



May 13, 2016

Mr. Richard R. Schrubbe  
Director, Corporate and Benefits Accounting  
Xcel Energy Inc.  
414 Nicollet Mall  
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## 2016 VALUATION RESULTS AND 2017-2021 CONTRIBUTION AND COST ESTIMATES

Dear Rick:

This letter summarizes the results of the 2016 plan year IRS funding valuations for Xcel Energy's qualified pension plans. Also included are costs for the Long-Term Disability (LTD) and Workers' Compensation plans that have been updated from the February 17, 2016, results to reflect 2016 census data and the final 2016 discount rate developed using cash flows based on the 2016 census data. Costs for the PSCo Bargaining Plan have been updated to reflect the negotiated Retirement Spending Account contribution increase and Nonqualified Plan settlement charges have been updated to reflect known 2016 and expected 2017 lump sum payments. Costs for all other plans are unchanged from February 17, 2016.

Attached to this letter are updated PBGC variable premium and IRS funded status forecasts followed by the previously provided benefit cost exhibits with the updates mentioned above. Also included is an exhibit that provides plan specific details of the cost reconciliations for the qualified pension plans.

### PENSION PLAN FUNDING

#### Summary of Key Results

The key results for each plan are provided in the following table:

(\$ in Millions)	Xcel Energy Pension Plan	NCE Nonbargaining Plan	SPS Bargaining Plan	PSCo Bargaining Plan
Effective Interest Rate	5.94%	5.81%	6.07%	6.04%
<b>Contributions</b>				
Minimum Required Contribution as of January 1, 2016, for the 2016 Plan Year Before Funding Balance	\$89.6	\$12.8	\$4.6	\$17.6
Minimum Required Contribution as of January 1, 2016, for the 2016 Plan Year After Funding Balance	\$0.0	\$0.0	\$0.0	\$0.0
<b>PBGC Premiums</b>				
PBGC Variable Premiums	\$3.3	\$0.9	\$0.4	\$3.4

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### Funded Status

A plan's funded status is measured by comparing the present value of plan benefits to the value of plan assets. The following table summarizes the 2016 plan year funded percentages:

Minimum Funding and Benefit Restrictions - 2016 (\$ in Thousands)	Xcel Energy Pension Plan	NCE Nonbargaining Plan	SPS Bargaining Plan	PSCo Bargaining Plan
1. Effective Interest Rate	5.94%	5.81%	6.07%	6.04%
2. Target Liability as of January 1	\$1,536,975	\$254,236	\$295,577	\$862,991
3. Actuarial Value of Assets as of January 1	\$1,622,100	\$260,638	\$338,291	\$933,741
4. Funding Balance as of January 1	\$123,850	\$16,239	\$39,695	\$96,068
5. Funded Percentage before funding balance reduction from plan assets [(3) / (2)]	105.5%	102.5%	114.4%	108.1%
6. Funded Percentage with funding balance reduction from plan assets (FTAP) [(3) - (4)] / (2)]	97.4%	96.1%	101.0%	97.0%

### Benefit Restrictions

Based on the 2016 funding results, no benefit restrictions will apply for the 2016 plan year since the preliminary AFTAP for each plan exceeds 80.0%. We will provide our certification of the funded status for the plans prior to the September 30, 2016 deadline.

### Funding Balances

The following summarizes the funding balance activity for the Xcel Energy pension plans.

(\$ in Millions)	Xcel Energy Pension Plan	NCE Non-bargaining Plan	SPS Bargaining Plan	PSCo Bargaining Plan
Funding Balances at January 1, 2015	\$ 117.3	\$ 14.9	\$ 24.9	\$ 86.8
Funding Balances used during 2015	(51.0)	(7.9)	0.0	0.0
Excess contributions elected to be added to funding balance	57.9	9.5	15.0	10.0
Interest adjustments	(0.5)	(0.1)	(0.2)	(0.7)
Amount of funding balance forfeited for AFTAP purposes	0.0	0.0	0.0	0.0
Funding balance transferred as a result of the non-deminimis asset transfer	0.2	(0.2)	0.0	0.0
Funding Balances at January 1, 2016	\$ 123.9	\$ 16.2	\$ 39.7	\$ 96.1



### PBGC Premiums

The PBGC variable premium amounts for the Xcel Energy Pension Plan and the SPS Bargaining Plan are based on the Alternative Premium Funding Target, determined without regard to 25-year average interest rate corridors. The variable premium amounts for the NCE Nonbargaining and PSCo Bargaining Plans are based on the Standard Premium Funding Target. However, the NCE Nonbargaining Plan is above the per-participant cap and the variable rate premium is limited to \$500 per participant. All other plans remain below the per-participant cap and variable rate premiums are equal to 3.0% of the unfunded vested liability.

The Xcel Energy Pension Plan, NCE Nonbargaining Plan, SPS Bargaining Plan, and PSCo Bargaining Plan can eliminate variable premium with September 15, 2016 contributions of \$114.0 million, \$34.4 million, \$15.0 million and \$117.6 million, respectively.

### ERISA 4010 Funded Status

An ERISA 4010 filing is required if any 4010 Funding Target Attainment Percentage (4010 FTAP) for a plan within the controlled group of the plan sponsor is less than 80%. For this purpose, the target liability is calculated using interest rates that ignore the MAP-21/HATFA/BBA interest rate corridors and plan assets are reduced by the amount of the prefunding balance and funding standard carryover balance. This determination is done as of the valuation date for the plan year ending within the information year ending December 31, 2016 (i.e., the 2016 plan year). The valuation date for the 2016 plan year is January 1, 2016. The January 1, 2016 4010 FTAPs for all Xcel Energy pension plans are as follows:

4010 FTAP – 2016 (\$ in Thousands)	Xcel Energy Pension Plan	NCE Nonbargaining Plan	SPS Bargaining Plan	PSCo Bargaining Plan
1. Effective Interest Rate	4.11%	3.88%	4.30%	4.25%
2. Target Liability as of January 1	\$1,786,466	\$289,163	\$358,608	\$1,039,267
3. Actuarial Value of Assets as of January 1	\$1,622,100	\$260,638	\$338,291	\$933,741
4. Funding Balance as of January 1	\$123,850	\$16,239	\$39,695	\$96,068
5. Funded Percentage with funding balance reduction from plan assets (4010 FTAP) [((3) – (4)) / (2)]	83.9%	84.5%	83.3%	80.6%

Based on the results above, no filing will be required for the 2016 information year. However, the forecasted 2017 4010 FTAPs for all plans are below 80% and a 4010 filing may be required for the 2017 information year. If a 4010 filing is required for the 2017 information year, the submission deadline will be April 15, 2018. We will continue to monitor interest rates and asset returns throughout the year and can address contribution/funding balance forfeiture strategies to avoid a filing as part of the contribution planning process in the fall.

### LONG-TERM DISABILITY AND WORKERS' COMPENSATION RESULTS

The combined 2016 Workers' Compensation (WC) and Long-Term Disability (LTD) cost/(income) is \$0.3 million, a \$0.1 million decrease from our February cost estimate of \$0.4 million for the plans combined. Updating the BOND:Link model results to use the cash flows based on the 2016 census data increases the discount rate from an estimated rate of 4.39% to 4.46%.

The decrease in LTD cost from \$0.0 million in the February 17 cost estimates to the final 2016 result of (\$0.7) million is due to lower projected December 31, 2016 liabilities, which is the result of fewer participants receiving payments from the plan in 2016 than expected.



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The increase in WC cost from \$0.4 million in the February 17 cost estimates to the final 2016 result of \$1.1 million is due to higher projected December 31, 2016 liabilities, which is the result of increases in small claims from the 1988-1991 experience years that are below reinsurance levels.

## RESULTS EXHIBITS

Pension contribution and PBGC variable premium forecasts are attached to the end of this letter. The planned funding schedule provided by Xcel Energy is assumed to sufficiently cover all minimum required contributions. Contribution and PBGC premium forecasts include 5% liability increases starting in 2017 to estimate the impact of potential mortality updates. Benefit cost forecasts for all plans except PSCo Bargaining, Nonqualified Plan and LTD and Workers' Compensation have not been updated from the forecasts provided on February 17, 2016. Estimates of 2017-2021 benefit costs summarized by legal entity are also presented in the attached exhibits as follows:

- Exhibit I: Benefit Cost Estimates – Qualified Pension Plans
- Exhibit II: Benefit Cost Estimates – Nonqualified Pension Plans
- Exhibit III: Benefit Cost Estimates – Retiree Medical and Life Insurance Plan
- Exhibit IV: Liabilities – LTD and Workers' Compensation
- Exhibit V: Claims and Expenses – LTD and Workers' Compensation
- Exhibit VI: Benefit Cost Estimates – LTD and Workers' Compensation
- Exhibit VII: Benefit Cost Reconciliation Details – Qualified Pension Plans



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### ***Plans Valued***

The attached exhibits include estimates for the following employee benefit plans maintained by Xcel Energy Inc. (Xcel Energy):

- Xcel Energy Pension Plan
- Xcel Energy Inc. Nonbargaining Pension Plan (South) [NCE Nonbargaining Plan]
- New Century Energies Inc. Retirement Plan for SPS Bargaining Unit Employees and Former Nonbargaining Unit Employees [SPS Bargaining Plan]
- New Century Energies Inc. Retirement Plan for PSCo Bargaining Unit Employees and Former Nonbargaining Unit Employees [PSCo Bargaining Plan]
- Xcel Energy Nonqualified Defined Benefit Plan
- Xcel Energy SERP
- SPS SERP
- Employment Agreements
- Fort St. Vrain Nuclear Operations Personnel Plan
- NMC SERP Part A
- Xcel Energy Retiree Medical and Life Insurance Plan (including Executive Life Insurance)
- Xcel Energy Workers' Compensation
- Xcel Energy Long-Term Disability (LTD) Income



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## FORECAST RESULTS

Forecast results are based on the information summarized below and do not reflect potential de-risking activities such as a terminated vested lump sum window or a small benefit retiree annuity purchase.

The following provides a reconciliation of actual 2016 costs to 2017 estimated costs, prior to regulatory effects:

### *Reconciliation of Benefit Costs (prior to regulatory effects)*

(\$ in Millions)	Qualified Pension <sup>1</sup>	Nonqualified Pension <sup>2,3</sup>	Retiree Medical	Workers' Compensation	Long Term Disability	Total
Final 2016	\$120.6	\$7.9	(\$3.8)	\$1.1	(\$0.7)	\$125.1
Historical asset performance	5.4	0.0	0.0	0.0	0.0	5.4
Expected liability, asset, and loss amortization changes	(11.3)	(1.7)	(0.6)	(0.6)	1.3	(12.9)
Initial 2017 Estimate	\$114.7	\$6.2	(\$4.4)	\$0.5	\$0.6	\$117.6

<sup>1</sup> Qualified Pension Plan costs reflect the assumption that NSP-MN and Xcel Energy Nuclear costs are determined under the Aggregate Cost Compensation Method. No additional regulatory deferrals have been reflected. See Exhibit VII for additional details.

<sup>2</sup> 2016 Includes estimated settlement charge of \$1.9 million related to Mr. Connelly's and other participants expected payments.

<sup>3</sup> 2017 Includes estimated settlement charge of \$1.4 million assuming \$3.0 million of lump sum payments are made in 2017 (\$2.1 million of known and \$0.9 million of expected).

## DATA, ASSUMPTIONS, METHODS AND PLAN PROVISIONS

The 2016 benefit costs, 2016 funding results and estimated 2017-2021 costs reflect the following data, assumptions, methods and plan provisions:

### *Data*

The 2016 benefit cost results and results for 2017-2021 are based on participant data as of January 1, 2015, projected to the end of the year based on status, compensation and benefit changes through November 30, 2015, and known retirements for December 2015. Actual new entrants through November 30, 2015, and expected new entrants through December 31, 2015, are included. See our February 17, 2016, letter for more details. The 2016 pension funding, Workers' Compensation and Long-Term Disability results are based on data as of January 1, 2016.



### Economic Assumptions

The key assumptions used to determine the actual 2016 and estimated 2017 - 2021 benefit cost results are provided below. The assumptions used to calculate the cost under the aggregate cost method are the same as used to prepare the ASC 715 results, except as noted. Actual asset returns net of administrative expenses are assumed to equal the expected return on assets assumptions throughout the forecast period.

May 13, 2016 results	
Benefit Cost	
Discount Rate – ASC 715:	
■ Xcel Energy Pension Plan	4.64%
■ NCE Nonbargaining Pension Plan	4.48%
■ SPS Bargaining Pension Plan	4.73%
■ PSCo Bargaining Pension Plan	4.71%
■ Nonqualified Pension Plan	4.34%
■ Retiree Medical and Life Insurance Plan	4.65%
■ Workers' Compensation and LTD	4.46%
Expected Return on Assets Assumption – Pension:	
■ Xcel Energy Pension Plan	7.10%
■ NCE Nonbargaining Pension Plan	6.90%
■ SPS Bargaining Pension Plan	6.75%
■ PSCo Bargaining Pension Plan	6.50%
■ Weighted Average Expected Return	6.87%
Expected Return on Assets Assumption – VEBA (Bargaining/Nonbargaining)	5.80%
Discount Rate – Aggregate Cost	7.10%
Salary Scale <sup>1</sup>	4.00%
Initial Medical Trend	6.00%
Ultimate Medical Trend	4.50%
Year Ultimate Trend is Reached	2019

<sup>1</sup> Weighted average of age-graded table (nonbargaining) and service-graded table (bargaining)

- The interest rate for converting lump sums to annuities and annuities to lump sums was updated from 4.00% to 4.25% in all years. The pre-PPA lump sum conversion interest rate was updated from 3.00% to 3.25%.
- The interest crediting rate for the 5% cash balance formula was updated from 3.00% to 3.25%. The interest crediting rate for the Retirement Spending Account was updated from 1.25% to 1.50%.
- The HRA trend assumption is 2.0%.

We have assumed Xcel Energy continues to use the 24-month average of the three-segment interest rates as of September in the year prior to the valuation date. The underlying three-segment rates from April 2016 were assumed to remain constant throughout the forecast period. This methodology produces the following effective interest rates:

	Year					
	2016	2017	2018	2019	2020	2021
Xcel Energy Pension Plan	5.94%	5.75%	5.56%	5.39%	5.24%	4.83%
NCE Nonbargaining Plan	5.81%	5.63%	5.44%	5.27%	5.12%	4.71%
SPS Bargaining Plan	6.07%	5.88%	5.69%	5.52%	5.37%	4.96%
PSCo Bargaining Plan	6.04%	5.85%	5.66%	5.49%	5.34%	4.93%

### Demographic Assumptions

- Active participant counts are assumed to remain level throughout the forecast period.
- When not prescribed by the IRS, the mortality assumption is the RP-2014 tables (blue collar for bargaining participants and white collar for nonbargaining participants, as adjusted for 2014 Xcel Energy mortality study) projected with generational mortality improvements using an adjusted SOA MP-2014 methodology.
- When not prescribed by the IRS, the mortality assumption for converting lump sums to annuities or annuities to lump is a combined annuitant and non-annuitant RP-2014 table projected with scale MP-2014 to the commencement year plus an additional 10 years.
- Liabilities that are required to use IRS prescribed mortality are based on the tables applicable for 2016 with projections to the valuation year and increased by 5% starting in 2017 to estimate the impact of potential mortality updates.
- Demographic assumptions have been updated based on a review of experience from 2010 through 2014 and future expectations, as provided in our November 19, 2015, letter and approved by the Pension Trust Administration Committee on December 16, 2015.

### Pension Contributions

The forecasts reflect actual 2016 contributions of \$125 million made on January 4, 2016, and planned contributions provided by Xcel Energy for 2017 through 2020. Contributions for 2021 are assumed to be equal to 2020. The table below summarizes the amounts assigned to each plan over the forecast period:

	Year					
	2016	2017	2018	2019	2020	2021 <sup>1</sup>
Xcel Energy Pension Plan	\$ 90.0	\$ 90.0	\$ 90.0	\$ 80.0	\$ 46.0	\$ 46.0
NCE Nonbargaining Plan	10.0	10.0	12.0	17.0	17.0	17.0
SPS Bargaining Plan	15.0	15.0	8.0	8.0	7.0	7.0
PSCo Bargaining Plan	10.0	10.0	15.0	20.0	55.0	55.0
<b>Total Contribution</b>	<b>\$ 125.0</b>	<b>\$ 125.0</b>	<b>\$ 125.0</b>	<b>\$ 125.0</b>	<b>\$ 125.0</b>	<b>\$ 125.0</b>

<sup>1</sup> Current projections indicate that an additional \$87 million in Xcel Energy Pension Plan contributions may be required in 2021 to meet the minimum requirements.

- Contributions in 2017 and beyond are assumed to be paid on January 15 and assigned to the prior plan year.



### ***PBGC Premiums***

- The PBGC Variable Premium estimates reflect the increase in premium rates under The Bipartisan Budget Act of 2015, actual January 1, 2016, asset values, demographic experience, and 5% liability increases starting in 2017 to estimate the impact of potential mortality updates.
- The estimates also assume the Xcel Energy Pension Plan and the SPS Bargaining Plan continue to use the alternative interest rate method, and the NCE Nonbargaining Plan and the PSCo Bargaining Plan continue to use the standard interest rate method.
- The PSCo Bargaining Plan is expected to be at the per-participant variable rate premium cap starting in 2017 and extending through the remainder of the forecast period. The NCE Nonbargaining Plan is expected to be at the per-participant variable rate premium cap starting in 2016 and extending through 2020.

### ***Retiree Medical and Life Insurance Plan – Effects of Health Care Reform***

- Our estimates continue to assume the same effects as noted in our 2016 ASC 715 cost report dated April 27, 2016.

### ***Plan Changes***

- Effective January 1, 2016, the annual credits contributed to the Retirement Spending Account increased from \$1,400 to \$1,700 for service after January 1, 2016 for the PSCo Bargaining Plan.

### **ACTUARIAL CERTIFICATION**

As requested by Xcel Energy Inc., this report provides results of the actuarial valuations of the Xcel Energy Inc. employee benefit plans indicated above. This report should not be used for other purposes, distributed to others outside Xcel Energy Inc. or relied upon by any other person without prior written consent from Willis Towers Watson. Except where we expressly agree in writing, this report should not be disclosed or provided to any third party, other than as provided below. In the absence of such consent and an express assumption of responsibility, no responsibility whatsoever is accepted by us for any consequences arising from any third party relying on this report or any advice relating to its contents.

Xcel Energy Inc. may make a copy of this report available to auditors or appropriate governmental agencies of the plan or the plan sponsor, but we make no representation as to the suitability of this report for any purpose other than that for which it was originally provided and accept no responsibility or liability to the auditors in this regard. Xcel Energy Inc. should draw the provisions of this paragraph to the attention of the auditors or appropriate governmental agencies when providing this report to them.

In preparing this valuation, we have relied upon information and data provided to us by Xcel Energy Inc. and other persons or organizations designated by Xcel Energy Inc. An audit of the financial and participant data provided was not performed, but we have checked the data for reasonableness as appropriate based on the purpose of the valuation. The results presented in this report are directly dependent upon the accuracy and completeness of the underlying data and information. Any material inaccuracy in the data, assets, plan provisions or other information provided to us may have produced results that are not suitable for the purposes of this report and such inaccuracies, as corrected by Xcel Energy Inc., may produce materially different results that could require that a revised report be issued.

This valuation reflects our understanding of the relevant provisions of the Pension Protection Act of 2006. The IRS has yet to issue final guidance with respect to certain aspects of this law. It is possible that such guidance may conflict with our understanding of the law and could therefore affect results shown in this report.



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The results summarized in this report involve actuarial calculations that require assumptions about future events. We believe the assumptions and methods used in this report are reasonable and appropriate for the purposes for which they have been used. In our opinion, all methods, assumptions and calculations are in accordance with requirements of the Internal Revenue Code and ERISA, and the applicable financial accounting standards, including ASC 712 and 715 and the procedures followed and presentation of results are in conformity with generally accepted actuarial principles and practices.

Assumptions for determining benefit cost results were selected by Xcel Energy Inc. Xcel Energy Inc. uses the standards set out in ASC 715 to calculate pension cost for each plan in total; pension cost for the subsidiaries is calculated based on plan assets allocated to each subsidiary in proportion to the PBO for each subsidiary. Beginning in fiscal 2010, Discontinued Operations is allocated assets in proportion to its PBO, similar to nondiscontinued operations. The gain/(loss) amortization is allocated to each subsidiary in proportion to the gain/(loss) balance for each subsidiary (excluding deferred asset gains and losses). This methodology is consistent with former NSP's methodology since 1998 and has been applied to the former NCE pension plans since January 1, 2001. A similar methodology is used for the ASC 715 costs for the Retiree Medical and Life Plan, except separate asset accounts are used for each subsidiary.

Except as otherwise provided herein, the results presented are based on the data, assumptions, methods and plan provisions outlined in the actuarial valuation reports to determine accounting requirements for the plan for the plan year ending December 31, 2015, and beginning January 1, 2016 dated April 27, 2016. Therefore, the descriptions of the data, assumptions, methods, plan provisions and limitations of the valuation and its use should be considered part of this letter report.

The undersigned consultants with actuarial credentials meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. Our objectivity is not impaired by any relationship between the Xcel Energy Inc. and our employer, Towers Watson Delaware Inc., a subsidiary of Willis Towers Watson PLC.

#### NEXT STEPS

If you have any questions or would like to discuss, please contact Jim at 952-842-6354 or Mark at +1 952 842 6445.

Sincerely,

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Consulting Actuary

Mark A. Afdahl, FSA  
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# Estimated Cash Flow (\$ in Millions) and Estimated Funded Status at January 1

Calendar Year	2016		2017		2018		2019		2020	
	2015	2016	2016	2017	2017	2018	2018	2019	2019	2020
Plan Year (Contributions)										
Xcel Energy Pension Plan		106%		98%		97%		99%		98%
Contributions	\$90.0	\$0.0	\$90.0	\$0.0	\$90.0	\$0.0	\$80.0	\$0.0	\$46.0	\$0.0
PBGC Variable Premiums	\$0.0	\$3.3	\$0.0	\$6.2	\$0.0	\$5.6	\$0.0	\$5.6	\$0.0	\$5.5
NCE Nonbargaining Plan		103%		93%		92%		95%		98%
Contributions	\$10.0	\$0.0	\$10.0	\$0.0	\$12.0	\$0.0	\$17.0	\$0.0	\$17.0	\$0.0
PBGC Variable Premiums	\$0.0	\$0.9	\$0.0	\$0.9	\$0.0	\$0.9	\$0.0	\$1.0	\$0.0	\$0.9
SPS Bargaining Plan		114%		108%		104%		103%		103%
Contributions	\$15.0	\$0.0	\$15.0	\$0.0	\$8.0	\$0.0	\$8.0	\$0.0	\$7.0	\$0.0
PBGC Variable Premiums	\$0.0	\$0.4	\$0.0	\$1.0	\$0.0	\$1.1	\$0.0	\$1.3	\$0.0	\$1.1
PSCo Bargaining Plan		108%		99%		94%		93%		96%
Contributions	\$10.0	\$0.0	\$10.0	\$0.0	\$15.0	\$0.0	\$20.0	\$0.0	\$55.0	\$0.0
PBGC Variable Premiums	\$0.0	\$3.4	\$0.0	\$3.7	\$0.0	\$3.8	\$0.0	\$3.9	\$0.0	\$4.0
Total		107%		99%		97%		97%		98%
Contributions	\$125.0		\$125.0		\$125.0		\$125.0		\$125.0	
PBGC Variable Premiums	\$8.0		\$11.8		\$11.4		\$11.8		\$11.5	

• Based on January 1, 2016 asset values and expected returns for the forecast period.

• Assumes Xcel Energy elects to use September three-segment rates.

• Target Liability effective rates (2016, 2017, 2018, 2019, 2020):

- XEPP: 5.94%, 5.75%, 5.56%, 5.39%, 5.24%
- NCE: 5.81%, 5.63%, 5.44%, 5.27%, 5.12%
- SPS: 6.07%, 5.88%, 5.69%, 5.52%, 5.37%
- PSCo: 6.04%, 5.85%, 5.66%, 5.49%, 5.34%

• Funding balance used to satisfy minimum required contributions and forfeited to avoid benefit restrictions and at-risk status.

• Funded status equals actuarial value of assets divided by target liability.

• Effective rates were calculated by assuming spot segment rates from mid-April 2016 of 1.36%, 3.63% and 4.68% remain unchanged throughout the remainder of the forecast period. The actual segment rates used are a 24-month average of the spot rates through August of the year prior to the valuation year, subject to the corridors of BBA.

• Forecasts do not reflect potential de-risking activities such as a terminated vested lump sum window or a small benefit retiree annuity purchase.



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

**EXHIBIT I**  
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	Amortizations					Net (Gain)/Loss	Aggregate Cost Compensation Method	Aggregate Cost 20-year Amortization Method	January 1 Prepaid (Accrued) <sup>1</sup>	Contribution	PBO
	Service Cost	Interest Cost	Expected Return on Assets	Prior Service Cost	Net (Gain)/Loss						
<b>2016</b>											
<b>Xcel Energy Pension Plan (XEPP)</b>											
Discontinued Operations <sup>2</sup>	-	3,510	(4,715)	-	3,353		N/A	N/A	35,936	3,805	78,354
Xcel Energy Nuclear	6,523	4,246	(5,706)	44	559		2,608	2,608	(7,363)	4,629	94,849
NSP - MN	21,784	41,185	(55,238)	892	36,218		30,831	25,528	378,989	44,773	928,274
NSP - WI	4,417	6,816	(9,157)	111	5,392		N/A	N/A	53,939	7,436	152,545
Xcel Services <sup>3</sup>	23,328	26,949	(36,170)	245	12,661		N/A	N/A	85,540	29,333	605,484
XEPC (former EMI)	-	22	(30)	-	(7)		(15)	N/A	(185)	24	495
<b>Total XEPP</b>	<b>56,052</b>	<b>82,728</b>	<b>(111,016)</b>	<b>1,292</b>	<b>58,176</b>		<b>33,981</b>	<b>28,136</b>	<b>546,856</b>	<b>90,000</b>	<b>1,860,001</b>
<b>NCE Non-Bargaining Pension Plan</b>											
Discontinued Operations - Cheyenne	-	170	(232)	-	157		N/A	N/A	1,606	133	3,948
PSCo	5,196	8,803	(12,001)	1	3,503		N/A	N/A	19,102	6,906	205,036
SPCo	3,087	3,770	(5,141)	-	3,421		N/A	N/A	34,788	2,961	87,644
<b>Total NCE</b>	<b>8,283</b>	<b>12,743</b>	<b>(17,374)</b>	<b>1</b>	<b>7,081</b>		<b>N/A</b>	<b>N/A</b>	<b>55,496</b>	<b>10,000</b>	<b>296,628</b>
<b>SPS Bargaining Plan</b>											
SPS	6,674	17,489	(22,461)	-	8,565		N/A	N/A	110,335	15,000	379,760
<b>Total SPS</b>	<b>6,674</b>	<b>17,489</b>	<b>(22,461)</b>	<b>-</b>	<b>8,565</b>		<b>N/A</b>	<b>N/A</b>	<b>110,335</b>	<b>15,000</b>	<b>379,760</b>
<b>PSCo Bargaining Plan</b>											
Discontinued Operations - Cheyenne	-	540	(680)	-	449		N/A	N/A	6,755	115	11,934
PSCo	20,730	46,602	(58,768)	(3,212)	23,268		N/A	N/A	297,435	9,885	1,019,820
<b>Total PSco</b>	<b>20,730</b>	<b>47,142</b>	<b>(58,448)</b>	<b>(3,212)</b>	<b>23,717</b>		<b>N/A</b>	<b>N/A</b>	<b>304,190</b>	<b>10,000</b>	<b>1,031,754</b>
<b>Total Xcel Energy</b>	<b>91,739</b>	<b>180,102</b>	<b>(210,299)</b>	<b>(1,919)</b>	<b>97,539</b>		<b>33,981</b>	<b>28,136</b>	<b>1,016,877</b>	<b>125,000</b>	<b>3,568,133</b>

<sup>1</sup> Includes \$4,128 transfer from NCE to XEPP for non-de minimis asset transfer on December 31, 2015

<sup>2</sup> Includes NRG, BMG, Viking, Natro Gas, Utility Engineering, Seren, Quixco, Crockett and QPS

<sup>3</sup> 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

Non-Bargaining Participants

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.

RP-2014 Blue Collar projected with generational mortality improvements using an adjusted SOA MP-2014 methodology

RP-2014 White Collar, as adjusted for 2014 Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2014 methodology

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

**EXHIBIT II**  
**Page 1 of 6**

	Amortizations					January 1 Prepaid (Accrued)	Expected Benefit Payments
	Service Cost	Interest Cost	Expected Return on Assets	Prior Service Cost	Net (Gain)/Loss		
<b>2016</b>							
Discontinued Operations <sup>1</sup>	-	57	-	-	12	(1,286)	159
Xcel Energy Nuclear	73	42	-	-	(24)	(1,299)	175
NSP - MN	16	164	-	-	308	(982)	613
NSP - WI	15	31	-	-	11	(641)	65
PSCo <sup>2</sup>	37	144	-	-	404	458	567
SPS	17	105	-	-	126	(1,308)	315
Xcel Services <sup>3</sup>	1,827	1,126	-	240	1,253	(14,637)	4,766
XEPC (former EMI)	-	-	-	-	(4)	(37)	-
<b>Total Xcel Energy</b>	<b>1,985</b>	<b>1,669</b>	<b>-</b>	<b>240</b>	<b>2,086</b>	<b>(19,732)</b>	<b>6,660</b>

<sup>1</sup> Includes NRG, BMG, Viking, Natrogas, Quixx, Seren and UE

<sup>2</sup> Includes Fort St. Vrain

<sup>3</sup> Includes Eloigne

<sup>4</sup> Estimated settlement amount for payments expected to be made to Mr. Connelly and other participants.

**Assumptions**

Discount Rate 4.34%

Salary Scale 4.00%

Assumed Mortality Table 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.

5/13/2016

<http://natct.internal.towerswatson.com/clients/609084/RETActuarial-2016/Documents/Projections/May-Projections/Projections-May-05132016-to-Xcel.xlsx> Nonqualified

**Willis Towers Watson**

**XCEL ENERGY INC. - Postretirement Benefits**  
**Benefit Cost by Legal Entity**  
(\$ in Thousands)

EXHIBIT III  
Page 1 of 6

	Service Cost	Interest Cost	Expected Return on Assets	Amortizations			Net Cost	January 1 Prepaid (Accrued)	Contribution
				Prior Service Cost	Net (Gain)/Loss	Net			
<b>2016</b>									
Discontinued Operations <sup>1</sup>	1	391	(79)	(103)	106		316	(5,424)	694
Xcel Energy Nuclear	14	33	-	49	(14)		82	(567)	14
NSP - MN <sup>2</sup>	109	3,892	(172)	(3,085)	1,617		2,361	(65,753)	8,560
NSP - WI	24	651	(24)	(351)	330		630	(8,383)	1,435
PSCo	768	18,070	(22,299)	(6,247)	1,931		(7,777)	11,152	-
SPS <sup>3</sup>	775	1,821	(2,377)	(401)	(583)		(765)	(16,081)	-
Xcel Services <sup>3</sup>	36	1,248	(44)	(549)	659		1,350	(13,339)	1,626
XEPC (former EMI)	-	1	-	1	(4)		(2)	(125)	6
<b>Total Xcel Energy</b>	<b>1,727</b>	<b>26,107</b>	<b>(24,995)</b>	<b>(10,686)</b>	<b>4,042</b>		<b>(3,805)</b>	<b>(98,520)</b>	<b>12,335</b>

<sup>1</sup>Includes NRG, BMG, Viking, Nitrogen, Cheyenne, Quixx and UE.

<sup>2</sup>Includes Elogne and Seren.

<sup>3</sup>Includes Executive Life Insurance benefits.

**Assumptions**

Discount Rate 4.65%  
Expected Return on Assets 5.80%

**Medical Trend**

Initial (2016) 6.00%  
Ultimate 4.50%  
Year Ultimate Reached 2019

**Assumed Mortality Table**

Bargaining:  
RP-2014 Blue Collar headcount-weighted table adjusted for Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2014 methodology.  
Non-bargaining:  
RP-2014 White Collar headcount-weighted table adjusted for Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2014 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 13, 2016 letter for additional information on data, assumptions, methods, and plan provisions.

5/13/2016

http://natct.internal.towerswatson.com/clients/609084/RET/Actuarial-2016/Documents/Projections/May - Projections/Projections - 05132016 to Xcel.xlsx: PRW



**XCEL ENERGY INC. - LTD and Workers' Compensation**  
**Benefit Cost Estimates by Legal Entity**  
(\$ in Thousands)

EXHIBIT VI

<b>Fiscal Year Ending</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
<b>ASC 712</b>	<b>Actual</b>	<b>Budget</b>	<b>Budget</b>	<b>Budget</b>	<b>Budget</b>	<b>Budget</b>	<b>Budget</b>
<b>Discount Rate- Workers' Compensation</b>	<b>3.86%</b>	<b>4.46%</b>	<b>4.46%</b>	<b>4.46%</b>	<b>4.46%</b>	<b>4.46%</b>	<b>4.46%</b>
<u>Former NSP - Workers' Compensation</u> <sup>1</sup>							
MN/SD	1,009	1,162	400	375	349	326	304
MI/WI	46	(115)	11	9	11	9	9
Subtotal	1,055	1,047	411	384	360	335	313
<u>Former NCE - Workers' Compensation</u> <sup>1</sup>							
Colorado - PSCO	(43)	9	66	63	61	59	57
<u>Deductible States - Workers' Compensation</u>							
Deductible States - SPS (KS, OK, NM, and TX)	-	-	-	-	-	-	-
<b>Total Xcel Energy Workers' Compensation</b>	<b>1,012</b>	<b>1,056</b>	<b>477</b>	<b>447</b>	<b>421</b>	<b>394</b>	<b>370</b>
<b>Discount Rate - LTD Income</b>	<b>3.86%</b>	<b>4.46%</b>	<b>4.46%</b>	<b>4.46%</b>	<b>4.46%</b>	<b>4.46%</b>	<b>4.46%</b>
<u>LTD Income</u>							
Discontinued Operations - Cheyenne	100	172	5	5	3	2	3
Discontinued Operations <sup>2</sup>	(1)	(80)	25	25	23	22	20
NSP-MN	837	(684)	326	309	293	276	261
NSP-WI	255	58	67	64	60	57	55
PSCO	223	302	91	71	54	39	31
SPS	166	(6)	34	30	24	19	14
Utility Engineering	59	55	2	2	2	2	1
Xcel Services	733	(557)	16	14	10	8	6
XEPC	9	5	2	1	1	-	-
<b>Total Xcel Energy LTD Income</b>	<b>2,381</b>	<b>(735)</b>	<b>568</b>	<b>521</b>	<b>470</b>	<b>425</b>	<b>391</b>
<b>Total Xcel Energy ASC 712</b>	<b>3,393</b>	<b>321</b>	<b>1,045</b>	<b>968</b>	<b>891</b>	<b>819</b>	<b>761</b>

<sup>1</sup> 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.

<sup>2</sup> Includes NRG, BMG, Viking and Natrogas.

The results above are based on the data, assumptions, methods, and plan provisions described in our May 13, 2016 letter.

# Xcel Energy Inc. - Qualified Pension Plans

Benefit Cost Reconciliation Details  
(\$ in Thousands)

Exhibit VII

	ASC 715 <sup>1</sup>			NSP-MN & Xcel Energy Nuclear				
	XEPP	NCE	SPS	PSCo	Total	ASC 715 <sup>1</sup>	Aggregate Cost Compensation Method	Aggregate Cost 20-Year Amortization Method
Initial 2016 Estimate (May 7, 2015)	87,834	9,553	10,128	29,273	136,788	52,323	31,013	24,321
Experience study assumption changes	(3,113)	(432)	79	(446)	(3,912)	(2,128)	(1,646)	522
Estimated demographic experience <sup>2</sup>	1,678	977	(37)	859	3,477	96	646	351
Discount rates <sup>3</sup>	(3,634)	(452)	(1,157)	(3,187)	(8,430)	(2,096)	13	10
Asset performance <sup>4</sup>	4,143	1,074	515	1,319	7,051	2,317	1,521	1,122
Pension contributions increased from \$90M to \$125M	(2,087)	-	(557)	194	(2,450)	(1,146)	-	-
Expected rate of return update <sup>5</sup>	2,350	501	1,669	2,292	6,812	1,289	1,372	955
Updated 2016 Estimate (December 16, 2015)	87,171	11,221	10,640	30,304	139,336	50,655	32,919	27,281
Final demographic experience <sup>6</sup>	703	(364)	(171)	(248)	(80)	174	408	372
Final discount rates	(1,991)	(445)	(321)	(1,350)	(4,107)	(1,088)	1	-
Final asset values	1,349	322	119	138	1,928	766	653	483
PSCo RSA contribution level increase	-	-	-	85	85	-	-	-
2016 Costs (May 13, 2016)	87,232	10,734	10,267	28,929	137,162	50,507	33,981	28,136
Historical asset performance	3,049	583	521	2,005	6,158	1,701	946	699
Expected liability, asset and loss amortization changes	(11,160)	(1,594)	(1,513)	(1,640)	(15,907)	(6,879)	(2,298)	(1,123)
Initial 2017 Estimate (May 13, 2016)	79,121	9,723	9,275	29,294	127,413	45,329	32,629	27,712

<sup>1</sup> Does not include potential settlement charges.

<sup>2</sup> Estimated impact of updated participant status and compensation data through September 30, 2015, with the primary factors being mortality and termination losses.

<sup>3</sup> December 31, 2015 discount rates assumed to be equal to the discount rates from Willis Towers Watson's BOND-Link model results as of November 30, 2015.

<sup>4</sup> 2015 asset returns equal actual returns through November 30, 2015 plus expected returns for the remainder of 2015 for an estimated pension return of 1% for 2015

<sup>5</sup> Weighted average rate of return for the pension plan assets was updated from 7.09% to 6.87%.

<sup>6</sup> Estimated impact of updated participant status and compensation data through November 30, 2015.

See May 13, 2016 letter for additional information on data, assumptions, methods and plan provisions.

Willis Towers Watson