

Direct Testimony and Schedules
Stephen R. Foss

Before the North Dakota Public Service Commission
State of North Dakota

In the Matter of the Application of Northern States Power Company
for Authority to Increase Rates for Electric Service in North Dakota

Case No. PU-12-____
Exhibit____(SRF-1)

Operations and System Investments

December 18, 2012

Case No. PU-12-____
Foss Direct

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1 **I. INTRODUCTION**

2

3 Q. PLEASE STATE YOUR NAME AND OCCUPATION.

4 A. My name is Stephen R. Foss. I am the Vice President of Distribution
5 Operations for Northern States Power Company – Minnesota (NSPM or
6 Company).

7

8 Q. PLEASE SUMMARIZE YOUR QUALIFICATIONS AND EXPERIENCE.

9 A. I have worked for Xcel Energy Services Inc. and NSPM in various positions
10 since 1982, with management positions including: Director of Sourcing
11 Services, where I was responsible for establishment and negotiation of
12 corporate contracts and agreements; and Director of Operating Company
13 Business Operations, where I was responsible for a variety of distribution-
14 related activities. In my current position as Vice President of Distribution
15 Operations, I am responsible for the electric and natural gas distribution
16 design and construction activities for our service areas in the states of North
17 Dakota, South Dakota, and Minnesota. In addition, I am responsible for our
18 electric distribution control centers within these areas. My résumé is attached
19 as Exhibit____(SRF-1), Schedule 1.

20

21 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

22 A. I present and support NSPM’s capital and operations and maintenance
23 (O&M) budgets for the Distribution, Transmission, and Energy Supply
24 business units within the Operations organization for purposes of determining
25 2013 test year electric revenue requirements and final rates in this proceeding.
26 My testimony highlights that:

- 1 • We have a sound plan to continue investing in our distribution and
2 transmission systems and generation facilities in order to ensure
3 customers have energy that is reliable, economical, and sustainable, and
4 that we are in compliance with regulatory requirements;
- 5 • We are investing in distribution and transmission infrastructure to
6 address capacity and growth needs, serve projected peak loads, and
7 interconnect new generators to the system;
- 8 • Our capital investments for Energy Supply are largely focused on
9 initiatives to address aging infrastructure, obsolete equipment or
10 components, and assets that are no longer meeting operational
11 standards;
- 12 • The integration of Distribution, Transmission, and Energy Supply
13 business units into a centralized Operations organization is facilitating
14 economies of scale and knowledge transfer. Efficiency and productivity
15 efforts across the Operations organization have helped offset rising
16 costs and limited the growth in O&M expenses, as well as improved the
17 cost efficiency of our capital projects; and
- 18 • We have complied with the electric reliability commitments in the
19 Settlement Agreement in our 2010 electric rate case (Case Nos. PU-10-
20 657 and PU-11-55).

21 **II. KEY FUNCTIONS AND ACTIVITIES**

- 22
- 23
- 24 Q. PLEASE DESCRIBE THE OPERATIONS ORGANIZATION'S CORE BUSINESS
25 OBJECTIVES AND RESPONSIBILITIES.
- 26 A. The organization's primary responsibility is to provide for the safe and reliable
27 generation, transmission, and distribution of electricity and natural gas to

1 customers. In doing so, we strive to keep costs low, comply with
2 environmental and other regulatory requirements, and improve our
3 environmental stewardship. We measure our performance based on how
4 safely, efficiently, and reliably we meet our customers' energy needs.

5
6 The Distribution, Transmission, and Energy Supply business units were
7 managed as separate business areas for the past several years. In 2011, these
8 functions were integrated across the four Xcel Energy, Inc. operating
9 companies into a single centralized Operations organization, along with
10 Supply Chain, Environmental Services, and Fuels. The objective of this
11 integration is to improve our operating performance while using standardized
12 processes, shared best practices, and efficiencies of scale to improve
13 productivity and control operating costs.

14
15 Q. PLEASE DESCRIBE THE NSP ELECTRIC SYSTEM.

16 A. For the NSP Companies, NSPM and Northern States Power Company –
17 Wisconsin (NSPW), the Operations organization manages over 6,600 MW of
18 non-nuclear generation capacity, 6,600 miles of transmission lines, 37,000
19 miles of distribution lines, and 550 transmission and distribution substations;
20 these assets serve over 1.6 million electric customers, including nearly 90,000
21 electric customers in North Dakota. We generate power using many different
22 fuel sources and technologies including: fossil fuels, such as coal and natural
23 gas; renewable resources, such as wind, solar, biomass and hydroelectric
24 power; and nuclear power. As discussed by Company witness Ms. Anne E.
25 Heuer, the costs of the integrated NSP System – the electric generation and
26 transmission systems of NSPM and NSPW – are shared between NSPM and
27 NSPW through the Interchange Agreement.

1 **III. SUMMARY OF REQUEST**

2
3 Q. PLEASE PROVIDE AN OVERVIEW OF THE OPERATIONS CAPITAL ADDITIONS
4 AND 2013 O&M BUDGET.

5 A. In 2012 and 2013, the Distribution, Transmission, and Energy Supply business
6 units of the Operations organization will place into service a total of \$923.3
7 million of new infrastructure for NSPM. These investments are needed to
8 address aging infrastructure and respond to localized areas of demand growth,
9 both of which are critical to maintaining and improving system reliability.

10
11 To support these capital investments and maintain our existing assets, we have
12 budgeted \$302.9 million for NSPM O&M in 2013. This is an increase of \$8.7
13 million or three percent over 2011 actual O&M expenses. The main drivers of
14 the increase are increased capital support (O&M on new capital investments),
15 increased costs to operate and maintain existing assets, and additional
16 compliance requirements for Transmission.

17
18 Table 1 summarizes the total 2012 and 2013 NSPM capital additions and 2013
19 NSPM O&M budgets for the Distribution, Transmission, and Energy Supply
20 business units.

1

Table 1

Summary of Request by Business Unit				
NSPM Electric Utility-Business Unit	2012/2013 Capital Additions (Millions)	Percent of Total	2013 O&M (Millions)	Percent of Total
Distribution	\$272.2	29%	\$106.8	35%
Transmission	\$470.8	51%	\$41.8	14%
Energy Supply	\$180.3	20%	\$154.3	51%
Total	\$923.3	100%	\$302.9	100%

2

3 NSPM’s Energy Supply and Transmission costs are allocated across the three
4 NSPM state jurisdictions (North Dakota, South Dakota, and Minnesota) and
5 to NSPW through the Interchange Agreement, with approximately five
6 percent of the total NSPM Energy Supply and Transmission costs allocated to
7 our North Dakota customers. In contrast to the Energy Supply and
8 Transmission costs, Distribution costs are directly assigned to each
9 jurisdiction. Of the total NSPM capital additions, \$13.1 million relates to new
10 local distribution plant in-service in North Dakota. The O&M budget
11 includes approximately \$5.1 million for the Distribution operations at our
12 three North Dakota service centers and the vegetation management and
13 damage prevention costs directly assigned to North Dakota.

14

15 Q. PLEASE PROVIDE AN OVERVIEW OF THE COMPANY’S LONG-TERM CAPITAL
16 INVESTMENT PLAN.

17 A. We expect to invest approximately \$3 billion in NSPM over the 2012-2016
18 timeframe to replace and upgrade our electric system, excluding nuclear
19 investments. Table 2 shows our planned capital expenditures over the 2012 to
20 2016 timeframe for the NSPM Distribution, Transmission, and Energy Supply
21 business units. The table does not include investments in our nuclear facilities,

1 natural gas systems, or corporate services, which together add over \$500
2 million a year to our total Company capital spending.

3
4 **Table 2**

2012-2016 Forecasted Capital Expenditures						
(\$000s)						
NSPM Electric Utility- Business Unit	2012	2013	2014	2015	2016	5 Year Total
Distribution	\$163,470	\$181,981	\$180,126	\$182,367	\$184,924	\$892,868
Transmission	\$313,473	\$505,501	\$396,660	\$230,754	\$192,076	\$1,638,464
Energy Supply	\$113,651	\$105,390	\$102,182	\$96,943	\$121,956	\$540,122
Total	\$590,594	\$792,872	\$678,968	\$510,064	\$498,956	\$3,071,454

5
6 We are making investments in our distribution system to maintain our
7 substations and line assets and to increase system capacity, both of which
8 support improved reliability. The capacity projects we are pursuing are needed
9 to accommodate past or projected peak load growth and maintain sufficient
10 operational flexibility to reliably serve existing load under outage or
11 contingency conditions.

12
13 Expansion remains a major focus for Transmission, as we build backbone
14 infrastructure as part of the CapX2020 initiative and upgrade the system to
15 serve localized load growth and new interconnections. Reliability is also a
16 major focus for Transmission, with new investments to comply with more
17 stringent North American Electric Reliability Corporation (NERC) reliability
18 standards.

19
20 The Company has been upgrading and refurbishing its electric generation fleet
21 for several years, including our High Bridge, A.S. King, and Riverside
22 generation facilities. As a result, we believe we have a portfolio of generation

1 units that are well positioned to reliably meet most generation needs for years
2 to come, while also meeting currently expected environmental regulations.
3 Given these past investments and slow projected overall sales growth, our
4 near-term focus for Energy Supply is on maintaining the health and reliability
5 of our existing assets.

6
7 Q. HOW DOES THE COMPANY'S INVESTMENT PLAN AND O&M BUDGET SUPPORT
8 RELIABILITY?

9 A. To maintain reliability, an electric system must have in place:

- 10 • parts in working order;
- 11 • sufficient capacity to meet customer needs; and
- 12 • redundancies and sufficient operating margins to accommodate system
13 disruptions.

14
15 Our planned investments address each of these components. For example,
16 across all business units, we have several projects that will replace or upgrade
17 equipment that is at or nearing the end of its useful life, or no longer meeting
18 operational standards. In the Energy Supply area, for example, we are
19 replacing boiler components at the A.S. King plant and replacing obsolete
20 electro-hydraulic control systems on all three turbines at the Sherco Plant.

21
22 In our Distribution and Transmission areas we are investing in new
23 infrastructure to serve new localized loads and restore operating margin. We
24 have also identified several locations where the loss of a single substation
25 transformer or other critical component would cause extended outages to a
26 large number of customers. We are investing in additional capacity at these
27 locations to mitigate the risk of high-consequence outages. For example, we

1 are adding a third transformer to the Cass County substation in Fargo, which
2 will enable us to maintain service to all customers should one of the other two
3 units fail.

4
5 The ongoing maintenance funded through our O&M budget is also essential
6 to ensuring that equipment is operating as intended and issues are, where
7 possible, resolved before they threaten reliability. For example, we have
8 increased our focus on vegetation management to maintain proper line
9 clearances and mitigate vegetation-caused outages, as committed to in the
10 Settlement Agreement.

11
12 Q. WHAT ARE THE MAIN DRIVERS OF THE INCREASE IN NSPM O&M EXPENSE
13 FROM 2011 TO 2013?

14 A. Operations has taken several steps to minimize O&M increases, which has
15 resulted in an increase for NSPM of only \$8.7 million, or three percent, over
16 2011 actual spending by the Distribution, Transmission, and Energy Supply
17 business units. Approximately \$4.8 million, or 55 percent, of the total increase
18 is related to Transmission O&M, including increased internal labor costs and
19 increased capital support resulting from significant investments in the
20 transmission system. Energy Supply contributes approximately \$3.3 million,
21 or 38 percent, of the increase, which is largely comprised of increased costs for
22 emissions reduction chemicals. The expected return to service of Sherco 3 in
23 2013 is a major factor in that increase. The remainder of the increase
24 (\$650,000 or seven percent) is largely attributable to increased capital support
25 and vegetation management for the distribution system.

26

1 Of the total O&M increase, approximately \$3.2 million, or 37 percent, is
2 related to capital support. Capital support refers to the incremental O&M
3 costs related to the construction and maintenance of new assets. For example,
4 when adding equipment to a substation, it is often necessary to relocate
5 existing equipment to make room for the new equipment and to install
6 temporary mobile transformers to ensure continued service during
7 construction; these expenses are properly charged to O&M. These new assets
8 then require ongoing maintenance to maintain performance.

9
10 Q. WHAT STEPS HAS THE OPERATIONS ORGANIZATION TAKEN TO MANAGE COSTS
11 AND CREATE EFFICIENCIES?

12 A. One of our initiatives was to establish additional productivity metrics across
13 the organization. The metrics help show us where we are doing well
14 compared to other utilities or our past performance, where we can improve,
15 and how we are improving as a result of our initiatives.

16
17 One of our key strategies to manage O&M costs is to emphasize preventative
18 maintenance over corrective or reactive work, as preventative maintenance is
19 far less expensive than dealing with a failure or emergency. For example, to
20 reduce our O&M costs associated with our overhead transmission lines, we
21 are increasing pole testing and being more proactive about replacing, as
22 opposed to repairing, equipment.

23
24 We also have strong partnerships with our Supply Chain area to reduce costs
25 associated with materials, fleet, and sourcing. One example of where we have
26 seen increased efficiency is in availability of materials to complete projects, as
27 measured by the On Time In Full (OTIF) metric. When all required materials

1 are available, the efficiency and productivity of the work is significantly
2 improved. Accurate materials specifications and ordering also helps eliminate
3 unnecessary material purchases and inventory costs.

4
5 Similarly, we have standardized our work scheduling processes to better
6 ensure that the right labor resources are dispatched at the right time to
7 efficiently complete the job. In Energy Supply, for example, work orders are
8 moving through their lifecycle more quickly due to fewer worker delays and a
9 reduced backlog of work orders.

10 11 **IV. DISTRIBUTION**

12 13 **A. Overview**

14 Q. PLEASE PROVIDE AN OVERVIEW OF THE DISTRIBUTION CAPITAL ADDITIONS
15 AND 2013 O&M BUDGET.

16 A. The Distribution business unit is responsible for the safe and reliable delivery
17 of energy from the transmission system to our end-use customers. Projected
18 Distribution capital additions for NSPM are \$122.4 million in 2012 and an
19 expected \$149.7 million in 2013 for a total of \$272.2 million. Of that total, we
20 have forecasted new North Dakota distribution plant in-service additions of
21 \$13.1 million for 2012 and 2013. We have budgeted \$106.8 million at the
22 NSPM level for O&M in 2013, which is an increase of 0.6 percent over 2011
23 actual spending. This includes approximately \$5.1 million for the Distribution
24 operations at our three North Dakota service centers and the vegetation
25 management and damage prevention costs directly assigned to North Dakota.

26

1 Q. HAS THE COMPANY MET ITS RELIABILITY COMMITMENTS PURSUANT TO THE
2 SETTLEMENT AGREEMENT IN THE LAST ELECTRIC RATE CASE?

3 A. Yes, the Company has completed or is in the process of completing each of
4 our commitments. As part of the Settlement Agreement, the Company made
5 the following commitments related to reliability:

- 6 • Install approximately 25 Intelliteam automated switches in the Fargo,
7 North Dakota service area in 2012;
- 8 • Increase annual vegetation management expenditures in the state of
9 North Dakota by approximately 25 percent;
- 10 • Hire an additional electrical engineer to be based in Fargo, North Dakota;
- 11 • Proactively locate and replace older vintage 500 MCM underground
12 cable;
- 13 • Develop and file recommendations regarding a North Dakota-focused
14 reliability “service quality plan;” and
- 15 • Provide the Commission with ongoing, periodic reliability performance
16 reporting.

17

18 Specifically, we have completed the installation of 25 Intelliteam switches and
19 they are operational. Through November 2012, we spent \$422,000 to identify
20 and replace the highest risk sections of 500 MCM cable. We will continue to
21 replace portions of MCM cable that we locate on our system over the 2013-
22 2014 period, with total investment of approximately \$750,000 over the three-
23 year period. Additionally, this case reflects a significant increase for vegetation
24 management expenditures in North Dakota. We also hired the additional
25 electrical engineer in North Dakota, filed a Reliability Performance Plan, and
26 have provided the requested reliability reporting.

27

1 **B. Capital Investments**

2 Q. WHAT TYPES OF CAPITAL INVESTMENTS ARE BEING MADE ON THE
3 DISTRIBUTION SYSTEM?

4 A. Distribution is making investments to increase system capacity, relocate
5 facilities within public right-of-ways, and maintain and improve substation and
6 distribution line asset health. The capacity-related projects include new service
7 connections and substation capacity increases to address high-consequence
8 outage potentials and localized growth. The asset health projects include
9 replacement of transformers, circuit breakers, and switches in our distribution
10 substations, as well as replacement of poles, wires and cables. Both asset
11 health and capacity projects are necessary to ensure sufficient power is
12 available when and where it is needed.

13
14 Q. PLEASE PROVIDE AN EXAMPLE OF A CAPACITY-RELATED PROJECT IN NORTH
15 DAKOTA.

16 A. In response to load growth in Fargo, in 2013 we are replacing an existing 47
17 MVA transformer at the Red River substation with a 90 MVA transformer.
18 This will increase the capacity to serve loads and position us to meet future
19 contingencies. Additionally, this project will result in operational benefits, as
20 the three transformers will be size-matched, which will improve the
21 operational capabilities. The 47 MVA transformer will be relocated to the
22 Cass County substation to increase the capacity of that substation. At the
23 Cass County substation, we are also adding three new feeders to provide
24 added operating capacity and flexibility.

25
26 Q. PLEASE PROVIDE AN EXAMPLE OF AN ASSET HEALTH PROJECT.

1 A. In 2012, we completed several projects at our Mayville substation as part of a
2 substation renewal. For example, we installed a new transformer and new
3 circuit breakers and switches, converting the distribution voltage from 4 kV to
4 12.5 kV. This project updates the substation with modern technology, which
5 will improve reliability. Also, by increasing voltage, we can capture long-term
6 maintenance savings and reduce line losses, which create savings for
7 customers.

8
9 Q. IN ADDITION TO RELIABILITY PROJECTS IN THE SETTLEMENT AGREEMENT,
10 ARE THERE OTHER CAPITAL PROJECTS IN THE TEST YEAR THAT WILL IMPROVE
11 RELIABILITY?

12 A. Yes. As part of our Feeder and Tap Performance Improvement Program, we
13 will continue to identify the poorest performing feeders and tap-level circuits
14 and target those segments for investment. Similarly, we are replacing tap-level
15 underground cable that has performance issues.

16
17 **C. O&M Budget**

18 Q. PLEASE PROVIDE AN OVERVIEW OF THE DISTRIBUTION 2013 O&M BUDGET.

19 A. Distribution has budgeted \$106.8 million for ongoing construction, operations
20 and maintenance of the NSPM distribution system in 2013. On an NSPM
21 basis, we have held O&M expenses relatively flat since 2011, with the budget
22 representing a modest increase of approximately \$650,000, or 0.6 percent, over
23 2011 actual spending.

24
25 Over 80 percent of the 2013 NSPM Distribution O&M budget is related to
26 employee and contractor labor. The remainder of the 2013 O&M budget is

1 comprised of materials and other costs. Table 3 shows the 2013 NSPM
2 Distribution O&M budget by major cost category.

3
4 **Table 3**

2013 NSPM Distribution O&M Budget by Cost Category		
Cost	Budget (Millions)	Percent of Total
Internal Labor	\$45.9	42.9%
Contract Labor	\$39.8	37.3%
Fleet	\$8.7	8.1%
Materials	\$7.7	7.3%
Other	\$4.7	4.4%
Total	\$106.8	100%

5
6 Q. WHAT PORTION OF THE NSPM DISTRIBUTION O&M BUDGET IS ASSOCIATED
7 WITH THE NORTH DAKOTA OPERATIONS?

8 A. Approximately \$5.1 million of the NSPM O&M budget is associated with the
9 Distribution operations at our three North Dakota service centers and
10 vegetation management and damage prevention costs directly assigned to
11 North Dakota.

12
13 Q. WHAT ARE THE MAIN CAUSES OF THE INCREASE IN NSPM O&M EXPENSES
14 FOR 2013?

15 A. As noted above, we have tightly managed O&M expenses and have budgeted
16 only a \$650,000, or 0.6 percent increase, over 2011 actual spending. The
17 primary drivers of the increase are: 1) increased capital support, and 2)
18 increased maintenance costs for existing assets, specifically associated with our
19 Vegetation Management and Damage Prevention programs and materials.
20 These increases are somewhat offset by reductions in other areas, such as
21 storm-related overtime, where we have assumed a return to normal average

1 storm activity for 2013. Table 4 summarizes the drivers for the increase in
2 O&M expenses.

3
4 **Table 4**

2013 Budget vs. 2011 Actual Expense		
Cost Drivers	Amounts	Total
	(Millions)	(Millions)
2011 Actual		\$106.1
Capital Support	\$1.8	
Vegetation Management	\$1.0	
Damage Prevention	\$0.4	
Materials	\$0.4	
Other	(\$2.9)	
2013 Budget		\$106.8

5
6 Q. DOES THE 2013 NORTH DAKOTA DISTRIBUTION O&M TEST YEAR INCLUDE
7 EXPENSE FOR ADDITIONAL EMPLOYEES?

8 A. Yes, in anticipation of retirements during the next several years and some
9 increased work loads, the test year O&M costs include approximately \$235,000
10 for the hiring of an additional four linemen. Two of the employees will be
11 focused on the Minot area, one will serve Grand Forks, and one will serve the
12 Fargo area. The cost is included as an adjustment to the 2013 O&M budget,
13 as discussed in the Direct Testimony of Ms. Heuer.

14
15 Q. WHAT TYPES OF O&M ACTIVITIES ARE INCLUDED IN THE BUDGET?

16 A. The primary activities in the O&M budget include the following:

- 17 • *Development of New Assets* – O&M related to the construction of new
18 distribution capital assets.
- 19 • *Operation and Maintenance of Existing Assets* – To ensure continued
20 reliability and performance, we perform core electric distribution work,

1 such as equipment maintenance, underground cable fault repair,
2 transformer change-outs, storm repair, system operations, inspections,
3 and field response to customer requests.

- 4 • *Vegetation Management* – Vegetation management and line clearance
5 activities to maintain distribution pole line right-of-ways and to address
6 vegetation-caused outages. This also includes the pole inspection
7 program.
- 8 • *Damage Prevention* – Costs associated with the locating of underground
9 electric facilities and other damage prevention activities.

10
11 Other budgeted functions include engineering, supervision, metering, outdoor
12 lighting, and administrative and general expenses.

13
14 Q. HOW ARE NEW CAPITAL INVESTMENTS IMPACTING THE NSPM O&M BUDGET?

15 A. We estimate approximately \$8.7 million of the NSPM O&M budget is to
16 support capital projects in 2013, which is an increase of \$1.8 million over 2011
17 actual spending. This increase is associated with incremental capital
18 investments, such as the asset health and capacity projects previously
19 discussed in my testimony. For example, the 2013 capital budget includes \$1.3
20 million for several voltage conversion projects, where older 4 kV substations
21 are converted to higher voltages, such as at the Mayville substation. Some of
22 the work activities associated with these conversions, such as pole line re-
23 insulations and service wire transfers, must be charged to O&M accounts.

24
25 Q. HOW IS MAINTENANCE OF EXISTING ASSETS IMPACTING THE BUDGET?

26 A. We have O&M expenses related to operating, maintaining, and restoring our
27 distribution assets. Maintenance needs increase as new assets are added to the

1 system, existing assets get older, and assets are damaged by weather
2 conditions. O&M costs are also increasing due to increases in the cost of
3 some materials and increased contractor labor costs for our Vegetation
4 Management and Damage Prevention programs.

5
6 Q. PLEASE PROVIDE AN EXAMPLE OF MATERIAL COST INCREASES.

7 A. The materials budget for NSPM Distribution increased by \$400,000 compared
8 to 2011 actual spending. This increase is driven by price escalations for
9 materials used by Distribution and additional materials associated with
10 incremental capital expenditures. For example, we experienced a four percent
11 increase in much of our underground splicing materials during 2012, which are
12 commonly used in fault repair activities.

13
14 Q. PLEASE DISCUSS THE VEGETATION MANAGEMENT AND DAMAGE
15 PREVENTION INITIATIVES.

16 A. We manage vegetation and preserve line clearance to maintain distribution
17 pole line right-of-ways and to address vegetation-caused outages. This
18 initiative also includes pole inspections. The Damage Prevention program
19 helps excavators and customers locate underground electric infrastructure to
20 avoid accidental damage and safety incidents. We rely heavily on contractors
21 for both of these programs. Our contractor costs are increasing due to
22 general inflationary factors faced by our service providers. Additionally, as
23 agreed to in the Settlement Agreement, we are increasing our annual
24 vegetation management expenditures in North Dakota to shorten the
25 vegetation management cycle and facilitate mid-cycle check-ups on the higher
26 growth areas.

27

1 Q. PLEASE PROVIDE EXAMPLES OF EFFICIENCY OR PRODUCTIVITY INITIATIVES.

2 A. Distribution has worked hard on cost containment and continues to leverage
3 best practices, process improvements, and technology to take costs out of our
4 business. One example of where we have worked to manage cost increases is
5 our Workforce Deployment Strategy. The NSPM Distribution business unit
6 has developed strategies to manage and offset incremental labor costs, such as
7 wage increases and contractor costs. Our Workforce Deployment Strategy
8 includes:

- 9 • Internal Resource Reallocations - moving local resources between area
10 offices to follow the highest priority work, which reduces the need for
11 contract labor.
- 12 • Overtime Governance - strict management of overtime labor, including
13 more formal and uniform processes for the authorization of overtime.
- 14 • Employee Replacements and Hires – thorough review and scrutiny of
15 employee replacements and new hires.
- 16 • Variable Resource Governance – centralization of strategic resource
17 planning regarding the utilization of both contractor and seasonal
18 resources, including routine monitoring of variable resource levels
19 compared to required workload and the requirement of formal
20 leadership approval for adding variable resources.

21

22 Distribution Operations is also in the process of deploying a new
23 programmatic and structured approach to efficiency and productivity. This
24 program will bring more formal oversight and management of cost efficiency
25 efforts through the discovery, cataloging, and implementation of best
26 practices, work management process improvements, and leveraging of new
27 technologies.

1 **V. TRANSMISSION**

2

3 **A. Overview**

4 Q. PLEASE PROVIDE AN OVERVIEW OF THE TRANSMISSION CAPITAL ADDITIONS
5 AND 2013 O&M BUDGET.

6 A. The Transmission business unit is responsible for the safe and reliable delivery
7 of energy from generating resources to the distribution systems of the
8 Company and numerous municipal or other load serving entities connected to
9 our transmission system. We expect to add \$141.7 million of new
10 transmission plant in-service additions in 2012 and \$329.1 million in 2013, for
11 a total of \$470.8 million. These investments are primarily focused on regional
12 expansion (*e.g.* CapX2020 projects), reliability requirements, and asset health.

13

14 We have budgeted \$41.8 million for Transmission O&M in 2013, which is an
15 increase of \$4.8 million or 13 percent over 2011 actual expenses. The main
16 drivers of the increase are the costs associated with existing asset maintenance
17 and capital support.

18

19 **B. Capital Investments**

20 Q. WHAT TYPES OF CAPITAL INVESTMENTS ARE BEING MADE ON THE
21 TRANSMISSION SYSTEM?

22 A. Transmission projects for transmission line and substation assets can be
23 broadly categorized as asset health or capacity or expansion projects, although
24 there is often some overlap, as we may increase the capacity of a line while
25 addressing asset health or reliability issues, such as by installing higher capacity
26 replacement conductor. Asset health projects focus on existing assets and
27 include replacement of assets and projects to comply with NERC reliability

1 requirements. Examples of substation asset health projects include replacing
2 transmission relays, circuit breakers, transformers, and remote terminal units.
3 Examples of the transmission line asset health projects include replacing poles,
4 cross arms, conductor and gang-operated switches.

5
6 Capacity or growth-related projects include upgrades for generation
7 interconnections required by the Midwest Independent Transmission System
8 Operator, Inc. (MISO) Tariff, transmission-to-transmission and load
9 interconnections, and regional expansion projects (*i.e.* CapX2020). Examples
10 of capacity-related projects include new interconnections and capacity
11 upgrades to allow newly installed generation to operate or increased loads to
12 be served without placing a reliability risk on the rest of the transmission
13 system.

14
15 Q. PLEASE PROVIDE AN EXAMPLE OF A MAJOR ASSET HEALTH INITIATIVE.

16 A. The Company is investing in a planned and coordinated renewal project to
17 replace analog electronic relays in substations with microprocessor-based
18 relays. Generally installed during the 1960's and 1970's, solid state analog
19 electronic relays are reaching the end of their lives. These older units are more
20 prone to "setting drift," which can lead to a mis-operation of the relay. In
21 addition, NERC reliability standards are imposing increased maintenance
22 requirements on transmission protection systems, including relays.

23
24 The new digital electronic relays also provide our system operators with more
25 information and enhance the intelligence of the grid. For example, these new
26 digital relays provide operators with real-time fault distance information
27 almost instantaneously. In other words, we can better identify where on the

1 transmission system the fault occurred. The devices also provide a more
2 detailed fault record for post-event evaluation. The first phase of solid state
3 relay renewals, which dealt with substations with voltages of 345 kV or greater,
4 will be largely complete by the end of 2012. The next phase of renewals
5 focuses on voltages of 115 kV and below, and is expected to be completed by
6 the end of 2015. The small number of 161 kV and 230 kV solid state line
7 relaying replacement projects are planned to be completed by the end of 2013.

8
9 Q. PLEASE PROVIDE SPECIFIC EXAMPLES OF ASSET HEALTH PROJECTS COMPLETED
10 IN 2012 OR PLANNED FOR 2013.

11 A. As part of our effort to phase out the older relaying systems, we are replacing
12 the 230 kV line relaying at the Sheyenne substation, which is comprised of a
13 combination of older relay types. Additionally, relay upgrades at Cass County,
14 Maple River, and Red River substations were completed in 2012. All of these
15 relays were targeted for replacement due to performance issues and lack of
16 replacement parts.

17
18 Similarly, Transmission is also replacing all Westinghouse APT-series potential
19 transformers, as several APT units have failed in service, creating safety and
20 reliability concerns. Included in this effort is the replacement of APT-series
21 potential transformers at the Cass County, Red River, Prairie and Mallard
22 substations in North Dakota.

23
24 Additionally, Transmission administers an infrastructure program for wood
25 pole replacements on transmission lines. The program includes the
26 replacement of defective cross arms, anchoring, as well as wood poles.

27

1 Q. PLEASE PROVIDE A SPECIFIC EXAMPLE OF A PROJECT TO COMPLY WITH NERC
2 RELIABILITY STANDARDS.

3 A. We make investments to comply with mandatory reliability standards, which
4 include load serving and NERC contingency requirements. For example, in
5 North Dakota, Transmission is replacing fault recorder equipment at the
6 Sheyenne substation in Fargo and the Prairie substation in Grand Forks.
7 These projects are required to comply with the Midwest Reliability
8 Organization (MRO) guidelines supporting NERC standards.

9

10 Q. PLEASE DISCUSS THE CAPACITY-RELATED TRANSMISSION INVESTMENTS.

11 A. We are making significant investments in regional expansion through the
12 CapX2020 initiative. For example, we are building a new 345 kV line from a
13 new Bison substation located west of Fargo to the Monticello substation in
14 Minnesota. This line is part of a larger regional build-out meant to support
15 regional transfers, as well as support local voltages in the Red River Valley
16 area.

17

18 Additionally, to address continued load growth in the city of Fargo, we are
19 expanding the Cass County 115 kV substation to accommodate a third
20 distribution transformer. The associated distribution assets are discussed in
21 the Distribution section of this testimony.

22

23 **C. O&M Budget**

24 Q. PLEASE PROVIDE AN OVERVIEW OF THE NSPM TRANSMISSION 2013 O&M
25 BUDGET.

1 A. Transmission has budgeted \$41.8 million for ongoing construction, operation
2 and maintenance of the NSPM transmission system in 2013. This is an
3 increase of \$4.8 million or 13 percent over 2011 actual expenses.

4
5 Over 80 percent of the 2013 Transmission O&M budget is related to
6 employee and contract labor. The remainder of the 2013 O&M budget is
7 comprised primarily of regulatory fees, materials, and fleet costs. Table 5
8 shows the 2013 NSPM Transmission O&M budget by major cost category.

9
10 **Table 5**

2013 NSPM Transmission O&M Budget by Cost Category		
Cost	Budget (Millions)	Percent of Total
Internal Labor	\$25.2	60.3%
Contract Labor & Consulting	\$10.14	24.2%
Fees	\$3.51	8.4%
Materials	\$3.10	7.4%
Fleet	\$1.93	4.6%
Other	(\$2.09)	(5.0%)
Total	\$41.8	100%

11
12 Q. WHAT TYPES OF O&M ACTIVITIES ARE INCLUDED IN THE BUDGET?

13 A. The primary activities in the 2013 Transmission O&M budget include the
14 following:

- 15 • *Development of New Assets* – The design, construction, operation and
16 maintenance of new transmission lines and substations results in
17 increased O&M expenses, including the cost of temporary facilities.

- 1 • *Maintenance of Existing Assets* – To ensure continued reliability and
2 performance, we perform routine maintenance on existing assets and
3 repair damaged assets, including damage after storms.
- 4 • *Compliance* – There are expenses associated with complying with Federal
5 Energy Regulatory Commission (FERC), NERC, Midwest Reliability
6 Organization (MRO), and MISO reliability standards and requirements,
7 as well as regulatory fees assessed for the operation of the transmission
8 system.
- 9 • *Transmission Planning, Policy, and Asset Development* – We participate in
10 national and regional planning forums and stakeholder groups where
11 critical expansion plans, cost allocation, policy evolution and other key
12 issues affecting transmission owners, states and customers are
13 discussed. For example, we participate in the annual MISO
14 Transmission Expansion Plan process, which results in the
15 identification of needed projects and an in-service date to meet the
16 stated needs for the transmission line.

17
18 Q. WHAT ARE THE MAIN CAUSES OF THE INCREASE IN NSPM TRANSMISSION
19 O&M EXPENSES IN THE TEST YEAR COMPARED TO 2011 ACTUALS?

20 A. Table 6 summarizes the drivers for the increase in Transmission O&M
21 expenses in the test year.

22

1

Table 6

2013 Budget vs. 2011 Actual Expenditures		
Cost Drivers	Amounts	Total
	(Millions)	(Millions)
2011 Actual		\$37.0
Internal Labor	\$1.60	
Capital Support & New Asset Maintenance	\$1.41	
Corrosion & Vibration Mitigation	\$1.20	
Compliance Expansion	\$0.44	
Planning (CapX2020 Study Work)	\$0.35	
Other	(\$0.21)	
2013 Budget		\$41.8

2

3 Q. HOW ARE NEW CAPITAL INVESTMENTS IMPACTING THE 2013 O&M BUDGET?

4 A. We estimate approximately \$1.1 million in additional O&M to support capital
5 projects in 2013. As previously mentioned, we are investing in new
6 transmission assets to address aging infrastructure and meet system needs.
7 Under our Capital Asset Accounting Policy, which is based on the FERC
8 Uniform System of Accounts, some costs associated with the construction of
9 capital projects cannot be capitalized and must be charged as O&M costs. For
10 example, the relocation of existing equipment within a substation to
11 accommodate the new equipment and the temporary installation of mobile
12 transformers to ensure continued service during construction are charged as
13 O&M expenses.

14

15 Additionally, once these new assets are in service they require ongoing
16 maintenance and inspections to ensure that they continue to operate as
17 intended and comply with NERC requirements. As we expand the system to
18 meet demand and ensure continued reliability, the O&M support needed to

1 maintain these assets will also grow, particularly additional labor to service the
2 new assets.

3
4 Q. HOW IS MAINTENANCE OF EXISTING ASSETS IMPACTING THE BUDGET?

5 A. In addition to O&M in support of new assets, we incur O&M expenses related
6 to operating, maintaining, restoring, and analyzing our large portfolio of
7 existing transmission and substation assets. Maintenance needs increase as
8 existing assets get older, and as regulatory requirements are added or
9 strengthened. Maintenance costs are also increasing due to increases in the
10 cost of some materials.

11
12 Q. PLEASE PROVIDE AN EXAMPLE OF MATERIAL COST INCREASES.

13 A. One anticipated material cost increase concerns transmission conductor. The
14 cost increases that we have experienced since early 2011 have been just under
15 three percent, due to an advantageous sourcing contract. However, our
16 contract is expiring and prices will increase by nearly 21 percent in early 2013
17 compared to early 2011.

18
19 Q. HOW ARE INCREASED COMPLIANCE REQUIREMENTS IMPACTING THE BUDGET?

20 A. Our 2013 Transmission O&M budget includes an increase of \$0.44 million
21 related to the expansion of compliance requirements. The Company is
22 currently subject to approximately 90 mandatory NERC reliability standards,
23 which include approximately 350 specific requirements, many with additional
24 sub-requirements. As the number of requirements has increased, so too has
25 the complexity of the requirements. Often, to comply we must develop new
26 or revised processes, change the way we work in the field, and develop new
27 information or tracking systems to collect the necessary data, all of which

1 requires considerable staff resources. The compliance process has matured,
2 however, so the 2013 increase is significantly less than the \$2.4 million cost
3 increase in the 2011 test year.

4
5 Q. PLEASE PROVIDE EXAMPLES OF O&M EXPENSES RELATED TO TRANSMISSION
6 PLANNING, POLICY, AND ASSET DEVELOPMENT.

7 A. An example of the transmission planning and policy work we do is our
8 collaboration with the CapX2020 utilities to study the Canada-U.S. interface
9 transmission expansion. Through this effort, being done as part of the
10 CapX2020 Vision Team Project Study Work, many utilities are sharing costs
11 and resources to study the potential benefits of locating a high voltage
12 transmission line along the Red River Valley and into Canada. This concept
13 has been under study by the CapX2020 utilities for several years, and \$350,000
14 was budgeted at the NSPM level for 2013 to contract for resources to
15 independently validate an optimal transmission path.

16
17 Q. PLEASE PROVIDE EXAMPLES OF EFFICIENCY OR PRODUCTIVITY INITIATIVES.

18 A. Similar to the other business units, Transmission is emphasizing preventative
19 maintenance and planned asset renewal work to reduce reactive repair work.
20 Key to this effort is the identification and prioritization of equipment for
21 preventative maintenance activities. The Adaptive Reliability Centered
22 Maintenance (ARCM) program is an analytical approach developed in 2012 to
23 prioritize maintenance activities based on a set of risk factors. This approach,
24 which helps ensure Transmission O&M funds are directed to the highest
25 benefit maintenance activities, will help reduce the need for more expensive
26 reactive repairs. Ensuring assets are not maintained beyond their useful life is
27 also a key element of this effort, which includes a more aggressive asset

1 renewal approach. The asset renewal initiative will help ensure short term
2 O&M repairs are reduced in favor of long term asset renewal.

3
4 Q. ARE THERE OTHER TRANSMISSION-RELATED REVENUES AND EXPENSES
5 REFLECTED IN THE TEST YEAR?

6 A. Yes. As a transmission owner, the NSPM and NSPW collect third party
7 wholesale transmission service revenues for other uses of the NSP System
8 under both the MISO Tariff and other wholesale transmission agreements.
9 The NSP System also incurs transmission and/or ancillary charges for loads in
10 other MISO pricing zones (Otter Tail Power, Minnesota Power, ITC Midwest,
11 and Dairyland Power Cooperative). In addition, we pay third-party wholesale
12 transmission service expenses to deliver generation resources located external
13 to the NSP pricing zone to our customers. For 2013, we expect net wholesale
14 transmission revenues of approximately \$6 million.

15 16 **VI. ENERGY SUPPLY**

17 18 **A. Overview**

19 Q. PLEASE PROVIDE AN OVERVIEW OF ENERGY SUPPLY CAPITAL ADDITIONS AND
20 THE 2013 O&M BUDGET.

21 A. The Energy Supply business unit operates and maintains NSPM's non-nuclear
22 electric generating facilities in a safe, reliable, cost-effective, and
23 environmentally sound manner. We project capital additions of \$87.6 million
24 for 2012 and \$92.7 million for 2013, and a 2013 O&M budget of \$154.3
25 million for NSPM.

26

1 Through cost management and efficiency efforts, we have minimized increases
2 to O&M, with our current request representing a 2.2 percent increase over
3 2011 actual spending. The main drivers of the increase are increased use and
4 price of emissions reduction chemicals, and higher overhaul costs.

5
6 **B. Capital Investments**

7 Q. WHAT TYPES OF CAPITAL INVESTMENTS ARE BEING MADE AT THE
8 GENERATING PLANTS?

9 A. Energy Supply's investments for 2013 are focused on projects to maintain and
10 improve the performance of our existing plants. The vast majority of these
11 projects fall into one of three categories: 1) projects to improve generating
12 plant reliability; 2) projects to address aging infrastructure issues; and 3)
13 projects that improve environmental stewardship.

14
15 Q. PLEASE PROVIDE EXAMPLES OF PROJECTS TO IMPROVE RELIABILITY.

16 A. Examples of reliability-focused projects planned for 2013 include replacement
17 of the boiler reheat section and boiler water wall sections at the A.S. King
18 Plant to reduce unplanned, forced outages resulting from tube leaks in those
19 aging sections of the boiler. Examples also include replacement of Number
20 27 High Pressure Feed Water Heater (HP FWH) on Sherco Unit 2. Boiler
21 tubes tend to thin over time due to wear and corrosion. We continuously
22 monitor boiler water chemistry and tube thickness, but eventually some tubes
23 thin to the point that failures may occur. We monitor tube leaks on individual
24 generators, and seek to replace or upgrade the tubes before they fail in order
25 to reduce unplanned outages.

26

1 Q. PLEASE PROVIDE AN EXAMPLE OF A PROJECT THAT ADDRESSES AGING OR
2 OBSOLETE INFRASTRUCTURE.

3 A. Aging or obsolete infrastructure refers to equipment that has either degraded
4 through normal operation and/or has become obsolete and is no longer
5 supported. Examples of these projects planned for 2013 include: replacement
6 of the Coal Conveying Control system at the A.S. King Plant; the replacement
7 of #22 Main Station Auxiliary Transformer on Sherco Unit 2, which is at the
8 end of life; and beginning the replacement of the lower section of the boiler
9 on Sherco Unit 1, which is the original boiler section and is approaching the
10 end of life.

11

12 An example of a project that addresses equipment obsolescence is the
13 replacement of electro-hydraulic control (EHC) systems on all three turbines
14 at the Sherco Plant. The EHC system controls the amount of steam entering
15 the turbine, thereby regulating the output of the unit. The existing EHC
16 systems are obsolete and no longer supported for spare parts and replacement
17 components. This inability to readily obtain replacement parts represent a
18 significant unplanned outage risk should the existing control system
19 experience a component failure.

20

21 Q. PLEASE PROVIDE EXAMPLES OF ENVIRONMENTAL STEWARDSHIP PROJECTS.

22 A. Examples of these projects planned for 2013 include: the replacement of one
23 Selective Catalytic Reduction catalyst layer at the A.S. King Plant; the
24 modification of Scrubber Modules to reduce SO₂ emissions on Sherco Units 1
25 and 2; and the installation of mercury emission reduction systems on Sherco
26 Units 1 and 2. These investments will enable compliance with the Mercury

1 and Air Toxics Standards promulgated by the Environmental Protection
2 Agency.

3
4 Q. WILL THE PLANNED INVESTMENTS RESULT IN ANY EFFICIENCY
5 IMPROVEMENTS?

6 A. Some projects are specifically intended to improve plant efficiency by either
7 reducing auxiliary load or improving plant thermal efficiency. Examples of
8 efficiency projects include lighting retrofits and electric motor replacement
9 projects, in which the old, less efficient equipment is replaced with equipment
10 with higher efficiency, thereby reducing auxiliary load. Reductions in auxiliary
11 load generally result in fuel cost savings, which are passed on to customers.

12
13 **C. O&M Budget**

14 Q. PLEASE PROVIDE AN OVERVIEW OF THE NSPM ENERGY SUPPLY 2013 O&M
15 BUDGET.

16 A. Energy Supply has budgeted \$154.3 million for O&M in 2013. This is an
17 increase of \$3.3 million or 2.2 percent over 2011 actual expenses. As such,
18 O&M growth is approximately 1.1 percent on an annualized basis since our
19 last rate case. Although we continue to experience increases in costs for
20 emission control chemicals and face other cost pressures, we have been able to
21 partially offset these impacts through cost-management and efficiency efforts.

22
23 Approximately 65 percent of the 2013 Energy Supply O&M budget is related
24 to employee and contract labor. The remainder of the 2013 O&M budget is
25 comprised primarily of materials and commodities, including boiler tubing,
26 concrete, valves and fittings, and emissions reduction chemicals. Table 7
27 shows the 2013 NSPM Energy Supply O&M budget by major cost category.

1
2

Table 7

2013 NSPM Energy Supply O&M Budget by Cost Category		
Cost	Budget (Millions)	Percent of Total
Internal Labor	\$75.7	49%
Contract Labor	\$27.7	18%
Materials	\$26.1	17%
Commodities	\$15.4	10%
Other	\$9.4	6%
Total	\$154.3	100%

3

4 Q. WHAT TYPES OF O&M ACTIVITIES ARE INCLUDED IN THE BUDGET?

5 A. The 2013 Energy Supply O&M budget is largely devoted to the operation and
6 maintenance of existing assets. For example, significant labor is required to
7 operate and maintain our generating plants on a day to day basis, including
8 unloading coal trains, operating power plant equipment from control rooms,
9 performing checks on equipment operation parameters, and performing
10 routine maintenance, such as repairing pumps and valves. Additionally, we
11 regularly use chemicals such as lime, activated carbon, and ammonia to reduce
12 emissions at the plants.

13

14 Q. WHAT ARE THE MAIN CAUSES OF THE INCREASE IN O&M EXPENSES SINCE
15 2011?

16 A. Operations employees have been vigilant in managing O&M expenses to
17 result in minimal increases. The primary drivers of the 2.2 percent increase
18 since 2011 are: 1) increasing environmental compliance costs related to
19 emission control chemicals; 2) increase in overhaul costs due to cost sharing in
20 2011, which lowered 2011 costs; and 3) a wage increase, which is partially

1 offset by staffing reductions at the Riverside and Sherco plants. Table 8
2 summarizes the drivers for the increase in 2013 O&M expenses.

3
4 **Table 8**

2013 Budget vs. 2011 Actual Expenditures		
Cost Drivers	Amounts	Total
	(Millions)	(Millions)
2011 Actual		\$151.0
Commodities	\$5.24	
Overhauls	\$4.05	
Base Labor	\$3.24	
Base Non-Labor	(\$1.05)	
Projects	(\$8.18)	
2013 Budget		\$154.3

5
6 Q. PLEASE EXPLAIN THE INCREASE IN COMMODITY COSTS.

7 A. Commodity costs include chemicals used for emission control purposes, as
8 well as other production purposes, including chemicals used for boiler water
9 treatment and high pressure gases used in generating equipment. The primary
10 driver of the increased commodity costs in 2013 is increased usage of
11 chemicals for emission control purposes as compared to 2011, as well as
12 increased cost per ton of lime and ammonia. We optimize our equipment to
13 reduce chemical usage and implemented sourcing initiatives to reduce
14 purchase costs, but these initiatives have not been sufficient to offset the
15 increases.

16
17 Lime and mercury sorbent usage at Sherco Unit 3 was lower than normal in
18 2011 due to the Unit 3 overhaul and subsequent turbine failure, which resulted
19 in the unit being offline during the fourth quarter of 2011. Usage at Sherco
20 Unit 3 is expected to return to normal levels during 2013, resulting in

1 approximately \$2.3 million additional chemical costs in 2013 as compared to
2 2011.

3
4 Additionally, in 2011, A.S. King Plant was operating the mercury removal
5 system in test mode, resulting in significantly less sorbent usage than is
6 expected in 2013. Use of lime and ammonia at A.S. King Plant was also lower
7 in 2011 as a result of less runtime than budgeted for in 2013. Chemical usage
8 at A.S. King Plant is expected to result in approximately \$1.9 million of
9 additional costs in 2013.

10
11 Q. WHAT IS THE CURRENT STATUS OF SHERCO 3?

12 A. In November 2011, there was a significant failure at Sherco 3, which led to an
13 extended outage. The event occurred at the end of a regularly scheduled
14 overhaul outage, which included completion of an uprate project for Unit 3.
15 During the testing procedure, specifically the overspeed test, the turbine and
16 generator instrumentation reported vibration levels significantly above normal,
17 and the unit was shut down. The vibration damaged many of the steam, oil,
18 and hydrogen seals in the turbines and generator, and caused a fire.

19
20 We have made significant progress in assessing the extent of the damage and
21 determining the scope of work to repair or replace the various components
22 affected by the event. We have developed and implemented plans and
23 schedules for the various restoration activities and those activities are well
24 underway. Based on the progress to-date and the remaining restoration
25 activities and schedule, we continue to target return of the unit to service
26 around the end of the first quarter of 2013.

27

1 Q. DOES THE 2013 BUDGET INCLUDE COSTS FOR THE REPAIRS AT SHERCO 3?

2 A. No. Most of the cost of the repair work is expected to be covered by
3 insurance payments. The Company's insurance deductible was recorded in
4 2011, and is not included in the 2013 budget. While the plant is offline,
5 however, we elected to proactively take care of some additional work to avoid
6 longer plant outages in the future. Specifically, the Sherco 3 cooling towers
7 were scheduled to be replaced in 2014 as part of the 2014 planned outage.
8 The cooling tower project would have extended the outage by approximately
9 four weeks. By performing this work while the plant is being repaired, the
10 future outage will be limited to the standard six to eight week period.
11 Additionally, while assessments of the structural integrity of the cooling towers
12 concluded that the existing towers would last until the scheduled replacement
13 in 2014, that conclusion was based on the towers maintaining normal
14 operation. As a result of the Sherco 3 turbine failure, the towers would have
15 remained dry (non-operational) until the Unit 3 restoration was complete,
16 which put the towers at risk for dry rot. Based on these two factors, we made
17 the decision to complete the project in 2013. Thus, the costs of this project
18 are included in the 2013 budget.

19

20 Q. PLEASE DESCRIBE THE INCREASE IN OVERHAUL COSTS FOR PLANNED
21 OUTAGES.

22 A. Planned overhauls, when the unit is shut down for scheduled maintenance
23 activities, are managed so that costs are relatively constant each year. From
24 2011 to 2013, total costs for overhauls increased \$4 million mostly due to the
25 sharing of costs for the Sherco Unit 3 overhaul in 2011 with Southern
26 Minnesota Municipal Power Agency, a co-owner of Sherco Unit 3, which
27 resulted in lower overhaul costs in 2011.

1 We manage overhauls by staggering units and work to be done to avoid
2 significant variation in annual overhaul costs. For example, in 2013, King
3 overhaul costs increased while Black Dog costs have decreased, and a 2013
4 combustion inspection on an Angus Anson combustion turbine is
5 approximately the same cost as a similar inspection in 2011 at Inver Hills. As
6 the result of our overhaul and project planning and prioritization process, we
7 are able to manage annual O&M spending on these items while also
8 maintaining safe and reliable operations.

9
10 Q. PLEASE DISCUSS THE COMPANY'S EFFORTS TO MITIGATE LABOR COST
11 INCREASES.

12 A. Our base labor costs are increasing by \$3.24 million primarily due to an
13 employee wage increase. Offsetting a portion of this increase is a reduction in
14 overall headcount at our Riverside and Sherco plants. Riverside is continuing
15 to reduce employees through attrition after its conversion from coal to gas.
16 The employees are utilized in site cleanup activities and travel for work at
17 other facilities. Sherco has implemented technology and productivity
18 improvements, which are also allowing them to reduce employees in certain
19 areas through attrition.

20
21 Q. PLEASE PROVIDE EXAMPLES OF EFFICIENCY OR PRODUCTIVITY INITIATIVES.

22 A. We are aggressive in our efforts to efficiently use O&M while improving
23 productivity and performance. In 2012, Energy Supply added new
24 performance metrics to drive employee engagement in operational excellence,
25 productivity improvement and cost savings. For example, we added Emission
26 Intensity metrics for NOx and SO2, which focus on optimizing equipment
27 and operator performance to reduce emissions, while also reducing the costs

1 of achieving the emissions reductions, particularly through optimized use of
2 chemicals. As in the other business units, Energy Supply is also emphasizing
3 preventative work and has a maintenance work productivity metric to track
4 the percent of preventative maintenance hours worked against corrective and
5 breakdown maintenance hours.

7 **VII. CONCLUSION**

8
9 Q. PLEASE SUMMARIZE YOUR TESTIMONY.

10 A. Our new 2012 and 2013 capital additions for NSPM of \$923.3 million are part
11 of a sound plan to address aging infrastructure, localized load growth, and
12 regulatory requirements, as well as maintain and improve reliability in North
13 Dakota. These investments are necessary to allow us to continue to maintain
14 the high quality, safe, and reliable service our customers demand and expect.
15 To support these capital investments and keep our existing assets performing
16 well, we have budgeted \$302.9 million for NSPM O&M in 2013. We have
17 been diligent in managing O&M costs despite facing cost pressures, such as
18 rising costs for materials and services and believe the costs are reasonable.

19
20 Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?


21 A. Yes, it does.

1 STATE OF NORTH DAKOTA
2 BEFORE THE
3 PUBLIC SERVICE COMMISSION
4
5

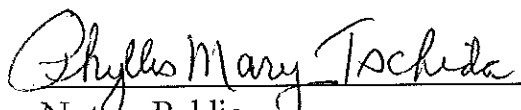
6 In the Matter of the Application of Northern)
7 States Power Company, a Minnesota Corporation)
8 For Authority to Increase Rates for Electric Service) Case No. PU-12-____
9 in North Dakota)

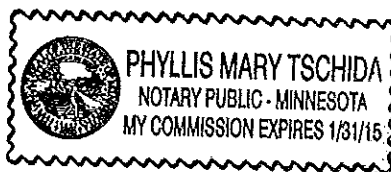
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12
13 **AFFIDAVIT OF**
14 **Stephen R. Foss**
15

16
17 I, the undersigned, being duly sworn, depose and say that the foregoing is
18 the Direct Testimony of the undersigned, and that such Direct Testimony and the
19 exhibits or schedules sponsored by me to the best of my knowledge, information
20 and belief, are true, correct, accurate and complete, and I hereby adopt said
21 testimony as if given by me in formal hearing, under oath.
22

23
24 
25 _____
26 Stephen R. Foss
27

28
29
30 Subscribed and sworn to before me, this 11 day of December, 2012.
31

32
33 
34 Notary Public
35



Statement of Qualifications Stephen R. Foss

Education:

Bachelor of Business Administration – 1982
University of Minnesota, Duluth

Employment:

Northern States Power Company - Minnesota

2012 – Present Vice President, Distribution Operations NSPM
2006 – 2011 Director, Op Co Business Operations

Xcel Energy Services Inc.

2004 – 2006 Director, Sourcing Services
2001 – 2004 Managing Director, Strategic Sourcing
2000 – 2001 Director, Supply Chain Logistics

Northern States Power Company

1998 – 2000 Manager, Warehousing and Distribution
1997 – 1998 Manager, Business and Technical Support
1994 – 1997 Director, Customer Service System Project
1991 – 1994 Manager, Revenue Requirements
1990 – 1991 Manager, Financial Analysis
1989 – 1990 Manager, Departmental and Capital Budgets
1988 – 1989 Administrator, Regional Business Operations
1987 – 1988 Senior Electric Financial Analyst
1982 – 1987 Depreciation Analyst (various positions)