Direct Testimony and Schedules
Richard R. Schrubbe

Before the Minnesota Public Utilities Commission
State of Minnesota

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

Docket No. E002/GR-19-564
Exhibit___(RRS-1)

Pension and Benefits Expense

November 1, 2019

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Terms and Acronyms

ACM	Aggregate Cost Method
Commission	Minnesota Public Utilities Commission
Company	Northern States Power Company – Minnesota
DB	Defined Benefit
EEI	Edison Electric Institute
ERISA	Employee Retirement Income Security Act
EROA	Expected Return on Assets
FAS	Statement of Financial Accounting Standard
FASB	Financial Accounting Standards Board
FERC	Federal Energy Regulatory Commission
IBNR	Incurred But Not Reported
IRC	Internal Revenue Code
LTD	Long-Term Disability
NSPM	Northern States Power Company – Minnesota
PBGC	Pension Benefit Guaranty Corporation
PBO	Pension Benefit Obligation
PTAC	Pension Trust Administrative Committee
PVFB	Present Value of Future Benefits
Xcel Energy	Xcel Energy Inc.
XEPP	Xcel Energy Pension Plan
XES	Xcel Energy Services Inc.

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND OCCUPATION.

A. My name is Richard Schrubbe. I am the Area Vice-President of Financial Analysis and Planning for Xcel Energy Services Inc. (XES), which provides services to Northern States Power Company – Minnesota (NSPM or the Company).

Q. PLEASE SUMMARIZE YOUR QUALIFICATIONS AND EXPERIENCE.

A. As Area Vice-President of Financial Analysis and Planning, I am responsible for overseeing the business area leaders of Energy Supply, Transmission, Distribution, Gas Engineering & Operations and Corporate Services with respect to budget planning, reporting, and analysis. I oversee the accounting for all employee benefits programs, playing a liaison role with the Human Resources department, external actuaries, and senior management with benefit fiduciary roles. I am also responsible for coordinating the benefits operations and maintenance (O&M) and capital budgeting and forecasting processes, as well as the monthly analysis of actual results against these budgets and forecasts. A summary of my qualifications, duties and responsibilities is included as Exhibit___(RRS-1), Schedule 1.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I discuss the pension plans and other non-cash benefits the Company offers to its eligible employees and their families, and I present the costs of these benefits in the multi-year rate plan period, which is the period from 2020-2022. In addition, I discuss pension cost accounting principles and explain

how the Company's pension expense necessarily reflects the cumulative effect of pension asset gain and loss experiences.

I also support the Company's request to include the net rate base increase associated with its benefit costs. This net rate base increase reflects the increase associated with the prepaid pension asset, although that amount is reduced to some extent by the accrued unfunded liability costs associated with the retiree medical and post-employment benefit costs and accumulated deferred income taxes. I provide a detailed discussion of the accounting and ratemaking treatment of these costs, and I demonstrate why this ratemaking treatment is reasonable.

Q. ARE THERE OTHER TOPICS COVERED IN YOUR TESTIMONY OR CHANGES SINCE YOUR LAST RATE CASE THAT YOU WOULD LIKE TO HIGHLIGHT?

A. Yes. First, in our last two rate cases the Commission approved a cap and deferral mechanism for XES pension expense, as well as a deferral and amortization mechanism for NSPM pension expense[1]. I quantify the regulatory assets associated with these deferral mechanisms and explain that the Company proposes to continue using them to set rates in this current case. In addition, the Company proposes to amortize the regulatory asset from the XES pension cap over the three years of the multi-year rate plan. Company witnesses Mr. Chamberlain and Mr. Halama discuss the appropriateness of this three-year amortization period.

[1] The two deferral mechanisms are necessary because the XES and NSPM pension plans use different accounting methods. I discuss these accounting methods in detail in Section III of my testimony.

Second, in Order Point 6 in Docket No. E002/GR-13-868, the Commission approved the use of a five-year average discount rate for our XES pension plan under Statement of Financial Accounting Standard (FAS) 87. The Company still believes that it is appropriate to use the discount rate established using a single-year bond-matching study, and we reserve the right to propose such a study as the basis for setting the proper discount rate in future cases. However, to reduce the potential number of disputed issues in this case we have used a five-year average discount rate as ordered by the Commission in our 2013 rate case. I discuss the discount rate and other pension assumptions in detail in Section IV of my testimony.

Finally, while I do not discuss the 2008 market loss at the level of detail provided in our last two cases, in Section III of my testimony I discuss pension accounting in detail, including the phase in and amortization of pension asset gain and loss experiences.

Q. IS ANY OTHER COMPANY WITNESS ADDRESSING PENSION AND BENEFIT ISSUES?

A. Yes. Company witness Ms. Ruth K. Lowenthal discusses the cash compensation offered by the Company, as well as the steps the Company has taken to help mitigate pension and benefit cost increases. In addition, Company witness Mr. Evan Inglis discusses the appropriateness of the Company's pension investment strategy.

Q. WHAT ORDER POINTS FROM COMMISSION ORDERS DO YOU ADDRESS IN YOUR TESTIMONY?

A. Table 1 below lists the order points I respond to from Commission Orders in rate cases (Docket No. E002/GR-13-868) and (Docket No. E002/GR-12-961). Table 1 lists the page numbers of my testimony where each is addressed.

Table 1
Order Point Requirements

Docket No. Order Point	Requirement	Page Numbers
13-868 7	The Company shall apply the rolling five-year average FAS 87 discount rate when determining the XES Plan cost subject to deferral (or reversal) in subsequent years (i.e., non–rate-case test years) as the 2012 mitigation established in Docket No. E002/GR-12-961 continues.	p. 36
13-868 10	The qualified pension asset and associated deferred-tax amounts shall be included in rate base. For rate-base purposes, the pension asset is to reflect the cumulative difference between actual cash deposits made by the Company reduced by the recognized qualified pension cost determined under the ACM/FAS 87 methods since plan inception, not to exceed the Company's filed request. The Company shall provide a detailed compliance filing which explains the calculated amount within ten days of the Commission's decision.	p. 63 Schedule 13
13-868 13	The discount rate used to calculate retiree medical benefit costs for ratemaking purposes shall be set to equal 5.08%, the five-year average of the FAS 106-based discount rates.	p.51-53
13-868 14	Any amount by which the qualified pension expense allowed in rates exceeds future years' qualified pension expense (calculated using the Commission-approved discount-rate point of reference) the Company shall apply toward the recovery of the accumulated deferred XES Plan costs. "Future years" includes 2015, and each subsequent year's qualified pension expense if not a rate-case test year. The recoverable XES Plan expense amount shall be calculated using the proximate measurement date appropriate for each operating year (12/31/2013 for 2014; 12/31/2014 for 2015, etc.) until the next rate case. The Company shall file annual compliance reports which provide its pension plans' cost-calculation reports, the XES Plan accumulated deferred balance, and the excess rate-level recovery applied toward satisfying the deferral. Deferred amounts shall not be included in rate base.	p. 50-51 Schedule 11
12-961 37	The Company shall not be permitted to include a compensating return on the pension's unamortized asset loss balance.	p. 49
12-961 40	In future rate case filings, Xcel shall include for each pension plan schedules of its 2008 market loss amortization, for the entire amortization period, until the 2008 market loss amortization has been extinguished.	P. 19 Schedule 3

Q. HOW IS THE REMAINDER OF YOUR TESTIMONY ORGANIZED?

A. I present the remainder of my testimony in the following sections:

- Section II, *Pension and Benefits Overview*, provides a summary of the pension and benefit costs included in our multi-year rate request.
- Section III, *Pension Cost Accounting*, discusses pension accounting principles and how the Company calculates its pension expense.
- Section IV, *Pension Assumptions*, presents the primary assumptions used to calculate our pension costs in this case.
- Section V, *Qualified Pension and 401(k) Match Costs*, quantifies the test year and multi-year rate plan expense amounts.
- Section VI, *Retiree Medical and FAS 112 Long-Term Disability Benefits*, presents information and costs related to our request for recovery of post-retirement healthcare and long-term disability benefits.
- Section VII, *Benefit Rate Base Assets and Liabilities*, discusses ratemaking treatment of both the Company's prepaid benefit costs and unfunded accrued liability costs.
- Section VIII, *Active Health and Welfare Costs*, provides details related to the active healthcare costs included in our rate request.
- Section IX, *Workers' Compensation FERC 925 Costs*, provides details related to the workers' compensation costs included in our rate request.
- Section X, *Conclusion*, summarizes the Company's request for recovery of pension and benefit-related costs.

II. PENSION AND BENEFITS OVERVIEW

Q. WHAT TYPES OF COSTS ARE INCLUDED IN THE COMPANY'S PENSION AND BENEFITS REQUEST?

A. With the exception of workers' compensation costs discussed in Section IX of my testimony, our pension and benefits costs are recorded in FERC Account 926. The Company has grouped its pension and benefit costs into three categories based on similar budgeting practices and cost recognition requirements. The three categories are: (1) actuarial costs; (2) health and welfare costs; and (3) other retirement costs.

Q. TO PROVIDE CLARITY, PLEASE DESCRIBE HOW DOLLAR AMOUNTS IN YOUR TESTIMONY ARE PRESENTED.

A. Unless specifically indicated otherwise, all of the dollar values presented in my testimony are presented at the NSPM electric, state of Minnesota level.

Q. PLEASE PROVIDE A SUMMARY OF THE PENSION AND BENEFIT COSTS INCLUDED IN THE COMPANY'S MULTI-YEAR RATE REQUEST.

A. Table 2 below sets forth the benefit amounts approved in our 2013 rate case, the forecasted 2019 expense amounts, and the forecast amounts for each year of the multi-year rate plan, (the 2015 rate case was settled on an overall revenue requirements basis, so there was no Commission approval of specific benefit amounts).

Table 2
Pension and Benefit Expense Summary ($)

FERC Account 926 Pension and Benefit Costs for NSPM Electric O&M, State of Minnesota					
FERC 926 Benefit Type	**Amount Approved in Docket No. 13-868**	**2019 Forecast**	**2020 Test Year**	**2021 Plan Year**	**2022 Plan Year**
Actuarial Costs					
Qualified Pension (1)	20,923,341	21,398,739	20,956,503	20,378,317	19,780,720
Deferred Pension Amortization			5,881,632	5,881,632	5,881,632
Nonqualified Pension		846,478			
FAS 106 Retiree Medical (2)	2,202,778	1,103,990	1,266,772	1,138,526	1,040,350
FAS 112 LTD	171,948	(73,979)	110,266	102,611	96,468
Total Actuarial Costs	**23,298,067**	**23,303,673**	**28,215,172**	**27,501,086**	**26,799,170**
Health & Welfare					
Active Health Care	32,207,553	33,530,876	34,547,977	35,966,484	37,505,915
Misc Ben Programs, Life, LTD	3,135,796	4,014,610	3,875,486	3,925,296	3,992,836
Total Health & Welfare	**35,343,349**	**37,545,486**	**38,423,462**	**39,886,575**	**41,489,982**
Other Retirement					
401(k) Match	8,012,615	9,259,666	9,313,718	9,553,390	9,809,095
Deferred Comp Match	32,807	47,646	52,453	56,301	60,380
NMC Employer Ret. Contr.	763,161	945,369	816,918	840,806	865,425
Ret. & Comp Consulting	673,136	544,143	487,355	487,366	488,222
Total Other Retirement	**9,481,719**	**10,768,377**	**10,670,443**	**10,937,862**	**11,223,122**
Total FERC 926	**68,123,136**	**71,617,536**	**77,309,078**	**78,325,523**	**79,512,274**

(1) Reflects NSPM calculated under the Aggregate Cost Method using a 20 year amortization. XES amount calculated using the 5-year average discount rate and the amount (deferred) / amortized resulting from XES pension costs being above or below the 2011 cap amount approved by the Commission in Docket No. E002/GR-12-961 and continued in Docket No. E002/GR-13-868. For 2020-2022 the Company has compared the amount to the 2019 forecasted expense, which is the amount that the company is seeking to reset the cap to in this rate filing.

(2) Calculated using the 5-year average discount rate.

Q. IS THE COMPANY SEEKING TO RECOVER THE FORECASTED PENSION AND BENEFITS EXPENSE AS SHOWN IN TABLE 2 AS PART OF ITS MULTI-YEAR RATE PLAN?

A. Yes. Company witness Mr. Benjamin C. Halama has incorporated the forecasted amounts into the 2020 test year and the 2021 and 2022 plan year revenue requirements. As discussed in detail throughout my testimony, our forecasts of pension and benefit costs included in FERC Account 926 are formulaic, calculated in accordance with accounting rules and standards, based on actuarial assumptions specific to the Company, and in some cases reflect specific regulatory treatment applied in prior Commission Orders.

Q. HOW DO THE AMOUNTS OF PENSION AND BENEFIT EXPENSE IN 2020, 2021, AND 2022 COMPARE TO THE ACTUAL AMOUNTS INCURRED IN PRIOR YEARS?

A. Exhibit___(RRS-1), Schedule 2 to my testimony contains a comparison of the pension and benefit expense amounts in 2020-2022 to the amounts of actual expense in prior years and the forecasted amount for 2019.

III. PENSION COST ACCOUNTING

Q. WHAT TOPIC DO YOU DISCUSS IN THIS SECTION OF YOUR TESTIMONY?

A. In this section I discuss pension accounting principles and describe how the Company calculates its test year pension expense.

Q. IN ORDER TO ESTABLISH THE CONTEXT FOR YOUR DISCUSSION OF THE CALCULATION OF PENSION EXPENSE, PLEASE DESCRIBE THE QUALIFIED PENSION PLANS THE COMPANY OFFERS.

A. The Company has two qualified pension plans: the NSPM Plan and the XES Plan. Employees of NSPM are eligible to participate in the NSPM Plan; employees of our service company subsidiary, XES, are eligible to participate in the XES Plan.

Q. ARE THE PENSION COSTS ATTRIBUTABLE TO EACH PLAN ACCOUNTED FOR IN THE SAME WAY?

A. No. Pension costs under the NSPM Plan are determined under the Aggregate Cost Method (ACM), whereas pension costs for the XES Plan are determined in accordance with FAS 87.[2] The history of the Company's use of these two different accounting methods is explained on page 21 and as I explain below; the ultimate goal of both methods is the same – to provide an actuarially sound basis to calculate and recover over the course of an employee's career the amount of money that will be necessary to satisfy the Company's pension obligation to that employee. In effect, both methods allow the Company to reflect a current expense associated with a future liability.

A. The Nature of Pension Expense

Q. IS PENSION EXPENSE SIMPLY A CASH OUTLAY IN THE TEST YEAR, LIKE MANY OTHER COMPONENTS OF OPERATION AND MAINTENANCE EXPENSE?

A. No. Pension expense represents an accrual for a future liability rather than the cash to pay benefits in a given year. Thus, pension expense is more similar to our nuclear decommissioning accrual, which is an expense in our cost of service, than it is to, say, contractor expense for our vegetation management, which more closely represents cash that flows out the door in a given year.

[2] In 2009 FAS 87 was renamed Accounting Standards Codification 715-30, but I will continue to refer to the standard in this testimony as FAS 87 for ease of reference.

Q. WHY IS THE DISTINCTION BETWEEN A PRESENT ACCRUAL AND A PRESENT CASH OUTLAY IMPORTANT?

A. A more current cash outlay, such as vegetation management (we still use accrual accounting for this cost), is not materially affected by a number of assumptions about longer term future conditions, but only by timing differences in the billing for the costs. In contrast, the current accrual for a substantial and distant future liability is affected by both past events and future forecasts. We must know what happened in the past and must have a forecast of what will happen in the future in order to derive an accurate measure of the current year expense associated with that future liability.

Q. WHY ARE PAST EVENTS TAKEN INTO CONSIDERATION FOR PURPOSES OF CALCULATING PENSION EXPENSE?

A. A fundamental component of pension expense is the experience from prior years. That is, the current year's pension expense is determined by knowing the existing value of the assets in the trust, as well as the forecasted future liability. To the extent the existing value of the assets is higher than initially forecasted, the level of expense is reduced, as there is less future cost to be recognized in the current period. To the extent the existing value of the assets is lower than initially forecast, then the expense level is higher.

Q. WHAT IS THE PROCESS FOR TAKING THE PAST EVENTS INTO ACCOUNT?

A. The elements used to calculate pension costs are established at the beginning of each year based on actuarial studies that account for factors such as the expected salary increases, expected mortality rates, the Expected Return on Assets (EROA), the discount rate and other factors. At the end of the year,

the assumptions are trued up to actual experience, and the differences give rise to gains or losses.

Q. WHY IS IT NECESSARY TO TRUE-UP THE PROJECTIONS TO ACTUAL EXPERIENCE?

A. The Company makes projections so that it can reflect the most accurate forward-looking level of pension expense on its income statement. For example, our projection of future pension liability is based on our best estimate of how long employees will stay with the Company because pension benefits are designed to grow with years of service. But circumstances change over the course of a year and the assumptions we made at the beginning of the year may have changed. To make our pension expense projections for the following year as accurate as possible, we incorporate the differences between the projections and actual experience from the prior years in our calculation of annual pension expense.

Q. WHAT DO YOU MEAN WHEN YOU SAY THAT THE COMPANY ACCOUNTS FOR THE CHANGES THAT HAVE OCCURRED?

A. Pension accounting systematically tracks the differences between the Year 1 forecast assumptions and the Year 1 actual experience, and then it includes a portion of that difference into the Year 2 pension expense as a gain or loss. (I explain in the next part of my testimony why only a portion is incorporated into the Year 2 pension expense calculation.) Deviations that reduce the level of the Present Value of Future Benefits (PVFB) are gains. Deviations that increase the PVFB are losses. The treatment of cumulative gain and loss experiences is a key component of the annual pension expense calculation, as I will discuss in the next subsection of my testimony.

B. Treatment of Gain and Loss Experiences

Q. WHAT FOUNDATIONAL CONCEPTS ARE NECESSARY TO UNDERSTAND HOW GAIN AND LOSS EXPERIENCES ARE INCORPORATED INTO THE CALCULATION OF CURRENT PENSION EXPENSE?

A. The first concept is that asset gains and losses must be distinguished from liability gains and losses. I will explain below the difference between those types of gains and losses.

The second concept involves the phase-in of asset gains and losses. As I will discuss in more detail below, asset gains and losses are phased into an amortization "pool," for lack of a better term, over a five-year period. Liability gains and losses are not phased in, but instead are placed into the amortization pool in a single year.

The third concept involves amortization. FAS 87 asset and liability gains and losses that enter the amortization pool are amortized over the remaining service lives of existing employees if they fall outside a "corridor." If the FAS 87 gains or losses are within the corridor, they are not amortized. I will discuss the corridor and the mechanics of the amortization in more detail below. ACM gains and losses are treated a bit differently, but the concepts are similar. As with FAS 87, asset gains and losses are phased in over a five-year period. After accounting for the phase-in of asset gains and losses, the Company calculates the difference between the market-related value of the pension plan assets and the PVFB owed by the Company, and the difference is spread over the remaining service lives of existing employees. As I will explain below, this is not an amortization in the same sense as the FAS 87

amortization, but it achieves similar results in that it results in the spreading of unrecognized gains and losses over a period of years.

Q. STARTING WITH THE FIRST CONCEPT YOU MENTIONED, PLEASE EXPLAIN THE DISTINCTION BETWEEN ASSET GAINS AND LOSSES AND LIABILITY GAINS AND LOSSES.

A. Asset gains or losses arise when the actual returns on the pension trust assets in a given year are greater than or lesser than the expected return on those assets. Suppose, for example, that the plan expects a 7 percent return on its pension trust assets, which total $1 billion. The expected return for that year would be $70 million. If the actual return in that year is 9 percent, the asset gain will be $20 million. Of course, the opposite can also occur. If the expected return is 7 percent and the actual return on the assets is 5 percent, the plan suffers a $20 million asset loss.

Liability gains and losses arise when the other components of pension expense differ from expectations. Those components include such things as the discount rate, the expected number of retirements, and wage increases. For example, if the Company assumes a 4 percent discount rate at the beginning of the year but the actual discount rate measured at year end for the next year turns out to be 5 percent, the Company will have a liability gain because the higher discount rate reduces the amount the Company must set aside to satisfy future pension liabilities.

Q. IS THE DISTINCTION BETWEEN ASSET GAINS AND LOSSES AND LIABILITY GAINS AND LOSSES IMPORTANT?

A. Yes. The distinction is important because, as I will discuss in more detail below, the asset gains and losses are phased in over time, whereas the liability gains and losses are not. Therefore, they must be tracked separately.

Q. HAVE YOU PROVIDED ANY EXAMPLES OF THE DISTINCTION BETWEEN ASSET GAINS AND LOSSES AND LIABILITY GAINS AND LOSSES?

A. Yes. Exhibit___(RRS-1), Schedule 3 shows the asset gains and losses and the liability gains and losses from 2008 to 2018.

Q. WHEN THE COMPANY HAS ASSET GAINS OR LIABILITY GAINS, DOES IT WITHDRAW THOSE AMOUNTS FROM THE TRUST AND TREAT THEM AS EARNINGS?

A. No. Federal law requires that all of the gains and losses stay within the pension trusts, which means that they affect the amount of pension expense in subsequent years. Generally speaking, if there is an asset or liability gain, it reduces the Company's pension expense in the following years. If there is an asset or liability loss, it increases pension expense in the following years. Thus, the Company treats gains and losses symmetrically in the sense that both must remain in the pension trust and both affect future pension expense.

Q. TURNING TO THE SECOND CONCEPT, PLEASE EXPLAIN WHAT YOU MEAN BY THE "PHASE IN" OF GAINS OR LOSSES.

A. The term "phase in" is used to describe the process of moving asset gains or losses into an amortization pool. Under FAS 87 and the ACM, the asset gains or losses are incorporated into the calculation of pension expense over a period of five years. Thus, 20 percent of a gain or loss is phased into the amortization pool during the first year after the gain or loss occurs, another 20

percent is phased into the amortization pool during the second year after the gain or loss occurs, and so forth until the fifth year, when the full amount of the gain or loss is phased in. The portion of gains and losses that enter the amortization pool are then amortized over a specific period of years if they satisfy the criteria I discuss below. Unlike asset gains or losses, liability gains and losses are not phased in.

Q. WHY ARE ASSET GAINS AND LOSSES PHASED IN BUT NOT LIABILITY GAINS AND LOSSES?

A. The assumptions used to establish pension liability (e.g., mortality rates, discount rates, etc.) typically do not vary greatly from year to year, and therefore, the drafters of FAS 87 did not consider it necessary to require the phase-in of liability gains and losses. In contrast, the market returns on pension fund assets can vary greatly from year to year. Because of the effects that such volatility would have on businesses' income statements, the drafters of FAS 87 decided that it was appropriate to phase-in market gains and losses.

Q. ARE EACH YEAR'S GAINS OR LOSSES CONSIDERED IN ISOLATION?

A. No. After the phase-in is completed, the current year's gains and losses are aggregated with the previously accumulated gains and losses.

Q. PLEASE DISCUSS THE THIRD CONCEPT YOU MENTIONED – THE AMORTIZATION OF GAINS AND LOSSES.

A. In addition to phasing the asset gains or losses into the amortization pool, the Company must undertake an analysis to determine whether it will actually amortize those gains or losses.

Q. HOW DOES THE COMPANY DETERMINE WHETHER IT WILL AMORTIZE GAINS OR LOSSES?

A. It depends on which plan is under review, because the analysis for FAS 87 is not the same as the analysis for the ACM. For FAS 87, which governs the XES Plan, the Company aggregates its current year's gains or losses with the other accumulated gains or losses to calculate a net unamortized gain or loss. That net unamortized gain or loss is then compared to the present value of the projected benefit obligation (PBO) and to the market-related value of the assets in the pension trust. If the net unamortized gain or loss is outside a 10-percent corridor – that is, if it is more than 10 percent of the greater of the PBO or the market-related value of the trust assets – the Company must amortize that net gain or loss. If the net unamortized gain and loss is within the corridor, amortization does not occur.

If amortization of the unrecognized gains or losses is required, the amortization amount is equal to the amount of the unrecognized gain or loss in excess of the corridor divided by the average remaining future service of the active participants in the plan. For the Company's FAS 87 plan this is approximately 11 years.

For the ACM, which governs the NSPM Plan, the Company simply compares the market-related value of the pension trust assets to the PVFB. If the market-related value of the assets is greater than the PVFB, the plan is overfunded and there is no pension expense. Thus, there is nothing to be amortized. If the market value is less than the PVFB, the plan is underfunded, which means there is pension expense that is amortized over the remaining service lives of the employees within the actuarial formula.

Note, however, that I am using the term "amortization" as a type of shorthand insofar as the ACM is concerned. The difference between the market value of trust assets and the PVFB is not truly amortized in the sense that the amount is established in Year 1 and then that amount is fixed and recovered according to a schedule that provides for annual payments over the next several years. Instead, the Company undertakes the following process each year:

1) it calculates the difference between the market-related value of the assets and the PVFB;
2) if the PVFB exceeds the market-related value, the Company calculates the number of years over which to recover the difference; and
3) the difference is divided by the number of years to determine the amount of pension expense that would need to be recovered in the current year in order to fund the shortfall.

In Year 2, however, this entire process is repeated, and the Company comes up with a new shortfall amount and a new period over which to fund it. The amount and the schedule from Year 1 are no longer relevant, because the Year 2 calculation "resets" the amount and the period over which the amount is to be funded.

In short, prior years' experience, whether positive or negative, is incorporated into the calculation of the current period recognition of pension expense. Exhibit___(RRS-1), Schedule 4 contains a decision tree for FAS 87 and a decision tree for the ACM. Both show the process for determining whether to amortize gains or losses.

Q. ORDER POINT 40 OF THE COMMISSION'S SEPTEMBER 3, 2013 ORDER IN DOCKET NO. E002/GR-12-961 IS RELATED TO PRIOR PERIOD GAINS AND LOSSES. IT REQUIRES THE COMPANY TO "INCLUDE FOR EACH PENSION PLAN SCHEDULES OF ITS 2008 MARKET LOSS AMORTIZATION, UNTIL THE 2008 MARKET LOSS AMORTIZATION HAS BEEN EXTINGUISHED." IS THE COMPANY PROVIDING THAT INFORMATION?

A. Yes. Exhibit___(RRS-1), Schedule 3 shows the estimated 2008 Market Loss amortization by year and plan, as well as the Company's experience in each year since 2008. Schedule 3 also depicts the phase-in of the asset gains or losses, as well as the amortization of the net unamortized balances of gains and losses, with the acknowledgement that our effort to break apart the NSPM Plan provides a similar look but against a different construct than the look at the FAS 87 tracked gains and losses.

Q. WHY DOES SCHEDULE 3 NOT SHOW THE 2008 MARKET LOSS AMORTIZATION UNTIL IT HAS BEEN EXTINGUISHED, AS DIRECTED BY ORDER POINT 40?

A. In accordance with the requirements of ACM and FAS 87 accounting standards, the amortization amount is re-determined each year as described below and does not follow a fixed schedule with a pre-determined end.

For FAS 87, each year the remaining amortizable gain or loss is divided by the average remaining service period for active employees. The average remaining service period for active employees is approximately eleven years and is re-determined each year based on the active participants in the plan. With an open plan that allows new hire participation, the average remaining service period has remained relatively constant and is expected to continue to be approximately eleven years. Since the denominator of the amortization

equation remains approximately eleven in all years, the amortization amount will gradually decline, but will never be fully amortized. This is similar to what would happen if a 30-year mortgage was re-financed each year into a new 30-year mortgage (the payments will decline, but the payment period is reset each year to 30 years)

For ACM, the concept is the same as FAS 87, except instead of amortizing gains and losses, the unfunded liability is amortized each year. The amortization period for ACM is determined each year using the 20-year amortization basis, which at a 7.10 percent discount rate is approximately eleven years. Using the same amortization factor each year leads to declining amortization payments, but because the amortization factor is reset each year, the amount will not be fully extinguished until there is no unfunded liability. Schedule 3 shows the first twenty years of payments for both FAS 87 and ACM.

Q. DO THE AMOUNTS ON SCHEDULE 3 SET FORTH THE COMPANY'S PENSION EXPENSE IN THE TEST YEAR?

A. No. The discussion of pension expense up to now has been only about how the pension asset gain and loss experiences are recorded and carried forward for incorporation into the current year's pension expense. In Section C below I will describe how the current year's pension expense is calculated under the ACM and FAS 87, and how that current pension expense incorporates past pension asset gain and loss experiences. I will also explain how the current pension expense incorporates liability gains and losses.

C. Calculation of Pension Expense under the ACM

Q. WHY DOES THE NSPM PLAN USE THE ACM TO ACCOUNT FOR PENSION EXPENSE?

A. NSPM began using the ACM to calculate pension expense in 1975. Although FAS 87 became the new standard for pension accounting for financial reporting purposes in 1987, it was made subject to the effects of rate regulation as provided for by FAS 71, which allowed regulated entities such as the NSPM Plan to reflect the "rate actions of a regulator" and the "effects of the rate-setting process" by regulatory agencies, such as the Commission. The authority provided by FAS 71 allowed the NSPM Plan to continue using the ACM for ratemaking purposes, as it had before 1987, and the Commission approved this continued use.

Q. PLEASE SUMMARIZE THE ACM AND EXPLAIN HOW PENSION COSTS ARE CALCULATED UNDER THAT METHOD.

A. The ACM is based on a normalized level of long-term cash funding requirements measured as a constant percentage of payroll. Under the ACM, the pension cost is the normalized amount that would need to be paid into the pension fund each year to fund earned benefits. Based on specific actuarial assumptions such as the discount rate, projected salary levels, and mortality, the PVFB is calculated and compared to the phased-in market-related value of plan assets. The difference between the PVFB and the market value of assets is the unfunded liability that must be funded over the future working lives of current employees. I have included a summary of the ACM in Exhibit___(RRS-1), Schedule 5, along with a comparison to the FAS 87 method for calculating pension expense.

Q. PLEASE PROVIDE AN EXAMPLE OF HOW THE ACM WORKS.

A. Suppose the Company determines, based on actuarial studies, that it will ultimately need $3 billion to fund its pension liability, which is the PVFB. If the market value of assets in the Company's NSPM Plan trust is currently $2.5 billion, there is a $500 million difference that will need to be funded. The ACM requires that the Company fund that amount based on the period approved by the Commission or the remaining future working lives of its employees, which is approximately 11 years. The Company then sets the pension expense at a levelized percentage of payroll based on the amount needed and the time remaining to fund the pension liability.

Q. HOW ARE THE PENSION ASSET GAIN AND LOSS EXPERIENCES INCORPORATED INTO THE ACM CALCULATION?

A. Recall that the ACM is calculated by comparing asset values to the PVFB. Thus, if there is an asset gain from the prior year, the phased-in amount of that asset gain is added to the market-related value of the assets, and if there is an asset loss, the phased-in amount of that loss is subtracted from the market-related value of the assets. Insofar as the PVFB is concerned, if there is a liability gain from the prior year, the PVFB is reduced by that amount. If the plan has a liability loss from the prior year, the PVFB grows by that amount. The difference between the asset value and the PVFB after incorporating the asset and liability gains and losses is the amount that is placed into the amortization pool, and netted with the cumulative unrecognized gain and loss experiences.

Q. PLEASE PROVIDE AN EXAMPLE OF HOW THE CALCULATION WORKS.

A. Consider the example set forth earlier – the market value of assets is $2.5 billion and the PVFB is $3.0 billion, which creates a funding obligation of $500 million in Year 1. Now suppose the following events occur:

- The actuarially determined EROA for Year 1 was 7 percent, but the fund actually earned 6 percent. In that instance, the fund would have an asset loss of $25 million ($2.5 billion x .01 = $25 million).
- The actual discount rate in Year 1 was 25 basis points higher than the actuaries had assumed, which reduced the PVFB by $15 million. Thus, the fund has a liability gain of $15 million for Year 1.
- The pension fund paid out $175 million in benefits in Year 1, which is exactly equal to the expected earnings on the plan's assets during that year ($2.5 billion assets x .07 EROA = $175 million).

Because the amounts paid out as benefits equal the EROA, the only changes that need to be incorporated in the Year 2 pension expense are the asset loss and the liability gain. The Year 1 asset loss was $25 million, but under the phase-in rules, only $5 million of that is reflected in the market value of assets in Year 2. On the other hand, the entire $15 million liability gain is recognized in Year 2, so the Year 2 asset value drops by $5 million and the Year 2 PVFB drops by $15 million. Now the difference between the market value of the assets and the PVFB is $490 million instead of $500 million. That $490 million is then spread over the amortization period approved by the Commission.

Q. IN THAT EXAMPLE, WHAT HAPPENS TO THE ASSET LOSSES THAT HAVE NOT BEEN PHASED IN AND AMORTIZED YET?

A. The amount is reflected on the Company's books as an increase to the liability offset by a regulatory asset, resulting in no change to the net balance sheet amount of the pension plan. As discussed earlier, an additional amount of the asset losses will be phased into the amortization pool each year for the next four years and will reduce the regulatory asset by a corresponding amount each year, all else being equal.

Q. THE NSPM PLAN CURRENTLY HAS PRIOR-PERIOD ASSET LOSSES AND PRIOR-PERIOD LIABILITY LOSSES, BOTH OF WHICH INCREASE THE AMOUNT OF PENSION EXPENSE IN THE CURRENT YEAR. HAVE THE COMPANY'S CUSTOMERS BENEFITED FROM ASSET GAINS AND LIABILITY GAINS IN THE PAST?

A. Yes. For many years the Company had significant gains because its pension plan investments benefited from a significant and prolonged upward market movement, and customers reaped the benefits through market gains that exceeded the EROA. Mr. Inglis discusses the Company's pension plan investments in more detail in his testimony.

Q. IS THE COMPANY ASKING ITS CUSTOMERS TO RESTORE LOSSES FROM PRIOR YEARS?

A. No. We are simply calculating the current year's pension expense, which is affected by cumulative gain and loss experiences. Expense is determined by prior experience, and customers have benefitted from the prior gains. Therefore, it is reasonable, appropriate, and necessary to reflect <u>both</u> prior-period gain and loss experiences in current pension expense.

Q. HOW HAVE THE PRIOR GAIN EXPERIENCES BEEN INCORPORATED INTO THE COMPANY'S PENSION EXPENSE?

A. Prior gain experiences have been incorporated in the same way the prior loss experiences were incorporated. For the NSPM Plan, the asset gains and liability gains reduced the amount that needed to be funded, which reduced the pension expense charged to customers. For the XES Plan, the asset gains and liability gains have offset the service costs and interest costs that our customers would otherwise have paid in rates.

Q. DO YOU HAVE DATA TO SHOW HOW CUSTOMERS HAVE BENEFITED FROM PENSION ASSET GAINS?

A. Yes. Exhibit___(RRS-1), Schedule 6 quantifies the significant benefits that the Company's pension assets have provided to customers. Schedule 6 shows the Xcel Energy Pension Plan (XEPP) Trust activity since its inception in 1950. Although Schedule 6 reflects more than just the NSPM Plan, it does demonstrate the overall value of the pension assets, which include the NSPM assets.[3] Since 1950, the Company has contributed approximately $1.3 billion into the trust while earning approximately $4.0 billion in investment returns, which helped pay for approximately $4.2 billion in payments to employees. For many years these asset returns enabled the Company to recognize pension benefit costs at or very close to zero and to make no pension contributions. These low or nonexistent pension expense amounts were reflected in our rate cases, which means that customers paid much less in annual pension cost than they would have in the absence of the pension asset gains.

[3] As of December 31, 2018, the NSPM Plan owned 52 percent of the total XEPP plan assets.

Q. WHAT HAS THE COMPANY DONE WITH THOSE GAINS?

A. By law, earnings on pension trust assets cannot be removed from the trust fund. Therefore, the net gains on the pension asset have been used to reduce the pension expense charged to our customers and mitigated cash funding requirements.

Q. IS THERE ANY OTHER WAY IN WHICH CUSTOMERS HAVE BENEFITED FROM THE PENSION ASSET GAINS?

A. Yes. For more than 50 years the Company's pension plan has provided a market-competitive employee benefit, which allowed us to attract and retain employees that helped us build, operate, and maintain the electrical system that continues to provide safe, reliable electric service. The pension asset gains have helped the Company provide that benefit at a much lower cost than would have been possible without the asset gains.

D. Calculation of Pension Expense under FAS 87

Q. PLEASE PROVIDE AN OVERVIEW OF FAS 87.

A. FAS 87 is an accounting standard adopted by the Financial Accounting Standards Board (FASB) in 1987 to govern employers' accounting for pensions. Under FAS 87, pension cost is generally made up of five components of costs but a sixth component can be required provided certain criteria are met during the year. The five main components of FAS 87 pension cost are:

1) the present value of pension benefits that employees will earn during the current year (service cost);
2) increases in the present value of the PBO that plan participants have earned in previous years (interest cost);

3) expected investment earnings during the year on the pension plan assets, or Expected Return On Assets (EROA);

4) recognition of prior-period gains or losses (e.g., investment earnings different from assumed or amortization of unrecognized gains and losses); and

5) recognition of the cost of benefit changes the plan sponsor provides for service the employees have already performed (amortization of unrecognized prior service cost).

Q. TAKING EACH OF THESE FIVE COMPONENTS IN ORDER, HOW IS THE SERVICE COST COMPONENT CALCULATED?

A. The service cost component recognized in a period is the actuarial present value of benefits attributed by the pension benefit formula to current employees' service during that period. In effect, the service cost is the value of benefits that the employees have earned during the current period. Actuarial assumptions are used to reflect the time value of money (the discount rate) and the probability of payment (assumptions as to mortality, turnover, early retirement, and so forth).

Q. NEXT, HOW IS THE INTEREST COST COMPONENT CALCULATED?

A. The interest cost component recognized in a fiscal year is determined as the increase in the plan's total PBO due to the passage of time. Measuring the PBO as a present value requires accrual of an interest cost at a rate equal to the assumed discount rate. Essentially, the interest cost identifies the time value of money by recognizing that anticipated pension benefit payments are one year closer to being paid from the pension plan.

Q. HOW IS THE THIRD COMPONENT, EROA, CALCULATED?

A. The EROA is determined based on the expected long-term rate of return on the market value of plan assets. The market value of plan assets is a calculated value that recognizes changes in the fair value of assets in a systematic and rational manner over not more than five years. The EROA is an offset to the service costs and interest costs, and therefore it reduces the amount of pension expense.

Q. CAN YOU PROVIDE AN EXAMPLE OF HOW THE INVESTMENT EARNINGS REDUCE THE AMOUNT OF PENSION EXPENSE?

A. Yes. Assume that the pension trust fund has a beginning asset balance of $500 million and the expected EROA in that year is 8 percent. The expected return is $40 million ($500 million x 8 percent). This amount will be used to offset the other components within the pension cost determination. Further assume that these other components are as follows: Service Cost ($25 million), Interest Cost ($20 million), and Loss Amortization ($30 million). The net periodic pension cost for the year would be $35 million as shown in Table 3:

Table 3

Annual Pension Expense Example

Amounts in Millions				
Service Cost	Interest Cost	Loss Amortization	EROA	Total
$25	$20	$30	$(40)	$35

As shown in Table 3, the pension cost would have been $75 million in the absence of the investment earnings. If the actual earned return in a particular year is higher than the EROA, customers will enjoy even more savings in future years as the asset gain is phased into pension expense.

Q. HAVE THE COMPANY'S CUSTOMERS EXPERIENCED THOSE TYPES OF SAVINGS IN PRIOR YEARS?

A. Yes. As I explained previously, the Company's annual pension cost included in rates has been significantly lower in prior years as a result of the earnings on the FAS 87 pension assets because those earnings helped reduce the amounts contributed by customers, relative to the true cost of the pension benefits.

Q. WITH REGARD TO THE FOURTH COMPONENT, WHAT ARE THE UNRECOGNIZED GAINS AND LOSSES?

A. The unrecognized gains and losses are the asset gains or losses and the liability gains or losses that I discussed earlier. The asset gains or losses occur because the actual earned return on assets was different from the EROA in prior years. The liability gains or losses occur because the actual values experienced in prior years, such as the discount rate and wage assumptions, were different from what was expected. The asset gains or losses are phased in according to the five-year schedule I discussed earlier, and then they are netted with not only the liability gains and losses from the previous year, but also the unamortized gains and losses from prior years. If the net unamortized gains or losses fall outside the ten-percent corridor, they are amortized over the remaining service lives of the Company's employees.

Q. PLEASE EXPLAIN IN MORE DETAIL THE PROCESS FOR DETERMINING WHETHER THE GAIN AND LOSS AMOUNT UNDER FAS 87 SHOULD BE AMORTIZED.

A. As noted in the decision tree that appears in Exhibit___(RRS-1), Schedule 4, the determination of the gain or loss amortization is a multi-step process composed of the following steps:

1) The Company first determines whether it has an asset gain or loss by comparing the actual return on assets for the prior year to the EROA for the prior year.
2) To the extent there is an asset gain or a loss, the Company phases in 20 percent of that gain or loss. The Company will also phase in portions of gains and losses from prior years that have not been fully phased in. They are phased in at the rate of 20 percent per year.
3) The Company then calculates the gain or loss on the PBO by comparing the actual year-end PBO from the prior year to the expected year-end PBO for the prior year.
4) The Company next aggregates the cumulative net gains and losses from all prior years to arrive at the cumulative unrecognized gains or losses.
5) If the cumulative unrecognized gains and losses are more than 10 percent of the greater of the PBO or the market value of assets, the balance of gains and losses that falls outside the corridor is amortized over the average expected remaining years of service of the Company's employees.

Q. IS THIS THE SAME PROCESS THAT THE COMPANY HAS FOLLOWED SINCE THE ORIGINATION OF THE XES PLAN?

A. Yes. The Company was required to set the phase-in period, as well as the basis for amortizing gains and losses at the time it adopted FAS 87, and it is not permitted to deviate from that basis from year to year.

Q. WITH RESPECT TO THE FIFTH COMPONENT OF THE PENSION COST CALCULATION, WHAT IS UNRECOGNIZED PRIOR SERVICE COST?

A. Plan amendments can change benefits based on services rendered in prior periods. FAS 87 does not generally require the cost of providing such retroactive benefits (prior service cost) to be included in net periodic pension cost entirely in the year of the amendment, but instead provides for recognition over the future years.

Q. HOW IS UNRECOGNIZED PRIOR SERVICE COST AMORTIZED?

A. Unrecognized prior service cost is amortized over the expected remaining years of service of the participants impacted by the benefit change. Also, there is no ten-percent corridor for this purpose.

Q. HOW HAS THE COMPANY TREATED THE ASSET GAINS OF THE XES PLAN?

A. As noted earlier in connection with the NSPM Plan, all net asset gains have been used to reduce pension expense.

Q. DOES THE AMORTIZATION AMOUNT OF UNRECOGNIZED GAINS AND LOSSES REPRESENT THE ENTIRE FAS 87 EXPENSE?

A. No. As I discussed earlier, it is only one component of the FAS 87 pension expense. The service costs, interest costs, EROA and recognition of prior service costs are also components of the FAS 87 expense.

Q. YOU HAD MENTIONED PREVIOUSLY THAT A SIXTH COMPONENT OF PENSION COST CAN BE REQUIRED; WHAT IS THAT?

A. A sixth component, FAS 88 settlement accounting, can be required provided certain criteria are met during the year. Settlement accounting is required if lump-sum payments to employees in a year are greater than the sum of the service cost and interest cost components recognized for that year. This

criterion for settlement accounting was met in 2017 and 2018 for the XEPP. The XEPP's participant population has a significant proportion of participants at or nearing retirement age. The Company has seen significantly more lump-sum pension payouts in 2017 and 2018 than in years past, thus exposing the plan to settlement accounting requirements for the first time. When settlement accounting is triggered, the Company is immediately required to recognize a portion of unrealized losses currently deferred as a regulatory asset. When settlement accounting is not triggered, the unrecognized gain or loss is amortized over a much longer period of time.

Q. DOES SETTLEMENT ACCOUNTING RESULT IN AN INCREASE IN THE OVERALL PENSION EXPENSE?

A. No. Settlement accounting is not an increase in the overall pension expenses, but rather an acceleration of the timing of when the pension expense will be recognized. Since the 2017 and 2018 FAS 88 settlement is part of the total recognized FAS 87 pension cost, it was factored into the cap and deferral mechanism for XES pension expense that was mentioned above. The deferred amount is described in more detail below.

Q. DID THE XEPP FAS 88 SETTLEMENT ONLY AFFECT MINNESOTA CUSTOMERS?

A. No. One of the Company's other operating companies, Northern States Power Company Wisconsin (NSPW), also has employees in the XEPP. As a result, they were also subject to this provision, requiring them to also immediately recognize a portion of their unrealized losses as required by FAS 88.

Q. HOW DID NSPW ADDRESS THE FAS 88 SETTLEMENT CHARGE?

A. NSPW requested deferred accounting treatment for the 2017 and 2018 pension settlement charges, which was granted. NSPW also received approval to amortized and include the deferred balances in 2020 rates, Interim Order 4220-UR-124.

Q. DOES THE ACM ALSO HAVE A SETTLEMENT ACCOUNTING PROVISION?

A. No, the ACM does not have a settlement accounting provision.

E. Pension Funding

Q. DO THE ACM AND FAS 87 ALSO GOVERN HOW RETIREMENT PLANS MUST BE FUNDED?

A. No. The funding of retirement plans is determined based upon prudent business practices as limited by the provisions of the Employee Retirement Income Security Act (ERISA), the Pension Protection Act, and the Internal Revenue Code (IRC). Under those laws and regulations:

- There are minimum required contributions;
- There are maximum contributions that can be deducted for tax purposes; and
- The plan sponsor has a fiduciary responsibility to prudently protect the interests of the plan participants and beneficiaries.

Over the long run, the cumulative employer contributions made to a plan in accordance with ERISA, the Pension Protection Act, and the IRC rules will be roughly equal to the cumulative pension expense recorded under both the ACM and FAS 87; but in the short and intermediate run, there can be significant differences. The cumulative difference between pension contributions and recognized pension expense gives rise to a prepaid pension

asset or a pension liability, both of which I will explain in greater detail later in my testimony.

IV. PENSION ASSUMPTIONS

Q. PLEASE SUMMARIZE THE THREE PRIMARY PENSION ASSUMPTIONS USED TO DETERMINE THE MULTI-YEAR RATE PLAN PENSION COST.

A. The primary pension assumptions used to determine the multi-year rate plan pension costs are the discount rate and the EROA. The Company used the following assumptions in Table 4 to determine 2020-2022 pension expense:

Table 4

2020-2022 Pension Assumptions

Company – Accounting Method	Discount Rate	EROA
NSPM – Aggregate Cost Method (ACM)	7.10%	7.10%
XES – FAS 87 (ASC 715)	4.15%	7.10%

Q. HAS THE COMPANY PROVIDED OBJECTIVE, VERIFIABLE MEASURES TO EVALUATE THE ASSUMPTIONS?

A. We have provided objective, verifiable measures where they are available. For example, we used Citigroup benchmark indexes to evaluate the reasonableness of the discount rate produced by our bond-matching study, which we used in determining the Company's five-year average discount rate. For the EROA assumptions, we gathered information from the 2018 Edison Electric Institute (EEI) survey results for fiscal year 2018, and we compared those other utilities' assumptions to ours. The results are shown on Exhibit___(RRS-1), Schedule 7.

Q. WHAT DOES THE COMPARISON SHOW?

A. The EROA and wage increase assumptions used for the NSPM Plan and the XES Plan are at or near the average of the 47 EEI companies who responded to the survey.

1) The NSPM Plan discount rate of 7.10 percent is much higher than the average discount rate of 4.31 percent for the 47 EEI companies who responded to the survey. This is due to the ACM requirement that the discount rate be set equal to the EROA, a requirement not faced by any company not using ACM. A higher discount rate assumption lowers the cost, so the NSPM discount rate assumption lowers cost as compared to other utilities, all else equal.

2) Regarding the XES Plan discount rate, as I noted earlier in my testimony, the Company continues to believe that the correct method to arrive at the FAS 87 discount rate is by performing a bond-matching study for a single year. However, we have used a five-year average discount rate in this case, consistent with prior Commission orders, to reduce the number of contested issues and to allow the parties to focus instead on the Company's proposed multi-year rate plan. The XES FAS 87 five-year average discount rate is 4.15 percent, compared to the EEI survey average of 4.31 percent.

3) The NSPM Plan and the XES Plan EROA assumptions of 7.10 percent are slightly higher than the 7.00 percent average for the EEI companies. The Company's slightly higher EROA also decreases costs, as compared to the 7.00 average.

A. Discount Rate Assumption

Q. PLEASE DESCRIBE HOW THE 4.15 PERCENT DISCOUNT RATE FOR THE XES PLAN WAS DETERMINED FOR THIS RATE CASE?

A. The Company determined the 4.15 percent discount rate consistent with Order Point 7 in Docket No. E002/GR-13-868, which states: "The Company shall apply the rolling five-year average FAS 87 discount rate when determining the XES Plan cost subject to deferral (or reversal) in subsequent years (i.e., non-rate-case test years) as the 2012 mitigation established in Docket No. E002/GR-12-961 continues." Table 5 below demonstrates how the five-year average discount rate of 4.15 percent was determined.

Table 5

Pension Discount Rate

Current Rate Case - Using Historical Actuals						
Expense Period	**2015**	**2016**	**2017**	**2018**	**2019**	**Five-Year**
Measurement Date	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018	**Average**
XES FAS 87	4.09%	4.64%	4.11%	3.60%	4.31%	4.15%

Q. WILL THE COMPANY PROVIDE AN UPDATED FIVE-YEAR AVERAGE DISCOUNT RATE TO INCORPORATE THE MOST RECENT MEASUREMENT DATE?

A. Yes. As we have done in prior rate cases, the Company will provide an updated five-year average discount rate in Rebuttal Testimony to incorporate the most recent measurement date of December 31, 2019, which will be available in late January or early February of 2020.

Q. PLEASE DESCRIBE HOW THE DISCOUNT RATES LISTED ABOVE IN TABLE 5 FOR THE FIVE-YEAR AVERAGE DISCOUNT RATE WERE DETERMINED.

A. The Company uses multiple reference points to set the discount rate. The primary basis for valuation is a bond-matching study that is performed as of December 31 of each year. The bond-matching study selects a matching bond for each of the individual projected payout durations within the plan based on projected actuarial experience, as compiled by the Company's actuary, Willis Towers Watson. The bonds selected must have a rating of Aa/AA or higher and not have a pending review as of December 31. In addition, the bond may not have an inconsistent rating between agencies where any agency rates the bonds below Aa/AA. If bonds are not available for a specific duration within the plan, a bond with the next closest shorter duration is used to determine the discount rate. The Company currently uses a single, average discount rate for all pension plans because the individual plans have a materially consistent duration and cash flow pattern. Individual discount rates by plan are identified and reviewed for significant deviations from the average in the determination of the overall rate.

The Company also uses other reference points to validate the rate calculated by the bond-matching study, including the Citigroup Benchmark and the Citigroup Above Median Benchmark. In addition to these reference points, the Company also reviews general survey data provided by Willis Towers Watson and EEI to assess the reasonableness of the discount rate selected.

The Company has consistently used the bond-matching approach, along with the corroborating methods, because it provides the most accurate discount rate of the available alternatives that meet applicable standards of FAS 87. Further information pertaining to the determination of discount rates is provided in Exhibit___(RRS-1), Schedule 8. These standards and the review

processes described below support the use of the discount rates used in determining the five-year average discount rate above that is used to determine pension expense for the XES Plan.

Q. DESCRIBE THE FINANCIAL VALIDATION PROCESS AND CONTROLS THAT ARE IN PLACE REGARDING SETTING THE DISCOUNT RATE.

A. The Company has a Pension Trust Administration Committee (PTAC). Preliminary discount rates are reviewed by the PTAC in late December with potential year-end scenarios. Because discount rates are not set until the December 31 rates are available, the review at the initial meeting is primarily to set expectations. Year-end discount rates are developed using a bond-matching study applied to projections of future cash outflows for benefit payments, as I described earlier. Bond-matching study results are reviewed jointly with the Company Controller, the director in charge of benefits accounting, and representatives from Willis Towers Watson. Each individual bond is analyzed to consider any attributes that would make it inappropriate for the bond-matching study. This includes any known risk of downgrade to the bond, any deviation in yield from other bonds of the same duration, and the total outstanding and traded value of the bond. The results of the study are compared to publicly available sources such as the Citigroup Pension Liability Index and Citigroup Pension Curve to validate the reasonableness of the discount rate determined using the bond-matching study. Any unusual deviations between these numbers are researched to understand the underlying drivers.

Bonds selected in the bond-matching study are revalidated by Willis Towers Watson prior to filing the Company's 10-K to ensure that individual bonds

selected have not been downgraded or put on watch. In addition, employee data used to determine the projected future payments is compared to previous years for reasonableness of the headcount and pay rate information, both internally and by Willis Towers Watson. Final discount rates are communicated back to the PTAC for approval, and the final approved rate is included in the meeting minutes. Final approved discount rate assumptions are then provided to the audit committee as part of the Company's critical accounting policies.

In addition to the year-end discount rate analysis, discount rates are regularly recalculated over the course of the year by Pacific Global Advisors (PGA), Willis Towers Watson, and independently by Company personnel using projected cash flows combined with publicly published Citigroup Pension Liability Curve rates to understand the expected impact of changing rates as market conditions change. Changes in the 10-year Treasury rate and the Citigroup Pension Liability Index are used as indicators that pension discount rates are likely deviating from current assumptions and will often drive incremental estimates of expected discount rates.

Q. HOW WAS THE 7.10 PERCENT NSPM PLAN DISCOUNT RATE DETERMINED?

A. Pension expense for the NSPM Plan is based on the ACM, which requires use of the long-term EROA as the discount rate. Thus, the determination of the appropriate level of EROA, which is discussed below, also addresses the appropriateness of the ACM discount rate.

Q. WHAT IS YOUR CONCLUSION REGARDING THE DISCOUNT RATES USED FOR THE XES PLAN AND THE NSPM PLAN?

A. The test year discount rates for the XES Plan of 4.15 percent and the NSPM Plan of 7.10 percent are reasonable and in the case of NSPM Plan are well above the average rates used by other companies. As I have indicated, the Company does not necessarily agree with the use of a five-year average, but we are proposing it in this case, consistent with the Commission's decision in our 2013 rate case, to reduce the number of contested issues, which will help the parties focus on evaluating the merits of our multi-year proposal.

Q. WILL THE COMPANY UPDATE ITS PROPOSED DISCOUNT RATE?

A. Yes. Consistent with the past practice, the Company will recalculate its test year pension cost using a measurement date of December 31, 2019, to capture the most current pension position and to provide an update to all elements of cost.

B. EROA Assumption

Q. WHAT IS THE TEST YEAR EROA?

A. The test year EROA is 7.10 percent. In the Company's 2015 rate case, the Company's EROA assumption was 7.25 percent.

Q. WHY DID THE COMPANY LOWER THE EROA ASSUMPTION?

A. The Company decreased the EROA assumption primarily because the interest rates on fixed-income securities have continued to fall, which reduces the expected return on those assets.

Q. HOW WAS THE TEST YEAR EROA ASSUMPTION DETERMINED?

A. The EROA is, and must be, determined based on the long-term expected rates of return as dictated by the requirements of the ACM and FAS 87. The

Company bases investment return assumptions on expected long-term performance for each of the investment types included in our pension asset portfolio – equity investments (such as corporate common stocks), fixed-income investments (such as corporate bonds and U.S. Treasury securities), and alternative investments (such as private equity, hedge fund-of-funds, commodities, or real estate partnerships). In reaching return assumptions, the Company considers the actual historical returns achieved, as well as the long-term return levels projected and recommended by investment experts in the marketplace. Xcel Energy continually reviews its pension investment assumptions in order to maintain investment portfolios that provide adequate rates of return at appropriate levels of risk. Further information pertaining to the determination of EROA is provided in Exhibit___(RRS-1), Schedule 8.

Q. DESCRIBE THE FINANCIAL VALIDATION PROCESS AND CONTROLS THAT ARE IN PLACE REGARDING SETTING THE EROA ASSUMPTION.

A. The PTAC develops and validates rate-of-return assumptions jointly with Goldman Sachs, which is the Company's external pension investment advisor. With the help of Goldman Sachs, the Company's treasury group establishes a target investment strategy and investment mix. This investment strategy and mix are then presented at the PTAC meeting for approval. The target portfolio investment mix is then matched with expected long-term returns provided by Goldman Sachs for each of the investment classes within the portfolio. The expected long-term returns are validated against other advisor group benchmarks and expected returns by asset class provided by Willis Towers Watson. The results of these weighted average investment returns are aggregated to arrive at a single average long-term rate of return by plan that is then included in the assumptions provided to the PTAC for review, and they

are included in the Company's critical accounting policies provided to the audit committee.

Q. DOES THE COMPANY COMPARE ITS EROA TO OTHER COMPANIES?

A. Yes. The Company compares its EROA to other utilities and also to general industry data. Exhibit___(RRS-1), Schedule 7 shows that the Company's long-term EROA assumption of 7.10 percent is slightly higher than the average of 7.00 percent for the EEI utilities.

Q. WHAT IS YOUR CONCLUSION REGARDING THE 7.10 PERCENT EROA?

A. The 7.10 percent EROA assumption is reasonable based on the requirement that the return be based on the target investment mix of the Company's pension plan assets. Mr. Inglis discusses the reasonableness of the Company's target asset allocation and investment strategy in more detail in his testimony.

V. QUALIFIED PENSION AND 401(K) MATCH COSTS

Q. WHAT DO YOU DISCUSS IN THIS SECTION OF YOUR TESTIMONY?

A. I quantify the multi-year rate plan expense amounts for qualified pension and 401(k) match.

A. Qualified Pension Expense

Q. WHAT IS THE LEVEL OF QUALIFIED PENSION EXPENSE IN EACH YEAR OF THE MULTI-YEAR RATE PLAN?

A. The 2020, 2021, and 2022 qualified pension expense amounts are approximately $21.0 million, $20.4 million, and $19.8 million, respectively. These amounts include costs related to both the NSPM Plan and the XES

Plan. Approximately 75 percent of the Company's qualified pension expense relates to the NSPM Plan and 25 percent relates to the XES Plan.

Q. DO THE NSPM PLAN AND THE XES PLAN DETERMINE THEIR QUALIFIED PENSION EXPENSE USING DIFFERENT METHODS?

A. Yes. As I indicated in an earlier section of my testimony, the ACM continues to be used to determine the expense of the NSPM Plan. Thus, the pension expense for that plan consists of a levelized percentage of payroll that is sufficient to recover the current year's portion of the difference between the PVFB and the asset value. In contrast, costs of the XES Plan costs are established based on the five elements prescribed by FAS 87 – service cost, interest cost, the EROA, unrecognized gains or losses, and unrecognized prior service costs.

Q. ARE THE TWO METHODS BASED ON ANY COMMON ASSUMPTIONS?

A. Yes. To calculate the pension liability under both methods, it is necessary to make assumptions about the discount rate and demographics (including attrition, expected wage increases, etc.) The assumptions are established at the end of each year, and they are used to determine book expense for the subsequent year. Accordingly, the 2019 assumptions were finalized as of December 31, 2018, and the 2020 assumptions will be finalized as of December 31, 2019. The final 2020 assumptions will be available in late January 2020. The Company has typically included updated cost amounts in Rebuttal Testimony. We also recognize that our updates should be objectively validated when possible, and we will provide the available validation measures in both this testimony and my Rebuttal Testimony. I provided detailed

support for each of the two major pension assumptions in the prior section of my testimony.

Q. WHAT WERE THE AMOUNTS OF QUALIFIED PENSION EXPENSE IN THE FIVE YEARS PRIOR TO THE TEST YEAR, AND WHAT DOES THE COMPANY EXPECT THEM TO BE OVER THE NEXT FEW YEARS?

A. Table 6 below shows pension expense amounts since 2015 and the Company's current forecast of qualified pension expense. The forecast for 2019 and beyond assumes no changes in assumptions for the EROA, discount rate, plan contributions, wage increases, and employee turnover. The forecast also assumes that actual experience matches these assumptions, including the Company's actual return on assets equaling the EROA in 2019 and all subsequent years. Additionally, where applicable, the amounts reflect the impacts of pension expense being calculated using a five-year average discount rate and applying the two additional mitigation methods that the Commission accepted in Docket No. E002/GR-12-961, including the proposed change to the XES cap discussed below.

Table 6

Qualified Pension Expense

NSPM Electric O&M State of MN	
Year	**Amount ($)**
2015	19,845,733
2016	18,815,654
2017	21,398,738
2018	20,549,083
2019 Forecast	21,427,184
2020 Test Year	20,956,503
2021 Plan Year	20,378,317
2022 Plan Year	19,780,720

Q. WHAT ARE THE MAJOR DRIVERS OF THE DECREASE IN QUALIFIED PENSION EXPENSE?

A. The major drivers of the changes in qualified pension expense are:

- a decrease in the asset loss amortization;
- improved funded status from contributions and expected return on assets; and
- plan design changes.

Q. PLEASE DISCUSS THE RECENT DECREASE IN THE ASSET LOSS AMORTIZATION, AND EXPLAIN HOW THIS CONTRIBUTES TO THE DECREASE IN PENSION EXPENSE.

A. The asset loss amortization was explained in detail in Section III. Also, see Exhibit___(RRS-1), Schedule 3, which shows the declining loss amounts in the 2020-2022 multi-year rate plan.

Q. PLEASE DESCRIBE HOW CONTRIBUTIONS AND THE EXPECTED RETURN ON ASSETS CONTRIBUTES TO THE DECREASE IN PENSION EXPENSE.

A. Because of funding requirements mandated by the Pension Protection Act of 2006, the Company has made significant contributions to the pension trust funds in recent years. Those contributions increase the assets upon which the Company earns a return, and those returns are an offset to annual pension cost. Thus, the increase in the asset base helps to reduce annual pension cost.

Q. PLEASE DISCUSS HOW PENSION PLAN DESIGN CHANGES CONTRIBUTE TO THE DECREASE IN PENSION EXPENSE.

A. Plan design changes implemented in 2011 and 2012 significantly reduced benefit levels for newly hired bargaining and non-bargaining employees. Each

year as new employees are hired, the Company will continue to see increased savings as new employees are enrolled in the revised pension benefit plan. In addition, effective on January 1, 2018, the annual RSA credits were eliminated on a going-forward basis for all non-bargaining employees and the Social Security Supplement was eliminated for all non-bargaining employees who will not meet certain criteria, including retirement eligibility, by December 31, 2022. The Company has estimated that these changes have reduced qualified pension expense by at least $5 to $6 million each year over the multi-year rate plan.

Q. HAS THE COMPANY PROVIDED THE ACTUARIAL STUDY AND DERIVATION OF THE JURISDICTIONAL AMOUNT?

A. Yes. The Company has included Exhibit___(RRS-1), Schedule 9, which is an actuarial study that supports the qualified pension costs included in the multi-year rate plan. Exhibit___(RRS-1), Schedule 10 shows the conversion of the 2020 total cost amounts to the NSPM electric O&M, state of Minnesota amount.

B. 401(k) Match

Q. WHAT IS THE 401(K) MATCH EXPENSE AMOUNT IN EACH YEAR OF THE MULTI-YEAR RATE PLAN?

A. The 2020, 2021, and 2022 401(k) match expense amounts are approximately $9.3 million, $9.6 million, and $9.8 million, respectively.

Q. WHAT WERE THE AMOUNTS OF 401(K) MATCH EXPENSES IN THE FIVE YEARS PRIOR TO THE TEST YEAR COMPARED TO THE FORECASTED AMOUNTS FOR THE MULTI-YEAR RATE PLAN PERIOD?

A. Table 7 below shows the amounts of 401(k) match expense from 2015 through 2019.

Table 7

401(k) Match Expense

NSPM Electric O&M State of MN	
Year	**Amount ($)**
2015	9,125,327
2016	9,194,646
2017	8,886,008
2018	9,036,008
2019 Forecast	9,259,666
2020 Test Year	9,313,718
2021 Plan Year	9,553,390
2022 Plan Year	9,809,095

Q. WHAT ASSUMPTIONS WERE USED TO DEVELOP THE 401(K) MATCH EXPENSE FOR 2020-2022?

A. The most recent actual 401(k) match, which was from the 2018 plan year, was used as the base year. This base year amount was then increased by the 2019 estimated and 2020-2022 budgeted merit increases to derive the amounts in 2020-2022.

Q. WHY IS THE AMOUNT OF 401(K) EXPENSE INCREASING EACH YEAR?

A. The 401(k) expense is increasing because the contribution is calculated based on a percentage of salary; and merit salary increases cause the total labor costs to increase each year. Moreover, the Company has experienced an overall increase in 401(k) participation in recent years, and that trend is expected to continue.

C. Qualified Pension Deferred Balances

Q. WHAT RECENT ACTIONS HAVE IMPACTED THE COMPANY'S RECOVERY QUALIFIED PENSION COSTS?

A. In the 2013 electric rate case Docket No. E002/GR-12-961, the Company introduced, and the Commission approved, two alternative cost recovery methods for its qualified pension costs – a twenty year amortization period for unrecognized pension costs for the NSPM Plan and a "cap and defer" recovery of XES pension costs. In Docket No. E002/GR-13-868, the Commission approved the continuation of those methods, stating:

> The Commission will adopt the ALJ's recommendation to require continuation of the qualified pension mitigation approved in the Company's 2012 rate case. As the ALJ recognized, this mitigation method has previously been found to be consistent with the public and ratepayer interests, and this record supports the same conclusion. The Commission will therefore again require the Company to extend the NSPM Plan amortization period for unrecognized pension costs from 10 to 20 years; and cap the XES pension expense at the 2011 level of $6.1 million and defer any excess of this amount to future years.

Q. IS THE COMPANY PROPOSING TO CONTINUE THESE TWO PROPOSALS IN THIS CASE?

A. Yes. The qualified pension amounts included in this rate case have been adjusted for the extension of the amortization period from 10 to 20 years and the XES pension cap that was previously approved by the Commission in the Company's 2012 rate case.

Q. WHAT IS THE IMPACT FROM THESE TWO CHANGES ON 2020 QUALIFIED PENSION EXPENSE?

A. These two changes have reduced the test year qualified pension expense by $1,623,362.

Q. HOW WOULD YOU CHARACTERIZE THE DEFERRED AMOUNTS?

A. These deferred amounts represent shareholder funds that the Company will not recover until a future time period, or a prepayment. The general ratemaking practice is for a utility prepayment to be added to rate base and for a customer prepayment to be subtracted from rate base.

Q. SO IS THE COMPANY EARNING A RETURN ON THE AMOUNTS DEFERRED TO FUTURE YEARS?

A. No. Although such treatment of these funds would be appropriate in order to make shareholders whole, in Docket No. E002/GR-13-868, the Commission stated that the deferred amounts "will not be included in rate base." Consistent with this Order, the Company has not earned a return on these deferrals, and in order to minimize contested issues in this proceeding, we have not included the deferred amounts in rate base in this proceeding either.

Q. DID THE COMMISSION PROVIDE ANY OTHER GUIDANCE WITH RESPECT TO THE DEFERRED BALANCE IN DOCKET NO. E002/GR-13-868?

A. Yes. On page 20 of the Docket No. E002/GR-13-868 Order, the Commission directed that, "if approved recovery exceeds future years' pension expense, the Company will apply that amount to recovery of the deferred XES pension expense amounts." The Commission also stated, "The Company shall file annual compliance reports which provide its pension plans' cost-calculation reports, the XES Plan accumulated deferred balance, and the excess rate-level recovery applied toward satisfying the deferral."

Q. HAS THE COMPANY CREATED THE REQUIRED ANNUAL COMPLIANCE FILING WHICH INCLUDES THE DEFERRED PENSION BALANCES?

A. Yes. Exhibit___(RRS-1), Schedule 11 provides the requested annual compliance filing, which shows how the deferred amount was built up and how it is expected to unwind over the course of the multi-year plan.

Q. DOES THE COMPANY HAVE ANY OTHER REQUESTS RELATED TO THESE DEFERRED BALANCES?

A. Yes. The Company proposes to amortize the December 31, 2018 XES Plan cap cumulative deferred balance of $17,644,894 over the three years of the multi-year plan, or $5,881,632 per year. Company witnesses Mr. Chamberlain and Mr. Halama discuss the appropriateness of the three-year amortization period. The history of the cumulative deferred balance can be found in Exhibit___(RRS-1), Schedule 11, on the Sch B-XES, Page 2. For further discussion around these deferred balances, including a description of the FAS 88 settlement, see the Company's response to Information Request (IR) DOC-2163 and DOC-2164 in Docket No. E002/GR-15-826 and can be found in Exhibit___(RRS-1), Schedule 12.

D. Qualified Pension and 401(k) Match Benefits Summary

Q. PLEASE SUMMARIZE THE COMPANY'S REQUEST REGARDING THE MULTI-YEAR RATE PLAN AMOUNTS FOR THESE TWO BENEFITS.

A. The Company requests that the Commission approve the 2020, 2021, and 2022 qualified pension expense amounts of $20,956,503, $20,378,317, and $19,780,720 and 401(k) match expense amounts of $9,313,718, $9,553,390, and $9,809,095 respectively. The qualified pension expense amounts include continuing the two normalization methods previously approved and updating

the XES Plan cap to the 2019 qualified pension forecasted amount of $5,055,526. Finally, the Company requests to amortize the December 31, 2018 cumulative deferred balance related to XES cap of $17,379,449 over the three years of the multi-year rate plan.

Q. IS IT REASONABLE TO ASK CUSTOMERS TO PAY FOR QUALIFIED PENSION AND 401(K) MATCH BENEFIT COSTS?

A. Yes. It is appropriate that customers pay for these benefits because they reflect a reasonable and necessary level of expense. As explained in more detail in the testimony of Ms. Lowenthal, our compensation and benefits plans are required to attract, retain, and motivate employees needed to perform the work necessary to provide quality services for NSPM customers. Without the qualified pension plan and 401(k) matching benefits, the Company would have to pay significantly higher current compensation to attract employees.

VI. RETIREE MEDICAL AND FAS 112 LONG-TERM DISABILITY BENEFITS

Q. WHAT DO YOU DISCUSS IN THIS SECTION OF YOUR TESTIMONY?

A. I discuss the Company's request to recover the expense for post-retirement healthcare benefits under FAS 106, EmployersF' Accounting for Post-Retirement Benefits Other Than Pensions and for post-employment long-term disability (LTD) benefits under FAS 112, Employers' Accounting for Post-Employment Benefits.

Q. PLEASE EXPLAIN THE DIFFERENCE BETWEEN FAS 106 AND FAS 112 LTD BENEFITS.

A. The FAS 106 benefits are primarily post-retirement healthcare benefits. FAS 112 encompasses a number of benefits, including LTD, workers' compensation, and continuation of life insurance.

A. Retiree Medical

Q. DOES THE COMPANY STILL OFFER FAS 106 RETIREE MEDICAL BENEFITS TO ITS ACTIVE EMPLOYEES?

A. No. The Company eliminated FAS 106 retiree medical benefits for all active non-bargaining and bargaining employees more than ten years ago. The current expense for retiree medical benefits is a legacy of the prior programs.

Q. PLEASE EXPLAIN HOW RETIREE MEDICAL COSTS ARE DETERMINED.

A. The components and calculation of FAS 106 are identical to FAS 87, with one exception. Unlike FAS 87, FAS 106 asset gains or losses are not phased in before they are amortized; but instead, the total gain or loss amount is simply amortized over the average years to retirement for active employees. Otherwise, the FAS 106 benefits are calculated based on assumptions regarding the discount rate, the EROA, and the salary or wage levels.

Q. WHAT ARE THE ASSUMPTIONS REGARDING THE DISCOUNT RATE AND THE EROA FOR THE MULTI-YEAR RATE PERIOD?

A. The 2020-2022 multi-year rate period reflects an EROA of 5.30 percent for both bargaining and non-bargaining employees. It reflects a 4.16 percent discount rate, which is the five-year average discount rate.

Q. PLEASE DESCRIBE HOW THE 4.16 PERCENT DISCOUNT RATE WAS DETERMINED FOR THIS RATE CASE.

A. The Company determined the 4.16 percent discount rate consistent with qualified pension. Table 8 below supports how the five-year average discount rate of 4.16 was determined.

Table 8

FAS 106 Retiree Medical Discount Rate

Current Rate Case - Using Historical Actuals						
Expense Period	**2015**	**2016**	**2017**	**2018**	**2019**	**Average**
Measurement Date	**12/31/2014**	**12/3/2015**	**12/312016**	**12/31/2017**	**12/31/2018**	**5-Year**
Discount Rate	4.08%	4.65%	4.13%	3.62%	4.32%	4.16%

Q. WILL THE COMPANY PROVIDE AN UPDATED FIVE-YEAR AVERAGE DISCOUNT RATE TO INCORPORATE THE MOST RECENT MEASUREMENT DATE?

A. Yes. As we have done in prior rate cases, the Company will provide an updated five-year average discount rate in Rebuttal Testimony to incorporate the most recent measurement date of December 31, 2019, which will be available in late January or early February of 2020.

Q. PLEASE DESCRIBE HOW THE DISCOUNT RATES LISTED ABOVE IN TABLE 8 FOR THE FIVE-YEAR AVERAGE DISCOUNT RATE WERE DETERMINED.

A. The process for determining the discount rate for retiree medical is the same as for pension and is built from the same portfolio of bonds developed through the Company's bond-matching study. This common set of bonds is then applied to the plan-specific cash flows to arrive at a weighted average discount rate appropriate for each individual plan. The EROA assumption is based on the expected long-term performance for each of the investment

types included in its post-retirement healthcare asset portfolio. Because the post-retirement medical benefits are generally payable on a shorter time horizon than the qualified pension expense benefits are, the Company uses shorter duration investments for the post-retirement medical benefit expense, which lowers the EROA somewhat.

Q. WHAT WERE THE AMOUNTS OF FAS 106 RETIREE MEDICAL EXPENSE IN THE FIVE YEARS PRIOR TO THE TEST YEAR, AND WHAT DOES THE COMPANY EXPECT THEM TO BE OVER THE NEXT FEW YEARS?

A. As Table 9 below shows, the test year retiree medical costs are the lowest they have been over this time period. This decrease in retiree medical costs has been the norm over the last several years and is primarily due to the fact that, as time passes, fewer employees are eligible for the benefit because it was closed to new participants more than a decade ago. Because of the foregoing factors, the FAS 106 expenses have decreased despite lower discount rates and the amortization of net gains and losses, both of which had the effect of increasing costs. Additionally, the Company implemented plan changes in 2013 to transition Medicare-eligible retirees and dependents to a healthcare exchange, which has also reduced costs.

Table 9

FAS 106 Retiree Medical Expense

NSPM Electric O&M State of MN	
Year	**Amount ($)**
2015	2,118,910
2016	1,612,940
2017	1,511,399
2018	1,458,735
2019 Forecast	1,103,990
2020 Test Year	1,266,780
2021 Plan Year	1,138,526
2022 Plan Year	1,040,350

Q. HAS THE COMPANY PROVIDED THE ACTUARIAL STUDY AND DERIVATION OF THE JURISDICTIONAL AMOUNT?

A. Yes. The Company has included Exhibit___(RRS-1), Schedule 9, which is an actuarial study that supports the FAS 106 costs for 2020-2022. Exhibit___(RRS-1), Schedule 10 shows the conversion of the 2020 total cost amounts to the NSPM electric O&M, state of Minnesota amount.

B. FAS 112 Long-Term Disability Benefits

Q. PLEASE DESCRIBE FAS 112 LONG-TERM DISABILITY BENEFITS, AND EXPLAIN HOW THEY ARE ACCOUNTED FOR.

A. LTD benefits are provided by the Company to former or inactive employees after employment but before retirement. The LTD plan provides the employee income protection by paying a portion of the employee's income while he or she is disabled by a covered physical or mental impairment.

The accounting treatment varies depending on whether the cost is self-insured or fully-insured. In a fully-insured plan, the Company purchases an insurance plan from an outside insurance provider that assumes the risk. In a self-insured plan, the Company provides the benefits to the covered individuals and therefore, effectively acts as the insurer. For the self-insured piece, the Company is required to accrue for LTD costs under FAS 112, while the fully-insured piece is simply the cost of the insurance premium incurred each year along with any other miscellaneous costs. The FAS 112 accrual represents the expected disability benefit payments for employees that are not expected to return to work.

Q. WHAT GROUPS OF EMPLOYEES ARE COVERED UNDER THE SELF-INSURED BENEFIT AND WHICH GROUPS ARE COVERED UNDER THE FULLY INSURED BENEFIT?

A. All non-bargaining employees disabled prior to January 1, 2008 and NSP bargaining employees disabled prior to January 1, 2014 are covered under the self-insured plan; and all employees disabled after these dates are covered under a fully insured plan.

Q. WHAT WERE THE AMOUNTS OF FAS 112 LONG-TERM DISABILITY EXPENSE IN THE FIVE YEARS PRIOR TO THE TEST YEAR, AND WHAT DOES THE COMPANY EXPECT THEM TO BE OVER THE NEXT FEW YEARS?

A. Table 10 below compares the FAS 112 long-term disability benefit costs from 2015 through 2022.

Table 10

FAS 112 Long-Term Disability Expense

NSPM Electric O&M State of MN	
Year	**Amount ($)**
2015	678,459
2016	(490,613)
2017	62,298
2018	11,661
2019 Forecast	(73,979)
2020 Test Year	110,266
2021 Plan Year	102,611
2022 Plan Year	96,468

Q. WHAT CAUSES THE FLUCTUATIONS IN THESE COSTS FROM YEAR TO YEAR?

A. The FAS 112 self-insured costs fluctuate from year to year because of changes to the discount rate or demographic adjustments, such as changes in the number of disabled employees or changes in the amount of the average monthly disability benefit. Discount rate changes and demographic adjustments are the differences between actual experience and assumed experience and are recorded in the current year, which can result in significant changes in costs from one year to the next. The cost change was significant because, unlike pension, there is no amortization for gains and losses since there are no active employees to accrue the gain or loss over. Instead, the entire amount is recorded when it is determined. The cost then increased in 2020 because we have assumed no further changes to the discount rate. It is reasonable to assume no further changes to the FAS 112 discount rate as our assumptions are the most reasonable estimate to determine 2020 to 2022 costs at this point in time.

Q. WILL THE COMPANY PROVIDE AN UPDATED FAS 112 DISCOUNT RATE TO INCORPORATE THE MOST RECENT MEASUREMENT DATE?

A. Yes. As we have done in prior rate cases, the Company will provide updated FAS 112 costs in Rebuttal Testimony to incorporate the most recent measurement date of December 31, 2019, which will be available in late January or early February of 2020.

Q. HAS THE COMPANY INVESTIGATED WHETHER IT SHOULD USE ONLY FULLY INSURED PLANS?

A. Yes. The Company has evaluated fully-insuring the plans that are currently self-insured, but we determined that it was more costly to fully-insure them due to the small number of individuals covered and the degree of uncertainty around anticipated claims.

Q. HAS THE COMPANY PROVIDED THE ACTUARIAL STUDY AND DERIVATION OF THE JURISDICTIONAL AMOUNT?

A. Yes. Exhibit___(RRS-1), Schedule 9, which is an actuarial study that supports the FAS 112 LTD costs for 2020-2022. Exhibit___(RRS-1), Schedule 10 shows the conversion of the 2020 total cost amounts to the NSPM electric O&M, state of Minnesota amount.

C. Retiree Medical and FAS 112 Long-Term Disability Benefits Summary

Q. PLEASE SUMMARIZE THE COMPANY'S REQUEST REGARDING THE MULTI-YEAR RATE PLAN AMOUNTS FOR THESE TWO BENEFITS.

A. The Company requests that the Commission approve retiree medical expense in the amounts of $1.3 million, $1.1 million, and $1.0 million. The Company requests that the Commission approve FAS 112 long-term disability benefit

expense in the amounts of $0.1 million, $0.1 million, and $0.1 million for 2020, 2021, and 2022 respectively.

Q. IS IT REASONABLE TO ASK CUSTOMERS TO PAY FOR RETIREE MEDICAL AND FAS 112 LONG-TERM DISABILITY BENEFIT COSTS?

A. Yes. It is appropriate that customers pay for these benefits because they reflect a reasonable and necessary level of expense, and because these are commitments that the Company made to employees who provided quality service to NSPM customers for many years. Stated differently, the FAS 106 and 112 expenses represent benefits that our former employees have already earned, and the Company is required to comply with its obligations to disabled and retired employees. These expenses are akin to accounts payable, which are amounts the Company must pay to satisfy its legal obligations.

VII. BENEFIT RATE BASE ASSETS AND LIABILITIES

Q. WHAT TOPIC DO YOU DISCUSS IN THIS SECTION OF YOUR TESTIMONY?

A. I discuss the ratemaking treatment of the Company's prepaid pension asset and its unfunded liabilities.

A. Overview of the Prepaid Pension Asset

Q. PLEASE DESCRIBE THE COMPANY'S PREPAID PENSION ASSET AND ITS UNFUNDED RETIREE MEDICAL AND POST-EMPLOYMENT BENEFIT LIABILITY.

A. The prepaid pension asset arises in connection with the Company's qualified pension plan. Over the life of that plan, the Company has contributed more dollars to the plan than it has recognized in actuarially calculated pension

expense. This results in a prepaid pension asset. Conversely, the retiree medical and post-employment benefits results in an unfunded liability.

Q. WHAT DO YOU MEAN WHEN YOU REFER TO THE ACTUARIALLY CALCULATED EXPENSE THAT IS COMPARED TO THE CUMULATIVE CONTRIBUTIONS BY THE COMPANY?

A. As I discussed earlier in my testimony, the annual qualified pension expense is calculated in accordance with FAS 87 and the ACM. Similarly, the retiree medical costs are calculated under FAS 106, and post-employment benefits are calculated under FAS 112. Based on its accounting records, the Company can quantify the total amount of actuarially calculated expense for each of those benefits over the entire period that the Company has offered that benefit. If that cumulative expense amount is less than the cumulative contributions made by the Company since it began offering that benefit, the Company has a prepaid pension asset. If the cumulative recognized expense exceeds the cumulative contributions to the plan, there is an unfunded liability.

Q. CAN YOU PROVIDE A CONCRETE EXAMPLE OF HOW A PREPAID PENSION ASSET ARISES?

A. Yes. Suppose that the Company contributes $100 per year to the qualified pension trust for each of the first five years of its existence. Further suppose that the actuarially determined qualified pension expense in each of those five years is $90. Table 11 below shows how the excess contributions each year create a cumulative prepaid pension asset

Table 11

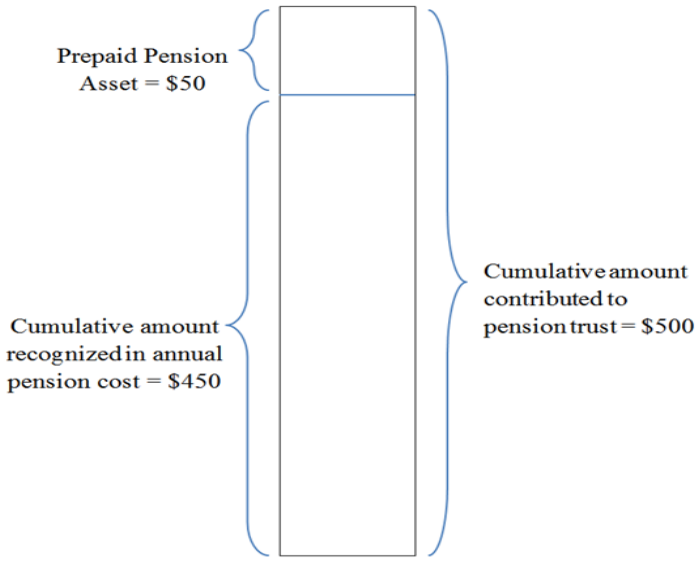
Prepaid Pension Asset Example

Year	Pension Contribution	Pension Expense	Cumulative Prepaid Pension Asset
1	$100	$90	$10
2	$100	$90	$20
3	$100	$90	$30
4	$100	$90	$40
5	$100	$90	$50

At the end of the five-year period, the utility has a prepaid pension asset of $50. Of course, the opposite can also occur. If pension expense exceeds the pension contributions in a given year, the prepaid pension asset will decline, or if there is no prepaid pension asset, the utility may have a pension liability. Over the long run, pension contributions and pension expense will even out, but over the short and intermediate run there will almost certainly be differences, which are recorded as prepaid pension assets or pension liabilities. Figure 1[4] below visually depicts the prepaid pension asset as the excess contributions over the recognized pension expense.

[4] The amounts in this figure are merely illustrative, as are the amounts in Table 11.

Figure 1



Q. WHY ARE THE CONTRIBUTIONS AND EXPENSE DIFFERENT IN ANY GIVEN YEAR?

A. As I discussed earlier, the qualified pension expense calculation is governed by the ACM and FAS 87, which sets forth the rules that companies must follow in determining their pension costs in order to have their accounting be acceptable under GAAP. In contrast, the contributions are driven by federal law requirements under ERISA and the IRC. Although the expense and contribution calculations both use accrual methodologies, the assumptions, attribution methods, and periods of time over which the costs are required to be recognized are different and thus can often result in different annual amounts.

Q. CAN THE UTILITY WITHDRAW THE PREPAID PENSION ASSET AND USE IT TO FUND CAPITAL REQUIREMENTS OR TO PAY FOR OPERATION AND MAINTENANCE EXPENSE?

A. No. As I noted earlier in my discussion of the calculation of qualified pension expense, federal law prohibits the withdrawal of any amounts from the pension trust fund except for the payment of benefits and plan expenses. Once the contributions are made, they are essentially locked away.

B. Ratemaking Treatment of Prepaid Pension Asset

Q. HOW ARE PREPAID PENSION ASSETS AND UNFUNDED ACCRUED BENEFIT LIABILITIES GENERALLY TREATED FOR PURPOSES OF SETTING RATES?

A. Like other prepayments, a prepaid pension asset is generally treated as an addition to rate base. Conversely, FAS 106 and FAS 112 liabilities cause the rate base to decrease, which is consistent with the treatment of other unfunded liabilities.

Q. IS THE COMPANY PROPOSING TO APPLY THE STANDARD RATEMAKING TREATMENT OF PREPAYMENTS AND UNFUNDED LIABILITIES IN THIS CASE?

A. Yes. In this case, the Company is proposing to include both the prepaid pension asset and the unfunded liabilities in rate base. Because the prepaid pension asset is larger than the unfunded liability, the Company has a net asset and therefore has an increase to rate base. The Company proposes to earn a return on the asset at the Company's weighted average cost of capital (WACC).

Q. IS THE COMPANY PROPOSING TO EARN A RETURN ON THE FULL AMOUNT OF THE NET PREPAID PENSION ASSET?

A. No. The net amount of the asset will be further offset by the accumulated deferred income tax amounts (ADIT) associated with it. Thus, instead of earning a return on the full amount of the net asset (i.e., the prepaid pension asset less the unfunded accrued liabilities of retiree medical and post-employment benefits) the Company earns a return only on the portion that remains after the ADIT is adjusted from it.

Q. HOW DOES ADIT ARISE IN CONNECTION WITH THE PREPAID PENSION ASSET OR ACCRUED UNFUNDED LIABILITY?

A. When the Company makes a contribution, it is allowed to deduct the contribution amount (up to IRS-imposed limits). That deduction shields income from taxes, which gives rise to deferred taxes. Thus, the amount by which the contributions in a particular year exceed the annual recognized cost for that year gives rise to a deferred tax liability. The opposite situation occurs when the annual cost recognized for a particular benefit exceeds the contribution, which give rise to a deferred tax asset. Company witness Mr. Halama discusses ADIT and how it impacts our filing.

Q. WHAT AMOUNT OF BENEFIT ASSETS AND LIABILITIES IS INCLUDED IN THE TEST YEAR RATE BASE?

A. Table 12 below shows the amount included in rate base for all benefit types included in 2016. This table also shows the amounts that must be offset by the ADIT associated with the benefit asset or liability balance. This same information can also be found in the Non-Plant Rate Base (Assets/Liabilities) Schedule. The net balance is approximately $82.4 million on a Minnesota

electric jurisdictional basis. This amount should be added to the Company's rate base because it represents shareholder capital held for future use and that will reduce ratepayer costs in those years, providing ratepayer benefit.

Table 12

Pension and Benefits Assets and Liabilities ($)

Rate Base Benefit (Short and Long-Term)	Non-Plant Rate Base Asset/(Liability)	Associated Accumulated Deferred Tax Asset/(Liability)	Net Rate Base Impact Asset/(Liability)
Prepaid Pension Asset	160,632,037	(45,192,860)	115,439,178
Retiree Medical - FAS 106	(34,795,006)	9,789,366	(25,005,640)
Post-Employment Benefits FAS 112	(10,397,766)	2,925,349	(7,472,417)
Total	115,439,266	(32,478,145)	82,440,261

Q. WHAT IS THE COMPANY'S REQUEST WITH RESPECT TO THE NET PENSION ASSET BALANCE OF $82.4 MILLION?

A. The Company seeks Commission approval to add that amount to its rate base and earn its WACC on that balance, consistent with the treatment of other prepayments.

Q. HAS THE COMPANY CREATED A SCHEDULE TO REFLECT THE UNDERLYING CALCULATION OF THE PREPAID PENSION ASSET THAT IS INCLUDED IN THE MULTI-YEAR RATE PLAN PERIOD, 2020-2023?

A. Yes. Exhibit___(RRS-1), Schedule 13 shows the annual calculation of the total NSPM prepaid pension asset or liability from 2015 through 2022. Schedule 13 also shows a detailed calculation by month that supports the 2020-2023 NSPM electric state of Minnesota prepaid pension asset balances that are being requested in rate base for this case.

Q. WHAT HAS CAUSED THE RECENT GROWTH OF THE PREPAID PENSION ASSET?

A. The growth of the prepaid pension asset was driven by three factors, all of which were outside the Company's control. The first factor was the enactment by Congress of the Pension Protection Act of 2006. Prompted by the defaults by several large defined benefit pension plans in the early part of that decade, Congress passed legislation that gave defined benefit pension plans seven years to become 100 percent funded. The Pension Protection Act also created penalties for plans that are underfunded, including an increase in Pension Benefit Guaranty Corporation (PBGC) premiums. As I will explain in more detail later in my testimony, the PBGC was established by Congress to insure pension benefits under private-sector defined benefit pension plans. The PBGC is funded by premiums paid by plan sponsors and by investment returns on the assets held in the PBGC trust fund.

The second factor was the severe economic downturn that occurred in 2008. The steep drop in equities markets dramatically reduced the net asset value of pension plans across the United States, including those of Xcel Energy. The Xcel Energy pension plans, for example, lost approximately 26 percent of their value as a result of the market crash.

The third factor was the drop in interest rates, which was caused by the Federal Reserve's efforts to stimulate the national economy in the wake of the 2008 recession. The resulting drop in discount rates caused the Company's pension liabilities to become larger, which increased the amount of underfunding. This is because future pension liabilities are discounted to present value, and a higher discount rate reduces the liability balance, whereas a lower discount rate increases the liability balance. That liability balance is

then compared to the value of the trust assets to determine its funded status and whether the trust is overfunded or underfunded.

Q. HOW DID THE COMPANY RESPOND TO THE COMBINATION OF HEIGHTENED FUNDING REQUIREMENTS AND A LOWER FUNDING LEVEL IN ITS PLANS?

A. The Company responded by taking the only steps that were practically available to it, which was to provide additional funding to the pension plans. To help ensure that the pension plans complied with the Pension Protection Act by becoming fully funded within seven years, the Company made the contributions listed in Exhibit___(RRS-1), Schedule 13. As I mentioned previously, these contributions will be recognized as expense over future periods. This timing difference gives rise to the prepaid pension asset.

Q. HOW CAN THE PENSION PLAN BE UNDERFUNDED AND YET THE COMPANY HAS A PREPAID PENSION ASSET?

A. The Company can have an underfunded pension plan at the same time it has a prepaid pension asset because they measure different things. The unfunded pension plan occurs when the projected benefit obligation exceeds the fair value of the pension plan assets. A prepaid pension asset occurs when the cumulative cash contributions to the trust exceed the cumulative pension expense recognized under FAS 87 since the inception of the pension plan.

C. Justification for Including the Net Asset in Rate Base

Q. WHY IS IT APPROPRIATE TO INCLUDE THE NET ASSET IN RATE BASE?

A. The net asset should be included in rate base for two separate and independent reasons. First, as I explained earlier, it is a well-established regulatory principle for prepayments to be included in rate base, regardless of

whether they are prepayments by the utility or by its customers. In other words, prepayments are included regardless of whether they are additions or reductions to rate base. There is no reason to treat the net prepayment in this case differently.

Second, customers are receiving the benefit of a return on the prepaid pension asset, and therefore it is appropriate that the Company earn a return on its prepayment as well.

Q. PLEASE EXPLAIN WHAT YOU MEAN WHEN YOU STATE THAT CUSTOMERS ARE RECEIVING THE BENEFIT OF A RETURN ON THE PREPAID PENSION ASSET.

A. As I explained earlier in my testimony, the annual pension cost determined under both accounting methods, the ACM (NSPM Plan) and FAS 87 (XES Plan), includes an EROA. The EROA percentage is multiplied by the value of the assets in the pension trust, and the product of that calculation is subtracted from the annual pension cost. Thus, the return on the prepaid pension asset reduces the annual pension cost passed on to ratepayers.

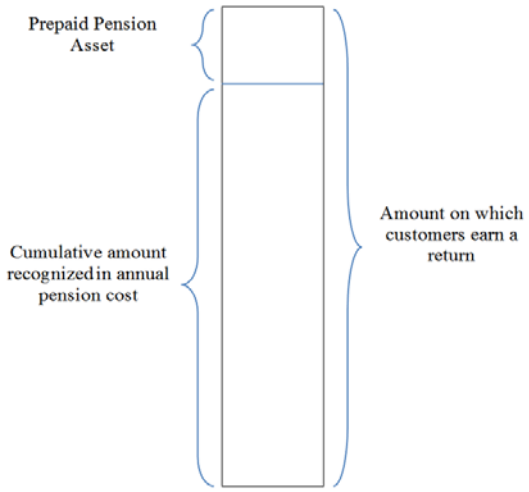
Q. WHAT IS THE EROA FOR THE NSPM PLAN AND THE XES PLAN?

A. The EROA for both the NSPM Plan and the XES Plan is 7.10 percent for 2020, 2021, and 2022. That percentage is applied to the balance in the pension trust.

Q. DOES THE PENSION TRUST FUND BALANCE THAT IS MULTIPLIED BY THE EROA INCLUDE THE PREPAID PENSION ASSET?

A. Yes. As shown in Figure 2 below, customers receive the benefit of the earnings on the *entire* amount of assets in the pension trust, not just the amount that has been recognized in annual pension cost.

Figure 2



As the figure shows, customers are receiving a return on amounts that they have not yet paid through recognized pension cost. In effect, the Company has made a prepayment of pension contributions, and customers are earning a return on that prepayment at the EROA. The return is reflected as a decrease in annual pension cost. It would be inequitable and unreasonable to deny the Company a return on the prepaid pension asset at the WACC because customers are, in fact, receiving the benefit of a return on that prepayment at the EROA.

Q. YOU TESTIFIED EARLIER THAT THE EROA FOR THE COMPANY IS 7.10 PERCENT, WHEREAS THE COMPANY IS SEEKING A WACC OF 7.42 PERCENT IN THE TEST YEAR. DOES THE DISPARITY BETWEEN THE WACC AND THE

EROA DEMONSTRATE THAT CUSTOMERS ARE DISADVANTAGED BY THE USE OF THE WACC AS THE RETURN ON THE PREPAID PENSION ASSET?

A. No. The disparity between the WACC and the EROA is offset by the benefits that customers receive through avoidance of incremental PBGC premiums.

The PBGC is a federal agency established by Congress as part of ERISA to insure pension benefits under private sector defined benefit pension plans. If a pension plan is terminated without sufficient money to pay all benefits, PBGC's insurance program will pay employees the benefits promised under the pension plan, up to the limits set by law. The funding for the PBGC comes partly from premiums charged to pension sponsors and partly from returns on assets held by the PBGC.

Q. WHAT TYPES OF PREMIUMS DOES THE PBGC CHARGE?

A. The PBGC charges two types of premiums: (1) a per capita premium that is charged to all single-employer defined benefit plans; and (2) a variable premium charged to underfunded plans. The amounts of the premiums are set by Congress and must be paid by sponsors of the defined benefit plans, such as NSPM.

Q. ARE THE VARIABLE PREMIUMS APPLICABLE TO UNDERFUNDED PLANS INCREASING?

A. Yes. For 2018, the variable-rate premium for a single-employer plan such as that of NSPM is $38 per $1000 of unfunded vested benefits.

Q. ARE THE COMPANY'S PENSION PLANS CURRENTLY UNDERFUNDED?

A. Yes. And absent the prepaid pension asset, the plan would be further underfunded.[5]

Q. BY HOW MUCH WOULD THE PENSION PLANS BE UNDERFUNDED IN THE ABSENCE OF THE PREPAID PENSION ASSET?

A. In the absence of the prepaid pension asset, the NSPM Plan would be further underfunded by $184 million at the end of 2018.

Q. BY HOW MUCH WOULD THE PBGC PREMIUMS INCREASE IN 2018 IN THE ABSENCE OF THE PREPAID PENSION ASSET?

A. The PBGC premiums would be approximately $3.0 million higher in 2018 on a NSPM Electric, state of Minnesota basis, without the prepaid pension asset.

Q. ARE PBGC PREMIUMS INCLUDED IN THE ANNUAL PENSION COST?

A. Yes. PBGC premiums are included in the annual pension cost calculation. Therefore, the existence of the prepaid asset will avoid the need for NSPM's electric retail customers to pay an additional $3.0 million in 2018.

Q. DOES THE AVOIDANCE OF INCREMENTAL PBGC PREMIUMS OFFSET THE PERCENTAGE DIFFERENCE BETWEEN THE EROA AND THE WACC?

A. Yes. As I testified earlier, the EROA is 7.10 percent, whereas the WACC requested by the Company in this case is 7.42 percent, which is a difference of 32 basis points. Multiplying the $82 million net asset by 32 basis points yields

[5] A plan can be underfunded at the same time it has a prepaid pension asset because they measure different things. As I testified earlier, the prepaid pension asset is the amount by which cumulative contributions exceed cumulative recognized pension expense. A pension plan is underfunded when its pension benefit obligations exceed the value of its assets.

a total of approximately $264,000, which is the amount by which the return to the Company will exceed the expected return to customers. That amount is far smaller than the $3.0 million that customers avoid paying in PBGC premiums because of the existence of the prepaid asset. Thus, it is reasonable to include the net asset in rate base and for the Company to earn a WACC return on the asset.

Q. PLEASE SUMMARIZE THE COMPANY'S REQUEST WITH RESPECT TO THE PREPAID PENSION ASSET.

A. The Company requests that the prepaid pension asset be included in rate base and that it earn a return at the WACC, similar to other prepayments.

VIII. ACTIVE HEALTH AND WELFARE COSTS

Q. WHAT ARE THE ACTIVE HEALTH AND WELFARE AMOUNTS FOR 2020, 2021, AND 2022?

A. The 2020, 2021, and 2022 health and welfare expense amounts are approximately $38.4 million, $39.9 million, and $41.5 million, respectively.

Q. WHAT TYPES OF BENEFIT COSTS ARE INCLUDED IN ACTIVE HEALTH AND WELFARE?

A. Active health and welfare costs can be broken down into three categories. The first and largest category is for active healthcare costs; the second category is for miscellaneous benefit programs and costs; and the third category contains life, LTD, and business travel insurance premiums.

Q. SINCE ACTIVE HEALTH AND WELFARE CONSISTS OF THREE CATEGORIES OF COSTS, CAN YOU PROVIDE A FURTHER BREAKDOWN OF COSTS IN THE TEST YEAR?

A. Yes. Exhibit___(RRS-1), Schedule 14, shows the components that are included in each category and the amount for each component in the test year. The active healthcare category makes up 90 percent of the total health and welfare costs, so the remainder of this section of testimony will focus on active healthcare.

Q. WHAT TYPES OF COSTS ARE INCLUDED IN ACTIVE HEALTHCARE?

A. Active healthcare costs are all costs associated with providing healthcare coverage to our employees. As explained in more detail by Ms. Lowenthal, active healthcare benefits include medical, pharmacy, dental and vision claims, administrative fees, employee withholdings, pharmacy rebates, Health Savings Account (HSA) contributions, transitional reinsurance fees, trustee fees, interest income and opt-out finding.

Q. DID THE COMPANY MAKE ANY ADJUSTMENTS TO THE PER BOOK AMOUNTS FOR ACTIVE HEALTHCARE CLAIMS?

A. Yes. Table 13 below shows both the per book and actual incurred amounts of active health and welfare claims for the five years prior to the test year and for the 2020-2022.

Table 13

Active Health Care

Per Book and Actual Incurred Claims

NSPM Electric O&M State of MN ($)			
Year	**Per Book Amount**		
		IBNR Adjustment	Actual Incurred Claims
2015	37,332,663	570,047	37,839,710
2016	38,267,972	(105,005)	38,162,967
2017	33,501,711	740,938	34,242,649
2018	34,120,041	(263,278)	33,856,764
2019 Forecast	33,211,673	319,203	33,530,876
2020 Test Year	n/a	n/a	34,547,977
2021 Plan Year	n/a	n/a	35,966,484
2022 Plan Year	n/a	n/a	37,505,915

Q. WHY WAS IT NECESSARY TO MAKE AN ADJUSTMENT TO THE PER BOOK CLAIMS AMOUNT?

A. This adjustment is necessary to reflect actual costs incurred in each year. The per book amounts for active healthcare include estimates because there is generally an average lag of approximately 30 days between when healthcare is provided and when the Company receives a bill for that care. Therefore, the actual amount of active healthcare expense was not available at the time the Company recorded its per book amount at the end of each month. Because the Company needs to close its books at the end of each reporting period before it receives all of those healthcare claims, it takes the actual amounts recorded through a certain point in the year and estimates the additional amount that will be incurred but not reported (IBNR) by the end of the

reporting period. This accrual estimate is called the IBNR reserve. During the following period, the Company receives the actual amounts attributable to care provided in the last part of the prior period, and at that time it trues up the IBNR estimate to the actual incurred amount. Therefore, the per book amounts need to be adjusted so that they reflect the actual incurred claim amounts during that period. After the adjustment, the periods include only the actual amounts incurred for the twelve months.

Q. HOW WERE THE 2020-2022 ACTIVE HEALTHCARE COSTS DETERMINED?

A. With the exception of medical and pharmacy claims, the Company's actuary, Willis Towers Watson, calculated the test year amounts by using actual experience, adjusting it for any plan design changes, participant counts, regulations, administrative fees, etc., and then trended that amount forward.

Q. HOW WERE THE 2020-2022 MEDICAL AND PHARMACY COSTS DETERMINED?

A. Since medical and pharmacy claims make up over 95 percent of the total health and welfare amounts, the Company wanted to ensure that it calculated these two components using the most current information available. The Company first took the most recent 2019 forecasted incurred medical and pharmacy claims amount, after making the IBNR adjustments described above, and then applied a 5.50 percent healthcare trend increase over the three years of the multi-year plan.

Q. WHAT IS THE COMPANY'S BASIS FOR USING A 5.50 PERCENT MEDICAL AND PHARMACY HEALTHCARE TREND?

A. The assumption reflects Willis Towers Watson's overall expectation of healthcare cost increases based on survey averages, carrier information, and an

analysis of the broad healthcare market. Exhibit___(RRS-1), Schedule 15 provides a summary of this analysis. Overall, the Willis Towers Watson survey data indicates that medical costs are expected to rise between 5.5 percent and 7.50 percent in 2019. While, PricewaterhouseCoopers (PwC) estimates that medical and pharmacy costs will rise 6.00 percent in 2019. This information, which was gathered by PwC's Health Research Institute, was based on PwC's own internal research and input from health plan actuaries, industry leaders, analyst reports, and employer surveys. Finally, the Aon Carrier Trend Report expects 2019 medical costs to increase by 7.00 percent and 2019 pharmacy costs to increase by 7.50 percent.

Q. WHAT PERCENTAGE DOES TOTAL HEALTH AND WELFARE COSTS INCREASE FROM 2020-2023 AFTER USING THE METHODOLOGY DESCRIBED ABOVE?

A. As shown in Table 14 below, the amounts reflect an average increase of 3.8 percent, which is well below the overall 5.50 percent healthcare trend increase.

Table 14

Active Health Care Expense

NSPM Electric O&M State of MN				
	2019 Forecast	**2020 Test Year**	**2021 Plan Year**	**2022 Plan Year**
Active Healthcare ($)	33,530,876	34,547,977	35,966,484	37,505,915
Year-Over-Year Change		3.06%	4.11%	4.28%

Q. DO YOU BELIEVE THE COMPANY'S ESTIMATE OF HEALTHCARE COSTS IS REPRESENTATIVE OF COSTS THE COMPANY EXPECTS TO INCUR IN FUTURE YEARS?

A. Yes. As shown in Table 14 above, the Company's active healthcare costs are currently forecasted to grow approximately 3-4 percent per year for 2020,

2021, and 2022. This growth rate is lower than the typical rate for other organizations, as demonstrated by the attachment referred to above. The Company has implemented several plan design changes to help control the pace of growth, as discussed by Company witness, Ms. Lowenthal. However, active healthcare costs have continued to increase and the Company's forecasts through 2022 are reasonable.

Q. WHY IS IT REASONABLE FOR CUSTOMERS TO PAY ACTIVE HEALTH AND WELFARE COSTS INCURRED BY THE COMPANY?

A. It is appropriate that customers pay for these benefits because they reflect a reasonable and necessary level of expense. Employees expect their employer to provide a reasonable level of health and welfare benefits, and any employer that does not do so is at a significant disadvantage in the labor market. Thus, our compensation plans and benefits are required to attract, retain, and motivate employees needed to perform the work necessary to provide quality services for NSPM customers.

IX. WORKERS' COMPENSATION FERC 925 COSTS

Q. WHAT TYPES OF COSTS ARE INCLUDED IN FERC ACCOUNT 925 INJURIES AND DAMAGES?

A. FERC Account 925 is composed of workers' compensation coverage and other liability insurance costs. The workers' compensation benefit covers work-related injury costs for medical claims, permanent or partial disability, lost time, rehabilitation costs, prescription drugs, etc. The other liability insurance includes coverage for general liability, excess liability, fiduciary insurance, and directors' and officers' insurance. Because my area of

responsibility is in benefits accounting, my testimony is limited to the workers' compensation costs.

Q. PLEASE EXPLAIN HOW WORKERS' COMPENSATION COSTS ARE DETERMINED.

A. Similar to LTD costs, the accounting treatment for workers' compensation differs for the self-insured and fully-insured portions of the plan. The workers' compensation benefit is self-insured for any active bargaining or non-bargaining employee who was injured before August 1, 2001, and it is fully insured for any employee who was injured on or after that date. The Company is required to accrue for self-insured workers' compensation costs under FAS 112. The fully-insured portion is the cost of the insurance premiums that the Company must pay each year.

Q. WHAT HAS BEEN THE TREND FOR THE WORKERS' COMPENSATION COSTS OVER THE LAST SEVERAL YEARS AND FOR THE MULTI-YEAR RATE PLAN PERIOD?

A. Table 15 below compares the workers' compensation benefit costs from 2015 through 2022.

Table 15

Workers' Compensation Expense

NSPM Electric O&M State of MN ($)			
Year	**FAS 112**	**Insurance Premiums & Other**	**Total Workers' Compensation**
2015	471,615	2,515,087	2,986,703
2016	454,589	1,856,452	2,311,041
2017	255,880	1,914,890	2,170,770
2018	157,468	1,880,119	2,037,587
2019 Forecast	(710,247)	1,907,971	1,197,725
2020 Test Year	123,281	1,888,992	2,012,273
2021 Plan Year	114,959	1,880,990	1,995,949
2022 Plan Year	106,239	1,873,035	1,979,274

Q. HOW DID YOU CALCULATE THE WORKERS' COMPENSATION AMOUNTS FOR 2020 THROUGH 2022?

A. The FAS 112 amounts are based on the 2020 through 2022 projected cost amounts from the Willis Towers Watson actuarial calculation provided in May 2019. The insurance premium amounts were based on the actual premiums paid through October 2019, with annual increases of five percent applied to trend to the end of 2022.

Q. HAS THE COMPANY PROVIDED THE ACTUARIAL STUDY AND DERIVATION OF THE JURISDICTIONAL AMOUNT?

A. Yes. The Company has included Exhibit___(RRS-1), Schedule 9, which is an actuarial study that supports the FAS 112 workers compensation costs in 2020-2022. Exhibit___(RRS-1), Schedule 10 shows the conversion of the 2020 total cost amounts to the NSPM electric O&M, state of Minnesota amount.

Q. IS THE COMPANY SEEKING TO RECOVER THE FORECASTED WORKERS' COMPENSATION EXPENSE AS SHOWN IN TABLE 15 AS PART OF ITS MULTI-YEAR RATE PLAN?

A. Yes. Mr. Halama has incorporated the budgeted amounts into the 2020 test year and 2021 and 2022 plan year revenue requirements. These costs are calculated in accordance with accounting rules and standards and are based on actuarial assumptions specific to the Company.

X. CONCLUSION

Q. PLEASE SUMMARIZE YOUR TESTIMONY AND RECOMMENDATIONS.

A. The assumptions that the Company has used to determine the test year pension expense are reasonable, as shown by comparison with other utilities' pension assumptions. In addition, we are proposing to use a five-year average discount rate – as the Commission approved in our last rate case – to reduce the potential number of disputed issues in this current case. Our annual qualified pension expense decreases each year through the multi-year rate plan period, in part due to the benefit plan design changes that have reduced employee benefit levels.

The Company should be allowed to recover the costs of its FAS 106 post-retirement medical benefit and its FAS 112 benefit. Those are reasonable costs that are part of the total compensation package the Company needs to attract and retain good employees.

The Company should also be allowed to include its prepaid pension asset in rate base. The gains from that asset help reduce pension expense in the test year, but shareholders have no access to those gains. The Company requests that the prepaid pension asset be included in rate base and that it earn a return, similar to other prepayments.

Regarding healthcare costs, we have implemented measures to help control the pace of growth in our healthcare costs, and the result is reflected in a lower inflation factor during the multi-year rate plan period than that recommended by our actuaries and PwC.

Finally, our workers' compensation costs are necessary and the forecasted amounts presented in my testimony should be approved for recovery in rates.

In summary, and as discussed in more detail by Ms. Lowenthal, the non-cash employee benefits discussed in my testimony are part of the Company's overall compensation and benefits package and are necessary to attract and retain the employees required to provide high-quality service to our customers. The forecasted amounts of pension and benefits costs I present are reasonable and accurately reflect our expected pensions and benefits expense in the multi-year rate plan period. As such, I recommend that the Commission approve these levels of expense to be included in rates.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

Statement of Qualifications
Richard R. Schrubbe

Current Responsibilities

As Area Vice President, Financial Planning and Analysis, I am responsible for overseeing the business area leaders of Energy Supply, Transmission, Distribution, Gas Engineering & Operations and Corporate Services with respect to budget planning, reporting, and analysis. I oversee the accounting for all employee benefits programs, playing a liaison role with the Human Resources department, external actuaries, and senior management with benefit fiduciary roles. I am also responsible for coordinating the benefits operations and maintenance ("O&M") and capital budgeting and forecasting processes, as well as the monthly analysis of actual results against these budgets and forecasts.

Experience

2007 – Present	Xcel Energy Inc.	Area Vice President, Financial Planning & Analysis

Education

1996	Bachelor of Science – Business Admin, Finance	Marquette University

Benefit Costs

NSPM Total Company Electric O&M

	2015 Actuals	2016 Actuals	2017 Actuals	2018 Actuals	2019 Forecast	2020 Forecast	2021 Forecast	2022 Forecast
Retirement								
401K Match	10,480,145	10,632,230	10,353,515	10,484,554	10,701,217	10,753,795	11,030,526	11,325,767
Qualified Pension (A)	23,678,168	22,334,475	25,093,293	25,119,979	24,180,960	24,447,778	23,633,550	22,825,324
Deferred Pension Amortization	-	-	-	-	-	5,881,632	5,881,632	5,881,632
Nonqualified Pension	1,783,776	1,689,374	1,483,843	1,262,954	978,258	-	-	-
Deferred Compensation Plan	37,857	45,973	52,054	51,305	55,063	60,563	65,006	69,716
NMC Employer Retirement Contribution	944,367	1,044,222	1,105,886	1,007,100	1,092,545	943,229	970,810	999,236
Retirement & Compensation Consulting	551,046	606,283	518,623	582,968	628,855	562,709	562,722	563,710
FAS 88 nonqualified settlement	936,119	563,000	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Total Retirement	38,411,478	36,915,557	38,607,214	38,508,860	37,636,898	42,649,705	42,144,245	41,665,385
Health & Welfare								
Active Health Care	42,875,363	44,251,173	39,034,455	39,589,763	38,382,090	39,889,748	41,527,584	43,305,041
Adjust to Incurred Claims	582,327	(121,422)	863,302	(305,483)	368,897	-	-	-
Life & LTD insurance, Misc Ben Programs	4,862,796	4,221,199	4,711,786	4,421,603	4,639,607	4,474,709	4,526,211	4,600,079
FAS 106 Retiree Medical	2,433,500	1,865,123	1,761,004	1,692,582	1,275,860	1,462,639	1,314,563	1,201,208
FAS 112 LTD (long-term disability)	779,188	(567,320)	72,586	13,530	(85,496)	127,315	118,477	111,384
Other			-			-	-	
Total Health & Welfare	51,533,174	49,648,753	46,443,133	45,411,995	44,580,958	45,954,411	47,486,836	49,217,712
Total Benefits	89,944,652	86,564,310	85,050,347	83,920,855	82,217,856	88,604,117	89,631,081	90,883,097

(A) Amounts are consistent with the data in the annual pension compliance filing

NSPM Electric O&M for Minnesota Jurisdiction

	2015 Actuals	2016 Actuals	2017 Actuals	2018 Actuals	2019 Forecast	2020 Forecast	2021 Forecast	2022 Forecast
Retirement								
401K Match	9,125,327	9,194,646	8,886,008	9,036,008	9,259,666	9,313,718	9,553,390	9,809,095
Qualified Pension (A)	19,845,733	18,815,654	20,626,921	20,549,083	21,398,739	20,956,503	20,378,317	19,780,720
Deferred Pension Amortization	-	-	-	-	-	5,881,632	5,881,632	5,881,632
Nonqualified Pension	1,553,179	1,460,954	1,273,523	1,088,464	846,478	-	-	-
Deferred Compensation Plan	32,963	39,757	44,676	44,217	47,646	52,453	56,301	60,380
NMC Employer Retirement Contribution	822,284	903,033	949,138	867,959	945,369	816,918	840,806	865,425
Retirement & Compensation Consulting	479,810	524,307	445,113	502,425	544,143	487,355	487,366	488,222
FAS 88 nonqualified settlement	815,102	486,877	-	-		-	-	-

Other	-	-	-	-		-	-	-
Total Retirement	32,674,399	31,425,228	32,225,379	32,088,156	33,042,040	37,508,578	37,197,811	36,885,474
Health & Welfare								
Active Health Care	37,332,663	38,267,972	33,501,711	34,120,041	33,211,673	34,547,977	35,966,484	37,505,915
Adjust to Incurred Claims	507,047	(105,005)	740,938	(263,278)	319,203	-	-	-
Life & LTD insurance, Misc Ben Programs	4,234,160	3,650,451	4,043,937	3,810,714	4,014,610	3,875,486	3,920,091	3,984,067
FAS 106 Retiree Medical	2,118,910	1,612,940	1,511,399	1,458,735	1,103,990	1,266,772	1,138,526	1,040,350
FAS 112 LTD (long-term disability)	678,459	(490,613)	62,298	11,661	(73,979)	110,266	102,611	96,468
Other	-	-	-	-				
Total Health & Welfare	44,871,238	42,935,745	39,860,283	39,137,874	38,575,497	39,800,500	41,127,712	42,626,801
Total Benefits	77,545,637	74,360,973	72,085,662	71,226,030	71,617,536	77,309,078	78,325,523	79,512,275

(A) Amounts are consistent with the data in the annual pension compliance filing

Benefit Costs

NSPM TOTAL COSTS (O&M, Capital, COGS, Clearing, Deferred)

	2015 Actuals	2016 Actuals	2017 Actuals	2018 Actuals	2019 Forecast	2020 Forecast	2021 Forecast	2022 Forecast
Retirement								
401K Match	10,179,711	10,658,651	10,597,175	10,656,570	11,214,748	11,288,319	11,593,949	11,907,922
Qualified Pension	34,213,000	33,981,000	34,862,000	34,465,000	34,707,000	34,175,000	31,994,000	29,894,000
Nonqualified Pension	584,000	579,000	724,000	719,000	582,000	586,000	548,000	515,000
Deferred Compensation Plan	11,568	16,117	20,738	20,910	25,029	23,559	25,691	27,886
NMC Employer Retirement Contribution	1,049,297	1,118,537	1,159,245	1,076,993	1,178,685	1,057,308	1,088,127	1,119,871
Retirement & Compensation Consulting	522,255	367,751	422,881	110,104	396,466	382,282	383,005	383,743
FAS 88 nonqualified settlement	-	-	-	-	-	-	-	-
Other	(120,174)	-	-	-	-	-	-	-
Total Retirement	46,439,657	46,721,056	47,786,039	47,048,577	48,103,928	47,512,468	45,632,772	43,848,422
Health & Welfare								
Active Health Care	42,926,697	47,154,493	41,660,769	43,770,034	42,406,652	44,470,593	46,432,070	48,510,971
Life & LTD insurance, Misc Ben Programs	4,458,064	4,002,600	5,109,622	4,410,233	4,860,426	4,686,155	4,756,127	4,844,004
FAS 106 Retiree Medical	2,908,000	2,443,000	2,335,000	2,207,000	1,614,000	1,442,000	1,203,000	979,000
FAS 112 LTD (long-term disability)	837,000	(684,000)	120,000	(22,000)	(153,000)	226,000	212,000	200,000
Other			-	-	-	-	-	-
Total Health & Welfare	51,129,761	52,916,093	49,225,391	50,365,267	48,728,078	50,824,748	52,603,196	54,533,975
Total Benefits	97,569,418	99,637,149	97,011,430	97,413,844	96,832,006	98,337,216	98,235,969	98,382,397

XES TOTAL COSTS (O&M, Capital, COGS, Clearing, Deferred)

	2015 Actuals	2016 Actuals	2017 Actuals	2018 Actuals	2019 Forecast	2020 Forecast	2021 Forecast	2022 Forecast
Retirement								
401K Match	9,402,650	9,950,823	10,441,898	10,899,361	11,055,299	11,570,689	11,917,809	12,275,344
Qualified Pension	29,148,000	27,013,000	28,256,000	23,352,000	21,759,000	20,954,000	19,320,000	18,127,000
Nonqualified Pension	4,681,000	4,446,000	3,737,000	2,872,000	2,330,000	2,387,000	2,219,000	1,986,000
Deferred Compensation Plan	93,816	108,784	124,718	118,874	127,548	151,252	161,489	172,034
Retirement & Compensation Consulting	847,528	1,026,890	929,845	1,843,994	1,312,591	1,096,962	1,099,698	1,102,489
FAS 88 qualified settlement	-	-	21,181,000	22,259,000	(124,000)	-	-	-
FAS 88 nonqualified settlement	3,200,000	1,900,000	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Total Retirement	47,372,994	44,445,497	64,670,461	61,345,229	36,460,438	36,159,903	34,717,997	33,662,867
Health & Welfare								

Active Health Care	38,329,364	41,847,670	41,215,822	39,265,443	39,963,324	42,032,546	43,853,852	45,789,286
Life & LTD insurance, Misc Ben Programs	5,479,323	5,525,082	5,462,713	6,029,821	6,015,738	5,938,287	6,025,829	6,134,389
FAS 106 Retiree Medical	1,545,000	1,350,000	1,491,000	1,527,000	1,253,000	1,394,000	1,351,000	1,394,000
FAS 112 LTD (long-term disability)	733,000	(557,000)	17,000	91,000	3,000	8,000	6,000	6,000
Other						-		
Total Health & Welfare	46,086,687	48,165,752	48,186,535	46,913,264	47,235,062	49,372,833	51,236,681	53,323,675
Total Benefits	93,459,681	92,611,249	112,856,996	108,258,492	83,695,500	85,532,735	85,954,678	86,986,542

Explanation of Schedule 3

Gains and losses arising from any individual event such as the 2008 market loss are not tracked separately under the ACM or SFAS 87. Instead, all gains and losses are combined and a portion of the unfunded liability (under ACM) or net unrecognized gain or loss (under SFAS 87) is recognized in annual pension cost. Further, the portion of unfunded liability (ACM) or net unrecognized gain or loss (SFAS 87) recognized in pension cost can change from year to year as future gains and losses occur. Therefore, specific amortization schedules for individual events do not exist under either the ACM or SFAS 87 as the exact recognition amount is dependent on future gain and loss experience.

However, to comply with Order Point 40, the Company had its actuary, Willis Towers Watson, create Schedule 3 which approximates the asset and liability gain/loss amortization amounts by Plan and by year from 2008 to 2018. A point-by-point walkthrough explaining this schedule is provided below.

I. The General Layout of the Schedule

- The schedule is first broken into two sections. Section I shows the NSPM plan activity and is on pages 1-4. Section II shows the XES plan activity and is on pages 5-8.
- Within each section the information is broken down further by year from 2008-2018. These seven subsections are labeled by year 2008 Experience, 2009 Experience, etc. The activity within these seven subsections is then split between two categories Asset and Liability. The liability category is shaded in gray to help distinguish it from the asset category. The asset and liability experience within these subsections from 2008-2018 represents actual results. The estimated amortization of these actual results are then shown through 2029.
- To better identify points of conversation, each page within the schedule has numbers down the left side identifying each row and letters along the top identifying each column. This enables the reader to identify a specific number within the schedule by a page and line number. For example a reference to Page-1 Line-A1 would point to the 2008 market Loss for the NSPM Plan of $200.3 million.

II. The Eleven Subsections 2008 Experience to 2018 Experience

- As mentioned above, these sections represent the actual asset and liability gains and losses for the specific year. Asset gains/losses are

each section. This is represented on lines 60 and 61 for the NSPM Plan (Section I) and 57 and 58 for the XES Plan (Section II).

III. Other Impacts

- For the NSPM Plan (Section I) there are other factors within the ACM that are added to the asset and liability experience amortizations to arrive at the total ACM amount that is recognized. These factors include the 20% limit on the difference between the market value of assets and valuation assets (AVA limit) which applied for 2009 and 2010, contributions and changes in the allocation of cost to the MN electric jurisdiction.
- For the XES Plan (Section II) there are other factors within SFAS 87 that are added to the asset and liability experience amortizations to arrive at the net gain/loss amount that is recognized. These factors include the SFAS 87 corridor and the gain/loss position prior to 2008. If the net gains/losses are inside the corridor, they remain unrecognized until which time they are determined to be outside of the corridor. In the XES Section, pages 3-4, Line 61 indicates whether it is a year inside the corridor ("Yes") or outside ("No").
    - The net gain/loss amortization is then added to the other four components of SFAS 87 to arrive at the total net periodic pension expense that is recognized for the year.

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Section 1	A (Gain)/Loss	B 2009	C 2010	D 2011	E 2012	F 2013	G 2014	H 2015	I 2016	J 2017	K 2018	L 2019
2008 Experience												
1 Asset loss (A) & Phase-in amount (B-V)	200,340	40,068	80,136	120,204	160,272	200,340	200,340	200,340	200,340	200,340	200,340	200,340
2 Asset loss offset by surplus[2]		(40,068)	(80,136)	(80,136)	(80,136)	(80,136)	(80,136)	(80,136)	(80,136)	(80,136)	(80,136)	(80,136)
3 Asset loss previously amortized		-	-	-	(5,415)	(15,266)	(24,682)	(33,253)	(40,976)	(48,013)	(54,425)	(60,268)
4 Asset loss remaining to amortize		-	-	40,068	74,721	104,938	95,522	86,951	79,228	72,191	65,779	59,936
5 Asset loss amortization		-	-	5,415	9,851	9,416	8,571	7,723	7,037	6,412	5,843	5,324
6 Liability loss[3]	20,518	20,518	20,518	20,518	20,518	20,518	20,518	20,518	20,518	20,518	20,518	20,518
7 Liability loss offset by surplus[2]		(20,518)	(20,518)	(20,518)	(20,518)	(20,518)	(20,518)	(20,518)	(20,518)	(20,518)	(20,518)	(20,518)
8 Liability loss previously amortized		-	-	-	-	-	-	-	-	-	-	-
9 Liability loss remaining to amortize		-	-	-	-	-	-	-	-	-	-	-
10 Liability loss amortization		-	-	-	-	-	-	-	-	-	-	-
2009 Experience												
11 Asset gain (A) & Phase-in amount (C-V)	(13,435)		(2,687)	(5,374)	(8,061)	(10,748)	(13,435)	(13,435)	(13,435)	(13,435)	(13,435)	(13,435)
12 Asset gain previously amortized			-	363	1,040	1,966	2,754	3,712	4,576	5,363	6,080	6,733
13 Asset gain remaining to amortize			(2,687)	(5,011)	(7,021)	(8,782)	(10,681)	(9,723)	(8,859)	(8,072)	(7,355)	(6,702)
14 Asset gain amortization			(363)	(677)	(926)	(788)	(958)	(864)	(787)	(717)	(653)	(595)
15 Liability loss[3]	50,560		50,560	50,560	50,560	50,560	50,560	50,560	50,560	50,560	50,560	50,560
16 Liability loss offset by surplus[2]			(19,954)	(19,954)	(19,954)	(19,954)	(19,954)	(19,954)	(19,954)	(19,954)	(19,954)	(19,954)
17 Liability loss previously amortized			-	(4,136)	(7,713)	(10,731)	(12,514)	(14,137)	(15,600)	(16,933)	(18,147)	(19,254)
18 Liability loss to amortize			30,606	26,470	22,893	19,875	18,092	16,469	15,006	13,673	12,459	11,352
19 Liability loss amortization			4,136	3,577	3,018	1,783	1,623	1,463	1,333	1,214	1,107	1,008
2010 Experience												
20 Asset gain (A) & Phase-in amount (D-V)	(18,960)			(3,792)	(7,584)	(11,376)	(15,168)	(18,960)	(18,960)	(18,960)	(18,960)	(18,960)
21 Asset gain previously amortized				-	512	1,444	2,335	3,486	4,860	6,112	7,253	8,293
22 Asset gain remaining to amortize				(3,792)	(7,072)	(9,932)	(12,833)	(15,474)	(14,100)	(12,848)	(11,707)	(10,667)
23 Asset gain amortization				(512)	(932)	(891)	(1,151)	(1,374)	(1,252)	(1,141)	(1,040)	(947)
24 Liability loss[3]	12,224			12,224	12,224	12,224	12,224	12,224	12,224	12,224	12,224	12,224
25 Liability loss previously amortized				-	(1,652)	(3,046)	(3,870)	(4,620)	(5,295)	(5,910)	(6,471)	(6,982)
26 Liability loss to amortize				12,224	10,572	9,178	8,354	7,604	6,929	6,314	5,753	5,242
27 Liability loss amortization				1,652	1,394	824	750	675	615	561	511	466
2011 Experience												
28 Asset loss (A) & Phase-in amount (E-V)	7,909				1,582	3,164	4,746	6,328	7,909	7,909	7,909	7,909
29 Asset loss previously amortized					-	(209)	(474)	(857)	(1,343)	(1,926)	(2,457)	(2,941)
30 Asset loss remaining to amortize					1,582	2,955	4,272	5,471	6,566	5,983	5,452	4,968
31 Asset loss amortization					209	265	383	486	583	531	484	441
32 Liability loss[3]	28,302				28,302	28,302	28,302	28,302	28,302	28,302	28,302	28,302
33 Liability loss previously amortized					-	(3,731)	(5,936)	(7,943)	(9,751)	(11,399)	(12,900)	(14,268)
34 Liability loss to amortize					28,302	24,571	22,366	20,359	18,551	16,903	15,402	14,034
35 Liability loss amortization					3,731	2,205	2,007	1,808	1,648	1,501	1,368	1,247
2012 Experience												
36 Asset gain (A) & Phase-in amount (F-V)	(18,826)					(3,765)	(7,530)	(11,295)	(15,060)	(18,826)	(18,826)	(18,826)
37 Asset gain previously amortized						-	338	983	1,899	3,068	4,468	5,743
38 Asset gain remaining to amortize						(3,765)	(7,192)	(10,312)	(13,161)	(15,758)	(14,358)	(13,083)
39 Asset gain amortization						(338)	(645)	(916)	(1,169)	(1,400)	(1,275)	(1,162)
40 Liability loss[3]	21,129					21,129	21,129	21,129	21,129	21,129	21,129	21,129
41 Liability loss previously amortized						-	(1,896)	(3,622)	(5,177)	(6,594)	(7,885)	(9,061)
42 Liability loss to amortize						21,129	19,233	17,507	15,952	14,535	13,244	12,068
43 Liability loss amortization						1,896	1,726	1,555	1,417	1,291	1,176	1,072
2013 Experience												
44 Asset loss (A) & Phase-in amount (G-V)	1,138						228	456	683	911	1,138	1,138
45 Asset loss previously amortized							-	(20)	(59)	(114)	(185)	(270)
46 Asset loss remaining to amortize							228	436	624	797	953	868
47 Asset loss amortization							20	39	55	71	85	77
48 Liability loss[3]	14,141						14,141	14,141	14,141	14,141	14,141	14,141
49 Liability loss previously amortized							-	(1,269)	(2,412)	(3,454)	(4,403)	(5,268)
50 Liability loss to amortize							14,141	12,872	11,729	10,687	9,738	8,873
51 Liability loss amortization							1,269	1,143	1,042	949	865	788
2014 Experience												
52 Asset gain (A) & Phase-in amount (H-V)	(252)							(50)	(100)	(151)	(202)	(252)
53 Asset gain previously amortized								-	4	13	25	41
54 Asset gain remaining to amortize								(50)	(96)	(138)	(177)	(211)
55 Asset gain amortization								(4)	(9)	(12)	(16)	(19)
56 Liability gain[3]	(8,004)							(8,004)	(8,004)	(8,004)	(8,004)	(8,004)
57 Liability gain previously amortized								-	711	1,359	1,949	2,487
58 Liability gain to amortize								(8,004)	(7,293)	(6,645)	(6,055)	(5,517)
59 Liability gain amortization								(711)	(648)	(590)	(538)	(490)

[1,2,3] See page 9 for footnotes.

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Section 1	A (Gain)/Loss	B 2009	C 2010	D 2011	E 2012	F 2013	G 2014	H 2015	I 2016	J 2017	K 2018	L 2019
2015 Experience												
60 Asset loss (A) & Phase-in amount (I-V)	38,169								7,634	15,268	22,901	30,535
61 Asset loss previously amortized									-	(678)	(1,974)	(3,833)
62 Asset loss remaining to amortize									7,634	14,590	20,927	26,702
63 Asset loss amortization									678	1,296	1,859	2,372
64 Liability loss[3]	5,350								5,350	5,350	5,350	5,350
65 Liability loss previously amortized									-	(475)	(908)	(1,303)
66 Liability loss to amortize									5,350	4,875	4,442	4,047
67 Liability loss amortization									475	433	395	359
2016 Experience												
68 Asset loss (A) & Phase-in amount (J-V)	1,171									234	468	703
69 Asset loss previously amortized										-	(21)	(61)
70 Asset loss remaining to amortize										234	447	642
71 Asset loss amortization										21	40	57
72 Liability gain[3]	(4,312)									(4,312)	(4,312)	(4,312)
73 Liability gain previously amortized										-	383	732
74 Liability gain to amortize										(4,312)	(3,929)	(3,580)
75 Liability gain amortization										(383)	(349)	(318)
2017 Experience												
76 Asset gain (A) & Phase-in amount (K-V)	(33,765)										(6,753)	(13,506)
77 Asset gain previously amortized											-	600
78 Asset gain remaining to amortize											(6,753)	(12,906)
79 Asset gain amortization											(600)	(1,146)
80 Liability loss[3]	1,098										1,098	1,098
81 Liability loss previously amortized											-	(98)
82 Liability loss to amortize											1,098	1,000
83 Liability loss amortization											98	89
2018 Experience												
84 Asset loss (A) & Phase-in amount (L-V)	47,471											9,494
85 Asset loss previously amortized												-
86 Asset loss remaining to amortize												9,494
87 Asset loss amortization												843
88 Liability loss[3]	1,990											1,990
89 Liability loss previously amortized												-
90 Liability loss to amortize												1,990
91 Liability loss amortization												177
Total 2008-2018 Experience												
92 Total 2008-2018 asset experience amortization		-	(363)	4,226	8,202	7,664	6,220	5,090	5,136	5,061	4,727	5,245
93 Total 2008-2018 liability experience amortization		-	4,136	5,229	8,143	6,708	7,375	5,933	5,882	4,976	4,633	4,398
94 Other impacts including AVA limits, interest, contributions and allocation percents[4]		-	(242)	(2,488)	349	1,079	1,950	3,444	2,420	5,211	5,811	6,407
95 Total aggregate normal cost		-	3,531	6,967	16,694	15,451	15,545	14,467	13,438	15,248	15,171	16,050

[1,2,3,4] See page 9 for footnotes.

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Section 1	A (Gain)/Loss	M 2020	N 2021	O 2022	P 2023	Q 2024	R 2025	S 2026	T 2027	U 2028	V 2029	W Total
2008 Experience												
1 Asset loss (A) & Phase-in amount (B-V)	200,340	200,340	200,340	200,340	200,340	200,340	200,340	200,340	200,340	200,340	200,340	
2 Asset loss offset by surplus[2]		(80,136)	(80,136)	(80,136)	(80,136)	(80,136)	(80,136)	(80,136)	(80,136)	(80,136)	(80,136)	
3 Asset loss previously amortized		(65,592)	(70,443)	(74,863)	(78,890)	(82,560)	(85,904)	(88,951)	(91,727)	(94,256)	(96,561)	
4 Asset loss remaining to amortize		54,612	49,761	45,341	41,314	37,644	34,300	31,253	28,477	25,948	23,643	
5 Asset loss amortization		4,851	4,420	4,027	3,670	3,344	3,047	2,776	2,529	2,305	2,100	98,661
6 Liability loss[3]	20,518	20,518	20,518	20,518	20,518	20,518	20,518	20,518	20,518	20,518	20,518	
7 Liability loss offset by surplus[2]		(20,518)	(20,518)	(20,518)	(20,518)	(20,518)	(20,518)	(20,518)	(20,518)	(20,518)	(20,518)	
8 Liability loss previously amortized		-	-	-	-	-	-	-	-	-	-	
9 Liability loss remaining to amortize		-	-	-	-	-	-	-	-	-	-	
10 Liability loss amortization		-	-	-	-	-	-	-	-	-	-	-
2009 Experience												
11 Asset gain (A) & Phase-in amount (C-V)	(13,435)	(13,435)	(13,435)	(13,435)	(13,435)	(13,435)	(13,435)	(13,435)	(13,435)	(13,435)	(13,435)	
12 Asset gain previously amortized		7,328	7,870	8,364	8,814	9,224	9,598	9,939	10,250	10,533	10,791	
13 Asset gain remaining to amortize		(6,107)	(5,565)	(5,071)	(4,621)	(4,211)	(3,837)	(3,496)	(3,185)	(2,902)	(2,644)	
14 Asset gain amortization		(542)	(494)	(450)	(410)	(374)	(341)	(311)	(283)	(258)	(235)	(11,026)
15 Liability loss[3]	50,560	50,560	50,560	50,560	50,560	50,560	50,560	50,560	50,560	50,560	50,560	
16 Liability loss offset by surplus[2]		(19,954)	(19,954)	(19,954)	(19,954)	(19,954)	(19,954)	(19,954)	(19,954)	(19,954)	(19,954)	
17 Liability loss previously amortized		(20,262)	(21,181)	(22,018)	(22,781)	(23,476)	(24,109)	(24,686)	(25,212)	(25,691)	(26,128)	
18 Liability loss to amortize		10,344	9,425	8,588	7,825	7,130	6,497	5,920	5,394	4,915	4,478	
19 Liability loss amortization		919	837	763	695	633	577	526	479	437	398	26,526
2010 Experience												
20 Asset gain (A) & Phase-in amount (D-V)	(18,960)	(18,960)	(18,960)	(18,960)	(18,960)	(18,960)	(18,960)	(18,960)	(18,960)	(18,960)	(18,960)	
21 Asset gain previously amortized		9,240	10,103	10,890	11,607	12,260	12,855	13,397	13,891	14,341	14,751	
22 Asset gain remaining to amortize		(9,720)	(8,857)	(8,070)	(7,353)	(6,700)	(6,105)	(5,563)	(5,069)	(4,619)	(4,209)	
23 Asset gain amortization		(863)	(787)	(717)	(653)	(595)	(542)	(494)	(450)	(410)	(374)	(15,125)
24 Liability loss[3]	12,224	12,224	12,224	12,224	12,224	12,224	12,224	12,224	12,224	12,224	12,224	
25 Liability loss previously amortized		(7,448)	(7,872)	(8,259)	(8,611)	(8,932)	(9,224)	(9,490)	(9,733)	(9,954)	(10,156)	
26 Liability loss to amortize		4,776	4,352	3,965	3,613	3,292	3,000	2,734	2,491	2,270	2,068	
27 Liability loss amortization		424	387	352	321	292	266	243	221	202	184	10,340
2011 Experience												
28 Asset loss (A) & Phase-in amount (E-V)	7,909	7,909	7,909	7,909	7,909	7,909	7,909	7,909	7,909	7,909	7,909	
29 Asset loss previously amortized		(3,382)	(3,784)	(4,150)	(4,484)	(4,788)	(5,065)	(5,318)	(5,548)	(5,758)	(5,949)	
30 Asset loss remaining to amortize		4,527	4,125	3,759	3,425	3,121	2,844	2,591	2,361	2,151	1,960	
31 Asset loss amortization		402	366	334	304	277	253	230	210	191	174	6,123
32 Liability loss[3]	28,302	28,302	28,302	28,302	28,302	28,302	28,302	28,302	28,302	28,302	28,302	
33 Liability loss previously amortized		(15,515)	(16,651)	(17,686)	(18,629)	(19,488)	(20,271)	(20,984)	(21,634)	(22,226)	(22,766)	
34 Liability loss to amortize		12,787	11,651	10,616	9,673	8,814	8,031	7,318	6,668	6,076	5,536	
35 Liability loss amortization		1,136	1,035	943	859	783	713	650	592	540	492	23,258
2012 Experience												
36 Asset gain (A) & Phase-in amount (F-V)	(18,826)	(18,826)	(18,826)	(18,826)	(18,826)	(18,826)	(18,826)	(18,826)	(18,826)	(18,826)	(18,826)	
37 Asset gain previously amortized		6,905	7,964	8,929	9,808	10,609	11,339	12,004	12,610	13,162	13,665	
38 Asset gain remaining to amortize		(11,921)	(10,862)	(9,897)	(9,018)	(8,217)	(7,487)	(6,822)	(6,216)	(5,664)	(5,161)	
39 Asset gain amortization		(1,059)	(965)	(879)	(801)	(730)	(665)	(606)	(552)	(503)	(458)	(14,123)
40 Liability loss[3]	21,129	21,129	21,129	21,129	21,129	21,129	21,129	21,129	21,129	21,129	21,129	
41 Liability loss previously amortized		(10,133)	(11,110)	(12,000)	(12,811)	(13,550)	(14,223)	(14,836)	(15,395)	(15,904)	(16,368)	
42 Liability loss to amortize		10,996	10,019	9,129	8,318	7,579	6,906	6,293	5,734	5,225	4,761	
43 Liability loss amortization		977	890	811	739	673	613	559	509	464	423	16,791
2013 Experience												
44 Asset loss (A) & Phase-in amount (G-V)	1,138	1,138	1,138	1,138	1,138	1,138	1,138	1,138	1,138	1,138	1,138	
45 Asset loss previously amortized		(347)	(417)	(481)	(539)	(592)	(640)	(684)	(724)	(761)	(794)	
46 Asset loss remaining to amortize		791	721	657	599	546	498	454	414	377	344	
47 Asset loss amortization		70	64	58	53	48	44	40	37	33	31	825
48 Liability loss[3]	14,141	14,141	14,141	14,141	14,141	14,141	14,141	14,141	14,141	14,141	14,141	
49 Liability loss previously amortized		(6,056)	(6,774)	(7,428)	(8,024)	(8,567)	(9,062)	(9,513)	(9,924)	(10,299)	(10,640)	
50 Liability loss to amortize		8,085	7,367	6,713	6,117	5,574	5,079	4,628	4,217	3,842	3,501	
51 Liability loss amortization		718	654	596	543	495	451	411	375	341	311	10,951
2014 Experience												
52 Asset gain (A) & Phase-in amount (H-V)	(252)	(252)	(252)	(252)	(252)	(252)	(252)	(252)	(252)	(252)	(252)	
53 Asset gain previously amortized		60	77	93	107	120	132	143	153	162	170	
54 Asset gain remaining to amortize		(192)	(175)	(159)	(145)	(132)	(120)	(109)	(99)	(90)	(82)	
55 Asset gain amortization		(17)	(16)	(14)	(13)	(12)	(11)	(10)	(9)	(8)	(7)	(177)
56 Liability gain[3]	(8,004)	(8,004)	(8,004)	(8,004)	(8,004)	(8,004)	(8,004)	(8,004)	(8,004)	(8,004)	(8,004)	
57 Liability gain previously amortized		2,977	3,424	3,831	4,202	4,540	4,848	5,128	5,383	5,616	5,828	
58 Liability gain to amortize		(5,027)	(4,580)	(4,173)	(3,802)	(3,464)	(3,156)	(2,876)	(2,621)	(2,388)	(2,176)	
59 Liability gain amortization		(447)	(407)	(371)	(338)	(308)	(280)	(255)	(233)	(212)	(193)	(6,021)

[1,2,3] See page 9 for footnotes.

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NSPM Aggregate Cost Method
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Section 1	A (Gain)/Loss	M 2020	N 2021	O 2022	P 2023	Q 2024	R 2025	S 2026	T 2027	U 2028	V 2029	W Total
2015 Experience												
60 Asset loss (A) & Phase-in amount (I-V)	38,169	38,169	38,169	38,169	38,169	38,169	38,169	38,169	38,169	38,169	38,169	
61 Asset loss previously amortized		(6,205)	(9,044)	(11,631)	(13,988)	(16,136)	(18,093)	(19,876)	(21,501)	(22,981)	(24,330)	
62 Asset loss remaining to amortize		31,964	29,125	26,538	24,181	22,033	20,076	18,293	16,668	15,188	13,839	
63 Asset loss amortization		2,839	2,587	2,357	2,148	1,957	1,783	1,625	1,480	1,349	1,229	25,559
64 Liability loss[3]	5,350	5,350	5,350	5,350	5,350	5,350	5,350	5,350	5,350	5,350	5,350	
65 Liability loss previously amortized		(1,662)	(1,990)	(2,288)	(2,560)	(2,808)	(3,034)	(3,240)	(3,427)	(3,598)	(3,754)	
66 Liability loss to amortize		3,688	3,360	3,062	2,790	2,542	2,316	2,110	1,923	1,752	1,596	
67 Liability loss amortization		328	298	272	248	226	206	187	171	156	142	3,896
2016 Experience												
68 Asset loss (A) & Phase-in amount (J-V)	1,171	937	1,171	1,171	1,171	1,171	1,171	1,171	1,171	1,171	1,171	
69 Asset loss previously amortized		(118)	(191)	(278)	(357)	(429)	(495)	(555)	(610)	(660)	(705)	
70 Asset loss remaining to amortize		819	980	893	814	742	676	616	561	511	466	
71 Asset loss amortization		73	87	79	72	66	60	55	50	45	41	746
72 Liability gain[3]	(4,312)	(4,312)	(4,312)	(4,312)	(4,312)	(4,312)	(4,312)	(4,312)	(4,312)	(4,312)	(4,312)	
73 Liability gain previously amortized		1,050	1,340	1,604	1,845	2,064	2,264	2,446	2,612	2,763	2,901	
74 Liability gain to amortize		(3,262)	(2,972)	(2,708)	(2,467)	(2,248)	(2,048)	(1,866)	(1,700)	(1,549)	(1,411)	
75 Liability gain amortization		(290)	(264)	(241)	(219)	(200)	(182)	(166)	(151)	(138)	(125)	(3,026)
2017 Experience												
76 Asset gain (A) & Phase-in amount (K-V)	(33,765)	(20,259)	(27,012)	(33,765)	(33,765)	(33,765)	(33,765)	(33,765)	(33,765)	(33,765)	(33,765)	
77 Asset gain previously amortized		1,746	3,390	5,488	8,000	10,288	12,373	14,273	16,004	17,582	19,019	
78 Asset gain remaining to amortize		(18,513)	(23,622)	(28,277)	(25,765)	(23,477)	(21,392)	(19,492)	(17,761)	(16,183)	(14,746)	
79 Asset gain amortization		(1,644)	(2,098)	(2,512)	(2,288)	(2,085)	(1,900)	(1,731)	(1,578)	(1,437)	(1,310)	(20,329)
80 Liability loss[3]	1,098	1,098	1,098	1,098	1,098	1,098	1,098	1,098	1,098	1,098	1,098	
81 Liability loss previously amortized		(187)	(268)	(342)	(409)	(470)	(526)	(577)	(623)	(665)	(703)	
82 Liability loss to amortize		911	830	756	689	628	572	521	475	433	395	
83 Liability loss amortization		81	74	67	61	56	51	46	42	38	35	738
2018 Experience												
84 Asset loss (A) & Phase-in amount (L-V)	47,471	18,988	28,483	37,977	47,471	47,471	47,471	47,471	47,471	47,471	47,471	
85 Asset loss previously amortized		(843)	(2,455)	(4,767)	(7,717)	(11,248)	(14,465)	(17,397)	(20,068)	(22,502)	(24,720)	
86 Asset loss remaining to amortize		18,145	26,028	33,210	39,754	36,223	33,006	30,074	27,403	24,969	22,751	
87 Asset loss amortization		1,612	2,312	2,950	3,531	3,217	2,932	2,671	2,434	2,218	2,021	26,741
88 Liability loss[3]	1,990	1,990	1,990	1,990	1,990	1,990	1,990	1,990	1,990	1,990	1,990	
89 Liability loss previously amortized		(177)	(338)	(485)	(619)	(741)	(852)	(953)	(1,045)	(1,129)	(1,205)	
90 Liability loss to amortize		1,813	1,652	1,505	1,371	1,249	1,138	1,037	945	861	785	
91 Liability loss amortization		161	147	134	122	111	101	92	84	76	70	1,275
Total 2008-2018 Experience												
92 Total 2008-2018 asset experience amortization		5,722	5,476	5,233	5,613	5,113	4,660	4,245	3,868	3,525	3,212	97,875
93 Total 2008-2018 liability experience amortization		4,007	3,651	3,326	3,031	2,761	2,516	2,293	2,089	1,904	1,737	84,728
94 Other impacts including AVA limits, interest, contributions and allocation percents[4]		6,162	6,167	6,109	6,045	5,944	N/A	N/A	N/A	N/A	N/A	N/A
95 Total aggregate normal cost		15,891	15,294	14,668	14,689	13,818	N/A	N/A	N/A	N/A	N/A	N/A

[1,2,3,4] See page 9 for footnotes.

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Approximate Pension Cost Attributable to 2008-2018 Gains and Losses - Illustrative[5]
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Section 2	A (Gain)/Loss	B 2009	C 2010	D 2011	E 2012	F 2013	G 2014	H 2015	I 2016	J 2017[9]	K 2018[9]	L 2019
2008 Experience												
1 Asset loss (A) & Phase-in amount (B-V)	48,577	9,715	19,430	29,145	38,861	48,577	48,577	48,577	48,577	48,577	48,577	48,577
2 Asset loss previously amortized		-	(933)	(2,725)	(5,295)	(8,595)	(12,462)	(15,979)	(19,051)	(21,641)	(27,243)	(31,507)
3 Asset loss remaining to amortize		9,715	18,497	26,420	33,566	39,982	36,115	32,598	29,526	26,936	21,334	17,070
4 Asset loss amortization[6]		933	1,792	2,570	3,300	3,867	3,517	3,072	2,590	5,602	4,264	1,499
5 Liability gain[7]	(6,144)	(6,144)	(6,144)	(6,144)	(6,144)	(6,144)	(6,144)	(6,144)	(6,144)	(6,144)	(6,144)	(6,144)
6 Liability gain previously amortized		-	590	1,128	1,616	2,061	2,456	2,815	3,129	3,393	3,966	4,401
7 Liability gain remaining to amortize		(6,144)	(5,554)	(5,016)	(4,528)	(4,083)	(3,688)	(3,329)	(3,015)	(2,751)	(2,178)	(1,743)
8 Liability gain amortization[6]		(590)	(538)	(488)	(445)	(395)	(359)	(314)	(264)	(573)	(435)	(153)
2009 Experience												
9 Asset loss (A) & Phase-in amount (C-V)	249		50	100	150	200	249	249	249	249	249	249
10 Asset loss previously amortized			-	(5)	(14)	(27)	(44)	(64)	(81)	(96)	(127)	(152)
11 Asset loss remaining to amortize			50	95	136	173	205	185	168	153	122	97
12 Asset loss amortization[6]			5	9	13	17	20	17	15	31	25	9
13 Liability loss[7]	4,950		4,950	4,950	4,950	4,950	4,950	4,950	4,950	4,950	4,950	4,950
14 Liability loss previously amortized			-	(480)	(915)	(1,312)	(1,664)	(1,984)	(2,264)	(2,500)	(3,009)	(3,398)
15 Liability loss to amortize			4,950	4,470	4,035	3,638	3,286	2,966	2,686	2,450	1,941	1,552
16 Liability loss amortization[6]			480	435	397	352	320	280	236	509	389	136
2010 Experience												
17 Asset gain (A) & Phase-in amount (D-V)	(1,791)			(358)	(716)	(1,074)	(1,432)	(1,791)	(1,791)	(1,791)	(1,791)	(1,791)
18 Asset gain previously amortized				-	35	102	196	316	455	572	825	1,017
19 Asset gain remaining to amortize				(358)	(681)	(972)	(1,236)	(1,475)	(1,336)	(1,219)	(966)	(774)
20 Asset gain amortization[6]				(35)	(67)	(94)	(120)	(139)	(117)	(253)	(192)	(68)
21 Liability loss[7]	3,342			3,342	3,342	3,342	3,342	3,342	3,342	3,342	3,342	3,342
22 Liability loss previously amortized				-	(325)	(622)	(885)	(1,124)	(1,333)	(1,509)	(1,890)	(2,181)
23 Liability loss to amortize				3,342	3,017	2,720	2,457	2,218	2,009	1,833	1,452	1,161
24 Liability loss amortization[6]				325	297	263	239	209	176	381	291	102
2011 Experience												
25 Asset loss (A) & Phase-in amount (E-V)	3,628				726	1,452	2,178	2,903	3,628	3,628	3,628	3,628
26 Asset loss previously amortized					-	(71)	(205)	(397)	(633)	(896)	(1,464)	(1,897)
27 Asset loss remaining to amortize					726	1,381	1,973	2,506	2,995	2,732	2,164	1,731
28 Asset loss amortization[6]					71	134	192	236	263	568	433	152
29 Liability loss[7]	8,038				8,038	8,038	8,038	8,038	8,038	8,038	8,038	8,038
30 Liability loss previously amortized					-	(790)	(1,491)	(2,128)	(2,685)	(3,155)	(4,170)	(4,944)
31 Liability loss to amortize					8,038	7,248	6,547	5,910	5,353	4,883	3,868	3,094
32 Liability loss amortization[6]					790	701	637	557	470	1,015	774	272
2012 Experience												
33 Asset gain (A) & Phase-in amount (F-V)	(3,403)					(681)	(1,362)	(2,043)	(2,723)	(3,403)	(3,403)	(3,403)
34 Asset gain previously amortized						-	66	192	366	573	1,162	1,611
35 Asset gain remaining to amortize						(681)	(1,296)	(1,851)	(2,357)	(2,830)	(2,241)	(1,792)
36 Asset gain amortization[6]						(66)	(126)	(174)	(207)	(589)	(449)	(157)
37 Liability loss[7]	17,295					17,295	17,295	17,295	17,295	17,295	17,295	17,295
38 Liability loss previously amortized						-	(1,673)	(3,194)	(4,523)	(5,643)	(8,067)	(9,912)
39 Liability loss to amortize						17,295	15,622	14,101	12,772	11,652	9,228	7,383
40 Liability loss amortization[6]						1,673	1,521	1,329	1,120	2,424	1,845	648
2013 Experience												
41 Asset loss (A) & Phase-in amount (G-V)	356						71	142	213	284	349	349
42 Asset loss previously amortized							-	(7)	(20)	(37)	(89)	(142)
43 Asset loss remaining to amortize							71	135	193	247	260	207
44 Asset loss amortization[6]							7	13	17	52	53	18
45 Liability gain[7]	(4,553)						(4,553)	(4,553)	(4,553)	(4,553)	(4,553)	(4,553)
46 Liability gain previously amortized							-	443	830	1,157	1,862	2,400
47 Liability gain to amortize							(4,553)	(4,110)	(3,723)	(3,396)	(2,691)	(2,153)
48 Liability gain amortization[6]							(443)	(387)	(327)	(705)	(538)	(189)
2014 Experience												
49 Asset loss (A) & Phase-in amount (H-V)	126							25	50	75	98	119
50 Asset loss previously amortized								-	(2)	(6)	(20)	(36)
51 Asset loss remaining to amortize								25	48	69	78	83
52 Asset loss amortization[6]								2	4	14	16	7
53 Liability loss[7]	12,985							12,985	12,985	12,985	12,985	12,985
54 Liability loss previously amortized								-	(1,224)	(2,256)	(4,488)	(6,186)
55 Liability loss to amortize								12,985	11,761	10,729	8,497	6,799
56 Liability loss amortization[6]								1,224	1,032	2,232	1,698	597

[5,6,7,9] See page 9 for footnotes.

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Section 2	A (Gain)/Loss	B 2009	C 2010	D 2011	E 2012	F 2013	G 2014	H 2015	I 2016	J 2017[9]	K 2018[9]	L 2019
2015 Experience												
57 Asset loss (A) & Phase-in amount (I-V)	10,622								2,124	4,248	6,199	7,971
58 Asset loss previously amortized									-	(186)	(1,031)	(2,063)
59 Asset loss remaining to amortize									2,124	4,062	5,168	5,908
60 Asset loss amortization[6]									186	845	1,032	519
61 Liability gain[7]	(674)								(674)	(674)	(674)	(674)
62 Liability gain previously amortized									-	59	187	285
63 Liability gain to amortize									(674)	(615)	(487)	(389)
64 Liability gain amortization[6]									(59)	(128)	(98)	(34)
2016 Experience												
65 Asset loss (A) & Phase-in amount (J-V)	1,649									330	633	908
66 Asset loss previously amortized										-	(69)	(181)
67 Asset loss remaining to amortize										330	564	727
68 Asset loss amortization[6]										69	112	64
69 Liability loss[7]	14,150									14,150	14,150	14,150
70 Liability loss previously amortized										-	(2,942)	(5,183)
71 Liability loss to amortize										14,150	11,208	8,967
72 Liability loss amortization[6]										2,942	2,241	787
2017 Experience												
73 Asset gain (A) & Phase-in amount (K-V)	(8,969)										(1,648)	(3,144)
74 Asset gain previously amortized											-	330
75 Asset gain remaining to amortize											(1,648)	(2,814)
76 Asset gain amortization[6]											(330)	(247)
77 Liability loss[7]	15,442										15,442	15,442
78 Liability loss previously amortized											-	(3,087)
79 Liability loss to amortize											15,442	12,355
80 Liability loss amortization[6]											3,087	1,085
2018 Experience												
81 Asset loss (A) & Phase-in amount (L-V)	16,220											2,946
82 Asset loss previously amortized												-
83 Asset loss remaining to amortize												2,946
84 Asset loss amortization[6]												259
85 Liability gain[7]	(6,738)											(6,738)
86 Liability gain previously amortized												-
87 Liability gain to amortize												(6,738)
88 Liability gain amortization[6]												(592)
Total 2008-2018 Experience												
89 Total 2008-2018 asset experience amortization		933	1,797	2,544	3,317	3,858	3,490	3,027	2,751	6,339	4,964	2,055
90 Total 2008-2018 liability experience amortization		(590)	(58)	272	1,039	2,594	1,915	2,898	2,384	8,097	9,254	2,659
91 Other impacts including corridor and net gain/loss position prior to 2008[8]		(343)	(1,217)	(1,191)	(1,546)	(1,913)	(1,894)	(1,874)	(1,668)	(5,662)	(4,400)	(1,706)
92 Total gain/loss amortization		-	522	1,625	2,810	4,539	3,511	4,051	3,467	8,774	9,818	3,008
Inside gain/loss recognition corridor (Yes/No)		Yes	No	No	No	No	No	No	No	No	No	No

[5,6,7,8,9] See page 9 for footnotes.

Xcel Energy Inc. - MN Electric Rate Case - Order Point 40
Approximate Pension Cost Attributable to 2008-2018 Gains and Losses - Illustrative[5]
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Section 2	A (Gain)/Loss	M 2020	N 2021	O 2022	P 2023	Q 2024	R 2025	S 2026	T 2027	U 2028	V 2029	W Total
2008 Experience												
1 Asset loss (A) & Phase-in amount (B-V)	48,577	48,577	48,577	48,577	48,577	48,577	48,577	48,577	48,577	48,577	48,577	
2 Asset loss previously amortized		(33,006)	(34,355)	(35,575)	(36,676)	(37,670)	(38,570)	(39,396)	(40,154)	(40,849)	(41,487)	
3 Asset loss remaining to amortize		15,571	14,222	13,002	11,901	10,907	10,007	9,181	8,423	7,728	7,090	
4 Asset loss amortization[6]		1,349	1,220	1,101	994	900	826	758	695	638	585	42,072
5 Liability gain[7]	(6,144)	(6,144)	(6,144)	(6,144)	(6,144)	(6,144)	(6,144)	(6,144)	(6,144)	(6,144)	(6,144)	
6 Liability gain previously amortized		4,554	4,692	4,817	4,929	5,031	5,123	5,207	5,284	5,355	5,420	
7 Liability gain remaining to amortize		(1,590)	(1,452)	(1,327)	(1,215)	(1,113)	(1,021)	(937)	(860)	(789)	(724)	
8 Liability gain amortization[6]		(138)	(125)	(112)	(102)	(92)	(84)	(77)	(71)	(65)	(60)	(5,480)
2009 Experience												
9 Asset loss (A) & Phase-in amount (C-V)	249	249	249	249	249	249	249	249	249	249	249	
10 Asset loss previously amortized		(161)	(169)	(176)	(182)	(188)	(193)	(198)	(202)	(206)	(210)	
11 Asset loss remaining to amortize		88	80	73	67	61	56	51	47	43	39	
12 Asset loss amortization[6]		8	7	6	6	5	5	4	4	4	3	213
13 Liability loss[7]	4,950	4,950	4,950	4,950	4,950	4,950	4,950	4,950	4,950	4,950	4,950	
14 Liability loss previously amortized		(3,534)	(3,657)	(3,768)	(3,868)	(3,958)	(4,040)	(4,115)	(4,184)	(4,247)	(4,305)	
15 Liability loss to amortize		1,416	1,293	1,182	1,082	992	910	835	766	703	645	
16 Liability loss amortization[6]		123	111	100	90	82	75	69	63	58	53	4,358
2010 Experience												
17 Asset gain (A) & Phase-in amount (D-V)	(1,791)	(1,791)	(1,791)	(1,791)	(1,791)	(1,791)	(1,791)	(1,791)	(1,791)	(1,791)	(1,791)	
18 Asset gain previously amortized		1,085	1,146	1,201	1,251	1,296	1,337	1,374	1,408	1,440	1,469	
19 Asset gain remaining to amortize		(706)	(645)	(590)	(540)	(495)	(454)	(417)	(383)	(351)	(322)	
20 Asset gain amortization[6]		(61)	(55)	(50)	(45)	(41)	(37)	(34)	(32)	(29)	(27)	(1,496)
21 Liability loss[7]	3,342	3,342	3,342	3,342	3,342	3,342	3,342	3,342	3,342	3,342	3,342	
22 Liability loss previously amortized		(2,283)	(2,375)	(2,458)	(2,533)	(2,601)	(2,662)	(2,718)	(2,769)	(2,816)	(2,859)	
23 Liability loss to amortize		1,059	967	884	809	741	680	624	573	526	483	
24 Liability loss amortization[6]		92	83	75	68	61	56	51	47	43	40	2,899
2011 Experience												
25 Asset loss (A) & Phase-in amount (E-V)	3,628	3,628	3,628	3,628	3,628	3,628	3,628	3,628	3,628	3,628	3,628	
26 Asset loss previously amortized		(2,049)	(2,186)	(2,310)	(2,422)	(2,523)	(2,614)	(2,698)	(2,775)	(2,845)	(2,910)	
27 Asset loss remaining to amortize		1,579	1,442	1,318	1,206	1,105	1,014	930	853	783	718	
28 Asset loss amortization[6]		137	124	112	101	91	84	77	70	65	59	2,969
29 Liability loss[7]	8,038	8,038	8,038	8,038	8,038	8,038	8,038	8,038	8,038	8,038	8,038	
30 Liability loss previously amortized		(5,216)	(5,461)	(5,682)	(5,881)	(6,061)	(6,224)	(6,374)	(6,511)	(6,637)	(6,753)	
31 Liability loss to amortize		2,822	2,577	2,356	2,157	1,977	1,814	1,664	1,527	1,401	1,285	
32 Liability loss amortization[6]		245	221	199	180	163	150	137	126	116	106	6,859
2012 Experience												
33 Asset gain (A) & Phase-in amount (F-V)	(3,403)	(3,403)	(3,403)	(3,403)	(3,403)	(3,403)	(3,403)	(3,403)	(3,403)	(3,403)	(3,403)	
34 Asset gain previously amortized		1,768	1,910	2,038	2,154	2,258	2,352	2,439	2,519	2,592	2,659	
35 Asset gain remaining to amortize		(1,635)	(1,493)	(1,365)	(1,249)	(1,145)	(1,051)	(964)	(884)	(811)	(744)	
36 Asset gain amortization[6]		(142)	(128)	(116)	(104)	(94)	(87)	(80)	(73)	(67)	(61)	(2,720)
37 Liability loss[7]	17,295	17,295	17,295	17,295	17,295	17,295	17,295	17,295	17,295	17,295	17,295	
38 Liability loss previously amortized		(10,560)	(11,144)	(11,672)	(12,148)	(12,578)	(12,967)	(13,324)	(13,652)	(13,953)	(14,229)	
39 Liability loss to amortize		6,735	6,151	5,623	5,147	4,717	4,328	3,971	3,643	3,342	3,066	
40 Liability loss amortization[6]		584	528	476	430	389	357	328	301	276	253	14,482
2013 Experience												
41 Asset loss (A) & Phase-in amount (G-V)	356	349	349	349	349	349	349	349	349	349	349	
42 Asset loss previously amortized		(160)	(176)	(191)	(204)	(216)	(227)	(237)	(246)	(254)	(262)	
43 Asset loss remaining to amortize		189	173	158	145	133	122	112	103	95	87	
44 Asset loss amortization[6]		16	15	13	12	11	10	9	8	8	7	269
45 Liability gain[7]	(4,553)	(4,553)	(4,553)	(4,553)	(4,553)	(4,553)	(4,553)	(4,553)	(4,553)	(4,553)	(4,553)	
46 Liability gain previously amortized		2,589	2,759	2,913	3,052	3,177	3,291	3,395	3,491	3,579	3,659	
47 Liability gain to amortize		(1,964)	(1,794)	(1,640)	(1,501)	(1,376)	(1,262)	(1,158)	(1,062)	(974)	(894)	
48 Liability gain amortization[6]		(170)	(154)	(139)	(125)	(114)	(104)	(96)	(88)	(80)	(74)	(3,733)
2014 Experience												
49 Asset loss (A) & Phase-in amount (H-V)	126	119	119	119	119	119	119	119	119	119	119	
50 Asset loss previously amortized		(43)	(50)	(56)	(61)	(66)	(70)	(74)	(78)	(81)	(84)	
51 Asset loss remaining to amortize		76	69	63	58	53	49	45	41	38	35	
52 Asset loss amortization[6]		7	6	5	5	4	4	4	3	3	3	87
53 Liability loss[7]	12,985	12,985	12,985	12,985	12,985	12,985	12,985	12,985	12,985	12,985	12,985	
54 Liability loss previously amortized		(6,783)	(7,320)	(7,806)	(8,245)	(8,641)	(8,999)	(9,328)	(9,630)	(9,907)	(10,161)	
55 Liability loss to amortize		6,202	5,665	5,179	4,740	4,344	3,986	3,657	3,355	3,078	2,824	
56 Liability loss amortization[6]		537	486	439	396	358	329	302	277	254	233	10,394

[5,6,7,9] See page 9 for footnotes.

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Approximate Pension Cost Attributable to 2008-2018 Gains and Losses - Illustrative[5]
XES ASC 715 (FAS 87)
($ in 000s)

Schedule 3
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Section 2	A (Gain)/Loss	M 2020	N 2021	O 2022	P 2023	Q 2024	R 2025	S 2026	T 2027	U 2028	V 2029	W Total
2015 Experience												
57 Asset loss (A) & Phase-in amount (I-V)	10,622	9,743	9,743	9,743	9,743	9,743	9,743	9,743	9,743	9,743	9,743	
58 Asset loss previously amortized		(2,582)	(3,203)	(3,764)	(4,270)	(4,727)	(5,141)	(5,521)	(5,869)	(6,189)	(6,482)	
59 Asset loss remaining to amortize		7,161	6,540	5,979	5,473	5,016	4,602	4,222	3,874	3,554	3,261	
60 Asset loss amortization[6]		621	561	506	457	414	380	348	320	293	269	6,751
61 Liability gain[7]	(674)	(674)	(674)	(674)	(674)	(674)	(674)	(674)	(674)	(674)	(674)	
62 Liability gain previously amortized		319	350	378	403	426	446	465	482	498	513	
63 Liability gain to amortize		(355)	(324)	(296)	(271)	(248)	(228)	(209)	(192)	(176)	(161)	
64 Liability gain amortization[6]		(31)	(28)	(25)	(23)	(20)	(19)	(17)	(16)	(15)	(13)	(526)
2016 Experience												
65 Asset loss (A) & Phase-in amount (J-V)	1,649	1,183	1,458	1,458	1,458	1,458	1,458	1,458	1,458	1,458	1,458	
66 Asset loss previously amortized		(245)	(326)	(423)	(511)	(590)	(662)	(728)	(788)	(843)	(894)	
67 Asset loss remaining to amortize		938	1,132	1,035	947	868	796	730	670	615	564	
68 Asset loss amortization[6]		81	97	88	79	72	66	60	55	51	47	941
69 Liability loss[7]	14,150	14,150	14,150	14,150	14,150	14,150	14,150	14,150	14,150	14,150	14,150	
70 Liability loss previously amortized		(5,970)	(6,679)	(7,320)	(7,898)	(8,420)	(8,893)	(9,327)	(9,725)	(10,090)	(10,425)	
71 Liability loss to amortize		8,180	7,471	6,830	6,252	5,730	5,257	4,823	4,425	4,060	3,725	
72 Liability loss amortization[6]		709	641	578	522	473	434	398	365	335	307	10,732
2017 Experience												
73 Asset gain (A) & Phase-in amount (K-V)	(8,969)	(4,640)	(6,136)	(7,632)	(7,632)	(7,632)	(7,632)	(7,632)	(7,632)	(7,632)	(7,632)	
74 Asset gain previously amortized		577	929	1,376	1,906	2,384	2,817	3,214	3,579	3,913	4,220	
75 Asset gain remaining to amortize		(4,063)	(5,207)	(6,256)	(5,726)	(5,248)	(4,815)	(4,418)	(4,053)	(3,719)	(3,412)	
76 Asset gain amortization[6]		(352)	(447)	(530)	(478)	(433)	(397)	(365)	(334)	(307)	(282)	(4,502)
77 Liability loss[7]	15,442	15,442	15,442	15,442	15,442	15,442	15,442	15,442	15,442	15,442	15,442	
78 Liability loss previously amortized		(4,172)	(5,149)	(6,032)	(6,829)	(7,549)	(8,200)	(8,798)	(9,346)	(9,849)	(10,310)	
79 Liability loss to amortize		11,270	10,293	9,410	8,613	7,893	7,242	6,644	6,096	5,593	5,132	
80 Liability loss amortization[6]		977	883	797	720	651	598	548	503	461	423	10,733
2018 Experience												
81 Asset loss (A) & Phase-in amount (L-V)	16,220	5,892	8,838	11,784	14,730	14,730	14,730	14,730	14,730	14,730	14,730	
82 Asset loss previously amortized		(259)	(747)	(1,441)	(2,317)	(3,354)	(4,293)	(5,154)	(5,944)	(6,669)	(7,334)	
83 Asset loss remaining to amortize		5,633	8,091	10,343	12,413	11,376	10,437	9,576	8,786	8,061	7,396	
84 Asset loss amortization[6]		488	694	876	1,037	939	861	790	725	665	610	7,944
85 Liability gain[7]	(6,738)	(6,738)	(6,738)	(6,738)	(6,738)	(6,738)	(6,738)	(6,738)	(6,738)	(6,738)	(6,738)	
86 Liability gain previously amortized		592	1,125	1,606	2,041	2,433	2,788	3,114	3,413	3,687	3,939	
87 Liability gain to amortize		(6,146)	(5,613)	(5,132)	(4,697)	(4,305)	(3,950)	(3,624)	(3,325)	(3,051)	(2,799)	
88 Liability gain amortization[6]		(533)	(481)	(435)	(392)	(355)	(326)	(299)	(274)	(252)	(231)	(4,170)
Total 2008-2018 Experience												
89 Total 2008-2018 asset experience amortization		2,152	2,094	2,011	2,064	1,868	1,715	1,571	1,441	1,324	1,213	52,528
90 Total 2008-2018 liability experience amortization		2,395	2,165	1,953	1,764	1,596	1,466	1,344	1,233	1,131	1,037	46,548
91 Other impacts including corridor and net gain/loss position prior to 2008[8]		(1,463)	(1,338)	(1,196)	(1,068)	(930)	N/A	N/A	N/A	N/A	N/A	N/A
92 Total gain/loss amortization		3,084	2,921	2,768	2,760	2,534	N/A	N/A	N/A	N/A	N/A	N/A
Inside gain/loss recognition corridor (Yes/No)		No	No	No	No	No	N/A	N/A	N/A	N/A	N/A	N/A

[5,6,7,8,9] See page 9 for footnotes.

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Approximate Pension Cost Attributable to 2008-2018 Gains and Losses - Illustrative

Footnotes

Applicable to Section 1 - NSPM Aggregate Cost Method

[1] The aggregate cost method does not explicitly track gains/(losses) and amortization schedules are not created for any individual gain/(loss).
The amortizations included in this exhibit are intended to illustrate the pension costs attributable to the asset and liability experience.

[2] Surplus is used to offset losses in the order in which they occur, assuming liability losses are offset first.

[3] Liability loss amounts are estimated based on total losses for the Xcel Energy Pension Plan allocated to NSPM using the percentage of PBO attributable to NSPM for each year.
Includes discount rate changes, other assumption changes and demographic experience.

[4] Subsequent experience is combined to determine the net funded status for the year. Contributions since 2008 have also reduced the unfunded position and annual cost.

Amortization factor for 2009-2012 is equal to the present value of all future pensionable compensation divided by current year pensionable compensation.
Amortization factor for 2013 and beyond is a 20-year principal and interest factor using the discount rate for the current year.

Applicable to Section 2 - XES ASC 715 (FAS 87)

[5] ASC 715 does not explicitly track gains/(losses) and amortization schedules are not created for any individual gain/(loss).
The amortizations included in this exhibit are intended to illustrate the pension costs attributable to the asset and liability experience.

[6] Amortization amounts do not reflect the gain/loss amortization corridor.

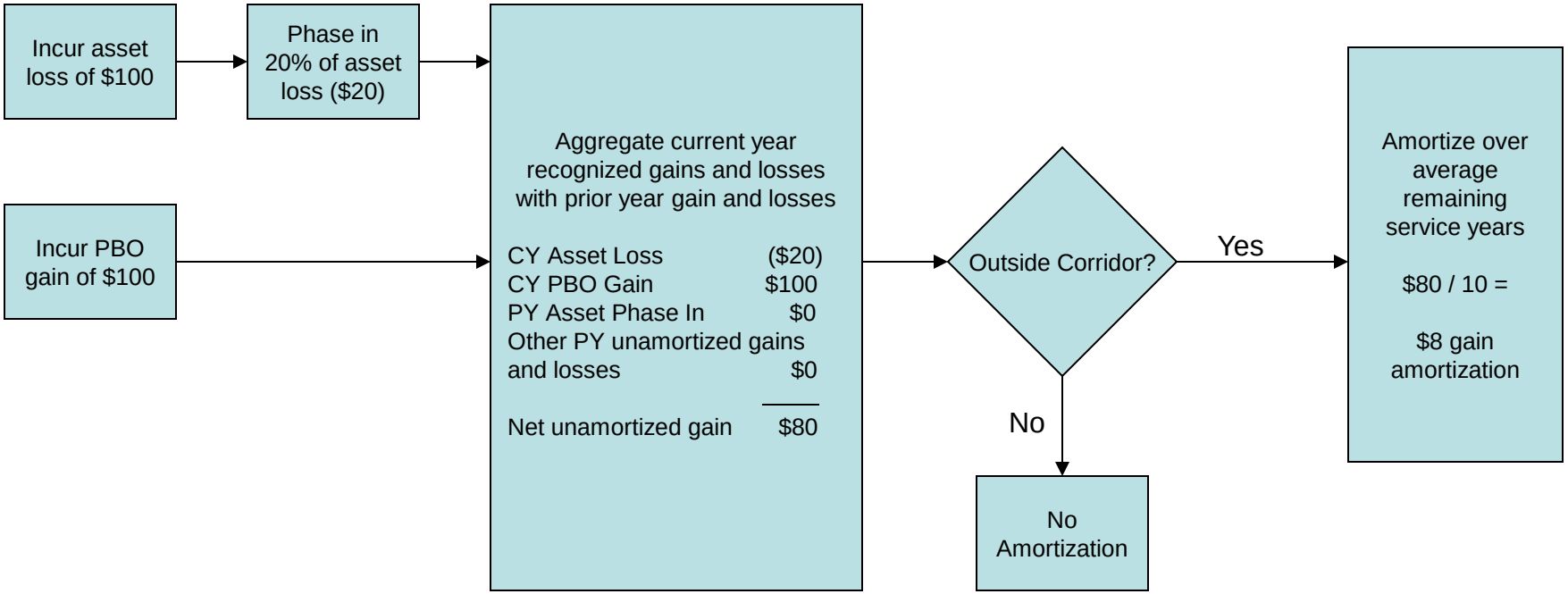
[7] Liability experience amounts are equal to the actuarial gain/loss component from the projected benefit obligation reconciliation included in the annual disclosures and include discount rate changes, other assumption changes and demographic experience.

[8] Prior to 2008, the plan was in a net gain position and subsequent experience is combined to determine the net outstanding position and amortization for the year.

[9] Amortizations include immediate recognition of a portion of (gain)/loss due to settlement accounting.

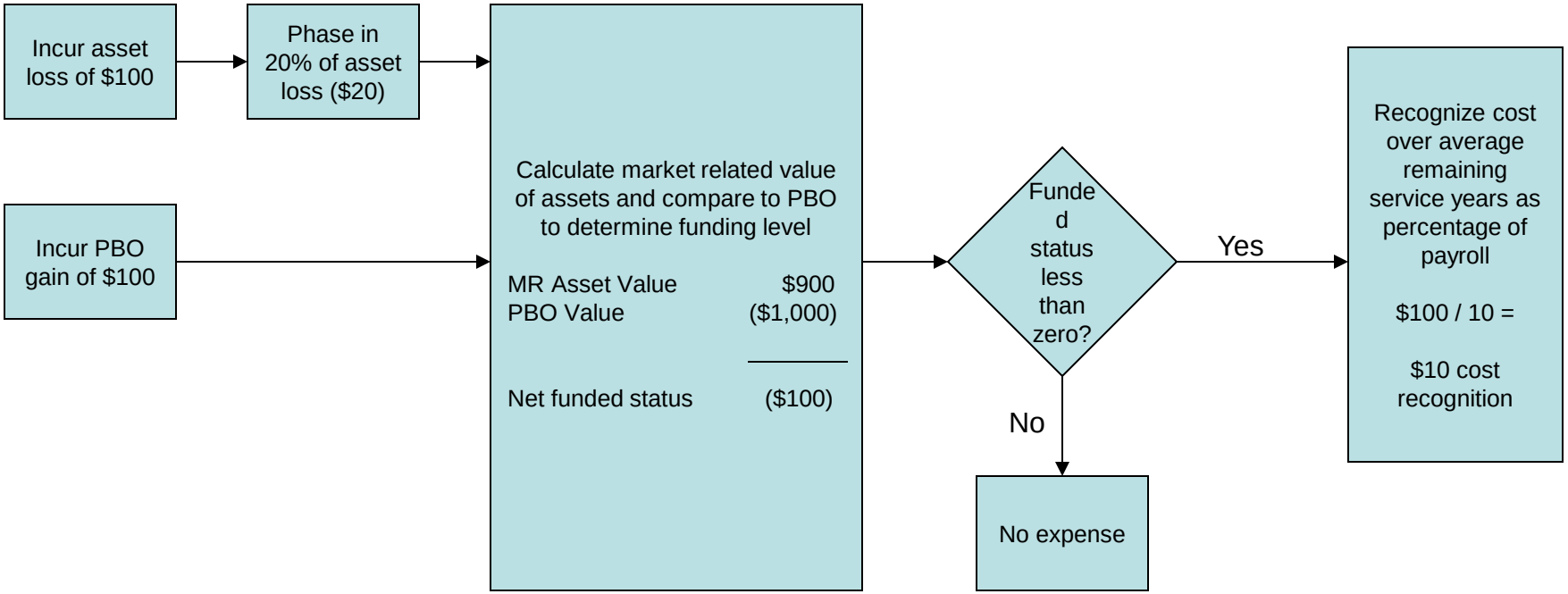
SFAS 87 Amortization

Assumes no prior year gain or loss balance



ACM Amortization

Beginning of year balances:
MR Asset Value $920
PBO Value ($1,100)



Description of Components and Calculations Under Aggregate Cost Method (ACM) and SFAS 87 (ASC 715)

A. Aggregate Cost Method

1. Components of the Aggregate Cost Method

The costs are determined using the following components:

a) the value of pension benefits expected to be paid in all future years (the "Present Value of Future Benefits");
b) the value of plan assets (the "Valuation Assets");
c) the value of expected future compensation to be paid to active employees (the "Present Value of Future Compensation");
d) the discount rate to be applied to all compensation expected to be paid to current employees (the "Aggregate Cost Discount Rate"); and,
e) the rate of return equal to the expected long-term rate of return on plan assets (the "Aggregate Cost Rate of Return").

Under the Aggregate Cost Method, the pension cost represents an amount that would need to be paid into the pension fund each year to pay all future benefits under the plan. The difference between the Present Value of Future Benefits and the Valuation Assets determines the unfunded benefits as of the valuation date. The unfunded benefits are divided by the Present Value of Future Compensation to determine the annual percentage of compensation that would need to be paid into the pension fund each year to fully fund all future benefits. The pension cost is equal to this percentage multiplied by the compensation expected to be paid to active employees in the upcoming year.

2. Present Value of Future Benefits

The Present Value of Future Benefits is determined by projecting into the future all benefits expected to be paid to plan participants. This projection requires future assumptions regarding mortality, when participants will leave the company, and future salary increases. The benefits expected to be paid are discounted back to the valuation date by the Aggregate Cost Discount Rate.

3. Valuation Assets

Valuation Assets are based on adjusted market value of assets, which is a calculated value that recognizes changes in fair value in a systematic and rational manner over not more than five years. The adjusted market value is subject to restriction that it be not less than 80 percent and not more than 120 percent of the market value of assets. Contributions that have been included in prior costs but have not been contributed to the pension fund are added to the Valuation Assets. Contributions that have been contributed to the pension fund but have not been included in prior costs are subtracted from the Valuation Assets.

4. Present Value of Future Compensation

The Present Value of Future Compensation is determined by projecting into the future all compensation expected to be paid to current employees. This projection requires future assumptions regarding mortality, termination and retirement rates, and future salary increases. The compensation expected to be paid is then discounted back to the valuation date using the Aggregate Cost Discount Rate.

5. Aggregate Rate of Return

The Company develops the Aggregate Cost Rate of Return based on expectations provided by Pacific Global, the pension fund manager. These expectations are based on the composition of plan assets.

6. Aggregate Cost Discount Rate

The Aggregate Cost Discount Rate is equal to the expected long-term rate of return on plan assets.

7. Validation of Reasonableness of the Assumptions

The Company's independent actuary, Willis Towers Watson, calculates the expense and obligations under the Aggregate Cost Method based on actual experience and company demographics, along with assumptions for the Aggregate Cost Discount Rate and Aggregate Cost Rate of Return. Willis Towers Watson also provides results of surveys of discount rates and rates of return for review. In addition, all material

assumptions are reviewed by Deloitte and Touche, the Company's external auditor, for reasonableness.

B. FAS 87 (ASC 715)

1. Components of the ASC 715 Method

Under FAS 87, pension cost is made up of several components including:

a) the value of pension benefits that employees will earn during the current year ("Service Cost");
b) increases in the present value of the pension benefits that plan participants have earned in previous years ("Interest Cost");
c) investment earnings on the pension plan assets that are expected to be earned during the year ("Expected Return On Assets");
d) recognition of costs (or income) from experience that differs from the assumptions (*e.g.*, investment earnings different than assumed) ("Amortization of Unrecognized Gains and Losses"); and,
e) recognition of the cost of benefit changes the plan sponsor provides for service the employees have already performed ("Amortization of Unrecognized Prior Service Cost").

2. Service Cost

The Service Cost is the actuarial present value of benefits attributed by the pension benefit formula to current employees' service during that period. Actuarial assumptions are used to reflect the time-value of money (the discount rate) and the probability of payment (assumptions as to mortality, turnover, early retirement, and others).

3. Interest Cost

The Interest Cost recognized in a fiscal year is determined as the increase in the projected benefit obligation due to the passage of time. Measuring the projected benefit obligation as a present value requires accrual of an Interest Cost at a rate equal to the assumed discount rate. The Interest Cost identifies the time value of money by recognizing that anticipated pension benefit payments are one year closer to being paid from the pension plan.

4. Expected Return On Assets

The Expected Return On Assets is determined based on the expected long-term rate of return on plan assets and the market-related value of plan assets. The market-related value of plan assets can be either fair market value or a calculated value that recognizes changes in fair value in a systematic and rational manner over not more than five years.

5. Amortization of Unrecognized Gains and Losses

Gains and losses are changes in the amount of either the projected benefit obligation or plan assets resulting from experience different from that assumed or from changes in assumptions. ASC 715 does not distinguish between sources of gains and losses. Asset gains and losses are the differences between the actual return on assets during a period and the expected return on assets for that period. Liability gains and losses are the differences between the actual liability at the end of a measurement period and the expected liability at the end of a measurement period. FAS 87 does not require recognition of gains and losses as a component of net pension cost in the period in which they arise.

Amortization of Unrecognized Net Gains or Losses must be included as a component of net periodic pension cost for a year if, as of the beginning of the year, the unrecognized net gain or loss exceeds a "corridor," which is 10 percent of the greater of the projected benefit obligation or the market-related value of plan assets. If Amortization of Unrecognized Net Gains or Losses is required, the amortization amount is equal to the amount of the Unrecognized Gain or Loss in excess of the corridor divided by the average remaining future service of the active participants in the plan.

6. Amortization of Unrecognized Prior Service Cost

Plan amendments can change benefits based on services rendered in prior periods. FAS 87 does not generally require the cost of providing such retroactive benefits (prior service cost) to be included in net periodic pension cost entirely in the year of the amendment but provides for recognition over the future years. Unrecognized prior service cost is amortized in the same manner as unrecognized gains and losses with the exception of the 10 percent corridor.

7. FAS 87 Rate of Return

The Company develops the FAS 87 Rate of Return based on expectations provided by JP Morgan, the pension fund manager. These expectations are based on the composition of plan assets.

8. FAS 87 Discount Rate

The FAS 87 Discount Rate is based on a bond matching approach which is recalculated on an annual basis to most accurately value the liability at a point in time.

9. Validation of Reasonableness of the Assumptions Used

The Company's independent actuary, Willis Towers Watson, calculates the expense and obligations under ASC 715 based on actual experience and company demographics, along with assumptions for the FAS 87 Discount Rate and FAS 87 Rate of Return. Willis Towers Watson also provides results of surveys of discount rates and rates of return for review. All material assumptions are also reviewed for reasonableness by Deloitte and Touche, the Company's external auditor.

C. Accounting Standards and Example of the Phase In of Pension Asset Losses Over Five Years

The company "phases in" losses over five years and then amortizes these losses over the average years to retirement. SFAS 87 allows the company to use a calculation referred to as the "market-related value of plan assets" to recognize changes in asset values over a period not to exceed five years. For example assume the company had plan assets with a fair value of $3,000,000 and those assets then lost $1,000,000 in value. The accounting standard allows the company to recognize the change in the value of these assets through the market-related value of these assets. As a result, the company would recognize only $200,000 ($1,000,000 x 1/5) of market loss per year for a period of five years. In the year of the losses, the market-related value of assets would be $2,800,000 ($3,000,000 – $200,000). The $200,000 represents 1/5 of the actual losses. This loss would then be amortized over the average remaining years of service (10 years). As a result, in Year 1 loss

amortization would be $200,000 divided by 10, or $20,000. The table below shows how losses would be phased in and then amortized.

Event	Fair Value of Assets	Market Related Value of Assets	Total Recognized	Year 1 Amort	Year 2 Amort	Year 3 Amort	Year 4 Amort	Year 5 Amort	Year 6 Amort
Beg Year 0	3,000,000	3,000,000	0						
Yr 0 Asset loss	2,000,000	2,800,000	200,000	20,000	20,000	20,000	20,000	20,000	20,000
	2,000,000	2,600,000-	400,000		20,000	20,000	20,000	20,000	20,000
	2,000,000	2,400,000	600,000			20,000	20,000	20,000	20,000
	2,000,000	2,200,000	800,000				20,000	20,000	20,000
	2,000,000	2,000,000	1,000,000					20,000	20,000
	Total Amortization			20,000	40,000	60,000	80,000	100,000	100,000

The accounting standard that allows the Company to smooth in the pension asset gains or losses over a five-year period is the Statement of Financial Accounting Standard ("SFAS") 87, Employers' Accounting for Pensions. The specific guidance can be found on page 14, paragraph 30 and 31, which I have copied below for your reference. The relevant reference is bolded and underlined.

> 30. The expected return on plan assets shall be determined based on the expected long-term rate of return on plan assets and the market-related value of plan assets. **The market-related value of plan assets shall be either fair value or a calculated value that recognizes changes in fair value in a systematic and rational manner over not more than five years.** Different ways of calculating market-related value may be used for different classes of assets (for example, an employer might use fair value for bonds and a five-year-moving-average value for equities), but the manner of determining market-related value shall be applied consistently from year to year for each asset class.
>
> 31. Asset gains and losses are differences between the actual return on assets during a period and the expected return on assets for that period. Asset gains and losses include both (a) changes reflected in the market-related value of assets and (b)

changes not yet reflected in the market-related value (that is, the difference between the fair value of assets and the market-related value). Asset gains and losses not yet reflected in market-related value are not required to be amortized under paragraphs 32 and 33.

Schedule 6
XEPP Fund Analysis
(Amounts in Thousands)
9/6/19

Year	Beginning of Year Market Value	Contributions	Earnings on Fund Investments	Pension Payments	Acquisitions/Transfers	Settlements	End of Year Market Value	Return on Assets
1950	-	1,023	(17)	(16)	-		989	-3.46%
1951	989	2,185	13	(145)	-		3,043	0.63%
1952	3,043	2,184	316	(200)	-		5,342	7.83%
1953	5,342	2,394	8	(263)	-		7,481	0.13%
1954	7,481	2,626	1,266	(346)	-		11,026	14.67%
1955	11,026	2,851	1,544	(444)	-		14,977	12.61%
1956	14,977	2,841	879	(534)	-		18,163	5.45%
1957	18,163	3,511	97	(772)	-		21,000	0.50%
1958	21,000	3,715	1,528	(958)	-		25,284	6.83%
1959	25,284	4,045	3,929	(1,135)	-		32,123	14.69%
1960	32,123	4,267	2,571	(1,359)	-		37,602	7.65%
1961	37,602	4,716	4,121	(1,557)	-		44,882	10.51%
1962	44,882	5,047	(4,158)	(1,785)	-		43,987	-8.94%
1963	43,987	5,219	7,373	(2,094)	-		54,485	16.18%
1964	54,485	5,469	6,666	(2,442)	-		64,177	11.90%
1965	64,177	5,749	3,023	(2,763)	-		70,186	4.60%
1966	70,186	5,690	3,252	(3,269)	-		75,860	4.56%
1967	75,860	5,650	5,727	(3,631)	-		83,606	7.45%
1968	83,606	5,647	7,919	(4,017)	-		93,154	9.38%
1969	93,154	5,785	(2,745)	(4,590)	-		91,604	-2.93%
1970	91,604	5,857	(11,557)	(5,267)	-		80,637	-12.57%
1971	80,637	6,203	18,077	(5,743)	-		99,174	22.34%
1972	99,174	6,939	13,010	(5,967)	-		113,157	13.05%
1973	113,157	7,533	(3,960)	(6,767)	-		109,963	-3.49%
1974	109,963	7,138	(10,668)	(7,590)	-		98,842	-9.72%
1975	98,842	8,967	16,770	(8,079)	-		116,500	16.88%
1976	116,500	10,790	12,240	(8,823)	-		130,707	10.40%
1977	130,707	13,128	5,803	(10,136)	-		139,503	4.38%
1978	139,503	16,308	7,166	(10,037)	-		152,940	5.02%
1979	152,940	18,071	26,014	(10,609)	-		186,416	16.59%
1980	186,416	20,523	41,250	(11,590)	-		236,599	21.59%
1981	236,599	23,131	(15,502)	(12,705)	-		231,523	-6.41%
1982	231,523	27,270	59,048	(14,242)	-		303,599	24.80%
1983	303,599	27,740	66,064	(5,743)	-		391,659	21.37%
1984	391,659	28,520	24,017	(19,084)	-		425,113	6.06%
1985	425,113	27,633	115,267	(22,959)	-		545,054	26.97%
1986	545,054	26,360	89,279	(24,836)	-		635,857	16.36%
1987	635,857	23,621	48,170	(27,898)	-		679,750	7.60%
1988	679,750	22,583	83,165	(40,645)	-		744,853	12.40%
1989	744,853	22,154	192,138	(44,303)	-		914,842	26.18%
1990	914,842	20,224	(11,273)	(56,827)	-		866,966	-1.26%
1991	866,966	22,248	248,374	(57,966)	-		1,079,623	29.25%
1992	1,079,623	21,516	121,945	(66,077)	-		1,157,007	11.53%
1993	1,157,007	-	153,083	(65,818)	-		1,244,272	13.62%
1994	1,244,272	-	15,665	(94,120)	-		1,165,817	1.31%
1995	1,165,817	-	345,631	(54,811)	-		1,456,637	30.36%
1996	1,456,637	-	274,978	(96,827)	-		1,634,787	19.53%
1997	1,634,787	-	428,004	(84,201)	-		1,978,590	26.87%
1998	1,978,590	-	330,836	(87,526)	-		2,221,900	17.10%
1999	2,221,900	-	305,501	(108,764)	-		2,418,637	13.98%
2000	2,418,637	-	89,651	(135,462)	38,412		2,411,238	6.90%
2001	2,411,238	-	(204,933)	(115,459)	-		2,090,846	-8.31%
2002	2,090,846	912	(318,389)	(155,606)	157,157	(994)	1,773,926	-10.90%
2003	1,773,926	1,712	372,354	(169,645)	-	(9,546)	1,968,801	22.61%
2004	1,968,801	-	179,697	(161,054)	-	(27,627)	1,959,817	9.34%
2005	1,959,817	-	160,630	(168,429)	-		1,952,018	8.73%
2006	1,952,018	-	189,246	(175,904)	-		1,965,360	10.24%
2007	1,965,360	-	121,057	(153,335)	-		1,933,082	6.60%
2008	1,933,082	-	(479,747)	(164,179)	-		1,289,156	-25.26%
2009	1,289,156	-	132,142	(113,427)	-		1,307,871	11.94%
2010	1,307,871	34,132	145,913	(147,452)	-		1,340,464	12.77%
2011	1,340,464	70,635	78,696	(153,274)	-		1,336,521	6.28%
2012	1,336,521	142,581	164,743	(146,248)	-		1,497,597	11.64%
2013	1,497,597	125,175	105,333	(178,392)	(14,931)		1,534,782	7.08%
2014	1,534,782	90,029	108,591	(184,049)	12,950		1,562,303	7.22%
2015	1,562,303	58,057	(17,038)	(154,384)	5,874		1,454,812	-1.25%
2016	1,454,812	90,050	92,086	(190,440)	12,415		1,458,923	6.66%
2017	1,458,923	120,308	216,751	(234,403)	1,378		1,562,957	15.29%
2018	1,562,957	120,000	(69,515)	(237,016)	(2,444)		1,373,982	-4.51%
Totals		1,348,660	4,099,117	(4,246,439)	210,811	(38,167)	54,134,351	

EEI Pension and OPEB Survey 2018-19

Company	Expected Discount Rate	Yield Curve / Model (Firm)	Yield Curve / Model (Specific)	Long-Run Expected Return	Expected Return CY (2018)	Expected Return CY+1 (2019)
EEI-1	4.66%	Willis Towers Watson	BOND:Link	6.90%	-4.40%	6.90%
EEI-2	4.20%	Mercer	Above Mean Yield Curve	5.85%	5.19%	5.33%
EEI-3	4.53%	Mercer	Select 100 yield curve	7.07%	-8.40%	7.41%
EEI-4	4.40%	Aon Hewitt	AA Above Median	7.50%	-4.60%	7.30%
EEI-5	4.19%	Aon Hewitt	AA Only Bond Universe	6.50%	6.50%	6.50%
EEI-6	4.35%	Aon Hewitt	AA Above Median	6.00%	-9.00%	6.00%
EEI-7	4.28%	Willis Towers Watson	BOND:Link	7.00%	-4.38%	7.00%
EEI-8	3.55%			5.15%	5.15%	
EEI-9	4.47%	Aon Hewitt	AA Only Above Median	7.50%	-5.50%	7.25%
EEI-10	4.50%	Mercer	Bond Model	7.50%	-7.34%	7.25%
EEI-11	4.43%	Aon Hewitt	AA Only Above Median	8.25%	-1.00%	8.25%
EEI-12	4.43%	Willis Towers Watson	BOND:Link	8.63%		8.63%
EEI-13	4.25%	Aon Hewitt	AA Above Median	7.00%	-4.00%	6.10%
EEI-14	4.55%	Willis Towers Watson	Rate:Link	6.10%	-4.40%	6.10%
EEI-15	4.16%	Aon Hewitt	AA-AAA Bond Universe	6.25%	6.80%	5.64%
EEI-16	4.30%	Willis Towers Watson	BOND:Link	6.25%	-2.00%	6.25%
EEI-17	4.35%	Willis Towers Watson	BOND:Link	6.75%	-6.00%	6.75%
EEI-18	4.36%	Aon Hewitt	AA Only Bond Universe	7.75%	7.75%	7.75%
EEI-19	3.85%	Other	Proprietary		7.50%	7.25%
EEI-20	4.35%	Willis Towers Watson	BOND:Link	7.00%	-5.87%	7.00%
EEI-21	4.35%	Willis Towers Watson	BOND:Link	6.50%	6.50%	6.75%
EEI-22	4.55%	Other	Bond model	7.50%	-6.50%	7.50%
EEI-23	4.04%	Citigroup	Discount Curve	6.00%	-5.30%	6.00%
EEI-24	4.51%	Aon Hewitt	AA Above Median	7.95%	-5.10%	7.75%
EEI-25	4.35%	Willis Towers Watson	BOND:Link	7.60%	-5.00%	7.60%
EEI-26	4.05%	Other	Proprietary		7.00%	7.35%
EEI-27		Citigroup	Pension Discount			
EEI-28	4.25%	Willis Towers Watson	BOND:Link	7.00%	-5.10%	7.00%
EEI-29	4.25%	Other	FTSE: Pension Discont (formerly Citigroup)	8.00%	-5.70%	7.50%
EEI-30	4.41%	Aon Hewitt	AA Above Median	7.80%	6.98%	7.80%
EEI-31	4.35%	Willis Towers Watson	BOND:Link	7.25%	-9.00%	7.25%
EEI-32	4.42%	Other	Proprietary	7.50%		
EEI-33	3.87%	Mercer	Proprietary	6.25%	6.25%	6.25%
EEI-34	4.25%	Willis Towers Watson	BOND:Link	7.00%	6.50%	7.00%
EEI-35	4.31%	Willis Towers Watson	BOND:Link	7.50%	-6.20%	7.25%
EEI-36	4.31%	Willis Towers Watson	BOND:Link	7.30%	-3.97%	7.31%
EEI-37	4.48%	Aon Hewitt	AA Only Above Median	7.00%	-10.00%	7.00%
EEI-38		Aon Hewitt	AA Only Above Median	6.41%		
EEI-39	4.31%	Willis Towers Watson	Rate:Link	7.60%	-4.70%	7.60%
EEI-40	4.32%	Mercer	Proprietary	7.40%	7.40%	7.20%
EEI-41	4.20%	Fidelity	Bond Model	7.85%	-6.20%	7.85%
EEI-42	4.25%	Other	Buck Standard Yield Curve	7.50%	-3.00%	7.00%
EEI-43	4.20%	Willis Towers Watson	BOND:Link	6.37%	7.00%	7.00%
EEI-44	4.48%	Willis Towers Watson	Rate:Link	7.00%	7.00%	7.00%
EEI-45	4.34%	Willis Towers Watson	Rate:Link	6.25%	-6.55%	6.25%
EEI-46	4.35%	Willis Towers Watson	Rate:Link	6.20%	-6.20%	6.00%
EEI-47	4.40%	Aon Hewitt	AA Above Median	6.25%	-4.00%	6.00%
2018-19 Results						
Average	**4.31%**			**7.00%**	**-1.53%**	**6.97%**
Quartile 0% (Min)	3.55%			5.15%	-10.00%	5.33%
Quartile 25%	4.25%			6.34%	-5.94%	6.38%
Quartile 50% (Median)	4.35%			7.00%	-4.40%	7.00%
Quartile 75%	4.42%			7.50%	6.38%	7.38%
Quartile 100% (Max)	4.66%			8.63%	7.75%	8.63%
# Responses	45	46	46	44	43	43
2018 Median	4.35%			7.00%	-4.40%	7.00%
2017 Median	3.70%			7.25%	14.00%	7.10%
2016 Median	4.20%			7.33%	7.50%	7.00%
2015 Median	4.50%			7.05%	0.00%	7.00%
2014 Median	4.11%			7.25%	7.50%	
2013 Median	4.94%			7.25%	9.88%	
2012 Median	4.10%			7.50%	12.30%	
2011 Median	4.82%			7.75%	3.50%	
2010 Median	5.40%			7.88%	8.75%	
2009 Median	5.75%			8.44%	17.00%	

Xcel Energy Discount Rate Benchmarks

	December 31, 2017 Bond Matching[1]	December 31, 2018 Bond Matching[1]	Change From December 31, 2017
Xcel Energy Pension Plan	3.60%	4.31%	0.71%
NCE Non-bargaining Plan	3.52%	4.25%	0.73%
SPS Bargaining Plan	3.71%	4.37%	0.66%
PSCo Bargaining Plan	3.68%	4.36%	0.68%
All Pension Plans Combined	3.63%	4.31%	0.68%
Nonqualified Pension	3.49%	4.26%	0.77%
Post-Retirement Medical Plan	3.62%	4.32%	0.70%
Workers Compensation and LTD[2]	3.51%	4.23%	0.72%
Merrill Lynch Corporate (AA-AAA) 15+ Bond Index	3.57%	4.16%	0.59%
10-Year Treasuries	2.40%	2.69%	0.29%
30-Year Treasuries	2.74%	3.02%	0.28%

1 Based on Willis Towers Watson BOND:Link model. Excludes collateralized bonds from model portfolio
2 Fiscal year 2019 budget estimates will use a discount rate of 4.23% until 2019 census data is available to determine actual discount rate for 2019 cost

Xcel Energy Inc.

2019 Expected Return on Assets (EROA) Analysis[1]

	Willis Towers Watson October 2018 Return Estimator		Target Asset Allocations (Provided by Xcel Energy)					
Asset Class	10-Yr Arithmetic Returns[2]	10-Yr Geometric Returns[3]	XEPP	PSCO	SPS	NCE	MPT	VEBA (Includes EIS Allocation)
Cash and Derivatives	3.00%	2.99%	2.00%	2.00%	2.00%	2.00%	2.00%	4.10%
US Equity - All	8.64%	7.37%	0.00%	0.00%	0.00%	0.00%	0.00%	9.00%
US Equity - Large Cap	8.52%	7.35%	15.50%	14.50%	14.50%	15.50%	15.09%	2.20%
US Equity - Small Cap	8.76%	6.95%	3.00%	3.00%	3.00%	3.00%	3.00%	1.10%
Non-US Equity - EAFE	8.84%	7.23%	9.00%	8.50%	8.50%	9.00%	8.79%	5.20%
Non-US Equity - EM	11.58%	7.94%	9.00%	8.50%	8.50%	9.00%	8.79%	0.00%
Fixed Income - Barclays Aggregate	3.56%	3.40%	0.00%	0.00%	0.00%	0.00%	0.00%	52.80%
Fixed Income - High Yield	5.18%	4.57%	18.00%	16.00%	16.00%	18.00%	17.18%	11.60%
Fixed Income - EM Debt[4]	5.18%	4.57%	0.00%	0.00%	0.00%	0.00%	0.00%	5.50%
Alternatives - Hedge Fund of Funds	6.19%	5.70%	3.50%	3.50%	3.50%	3.50%	3.50%	8.50%
Alternatives - Private Equity	13.35%	8.66%	5.00%	4.50%	4.50%	5.00%	4.79%	0.00%
Alternatives - Real Estate	6.76%	6.08%	7.00%	6.50%	6.50%	7.00%	6.79%	0.00%
LDFI	3.57%	2.74%	18.00%	22.00%	22.00%	18.00%	19.65%	0.00%
Treasury Strips	2.86%	0.11%	10.00%	11.00%	11.00%	10.00%	10.41%	0.00%
Total			100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

	XEPP	PSCO	SPS	NCE	MPT	VEBA
Expected Geometric Portfolio Returns (before administrative expenses)						
Willis Towers Watson - 10-year - passive	6.13%	5.93%	5.93%	6.13%	6.05%	4.76%
Willis Towers Watson - 20-year - passive	6.76%	6.58%	6.58%	6.76%	6.68%	5.21%
Goldman Sachs - 10-year - active (net of investment management fees)	6.50%	6.40%	6.40%	6.50%	6.46%	4.50%
Expected 2019 Administrative Expenses[5]	-0.38%	-0.58%	-0.26%	-0.63%	-0.44%	-0.08%
2019 EROA Assumption Selected by Xcel Energy[6]	**7.10%**	**6.50%**	**6.75%**	**6.90%**	**6.87%**	**5.30%**
2018 EROA Assumption	7.10%	6.50%	6.75%	6.90%	6.87%	5.80%

[1] All returns are net of investment expenses

[2] Reflects average of all single-year returns within the first 10 years of the simulation. Returns assume passive management and do not include alpha

[3] Reflects average of all annualized compound returns for the first 10 years of the simulation. Returns assume passive management and do not include alpha

[4] Emerging market debt modeled as Fixed Income - High Yield

[5] ASC 715 expected return assumption is net of administrative expenses as these are paid from plan assets. Expected administrative expenses equal annualized amounts paid through September 2018 plus expected changes in PBGC premiums. VEBA assumption is a high-level estimate.

[6] See Xcel Energy assumption memo for more information on the assumption selection process and additional information considered

XCEL ENERGY INC. - Qualified Pension Plans
Cost by Legal Entity
($ in Thousands)

EXHIBIT I
Page 2 of 6

2020	Service Cost	Interest Cost	Expected Return on Assets	Amortizations: Prior Service Cost	Amortizations: Net (Gain)/Loss	Net Cost	Settlement Charge [1]	Aggregate Cost Compensation Method	Aggregate Cost 20-year Amortization Method	January 1 Prepaid (Accrued)	Contribution	PBO
Xcel Energy Pension Plan (XEPP)												
Discontinued Operations[2]	-	2,940	(4,360)	-	3,073	1,653	-	N/A	N/A	35,784	3,508	70,641
Xcel Energy Nuclear	5,653	4,261	(6,317)	(214)	598	3,981	-	4,001	3,621	(7,930)	5,102	102,753
NSP - MN	18,652	31,809	(47,102)	100	28,847	32,306	-	30,174	27,303	320,706	38,471	774,803
NSP - WI	4,190	5,607	(8,310)	(30)	4,316	5,773	-	N/A	N/A	44,717	6,731	135,558
Xcel Services[3]	21,406	25,961	(38,475)	(985)	13,047	20,954	-	N/A	N/A	95,205	31,161	627,582
XEPC (former EMI)	-	23	(34)	-	4	(7)	-	N/A	N/A	(22)	27	543
Total XEPP	49,901	70,601	(104,598)	(1,129)	49,885	64,660	-	34,175	30,924	488,460	85,000	1,711,880

2021	Service Cost	Interest Cost	Expected Return on Assets	Amortizations: Prior Service Cost	Amortizations: Net (Gain)/Loss	Net Cost	Settlement Charge [1]	Aggregate Cost Compensation Method	Aggregate Cost 20-year Amortization Method	January 1 Prepaid (Accrued)	Contribution	PBO
Xcel Energy Pension Plan (XEPP)												
Discontinued Operations[2]	-	2,861	(4,321)	-	3,011	1,551	-	N/A	N/A	37,639	2,766	68,673
Xcel Energy Nuclear	5,479	4,362	(6,586)	(214)	497	3,538	-	3,921	3,650	(6,809)	4,236	105,163
NSP - MN	19,010	30,893	(46,604)	100	27,320	30,719	-	28,073	26,133	326,871	30,335	752,981
NSP - WI	4,259	5,570	(8,409)	(30)	4,073	5,463	-	N/A	N/A	45,675	5,426	134,696
Xcel Services[3]	21,115	25,881	(39,073)	(985)	12,382	19,320	-	N/A	N/A	105,412	25,215	625,919
XEPC (former EMI)	-	22	(34)	-	5	(7)	-	N/A	N/A	12	22	536
Total XEPP	49,863	69,589	(105,027)	(1,129)	47,288	60,584	-	31,994	29,783	508,800	68,000	1,687,968

2022	Service Cost	Interest Cost	Expected Return on Assets	Amortizations: Prior Service Cost	Amortizations: Net (Gain)/Loss	Net Cost	Settlement Charge [1]	Aggregate Cost Compensation Method	Aggregate Cost 20-year Amortization Method	January 1 Prepaid (Accrued)	Contribution	PBO
Xcel Energy Pension Plan (XEPP)												
Discontinued Operations[2]	-	2,778	(4,227)	-	2,940	1,491	-	N/A	N/A	38,854	1,929	66,878
Xcel Energy Nuclear	5,316	4,445	(6,763)	(214)	413	3,197	-	3,824	3,655	(6,111)	3,097	107,346
NSP - MN	18,634	30,009	(45,622)	100	25,766	28,887	-	26,070	24,921	326,487	21,111	731,811
NSP - WI	4,185	5,536	(8,422)	(30)	3,830	5,099	-	N/A	N/A	45,638	3,862	133,889
Xcel Services[3]	20,821	25,767	(39,200)	(985)	11,724	18,127	-	N/A	N/A	111,307	17,986	623,466
XEPC (former EMI)	-	22	(33)	-	6	(5)	-	N/A	N/A	41	15	522
Total XEPP	48,956	68,557	(104,267)	(1,129)	44,679	56,796	-	29,894	28,576	516,216	48,000	1,663,912

[1] Settlement accounting may be required if lump sum benefit payments exceed the sum of service cost and interest on a plan by plan basis. No settlements have been estimated at this time.
[2] Includes NRG, BMG, Viking, Natro Gas, Utility Engineering, Seren, Quixx, Crockett and QPS
[3] Includes Eloigne

Assumptions

Discount Rate - U.S. GAAP	
XEPP	4.31%
NCE	4.25%
SPS	4.37%
PSCo	4.36%
Discount Rate - Aggregate Normal Cost	7.10%
Salary Scale	3.75%
Expected Return on Assets	
XEPP	7.10%
NCE	6.90%
SPS	6.75%
PSCo	6.50%
Assumed Mortality Table	
Bargaining Participants	RP-2014 Blue Collar projected with generational mortality improvements using an adjusted SOA MP-2016 methodology
Non-bargaining Participants	RP-2014 White Collar, as adjusted for 2014 Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2016 methodology

See May 17, 2019 letter for additional information on data, assumptions, methods, and plan provisions.
Contributions already made are allocated in accordance with the January 2, 2019 contribution directives.

XCEL ENERGY INC. - Postretirement Benefits
U.S. GAAP Cost Estimates by Legal Entity
($ in Thousands)

EXHIBIT III
Page 2 of 6

2020	Service Cost	Interest Cost	Amortizations: Expected Return on Assets	Amortizations: Prior Service Cost	Amortizations: Net (Gain)/Loss	Net Cost	January 1 Prepaid (Accrued)	Contribution
Discontinued Operations[1]	-	296	(75)	(111)	78	188	(4,309)	630
Xcel Energy Nuclear	13	38	-	95	(14)	132	(897)	20
NSP - MN[2]	102	2,911	(136)	(3,014)	1,447	1,310	(45,090)	6,853
NSP - WI	26	505	(24)	(337)	290	460	(6,310)	1,121
PSCo	339	15,042	(18,367)	(3,762)	2,822	(3,926)	52,470	-
SPS[3]	859	1,725	(1,982)	(425)	(399)	(222)	(12,929)	-
Xcel Services[3]	43	1,110	(35)	(365)	641	1,394	(12,257)	1,426
XEPC (former EMI)	-	1	-	-	(4)	(3)	(109)	1
Total Xcel Energy	1,382	21,628	(20,619)	(7,919)	4,861	(667)	(29,431)	10,051

2021	Service Cost	Interest Cost	Amortizations: Expected Return on Assets	Amortizations: Prior Service Cost	Amortizations: Net (Gain)/Loss	Net Cost	January 1 Prepaid (Accrued)	Contribution
Discontinued Operations[1]	-	282	(79)	(111)	75	167	(3,867)	621
Xcel Energy Nuclear	12	39	-	95	(13)	133	(1,009)	24
NSP - MN[2]	94	2,750	(143)	(3,014)	1,383	1,070	(39,547)	6,547
NSP - WI	24	480	(25)	(337)	277	419	(5,649)	1,086
PSCo	197	14,422	(17,776)	(3,762)	2,692	(4,227)	56,396	-
SPS[3]	827	1,703	(1,924)	(425)	(382)	(201)	(12,707)	-
Xcel Services[3]	41	1,098	(36)	(365)	613	1,351	(12,225)	1,417
XEPC (former EMI)	-	1	-	-	(4)	(3)	(105)	1
Total Xcel Energy	1,195	20,775	(19,983)	(7,919)	4,641	(1,291)	(18,713)	9,696

2022	Service Cost	Interest Cost	Amortizations: Expected Return on Assets	Amortizations: Prior Service Cost	Amortizations: Net (Gain)/Loss	Net Cost	January 1 Prepaid (Accrued)	Contribution
Discontinued Operations[1]	-	267	(83)	(88)	72	168	(3,413)	621
Xcel Energy Nuclear	11	41	-	95	(12)	135	(1,118)	26
NSP - MN[2]	89	2,595	(150)	(3,014)	1,324	844	(34,070)	6,206
NSP - WI	23	456	(26)	(337)	265	381	(4,982)	1,020
PSCo	83	13,782	(17,167)	(2,316)	2,572	(3,046)	60,623	-
SPS[3]	801	1,677	(1,861)	(425)	(366)	(174)	(12,506)	-
Xcel Services[3]	38	1,085	(38)	(278)	587	1,394	(12,159)	1,417
XEPC (former EMI)	-	1	-	-	(4)	(3)	(101)	1
Total Xcel Energy	1,045	19,904	(19,325)	(6,363)	4,438	(301)	(7,726)	9,291

[1]Includes NRG, BMG, Viking, Natrogas, Cheyenne, Quixx and UE.

[2]Includes Eloigne and Seren.

[3]Includes Executive Life Insurance benefits.

Assumptions

Discount Rate	4.32%	
Expected Return on Assets	5.30%	
Medical Trend	Pre-65	Post-65
Initial (2019)	6.50%	5.30%
Ultimate	4.50%	4.50%
Year Ultimate Reached	2023	2023

Assumed Mortality Table

Bargaining: RPH-2014 Blue Collar headcount-weighted table adjusted for Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2016 methodology.

Non-bargaining: RPH-2014 White Collar headcount-weighted table adjusted for Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2016 methodology.

Contributions for PSCo and SPS are assumed equal to the net cost, but not less than zero. Contributions for other legal entities are assumed equal to the expected benefit payments.
See May 17, 2019 letter for additional information on data, assumptions, and plan provisions.

Xcel Energy Inc. - LTD and Workers' Compensation
Benefit Cost Estimates by Legal Entity
($ in Thousands)

Exhibit VI
Page 1 of 1

Fiscal Year Ending	2018	2019	2020	2021	2022	2023	2024
U.S. GAAP	Actual	Actual	Budget	Budget	Budget	Budget	Budget
Discount Rate- Workers' Compensation	3.51%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%
Former NSP - Workers' Compensation[1]							
MN/SD	339	(1,517)	270	253	235	220	205
MI/WI	(53)	(22)	3	3	3	4	3
Subtotal	286	(1,539)	273	256	238	224	208
Former NCE - Workers' Compensation[1]							
Colorado - PSCo	555	-250	52	51	48	48	46
Deductible States - Workers' Compensation							
Deductible States - SPS (KS, OK, NM, and TX)	-3	0	0	0	0	0	0
Total Xcel Energy Workers' Compensation	**838**	**(1,789)**	**325**	**307**	**286**	**272**	**254**
Discount Rate - LTD Income	3.51%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%
LTD Income							
Discontinued Operations - Cheyenne	(21)	11	4	3	3	2	1
Discontinued Operations[2]	89	89	22	20	19	18	17
NSP-MN	(22)	(153)	226	212	200	187	176
NSP-WI	(258)	(16)	48	45	43	41	38
PSCo	(117)	70	37	29	25	19	15
SPS	(7)	(76)	16	10	8	4	2
Utility Engineering	(3)	(3)	1	1	2	1	1
Xcel Services	91	3	8	6	6	6	5
XEPC	3	-	-	-	-	-	-
Total Xcel Energy LTD Income	**(245)**	**(75)**	**362**	**326**	**306**	**278**	**255**
Total Xcel Energy U.S. GAAP	**593**	**(1,864)**	**687**	**633**	**592**	**550**	**509**

[1] *Results for former NSP states include income replacement and medical benefits as well as reserve for bankrupt insurers. Colorado results include reserve for bankrupt insurers.*
[2] *Includes NRG, BMG, Viking and Natrogas.*

[3] *See May 17, 2019 letter for additional information on data, assumptions, methods, and plan provisions.*

5/17/2019
http://natct.internal.towerswatson.com/clients/609084A/XcelRETActuarial-2019/Documents/Projections/May/2019 Benefit Costs and 2020-2024 Benefit Cost Estimates - May 2019.xlsx\f112 expense

Willis Towers Watson

Actuarial Costs
2020 Test Year

	Qualified Pension (1)	Retiree Medical (2)	FAS 112 Long-Term Disability	FAS 112 Workers Compensation
NSPM				
Total Cost from Actuarial Report	30,174,000	1,310,000	226,000	270,000
5 Year Average Discount Rate Adjustment	-	294,560	-	
Adjusted Total Cost	30,174,000	1,604,560	226,000	
Percent to NSPM Electric O&M	55.37%	55.37%	55.37%	52.72%
Amount to NSPM Electric O&M	16,706,490	888,399	125,130	142,344
Percent to State of Minnesota	86.61%	86.61%	86.61%	86.61%
Amount to State of Minnesota	14,469,267	769,431	108,373	123,282
Nuclear				
Total Cost from Actuarial Report	4,001,000	132,000		
5 Year Average Discount Rate Adjustment	-	15,360		
Adjusted Total Cost	4,001,000	147,360		
Percent to NSPM Electric O&M	89.21%	89.21%		
Amount to NSPM Electric O&M	3,569,309	131,460		
Percent to State of Minnesota	86.61%	86.61%		
Amount to State of Minnesota	3,091,331	113,856		
Xcel Energy Services				
Total Cost from Actuarial Report	20,954,000	1,394,000	8,000	
5 Year Average Discount Rate Adjustment	279,040	228,320		
Adjusted Total Cost	21,233,040	1,622,320		
Percent to NSPM Electric O&M	27.29%	27.29%	27.29%	
Amount to NSPM Electric O&M	5,795,119	442,779	2,183	
Percent to State of Minnesota	86.61%	86.61%	86.61%	
Amount to State of Minnesota	5,019,075	383,485	1,891	
Net Regulatory Adjustments (Cap & 10-20 year)	(1,623,362)			
Affiliate Charges	192	8	2	1
Total NSPM Electric O&M, State of Minnesota	**20,956,503**	**1,266,780**	**110,266**	**123,282**

(1) Total cost amounts are from the 5/17/2019 actuarial report and reflects NSPM calculated under the Aggregate Cost Method using a 20 year amortization and XES calculated using the 5 year average discount rate and the amount (deferred) / amortized resulting from XES pension costs being above or below the updated 2019 estimate pension expense which is the amount that the company is seeking to reset the baseline in this rate filing.
(2) Calculated using the 5 year average discount rate

Docket Nos. E002/GR-13-868, E002/GR-15-826
2018 Qualified Pension Plan Annual Report - June 17, 2019
Attachment A - Page 1 of 8

Annual Qualified Pension Compliance Filing for NSPM Electric State of Minnesota
Summary ($s)

Schedule A

	2014	2015	2016	2017	2018
NSPM Plan	21,935,926	18,972,305	16,229,267	18,389,047	17,824,711
XES Plan	6,682,265	7,062,295	7,471,627	11,694,048	10,909,060
Extend ACM amortization 10 to 20 years	(6,390,596)	(4,504,585)	(2,791,625)	(3,140,138)	(2,653,639)
Cap XES Plan	(1,304,253)	(1,684,283)	(2,093,615)	(5,711,893)	(5,531,048)
Total Pension Expense for Ratemaking	20,923,341	19,845,733	18,815,654	21,231,064	20,549,084

Northern States Power Company

Docket Nos. E002/GR-13-868, E002/GR-15-826
2018 Qualified Pension Plan Annual Report - June 17, 2019
Attachment A - Page 2 of 8

Annual Qualified Pension Compliance Filing for NSPM Electric State of Minnesota
XES Qualified Pension ($s) **Schedule B**

	2014	2015	2016	2017	2018
Discount Rate Assumption	5 Yr Avg of 5.05%	5 Yr Avg of 4.67%	5 Yr Avg of 4.50%	5 Yr Avg of 4.32%	5 Yr Avg of 4.24%
Total Cost Amount	26,989,000	29,148,000	27,013,000	49,566,000	45,358,000
Required Ratemaking Adjustments:					
5 Year Average Discount Rate	(821,051)	(1,356,060)	269,080	(380,752)	(873,228)
Total Cost Amount with Ratemaking Adjustments	26,167,949	27,791,940	27,282,080	49,185,248	44,484,772
Percent to Electric O&M	29.17%	29.15%	31.45%	27.31%	28.85%
Amount to Electric O&M	7,633,036	8,101,904	8,580,923	13,430,238	12,833,560
Percent to State of MN	87.54%	87.17%	87.07%	87.07%	87.07%
Amount to State of MN Electric O&M	6,682,265	7,062,295	7,471,627	11,694,048	10,909,060
2011 State of MN Amount (cap)	5,378,012	5,378,012	5,378,012	5,378,012	5,378,012
Amount Above/(Below) 2011 Level	1,304,253	1,684,283	2,093,615	6,316,036	5,531,048
Prior Year Adjustment				604,143	
Amount of Expense Deferred *	**(1,304,253)**	**(1,684,283)**	**(2,093,615)**	**(5,711,893)**	**(5,531,048)**
Cumulative Amount of Expense Deferred *	**(2,358,610)**	**(4,042,893)**	**(6,136,508)**	**(11,848,401)**	**(17,379,449)**
Amount Used/Amortized to Satisfy the Deferral *	**-**	**-**	**-**	**-**	**-**
				Remove true-up booked in 2019	(265,446)
				Balance as of 12/31/18	(17,644,894)

* Negative amounts reflect a reduction to expense or an increase to the deferral. Positive amounts reflect an increase to expense or a decrease to the deferral. The amount of expense deferred represents the amount incurred by year rather than the calendar year total as there may be prior year true-ups booked in the subsequent year.

Annual Qualified Pension Compliance Filing for NSPM Electric State of Minnesota
NSPM ACM Qualified Pension ($s)

Docket Nos. E002/GR-13-868, E002/GR-15-826
2018 Qualified Pension Plan Annual Report - June 17, 2019
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Schedule C

	2014			2015			2016			2017			2018		
	Qualified Pension w/ 10 Yr Amortization	Qualified Pension w/ 20 Yr Amortization	Change (Adjustment)	Qualified Pension w/ 10 Yr Amortization	Qualified Pension w/ 20 Yr Amortization	Change (Adjustment)	Qualified Pension w/ 10 Yr Amortization	Qualified Pension w/ 20 Yr Amortization	Change (Adjustment)	Qualified Pension w/ 10 Yr Amortization	Qualified Pension w/ 20 Yr Amortization	Change (Adjustment)	Qualified Pension w/ 10 Yr Amortization	Qualified Pension w/ 20 Yr Amortization	Change (Adjustment)
MN															
Total Cost	35,485,000	25,147,000	(10,338,000)	31,064,000	23,689,000	(7,375,000)	30,831,000	25,528,000	(5,303,000)	31,554,000	26,166,000	(5,388,000)	30,891,000	26,292,000	(4,599,000)
Percent to electric O&M	61.44%	61.44%	61.44%	60.69%	60.69%	60.69%	51.03%	51.03%	51.03%	56.94%	56.94%	56.94%	55.45%	55.45%	55.45%
Amount to electric O&M	21,802,948	15,451,000	(6,351,948)	18,853,331	14,377,303	(4,476,027)	15,732,443	13,026,428	(2,706,015)	17,967,424	14,899,398	(3,068,026)	17,129,060	14,578,914	(2,550,146)
Percent to state of MN	87.5440%	87.5440%	87.5440%	87.1683%	87.1683%	87.1683%	87.07%	87.07%	87.07%	87.07%	87.07%	87.07%	87.07%	87.07%	87.07%
Amount to state of MN	19,087,173	13,526,424	(5,560,749)	16,434,136	12,532,457	(3,901,679)	13,698,636	11,342,440	(2,356,196)	15,644,691	12,973,283	(2,671,408)	14,914,705	12,694,229	(2,220,476)
Nuclear															
Total Cost	3,426,000	2,428,000	(998,000)	3,149,000	2,401,000	(748,000)	3,150,000	2,608,000	(542,000)	3,308,000	2,743,000	(565,000)	3,574,000	3,042,000	(532,000)
Percent to electric O&M	94.98%	94.98%	94.98%	92.47%	92.47%	92.47%	92.27%	92.27%	92.27%	95.28%	95.28%	95.28%	93.51%	93.51%	93.51%
Amount to electric O&M	3,254,081	2,306,161	(947,920)	2,911,801	2,220,145	(691,657)	2,906,349	2,406,272	(500,077)	3,151,805	2,613,483	(538,322)	3,342,047	2,844,574	(497,473)
Percent to state of MN	87.5440%	87.5440%	87.5440%	87.1683%	87.1683%	87.1683%	87.07%	87.07%	87.07%	87.07%	87.07%	87.07%	87.07%	87.07%	87.07%
Amount to state of MN	2,848,753	2,018,906	(829,847)	2,538,169	1,935,263	(602,906)	2,530,632	2,095,202	(435,429)	2,744,356	2,275,625	(468,731)	2,910,005	2,476,843	(433,163)
TOTAL															
TOTAL Amount to electric O&M	25,057,029	17,757,161	(7,299,868)	21,765,132	16,597,448	(5,167,684)	18,638,792	15,432,700	(3,206,091)	21,119,229	17,512,881	(3,606,348)	20,471,107	17,423,488	(3,047,619)
Percent to state of MN	87.5440%	87.5440%	87.5440%	87.1683%	87.1683%	87.1683%	87.07%	87.07%	87.07%	87.07%	87.07%	87.07%	87.07%	87.07%	87.07%
TOTAL Amount to state of MN	**21,935,926**	**15,545,329**	**(6,390,596)**	**18,972,305**	**14,467,721**	**(4,504,585)**	**16,229,267**	**13,437,643**	**(2,791,625)**	**18,389,047**	**15,248,908**	**(3,140,138)**	**17,824,711**	**15,171,072**	**(2,653,639)**
Cumulative Amount of Expense Deferred			**(13,703,716)**			**(18,208,301)**			**(20,999,926)**			**(24,140,064)**			**(26,793,703)**

Annual Qualified Pension Compliance Filing for NSPM Electric State Qualified Pension Actuarial Reports

Schedule D

XCEL ENERGY INC. - Qualified Pension Plans
Cost Estimates by Legal Entity
($ in Thousands)

EXHIBIT I
Page 1 of 6

2014	Service Cost	Interest Cost	Expected Return on Assets	Amortizations: Prior Service Cost	Amortizations: Net (Gain)/Loss	Net Cost	Aggregate Cost Compensation Method	Aggregate Cost 20-year Amortization Method	January 1 Prepaid (Accrued)	Contribution
Xcel Energy Pension Plan (XEPP)										
Discontinued Operations[1]	-	3,485	(4,660)	-	3,668	2,493	N/A	N/A	34,644	3,689
Xcel Energy Nuclear	6,876	4,227	(5,633)	44	1,078	6,592	3,426	2,428	(1,632)	4,575
NSP - MN	22,823	43,082	(57,287)	892	43,707	53,217	35,485	25,147	407,285	47,523
NSP - WI	4,527	7,257	(9,642)	111	6,617	8,870	N/A	N/A	58,556	8,030
Xcel Services[2]	20,993	24,087	(32,085)	245	13,749	26,989	N/A	N/A	88,822	26,161
XEPC (former EMI)	-	21	(28)	-	(14)	(21)	N/A	N/A	(263)	22
Total XEPP	55,219	82,159	(109,335)	1,292	68,805	98,140	38,911	27,575	587,412	90,000
NCE Non-Bargaining Pension Plan										
Discontinued Operations - Cheyenne	-	159	(222)	-	190	127	N/A	N/A	1,447	179
PSCo	6,264	9,110	(12,726)	136	5,079	7,863	N/A	N/A	16,520	10,390
SPS	3,122	3,905	(5,460)	54	5,351	6,972	N/A	N/A	43,365	4,431
Total NCE	9,386	13,174	(18,408)	190	10,620	14,962	N/A	N/A	61,332	15,000
SPS Bargaining Plan										
SPS	6,062	16,539	(20,719)	-	7,975	9,857	N/A	N/A	124,408	-
Total SPS	6,062	16,539	(20,719)	-	7,975	9,857	N/A	N/A	124,408	-
PSCo Bargaining Plan										
Discontinued Operations - Cheyenne	-	580	(760)	-	549	369	N/A	N/A	7,031	328
PSCo	17,675	44,167	(57,983)	(3,228)	28,813	29,444	N/A	N/A	326,103	24,672
Total PSCo	17,675	44,747	(58,743)	(3,228)	29,362	29,813	N/A	N/A	333,134	25,000
Total Xcel Energy	88,342	156,619	(207,205)	(1,746)	116,762	152,772	38,911	27,575	1,106,286	130,000

[1] Includes NRG, BMG, Viking, Natro Gas, Utility Engineering, Seren, Quixx, Crockett and QPS
[2] Includes Eloigne

Assumptions

Discount Rate - U.S. GAAP	
XEPP	4.74%
NCE	4.32%
SPS	5.00%
PSCo	4.89%
Discount Rate - Aggregate Normal Cos	7.25%
Salary Scale	3.75%
Expected Return on Assets	
XEPP	7.25%
NCE	7.10%
SPS	6.85%
PSCo	6.75%
Assumed Mortality Table	
Bargaining Participants	RP-2000 Blue Collar projected with scale AA to 2021 for retirees and 2029 for other participants
Non-bargaining Participants	RP-2000 White Collar projected with scale AA to 2021 for retirees and 2029 for other participants

See May 7, 2014 letter for additional information on data, assumptions, methods and plan provisions.
Contributions already made are allocated in accordance with the January 14, 2014 contribution directives provided by Xcel Energy.

5/7/2014
J:\Clients\66120\RET\2014\Projections\01 February Forecasts\03b Analysis\Pension - Qualified\Qualified Plans 2014 - February Projections.xls: 2014

TOWERS WATSON

Annual Qualified Pension Compliance Filing for NSPM Electric State Qualified Pension Actuarial Reports

Docket Nos. E002/GR-13-868, E002/GR-15-826
2018 Qualified Pension Plan Annual Report - June 17, 2019
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XCEL ENERGY INC. - Qualified Pension Plans
Benefit Cost Estimates by Legal Entity
($ in Thousands)

EXHIBIT I
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2015	Service Cost	Interest Cost	Expected Return on Assets	Amortizations: Prior Service Cost	Amortizations: Net (Gain)/Loss	Net Cost	Aggregate Cost Compensation Method	Aggregate Cost 20-year Amortization Method	January 1 Prepaid (Accrued)[1]	Contribution	PBO
Xcel Energy Pension Plan (XEPP)											
Discontinued Operations[2]	-	3,382	(4,924)	-	3,994	2,452	N/A	N/A	35,842	2,543	85,512
Xcel Energy Nuclear	7,270	4,004	(5,629)	44	1,239	6,728	3,149	2,401	(3,648)	3,010	101,201
NSP - MN	24,286	39,210	(57,001)	892	44,953	52,340	31,064	23,689	401,607	29,693	998,470
NSP - WI	4,759	6,520	(9,483)	111	6,804	8,711	N/A	N/A	57,718	4,927	165,669
Xcel Services[3]	23,730	23,646	(34,416)	245	15,943	29,148	N/A	N/A	92,732	17,811	598,887
XEPC (former EMI)	-	21	(31)	-	(9)	(19)	N/A	N/A	(220)	16	528
Total XEPP	60,045	76,783	(111,684)	1,292	72,924	99,360	34,213	26,090	584,031	58,000	1,950,267
NCE Non-Bargaining Pension Plan											
Discontinued Operations - Cheyenne	-	158	(250)	-	188	96	N/A	N/A	1,499	203	4,261
PSCo	5,830	7,908	(12,511)	92	4,594	5,913	N/A	N/A	16,458	10,170	213,403
SPS	3,459	3,602	(5,701)	39	4,657	6,056	N/A	N/A	38,696	4,627	97,098
Total NCE	9,289	11,668	(18,462)	131	9,439	12,065	N/A	N/A	56,653	15,000	314,762
SPS Bargaining Plan											
SPS	7,547	16,582	(22,909)	-	10,430	11,650	N/A	N/A	114,985	7,000	403,592
Total SPS	7,547	16,582	(22,909)	-	10,430	11,650	N/A	N/A	114,985	7,000	403,592
PSCo Bargaining Plan											
Discontinued Operations - Cheyenne	-	542	(756)	-	576	362	N/A	N/A	6,991	126	13,577
PSCo	22,430	42,949	(60,079)	(3,228)	31,783	33,855	N/A	N/A	321,416	9,874	1,064,554
Total PSCo	22,430	43,491	(60,835)	(3,228)	32,359	34,217	N/A	N/A	328,407	10,000	1,078,131
Total Xcel Energy	99,311	148,524	(213,890)	(1,805)	125,152	157,292	34,213	26,090	1,084,076	90,000	3,746,752

[1] Includes $4,730 transfer from NCE to XEPP for non-de minimis asset transfer on December 31, 2014
[2] Includes NRG, BMG, Viking, Natro Gas, Utility Engineering, Seren, Quixx, Crockett and QPS
[3] Includes Eloigne

Assumptions

Discount Rate - ASC 715	
XEPP	4.09%
NCE	3.84%
SPS	4.21%
PSCo	4.15%
Discount Rate - Aggregate Normal Cost	7.25%
Salary Scale	3.75%
Expected Return on Assets	
XEPP	7.25%
NCE	7.10%
SPS	7.25%
PSCo	6.75%
Assumed Mortality Table	
Bargaining Participants	RP-2014 Blue Collar projected with generational mortality improvements using an adjusted SOA MP-2014 methodology
Non-bargaining Participants	RP-2014 White Collar, as adjusted for 2014 Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2104 methodology

See May 7, 2015 letter for additional information on data, assumptions, methods and plan provisions.
Contributions already made are allocated in accordance with the January 15, 2015 contribution directives provided by Xcel Energy on January 12, 2015.

5/7/2015
\\natct.intemal.towerswatson.com\DavWWWRoot\clients\609084\RETActuarial-2015\Documents\Projections\May Projections\Projections - 05072015 to Xcel.xlsx]Qualified

TOWERS WATSON

Annual Qualified Pension Compliance Filing for NSPM Electric State Qualified Pension Actuarial Reports

Docket Nos. E002/GR-13-868, E002/GR-15-826
2018 Qualified Pension Plan Annual Report - June 17, 2019
Attachment A - Page of 8

XCEL ENERGY INC. - Qualified Pension Plans
Benefit Cost by Legal Entity
($ in Thousands)

EXHIBIT I
Page 1 of 6

2016	Service Cost	Interest Cost	Expected Return on Assets	Amortizations: Prior Service Cost	Amortizations: Net (Gain)/Loss	Net Cost	Aggregate Cost Compensation Method	Aggregate Cost 20-year Amortization Method	January 1 Prepaid (Accrued)[1]	Contribution	PBO
Xcel Energy Pension Plan (XEPP)											
Discontinued Operations[2]	-	3,510	(4,715)	-	3,353	2,148	N/A	N/A	35,936	3,805	78,354
Xcel Energy Nuclear	6,523	4,246	(5,706)	44	559	5,666	3,150	2,608	(7,363)	4,629	94,849
NSP - MN	21,784	41,185	(55,238)	892	36,218	44,841	30,831	25,528	378,989	44,773	928,274
NSP - WI	4,417	6,816	(9,157)	111	5,392	7,579	N/A	N/A	53,939	7,436	152,545
Xcel Services[3]	23,328	26,949	(36,170)	245	12,661	27,013	N/A	N/A	85,540	29,333	605,484
XEPC (former EMI)	-	22	(30)	-	(7)	(15)	N/A	N/A	(185)	24	495
Total XEPP	56,052	82,728	(111,016)	1,292	58,176	87,232	33,981	28,136	546,856	90,000	1,860,001
NCE Non-Bargaining Pension Plan											
Discontinued Operations - Cheyenne	-	170	(232)	-	157	95	N/A	N/A	1,606	133	3,948
PSCo	5,196	8,803	(12,001)	1	3,503	5,502	N/A	N/A	19,102	6,906	205,036
SPS	3,087	3,770	(5,141)	-	3,421	5,137	N/A	N/A	34,788	2,961	87,644
Total NCE	8,283	12,743	(17,374)	1	7,081	10,734	N/A	N/A	55,496	10,000	296,628
SPS Bargaining Plan											
SPS	6,674	17,489	(22,461)	-	8,565	10,267	N/A	N/A	110,335	15,000	379,750
Total SPS	6,674	17,489	(22,461)	-	8,565	10,267	N/A	N/A	110,335	15,000	379,750
PSCo Bargaining Plan											
Discontinued Operations - Cheyenne	-	540	(680)	-	449	309	N/A	N/A	6,755	115	11,934
PSCo	20,730	46,602	(58,768)	(3,212)	23,268	28,620	N/A	N/A	297,435	9,885	1,019,820
Total PSCo	20,730	47,142	(59,448)	(3,212)	23,717	28,929	N/A	N/A	304,190	10,000	1,031,754
Total Xcel Energy	91,739	160,102	(210,299)	(1,919)	97,539	137,162	33,981	28,136	1,016,877	125,000	3,568,133

[1] Includes $4,128 transfer from NCE to XEPP for non-de minimis asset transfer on December 31, 2015
[2] Includes NRG, BMG, Viking, Natro Gas, Utility Engineering, Seren, Quixx, Crockett and QPS
[3] Includes Eloigne

Assumptions

Discount Rate - U.S. GAAP	
XEPP	4.64%
NCE	4.48%
SPS	4.73%
PSCo	4.71%
Discount Rate - Aggregate Normal Cost	7.10%
Salary Scale	4.00%
Expected Return on Assets	
XEPP	7.10%
NCE	6.90%
SPS	6.75%
PSCo	6.50%
Assumed Mortality Table	
Bargaining Participants	RP-2014 Blue Collar projected with generational mortality improvements using an adjusted SOA MP-2014 methodology
Non-bargaining Participants	RP-2014 White Collar, as adjusted for 2014 Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2014 methodology

See May 13, 2016 letter for additional information on data, assumptions, methods, and plan provisions.
Contributions already made are allocated in accordance with the January 4, 2016 contribution directives provided by Xcel Energy on January 26, 2016.

5/13/2016
http://natct.internal.towerswatson.com/clients/609084/RETActuarial-2016/Documents/Projections/May - Projections/Projections - 05132016 to Xcel.xlsx: Qualified

Willis Towers Watson

Annual Qualified Pension Compliance Filing for NSPM Electric State Qualified Pension Actuarial Reports

XCEL ENERGY INC. - Qualified Pension Plans
Benefit Cost Estimates by Legal Entity
($ in Thousands)

EXHIBIT I
Page 1 of 1

2017	Service Cost	Interest Cost	Expected Return on Assets	Amortizations: Prior Service Cost	Amortizations: Net (Gain)/Loss	Net Cost	Settlement Charge	Aggregate Cost Compensation Method	Aggregate Cost 20-year Amortization Method	January 1 Prepaid (Accrued)	Contribution	PBO
Xcel Energy Pension Plan (XEPP)												
Discontinued Operations[1]	-	3,070	(4,547)	-	3,676	2,199	4,547	N/A	N/A	37,594	4,570	77,403
Xcel Energy Nuclear	6,578	3,905	(5,777)	44	748	5,498	1,355	3,308	2,743	(8,397)	6,713	98,345
NSP - MN	21,253	36,802	(54,289)	1,016	38,861	43,643	46,816	31,554	26,166	378,945	54,028	938,163
NSP - WI	4,618	6,218	(9,180)	138	5,846	7,640	7,107	N/A	N/A	53,800	9,284	157,457
Xcel Services[2]	24,702	25,913	(38,193)	245	15,589	28,256	21,310	N/A	N/A	95,517	45,680	658,883
XEPC (former EMI)	-	22	(32)	-	(3)	(13)	1	N/A	N/A	(146)	33	537
Total XEPP	57,151	75,930	(112,018)	1,443	64,717	87,223	81,136	34,862	28,909	557,313	120,308	1,930,788
NCE Non-Bargaining Pension Plan												
Discontinued Operations - Cheyenne	-	155	(226)	-	174	103	-	N/A	N/A	1,645	133	4,117
PSCo	4,828	7,769	(11,356)	1	3,937	5,179	-	N/A	N/A	16,497	7,589	204,341
SPS	3,008	3,333	(4,871)	-	3,278	4,748	-	N/A	N/A	28,980	3,500	87,994
Total NCE	7,836	11,257	(16,453)	1	7,389	10,030	-	N/A	N/A	47,122	11,222	296,452
SPS Bargaining Plan												
SPS	6,750	16,377	(23,012)	-	9,703	9,818	-	N/A	N/A	115,195	20,002	395,607
Total SPS	6,750	16,377	(23,012)	-	9,703	9,818	-	N/A	N/A	115,195	20,002	395,607
PSCo Bargaining Plan												
Discontinued Operations - Cheyenne	-	456	(608)	-	454	302	-	N/A	N/A	6,561	111	11,290
PSCo	22,452	42,789	(57,179)	(3,212)	24,418	29,268	-	N/A	N/A	278,738	9,911	1,047,481
Total PSCo	22,452	43,245	(57,787)	(3,212)	24,872	29,570	-	N/A	N/A	285,299	10,022	1,058,771
Total Xcel Energy	94,189	146,809	(209,270)	(1,768)	106,681	136,641	81,136	34,862	28,909	1,004,929	161,554	3,681,618

[1] Includes NRG, BMG, Viking, Natro Gas, Utility Engineering, Seren, Quixx, Crockett and QPS

[2] Includes Eloigne

Assumptions

Discount Rate - U.S. GAAP	
XEPP	4.11%
NCE	3.97%
SPS	4.25%
PSCo	4.21%
Discount Rate - Aggregate Normal Cost	7.10%
Salary Scale	3.75%
Expected Return on Assets	
XEPP	7.10%
NCE	6.90%
SPS	6.75%
PSCo	6.50%
Assumed Mortality Table	
Bargaining Participants	RP-2014 Blue Collar projected with generational mortality improvements using an adjusted SOA MP-2016 methodology
Non-bargaining Participants	RP-2014 White Collar, as adjusted for 2014 Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2016 methodology

See May 17, 2017 letter for additional information on data, assumptions, methods and plan provisions.
Settlement charge is calculated using a discount rate of 3.60% and year-end asset value of $1,563M. See December 31, 2017 disclosures for additional information on data, assumptions, methods and plan provisions.
Contributions already made are allocated in accordance with the January 3, 2017 and December 28, 2017 contribution directives provided by Xcel Energy on January 23, 2017 and December 28, 2017, respectively.

Annual Qualified Pension Compliance Filing for NSPM Electric State Qualified Pension Actuarial Reports

Docket Nos. E002/GR-13-868, E002/GR-15-826
2018 Qualified Pension Plan Annual Report - June 17, 2019
Attachment A - Page of 8

XCEL ENERGY INC. - Qualified Pension Plans
Benefit Cost Estimates by Legal Entity
($ in Thousands)

EXHIBIT I
Page 1 of 1

2018	Service Cost	Interest Cost	Expected Return on Assets	Amortizations: Prior Service Cost	Amortizations: Net (Gain)/Loss	Net Cost	Estimated Settlement Charge[1]	Aggregate Cost Compensation Method	Aggregate Cost 20-year Amortization Method	January 1 Prepaid (Accrued)[1]	Contribution	PBO
Xcel Energy Pension Plan (XEPP)												
Discontinued Operations[2]	-	2,736	(4,539)	-	3,615	1,812	4,838	N/A	N/A	35,418	4,864	78,815
Xcel Energy Nuclear	6,284	3,738	(6,200)	(214)	1,129	4,737	1,314	3,574	3,042	(9,131)	6,524	107,357
NSP - MN	21,644	31,479	(51,967)	100	37,329	38,585	47,459	30,891	26,292	342,488	56,623	927,782
NSP - WI	4,777	5,442	(9,025)	(30)	5,673	6,837	7,232	N/A	N/A	48,153	9,597	156,748
Xcel Services[3]	22,649	23,771	(39,361)	(985)	17,078	23,352	22,006	N/A	N/A	87,739	42,356	690,963
XEPC (former EMI)	-	21	(34)	-	2	(11)	4	N/A	N/A	(101)	36	584
Total XEPP	55,554	67,187	(111,126)	(1,129)	64,826	75,312	82,853	34,465	29,334	504,566	120,000	1,962,249
NCE Non-Bargaining Pension Plan												
Discontinued Operations - Cheyenne	-	133	(218)	-	177	92	175	N/A	N/A	1,675	137	3,931
PSCo	4,297	6,958	(11,341)	(165)	4,403	4,152	4,465	N/A	N/A	18,891	6,830	206,586
SPS	2,656	3,045	(4,957)	(137)	3,386	3,993	3,212	N/A	N/A	27,599	3,033	91,051
Total NCE	6,953	10,136	(16,516)	(302)	7,966	8,237	7,852	N/A	N/A	48,165	10,000	301,568
SPS Bargaining Plan												
SPS	7,062	15,365	(23,370)	-	10,682	9,739	-	N/A	N/A	125,403	5,000	424,828
Total SPS	7,062	15,365	(23,370)	-	10,682	9,739	-	N/A	N/A	125,403	5,000	424,828
PSCo Bargaining Plan												
Discontinued Operations - Cheyenne	-	404	(571)	-	469	302	-	N/A	N/A	6,370	150	11,411
PSCo	24,788	40,296	(57,179)	(3,212)	26,855	31,548	-	N/A	N/A	259,393	14,850	1,127,594
Total PSCo	24,788	40,700	(57,750)	(3,212)	27,324	31,850	-	N/A	N/A	265,763	15,000	1,139,005
Total Xcel Energy	94,357	133,388	(208,762)	(4,643)	110,798	125,138	90,705	34,465	29,334	943,897	150,000	3,827,650

[1] Includes actual September 1, 2018 and December 31, 2018 settlement charges. Settlement charges are allocated in proportion to the unrecognized loss balance of each legal entity at the time of the settlement.
See September 14, 2018 and January 7, 2019 emails for assumptions and additional information.

[2] Includes NRG, BMG, Viking, Natro Gas, Utility Engineering, Seren, Quixx, Crockett and QPS

[3] Includes Eloigne

Assumptions used to determine 2018 benefit cost

Discount Rate - U.S. GAAP	
XEPP	3.60%
NCE	3.52%
SPS	3.71%
PSCo	3.68%
Discount Rate - Aggregate Normal Cost	7.10%
Salary Scale	3.75%
Expected Return on Assets	
XEPP	7.10%
NCE	6.90%
SPS	6.75%
PSCo	6.50%
Assumed Mortality Table	
Bargaining Participants	RP-2014 Blue Collar projected with generational mortality improvements using an adjusted SOA MP-2016 methodology
Non-bargaining Participants	RP-2014 White Collar, as adjusted for 2014 Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2016 methodology

See May 18, 2018 letter for additional information on data, assumptions, methods, and plan provisions.
Contributions already made are allocated in accordance with the January 2, 2018 contribution directives provided by Xcel Energy on January 3, 2018.

1/22/2019
http://natct.internal.towerswatson.com/clients/609084A/XcelRETActuarial-2019/Documents/Valuations/Disclosure/2018 Cost All Plans to Xcel_Q4 Settlement_Assets.xlsx

Willis Towers Watson

☐ **Non Public Document – Contains Trade Secret Data**
☐ **Public Document – Trade Secret Data Excised**
☒ **Public Document**

Xcel Energy
Docket No.: E002/GR-15-826
Response To: MN Department of Commerce Information Request No. 2163
Requestor: Nancy Campbell / Mark Johnson
Date Received: July 15, 2018

Request:

Topic: Qualified Pension Plan Report
Reference(s): June 17, 2019 Compliance Filing, Schedule B – Total Cost Amount

a) Please provide all supporting calculations and assumptions for the XES Pension "Total Cost Amount" for 2016 to 2018.

b) The XES Pension "Total Cost Amount" in 2017 was $27,013,000 and increased in 2018 to $49,566,000. Please explain and provide a breakout of the causes for why there was a $22.5 million increase in total pension expense for XES on a total company basis before allocations to Minnesota.

c) Please explain why the cumulative deferral at the end of 2014 is $2.359 million when the first year deferral for 2014 is $1.304 million.

Response:

a) See Attachment A page 6-8, of the June 17, 2019 compliance filing, for the 2016 to 2018 actuarial reports from Willis Towers Watson. These actuary reports provide the supporting calculations and assumptions for the XES pension total cost amounts.

b) The $22.5 million increase in pension costs from 2016 to 2017 was primarily due to a $21.3 million FAS 88 settlement charge. A settlement charge is a component of net periodic pension expense. According to accounting guidance published by the Financial Accounting Standards Board, if the level of lump-sum payouts exceeds the sum of the service cost and interest cost for a given year, settlement accounting is triggered and the Company is immediately required to recognize a portion of unrealized losses currently deferred as a regulatory asset. When Settlement Accounting is not

triggered, the unrecognized loss is amortized over a much longer period of time. Thus, Settlement Accounting is not an increase in the overall pension expenses, but rather an acceleration of the timing by which an amount of the pension expense will be recognized.

c) The Company respectfully notes that this request misstates the facts in referring to the 2014 deferral as the "first year deferral." The XES capping deferral began in 2013 per the rate order. The amount deferred in 2013 was $1,054,357, which, together with the 2014 deferral equals the $2.359 million cumulative deferral noted in the question. The 2013 deferral amount was reported in the 2013 to 2017 compliance filings but was removed in 2018 as the Company felt only showing five years of history was appropriate.

Preparer: Levi Glines
Title: Consultant
Department: Payroll and Benefits Accounting
Telephone: 612-337-2372
Date: July 29, 2019

☐ **Non Public Document – Contains Trade Secret Data**
☐ **Public Document – Trade Secret Data Excised**
☒ **Public Document**

Xcel Energy
Docket No.: E002/GR-15-826
Response To: MN Department of Commerce Information Request No. 2164
Requestor: Nancy Campbell / Mark Johnson
Date Received: July 15, 2018

Request:

Topic: Qualified Pension Plan Report
Reference(s): June 17, 2019 Compliance Filing, Schedule C- NSPM ACM Qualified Pension

a) Please explain why the cumulative deferral at the end of 2014 is $13.704 million when the first year deferral for 2014 is $6.39 million.

b) For the Total Cost Amounts for Minnesota and Nuclear in 2014 to 2018 (in red boxes) please provide all assumptions and calculations on a live spreadsheet including the comparable information included in the rate case.

c) Please explain why the NSPM deferral was so high for 2014 of ($6,390,596) and 2015 of ($4,504,585) and why this deferral is reasonable.

Response:

a) The Company respectfully notes that this request misstates the facts in referring to the 2014 deferral as the "first year deferral.: The ACM 10-20 deferral started in 2013 per the rate order. The Company deferred $7,313,120 in 2013, which, together with the 2014 deferral equals the $13.704 million cumulative deferral noted in the question. The 2013 deferral amount was included in the 2013 to 2017 compliance filings but it was removed in 2018 as the Company felt only showing five years of history was appropriate.

b) See Attachment A, pages 4-8, of the June 17, 2019 compliance filing for the actuarial reports from Willis Towers Watson that support the Minnesota and Nuclear amounts from 2014 to 2018. These reports also include the assumptions used to calculate the amounts and include the information in

the last rate case. These are the only reports provided by our actuary and we do not receive detailed support for these calculations that can be provided in a spreadsheet.

c) The Company objects to this request on the grounds that it is argumentative and mischaracterizes the facts present. This deferral is the result of smoothing the amortization period for the NSPM plan from 10-20 years. The deferrals in 2014 and 2015 were higher than other years because at that time the asset values under the 20-year method were higher than the 10-year method causing a greater deferral. Since that time the asset values under the 20-year method have been reduced relative to the 10-year method. The lower asset value under the 20-year method begins to offset the benefits of the longer amortization period. Therefore, the forecasted aggregate cost under the 20-year method does not decrease as fast as the 10-year method. Eventually, the 20-year method will result in a larger cost than under the 10-year method winding down the cumulative deferral balance.

This deferral is reasonable because it was one of two mitigation measures approved by the Commission to smooth out pension expense.

Preparer: Levi Glines
Title: Consultant
Department: Payroll and Benefits Accounting
Telephone: 612-337-2372
Date: July 29, 2019

Northern Sates Power Company Minnesota
Prepaid Pension Asset

Line No		2015	2016	2017	2018	2019	2020	2021	2022
1									
2	**Beginning Asset (Liability) Balance**	115,599,406	114,121,017	129,569,692	154,828,347	183,510,347	195,448,347	204,780,347	207,300,347
3	Recognized Expense	(34,213,000)	(33,981,000)	(34,862,000)	(34,465,000)	(34,783,000)	(34,241,000)	(32,051,000)	(29,943,000)
4	Cash Contributions	32,734,611	49,429,675	60,740,655	63,147,000	46,721,000	43,573,000	34,571,000	24,208,000
5	Other			(620,000)					
6	**Ending Asset (Liability) Balance**	114,121,017	129,569,692	154,828,347	183,510,347	195,448,347	204,780,347	207,300,347	201,565,347
7									
8									

		2020 Test Year												
9														
10		**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**TOTAL**
11	**Beginning Asset (Liability) Balance**	195,448,347	236,167,930	233,314,514	230,461,097	227,607,680	224,754,264	221,900,847	219,047,430	216,194,014	213,340,597	210,487,180	207,633,764	195,448,347
12	Recognized Expense	(2,853,417)	(2,853,417)	(2,853,417)	(2,853,417)	(2,853,417)	(2,853,417)	(2,853,417)	(2,853,417)	(2,853,417)	(2,853,417)	(2,853,417)	(2,853,417)	(34,241,000)
13	Cash Contributions	43,573,000												43,573,000
14	**Ending Asset (Liability) Balance**	236,167,930	233,314,514	230,461,097	227,607,680	224,754,264	221,900,847	219,047,430	216,194,014	213,340,597	210,487,180	207,633,764	204,780,347	204,780,347
15														
16	**Beginning Asset (Liability) Balance**	195,448,347												204,780,347
17	ADIT Percent	-28.13%												-28.13%
18	ADIT Amount	(54,988,220)												(57,613,722)
19	Net Prepaid Pension Asset	140,460,127												147,166,625
20	% to MN Electric	80.270125493%												80.27%
21	**Actual Total**	112,747,520												118,130,835
22												**2020 Actual BOY & EOY Average**		**115,439,177**

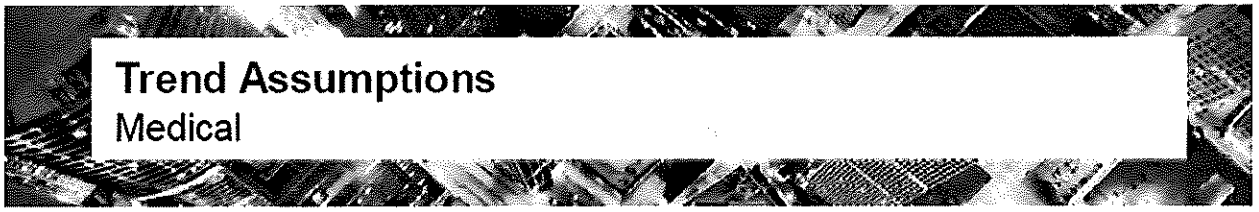
		2021 Test Year												
24														
25		**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**TOTAL**
26	**Beginning Asset (Liability) Balance**	204,780,347	236,680,430	234,009,514	231,338,597	228,667,680	225,996,764	223,325,847	220,654,930	217,984,014	215,313,097	212,642,180	209,971,264	204,780,347
27	Recognized Expense	(2,670,917)	(2,670,917)	(2,670,917)	(2,670,917)	(2,670,917)	(2,670,917)	(2,670,917)	(2,670,917)	(2,670,917)	(2,670,917)	(2,670,917)	(2,670,917)	(32,051,000)
28	Cash Contributions	34,571,000												34,571,000
29	**Ending Asset (Liability) Balance**	236,680,430	234,009,514	231,338,597	228,667,680	225,996,764	223,325,847	220,654,930	217,984,014	215,313,097	212,642,180	209,971,264	207,300,347	207,300,347
30														
31	**Beginning Asset (Liability) Balance**	204,780,347												207,300,347
32	ADIT Percent	-28.13%												-28.13%
33	ADIT Amount	(57,613,722)												(58,322,709)
34	Net Prepaid Pension Asset	147,166,625												148,977,638
35	% to MN Electric	80.27%												80.27%
36	**Actual Total**	118,130,835												119,584,537
37												**2021 Actual BOY & EOY Average**		**118,857,686**

		2022 Test Year												
39														
40		**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**TOTAL**
41	**Beginning Asset (Liability) Balance**	207,300,347	229,013,097	226,517,847	224,022,597	221,527,347	219,032,097	216,536,847	214,041,597	211,546,347	209,051,097	206,555,847	204,060,597	207,300,347
42	Recognized Expense	(2,495,250)	(2,495,250)	(2,495,250)	(2,495,250)	(2,495,250)	(2,495,250)	(2,495,250)	(2,495,250)	(2,495,250)	(2,495,250)	(2,495,250)	(2,495,250)	(29,943,000)
43	Cash Contributions	24,208,000												24,208,000
44	**Ending Asset (Liability) Balance**	229,013,097	226,517,847	224,022,597	221,527,347	219,032,097	216,536,847	214,041,597	211,546,347	209,051,097	206,555,847	204,060,597	201,565,347	201,565,347
45														
46	**Beginning Asset (Liability) Balance**	207,300,347												201,565,347
47	ADIT Percent	-28.13%												-28.13%
48	ADIT Amount	(58,322,709)												(56,709,201)
49	Net Prepaid Pension Asset	148,977,638												144,856,146
50	% to MN Electric	80.27%												80.27%
51	**Actual Total**	119,584,537												116,276,210
52												**2022 Actual BOY & EOY Average**		**117,930,374**

2020 Test Year Active Health Care O&M Costs by Category

Allocation Percentages		
Company	MN Electric O&M	MN Electric O&M State of MN
NSPM	55.37%	86.61%
Nuclear	89.21%	86.61%
XES	27.29%	86.61%

	NSPM			Nuclear			XES			Totals	
	Total Cost	MN Electric O&M	MN Electric O&M State of MN	Total Cost	MN Electric O&M	MN Electric O&M State of MN	Total Cost	MN Electric O&M	MN Electric O&M State of MN	MN Electric O&M	MN Electric O&M State of MN
Misc Benefit Programs & Costs											
Adoption Assistance	2,577	1,427	1,236	972	867	751	4,103	1,120	970	3,414	2,957
HR Service Center	35,829	19,838	17,181	13,509	12,051	10,438	507,242	138,441	119,902	170,330	147,521
Communications, Printing & Postage	64,472	35,696	30,916	24,308	21,685	18,781	102,626	28,010	24,259	85,391	73,956
Ergonomists for field workers	12,000	6,644	5,754	0	0	0	0	0	0	6,644	5,754
Return to Work (STD/LTD)	0	0	0	0	0	0	130,000	35,481	30,729	35,481	30,729
Financial Planning	0	0	0	0	0	0	25,247	6,891	5,968	6,891	5,968
Cobra Admin Fees	18,597	10,297	8,918	7,011	6,255	5,417	29,602	8,079	6,997	24,630	21,332
H&W Audit Fees	16,413	9,087	7,870	6,188	5,520	4,781	26,126	7,131	6,176	21,738	18,827
Flex Spending - Admin Fees (HCRA, DCRA, TRA)	7,096	3,929	3,403	2,675	2,386	2,067	11,295	3,083	2,670	9,398	8,139
Bus Pass Subsidy	100,000	55,367	47,953	0	0	0	575,000	156,934	135,919	212,302	183,871
Employee Assistance Program	64,170	35,529	30,771	21,390	19,082	16,527	97,460	26,600	23,038	81,211	70,336
Tuition Reimbursement Program	272,454	150,850	130,649	102,723	91,640	79,368	433,692	118,367	102,516	360,857	312,533
STD and LTD admin fees	126,762	70,185	60,786	50,307	44,879	38,869	324,864	88,665	76,791	203,729	176,447
Wellness Clinics / Programs	162,628	90,043	77,985	61,315	54,699	47,374	258,872	70,654	61,192	215,396	186,551
WW H&W admin fees payable from VEBA trust	177,002	98,001	84,877	66,735	59,535	51,562	281,752	76,898	66,601	234,434	203,040
WW H&W admin fees not payable from VEBA trust	230,209	127,460	110,392	86,795	77,430	67,061	366,448	100,014	86,621	304,905	264,074
Total Misc Benefit Programs & Costs	**1,290,209**	**714,352**	**618,691**	**443,928**	**396,030**	**342,996**	**3,174,329**	**866,367**	**750,349**	**1,976,750**	**1,712,036**
Active Health Care											
VEBA Paid Claims MEDICAL	28,796,765	15,943,954	13,808,845	11,295,951	10,077,166	8,727,699	37,874,783	10,337,138	8,952,857	36,358,258	31,489,400
VEBA Paid Claims PHARMACY	6,879,175	3,808,805	3,298,755	1,525,138	1,360,582	1,178,382	9,254,710	2,525,881	2,187,632	7,695,268	6,664,769
VEBA Paid Claims DENTAL	1,888,218	1,045,453	905,453	797,267	711,245	616,000	2,771,945	756,545	655,233	2,513,243	2,176,686
VEBA Paid Claims VISION	269,326	149,118	129,149	109,812	97,964	84,845	385,507	105,216	91,126	352,298	305,121
HSA Funding	31,611	17,502	15,158	55,537	49,545	42,910	218,295	59,579	51,601	126,626	109,669
Employee Withholdings	(3,189,639)	(1,766,013)	(1,529,520)	(1,466,847)	(1,308,580)	(1,133,344)	(5,992,337)	(1,635,484)	(1,416,471)	(4,710,078)	(4,079,335)
Pharmacy Rebates	(1,708,585)	(945,995)	(819,314)	(604,212)	(539,020)	(466,838)	(2,638,980)	(720,255)	(623,803)	(2,205,270)	(1,909,955)
Administration Fees	1,134,313	628,037	543,934	419,938	374,628	324,461	1,822,218	497,337	430,737	1,500,002	1,299,132
Opt-out Funding, Affordable Care Act	5,000	2,768	2,398	0	0	0	60,000	16,376	14,183	19,144	16,580
Total Active Health Care	**34,106,184**	**18,883,629**	**16,354,858**	**12,132,584**	**10,823,530**	**9,374,114**	**43,756,141**	**11,942,333**	**10,343,094**	**41,649,492**	**36,072,067**
Life, LTD & Business Travel Ins											
Life Insurance	2,714,132	1,502,738	1,301,501	1,019,140	909,179	787,428	2,866,463	782,342	677,576	3,194,259	2,766,505
Life insurance withholdings	(2,150,108)	(1,190,454)	(1,031,036)	(857,100)	(764,623)	(662,229)	(2,337,942)	(638,093)	(552,644)	(2,593,169)	(2,245,909)
Business Travel Insurance	18,792	10,405	9,011	7,085	6,321	5,474	29,913	8,164	7,071	24,889	21,556
LTD insurance premiums	2,046,784	1,133,246	981,490	153,294	136,754	118,441	2,205,524	601,952	521,343	1,871,953	1,621,273
Total Life, LTD & Business Travel Ins	**2,629,600**	**1,455,935**	**1,260,966**	**322,419**	**287,631**	**249,114**	**2,763,958**	**754,365**	**653,346**	**2,497,932**	**2,163,425**
Total	**38,025,993**	**21,053,916**	**18,234,515**	**12,898,931**	**11,507,191**	**9,966,224**	**49,694,428**	**13,563,065**	**11,746,789**	**46,124,173**	**39,947,528**
Affiliate Charges		279	242							278	241
Grand Total	**38,025,993**	**21,054,195**	**18,234,757**	**12,898,931**	**11,507,191**	**9,966,224**	**49,694,428**	**13,563,065**	**11,746,789**	**46,124,451**	**39,947,769**



Trend Assumptions
Medical

Medical Pharmacy Trend

Medical underwriting trend encompasses several components. It is not solely the price inflation for a given medical service unit. The components found in trend include the following:

- **Unit price inflation:** Annual price inflation for a fixed "market basket" of services
- **Technology and intensity:** The additional cost of newer, more expensive technology and services (advanced imaging, advancements in prescription drugs, etc).
- **Utilization:** Greater use of medical services over time. Driven by an aging population and the availability of greater medical technology.
- **Cost-shifting:** Typically occurs as a result of costs being held down (fixed fee schedules for government programs such as Medicare and Medicaid) which are passed on to private payers, notably employer-sponsored medical plans.
- **Plan design leveraging (high deductible plans):** When plans with high member cost sharing (such as deductibles >$1,000) don't periodically increase their fixed cost elements (deductibles, out-of-pocket maximums), they tend to experience a "leveraged" (higher) trend due to medical trend pushing more people above deductibles and out-of-pocket maximums each year.
- **Impact of large claims:** The incidence of large claims in a population is another factor affecting observed trend.

The factors above in large part explain why observed medical trends have exceeded historical CPI increases by a significant margin. Currently, medical trends are still roughly twice the rate of CPI.

Survey data shows that medical cost is expected to rise between 5.5% and 7.5% in 2019

1. Pricewaterhouse Coopers medical cost trend: Behind the numbers 2019

- Expected medical and Rx cost increase 6%

https://www.pwc.com/us/en/health-industries/health-research-institute/assets/pdf/hri-behind-the-numbers-2019.pdf

2. Aon Carrier Trend Report

- Expected medical cost increase 7%
- Expected medical and pharmacy cost increase 7.5%

https://healthresources.aon.com/reports-2/2019-carrier-trend-survey

3. Willis Towers Watson Best Practices in Health Care Employer Survey

- Expected medical and pharmacy cost increase 5.5%

https://www.willistowerswatson.com/-/media/WTW/PDF/Insights/2018/12/willis-towers-watson-23rd-annual-best-practices-in-health-care-employer-survey-full-report.pdf

Summary

The total cost trend is based on expected cost increases for medical, specialty pharmacy and non-specialty pharmacy as they have different expected cost increases:

- Based on our analysis we expect medical cost trend to be 5.5% and pharmacy trend in total to be 10%,
  - 10% pharmacy trend ismade up of a Specialty pharmacy trend of 16% and a Non-specialty pharmacy trend of 3%
- Each pricing group has a different split of the total cost between medical and pharmacy cost, but we expect the total trend to fall between 5.5% and 7.5% as documented in the trend surveys outlined above