

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

* * * * *

RE: IN THE MATTER OF ADVICE)
LETTER NO. 1672-ELECTRIC FILED)
BY PUBLIC SERVICE COMPANY OF)
COLORADO TO REVISE ITS) PROCEEDING NO. 14AL-_____E
COLORADO PUC NO. 7-ELECTRIC)
TARIFF TO IMPLEMENT A GENERAL)
RATE SCHEDULE ADJUSTMENT AND)
OTHER RATE CHANGES EFFECTIVE)
JULY 18, 2014.)

DIRECT TESTIMONY AND ATTACHMENTS OF DAVID C. HARKNESS

ON

BEHALF OF

PUBLIC SERVICE COMPANY OF COLORADO

June 17, 2014

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO**

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SUMMARY OF DIRECT TESTIMONY OF DAVID C. HARKNESS

Mr.

David C. Harkness is Chief Information Officer and Vice President of Xcel Energy Services Inc. ("XES"). In this position, Mr. Harkness is responsible for the XES Business System organization, which provides Information Technology ("IT") services to XES and its operating company affiliates, including Public Service Company of Colorado ("Public Service" or "Company"). Mr. Harkness is also responsible for the corporate Business Continuity function and IT disaster recovery.

In

his Direct Testimony, Mr. Harkness supports the \$79.6 million in 2014 Business Systems capital additions and \$81.2 million in 2015 Business Systems capital additions that Company witness Ms. Lisa Perkett utilizes to develop the plant-related roll forward, which is in turn used by Company Witness Ms. Deborah Blair to calculate the 13-month average plant in service balance included in the January 1,

2015 through December 31, 2015 Test Year (“Test Year”) rate base. Mr. Harkness also supports the \$38.3 million in adjusted 2013 Operations & Maintenance (“O&M”) expenses that are included in the Test Year cost of service.

In support of these requests, Mr. Harkness provides a description of the Business Systems organization and the IT services it provides to Public Service; a description of the Business Systems capital budgeting process; support for Business Systems’ capital additions to be placed in-service in 2014 and 2015 that impact Public Service’s cost of service; and presents and supports Business Systems’ O&M expenditures during 2013, which forms the basis of the Test Year cost of service.

Mr. Harkness recommends that the Colorado Public Utilities Commission (“Commission”) approve the level of capital additions and O&M presented in his testimony as reasonable and necessary to support Public Service’s ability to provide safe and reliable electric service to its customers, and therefore are a reasonable basis for the Company’s Test Year cost of service and is supported by Ms. Blair.

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LIST OF ATTACHMENTS

Attachment No. DCH-1	Business Systems Capital Additions: 2014-2015
Attachment No. DCH-2	Business Systems 2013 O&M by Object and FERC Account

GLOSSARY OF ACRONYMS AND DEFINED TERMS

<u>Acronym/Defined Term</u>	<u>Meaning</u>
ADMS	Advanced Distribution Management System
BES	Bulk Electric System
CIO	Chief Information Officer
CIP	Critical Infrastructure Protection
CMS	Commodity Management System
CRS	Customer Resource System
EMS	Energy Management System
ET	Emissions Tracker
FERC	Federal Energy Regulatory Commission
GAAP	Generally Accepted Accounting Principles
GIS	Geographic Information System
GIST	Geographic Information Systems Transmission
IT	Information Technology
IVR	Interactive Voice Response
LIDAR	Light Detection and Ranging
NERC	North American Electric Reliability Corporation
O&M	Operations & Maintenance
OMS	Outage Management System

<u>Acronym/Defined Term</u>	<u>Meaning</u>
PC	Personal Computer
Public Service, or Company	Public Service Company of Colorado
RIS	Regulatory Information System
SCADA	Supervisory Control and Data Acquisition
Test Year	January 1, 2015 through December 31, 2015
Xcel Energy	Xcel Energy Inc.
XES	Xcel Energy Services Inc.

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DIRECT TESTIMONY AND ATTACHMENTS OF DAVID C. HARKNESS

**I. INTRODUCTION, QUALIFICATIONS, PURPOSE OF TESTIMONY, AND
RECOMMENDATION**

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is David C. Harkness. My business address is 250 Marquette Plaza, Minneapolis, Minnesota 55401.

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. XES is a wholly-owned subsidiary of Xcel Energy Inc. ("Xcel Energy"), and provides an array of support services to Public Service Company of Colorado ("Public Service" or "Company") and the other utility operating company subsidiaries of Xcel Energy on a coordinated basis.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THE PROCEEDING?

A. I am testifying on behalf of Public Service.

1 **Q. PLEASE SUMMARIZE YOUR RESPONSIBILITIES AND**
2 **QUALIFICATIONS.**

3 A. I am responsible for the XES Business Systems organization, which provides
4 Information Technology (“IT”) services to XES and the Xcel Energy operating
5 companies, including Public Service. In this role, I am also responsible for
6 the corporate Business Continuity function and IT disaster recovery. A
7 description of my qualifications, duties, and responsibilities is included as
8 Attachment A.

9 **Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY AND**
10 **ATTACHMENTS?**

11 A. The purpose of my testimony is to support the \$160.8 million in 2014 and
12 2015 Business Systems plant in-service additions that are included in the
13 January 1, 2015 through December 31, 2015 Test Year (“Test Year”) cost of
14 service that is presented by Ms. Deborah Blair. I am also supporting the
15 Company’s 2013 O&M expense of \$38.3 million, as adjusted for labor costs
16 as discussed and quantified by Company witness Ms. Ruth Lowenthal, as the
17 appropriate level of Business Systems’ Operations & Maintenance (“O&M”)
18 expense in the Test Year. To support this request, I will provide the following
19 information in my testimony:

- 20 • A description of the Business Systems organization and the
21 information technology services that we provide to the Xcel Energy
22 companies, including Public Service;

- 1 • A description of the Business Systems' capital budgeting process that
- 2 determines which capital projects are selected for implementation;
- 3 • Presentation and support of the Business Systems' capital additions
- 4 that are planned to go into service during 2014 and 2015 that impact
- 5 Public Service; and
- 6 • Presentation and support of Business Systems' O&M expenditures
- 7 during 2013, which form the basis of for the Test Year cost of service.

8 **Q. ARE YOU SPONSORING ANY ATTACHMENTS?**

9 A. Yes, I am sponsoring two attachments, Attachment No. DCH-1 (Business
10 Systems Capital Additions: 2014-2015) and Attachment No. DCH-2 (Business
11 Systems 2013 O&M by Object and Federal Energy Regulatory Commission
12 ("FERC") Account).

13 **Q. WHAT RECOMMENDATIONS ARE YOU MAKING IN YOUR TESTIMONY?**

14 A. I recommend that the Colorado Public Utilities Commission ("Commission")
15 approve the \$79.6 million in 2014 Business Systems capital additions and
16 \$81.2 million in 2015 capital additions presented in my testimony because
17 these investments are reasonable and necessary to support Public Service's
18 ability to provide safe and reliable electric service to its customers, and
19 therefore are a reasonable basis for the Company's Test Year cost of service
20 and is supported by Ms. Blair. I also recommend that the Commission
21 approve the 2013 O&M expense of \$38.3 million, adjusted for labor costs as
22 described in the testimony of Company witness Ms. Ruth Lowenthal, as a
23 reasonable level of O&M expense for the Test Year.

1 **II. BUSINESS SYSTEMS FUNCTIONS AND ACTIVITIES**

2 **Q. PLEASE DESCRIBE BUSINESS SYSTEMS' KEY FUNCTIONS AND**
3 **RESPONSIBILITIES.**

4 A. Business Systems is XES' centralized IT organization, providing technology
5 services to support all aspects of the operations of the Xcel Energy operating
6 companies, including Public Service. In this era, it is hard to identify an
7 aspect of our operations that Business Systems does not in some manner
8 support. The key services Business Systems provides include the following:

- 9 • Technology Infrastructure: Support for each employee's hardware and
10 software needs, including the provision and maintenance of hardware
11 such as computers, phones, and servers; maintaining and updating
12 operating systems; and providing sufficient data storage capabilities.
13 Business Systems also provides protection from cyber security attacks,
14 including but not limited to computer viruses.
- 15 • Systems Control: Technology support to our generation, transmission, and
16 distribution business areas to enable management and operation of the
17 electric and gas system. One of the systems that we maintain is the
18 Outage Management System ("OMS"), which tracks customer outages
19 and dispatches repair crews to restore service. Business Systems also
20 supports the Supervisory Control and Data Acquisition ("SCADA") system,
21 which is used to monitor the health of the electric transmission and
22 distribution systems.

- 1 • Customer IT Support: Hardware and software needed to facilitate
2 interactions with Public Service customers. These activities include
3 maintaining the company website that provides important information
4 to customers about outages, the status of their account, the
5 Company's energy efficiency programs and rebates, and the
6 Company's operations. Business Systems also maintains the
7 Customer Resource System ("CRS"), which is the Company's
8 customer information system of record, and which generates
9 approximately 1.5 million billing statements to Public Service retail
10 customers on a monthly basis. Business Systems also supports the
11 Interactive Voice Response ("IVR") software that enables interaction
12 with customers via telephone keypad or speech recognition.
- 13 • Corporate IT Support: Business Systems provides IT support for
14 necessary corporate functions such as Human Resources and
15 Financial Management. This includes maintaining software that
16 enables creation, tracking, reporting, and analysis of budget, forecasts,
17 and actual financials, as well as all employee-related information.

1 **III. BUSINESS SYSTEMS CAPITAL ADDITIONS**

2 **A. Overview of Capital Project Needs**

3 **Q. WHAT ARE THE PRIMARY DRIVERS OF THE CAPITAL ADDITIONS**
4 **THAT YOUR ORGANIZATION PLACES IN SERVICE?**

5 A. After keeping capital costs relatively steady for the past several years,
6 Business Systems is entering a period of increased investment. There are
7 three key drivers for these capital additions:

- 8 • Replacing aging technology: IT assets are no different from other
9 physical assets in that they are subject to aging and technical
10 obsolescence. A reasonably up-to-date infrastructure is necessary for
11 the Company to continue to meet current legal and regulatory
12 requirements as well as meet the service expectations of our
13 customers. We seek to maximize our investments by harvesting the
14 value of existing systems prior to replacing them. However, there
15 comes a time when we must upgrade our aging systems due to
16 business, reliability, or compliance needs.
- 17 • Addressing cyber security - Investments in cyber security ensure the
18 availability, integrity, and confidentiality of our IT systems, as well as
19 compliance with legal and regulatory obligations. These investments
20 provide prevention, detection, containment, and repair services to
21 protect the company from cyber attacks and to assist in recovery if
22 such an attack occurs.

- 1 • Increasing efficiency – Technology can be used to increase
2 productivity, improve communication, and enable more efficient use of
3 data. Business Systems identifies and analyzes new technologies to
4 determine whether they can offer efficiency benefits to the company.

5 **Q. GIVEN THESE BUSINESS DRIVERS, WHAT TYPES OF CAPITAL**
6 **PROJECTS DOES BUSINESS SYSTEMS UNDERTAKE?**

7 A. Business Systems' capital additions include hardware (desktop and laptop
8 computers, servers, routers, phone systems, radio systems, microwave
9 communication systems, and network equipment), software (computer
10 programs), and related technology infrastructure investments, and cyber
11 security solutions that support the Xcel Energy operating companies'
12 business operations.

13 **Q. WHAT IS THE DOLLAR AMOUNT OF THE BUSINESS SYSTEMS**
14 **CAPITAL ADDITIONS FOR THE TEST YEAR?**

15 A. Business Systems is forecasting major capital additions that will be placed in-
16 service in 2014 totaling \$79.6 million and in 2015 totaling \$81.2 million. I
17 describe these capital additions in more detail later in my testimony. Public
18 Service witnesses Ms. Perkett and Ms. Blair show how these capital additions
19 affect the Company's rate base.

1 **Q. DOES BUSINESS SYSTEMS IMPLEMENT CAPITAL PROJECTS FOR**
2 **PUBLIC SERVICE ON A SINGLE COMPANY BASIS OR ON AN XCEL**
3 **ENERGY SYSTEM-WIDE BASIS?**

4 A. Although we implement some projects specific to individual operating
5 companies, we achieve efficiencies of scale by performing most of our
6 activities on a system-wide basis. Accordingly, many of the Business
7 Systems projects are planned and budgeted at the XES level, allocated or
8 assigned to the appropriate operating companies, and implemented
9 throughout the different operating companies. When certain projects, such as
10 the Public Service Microwave Refresh Project described later in my
11 testimony, are developed and implemented solely for Public Service or other
12 individual operating companies, the costs are directly assigned to that utility.

13 **Q. HOW DO THE SYSTEM-WIDE CAPITAL PROJECTS IMPLEMENTED BY**
14 **BUSINESS SYSTEMS AFFECT PUBLIC SERVICE?**

15 A. Ms. Janet Schmidt-Petree explains the Company's cost allocation and
16 assignment process for appropriately allocating Business Systems' costs to
17 the Public Service electric utility.

18 **B.** **Bu**
19
20 **usiness Systems Budget Development and Management**

21 **Q. PLEASE DESCRIBE THE PROCESS BUSINESS SYSTEMS USES TO**
22 **PREPARE ITS CAPITAL BUDGETS.**

23 A. Business Systems uses a methodical approach called the IT Governance
24 process to evaluate any proposed Business Systems investment. IT

1 Governance is Business Systems' budget development, project prioritization,
2 and project oversight process, which helps to establish budgets that are
3 reasonable, and to manage our capital expenditures accordingly. These
4 budget processes help ensure our Test Year budgets are reasonably
5 reflective of the projects we will place in service during the Test Year.

6 **Q. HOW DOES THE IT GOVERNANCE PROCESS WORK?**

7 A. IT Governance uses the "Governance Gates Process" to oversee IT projects
8 as they move from project inception towards in-service, thereby ensuring that
9 projects comply with relevant IT portfolio and project management
10 requirements. The IT Governance Gates Process consists of the following
11 steps supporting a comprehensive and robust capital budget:

- 12 • Approval to Initiate – The project idea phase of development, with the
13 purpose of determining whether a project is sound, viable, and worthy
14 of funding, support, and inclusion in the Company's IT portfolio.
- 15 • Approval to Plan – The formal review process to obtain approval of a
16 proposed project from the IT Governance Board that the scope,
17 budget, and schedule are adequately documented and that the project
18 management strategy is appropriate.
- 19 • Approval to Proceed – Final approval before production begins to
20 ensure that the proposed design meets the identified business needs
21 and that any technical problems are resolved.
- 22 • Approval to Implement – A formal inspection conducted by the IT
23 Technical Review Board to determine whether the technology asset is

1 ready to be placed in service. The business unit requesting the asset
2 must also approve the project and confirm that it meets their
3 requirements.

4 **Q. WHO COMPRISES THE IT GOVERNANCE BOARD?**

5 A. The IT Governance Board is comprised of director level personnel from
6 various areas of Business Systems. The board includes: myself, our Senior
7 Director of IT Account Management, Senior Director of IT Governance and
8 Portfolio Management, Director of Enterprise Architecture, Director of IT
9 Security and Risk Management, Director of Infrastructure, and Senior Director
10 of Enterprise Applications.

11 **Q. DOES BUSINESS SYSTEMS TAKE STEPS TO MONITOR PROJECT**
12 **VARIANCES BETWEEN ACTUAL EXPENDITURES AND BUDGET?**

13 A. Yes. Project expenditures are monitored on a monthly basis. Any deviations
14 are evaluated and variance explanations prepared. In addition, action plans
15 are developed to mitigate variations in actual to budgeted expenditures.
16 These plans may either reduce or delay other expenditures to support the
17 overall authorized budget. If authorized budget adjustments are required,
18 they are identified and approved at an appropriate level of management. I
19 note that, as described by Company witness Mr. Gregory Robinson, Business
20 Systems is required to manage to its overall Finance Council- and Board-
21 approved capital budget.

1 **C. Business Systems Test Year Capital Additions**

2 **Q. WHAT TYPES OF COSTS ARE INCLUDED IN THE BUSINESS SYSTEMS**
3 **CAPITAL ADDITIONS FOR THE TEST YEAR?**

4 A. The four primary categories of Business Systems capital additions are: (i)
5 replacing aging technology; (ii) addressing cyber security threats and meeting
6 compliance requirements; (iii) increasing efficiency; and, (iv) other capital
7 additions. To elaborate on each:

8 • *Aging Technology:* We seek to maximize our investments by maintaining
9 our systems solely at the level necessary to meet business area and
10 organizational needs. This may mean that we do not perform upgrades at
11 the same pace as recommended by the software developer, for example.
12 There comes a point, however, when the business or compliance needs
13 increase, or the risk of this approach outweighs its benefits, and we must
14 upgrade or replace an older system.

15 • *Cyber Security:* Cyber security investments support the availability,
16 integrity, and confidentiality of our information systems, and help ensure
17 that we meet our legal and regulatory obligations and risk management
18 objectives. These investments provide prevention, detection, containment,
19 and corrective services to protect the company from security incidents,
20 and assist in the recovery from any adverse events.

21 • *Increase Efficiencies:* Investments that leverage technology to increase
22 productivity fall into the Increase Efficiencies category. Examples of the
23 types of projects that fall into this category include increasing our data

capacity to facilitate or keep pace with increased technology usage, and enabling online account management capabilities for customers.

- *Other*: This category relates to projects that are typically in the early stages of initiation. The largest portion is the Business Systems' Emergent Demand Account, which is used to fund important and unexpected projects or changes in scope of previously-planned projects. This category also includes smaller projects (under \$1 million) that are still in the initiation phase and have not yet been assigned individual parent workorders.

Q. PLEASE PROVIDE THE 2014 AND 2015 DOLLAR AMOUNTS OF CAPITAL ADDITIONS FOR EACH OF THESE CATEGORIES.

A. Table 1 provides a summary of the major categories that comprise the Business Systems capital investment plan for 2014 and 2015:

Table 1
Business Systems Capital Additions
Public Service (Total Company)
(Dollars in Millions)

YEAR	2014	2015
Aging Technology	\$46.1	\$46.4
Cyber Security	\$5.3	\$4.4
Increase Efficiencies	\$27.3	\$24.1
Other	\$0.9	\$6.3
Totals	\$79.6	\$81.2

1 Attachment No. DCH-1 provides more detail regarding the capital
2 additions for Business Systems for 2014 and 2015.

3 **Q. PLEASE DESCRIBE THE INFORMATION CONTAINED IN ATTACHMENT**
4 **NO. DCH-1.**

5 A. The columns in this spreadsheet provide the following information:

Column A	Work Order Number	The parent project number used to denote the project.
Column B	Description	A brief description of the project from our budget system.
Column C	Estimated In-Service Date	The date the project is expected to be placed into service.
Columns D and E	Activity Years 2014 and 2015	The annual amount budgeted to be placed into service for each respective year.
Column F	Project Category	The category of project for the particular capital addition workorder.
Column G	Project Name	The project name referenced in testimony.

6 **Q. IS PUBLIC SERVICE REQUESTING TO INCLUDE CAPITAL ADDITIONS**
7 **FOR BUSINESS SYSTEMS IN RATE BASE?**

8 A. Yes. Company witness Ms. Lisa Perkett utilizes the capital additions I
9 describe for 2014 and 2015 to develop the plant-related roll forward that Ms.
10 Blair uses to calculate the 13-month average plant in-service for the Test
11 Year.

1 **Q. IN COLUMN C OF ATTACHMENT NO. DCH-1, ESTIMATED IN-SERVICE**
2 **DATE, THERE ARE A NUMBER OF WORKORDERS WITH AN IN-**
3 **SERVICE DATE OF “12/31/2021.” WHY ARE THESE PROJECTS**
4 **INCLUDED IN THIS ATTACHMENT?**

5 A. Some of the projects listed with in-service dates of December 31, 2021
6 represent ongoing routine projects that occur each year. Routine asset
7 refresh projects are discussed in more detail below in the Aging Technology
8 section of my testimony. To ensure that these workorders are not closed
9 inadvertently, we specify an arbitrary future date, in this case December 31,
10 2021.

11 **Q. ARE THERE OTHER PROJECTS THAT ALSO UTILIZE A “12/31/2021” IN-**
12 **SERVICE DATE?**

13 A. Yes. We also use some workorders – which comprise the "Other" category in
14 Table 1 – to capture smaller planned projects (under \$1 million) for which no
15 individual parent workorder has yet been assigned, as well as our Emergent
16 Demand account. I discuss this category of capital additions later in my
17 testimony.

18 **Q. DOES THE PROJECTED BUSINESS SYSTEMS’ TEST YEAR CAPITAL**
19 **BUDGET REPRESENT AN INCREASE OVER PRIOR YEARS?**

20 A. Yes. During the past several years, Business Systems has been in a period
21 of moderate capital investments. During this time, we have not incurred
22 significant costs to update or replace our existing IT systems. Instead, we
23 have focused on making moderate investments to maintain the reliability of

1 our current systems and tried to harvest the maximum value of these existing
2 systems. These efforts have allowed us to delay significant investment for
3 the replacement of various systems.

4 However, due to the age of our IT infrastructure and systems, and new
5 business and regulatory requirements, we have entered a period when we
6 must replace and upgrade aging and no longer supported IT systems. As a
7 result, we initiated a considerable increase in our capital expenditures for
8 Business Systems starting in 2012, as we began to make plans and start
9 development for expected new and necessary capital additions.

10 **D. Capital Project Categories**

11 **Q. CAN YOU PROVIDE MORE INFORMATION ABOUT THE CATEGORIES**
12 **OF COSTS DRIVING THE BUSINESS SYSTEMS CAPITAL ADDITIONS**
13 **BUDGET?**

14 A. Yes. As I discussed earlier in my testimony, the Business Systems capital
15 additions are intended to address requirements arising from (1) Aging
16 Systems, through investments in refreshing our critical infrastructure; (2)
17 Cyber Security, through investments to deter new and increasingly complex
18 threats; and (3) Increasing Efficiencies, through investments in systems that
19 allow our employees to work more productively.

20 I understand that the need for Business Systems investments within a
21 utility company may not be as readily understandable as the need for
22 investments in poles, wires, substations, and the like. I therefore describe the
23 types of investments related to these categories below. To further

1 underscore the importance of these Business Systems investments on behalf
2 of Public Service customers, I also describe the key capital projects within
3 each category.

4 **1. Aging Technology**

5 **Q. WHY DOES BUSINESS SYSTEMS REPLACE AGING TECHNOLOGY?**

6 A. While IT assets are no different than other assets in that they are subject to
7 aging, obsolescence, increasing maintenance costs, IT assets are unique in
8 that technology changes quickly, older IT assets may not be equipped with
9 the most current data security software and thus are more vulnerable to
10 emerging security threats, and vendors may not continue to support older
11 technologies. As these assets age and vendor support becomes less
12 available, it may be difficult to find replacement parts or troubleshoot software
13 errors. These risks must be balanced with the costs and benefits of replacing
14 aging technologies.

15 As such, despite our attempts to utilize Business Systems assets for
16 as long as reasonably possible, these assets will reach a point where they are
17 no longer adequate to serve the needs for which they are intended. As noted
18 above, the largest Business Systems projects in the Test Year are primarily
19 serving Public Service's need to replace aging technologies.

20 **Q. WHAT ARE SOME EXAMPLES OF PROJECTS THAT WILL REPLACE**
21 **AGING TECHNOLOGY?**

22 A. Replacing aging technology comprises approximately \$92.5 million in capital
23 additions or 58 percent of the forecasted capital additions to be placed in

1 service in 2014 and 2015. Routine refresh projects account for \$19.2 million
2 in capital additions (12 percent) of the \$92.5 million including planned and
3 unplanned year-over-year personal computer, network, and server
4 replacements. We have budgeted approximately \$11 million in 2014 and \$8
5 million in 2015 in capital additions for these routine refresh projects.

6 We also plan for non-routine refresh projects. The Public Service
7 Microwave Refresh Project (2014) budgeted as a capital addition of \$6.9
8 million, the General Ledger Replacement Project (2015) budgeted as a
9 capital addition of \$20.6 million, and Dynamic Energy Management System
10 (“EMS”) Environment Phase 2 (2015) budgeted as a capital addition of \$9.8
11 million are examples of specific refresh projects that will replace aging
12 technologies. The remaining \$73.3 million of the Aging Technology capital
13 additions for 2014 and 2015 pertain to these non-routine projects.

14 ***a. Routine Refresh Projects***

15 **Q. WHAT ARE ROUTINE REFRESH PROJECTS?**

16 A. Like any asset, the technological infrastructure managed by Business
17 Systems must be refreshed due to age or failure. Given the breadth and
18 depth of the different equipment we utilize and manage, we refresh smaller
19 components of our technology infrastructure on regular cycles. We annually
20 budget for these replacements as routine refresh projects.

21 These projects generally fall into one of two categories: “planned” and
22 “unplanned” refresh projects. “Planned” refresh projects are those projects
23 that involve replacing aging equipment based on a pre-determined rolling life-

1 cycle or annual updates to company software or hardware to meet expected
2 annual growth in demand. “Unplanned” refresh projects are those projects
3 that replace equipment that fails or is unable to meet our immediate needs.
4 These examples fall under the “Aging Technology” category of projects.

5 **Q. CAN YOU PROVIDE AN EXAMPLE OF A “PLANNED” REFRESH**
6 **PROJECT?**

7 A. An example of this type of project is our Annual Planned PC Refresh project.
8 Companies within the Xcel Energy system, including Public Service, use a
9 “rolling PC Lifecycle refresh” approach, which upgrades approximately 20
10 percent of the desktop computing devices annually based on a first in-first out
11 basis. The average lifespan of a desktop computing device is five years.
12 This lifecycle program was established in 2007, and utilization of the process
13 ensures that the personal computers maintain their functionality and are
14 compatible with existing software and other systems.

15 **Q. IS THERE ALSO A CORRESPONDING “UNPLANNED” PC REFRESH**
16 **PROJECT?**

17 A. Yes. This project allows for the replacement of personal computers that will
18 simply fail each year or for increases in demand.

19 **Q. CAN YOU PROVIDE ANOTHER EXAMPLE OF A PLANNED REFRESH**
20 **PROJECT?**

21 A. Another example is the Annual Data Storage Project which is needed to
22 address incremental growth needs for the storage of digital data as well as to
23 address end of life data storage infrastructure. Our storage infrastructure

1 maintains digital data across high-speed local area network connections as
2 well as between remote locations over wide area networks. We determine
3 annual storage upgrade budgets based on a combination of historical year-
4 to-year growth trends of data and predictable growth based on expansion of
5 our systems. Table 2 below shows the incremental growth in the company's
6 data storage needs since 2010.

Table 2
Data Storage Capacity – Xcel Energy

YEAR	2010	2011	2012	2013	2014
Data Storage Capacity	0.77 PB*	1.00 PB	1.20 PB	1.60 PB	1.85 PB

*PB=Petabytes, which equals 1,000 Terabytes, which equals 1,048,576 gigabytes. 1.3 petabytes is the same as 70 billion pages of text.

7 Likewise, the Annual Network Refresh provides for the planned
8 replacement of components and devices to enable data and resource
9 communications that ensure safe and reliable operations. Typical devices
10 include phones, radios, routers, microwave communication equipment,
11 cabling, and fiber equipment.

12 ***b. Specific Refresh Projects***

13 **Q. WHAT ARE SPECIFIC REFRESH PROJECTS?**

14 A. Unlike routine refresh projects, which generally address smaller capital
15 replacements on a regular cycle or which are routinely needed, we also must
16 manage larger technology replacements for equipment that is nearing the end
17 of its useful life. Specific refresh projects are often managed over a longer
18 term, reoccur less frequently, and are significantly more complex than routine
19 refresh projects.

1 As I discussed earlier, the main specific refresh projects we intend to
2 implement during 2014 and 2015 are the Public Service Microwave Refresh
3 Project (2014), the General Ledger Replacement Project (2015), and
4 Dynamic EMS Environment Phase 2 (2015).

5 **Q. WHAT IS THE PUBLIC SERVICE MICROWAVE REFRESH PROJECT?**

6 A. This project replaces and upgrades aging microwave communication
7 equipment used by Public Service. The existing equipment is no longer
8 supported by the vendor and replacement parts are difficult to acquire. Also,
9 the age of the microwave system in the Public Service region has caused
10 reduced reliability of these systems leading to an increase in outages and
11 maintenance which has placed the EMS and SCADA circuits that run over the
12 aging microwave system at risk of failure. In addition to improving telecom
13 reliability and relay and telemeter data collection, this upgrade also ensures
14 compliance with North American Electric Reliability Corporation ("NERC")
15 Standard EOP-008. This project is planned to be in service in 2014 and
16 budgeted as a capital addition of \$6.9 million.

17 **Q. WHAT IS THE GENERAL LEDGER REPLACEMENT PROJECT?**

18 A. This project will replace the company's accounting environment, which
19 includes the general ledger as well as supporting functions related to the sub-
20 ledger, project tracking, and expenditure allocation. Our current JD Edwards
21 general ledger system is reaching the end of its useful life. Improvements we
22 expect to achieve from this new system include a simplified chart of accounts
23 structure, better analysis capabilities between accounting results and

1 supporting business drivers, better traceability from operations and Generally
2 Accepted Accounting Principles (“GAAP”) accounting to individual Federal
3 Energy regulatory Commission (“FERC”) accounts, and improved process
4 and workflow functionality to reduce accounting support requirements. This
5 project is planned to be in service in 2015 and is budgeted as a capital
6 addition of \$20.6 million.

7 **Q. WHAT IS THE DYNAMIC ENERGY MANAGEMENT SYSTEM, PHASE 2**
8 **PROJECT?**

9 A. The “Dynamic EMS” project is a five-year effort to replace our EMS, which
10 was implemented 15 years ago and is well past its useful life. EMS is a
11 critical cyber asset that is used for the monitoring and management of the
12 Bulk Electric System by Xcel Energy’s Transmission and Distribution
13 Operations function. The EMS interfaces with field devices that collect
14 information about the health of the bulk electric system. Real time two-way
15 communications provides Transmission and Distribution Operations the ability
16 to remotely control the flow of electricity during outage and maintenance
17 periods. This is a key project to allow us to comply with critical infrastructure
18 protection (“NERC CIP requirements”). The project began in 2011, and will
19 conclude with the deployment of new hardware and software to all operating
20 companies in 2015 and is budgeted as a capital addition of \$9.8 million.

1 Q. PLEASE BRIEFLY DESCRIBE OTHER PROJECTS THAT WILL BE
2 PLACED IN SERVICE DURING THE TEST YEAR TO REPLACE AGING
3 TECHNOLOGY.

4 A. Below are descriptions of other projects with capital additions over \$2 million
5 that that will be placed in-service during the Test Year to replace aging
6 technology:

7 • *Mainframe Modernization*: Several of Xcel Energy's critical business
8 applications operate on a mainframe computer platform. The existing
9 platform and supporting peripheral devices (such as physical tape used for
10 backups) are aging and increasingly expensive to maintain. This project
11 will replace the current hardware with new equipment. The benefits of a
12 new computing platform include better performance and improved backup
13 and recovery times. This project represents \$4.1 million in capital
14 additions budgeted to be placed in-service in 2014.

15 • *Windows 7 Upgrade*: Xcel Energy is currently running Microsoft Windows
16 XP on all computing workstations. Microsoft XP was initially released in
17 2001, and Microsoft support for this operating system expired in April
18 2014. It is necessary to upgrade to a more current operating system to
19 ensure company assets are protected with up-to-date security measures
20 supported by Microsoft. Failure to upgrade could expose the company's
21 computing environment to potential cyber security risks and vulnerabilities.
22 This project represents \$3.9 million in capital additions budgeted to be
23 placed in-service in 2014.

- 1 • *Budget Systems Replacement Project:* The existing budget and forecast
2 tools have reached their end of life both from a technology platform as well
3 as meeting the needs of the Finance Business Area. Overall, little
4 investment has been made in these budgeting tools since the original
5 implementation in 2003. The primary scope of the project includes
6 replacing the end-to-end budget and forecasting software used company-
7 wide to manage capital and operations and maintenance costs. This
8 project will also replace the existing software that is used to allocate costs
9 to Xcel Energy's operating companies. This project represents \$2.9
10 million in capital additions budgeted to be placed in-service in 2014.
- 11 • *Remedy/Mercury Migration Project:* The Mercury and Remedy systems
12 used to manage all IT demand and fulfillment activity at Xcel Energy are
13 obsolete products that are no longer supported. The aging of these
14 systems increases business risk as both support critical IT operational
15 capabilities and business processes. The project will replace these aging
16 systems to minimize risk. This project represents \$2.8 million in capital
17 additions budgeted to be placed in-service in 2014.
- 18 • *Teradata Hardware Project:* Teradata is a vendor that provides software
19 and hardware to manage data. This project includes the purchase of new
20 Teradata hardware which will allow for expanded disk storage and
21 enhanced performance capabilities within the company's existing
22 enterprise data warehouse used for enterprise reporting and analytics.

1 This project represents \$2.5 million in capital additions budgeted to be
2 placed in-service in 2015.

3 • *Site Infrastructure Improvements:* This is a multi-year project that will
4 upgrade existing IT hardware at generation and service center locations.
5 This includes core network routing and switching devices and data file
6 servers that are no longer supported by the vendor. This project
7 represents \$2.6 million in capital additions budgeted to be completely
8 placed in-service in 2015.

9 **2. Cyber Security**

10 **Q. WHY ARE INVESTMENTS IN CYBER SECURITY NECESSARY?**

11 A. As the number of cyber threats, attacks, and regulatory requirements
12 continue to increase, it is important for Xcel Energy to invest in cyber security
13 capabilities to ensure that we can protect our data and information systems
14 and comply with regulatory requirements. I note, however, that to protect the
15 business, investments in cyber security cannot be limited to those required by
16 current regulations; rather, regulatory requirements provide a mere baseline
17 for our cyber security efforts. For example, many companies that have had
18 their data hacked in recent years were compliant with current requirements.

19 **Q. CAN YOU PROVIDE AN EXAMPLE OF KEY CAPITAL PROJECTS THAT**
20 **WILL MEET THE CYBER SECURITY OBJECTIVE?**

21 A. As shown above, addressing cyber security issues comprises approximately
22 \$4.4 million of the forecasted capital additions included in the Test Year. The

1 Corporate Firewall Enhancement project is one example that will serve to
2 address the company's cyber security needs.

3 **Q. WHAT IS THE CORPORATE FIREWALL ENHANCEMENT PROJECT?**

4 A. This project will architect, design and implement updated firewalls used to
5 guard against cyber attacks and system breaches through a centralized and
6 fully redundant management environment. The project will also develop and
7 implement standard and consistent firewall monitoring practices including
8 actions to be performed on alerts and develop and implement process
9 improvements to rule, object, and policy management to ensure the
10 environment stays current and meets security and operational needs. This
11 budgeted capital addition of \$1.9 million is planned to be placed in service in
12 2015.

13 **3. *Improve Efficiencies***

14 **Q. WHY DOES BUSINESS SYSTEMS INVEST IN CAPITAL ADDITIONS TO**
15 **IMPROVE EFFICIENCY?**

16 A. Investments in technology can improve efficiency through several means.
17 For example, streamlining processes through automation leads to a reduction
18 in manual processes and can improve the quality of the information. They
19 can also improve productivity by allowing us to better use and manage
20 information. In other words, these types of projects provide technology
21 support to improve our ability to do our work accurately and efficiently.

1 **Q. CAN YOU PROVIDE EXAMPLES OF PROJECTS THAT WILL SERVE TO**
2 **IMPROVE EFFICIENCIES THROUGHOUT THE COMPANY?**

3 A. Approximately \$24.1 million in capital additions will be placed in service
4 during the Test Year to improve efficiencies through the use of technology.
5 The Regulatory Information System (“RIS”) Project and the Risk and
6 Compliance Management Project are examples of improving efficiencies.

7 **Q. WHAT IS THE RIS PROJECT?**

8 A. The RIS Project will define, implement, and document the detailed steps and
9 quality assurance controls required to develop a cost of service model and
10 riders. This system will help ensure these elements of regulatory filings are
11 completed using automated, standardized and best practices across all Xcel
12 Energy operating companies instead of the current non-standardized, manual
13 processes. In addition, the RIS system is expected to enable enhanced
14 auditing, and facilitate creation of improved information related to customer
15 bill impacts, rate options, municipal revenue impacts, and rate mitigation
16 analysis. Finally, the system will enable the integration of regulatory recovery
17 modeling with rate case submission needs in a single tool, from a single
18 vendor, with a single upgrade path. This capital addition of \$5.1 million is
19 budgeted to be placed in service in 2015.

20 **Q. WHAT IS THE RISK AND COMPLIANCE MANAGEMENT PROJECT?**

21 A. This project installs new software that enables company compliance with
22 NERC CIP requirements, and also enables continuous security and
23 compliance monitoring capabilities for NERC and other regulatory

1 requirements. Ensuring compliance with these NERC CIP standards is
2 important because fines for compliance violations can be up to \$1 million per
3 day under the Federal Power Act. This new software also enables
4 automation of compliance tasks that would otherwise need to be completed
5 manually. This project represents \$2.9 million in capital additions budgeted to
6 be placed in-service in 2015.

7 **Q. CAN YOU PROVIDE EXAMPLES OF OTHER CAPITAL PROJECTS THAT**
8 **ARE INCLUDED IN THE IMPROVE EFFICIENCIES CATEGORY?**

9 A. The following projects represent those capital additions over \$2 million which
10 that will be placed in-service during the Test Year to improve efficiencies:

- 11 • *Service Suite 10*: This project provides the Xcel Energy Distribution
12 business unit with a single mobile Work Force Management System by
13 upgrading the existing application and retiring the unsupported Field
14 Service Suite application. This includes implementation of high-availability
15 servers to improve reliability, which is essential for managing outages,
16 routine work such as turn-ons and street light maintenance, as well as
17 longer cycle work such as new construction. This project represents \$4.7
18 million in capital additions budgeted to be placed in-service in 2014.
- 19 • *Commodity Management System ("CMS") (Phase IV)*: This project is the
20 fourth phase in a CMS suite of information technology projects. For the
21 company, the CMS system plays a role in managing transactions that are
22 entered into on behalf of retail customers and with wholesale trading
23 counterparties. The current Energy Trading and Risk Management

software is no longer supported, and therefore is being replaced. The inability to participate in power markets, driven by a failure in the current software, would result in increased costs to customers and a sub-optimal allocation of generation and merchant transmission assets. This new solution provides increased ability to deal with changes in energy markets, regulatory requirements, and compliance regulations as well as minimizing risk to retail customers. This project represents \$3.5 million in capital additions budgeted to be placed in-service in 2015.

- *Dodd-Frank*: The primary objective of this project is to ensure that Xcel Energy is compliant with the Dodd-Frank legislation passed by the United States Congress to regulate the financial industry. While Xcel Energy is not a financial company, it does have commodity trading operations that are subject to the rules and regulations of Dodd-Frank. This project will assess the impacts of the legislation on Xcel Energy and implement a solution that will ensure compliance. This project represents \$3.8 million in capital additions budgeted to be placed in-service in 2014.

- *Real Property Asset Management*: This project will provide the Real Estate Services area an automated system to manage approximately 6,000 properties across the Xcel Energy real estate portfolio. The new system will replace the current manual process. This project represents \$4.4 million in capital additions budgeted to be placed in-service in 2014.

- *Advanced Distribution Management System ("ADMS")*: ADMS is a comprehensive, real-time decision support and network management

1 solution to monitor and control the electric distribution network. This
2 project represents \$3.0 million in capital additions budgeted to be placed
3 in-service in 2015.

- 4 • *Enterprise Environmental Services Solution*: Xcel Energy has been
5 accepted as an early applicant to 1605b and climate registry regulatory
6 reporting. This reporting will require all greenhouse gases to be tracked by
7 EmissionsTracker (“ET”). To enable this additional reporting, the existing
8 software must be replaced with the ET solution. This project represents
9 \$3.1 million in capital additions budgeted to be placed in-service in 2014.

- 10 • *Geographic Information System Transmission (“GIST”) Phase III*: This
11 project extends functionality previously developed in the GIST II project for
12 transmission substations, and is a regulatory-driven project that is required
13 to support the company’s response to the January 18, 2011 NERC
14 Mandate to validate the Bulk Electric System (“BES”) transmission line
15 facility ratings based on actual field conditions. The project will create a
16 system that combines the information from Light Detection and Ranging
17 (“LIDAR”) technology and the GIS to electronically verify that transmission
18 line clearances are NERC compliant. This project represents \$2.8 million
19 in capital additions budgeted to be placed in-service in 2015.

- 20 • *MyAccount Business Usage and Customer Care Update*: The MyAccount
21 project will provide usage data to all residential and business customers.
22 Complex rate schedules have not yet been implemented on MyAccount;
23 therefore, customers on more complex rate schedules are unable to view

1 their usage on the system. These changes are expected to provide a
2 better customer experience and increase MyAccount traffic and eBill and
3 ePay enrollments. This project represents \$2.5 million in capital additions
4 budgeted to be placed in-service in 2014.

5 **4. "Other"**

6
7 **Q. What are the "Other" capital additions included in the Business**
8 **Systems budget?**

9 A. The "Other" category of our budget is utilized to capture smaller planned
10 projects (under \$1 million) for which no individual parent workorder has yet
11 been assigned because the projects have not yet been initiated. Business
12 Systems combines such smaller projects of similar types into larger parent
13 workorders for budgeting purposes. These larger parent workorders are
14 assigned a general December 31, 2021 in-service date, since the smaller
15 projects may have varying individual in-service dates, which are reflected in
16 the capital roll forward set forth in Attachment No. DCH-2. Once these small
17 projects move into the planning phase, they are assigned individual parent
18 workorders with specific in service dates. Attachment No. DCH-2 provides an
19 initial breakdown of the smaller projects that are included in these larger
20 parent workorders.

21 **Q. ARE THERE ANY ADDITIONAL PROJECTS IN THE "OTHER"**
22 **CATEGORY?**

23 A. Yes. Among the "Other" workorders identified above, the largest is Business
24 Systems' Emergent Demand Account, which accounts for \$1 million in 2014

1 and \$5.3 million in 2015. The Emergent Demand Account is an account
2 created to ensure we are able to meet the aging technology, cyber security,
3 and efficiency needs that inevitably emerge in each year. Given the ever-
4 changing nature of technology and emerging risks, it is frequently not possible
5 to specifically identify all necessary projects that may arise or become critical
6 in a given year. For example, it is not always possible to predict what kind of
7 security risk might be created by hackers as technology continues to develop.
8 In other situations, as we developed a project with a particular scope we
9 determined that additional benefits or long-term cost savings could be
10 captured by expanding the scope of the project. Previously, we had to delay
11 or cancel previously-planned projects or absorb unplanned work and costs
12 when a new technology or critical need was identified.

13 **Q. HOW IS THE EMERGENT DEMAND ACCOUNT CALCULATED AND**
14 **MANAGED?**

15 A. Historical scope change and new demand trends are analyzed to determine
16 the appropriate amount of budgeted capital allocated for the Emergent
17 Demand Account. Generally, Business Systems analyzes data from the past
18 three years and uses that analysis to develop the budget amount for this
19 account.

20 All requests for funds from the Emergent Demand Account must be
21 approved by the IT Governance Board, which evaluates each request to
22 determine whether it is reasonable and necessary. This process provides
23 another layer of oversight for existing projects as they must receive additional

1 approval before being allocated funds from the Emergent Demand Account.
2 As new forecasts are developed, funds from the Emergent Demand Account
3 are allocated to the new or existing parent workorders for the specific projects
4 that are approved to receive these funds.

5 **Q. ARE THE BUDGETED COSTS FOR THE BUSINESS SYSTEMS CAPITAL**
6 **PROJECTS THAT WILL GO INTO SERVICE IN 2014 AND 2015**
7 **REASONABLY REFLECTIVE OF WHAT YOU EXPECT TO BECOME**
8 **PART OF THE RETAIL RATE BASE?**

9 A. Yes.

10

1 IV. BUSINESS SYSTEMS OPERATIONS AND MAINTENANCE

2 **Q. WHAT ARE THE TYPES OF COSTS THAT BUSINESS SYSTEMS INCURS**
3 **FOR O&M?**

4 A. I described above the various work that is performed by Business Systems.
5 To perform this work, Business Systems generally incurs O&M costs in nine
6 categories:

- 7 • *Network Services* – costs related to the maintenance of existing
8 circuits, phones, microwave and radio systems, and other IT
9 communication assets. Network activities provide operations and
10 management of the company's internal and external data transmission
11 requirements.
- 12 • *Software Licenses and Maintenance* – includes costs for maintenance
13 payments to software vendors pursuant to license agreements
14 associated with various software applications and desktop tools.
15 These fees must be paid to secure vendor support for troubleshooting,
16 enabling access to vendor patches, fixes, and version upgrades.
- 17 • *Application Development and Maintenance* – costs associated with the
18 development, enhancement, maintenance, and consultation on new or
19 existing IT systems.
- 20 • *Labor* – costs associated with all employees in the Business Systems
21 department.

- 1 • *Distributed Systems Services* – costs related to maintenance
2 agreements on servers and data storage, personal computer (“PC”)
3 maintenance and help desk services for computer users.
- 4 • *Contract Labor/Consulting* – consists of fees and expenses for
5 consultants or knowledge base experts that are not employees of the
6 company.
- 7 • *Mainframe* – costs associated with maintaining the centralized
8 applications running on the mainframe computer, which serve multiple
9 business needs such as batch processing for customer billing and
10 meter reading.
- 11 • *Other* – includes employee expenses, outsourcing services not
12 included in the other categories, shared asset allocation, small
13 purchases for administrative materials, fleet expenses, and addressing
14 company anti-virus needs.

15 **Q. WHAT WERE BUSINESS SYSTEMS’ ACTUAL 2013 O&M COSTS?**

16 A. Our actual O&M expenditures for 2013 totaled \$38,328,668. Table 3 breaks
17 down the amount of overall O&M costs by the categories I discussed above.
18 Attachment No. DCH-2 provides an accounting of these expenditures by
19 Object and FERC account.

Table 3

Cost Category	\$ Millions
Network Services	\$10.2
Software Licenses and Maintenance	\$9.2
Application Development and Maintenance	\$7.4
Labor	\$4.5
Distributed Systems Services	\$4.6
Contract Labor/Consulting	\$3.7
Mainframe	\$0.5
Other	\$(1.8)
Total	\$38.3

1 **Q. ARE THE \$38.3 MILLION IN 2013 O&M COSTS FOR BUSINESS**
2 **SYSTEMS YOU DESCRIBE ABOVE REFLECTED IN THE 2015 COST OF**
3 **SERVICE PRESENTED BY MS. BLAIR?**

4 **A.** Yes, with one adjustment. As discussed by Ms. Alice Jackson, Public Service
5 is proposing to set rates based on our historic 2013 O&M costs, with limited
6 adjustments for known and anticipated changes between 2013 and the Test
7 Year. Company witness Ms. Lowenthal supports the increase in labor
8 expenses due to anticipated merit and base salary increases for non-
9 bargaining and bargaining employees through December 31, 2015 and Ms.
10 Blair quantifies the increase in total labor expenses included in the Test Year
11 cost of service. As it relates to the Business Systems Business Area, our

1 2013 historic O&M costs otherwise provides a reasonable level of O&M for
2 the Test Year.

3 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

4 **A. Yes, it does.**

Attachment A
Statement of Qualifications

David C. Harkness

David C. Harkness is the Chief Information Officer and Vice President, for Xcel Energy Services Inc. David is responsible for the XES Business System organization, which provides Information Technology (IT) services to XES and its operating company affiliates, including Public Service Company of Colorado. David is also responsible for the corporate Business Continuity function and IT disaster recovery.

David has 28 years of experience in the field of IT, with 24 of those years in a management role. He joined Xcel Energy in November 2009, following six years at PNM Resources at Albuquerque, New Mexico, where he 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, David was also appointed by Governor Richardson to New Mexico's Information Technology Commission, where he helped establish and direct the IT Strategy for the State of New Mexico. Prior to that experience, David held several IT Leadership roles for McLeod USA, MCI, and Rockwell International, where he began his career in 1986.

David graduated from the University of Iowa where he earned a Bachelor of Science degree in Computer Science and a Bachelor of Arts degree in Applied Mathematics.

Budget Org ID	Business Systems
Func Class Descr	(All)

Project ID	Project NBR Desc	Est. ISD	Activity Year		Project Category	Project Name
			2014	2015		
11602579	Commodity Mgmt Sys Ph 3	4/30/2013	416	-	Increase Efficiencies	Commodity Management System (CMS) release 3 of 3
11683130	Kofax SW Upgrade PSCO	4/30/2013	(1,823)	-	Aging Technology	Kofax Upgrade
11704765	Call Reporting New Version PSC	7/31/2013	222	-	Aging Technology	IVR Platform Upgrade
11742452	Purch Servers Service Suite PS	10/15/2013	(15,488)	-	Aging Technology	Service Suite 10
11709054	Purch Fleet Network GPS HW PSCO	10/31/2013	2,061	-	Increase Efficiencies	Fleet Telematics
11747137	Purch Server GIS LOC PSCO	10/31/2013	1,000	-	Increase Efficiencies	GIST III
11551374	Supply Chain Analytics Data Ma	11/30/2013	1,290	-	Increase Efficiencies	Supply Chain Analytics
11804218	Purch Server RIS Project PSCO	12/8/2013	(572)	-	Increase Efficiencies	Regulatory Information System (RIS)
11772032	Power Source Ph2 SW PSCO	12/31/2013	1,725	-	Increase Efficiencies	PowerSource Phase 2
11717146	Purch Network HW Budget Sys PS	12/31/2013	(572)	-	Aging Technology	Budget System Upgrade or Replacement
10815980	Bill Print Redesign	12/31/2013	(1,118)	-	Increase Efficiencies	Xcel Energy Bill Format
11578738	Purch RedZone Network Appl PSC	12/31/2013	(7,632)	-	Cyber Security	RedZone
11567479	Purch Disaster Recovery HW PSC	12/31/2013	(236,303)	-	Cyber Security	Disaster Recovery Project
11873726	OSI Soft PI SW PSCO	1/2/2014	(278,069)	-	Aging Technology	OSI Soft license purchase
11727751	AIX Linux Server OS SW Upgrade PSCO	1/31/2014	(5,867)	-	Aging Technology	AIX Technology Upgrade Project
11790101	Vulnerability Mgmt Scanner SW	1/31/2014	(431,864)	-	Cyber Security	Vulnerability Management
11866280	Fuelworx New Version SW PSCO	2/28/2014	(98,477)	-	Aging Technology	Fuelworx Upgrade
11878361	Purch ARMZ Network Equip PSCO	2/28/2014	(198,453)	-	Increase Efficiencies	ARMZ Enhance Business Continuity
11909892	Ent SDLC Rational SW PSCO	2/28/2014	(224,469)	-	Increase Efficiencies	Enterprise SDLC Rational CLM Phase 1
11753880	My Account New Module PSCO	2/28/2014	(2,483,310)	-	Increase Efficiencies	MyAccount Business Usage and Customer Care updates (Release 2.3)-GP
11492005	Microwave Refresh PSCO only	2/28/2014	(6,916,650)	-	Aging Technology	PSCO Microwave Refresh
11870183	OpenText SW Upgrade PSCO	3/28/2014	(136,286)	-	Increase Efficiencies	OpenText Parallel Environment
11656506	EPH Ph3 SW PSCO	3/31/2014	7,231	-	Increase Efficiencies	EPH Phase 3 - Business Systems
11648158	Virtual Computing SW PSCO	3/31/2014	(6,521)	-	Increase Efficiencies	Virtual Computing Environment
11704506	Purch Telecom VOIP HW PSCO	3/31/2014	(16,170)	-	Aging Technology	Telecom VoIP Advancements
11847579	Purch Subnet Servers PSCO	3/31/2014	(26,436)	-	Aging Technology	2013 EMS Infrastructure Refresh
11653400	Purch Synchrophaser LOC PSCO	3/31/2014	(37,453)	-	Increase Efficiencies	MISO Synchrophasor
11862008	2013 Planned LAN/WAN elec PSCO	3/31/2014	(91,457)	-	Aging Technology	2013 Planned Network Refresh
11862998	EMS DEMS PH2-D SCADA HW PSCO	3/31/2014	(108,258)	-	Aging Technology	Dynamic EMS (DEMS) Environment Phase 2
11847591	Purch AMAG Servers PSCO	3/31/2014	(149,458)	-	Aging Technology	2013 EMS Infrastructure Refresh
11673761	Purch Vulnerability Mgmt Appl	3/31/2014	(446,797)	-	Cyber Security	Vulnerability Management
11614022	Operation Config Mgmt SW PSCO	3/31/2014	(784,064)	-	Increase Efficiencies	Operations Configuration Management
11783149	2013 Storage Refresh PSCO	3/31/2014	(1,024,994)	-	Aging Technology	2013 Storage Refresh
11810233	2013 Wireless HW PSCO	3/31/2014	(1,360,403)	-	Aging Technology	2013 Wireless Refresh
11458351	IEM EMS SW PSCO	3/31/2014	(1,821,584)	-	Increase Efficiencies	Integrated Energy Management (IEM)
11549772	ESC Environmental Compliance S	3/31/2014	(3,113,463)	-	Increase Efficiencies	Enterprise Environmental Services Solution - EHS
11661828	Dodd Frank Compliance PSCO	3/31/2014	(3,797,179)	-	Increase Efficiencies	Dodd-Frank
11879627	Purch Server RIS Project PSCO	4/30/2014	(107,077)	-	Increase Efficiencies	Regulatory Information System (RIS)
11876990	Purch Fleet Diagnostics Laptop	4/30/2014	(241,955)	-	Increase Efficiencies	Fleet Diagnostics
11786249	Business Obj New Release Ver 4	4/30/2014	(375,102)	-	Aging Technology	Business Objects 4 Upgrade
11844785	Documentum New Version SW PSCO	4/30/2014	(594,894)	-	Aging Technology	Documentum Upgrade
11798858	2013 VOIP Phone Refresh	4/30/2014	(1,080,525)	-	Aging Technology	2013 PBX Phone Upgrade
11679487	ELearning LMS New Version PSC	5/1/2014	(711,067)	-	Increase Efficiencies	Enterprise Learning
11838412	2013 VOIP Phone Refresh ELE PSCO	5/31/2014	(221,872)	-	Aging Technology	2013 PBX Phone Upgrade
11890818	Solar Data Warehouse SW PSCO	5/31/2014	(790,444)	-	Increase Efficiencies	Solar Rewards Optimization (SRO)
11619867	Budget System Upgrade SW PSCO	5/31/2014	(2,850,093)	-	Aging Technology	Budget System Upgrade or Replacement
11862032	Purch Server LOC PSCO	6/1/2014	(264,134)	-	Increase Efficiencies	Enterprise Purge Archive

Project ID	Project NBR Desc	Est. ISD	2014	2015	Project Category	Project Name
11845141	Early Case Assessment SW PSCO	6/1/2014	(485,764)	-	Increase Efficiencies	Early Case Assessment (ECA)
11873786	CRS Extend SW Part 2 PSCO	6/30/2014	(217,515)	-	Aging Technology	CRS - Extend database to handle data growth
11735634	Meridium New Version PSCO	6/30/2014	(919,983)	-	Aging Technology	Meridium - Generation Asset Reliability Upgrade
11564713	Purch Mainframe HW LOC PSCO	6/30/2014	(4,104,368)	-	Aging Technology	Mainframe Modernization
11501726	2014 Unplanned MDT Refresh	7/31/2014	(27,600)	-	Aging Technology	2014 Unplanned MDT Refresh
11942377	Data Loss Ph2 SW PSCO	7/31/2014	(193,959)	-	Cyber Security	Data Loss Prevention (DLP II) - Phase 2
11873044	Cust Care Multi Channel SW PSC	7/31/2014	(487,484)	-	Increase Efficiencies	Customer Care Multi Channel Customer Preference
11903493	XE XM Upgrade SW PSCO	7/31/2014	(672,784)	-	Increase Efficiencies	XE XM New Online Capabilities
11491871	Windows 7 OS Migration SW PSCO	7/31/2014	(3,886,713)	-	Aging Technology	Windows 7 OS Migration CORPORATE
11438204	Enterprise Purge and Archive S	8/31/2014	(964,806)	-	Increase Efficiencies	Enterprise Purge Archive
11459804	RPAM Landworks PSCO	9/30/2014	(3,211,014)	-	Increase Efficiencies	Real Property Asset Management (RPAM)
11936859	Emptoris Upgrade SW PSCO	10/31/2014	(447,633)	-	Aging Technology	Emptoris Upgrade
11718902	FocalPoint Work Mgmt SW PSCO	12/1/2014	(79,917)	-	Increase Efficiencies	Focal Point - Work Management
11599365	Service Suite 10 PSCO	12/15/2014	(4,684,275)	-	Aging Technology	Service Suite 10
11466230	RPAM Tririga PSCO	12/19/2014	(1,219,776)	-	Increase Efficiencies	Real Property Asset Management (RPAM)
11604863	ITSM Ph2 PSCO	12/26/2014	(2,752,774)	-	Aging Technology	Remedy Mercury Migration Project (ITSM Phase II)
11868773	Wind Predictor Load Balancing SW PS	12/31/2014	(93,729)	-	Increase Efficiencies	Wind Predictor System Enhancements Projects
11945289	2014 EMS Infrastructure HW PSC	12/31/2014	(148,324)	-	Aging Technology	2014 EMS Infrastructure Refresh
11802115	Purch 2014 Handheld/Mobile PSCO	12/31/2014	(238,001)	-	Aging Technology	2014 Handheld Mobile Collector Refresh
11942342	Purch CIP Compliance HW PSCO	12/31/2014	(288,000)	-	Cyber Security	CIP Compliance
11921915	EPM Ph 3.5 SW PSCO	12/31/2014	(294,996)	-	Increase Efficiencies	EPM Phase 3 - Business Systems
11812510	2014 Planned MDT PSCO	12/31/2014	(356,039)	-	Aging Technology	2014 Planned MDT Refresh
11941718	Endpoint Security SW PSCO	12/31/2014	(357,449)	-	Cyber Security	Endpoint Security
11490627	2014 Unplanned PC Refresh PSCO	12/31/2014	(363,141)	-	Aging Technology	2014 Unplanned PC Refresh
11944945	Services Virtualization SW PSCO	12/31/2014	(375,799)	-	Increase Efficiencies	Services Virtualization
11942586	Internal Network Security SW P	12/31/2014	(478,728)	-	Cyber Security	Enhanced Internal Network Security
11490645	2014 Unplanned Server Refresh PSCO	12/31/2014	(480,002)	-	Aging Technology	2014 Unplanned Server Refresh
11826255	SharePoint New Version SW PSCO	12/31/2014	(525,431)	-	Increase Efficiencies	Sharepoint 2013
11939996	Purch Data Center Core HW PSCO	12/31/2014	(595,837)	-	Aging Technology	Data Center Core Routing Switching Modernization and Streamlining
11831492	ITSA Pole Ph2 SW PSC	12/31/2014	(690,803)	-	Increase Efficiencies	ITSA Pole Phase2 - Inspect Treat and Strength Analysis for Poles
11490476	2014 IT INFS Network Refresh PSCO	12/31/2014	(711,105)	-	Aging Technology	2014 IT INFS Network Refresh
11490564	2014 Planned Server Refresh PSCO	12/31/2014	(720,000)	-	Aging Technology	2014 Planned Server Refresh
11942487	Purch Metro SCADA HW PSCO	12/31/2014	(870,000)	-	Increase Efficiencies	Metro SCADA Redundancy
11942508	Purch Network Reliability HW PSCO	12/31/2014	(870,000)	-	Aging Technology	Network Reliability Upgrades
11910011	2014 Planned PC Refresh PSCO	12/31/2014	(922,672)	-	Aging Technology	2014 Planned PC Refresh
11836281	Focal Point Network Mgmt SW P	12/31/2014	(1,085,351)	-	Increase Efficiencies	Focal Point - Network Management
11621471	Purch Xcel Corp Network HW PSC	12/31/2014	(1,106,231)	-	Aging Technology	IT Xcel Corporate Network Transformation Program
11727527	Identity and Access Mgmt SW PS	12/31/2014	(1,394,737)	-	Cyber Security	Identity & Access Management
11839734	Purch LOC Physical Div HW PSC	12/31/2014	(1,500,004)	-	Increase Efficiencies	LOC Physical Diversity - Network
11490692	2014 Storage Project PSCO	12/31/2014	(1,720,124)	-	Aging Technology	2014 Storage Project
11491023	2015 Planned Server Refresh PSC	1/31/2015	-	(480,000)	Aging Technology	2015 Planned Server Refresh
11490704	2015 Planned PC Refresh PSCO	1/31/2015	-	(1,057,669)	Aging Technology	2015 Planned PC Refresh
11836298	FocalPoint Field Force SW PSCO	2/1/2015	-	(78,290)	Increase Efficiencies	Focal Point - Field Force Management
11942054	GIS Upgrade 4.3 SW	2/28/2015	-	(1,820,416)	Aging Technology	GIS - Upgrade 4.3
11698559	CMS Phase 4 PSCO	2/28/2015	-	(3,463,512)	Increase Efficiencies	Commodity Management System - Release 3 - Physical Power, PCI & TPT Integration
11438101	Regulatory Process Standard SW	2/28/2015	-	(4,948,210)	Increase Efficiencies	Regulatory Information System (RIS)
11942436	Purch Corp Email HW PSCO	4/30/2015	-	(750,000)	Aging Technology	Corporate Email Refresh 2015
10818775	Dynamic EMS Environment Phase	4/30/2015	-	(6,603,537)	Aging Technology	Dynamic EMS (DEMS) Environment Phase 2
11888978	Sub Asset Mgmt SW PSCO	5/31/2015	-	(1,417,671)	Increase Efficiencies	Substation Asset Mgmt System (Enterprise Reliability)
11685117	GRC Compliance SW PSCO	5/31/2015	-	(2,907,455)	Increase Efficiencies	Risk & Compliance Management
11679503	Purch Network Appl Camera Upgr	6/30/2015	-	(786,664)	Cyber Security	IP Security Camera

Project ID	Project NBR Desc	Est. ISD	2014	2015	Project Category	Project Name
11584381	Purch EMS DEMS Ph2 HW PSCO	8/31/2015	-	(3,039,372)	Aging Technology	Dynamic EMS (DEMS) Environment Phase 2
11940076	Purch Smart Grid Security HW P	10/31/2015	-	(576,000)	Cyber Security	Smart Grid Security
11556091	GIST Ph3 SW PSCO	12/3/2015	-	(2,827,487)	Increase Efficiencies	GIST III
11506707	EPM Ph2 Transmission PSCO	12/7/2015	-	(728,553)	Aging Technology	Enterprise Project Management (phase II)
11942403	Purch Mobile Device HW PSCO	12/24/2015	-	(269,999)	Cyber Security	Enhanced Mobile Device Security
11940031	Purch Perimeter Security HW PS	12/28/2015	-	(449,999)	Cyber Security	Enhanced Perimeter Security
11501754	2015 Unplanned MDT Refresh	12/31/2015	-	(27,601)	Aging Technology	2015 Unplanned MDT Refresh
11836363	FocalPoint Asset Mgmt SW PSCO	12/31/2015	-	(131,264)	Increase Efficiencies	Focal Point - Asset Management
11491259	2015 EMS Infrastructure Refres	12/31/2015	-	(148,244)	Aging Technology	2015 EMS Infrastructure Refresh
11802125	Purch 2015 Handheld/Mobile PSCO	12/31/2015	-	(238,001)	Aging Technology	2015 Handheld Mobile Collector Refresh
11942570	SCCM Upgrade SW PSCO	12/31/2015	-	(245,905)	Aging Technology	SCCM Upgrade 2015
11940059	Mobile Computing Infra SW PSCO	12/31/2015	-	(296,148)	Increase Efficiencies	Mobile Computing Infrastructure
11942591	Purch Field Mobile Data HW PSCO	12/31/2015	-	(348,000)	Increase Efficiencies	Field Mobile Data (Dispatch)
11491091	2015 Unplanned PC Refresh PSCO	12/31/2015	-	(407,999)	Aging Technology	2015 Unplanned PC Refresh
11764340	2015 Planned MDT Refresh PSCO	12/31/2015	-	(432,000)	Aging Technology	2015 Planned MDT Refresh
11491148	2015 Unplanned Server Refresh PSCO	12/31/2015	-	(480,002)	Aging Technology	2015 Unplanned Server Refresh
11940035	Purch SCADA Security HW PSCO	12/31/2015	-	(522,000)	Cyber Security	Enhanced SCADA Security
11795608	EPM Ph4 Supply Chain PSCO	12/31/2015	-	(548,088)	Increase Efficiencies	Enterprise Project Management IV - Supply Chain
11944687	Ent Database Security HW PSCO	12/31/2015	-	(648,000)	Cyber Security	Database Security Project
11940004	Data Quality Tool SW PSCO	12/31/2015	-	(671,187)	Increase Efficiencies	Data Quality Tool Suite
11942600	Purch Infra Private Cloud HW PSCO	12/31/2015	-	(720,000)	Increase Efficiencies	Infrastructure Private Cloud
11874440	Integrated Talent Mgmt SW PSCO	12/31/2015	-	(761,496)	Increase Efficiencies	Integrated Talent Management (ITM)
11940055	Master Data Mgmt SW PSCO	12/31/2015	-	(825,322)	Increase Efficiencies	Master Data Management (MDM)
11942624	Purch Net Inventory HW PSCO	12/31/2015	-	(1,000,000)	Increase Efficiencies	Network Inventory and Planning Solution
11490699	2015 IT INFS Network Refresh PSCO	12/31/2015	-	(2,196,748)	Aging Technology	2015 IT INFS Network Refresh
11490694	2015 Storage Project PSCO	12/31/2015	-	(2,425,000)	Aging Technology	2015 Storage Project
11940078	Purch Teradata HW PSCO	12/31/2015	-	(2,500,000)	Aging Technology	Teradata HW Purchase
11839697	ADMS SW PSCO	12/31/2015	-	(3,034,395)	Increase Efficiencies	ADMS - Advanced Distribution Management System
11765135	General Ledger Ph 1 SW PS	12/31/2015	-	(20,576,451)	Aging Technology	General Ledger Replacement - Phase 2
11939909	CMS Reporting SW PSCO	12/31/2017	-	(158,538)	Increase Efficiencies	Commodity Management System (CMS) - Reporting
11940072	Security Tech Refresh SW PSCO	12/31/2017	-	(717,148)	Cyber Security	Security Technology Refresh
10948963	2012 Server Refresh	12/31/2021	(6)	-	Aging Technology	2012 Server Refresh
11088762	2013 Planned PC Refresh	12/31/2021	(6,986)	-	Aging Technology	2013 Planned PC Refresh
11102504	2013 Unplanned PC Refresh	12/31/2021	(19,334)	-	Aging Technology	2013 Unplanned PC Refresh
11102301	2013 Unplanned Server Refresh	12/31/2021	(23,646)	(11)	Aging Technology	2013 Unplanned Server Refresh
11218100	Data Warehouse Environment Refresh	12/31/2021	-	(101,553)	Other	Data Warehouse Environment Refresh 2015
11920746	Purch VPN Network Equip PSCO	12/31/2021	(181,242)	(5,204)	Aging Technology	VPN Refresh
11227019	IT Infrastructure - Network Hardware	12/31/2021	(153,615)	(254,569)	Other	IT Infrastructure - Network Hardware
11088701	2013 Planned LAN WAN Refresh	12/31/2021	(721,646)	(352)	Aging Technology	2013 Planned Network Refresh
11382122	SONET Refresh - Colorado	12/31/2021	-	(727,422)	Other	SONET Refresh - Colorado
11088748	2013 Server Refresh	12/31/2021	(856,972)	(419)	Aging Technology	2013 Planned Server Refresh
11920741	Purch Firewall Network Equip PSCO	12/31/2021	(1,495,042)	(380,588)	Cyber Security	Corporate Firewall Enhancement
11915888	Purch Site Infrastructure Equip PSC	12/31/2021	(2,281,336)	(364,555)	Aging Technology	Site Infrastructure Improvements - PSCO
11802569	Purch NS T&D Network Equip PSC	12/31/2021	(1,528,064)	(1,869,266)	Aging Technology	Network Strategy - T&D Substation Connectivity
11218046	Business Process Enhancements	12/31/2021	(743,651)	(5,225,049)	Other	Business Process Enhancements
Grand Total			(79,598,818)	(81,193,360)		

Type of Cost	Operating & Maintenance
Business Area	(Multiple Items)
Business Unit	(All)
FERC Account	(All)
FERC Description	(All)
CC25	(All)

Sum of Total PSCo Electric		
Sub-Business Area	Object Account	Total
Business Systems	711142 Productive Labor	\$3,857,371
	711143 Reg Labor Loading-NonProductiv	\$665,518
	711150 Premium Time	\$1,643
	711190 Overtime	\$15,036
	712110 Contract Labor	\$1,705,569
	713000 Consulting/Prof Svcs-Other	\$1,915,524
	713050 Contract LT Outside Vendor	\$51,006
	713055 Outside Svcs-Cust Care	\$35
	713100 Consulting/Prof Svcs-Legal	\$2,950
	714000 Materials	\$31,814
	714100 Print/Copy-Other	\$3,567
	714500 Equipment Maintenance	\$262
	715100 IT Hardware Maintenance	\$177,761
	715200 IT Hardware Purchases	\$132,829
	715300 Software-prepetual lic purch	\$942,815
	715400 Software - term lic purch	\$1,903,307
	715500 Software Maintenance	\$6,137,602
	715600 Personal Communication Devices	\$85,627
	715700 Network Services	\$444,468
	715710 Network Voice	\$2,736,809
	715720 Network Data	\$1,925,948
	715730 Network Telecom	\$1,586,856
	715740 Network Radio/Pgr/MW	\$3,463,869
	715800 Mainframe Services	\$545,501
	715810 Distributed Systems Services	\$4,260,126
	715820 App Dev & Maint	\$7,425,214
	715830 Project Office	\$423,429
	715900 Software - ASP	\$215,843
	721005 EE Exp Airfare	\$54,983
	721010 EE Exp Car Rental	\$7,147
	721015 EE Exp Taxi/Bus	\$5,164
	721020 EE Exp Mileage	\$8,834
	721025 EE Exp Conf/Semnrs/Trng	\$72,055
	721030 EE Exp Hotel	\$61,468
	721035 EE Exp Meals/EE's	\$18,796
	721040 EE Exp Meals/Incl.Non-EE's	\$2,924
	721045 EE Exp Parking	\$5,957
	721055 EE Exp Safety Equip	\$422
	721060 EE Exp Other	\$11,855
	721500 Office Supplies	\$16,453
	721700 Workforce Admin Expense	\$25,969
	721800 Safety Recognition	\$32
	721810 Life Events	\$366

Business Systems	722000 Transportation Fleet Cost	\$13,525
	723031 Electric Use Costs	\$2,468
	723032 Gas Use Costs	\$16
	723034 Sewer Maint Costs	-\$2,331
	723040 Moves/Adds/Changes	\$6,141
	723130 Equipment Rental	\$277,080
	723400 Postage	\$15,041
	723710 Brand/Image Advertising	\$1,314
	723720 Advertising - General	\$2,311
	723810 Professional Association Dues	\$42,775
	723820 Utility Association Dues	\$89
	723821 Electric Util Assoc Dues	\$58
	723833 Charitable Contributions	\$14
	723835 Civic & Political	\$196
	723836 Chamber of Commerce Dues	\$3
	723850 Social Service Dues	\$9
	723854 Deductions-Corp Tickets	\$95
	723855 Other Deductions	\$787
	723895 License Fees & Permits	\$345,594
	723897 Penalties	\$207,851
	724100 Misc O&M Credits	-\$552
	724500 Shared Asset Costs	\$10,485,573
	724510 Shared Assets-Owning Co Cr	-\$14,444,218
	725000 Other	\$1,136
	725000.11 TriState Offsets-ADE	\$0
	725005 Online Information Services	\$422,966
	725100.1000 Op Co OH - A&G	\$0
Business Systems Total		\$38,328,668
Grand Total		\$38,328,668

Type of Cost	Operating & Maintenance
Business Area	(Multiple Items)
Business Unit	(All)
Object Account	(All)
CC25	(All)

Sum of Total PSCo Electric			
Sub-Business Area	FERC Account	FERC Description	Total
Business Systems	417.1	Exp from Non-Utility	\$0
	426.1	Donations	\$14
	426.3	Penalties	\$207,851
	426.4	Expenditures for Civic,	\$5,981
	426.5	Other Deductions	\$891
	500	Stm Prod Op & Supr	\$1,968
	502	Steam Expenses Major	\$0
	505	Stm Gen Elec Exp. Major	\$0
	506	Misc Steam Pwr Exp	\$1,338,336
	510	Stm Maint Super&Eng	-\$1
	511	Stm Maint of Structures	\$0
	512	Stm Maint of Boiler Plt	\$0
	513	Stm Maint of Elec Plant	\$0
	514	Stm Maint of Misc Stm Plt	\$20,557
	535	Hyd Oper Super & Eng	\$3
	538	Hyd Oper Electric Exp	\$4,306
	539	Hydro Oper Misc Gen Exp	\$80,559
	541	Hydro Mtc Super& Eng	\$0
	543	Hydro Mtc Resv, Dams	\$28,901
	545	Hyd Mt Misc Hyd Plnt Mjr	\$4
	546	Oth Oper Super&Eng	\$50
	548	Oth Oper Gen Exp	\$25,274
	549	Oth Oper Misc Gen Exp	\$167,014
	551	Oth Maint Super & Eng	\$1
	554	Oth Mtc Misc Gen Plt Mjr	\$9,460
	556	Load Dispatch	\$92,769
	557	Other Power Oth Exp	\$1,541
	560	Trans Oper Super & Eng	\$139,063
	561.2	Load Disp-Monitor/Operate	\$1,397,491
	562	Trans Oper Station Exp	\$69,307
	563	Trans Oper OH Lines	\$3,470
	566	Trans Oper Misc Exp	\$210,915
	570	Tran Mnt of Station Equip	\$26,238
	571	Trans Mt of Overhead Line	\$24,866
	573	Trans Mtc of Misc Plt Mjr	\$4,327
	580	Dist Oper Sup & Eng	\$318,734
	581	Dist Load Dispatching	\$1,504,455
	582	Dist Op Station Exp	\$149,547
	583	Dist Oper Overhead Lines	\$192
	584	Dist Op UG Elec lines	\$2,270
	585	Dist Oper Streetlight	\$1,962
	586	Dist Oper Meter Exp	\$114,725
	588	Dist Oper Misc Exp	\$3,387,608

Business Systems	589	Dist Rents	\$65,799
	590	Dist Mtc Super & Eng	\$784
	592	Dist Mt of Station Equip	\$2,462
	593	Dist Mtc of Overhead Llnes	\$35,761
	594	Dist Mt of Undergrnd Line	\$168
	596	Dist Mtc of Streetlights	\$52
	597	Dist Mtc of Meters	\$7,967
	598	Dist Maint of Dist Plant	\$40,395
	814	UG Strg Oper Exp E&S	\$0
	824	Strg Other Exp	\$0
	850	Trans Oper - E&S	\$0
	851	Trans Oper -Sys Ctl &Ld	\$0
	853	Compressor Station Labor&Exp	\$0
	856	Trans -Mains Exp	\$0
	857	Trans -Meas& Regult	\$0
	859	Trans - Other Equip	\$0
	863	Trans Mtce Mains	\$0
	865	Trans Mtce Meas Rg	\$0
	866	Trans Mtce Commun Equip	\$0
	870	Dist Oper - E&S	\$0
	871	Dist Exp-Dist Load	\$0
	874	Dist Exp-Mains & Serv	\$0
	877	Dist Op Meas&Regl Stat Cty Gt	\$0
	878	Dist Op Meter & House Reg	\$0
	879	Dist Op Customer Install	\$0
	880	Dist Oper -Other	\$0
	885	Dist - Mtce E&S	\$0
	887	Dist - Mtce of Mains	\$0
	892	Dist-Mtce of Services	\$0
	893	Dist-Mtce of Meters&Hou	\$0
	901	Cust Acct Supervise	\$103
	902	Cust Acct Meter Read	\$1,045,245
	903	Cust Acct Recrds &Coll	\$4,080,075
	908	Customer Asst Expense	\$12,618
	912	Sales Demo & Sales	\$85
	920	A&G Salaries	\$3,048,985
	921	A&G Office & Supplies	\$21,673,675
	922	A&G Admn Transfer Crdt	-\$14,444,770
	923	A&G Outside Services	\$2,923,998
	930.1	A&G General Advertising	\$3,625
	930.2	A&G Misc General Exp	\$147
	931	A&G Rents	\$10,485,573
	932	A&G Maint of Structures	\$0
	935	A&G Maint of Gen PLT	\$5,272
Business Systems Total			\$38,328,668
Grand Total			\$38,328,668