BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

IN THE MATTER OF SOUTHWESTERN PUBLIC SERVICE COMPANY'S APPLICATION FOR REVISION OF ITS RETAIL RATES UNDER ADVICE NOTICE NO. 255 ,	)	**CASE NO. 15-00139-UT**
SOUTHWESTERN PUBLIC SERVICE COMPANY,	)	
APPLICANT.	)	

DIRECT TESTIMONY

of

DAVID C. HARKNESS

on behalf of

SOUTHWESTERN PUBLIC SERVICE COMPANY

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GLOSSARY OF ACRONYMS AND DEFINED TERMS

Acronym/Defined Term	Meaning
BTEs	Business Technology Executives
CIO	Chief Information Officer
CIP	Critical Infrastructure Protection
CRS	Customer Resource System
DEMS	Dynamic Energy Management System
EEI	Edison Electric Institute
ERP	Enterprise Resource Planning System
FERC	Federal Energy Regulatory Commission
GIST-3	Geospatial Information Systems for Transmission Phase 3
GL	General Ledger
ISD	In-Service Date
IT	Information Technology
NERC	North American Electric Reliability Corporation
Operating Companies	Northern States Power Company, a Minnesota corporation; Northern States Power Company, a Wisconsin corporation; Public Service Company of Colorado, a Colorado corporation; and SPS
SCADA	Supervisory Control and Data Acquisition
SPP	Southwest Power Pool

Acronym/Defined Term	Meaning
SPP IM Phase II	Southwest Power Pool Integrated Marketplace Phase II
SPS	Southwestern Public Service Company, a New Mexico corporation
Test Year	January 1, 2016 through December 31, 2106.
WAM	Work and Asset Management
Xcel Energy	Xcel Energy Inc.
XES	Xcel Energy Services Inc.

LIST OF ATTACHMENTS

Attachment	Description
DCH-1	Business Systems Capital Additions (*Filename:* DCH-1.xlsx)

Case No. 15-00139-UT
Direct Testimony
of
David C. Harkness

I. WITNESS IDENTIFICATION AND QUALIFICATIONS

Q. Please state your name and business address.

A. My name is David C. Harkness. My business address is 414 Nicollet Mall, Minneapolis, Minnesota 55401.

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

A. I am testifying on behalf of Southwestern Public Service Company, a New Mexico corporation ("SPS") and wholly-owned electric utility subsidiary of Xcel Energy Inc. ("Xcel Energy"). Xcel Energy is a registered holding company that owns several electric and natural gas utility operating companies.[1]

Q. By whom are you employed and in what position?

A. I am employed by Xcel Energy Services Inc. ("XES") as Chief Information Officer ("CIO") and Vice President.

[1] Xcel Energy is the parent company of four wholly-owned electric utility operating companies: Northern States Power Company, a Minnesota corporation; Northern States Power Company, a Wisconsin corporation; Public Service Company of Colorado, a Colorado corporation; and SPS (collectively, "Operating Companies"). Xcel Energy's natural gas pipeline subsidiary is WestGas InterState, Inc. Xcel Energy also has two transmission-only operating companies, Xcel Energy Southwest Transmission Company, LLC and Xcel Energy Transmission Development Company, LLC, both of which are regulated by the Federal Energy Regulatory Commission ("FERC").

Q. Please briefly outline your responsibilities as CIO and Vice President.

A. I am responsible for the XES Business Systems organization, which performs Xcel Energy's shared Information Technology ("IT") functions. The key types of activities performed include all enterprise application development and maintenance, management of IT infrastructure, data center operations and architecture, and IT governance. Also as part of this role, I am responsible for cyber security and IT disaster recovery. I report to the Chief Administrative Officer.

Q. Please describe your educational background.

A. I hold a Bachelor of Arts degree from the University of Iowa with a major in Computer Science and Applied Mathematics.

Q. Please describe your professional experience.

A. I have more than 29 years of experience in the field of IT, with 25 of those years being in a management role. I joined Xcel Energy in November 2009, following six years at PNM Resources in Albuquerque, New Mexico, where I first served as Senior Director, Business Process Outsourcing, then as Senior Director of Business Transformation and, finally, as Vice President and CIO for more than three years. While in New Mexico, I was also appointed by Governor Richardson

to New Mexico's Information Technology Commission, where I helped establish and direct IT strategy for the State of New Mexico. Prior to that experience, I held several IT leadership roles for McLeod USA, MCI, and Rockwell International, where I began my career in 1986.

Q. Have you attended or taken any special courses or seminars relating to public utilities?

A. Yes. I attended the University of Idaho Utility Executive Course in 2006. I also attended a Merger and Acquisition course at Northwestern University's Kellogg School of Management in 2007.

Q. Are you a member of any professional organizations?

A. Yes. I serve on two utility CIO committees. The Edison Electric Institute ("EEI") Executive Advisory Committee is made up of 25 utility CIOs and is designed to advise our Chief Executive Officers on critical technology risks and advances, as well as assist in policy development surrounding standards, regulation, and legislation. In addition, I serve as Chair on the EEI/AGA (American Gas Association) Technical Advisory Council made up of 16 utility CIOs. That Council discusses best practices, lessons learned, and case studies of various IT projects and operations. I also serve on the IT Committee of the

Knowledge Utility Executive Summit, an annual conference of senior leaders in the utility industry. The summits address pressing topics in the industry, including issues related to IT.

Q. Have you submitted testimony in any regulatory proceedings?

A. Yes. I have testified before the New Mexico Public Regulation Commission on behalf of Public Service Company of New Mexico regarding IT costs and operations and have filed testimony on those same topics before the Public Utility Commission of Texas in previous SPS rate cases.

II. ASSIGNMENT AND SUMMARY OF TESTIMONY AND RECOMMENDATIONS

Q. What is your assignment in this proceeding?

A. The purpose of my testimony is to describe the Business Systems capital projects for the Corporate Services business area that will be placed in-service between January 1, 2015 and December 31, 2016.

Q. Please summarize your testimony and recommendations.

A. During the time period January 1, 2015 through December 31, 2016, the Corporate Services business area plans to place in service $88.1 million in Business Systems capital additions. These capital additions are reasonable and necessary, and support SPS's ability to provide safe and reliable electric service to its customers.

III. BUSINESS SYSTEMS CAPITAL ADDITIONS

Q. What topic do you discuss in this section of your testimony?

A. I discuss the Business Systems capital additions that SPS expects to place in service during the period January 1, 2015 through December 31, 2016. SPS has included these capital additions in its Test Year[2] rate base.

Q. What services does Business Systems provide?

A. Business Systems is the centralized information technology arm of Xcel Energy, which procures and maintains the hardware (*e.g.*, servers, laptops, phones, and radios), systems (control systems, email, word processing, accounting, operations, and other application software), and the networks (communication wires and circuits) that are used by SPS and XES. Some of the larger and more business-critical systems that Business Systems provides and maintains are:

- The Customer Resource System ("CRS") stores SPS customer data. CRS is used by call center agents to respond to SPS customer inquiries about outages and billing, and is used to generate the information required to produce and distribute SPS customer bills.

- The Outage Management System is used to track customer outages and dispatch repair crews in the SPS service territory.

[2] The Test Year in this case is January 1, 2016 through December 31, 2016.

- The Meter Reading Management System is used to manage the inventory of meters and devices used to collect usage information from SPS's customers.

- The Supervisory Control and Data Acquisition ("SCADA") System is used to monitor system operations and the health of the SPS transmission grid.

- The PassPort System is used for the purchasing and management of material and inventory used in the generation, transmission, and distribution business areas.

- The Work Management Systems enable the workforce to maintain the infrastructure in the generation plants and in the transmission and distribution network.

- The Financial Systems are used in maintaining and evaluating financial results.

Q. Please describe the Business Systems capital additions SPS is asking to include in its rate base.

A. SPS is requesting rate base treatment for the Business Systems capital additions that SPS intends to make during the period January 1, 2015 through December 31, 2016. These projects are necessary to keep current with technology and provide the tools required to effectively and safely provide service to SPS's customers. They include service infrastructure projects such as: software (implementations and upgrades); network equipment (hardware upgrades and replacements for equipment, such as computers, servers, radios, phones, routers, and other

network-related equipment); communication equipment (upgrades and replacements of the overall technology infrastructure required to enable use of the hardware and software — *e.g.*, voice and data networks); and cyber security solutions required to meet regulatory requirements and protect Xcel Energy's computing environment. These investments are necessary for SPS to maintain system stability and adequate performance levels, support changing business needs, and help meet regulatory requirements.

Q. Please describe the process for ranking and funding Business Systems capital projects.

A. The Program Management Office, which resides within Business Systems, decides which capital projects to propose for the budget. The project selection process is as follows:

1. Business technology strategy directors, internally referred to as Business Technology Executives ("BTEs"), represent different operational areas throughout Xcel Energy, such as Corporate, Utility, and Financial Operations. The BTE works with the operational areas to understand the business strategy and what IT needs are required to support that strategy. The BTE, in

conjunction with operational area personnel, develops an IT roadmap based on the business strategy. The IT roadmap contains the current systems in use, required upgrades, and future system solutions to meet the business strategy. The IT roadmap becomes the source for project ideas that are used as input into the capital budget process.

2. Project ideas are entered into a database and categorized by type. There are eight categories: (1) Business Demand; (2) Hardware Refreshes; (3) IT Security; (4) Legal and Regulatory Requirements; (5) Other IT Infrastructure; (6) Critical Systems Upgrades/Replacements less than $5 million; (7) Major Investments; and (8) Strategic Technology.

3. Projects are ranked across the enterprise based on risk and value, which includes, but is not limited to, a cost-benefit analysis. During the ranking process, the CIO and his management team (*i.e.,* the BTEs, with support of operational area personnel) review key drivers and the expected benefits of each project. As part of this process, the team reviews the last four years of project

spending by category and the next five years of future demand and other factors, which are referred to as "influencers," to determine category thresholds for future years. This process helps Xcel Energy evaluate projects using a pre-defined set of criteria and has helped SPS and Xcel Energy to be more objective when determining the capital budget.

Q. How do legal requirements affect the ranking and selection of capital projects to be funded?

A. Legal requirements are built into the categories discussed above and they also affect the influencers. Influencers include environmental requirements, recent system stability, and future regulatory demands. For example, the North American Electric Reliability Corporation ("NERC") Critical Infrastructure Protection ("CIP") Standards CIP-002 through CIP-009 affect the capital budget. These standards require that Xcel Energy comply with physical and cyber security controls designed to protect critical infrastructure.

Q. How does SPS assure that Business Systems capital expenditures provide the intended benefits?

A. During the proposal process of each project, the key success metrics based on the category of the project are identified. These success metrics are reviewed during project execution and at the close of the project. The sponsor of the project is responsible for presenting the applicable economic, operational, staffing, regulatory compliance, and any other benefits derived from the project. These formal reviews help the sponsor stay on track for delivery and attain the project benefits.

Q. What is the dollar amount of Business Systems capital additions that SPS is requesting to include in rate base in this case?

A. SPS is requesting $88.1 million (total company) in capital additions for the period January 1, 2015 through December 31, 2016. The testimony of SPS witness Arthur P. Freitas discusses allocation of the total company dollar amount among SPS's jurisdictions (New Mexico retail, Texas retail, and wholesale). Attachment DCH-1 provides a list of Business Systems capital additions to plant in-service for this time period.

Q. Please describe the information included in Attachment DCH-1, which provides details about the dollar amount for Business Systems capital additions.

A. Attachment DCH-1 provides the following information:

Column A	Parent Work Order Number	Provides the parent work order number for the project.
Column B	Category	Classifies the project into one of eight project types.
Column C	Description	Provides a short description of parent work order.
Column D	Estimated ISD	Provides the estimated in-service date ("ISD") of the parent work order.
Columns E	2015	Provides plant additions expected in calendar year 2015.
Column F	2016	Provides plant additions expected in calendar year 2016.
Column G	Total Period (Jan. 1, 2015 – Dec. 31, 2016)	Provides total plant additions expected in calendar years 2015 and 2016.

Q. In Column D – Estimated ISD there are a number of line items listed with "routine" rather than a date. What does the reference to "routine" represent?

A. Some capital work involves multiple assets being constructed in the same work order with many in-service dates (commonly referred to as "blanket" work orders). "Routine" means that there are many actual work orders, each with its own in-service date.

Q. In Column D – Estimated ISD there are a number of line items with dates after December 31, 2016. Are these valid line items?

A. Yes. These line items with an in-service date after December 31, 2016 represent work on a project that has several defined dates when portions of the project are projected to close to plant in-service.

Q. In Column D – Estimated ISD there are a number of line items with dates prior to January 1, 2014. Are these valid line items?

A. Yes. Typically, charges can continue for a short period after the in-service date is recognized on a work order. These charges can include recognition of the final bills from vendors, testing of the equipment, and settlement of any disputes.

Q. Please describe the Business Systems capital additions.

A. As shown in Table DCH-1 below, the majority of plant additions for this period are in the major investment category. Business Systems investments are primarily enterprise-wide systems that are used by all of the Operating Companies. The dollar figures in Table DCH-1 represent SPS's portion of costs.

Table DCH-1

Business Systems - Capital Investment
(in millions, total company)

	2015 Projected Capital Additions	2016 Projected Capital Additions	Total
Major Investment	$6.7	$44.2	$50.9
Critical Systems Upgrades/Replacements Less Than $5 million	$12.4	$1.1	$13.5
Business Demand	$6.7	$3.9	$10.6
Other Information Technology Infrastructure	$1.7	$2.7	$4.4
Legal & Regulatory Required	$3.7	$0.2	$3.9
Hardware Refreshes	$1.1	$0.9	$2.0
Strategic Technology	$1.1	$0.4	$1.5
Information Technology Security	$1.3	-	$1.3
Total	**$34.7**	**$53.4**	**$88.1**

Q. Please explain the types of projects included in the "major investments" category.

A. This category of investment includes projects that exceed $10 million total investment for Xcel Energy. The total investment in this category amounts to $50.9 million during the period.

Major projects included in this category are Work and Asset Management ("WAM") Phase 1 (parent workorder 11491947), purchase of transmission and distribution network equipment (parent workorder 11802571), and deployment of Dynamic Energy Management System ("DEMS") (parent workorder 10818776). Combined, these projects account for 95% of the total capital additions in this category.

Currently, multiple WAM tools are used, each tailored for a particular business area. All are at or near end-of-life. Rather than replacing each of these applications individually, they will be replaced with an Enterprise Resource Planning system ("ERP") from the vendor SAP. ERP is a suite of integrated applications that is used to collect, store, manage, and interpret data from many business activities and that is intended to be used across Xcel Energy. This corporate-wide approach is more efficient than implementing multiple systems.

A corporate-wide approach also is much easier to support and maintain than a collection of stand-alone applications.

The second project is the purchase of transmission and distribution network equipment. These costs are associated with design, deployment, and testing of elements for utilizing transmission fiber and microwave based communications in support of a corporate initiative to expand and privatize the Xcel Energy-wide area network. The business needs being addressed include: increased substation communications reliability, high speed digital access for operations/maintenance/security and ability to analyze data to improve reliability and operations.

The third project is the deployment of DEMS. The DEMS project will replace the current energy management system. This is being done in an effort to reduce operational and technical risk and remain compliant with regulatory requirements.

Q. Please explain the types of capital investments included in the "critical systems upgrades/replacements less than $5 million" category.

A. Projects in this capital category include upgrades of the critical systems which are used company-wide such as desktop operating systems, productivity suites and

other infrastructure systems used throughout the organization. The total planned amount of the investment in this category is approximately $13.5 million during the period.

The major projects included in this category are General Ledger ("GL") Phase 1 (parent workorder 11765140) and DEMS Phase 2 hardware (identified as "Purch EMS DEMS Ph2 HW SPS" on attachment DCH-1, parent workorder 11584387), which account for approximately 87% of the capital additions in this category.

The current GL, JD Edwards, is reaching end-of-life and will no longer be supported by the vendor. It is being replaced by the SAP ERP solution discussed above. DEMS Phase 2 hardware is the hardware portion of the DEMS project discussed above.

Q. Please explain the types of capital investments included in the "business demand" category.

A. This category of IT investments includes the implementation of new software, upgrades to existing software systems, and the necessary hardware upgrades to support the software investments. These investments are needed to enhance production and training environments to meet regulatory requirements, efficiently

manage assets, improve project management and workflow, enable continued system stability, meet evolving legal compliance requirements, maintain and improve business operations, and to protect SPS and Xcel Energy information. These investments impact many of the operational functions of Xcel Energy including power plants, transmission operations, facility management, IT operations management, construction project management, and customer care needs. The total planned investment in this category is $10.6 million during the period.

Major projects in this category include the purchase of core network hardware (parent workorder 11939990), Emergent Demand (identified as "BS-Fcst-BD-SW-EL-S" on attachment DCH-1, parent workorder 11218053), and ITSA Pole Ph2 (parent workorder 11831494). Combined, these projects account for 49% of the total capital additions in this category.

The purchase of network core hardware is one of a number of projects to upgrade the corporate network. This project includes the design, planning, installation and commissioning of equipment that comprises the backbone of the corporate network, and meets demand for more robust network capabilities and bandwidth, and to ensure required regulatory and reliability metrics are met.

The Emergent Demand Account is an account created to ensure Xcel Energy is able to meet the aging technology, cyber security, and efficiency needs that inevitably emerge in each year. Given the ever-changing nature of technology and emerging risks, it is frequently not possible to specifically identify all necessary projects that may arise or become critical in a given year.

Historical scope change and new demand trends are analyzed to determine the appropriate amount of budgeted capital allocated for the Emergent Demand Account. Generally, Business Systems analyzes data from the past three years and uses that analysis to develop the budget amount for this account. All requests for funds from the Emergent Demand Account must be approved by the IT Governance Board, which evaluates each request to determine whether it is reasonable and necessary.

ITSA (inspect, treat, strength analysis) Pole software is used to capture and analyze the physical properties of electric distribution wooden poles and to identify those poles that require proactive reinforcement or replacement.

Q. Please explain the types of capital investments included in the "other information technology infrastructure" category.

A. This category includes core technology that forms the foundation upon which applications and systems are built to support IT and business operations. These assets typically include servers, mainframes, networks, and operating and internet platforms. The total planned amount of the investment in this category is $4.4 million during the period.

Major projects in this category include the INFS Network Refresh (parent workorders 11490683, 11490701, and 11490477), the purchase of data center hardware (identified as "Purch Data Center HW SPS" on attachment DCH-1, parent workorder 11940001), and the purchase of network reliability hardware (parent workorder 11942511). Combined, these projects account for 52% of the total capital additions in this category.

The INFS Network Refresh annual projects provide for the planned, scheduled replacement of aging local area network and wide area network components.

The purchase of data center hardware and Network Reliability projects are being implemented to increase the reliability of critical network components,

prevent outages, support increasing network traffic, and meet increasing regulatory reliability standards.

Q. Please explain the types of capital investments included in the "Legal/Regulatory Requirements" category.

A. This category includes projects that are implemented to ensure compliance with mandated safety and other regulatory requirements. These projects usually require the purchase of a specified asset where there are no alternative means of compliance. The total planned amount of the investment in this category is $3.9 million during the period.

The major projects included in this category are Geospatial Information Systems for Transmission Phase 3 ("GIST-3") (parent workorder 11556095) and the Southwest Power Pool Integrated Marketplace Phase II ("SPP IM Phase II") (parent workorder 12001855), which account for approximately 95% of the capital additions in this category.

GIST-3 is a regulatory project in response to a 2011 NERC mandate to validate Bulk Electric System transmission line facilities based on actual field conditions. GIST-3 is a prerequisite for business capital projects designed to meet the NERC requirement.

The SPP IM Phase II project is necessary to ensure that SPS's trading systems remain compliant with FERC mandated requirements in order to actively participate in the SPP Integrated Marketplace.

Q. Please explain the types of capital investments included in the "Hardware Refreshes" category.

A. Capital additions in this category include planned replacements and upgrades of computer hardware platforms (PCs, laptops, etc.), radio and microwave systems, mobile data terminals and Emergency Management System/SCADA hardware. The total planned amount of the investment in this category is $2.0 million during the period.

Major projects included in this category are the planned and unplanned PC refreshes (parent workorders 11490705, 11490090, 11491094, and 11491367). Together, these workorders account for approximately 75% of the capital additions in this category.

Planned PC Refresh is the replacement of aging laptops, desktops, and printers when they reach end of life. Unplanned Refresh represents desktops and laptops purchased for new personnel, or as replacements for lost or damaged computers.

Q. Please explain the types of capital investments included in the "Strategic Technology" category.

A. Strategic Technology projects focus on the development of technology that will create new risk-mitigating solutions and improve asset life-cycle efficiencies such as grid-monitoring devices and cleaner-power solutions. The total planned amount of the investment in this category is $1.5 million during the period.

Major projects in this category include Wind predictor enhancement (parent workorder 11772073) and Strategic Technology (parent workorder 10812285).

Q. Please explain the types of capital investments included in the "Information Technology Security" category.

A. IT Security investments include cyber and other risk mitigation investments. The total planned amount of the investment in this category is $1.3 million during the period.

Capital additions in this category include Endpoint Security (parent workorder 11943996), Security Incident and Event Management (parent workorder 12076489), and Sailpoint Identity and Access Management (parent

workorder 12075881). Together these projects account for 40% of the capital additions in this category.

Q. Please generally describe how Business Systems developed cost information for the projects included in Attachment DCH-1.

A. Business Systems develops cost information in different ways depending on the type of project involved. Many of the Business Systems capital additions involve new technology, thus cost information is often derived from vendors and other companies that have implemented similar types of technology. In some circumstances, cost estimates may be based on prior experience. Regardless of the process used to develop cost estimates, Business Systems capital additions are evaluated and approved through the process discussed above and through the budgeting process discussed in detail by SPS witness Gregory J. Robinson.

Q. More specifically, please describe how Business Systems developed cost estimates for the GL, WAM, and DEMS projects discussed above, which constitute 44% of the Business Systems capital additions SPS is requesting in this case.

A. Cost estimates for the SAP GL and WAM projects were driven by detailed projections for the design and requirements phase of the project, and high level

estimates of the implementation costs prepared by Accenture, Xcel Energy's external strategic integration consultant. Software costs include the licensing fees required for the right to use SAP for accounting and financial reporting application, and asset management. Labor includes professional service fees and internal company labor used to configure the application to meet the functional and technical requirements identified as the project scope; these costs are primarily incurred during implementation. As part of the competitive bid process for the SAP project scope of work, Xcel Energy engaged Upper Edge, an independent external advisor, to assess the bids for reasonableness. Upper Edge provided a third party assessment of the software development and implementation proposals and evaluated the individual terms and conditions of each proposal and provided an assessment of competitiveness of the bid. The results of the Upper Edge assessment were considered as one criterion in the vendor selection process.

Similarly, cost estimates for the DEMS project were created by developing bottom-up, detail-level estimates for the scope of the project. Xcel Energy conducted a competitive bid process for acquisition of the software and another competitive bid process for acquisition of the software integrator used to

implement the software. In addition, a comparison of project estimates was made against peer utilities to assess the reasonableness and completeness of the detailed-level estimate. Software costs include the licensing fees required for the right to use the software. Hardware costs include all primary and backup hardware necessary to operate the solution. Labor costs include professional service fees and internal company labor to design, configure, test, and implement the new solution.

Q. Are the Business Systems capital additions presented in Attachment DCH-1 reasonably reflective of what is expected to be placed in service during the period from January 1, 2015 through December 31, 2016?

A. Yes.

Q. Are the Business Systems capital additions presented in Attachment DCH-1 reasonable and necessary?

A. Yes. As discussed above in my testimony, the Business Systems capital additions presented in Attachment DCH-1 are reasonable and necessary to maintain stability and reliability of systems used by employees to serve SPS's customers, efficiently manage business operations, protect SPS and Xcel Energy data and information, and meet evolving regulatory and legal requirements.

IV. CONCLUSION

Q. Was Attachment DCH-1 prepared by you or under your direct supervision and control?

A. Yes.

Q. Does this conclude your pre-filed direct testimony?

A. Yes.

VERIFICATION

STATE OF MINNESOTA)
) ss.
COUNTY OF HENNEPIN)

DAVID C. HARKNESS, first being sworn on his oath, states:

I am the witness identified in the preceding direct testimony. I have read the testimony and the accompanying attachments and am familiar with their contents. Based upon my personal knowledge, the facts stated in the testimony are true. In addition, in my judgment and based upon my professional experience, the opinions and conclusions stated in the testimony are true, valid, and accurate.

DAVID C. HARKNESS

SUBSCRIBED AND SWORN TO before me this 20th day of May, 2015.

MARY ANN MARTINEZ
Notary Public
State of Minnesota
My Commission Expires
January 31, 2020

Notary Public, State of Minnesota
My Commission Expires: 1-31-20

Southwestern Public Service Company

Business Systems Capital Additions
Calendar Year January 2015 through December 2016

Line No.	Parent Workorder (A)	Category (B)	Description (C)	Estimated ISD (D)	2015 (E)	2016 (F)	Total (G)
1	10818776	MI_Energy Management System	Dynamic EMS Environment Phase	5/31/16	$ -	$ 4,409,059	$ 4,409,058.83
2	11490090	BT_HW Refreshes	2016 Planned PC Refresh SPS	12/31/16	-	499,308	499,308
3	11490165	BT_Other IT Infrastructure	2016 Planned Server Refresh SP	12/31/16	-	37,000	37,000
4	11490477	BT_Other IT Infrastructure	2014 IT INFS Network Refresh S	9/30/15	42,809	-	42,809
5	11490501	BT_HW Refreshes	2014 Planned PC Refresh SPS	12/31/14	385	-	385
6	11490565	BT_Other IT Infrastructure	2014 Planned Server Refresh SP	3/31/15	8,312	-	8,312
7	11490630	BT_HW Refreshes	2014 Unplanned PC Refresh SPS	12/31/14	10,160	-	10,160
8	11490683	BT_Other IT Infrastructure	2016 IT INFS Network Refresh S	12/31/16	-	829,950	829,950
9	11490701	BT_Other IT Infrastructure	2015 IT INFS Network Refresh S	12/31/15	486,750	-	486,750
10	11490705	BT_HW Refreshes	2015 Planned PC Refresh SPS	1/31/16	599,114	31,960	631,074
11	11491027	BT_Other IT Infrastructure	2015 Planned Server Refresh SP	1/31/16	16,835	3,165	20,000
12	11491094	BT_HW Refreshes	2015 Unplanned PC Refresh SPS	12/31/15	207,592	-	207,592
13	11491149	BT_Other IT Infrastructure	2015 Unplanned Server Refresh	12/31/15	10,010	-	10,010
14	11491268	BT_HW Refreshes	2015 EMS Infrastructure Refres	1/31/16	-	93,250	93,250
15	11491367	BT_HW Refreshes	2016 Unplanned PC Refresh SPS	12/31/16	-	121,000	121,000
16	11491389	BT_Other IT Infrastructure	2016 Unplanned Server Refresh	12/31/16	-	20,000	20,000
17	11501757	BT_HW Refreshes	2015 Unplanned MDT Refresh	12/31/15	12,650	-	12,650
18	11578743	BT_IT Security	Purch RedZone Network Appl SPS	12/31/13	37	-	37
19	11584387	BT_Critical Sys Upgrades/Rplmt(<5M)	Purch EMS DEMS Ph2 HW SPS	12/31/15	4,632,820	-	4,632,820
20	11616685	BT_HW Refreshes	2016 Unplanned MDT Refresh SPS	12/31/16	-	12,650	12,650
21	11621473	MI_Xcel Corporate Network	Purch Xcel Corp Network HW SPS	11/17/16	270,438	219,351	489,789
22	11679509	BT_Business Demand	Purch Network Appl Camera Upgr	12/31/15	319,403	-	319,403
23	11764323	BT_HW Refreshes	2016 Planned MDT Refresh SPS	12/31/16	-	118,965	118,965
24	11764345	BT_HW Refreshes	2015 Planned MDT Refresh SPS	12/31/15	185,400	-	185,400
25	11798862	BT_HW Refreshes	2013 VOIP Phone Refresh	12/31/14	15,226	-	15,226
26	11802571	MI_Network Strategy	Purch NS T&D Network Equip SPS	Routine	6,090,967	15,277,803	21,368,770
27	11802578	MI_Network Strategy	Purch NS Dist Network Equip SP	Routine	79,848	180,209	260,056
28	11810240	BT_Business Demand	2013 Wireless HW SPS	12/31/15	336,359	-	336,359
29	11849652	BT_HW Refreshes	2013 VOIP Phone Refresh NM SPS	12/31/14	(308)	-	(308)
30	11876993	BT_Business Demand	Purch Fleet Diagnostics Laptop	1/31/15	121,186	-	121,186
31	11876996	BT_Business Demand	Purch Fleet Diagnostics Laptop	1/31/15	35,685	-	35,685
32	11878365	BT_Other IT Infrastructure	Purch ARMZ Network Equip SPS	8/31/14	111	-	111
33	11883743	BT_Other IT Infrastructure	Purch SPS Microwave Red Bluff NM	12/31/14	206,564	-	206,564
34	11915891	BT_Other IT Infrastructure	Purch Site Infrastructure SPS	Routine	41,585	7,320	48,905
35	11939990	BT_Business Demand	Purch Corp Network Core HW SP	12/31/16	-	1,390,828	1,390,828
36	11940001	BT_Other IT Infrastructure	Purch Data Center HW SPS	10/31/16	-	600,000	600,000
37	11940032	BT_IT Security	Purch Perimeter Security HW SP	12/28/15	110,500	-	110,500
38	11940064	BT_Other IT Infrastructure	Purch Net Infra Standard HW SP	4/30/16	-	57,671	57,671
39	11942348	BT_IT Security	Purch CIP Compliance HW SPS	12/31/15	32,500	-	32,500
40	11942405	BT_IT Security	Purch Mobile Device HW SPS	3/31/15	8,172	-	8,172

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41	11942511	BT_Other IT Infrastructure	Purch Network Reliability HW S	12/31/15	329,064	-	329,064
42	11942592	BT_Other IT Infrastructure	Purch Field Mobile Data HW SPS	12/31/15	132,000		132,000
43	11942601	BT_Other IT Infrastructure	Purch Infra Private Cloud HW S	12/31/16	-	110,000	110,000
44	11944689	BT_IT Security	Purch Database Security HW SPS	12/31/15	78,000	-	78,000
45	11954396	BT_Business Demand	2014 IT INFS Network HW SPS	9/30/15	15,712	-	15,712
46	11954488	BT_Other IT Infrastructure	2014 Storage Project SPS	2/28/15	39	-	39
47	11954502	BT_Other IT Infrastructure	2014 Storage Project SPS	2/28/15	39	-	39
48	12001723	BT_Business Demand	2014 IT INFS Netw HW Elec Comm	9/30/15	105,989	-	105,989
49	12003030	BT_Other IT Infrastructure	SCADA Reliability Satellite HW SPS	6/30/16	-	47,347	47,347
50	12058374	BT_Other IT Infrastructure	Purch Windows 2003 Server HW SPS	12/31/16	-	236,043	236,043
51	12060284	BT_IT Security	Purch Firewall Network SPS	4/15/15	53,665	-	53,665
52	12060290	BT_IT Security	Purch Firewall Network NM SPS	4/15/15	53,665	-	53,665
53	12064499	BT_Business Demand	2014 IT INFS Netw HW Elec Comm	9/30/15	62,997	-	62,997
54	12070463	BT_Other IT Infrastructure	Purch Network Reliability HW S	12/31/15	110,358	-	110,358
55	12076075	BT_Other IT Infrastructure	Purch PLC CADD HW SPS	3/31/15	7,950	-	7,950
56	12076262	BT_HW Refreshes	Purch 2015 Handheld/Mobile Ref	7/31/15	49,000	-	49,000
57	11218053	BT_Business Demand	BS-Fcst-BD-SW-EL-S	Routine	998,509	1,483,230	2,481,739
58	11438106	BT_Business Demand	Regulatory Process Standard S	11/30/14	(1,797)	-	(1,797)
59	11438211	BT_Critical Sys Upgrades/Rplmt(<5M)	Enterprise Purge and Archive S	12/31/14	3,193	-	3,193
60	11458353	BT_Business Demand	IEM EMS SW SPS	6/30/14	1	-	1
61	11459808	BT_Business Demand	RPAM Landworks SPS	12/30/14	912	-	912
62	11466233	BT_Business Demand	RPAM Tririga SPS	12/19/14	4,262	-	4,262
63	11491889	BT_Other IT Infrastructure	Windows 7 OS Migration SW SPS	12/31/14	38,906	-	38,906
64	11549778	BT_Business Demand	ESC Environmental Compliance	6/30/15	29,586	-	29,586
65	11556095	BT_Legal/Regulatory Required	GIST Ph3 SW SPS	12/3/15	1,913,937	-	1,913,937
66	11599370	BT_Critical Sys Upgrades/Rplmt(<5M)	Service Suite 10 SPS	12/15/14	195	-	195
67	11604869	BT_Critical Sys Upgrades/Rplmt(<5M)	ITSM Ph2 SPS	11/30/14	5,411	-	5,411
68	11619880	BT_Critical Sys Upgrades/Rplmt(<5M)	Budget System Upgrade SW SPS	11/30/14	19,387	-	19,387
69	11685123	BT_IT Security	GRC Compliance SW SPS	5/31/15	(246)	-	(246)
70	11698565	BT_Business Demand	CMS Phase 4 SPS	12/31/14	79,284	-	79,284
71	11727530	BT_IT Security	Identity and Access Mgmt SW SP	6/30/15	13,314	-	13,314
72	11735635	BT_Business Demand	Meridium New Version SPS	9/30/14	(419)	-	(419)
73	11786253	BT_Critical Sys Upgrades/Rplmt(<5M)	Business Obj New Release Ver 4	11/1/14	824	-	824
74	11795612	BT_Business Demand	EPM Ph4 Supply Chain SPS	12/31/15	0	-	0
75	11826260	BT_Business Demand	SharePoint New Version SW SPS	12/20/16	(54)	262,199	262,146
76	11831494	BT_Business Demand	ITSA Pole Ph2 SW SPS	11/30/15	1,382,652	-	1,382,652
77	11836288	BT_Business Demand	Focal Point Network Mgmt SW SP	12/31/15	343,617	-	343,617
78	11844790	BT_Critical Sys Upgrades/Rplmt(<5M)	Documentum New Version SW SPS	6/30/14	19	-	19
79	11845154	BT_Business Demand	Early Case Assessment SW SPS	1/31/15	137,855	-	137,855
80	11868774	BT_Business Demand	Wind Predictor Load Balancing	9/30/15	150,123	-	150,123
81	11873788	BT_Business Demand	CRS Extend SW Part 2 SPS	11/10/14	9	-	9

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Line No.	Parent Workorder (A)	Category (B)	Description (C)	Estimated ISD (D)	2015 (E)	2016 (F)	Total (G)
82	11874452	BT_Business Demand	Integrated Talent Mgmt SW SPS	12/31/15	369,720	21,140	390,860
83	11888983	BT_Business Demand	Sub Asset Mgmt SW SPS	12/31/15	506,626	-	506,626
84	11903497	BT_Business Demand	XE XM Upgrade SW SPS	3/30/15	22,455	-	22,455
85	11921916	BT_Business Demand	EPM Ph3.5 SW SPS	3/31/15	146,293	-	146,293
86	11936867	BT_Business Demand	Emptoris Upgrade SW SPS	11/30/14	(715)	-	(715)
87	11939986	BT_Business Demand	Contact Center Continuity SW S	12/20/15	39,855	-	39,855
88	11939994	BT_Business Demand	Cust Care Agent Screen SW SPS	10/31/16	-	201,713	201,713
89	11940005	BT_Business Demand	Data Quality Tool SW SPS	6/30/15	478,723	-	478,723
90	11940045	BT_Critical Sys Upgrades/Rplmt(<5M)	GIS Upgrade 4.3 SW SPS	6/30/16	-	687,987	687,987
91	11940060	BT_Other IT Infrastructure	Mobile Computing Infra SW SPS	12/31/16	-	140,000	140,000
92	11940073	MI_Security Technology	Security Tech Refresh SW SPS	12/31/19	-	735,504	735,504
93	11942379	BT_IT Security	Data Loss Ph2 SW SPS	9/30/15	105,104	-	105,104
94	11942566	MI_Next Generation Desktop	Next Gen Desktop SW SPS	12/31/16	-	660,000	660,000
95	11942572	BT_Other IT Infrastructure	SCCM Upgrade SW SPS	12/31/15	154,000	-	154,000
96	11943996	BT_IT Security	Endpoint Security SW SPS	6/12/15	236,489	-	236,489
97	11944881	BT_Other IT Infrastructure	Network Monitoring SW SPS	10/31/16	-	220,000	220,000
98	11949485	BT_Business Demand	Builders Portal SW SPS	4/30/15	140,484	-	140,484
99	11968554	BT_Other IT Infrastructure	Virtual Comp Phase II SW SPS	10/10/14	133	-	133
100	11993525	BT_Critical Sys Upgrades/Rplmt(<5M)	Upgrade IEE 5.3 to IEE 8.1 SW	12/31/15	216,819	(0)	216,819
101	12001855	BT_Legal/Regulatory Required	SPP IM Phase II SW SPS	6/30/15	1,752,142	-	1,752,142
102	12002121	BT_Business Demand	Data Discovery Suite SW SPS	12/20/16	-	97,134	97,134
103	12002476	BT_Other IT Infrastructure	HDB (Non-Outage OMS) SW SPS	12/31/16	-	29,533	29,533
104	12002497	BT_Business Demand	Improve Outage Communication S	12/31/16	-	15,260	15,260
105	12002764	BT_Other IT Infrastructure	Active Directory 2016 SW SPS	7/31/16	-	54,667	54,667
106	12002787	BT_Business Demand	Metadata Management SW SPS	7/31/16	-	16,098	16,098
107	12002967	BT_IT Security	SEP Refresh SW SPS	11/30/16	-	43,733	43,733
108	12003021	BT_Other IT Infrastructure	Unified Communication SW SPS	5/31/16	-	41,864	41,864
109	12003035	BT_Other IT Infrastructure	RADIUS Authentication SW SPS	7/31/16	-	23,147	23,147
110	12003040	BT_Business Demand	Network Topology Mgmt SW SPS	12/31/16	-	65,074	65,074
111	12003044	BT_Other IT Infrastructure	Expansion of Guest Wireless SW SPS	11/30/16	-	34,954	34,954
112	12003049	BT_Other IT Infrastructure	Radio Microwave Planned SW SPS	5/31/16	-	48,948	48,948
113	12003053	BT_Other IT Infrastructure	NetOps Tools Infoblox SW SPS	8/31/16	-	97,940	97,940

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Line No.	Parent Workorder (A)	Category (B)	Description (C)	Estimated ISD (D)	2015 (E)	2016 (F)	Total (G)
114	12003060	BT_Other IT Infrastructure	Intelligent Network Elements SW SPS	12/31/16	-	82,500	82,500
115	12008633	BT_Business Demand	CPC Phase II SW SPS	12/31/14	(351)	-	(351)
116	12030049	BT_Business Demand	My Account ReDesign SW SPS	3/30/15	206,448	-	206,448
117	12041585	BT_Critical Sys Upgrades/Rplmt(<5M)	Corp Email SW SPS	8/31/15	179,512	-	179,512
118	12058076	BT_Business Demand	Whole Building Benchmarking SW SPS	11/1/15	133,347	-	133,347
119	12058166	BT_Business Demand	Master Contact Data Mgmt SW SP	12/31/15	105,109	-	105,109
120	12058199	BT_Business Demand	Dynamic Pricing SW SPS	12/31/16	-	80,848	80,848
121	12069638	BT_Business Demand	ITM Ph2 Recruiting SW SPS	3/31/15	27,033	-	27,033
122	12069702	BT_Business Demand	CPC Phase ll Outage SW SPS	2/23/15	177,940	-	177,940
123	12071700	BT_Business Demand	Marketing Campaign SW SPS	12/31/15	54,472	-	54,472
124	12071719	BT_Business Demand	Multi Site Customer SW SPS	12/31/16	-	52,161	52,161
125	12071732	BT_Business Demand	Enterprise Search Portal SW SP	12/15/16	-	71,585	71,585
126	12071757	BT_Business Demand	Customer Experience SW SPS	12/31/15	50,273	-	50,273
127	12071898	BT_Business Demand	My Account Integration SW SPS	12/31/16	-	57,268	57,268
128	12071944	BT_Business Demand	Verint Workforce SW SPS	12/31/16	-	103,320	103,320
129	12075877	BT_IT Security	Identity & Access Mgmt QAS SW SPS	9/15/15	49,483	-	49,483
130	12075881	BT_IT Security	Identity & Access Mgmt Sailpoint SW	9/15/15	128,717	-	128,717
131	12076066	BT_Legal/Regulatory Required	Federated Record SW SPS	12/31/16	-	198,704	198,704
132	12076072	MI_Regulatory Process Standard SW-RIS	Regulatory Info Sys Ph2 SW SPS	12/31/15	285,235	-	285,235
133	12076475	BT_IT Security	Enterprise Vulnerability SW SP	12/15/15	95,788	-	95,788
134	12076481	BT_IT Security	Threat Assessment SW SPS	12/31/15	23,947	-	23,947
135	12076489	BT_IT Security	Security Incident SW SPS	12/31/15	164,209	-	164,209
136	12076493	BT_IT Security	Certificate Key Mgmt SW SPS	4/30/15	53,813	-	53,813
137	12076497	BT_IT Security	Forensic Investigate SW SPS	12/31/15	58,157	-	58,157
138	12076511	BT_Other IT Infrastructure	RedSky e911 SW SPS	12/15/15	82,391	-	82,391
139	12080275	BT_Business Demand	Riskmaster v14.1 SW SPS	5/22/15	147,350	-	147,350
140	12080518	BT_Critical Sys Upgrades/Rplmt(<5M)	Fuelworx SW SPS	12/31/16	-	225,976	225,976
141	10812285	Strategic Technology (CEO Only)	Strategic Technology - SPS	Routine	302,106	395,651	697,757
142	11772073	Strategic Technology (CEO Only)	Wind Predictor Enhance SW SPS	3/31/15	773,215	-	773,215
143	11491947	MI_Enterprise Asset Management	Work and Asset Phase 1 SW SPS	6/30/18	-	22,698,107	22,698,107
144	11765140	BT_Critical Sys Upgrades/Rplmt(<5M)	General Ledger Ph 1 SW SP	12/31/15	6,909,288	234,311	7,143,599
145	11940068	BT_Critical Sys Upgrades/Rplmt(<5M)	Powerplant Upgrade SW SPS	5/31/15	458,031	-	458,031
146	**Grand Total**				**$ 34,632,711**	**$ 53,483,434**	**$ 88,116,145**