HP steel gas main and 10' of 12" HP steel gas main connecting the station to the transmission lines eliminated the need to install a filter at the reg station for ILI inspections. Increased costs attributed to additional 100' of 2" PE 10" gas main due to location of tie-in being farther west than historic as-built documentation indicated. The retirements increased overall cost for restoration and traffic control. Retirement costs were originally planned to be part of the associated TMOO project 3409, but were included on DMOO 4250. Total cost for both projects is projected to be less than the combined estimate for both.
3392	18202801054022/ 1820280154017	Gas Quality / Conditioning	Mt. Vernon	Mt. Vernon	Install chromatograph at Oliver Storage Field	2020	2021					Preliminary engineering and material purchases in 2020 with construction expected to be complete in 2021.						N	Actual charges include preliminary engineering and partial material costs only.
3394	18202801054023 /18202801054018	Gas Quality / Conditioning	Washington	Monroe City	Install chromatograph at Monroe City Storage Field	2020	2021					Preliminary engineering and material purchases in 2020 with construction expected to be complete in 2021.						N	Actual charges include preliminary engineering and partial material costs only.
4299	19202801054016	Gas Quality / Conditioning	Rockport	Midway	Install filter separator and chromatograph at Midway Storage Field	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. These analyzers cost twice as much as originally proposed equipment, but provide additional gas quality measurement capabilities determined to be necessary to monitor gas supply. Some additional installation contingency has been incorporated into the estimate in consideration of this being the first chromatographs/analyzers of this type installed in the Vectren system. For example, 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.
4186	19202801054019	Gas Quality / Conditioning	Vincennes	Monroe City	Install hydrogen sulfide removal system at Monroe City Storage Field	2020	2021					Research of H2S removal technology and cost analysis continues. Preliminary engineering and material purchases are expected in 2020 with construction expected to be complete in 2021.						N	Actual charges include preliminary engineering and partial material costs only.
3108	19202801054015	Pressure Test	Evansville	Evansville	12" Kasson-Upper Mt Vernon - Pressure test 2.05 miles of pipeline and remediate four (4) pipeline exposures on 12" Kasson to BAGGS pipeline	2020	2021					Project reauthorized beyond the current Compliance Plan ending in 2020. Preliminary engineering and material purchases in 2020 with construction expected to be complete in 2021.						N	Actual charges include preliminary engineering and partial material costs only.

Vectren South
 Compliance Plan - Transmission Modernization Projects

Database Project Number	Oracle Project Number	Project Category	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)
4859	19202801054020	Priority Pipe	Evansville	Evansville	Replace approximately 180' of pipeline on 12" OBH to Kasson	N/A	2019					Projected added to 2019 to replace pipeline due sections of pipeline with identified defects along the longitudinal seam weld						Y	
4091	17202801054014	Valves / Operators / Remote Cntrl	Mt. Vernon	Mt. Vernon	Oliver Storage Field Valve Installation	2017	2017											Y	
3119	16202801054012	ILI Retrofits	Boonville	Newburgh	12" Long Rd. 8in to Midway Storage Field - ILI retrofit; 19.35 miles of pipeline, remediate two pipeline exposures, and proving tool run	2017	2017											Y	
2964	15202801054014	Miscellaneous	Evansville	Midway	12" Midway to Midwestern - Install additional ground for inadequate cathodic protection	2017	2017											Y	Project was able to be completed with less material and other labor than estimated. Also, overheads were less than included in estimate.

Vectren South
Compliance Plan - Distribution Modernization Projects

Database Project Number	Maximo Work Order Number	Oracle Project Number	Project Category	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)	
593	15334130	17585601050213	Bridge Crossings	Boonville	Newburgh	IN-NEWBURGH-SIELER RD-RELOCATE 2" STL BRIDGE CROSSING	2018	2018												Y	Open-cut trench was estimated but contractor was able to bore entire project, this resulted in lower restoration cost. Also, the cost of removing the retired main off the bridge was lower than estimated.
3733	14585048	17585401050220	Ineffectively Coated Steel	Evansville	Evansville	IN-EVANSVILLE-N FIRST AVE-EICHEL TO COLIMBIA-REPLACE 2,300' OF 12" STL MAIN	2018	2018												Y	Additional costs were primarily due to conflicts with other underground utilities identified during construction in progress and is trending on target to estimate.
2119	14561721	17585701050214	Exposures	Vincennes	Wheatland	IN-WHEATLAND-FOWLER FARMS-REMEDiate (2) 10" HP STL MAIN EXPOSURES	2019	2019												N	Construction in progress and is trending on target to estimate.
2123	14561827	17585701050217	Exposures	Vincennes	Wheatland	IN-WHEATLAND-1238 S ENLEY RD-REMEDiate 10" HP STL MAIN EXPOSURE	2018	2018												Y	Construction in progress and is trending on target to estimate.
2126	14561982	17585701050218	Exposures	Vincennes	Wheatland	IN-WHEATLAND-PATRICK DITCH-REMEDiate 10" HP STL MAIN EXPOSURE	2019	2019												N	Construction in progress and is trending on target to estimate.
1424	N/A	585450003-19	Ineffectively Coated Steel	N/A	N/A	2019 SW ISOLATED SERVICES	2019	2019												N	Construction in progress and is trending on target to estimate.
1448	N/A	585450002-19	Obsolete Equipment	N/A	N/A	2019 SW OBSOLETE RISERS	2019	2019												N	Construction in progress and is trending on target to estimate.
1879	14562282	17585401050218	Exposures	Evansville	Evansville	IN-EVANSVILLE-851 N RED BANK RD-REMEDiate 4" STL MAIN EXPOSURE	2019	2019												N	Construction in progress and is trending on target to estimate.
1886	11647972	17585501032212	Obsolete Equipment	Mt. Vernon	Mount Vernon	IN-MOUNT VERNON-REPLACE BRISTOL MYERS REGULATOR	2019	2019												N	Construction in progress and is trending on target to estimate.
2066	15334167	17585401050228	Pressure Monitoring / SCADA / RTU	Evansville	Evansville	IN-EVANSVILLE-4384 BIG CYNTHIANA RD-INSTALL ERX	2019	2019												N	Construction in progress and is trending on target to estimate.
2069	15334275	17585401050229	Pressure Monitoring / SCADA / RTU	Evansville	Evansville	IN-EVANSVILLE-4928 HWY 41N-INSTALL ERX	2019	2019												N	Construction in progress and is trending on target to estimate.
4080	15335619	17585401050234	Non-Commercially Available Pipe Size	Evansville	Evansville	IN-EVANSVILLE-POLLACK AVE-REPLACE 4,200' OF 10" HP NON-STANDARD STL MAIN	2019	2019												N	Construction still in progress and cost trending to \$800k over estimate. Project overage attributed to additional restoration cost associated with new 12" gas main forced to be installed 5' below grade, trench width increased to 4'-5' due to depth of main and installation of 4 additional offsets to avoid conflict with other utilities (water / sewer mains and laterals). Depth and exact location along of all other utilities could not be determined prior to project start.
2121	14561783	17585701050215	Exposures	Vincennes	Wheatland	IN-WHEATLAND-S GRAY BARN RD-REMEDiate 10" HP STL MAIN EXPOSURE	2019	2019												Y	It was necessary to replace an additional 250' or 12" steel gas main due to inadequate depth of cover in farm field where soil had apparently been removed from the field by the landowner sometime in the past and added to top of existing levee to contain regulated county ditch. Field investigation during construction determined the pipe depth was 30' at the proposed tie in point with only 13' of cover over the tie in fitting. The new main - including the additional 280' - was installed at a greater depth to ensure protection of main.
2122	14561856	17585701050216	Exposures	Vincennes	Wheatland	IN-WHEATLAND-MATHIS FARM-REMEDiate 10" HP STL MAIN EXPOSURE	2019	2019												Y	Construction in progress and project trending \$1M over estimate. Additional costs for replacement of leaking high-pressure steel valve and fittings discovered during construction and the exposure of the steel valve - restoration cost, high pressure steel stopper fitting, high pressure stopping equipment, shoring equipment, additional labor cost, additional pipe, and traffic control. Historic information indicated a pipe stub at the Pollack Ave Regulator Station but no stub existed so a stopper fitting was required to tie over the Pollack Ave Regulator Station - increase cost for restoration, material and labor. Finally, a law enforcement was engaged for full-time onsite security due to adjacent property owner's threats to crew.
4081	15335625	17585401050235	Non-Commercially Available Pipe Size	Evansville	Evansville	IN-EVANSVILLE-POLLACK AVE-REPLACE 4,600' OF 10" HP NON-STANDARD STL MAIN	2019	2019												N	Construction in progress and project trending \$1M over estimate. Additional costs for replacement of leaking high-pressure steel valve and fittings discovered during construction and the exposure of the steel valve - restoration cost, high pressure steel stopper fitting, high pressure stopping equipment, shoring equipment, additional labor cost, additional pipe, and traffic control. Historic information indicated a pipe stub at the Pollack Ave Regulator Station but no stub existed so a stopper fitting was required to tie over the Pollack Ave Regulator Station - increase cost for restoration, material and labor. Finally, a law enforcement was engaged for full-time onsite security due to adjacent property owner's threats to crew.
3689	15334329	17585401050230	Casings	Evansville	Evansville	IN-EVANSVILLE-N ROYAL AVE-REPLACE SHORTED 2" STL MAIN AND CASING	2019	2019												N	Construction in progress and is trending on target to estimate.
3694	15334357	17585401050231	Casings	Evansville	Evansville	IN-EVANSVILLE-1800 OHIO STREET-REPLACE SHORTED 4" STL MAIN AND CASING	2019	2019												N	Construction in progress and is trending on target to estimate.
3697	15334406	17585401050232	Casings	Evansville	Evansville	IN-EVANSVILLE-OLD STATE RD-REPLACE SHORTED 4" STL MAIN AND CASING	2019	2019												N	Construction in progress and is trending on target to estimate.
3698	16918068	19585401050210	Casings	Evansville	Evansville	IN-EVANSVILLE-NURRENBERN RD-REPLACE 2" STL MAIN AND CASING	2019	2019						Removed 90' of main installation from estimate after preliminary design review and field survey.						N	Construction in progress and is trending on target to estimate.
3699	15334554	17585501050218	Casings	Fort Branch	Haubstadt	IN-HAUBSTADT-CR 1200 S-REPLACE SHORTED 4" STL MAIN AND CASING	2019	2019												N	Construction in progress and is trending on target to estimate.
3700	15334757	17585401050233	Casings	Evansville	Evansville	IN-EVANSVILLE-E MORGAN AVE-REPLACE SHORTED 4" STL MAIN AND CASING	2019	2019												N	Construction in progress and is trending on target to estimate.
3709	15335271	17585501050219	Casings	Fort Branch	Haubstadt	IN-HAUBSTADT-CR 1250 S-REPLACE SHORTED 2" STL MAIN AND CASING	2019	2019												N	Construction in progress and is trending on target to estimate.
3732	14562304	17585401050219	Ineffectively Coated Steel	Evansville	Evansville	IN-EVANSVILLE-N FIRST AVE-REPLACE 2,500' OF 12" STL MAIN	2020	2020						During the preliminary design review incorporating Army Corps of Engineer requirements for horizontal directional drilling beneath regulated floodwall, it was determined necessary to increase the estimate for geotechnical investigation, hydraulic fracture evaluation, construction access & accessibility assessments, special drilling equipment, drilling pressure monitoring equipment, additional cost for labor, increase the depth of main, additional material required, additional site restoration, tree clearing and traffic control. The original construction plan based on prior similar projects did not have the same drilling requirements as mandated by Army Corp of Engineers for this project.					N	Construction in progress and is trending on target to estimate.	
3862	14585051	17585601050212	Shallow Pipe	Rockport	Rockport	IN-ROCKPORT-SR 66 & SILVERDALE RD-REPLACE 1,250' OF SHALLOW 4" STL HP PIPE	2019	2019												N	Construction in progress and is trending on target to estimate.
1423	N/A	585450003	Ineffectively Coated Steel	N/A	N/A	2016 SW ISOLATED SERVICES	2018	2018												N	Construction in progress and is trending on target to estimate.

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Database Project Number	Maximo Work Order Number	Oracle Project Number	Project Category	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)	
1447	N/A	565450002	Obsolete Equipment	N/A	N/A	2018 SW OBSOLETE RISERS	2018	2018												N	Focused operational resources on inside meters
4189	15516310	18585501050210	Priority Pipe	Fort Branch	Buckskin	IN-FORT BRANCH-CR 880 S.E. OF YELLOW DOG RD --- REPLACE CASED 2" PE MAIN DUE TO LEAK UNDER RR	2019	2019												N	
4219	15713980	18585701050210	Obsolete Equipment	Vincennes	Monroe City	IN-MONROE CITY-REPLACE 2" HP STL CRITICAL VALVE 4714	2019	2019													Project coverage attributed to the retirement of additional steel fittings and installation of two 8" HP line stoppers to isolate the valve to be replaced due to inadequate separation between 2" HP steel valve and 2" HP tee to install small 2" stopper as estimated. This information was not available on historical work
4279	16126513	18585401050210	Exposures	Evansville	Evansville	IN-EVANSVILLE-TELEPHONE ROAD --- INSTALL 630' OF 2" PE TO REMEDIATE PE EXPOSURE AND TIE-OVER FOUR (4) SERVICES	2019	2019												N	Actual charges include preliminary engineering and partial materials costs only.
4280	16127425	18585701050212	Regulator Station	Vincennes	Vincennes	IN-VINCENNES-HICKORY CORNER & MARTINDALE --- REBUILD REGULATOR STATION V-42	2019	2019						Removed 20' of install main after preliminary design review and conducting field survey.					N		
4320	16276960	19585401050212	Priority Pipe	Evansville	Evansville	IN-EVANSVILLE-OUTER LINCOLN & SCENIC-REPLACE CRITICAL VALVE WITH UNREPAIRABLE LEAK	2019	2019						Added 400' of main installation to estimate after preliminary design review and conducting field survey determined a route change was needed.					N		
4323	16308812	18585401050212	Obsolete Equipment	Evansville	Evansville	IN-EVANSVILLE-REMOVE (7) KNOWN BLOCK VALVES THAT SEPARATE LOW PRESSURE AND MEDIUM PRESSURE SYSTEMS	2019	2019						Removed four stopper fittings purchase and installation cost after preliminary design review and conducting field survey determined valves could be used to isolate segments where block valves to be removed, one installed					N		
4808	16681327	19585601050210	Exposures	Boonville	Yankeetown	IN-YANKEETOWN-HILLS RD --- REMEDIATE 2" PE MAIN EXPOSURE	2019	2019													Project was completed with in-house crews which resulted in lower labor cost and inspection costs. Also, in-house construction crew installed 20' less concrete to original scope of work.
4815	16986186	19585401050213	Exposures	Evansville	Evansville	IN-EVANSVILLE-CASTLE CREEK DR --- REMEDIATE 2" PE MAIN EXPOSURE	2019	2019												N	
4817	16988633	19585501050210	Pressure Monitoring / SCADA / RTU	Fort Branch	Francisco	IN-FRANCISCO-ERX INSTALLATION --- INSTALL ERX ON MEDIUM PRESSURE SYSTEM	2019	2019						Removed some steel fittings from estimate after preliminary design review and conducting field survey.					N		
4838	17002640	19585701050212	Pressure Monitoring / SCADA / RTU	Vincennes	N/A	IN-VINCENNES-ERX INSTALLATION - REPLACE (4) RTU UNITS WITH ERX	N/A	2019					Project added to 2019 to install ERXs to comply with 170 IAC 5-1-10 and 49 CFR 192.739						N		
4839	17002739	19585501050217	Pressure Monitoring / SCADA / RTU	Fort Branch	N/A	IN-FORT BRANCH-ERX INSTALLATION - REPLACE (2) RTU UNITS WITH ERX	N/A	2019					Project added to 2019 to install ERXs to comply with 170 IAC 5-1-10 and 49 CFR 192.739						N		
4840	17002754	19585501050219	Pressure Monitoring / SCADA / RTU	Mt. Vernon	N/A	IN-MOUNT VERNON-ERX INSTALLATION - REPLACE (2) RTU UNITS WITH ERX	N/A	2019					Project added to 2019 to install ERXs to comply with 170 IAC 5-1-10 and 49 CFR 192.739						N		
4841	17002769	19585601050212	Pressure Monitoring / SCADA / RTU	Boonville	N/A	IN-BOONVILLE-ERX INSTALLATION - REPLACE (2) RTU UNITS WITH ERX	N/A	2019					Project added to 2019 to install ERXs to comply with 170 IAC 5-1-10 and 49 CFR 192.739						N		
4842	17002784	19585401050215	Pressure Monitoring / SCADA / RTU	Evansville	N/A	IN-EVANSVILLE-ERX INSTALLATION - REPLACE (3) RTU UNITS WITH ERX	N/A	2019					Project added to 2019 to install ERXs to comply with 170 IAC 5-1-10 and 49 CFR 192.739						N		
527	16379983	18585501050216	Bridge Crossings	Mt. Vernon	Mount Vernon	IN-MOUNT VERNON-OLD HWY 62 --- RELOCATE 4" STL BRIDGE CROSSING	2020	2020												N	
528	10686330	14585401050213	Bridge Crossings	Evansville	Evansville	IN-EVANSVILLE-5609 MIDDLE MT VERNON RD --- RELOCATE 2" STL BRIDGE CROSSING	2020	2020												N	
556	10686429	14585401050218	Bridge Crossings	Evansville	Evansville	IN-EVANSVILLE-MESKER PARK DR BY ANIMAL HOSPITAL --- RELOCATE 2" STL BRIDGE CROSSING	2020	2020						Removed 137' of main installation cost after completing preliminary design review and conducting field survey.					N		
577	10686840	14585401050224	Bridge Crossings	Evansville	Evansville	IN-EVANSVILLE-HWY 41 N-WHIRLPOOL PARKING LOT BRIDGE-RELOCATE 8" STL BRIDGE CROSSING	2020	2020						Removed 172' of main installation cost from estimate after completing preliminary design review and conducting field survey.					N		
579	10686860	14585401050226	Bridge Crossings	Evansville	Evansville	IN-EVANSVILLE-11801 WALNUT RD-SOUTH CAMPBELL RD --- RELOCATE 2" STL BRIDGE CROSSING	2020	2020												N	
580	10686869	14585401050227	Bridge Crossings	Evansville	Evansville	IN-EVANSVILLE-15110 OLD PETERSBURG RD-RELOCATE 2" STL BRIDGE CROSSING	2020	2020						Removed 150' of main installation cost from estimate after preliminary design review and conducting field survey.					N		
589	16379920	18585401050214	Bridge Crossings	Evansville	Evansville	IN-EVANSVILLE-5101 UPPER MT VERNON RD-RELOCATE 4" STL BRIDGE CROSSING	2020	2020						Added 71' of main installation from estimate after completing preliminary design review and conducting field survey.					N		
639	16379955	18585401050215	Bridge Crossings	Evansville	Evansville	IN-EVANSVILLE-BOEHNE CAMP & MIDDLE MT VERNON RD-RELOCATE 2" STL BRIDGE CROSSING	2020	2020						Removed 150' of main installation cost from estimate after preliminary design review and field survey.					N		
785	10686994	14585601050214	Non-Commercially Available Pipe Size	Boonville	Newburgh	IN-NEWBURGH-ANDERSON RD --- REPLACE 1.530' OF 2" EXTRUBE PIPE	2020	2020												N	
789	10687000	14585401050236	Non-Commercially Available Pipe Size	Boonville	Newburgh	IN-NEWBURGH-BROADVIEW --- REPLACE 1.980' OF 2" EXTRUBE PIPE	2020	2020						Added 450' of main installation and 4 services to estimate after completing detailed design and conducting field survey.					N		
790	10687002	14585601050215	Non-Commercially Available Pipe Size	Boonville	Newburgh	IN-NEWBURGH-ROSE HILL --- REPLACE 735' OF 2" EXTRUBE PIPE	2020	2020												N	
791	11366189	14585601050220	Non-Commercially Available Pipe Size	Boonville	Newburgh	IN-NEWBURGH-RIDGEMONT DR --- REPLACE 1.650' OF 2" EXTRUBE PIPE	2020	2020						Added 52' of main installation and 4 services to estimate after preliminary design review and conducting field survey.					N		
793	11366257	14585601050222	Non-Commercially Available Pipe Size	Boonville	Newburgh	IN-NEWBURGH-GOURLEY PL-REPLACE 1,190' OF 2" EXTRUBE PIPE	2020	2020						Added 38' of main installation and 5 services to estimate after preliminary design review and conducting field survey.					N		
798	16380073	18585601050212	Non-Commercially Available Pipe Size	Boonville	Newburgh	IN-NEWBURGH-SHARON RD-REPLACE 2,900' OF 2" EXTRUBE PIPE	2020	2020												N	
799	16319244	18585501050213	Non-Commercially Available Pipe Size	Mt. Vernon	Wadesville	IN-MT VERNON-UPTON RD-REPLACE 4,024' OF 2" EXTRUBE PIPE	2020	2020						Reduced restoration costs in estimate after preliminary design review and conducting field survey determining main could be installed in road right of way instead of street					N		
803	16380093	18585601050213	Non-Commercially Available Pipe Size	Boonville	Newburgh	IN-NEWBURGH-ELLERBRUSCH RD-REPLACE 2,891' OF 2" EXTRUBE PIPE	2020	2020												N	
804	16380553	18585601050214	Non-Commercially Available Pipe Size	Rockport	Richland City	IN-RICHLAND CITY-SANDRIDGE-REPLACE 2,256' OF 2" EXTRUBE PIPE	2020	2020												N	
1425	N/A	565450003-20	Ineffectively Coated Steel	N/A	N/A	2020 SW ISOLATED SERVICES	2020	2020						Reduction in estimate to balance projects						N	

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Databases	Project Number	Maximo Work Order Number	Oracle Project Number	Project Category	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)	
	1449	N/A	585450002-20	Obsolete Equipment	N/A	N/A	2020 SW OBSOLETE RISERS	2020	2020						Reduction in estimate to balance projects						N	
	1684	16380133	18585701050216	Non-Commercially Available Pipe Size	Evanville	Evanville	IN-EVANVILLE-BURKHARDT & PEACOCK-REPLACE 4,200' OF 2" EXTRUBE PIPE	2020	2020												N	
	1687	11364951	18585501050214	Non-Commercially Available Pipe Size	Mt. Vernon	Wadesville	IN-WADESVILLE-HWY 66 -- REPLACE 14,443' OF 2" EXTRUBE PIPE	2020	2020												N	
	3616	10280403	18585501050212	Ineffectively Coated Steel	Fort Branch	Princeton	IN-PRINCETON-PLEASANT VALLEY TRAILER COURT -- REPLACE 1,300' OF THREADED 1-1/4" STL MAIN	2020	2020						The estimate was increased in the TDSIC-10 filing due to the additional 29 services identified during the field survey. However, the service replacements were reduced back to 11 after determining the 29 had been inactive for several years and would not be replaced with this project.					N		
	3766	1294898	18585501050217	Encroachments	Mt. Vernon	Mount Vernon	IN-MOUNT VERNON-SIEBERT RD -- INSTALL 1,000' OF 2" PE TO REMEDIATE SERVICE ENCROACHMENTS FROM TRAILERS	2020	2020												N	
	3968	15333352	17585701050220	Bridge Crossings	Vincennes	Vincennes	IN-VINCENNES-S OLD DECKER RD-RELOCATE 2" STL BRIDGE CROSSING	2020	2020												N	
	4128	17065579	19585601050213	Obsolete Equipment	Mt. Vernon Rockport	Mount Vernon Rockport	IN-MOUNT VERNON-SIEBERT LN -- REPLACE RECTIFIER AND GROUND BED	2020	2020												N	
	4180	16380600	18585401050216	Shallow Pipe	Evanville	Evanville	IN-ROCKPORT-S 6TH ST -- REPLACE RECTIFIER AND GROUND BED	2020	2020						Added 41' of main installation cost after preliminary design review and field survey determined more main needed to be replaced to remediate shallow conditions.					N		
	4203	15456031	18585601050215	Shallow Pipe	Boonville	Newburgh	IN-NEWBURGH-FAYE LN -- REMEDIATE 2" PE SHALLOW MAIN	2020	2020												N	
	4226	16319091	18585701050214	Bridge Crossings	Vincennes	Vincennes	IN-VINCENNES-N PRULLAGE RD -- RELOCATE 4" STL BRIDGE CROSSING	2020	2020						Detailed engineering determined the need to add cost for acquiring easement due to construction work outside road right of way.					N		
	4227	16319118	18585701050215	Bridge Crossings	Vincennes	Bruceville	IN-BRUCEVILLE-N DAVIS RD -- RELOCATE 2" STL BRIDGE CROSSING	2020	2020						Removed 50' of main installation from estimate after preliminary design review and field survey.					N		
	4235	16380047	18585601050210	Exposures	Rockport	Rockport	IN-ROCKPORT-SR 161 -- REMEDIATE 1" STL MAIN EXPOSURE	2020	2020						Removed 100' of main installation from estimate after preliminary design review and field survey determined exposure limits.					N		
	4836	17066256	19585601050214	Exposures	Rockport	Rockport	IN-ROCKPORT-SILVERDALE RD -- REMEDIATE 2" PE MAIN EXPOSURE	N/A	2020					Project added to 2020 to mitigate exposed elastic pipeline							N	
	4853	17067244	19585401050216	Obsolete Equipment	N/A	N/A	IN-SW DIVISION-ELIMINATE (3) 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	
	828	3578248	16585401050213	Obsolete Equipment	Evanville	Evanville	IN-EVANVILLE-POLLACK AVENUE-REBUILD REGULATOR STATION	2017	2017												Y	
	2890	N/A	585450001-20	Inside Meters	N/A	N/A	2020 SW INSIDE METERS	2020	2020						Added project to complete removal for inside meters						N	
	1401	N/A	585450001	Inside Meters	N/A	N/A	2017 SW INSIDE METERS	2017	2017												N	Focused operational resources on inside meters
	2600	N/A	48202801050015-	Regulator Station	Washington	Coldwater	Oaktown Station Rebuild	N/A	N/A												N	Prior year project-trailing costs
	3720	N/A	585750001	Obsolete Equipment	Fort Branch	N/A	STYLE 90 DRESSER FITTINGS REPLACEMENT BLANKET IN FRANCISCO/COKLAND CITY/PRINCETON SYSTEM	2016	2016												N	
	797	14506184	17585401050216	Non-Commercially Available Pipe Size	Evanville	Evanville	IN-EVANVILLE-BOEHNE CAMP RD-REPLACE 4,237' OF 2" EXTRUBE PIPE	2017	2017												Y	Restoration costs were less than estimated due to construction being outside of the roadway. Cost of obtaining easement was also less than estimated.
	498	14979825	17585401050225	Inside Meters	Evanville	Evanville	IN-EVANVILLE-2215 N KENTUCKY AVE- REMOVE INSIDE METERS	2018	2018												Y	Restoration costs were more than estimated due to additional asphalt and concrete needed after it was necessary to route main through an alley/parking lot. Also, additional cost were incurred due to the complexity of running the new fuel lines from the new outside meters to the existing inside meters.
	2858	10528223	17585401050214	Exposures	Evanville	Evanville	IN-EVANVILLE-114 ESSLER RD-REMEDIAE 2" STL MAIN EXPOSURE	2018	2018												Y	Labor charges were charged from unit pricing to time & material rates due to the complexity of the bore, difficulty in locating the forced sewer, and the complexity and depth of the bore.
	584	14365078	17585401050210	Bridge Crossings	Evanville	Evanville	IN-EVANVILLE-901 HOING RD-RELOCATE 2" STL BRIDGE CROSSING	2018	2018												Y	
	3797	13706052	16585601050213	Pressure Monitoring / SCADA / RTU	Rockport	Chrisney	IN-CHRISNEY-A CR 450 W-MOD -- INSTALL ERX	2016	2016												Y	Project complete in 2016 - Materials for the ERX install were previously purchased under another Compliance project (ProjectID 2, MaximoWONUM 8766232) in a prior year.
	782	10686979	14585401050235	Non-Commercially Available Pipe Size	Evanville	Evanville	IN-EVANVILLE-PLEASANT RIDGE MO HO PK-REPLACE 1,750' OF 2" EXTRUBE PIPE	2017	2017												Y	
	795	14506173	17585401050215	Non-Commercially Available Pipe Size	Evanville	Evanville	IN-EVANVILLE-BURKHARDT AND LINCOLN AVE-REPLACE 1,018' OF 2" EXTRUBE PIPE	2017	2017												Y	An additional 300 feet of main was replaced than originally estimated due to extrude (extruded tubing - obsolete material) pipe that was discovered during construction.
	2128	13638311	16585701050213	Exposures	Washington	Washington	IN-WASHINGTON-HAWKINS CREEK-REMEDIAE 10" HP STL MAIN EXPOSURE	2017	2017												Y	
	2937	12465271	15585601050213	Pressure Monitoring / SCADA / RTU	Boonville	Newburgh	IN-NEWBURGH-PROSPECT DR-INSTALL ERX	2017	2017												Y	Job was completed with in-house labor which resulted in lower than estimated labor costs. The original estimate was based on contractor labor with higher labor hours.
	2938	12464983	15585401050216	Pressure Monitoring / SCADA / RTU	Evanville	Elberfeld	IN-ELBERFELD-ZOAR CHURCH RD & WATERS EDGE DR-INSTALL ERX	2017	2017												Y	
	3620	12541595	17585701050210	Exposures	Vincennes	Vincennes	IN-BRUCEVILLE-2996 CHURCH RD-RELOCATE 2" STL BRIDGE CROSSING	2017	2017												Y	Restoration and inspector charges were less than estimated. The service line was able to be tied over and not replaced, which also reduced costs.
	3727	14375808	17585701050212	Exposures	Washington	Loogootee	IN-LOOGOOTE-125 COOPER ST-REMEDIAE 2" STL MAIN EXPOSURE	2017	2017												Y	Installed 14 feet less main, restoration, and inspection were lower than estimate. Original estimate accounted for sewer locate challenges which were not encountered during construction. Construction crew was able to bore more main than open cut and not all charges have been incurred on this project.
	3870	14167849	16585401050216	Inside Meters	Evanville	Evanville	IN-EVANVILLE-2613 WASHINGTON AVE-RELOCATE INSIDE METERS	2017	2017												Y	Material and contract plumbing and sewer locate work was less than estimated.
	4064	14952331	17585401050226	Bridge Crossings	Mt. Vernon	Wadesville	IN-WADESVILLE-VIENNA RD-RELOCATE 2" PE BRIDGE CROSSING	2017	2017												Y	First attempt by contractor to make the bore was unsuccessful due to rock under the ditch. A specialized contractor was required to make the bore increasing the project cost. Rock was not anticipated in this location.
	4150	15131780	17585501050217	Exposures	Mt. Vernon	Mount Vernon	IN-MOUNT VERNON-9101 S FORD RD-RETIRE 85' OF EXPOSED 2" PE MAIN	2017	2017												Y	Actual charges were incorrectly applied to another account. Costs will be transferred to transferred to this job in next filing.
	2117	14365108	17585401050212	Exposures	Evanville	Evanville	IN-EVANVILLE-2424 SCHUTTE RD-REMEDIAE 4" STL MAIN EXPOSURE	2018	2018												Y	Restoration costs were more than estimated due to additional asphalt and concrete needed after it was necessary to route main through an alley/parking lot. Also, additional cost were incurred due to the complexity of running the new fuel lines from the new outside meters to the existing inside meters.
	2118	14365218	17585401050213	Exposures	Evanville	Evanville	IN-EVANVILLE-1634 SPEAKER RD-REMEDIAE 2" STL MAIN EXPOSURE	2018	2018												Y	

Vectren South
Compliance Plan - Distribution Modernization Projects

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Vectren South
Compliance Plan - Bare Steel and Cast Iron Projects

Database Project Number	Maximo Work Order Number	Oracle Project Number	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 - 6/1/19)	Actual Spend Variance (\$)	Actual Spend Variance (%)	In-service? (Y or N)	Actual Spend Variance Commentary (Current Fall 2019 Filing)
S-1175	11466756	14585701052212	WA	WASHINGTON	IN-WASHINGTON-S-1175-BSCI	6,840	6,580	70	2018	2018											Y	A portion of main was relocated to the street from the green space due to utility conflicts, and another portion of main had to be open-cut due to incomplete sewer locales. These changes resulted in an increase in restoration, traffic control and inspection cost.
S-1177	13589649	16585701052210	WA	WASHINGTON	IN-WASHINGTON-S-1177-BSCI	7,012	6,625	122	2018	2018											Y	A portion of the project had to be open-cut trenched versus bored due to sewers that could not be located, utility conflicts and limited road right of way. This increased the cost of restoration. Additional main was installed on Main St to avoid cutting the street that had been recently paved.
S-1195	13589678	16585701052212	WA	WASHINGTON	IN-WASHINGTON-S-1195-BSCI	3,442	4,131	43	2018	2018											Y	
S-1196	13589812	16585701052213	WA	WASHINGTON	IN-WASHINGTON-S-1196-BSCI	9,044	9,026	108	2018	2018											Y	
S-1224	13589898	16585501052214	FB	PRINCETON	IN-PRINCETON-S-1224-BSCI	3,251	3,923	44	2018	2018											Y	
S-1243	13590188	16585701052214	VN	VINCENNES	IN-VINCENNES-S-1243-BSCI	3,399	2,583	39	2018	2018											Y	One less service installed compared to the estimate due to inactive service identified during construction. Portion of project estimated as open trench with restoration was changed to HDD resulting in reduced cost for installation and restoration.
S-1358	13591567	16585401052215	EV	EVANSVILLE	IN-EVANSVILLE-S-1358-BSCI	5,332	4,957	163	2018	2018											Y	Project overage attributed to 2,000' of main relocated from green space to the street and another 190' of main relocated from the green space to the sidewalk due to trees and utility conflicts. These changes resulted in an increase in restoration, traffic control and inspection cost.
S-1373	13887291	16585401052219	EV	EVANSVILLE	IN-EVANSVILLE-S-1373-BSCI	4,099	4,354	94	2018	2018											Y	Project overage attributed to 250' additional 2' main to avoid cutting newly paved street. Also replaced leaking valve and mechanical fittings. Also, replaced leaking valve and dresser fitting found during construction and not part of initial scope of work.
S-1535	11471226	14585701052218	VN	VINCENNES	IN-VINCENNES-S-1535-BSCI	5,780	6,125	0	2018	2018											Y	An additional 269 feet of approached main was required to tie in to the existing system. Restoration costs ran more than expected due to the additional spot holes needed on services crossing other utilities and the main installation in a very condensed road right of way area with other utilities.
S-1743	12341094	15585401052212	EV	EVANSVILLE	IN-EVANSVILLE-S-1743-BSCI	5,258	7,857	168	2018	2018											Y	Original estimate planned for main to be installed in right of way but due to other utilities in the area a portion of the gas main was forced into the street resulting in increase cost of installation and restoration.
S-2101	13591599	16585401052216	EV	EVANSVILLE	IN-EVANSVILLE-S-2101-BSC	4,199	3,467	79	2018	2018											Y	Project moved 500' of 2" HDPE west of east curb line and into the street due to conflict with telephone duct bank, incomplete sewer locales and the retirement of a leaking steel valve. Open cut 70' in the street at Bennighof Ave due to construction crew could not locate one gas service. It was necessary to install 500' of new 2" main west of east curb line and into the street of South Boone Road due to conflict with Telephone duct bank (rather than behind curb in grass), incomplete sewer locales (unable to locate) and the retirement of a leaking 2" steel valve at the intersection of Boone Road and Jackson Ave all of which required open cutting of street and subsequent hard surface restoration.
S-2102	13591818	16585501052216	FB	PRINCETON	IN-PRINCETON-S-2102-BSCI	6,258	5,453	60	2018	2018											Y	Open cut 70' in the street at 709, 708 and 706 Bennighof Ave due to the construction crew which could not find gas service at 709 Bennighof Ave. Additional restoration cost was and additional traffic control cost was Note on restoration: the project replaced 180 services which required additional spot hole verification and bell holes for service tie-overs. Additional excavations were required for the retirement of cast iron within the scope of work.
S-2103	13592143	16585701052215	WA	WASHINGTON	IN-WASHINGTON-S-2103-BSCI	2,203	2,237	43	2018	2018											Y	
S-2105	13592237	16585501052217	FB	PRINCETON	IN-PRINCETON-S-2105-BSCI	1,658	1,561	9	2018	2018											Y	
S-2111	13592290	16585401052217	EV	EVANSVILLE	IN-EVANSVILLE-S-2111-BSC	1,440	1,703	26	2018	2018											Y	
S-2132	13708422	16585701052217	WA	WASHINGTON	IN-WASHINGTON-S-2132-BSCI	2,470	3,165	30	2018	2018											Y	
S-2282	14304786	17585401052210	EV	EVANSVILLE	IN-EVANSVILLE-S-2282-BSCI	3,630	3,933	62	2018	2018											Y	
S-2315	14782097	17585501052210	FB	PRINCETON	IN-PRINCETON-S-2315-BSCI	3,624	4,462	48	2018	2018											Y	
S-24	14819126	17585701052225	VN	VINCENNES	IN-VINCENNES-S-24-BSCI	5,450	7,520	80	2018	2018											Y	
S-2435	15426710	18585701052213	VN	VINCENNES	IN-VINCENNES-S-2435-BSCI	909	909	9	2018	2018											Y	
S-2446	15735990	18585401052212	EV	EVANSVILLE	IN-EVANSVILLE-S-2446-BSCI	7,120	10,135	180	2018	2018											Y	
S-691	12386609	15585701052218	VN	VINCENNES	IN-VINCENNES-S-691-BSCI	7,135	8,240	84	2018	2018											Y	
S-697	12341391	15585701052216	WA	WASHINGTON	IN-WASHINGTON-S-697-BSCI	2,812	3,457	66	2018	2018											Y	
S-700	13887385	16585401052220	EV	EVANSVILLE	IN-EVANSVILLE-S-700-BSC	5,050	5,027	134	2018	2018											Y	
S-704	13592348	16585401052218	EV	EVANSVILLE	IN-EVANSVILLE-S-704-BSC	5,070	4,183	74	2018	2018											Y	
S-1199	14816753	17585701052210	WA	WASHINGTON	IN-WASHINGTON-S-1199-BSCI	8,504	8,246	121	2019	2019											Y	
S-1201	14816963	17585701052212	WA	WASHINGTON	IN-WASHINGTON-S-1201-BSCI	8,963	9,462	79	2019	2019											N	Construction in progress and is trending on target to estimate.
S-1204	14817028	17585701052213	VN	VINCENNES	IN-VINCENNES-S-1204-BSCI	950	2,900	7	2019	2019											Y	Final restoration repairs still in progress
S-1236	11467221	14585701052217	WA	PETERSBURG	IN-PETERSBURG-S-1236-BSCI	4,727	6,988	69	2019	2019											N	Construction in progress and is trending on target to estimate.
S-1254	14817070	17585701052214	VN	VINCENNES	IN-VINCENNES-S-1254-BSCI	5,890	6,100	108	2019	2019											N	Construction in progress and is trending on target to estimate.
S-1265	14817116	17585701052215	VN	VINCENNES	IN-VINCENNES-S-1265-BSCI	5,070	4,175	80	2019	2019											N	Construction in progress and is trending on target to estimate.
S-1271	14817135	17585701052216	VN	VINCENNES	IN-VINCENNES-S-1271-BSCI	5,010	7,145	85	2019	2019											Y	
S-1355	14817332	17585401052213	EV	EVANSVILLE	IN-EVANSVILLE-S-1355-BSC	4,906	4,176	100	2019	2019											Y	
S-1356	12340962	15585401052210	EV	EVANSVILLE	IN-EVANSVILLE-S-1356-BSCI	6,945	7,322	247	2019	2019											Y	Restoration is in progress and project trending on target to estimate.
S-1376	14817486	17585401052215	EV	EVANSVILLE	IN-EVANSVILLE-S-1376-BSC	2,981	4,437	9	2019	2019											N	
S-1377	14817559	17585401052216	EV	EVANSVILLE	IN-EVANSVILLE-S-1377-BSC	3,405	6,290	51	2019	2019											N	
S-1565	14817602	17585701052217	VN	VINCENNES	IN-VINCENNES-S-1565-BSCI	2,770	6,005	23	2019	2019											N	
S-1982	14817669	17585701052218	WA	WASHINGTON	IN-WASHINGTON-S-1982-BSCI	3,583	3,823	58	2019	2019											N	Construction in progress and is trending on target to estimate.
S-2169	14817738	17585401052217	EV	EVANSVILLE	IN-EVANSVILLE-S-2169-BSCI	5,445	5,265	162	2019	2019											Y	1,562' of main was moved from proposed green space into the road due to an old storm sewer tunnel not identified in city plans or design locales, limited right of way and conflict with other utilities. The change in construction increased traffic control and restoration cost.

[illegible]

Vectren South
TDSIC Plan Projects

Petitioner's Exhibit No. 1
Attachment SAH-8
Cause No. 44429-TDSIC-11
Vectren South
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Maximo Work Order Number	Oracle Project Number	Project Category	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)
15232621	17585501G51210	System Improvement	FB	HAUBSTADT	IN-HAUBSTADT-US 41 N & SR 68-GMINS - INSTALL MAIN TO ENSURE CAPACITY AND DELIVERABILITY ALONG SR 68 AND ALLOW FOR RETIREMENT OF TWO REGULATOR STATIONS AND HIGH PRESSURE SERVICE TAPS ALONG THE ROUTE.	2018	N/A												Y Project was less complex than originally estimated. Restoration came in significantly under estimate and did not need to use any of the project's contingency.
12631884	17585601G51213	System Improvement	BV	NEWBURGH	IN-NEWBURGH-OAK GROVE CASEY TO OAK TRAIL GIN SI- INSTALL MAIN TO INCREASE CAPACITY AND DELIVERABILITY TO CUSTOMERS IN VANN INDUSTRIAL PARK AREA	2017	N/A												Y Restoration, surveying, and traffic control were less than estimated due to favorable site conditions and minimal traffic issues. Contingency anticipated for adverse construction conditions - depth of main, etc. - were not encountered.
JS101	15200601006016	Gas Production & Storage	N/A	EVANSVILLE	INSTALL GAS DEHYDRATION TOWER AND REBOILER.	2018	2018					Project completed in 2018							Y Actual cost increased due to unanticipated additional work during foundation installation - it was necessary to relocate glycol and gas lines to position foundations for the new equipment.
12622612	16585401061215	Public Improvement	EV	EVANSVILLE	IN-EVANSVILLE-PECK RD. FROM OLD STATE TO BASELINE RD. RELOCATE MAIN DUE TO ROAD WIDENING PROJECT.	2017	N/A												Y Actual costs were less than estimated due to construction work being less complex than planned which resulted in significantly lower costs for main relocation, surveying, locating, and restoration. Traffic was very light which eliminated the need for contracted traffic control.
12622682	16585601061214	Public Improvement	BV	NEWBURGH	IN-NEWBURGH-LINCOLN PH III- RELOCATE MAIN DUE TO ROAD IMPROVEMENT PROJECT	2017	N/A												Y
NA	17202801044011	Rural Extension	BV	NEWBURGH	IN-NEWBURGH-WARRICK COUNTY RURAL EXTENSION	2017	N/A												Y
12344251	17585701G51210	System Improvement	EV	WASHINGTON	IN-WASHINGTON-PIPPIN RD- GMINS - MOVE METERS FROM ROAD TO STANDARD PLACEMENT AT CUSTOMER STRUCTURES	2017	N/A												Y Project was estimated for inspection by internal resources. Contract inspector was utilized due to internal inspector resource constraints increasing the inspection cost.

Vectren South
Compliance Plan - Storage Modernization Projects

Database Project Number	Oracle Project Number	Project Category	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 - 6/1/19)	Actual Spend Variance (\$)	Actual Spend Variance (%)	In-service? (Y or N)	Actual Spend Variance Commentary		
3985	18200601055013	Well Construction / Remediation	Midway	Midway	Midway	Plug & Abandon MID-022 E.Kirkland#01 Well	2018	2018													Actual charges include retirement of the existing flowline and the Y-squeezing of cement between the casing was required to be performed twice due to initial inadequate bond.	
4199	TBD	Well Construction / Remediation	Midway	Midway	Midway	New horizontal injection / withdrawal well to replace MID-022 E. Kirkland #1	2019	2021					Project reprioritized beyond current Compliance Plan ending in 2020. Preliminary engineering and material purchases in 2020 with construction expected to be complete in 2021.							N		
4027	18200601055014	Emergency Response	Oliver	Oliver	Oliver	Install well access roads at Oliver Storage Field - 2018	2018	2018													Roads necessary for 2018/2019 well logging were completed. The remainder of the work will be completed in late 2019 or 2020 to support 2020 well logging activities.	
4730	18200601055019	Emergency Response	Oliver	Oliver	Oliver	Install additional well access roads at Oliver Storage Field	2018	2018													Y	
4093	18200601055015	Emergency Response	Midway	Midway	Midway	Install 9 well access roads at Midway Storage Field	2018	2018														Increase in cost due to additional rock and soil stabilization necessary to construct roads to wells on south side of field. Soil conditions were much worse than anticipated and required deeper road beds.
4200	18200601055016	Well Construction / Remediation	Midway	Midway	Midway	Drill new observation well at Midway Storage Field	N/A	2020					Project reprioritized to 2020.								N	
4209	18200601055017	Well Construction / Remediation	Oliver	Oliver	Oliver	Plug & Abandon OLP-006 Becker #8 Well	2018	2018													N	The flow line retirement was not included in the original estimate. The original plan was to drill a new replacement well for Becker #8 and connect it to the flow line. The new well installation will be performed in the future, but it was necessary to retire the line to mitigate risk of damage. Actual abandonment of the well required multiple cement squeezes to prevent migration of gas to the surface. Geology and casing condition can result in additional cost to seal wells - it is not possible to identify these situations in advance.
4312	TBD	Pressure Monitoring / SCADA / RTU	Midway	Midway	Midway	Install Phase 1 of remote pressure monitoring at Midway Install remote pressure monitoring at Midway	2019	2019													N	
4347	TBD	Equipment	Monroe City	Monroe City	Monroe City	Install Phase 1 of remote pressure monitoring at Midway	2019	N/A					Project cancelled - Will be replaced with projects for individual well head replacements 1900601055012, 19200601055013, and 19200601055014							N	Project was split into 2 separate wellhead replacements - Project is trending under budget by roughly 25%.	
4318	TBD	Pressure Monitoring / SCADA / RTU	Monroe City	Monroe City	Monroe City	Install Phase 1 of remote pressure monitoring at Monroe City	2019	2020					Project reprioritized to 2020. Decided to move forward with doing all wells at each field instead of phased approach.							N	Project reprioritized to 2020. Decided to move forward with doing all wells at each field instead of phased approach.	
4319	19200601055011	Well Construction / Remediation	Monroe City	Monroe City	Monroe City	Install liner to remediate integrity defect, access road, and downhole pressure monitoring at MCP-018 Downey #1	2019	2019													N	Project is in progress and trending to budget.
4344	TBD	Pressure Monitoring / SCADA / RTU	Oliver	Oliver	Oliver	Install Phase 1 of remote pressure monitoring at Oliver	2019	2020					Project reprioritized to 2020. Decided to move forward with doing all wells at each field instead of phased approach.							N	Project reprioritized to 2020. All wells at each field will be instrumented instead of phased approach.	
4345	TBD	Pressure Monitoring / SCADA / RTU	Oliver	Oliver	Oliver	Install Phase 2 of remote pressure monitoring at Oliver	2019	2020					Project reprioritized to 2020. Decided to move forward with doing all wells at each field instead of phased approach.							N	Project reprioritized to 2020. All wells at each field will be instrumented instead of phased approach.	
4710	18200601055020	Emergency Response	Midway	Midway	Midway	Install access roads at Midway Storage Field	2019	2020					Project reprioritized to 2020. Further land owner negotiations needed before installs can be completed.								N	Project reprioritized to 2020
4263	18200601055018	Well Construction / Remediation	Monroe City	Monroe City	Monroe City	Drill new observation well at Monroe City Storage Field	2020	2020													N	Project reprioritized to 2020
4554	TBD	Equipment	Monroe City	Monroe City	Monroe City	Replace 2 wellheads at Monroe City Storage Field	2020	2020													N	
4802	TBD	Pressure Monitoring / SCADA / RTU	Monroe City	Monroe City	Monroe City	Install Phase 2 of remote pressure monitoring at Monroe City	2020	2020													N	
4803	TBD	Pressure Monitoring / SCADA / RTU	Midway	Midway	Midway	Install Phase 2 of remote pressure monitoring at Midway	2020	2020					Project reprioritized to 2020. Decided to move forward with doing all wells at each field instead of phased approach.							N		
4804	TBD	Well Construction / Remediation	Monroe City	Monroe City	Monroe City	Replug 3 wells at Monroe City Storage Field	2020	2020													N	
4805	TBD	Well Construction / Remediation	Oliver	Oliver	Oliver	Replug 1 well at Oliver Storage Field	2020	2020													N	
4861	19200601055012	Well Construction / Remediation	Monroe City	Monroe City	Monroe City	OLP-054 AA Becker # 2 Wellhead Replacement	N/A	2019					Project added to 2019 - Individual well head replacement that replaced Project ID 4317							N		
4862	19200601055013	Well Construction / Remediation	Monroe City	Monroe City	Monroe City	OLP-NA L. Phyllis # 1 Wellhead Replacement	N/A	N/A					Project cancelled - Individual well head replacement that replaced Project ID 4347							N		
4863	19200601055016	Well Construction / Remediation	Oliver	Oliver	Oliver	Plug & Abandon Metz # 2 Well	N/A	2019					Project added to 2019 due to inability to log well requiring well to be plugged							N		
4864	19200601055017	Well Construction / Remediation	Oliver	Oliver	Oliver	Plug & Abandon Willis # 2 Well	N/A	2019					Project added to 2019 due to anomalies found during well logging							N		

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