



May 17, 2019

Mr. Richard R. Schrubbe
 AVP, Financial Analysis & Planning
 Xcel Energy Inc.
 401 Nicollet Mall
 3rd Floor
 Minneapolis, Minnesota 55401

2019 VALUATION RESULTS AND 2020-2024 COST ESTIMATES

Dear Rick:

This letter summarizes the results of the 2019 plan year IRS funding valuations for Xcel Energy's qualified pension plans. Also included are final 2019 costs and updated 2020-2024 cost estimates for the Long-Term Disability (LTD) and Workers' Compensation plans. The results for these plans have been updated from the March 29, 2019, results to reflect 2019 census data for both plans. Costs for all other plans are unchanged from March 29, 2019.

Attached to this letter are benefit cost exhibits and 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	5.36%	5.25%	5.53%	5.50%
Contribution Requirements for the 2019 Plan Year (as of January 1, 2019)				
Minimum Required Contribution Before Funding Balance	\$98.8	\$12.5	\$12.8	\$40.9
Minimum Required Contribution After Funding Balance	\$0.0	\$8.0	\$0.0	\$0.0
2019 PBGC Premiums				
PBGC Variable Rate Premiums	\$5.5	\$0.9	\$0.9	\$3.5

For all plans except the NCE Nonbargaining Plan, there is sufficient funding balance to satisfy the entire 2019 plan year minimum funding requirements. For the NCE Nonbargaining Plan, there is not enough funding

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balance remaining to satisfy the entire 2019 plan year requirement. As a result, the following contributions, reflecting interest from the January 1, 2019 valuation date to the payment due date, are required:

- \$1.1 million by July 15, 2019
- \$2.9 million by October 15, 2019
- \$2.9 million by January 15, 2020
- \$1.8 million by September 15, 2020.

Under the current contribution forecast, Xcel Energy has a planned contribution of \$15 million to the NCE Nonbargaining Plan for the 2019 plan year, expected to be contributed in January 2020. Our recommendation is to split the contribution into two payments. For example, an initial payment of \$4 million before July 15, 2019 to cover the 2019 plan year requirements due in 2019 and a second payment of \$11 million before January 15, 2020.

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 2019 plan year funded percentages:

Minimum Funding and Benefit Restrictions – 2019 (\$ in Millions)	Xcel Energy Pension Plan	NCE Nonbargaining Plan	SPS Bargaining Plan	PSCo Bargaining Plan
1. Effective Interest Rate	5.36%	5.25%	5.53%	5.50%
2. Target Liability as of January 1	\$1,500.4	\$241.3	\$325.1	\$920.2
3. Actuarial Value of Assets as of January 1	\$1,530.4	\$230.6	\$358.6	\$907.6
4. Funding Balance as of January 1	\$202.2	\$4.5	\$61.2	\$117.9
5. Funded Percentage before funding balance reduction from plan assets [(3) / (2)]	102.0%	95.6%	110.3%	98.6%
6. Funded Percentage with funding balance reduction from plan assets (FTAP) [((3) – (4)) / (2)]	88.5%	93.7%	91.5%	85.8%
7. Preliminary Adjusted Funding Target Attainment Percentage (AFTAP) ¹	102.0%	93.7%	110.3%	85.8%

¹ If Actuarial Value of Assets/Target Liability >= 100%, the AFTAP matches line 5; otherwise it matches line 6

Benefit Restrictions

Based on the 2019 funding results, benefit restrictions are not expected to apply for the 2019 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, 2019 deadline.

Funding Balances

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



Mr. Richard R. Schrubbe
 May 17, 2019

(\$ in Millions)	Xcel Energy Pension Plan	NCE Nonbargaining Plan	SPS Bargaining Plan	PSCo Bargaining Plan
Funding Balances at January 1, 2018	\$191.7	\$11.4	\$60.2	\$102.0
Funding Balances used for the 2018 plan year	(44.3)	(7.5)	(6.9)	(12.2)
Excess contributions elected to be added to funding balance	61.1	0.8	10.2	32.0
Investment experience adjustments	(6.3)	(0.2)	(2.3)	(3.9)
Amount of funding balance forfeited for AFTAP purposes	0.0	0.0	0.0	0.0
Funding Balances at January 1, 2019	\$202.2	\$4.5	\$61.2	\$117.9

PBGC Premiums

The PBGC variable rate premium amounts in the table on page one are based on the Standard Premium Funding Target for the PSCo Bargaining Plan and the NCE Nonbargaining Plan. The Alternative Premium Funding Target is used for the Xcel Energy Pension Plan and the SPS Bargaining Plan, but both plans are eligible to switch to the Standard Premium Funding Target method. If the method is changed, the 2019 premiums shown above and the contributions required to eliminate variable rate premiums shown below would be lower. Similar to prior years, we will analyze and discuss the option to switch methods with you in early September before a final decision is required in early October. The PSCo Bargaining Plan and the NCE Nonbargaining Plan are above the per-participant cap and the variable rate premium is limited to \$541 per participant.

The plans can eliminate variable rate premiums with the September 15, 2019 contribution amounts below:

Contribution to Avoid PBGC Variable Rate Premium (\$ in Millions)	Xcel Energy Pension Plan	NCE Nonbargaining Plan	SPS Bargaining Plan	PSCo Bargaining Plan
Contribution (as of September 15, 2019)	\$134.0	\$38.4	\$22.7	\$147.2

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 do not reflect interest rate stabilization 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, 2019 (i.e., the 2019 plan year). The valuation date for the 2019 plan year is January 1, 2019. The January 1, 2019 4010 FTAPs for all Xcel Energy pension plans are as follows:

4010 FTAP – 2019 (\$ in Millions)	Xcel Energy Pension Plan	NCE Nonbargaining Plan	SPS Bargaining Plan	PSCo Bargaining Plan
1. Effective Interest Rate	3.87%	3.76%	4.01%	3.99%
2. Target Liability as of January 1	\$1,700.4	\$269.3	\$385.8	\$1,081.6
3. Actuarial Value of Assets as of January 1	\$1,530.4	\$230.6	\$358.6	\$907.6
4. Funding Balance as of January 1	\$202.2	\$4.5	\$61.2	\$117.9
5. Funded Percentage with funding balance reduction from plan assets (4010 FTAP) [((3) – (4)) / (2)]	78.1%	84.0%	77.1%	73.0%

Based on the results above, a filing will be required for the 2019 information (fiscal) year unless additional contributions for the 2018 plan year are made on or before September 15, 2019. Alternatively, funding balances may be forfeited such that the 4010 FTAP for each plan is above 80%. More specifically, Xcel Energy can avoid an ERISA 4010 filing with contributions and/or funding balance forfeitures by September 15, 2019 of \$32.1 million, \$11.2 million, and \$75.6 million to the Xcel Energy Pension Plan, SPS Bargaining Plan, and PSCo Bargaining Plan respectively (amounts as of January 1, 2019). If no action is taken and a 4010 filing is required for the 2019 information year, the submission deadline will be April 15, 2020.

LONG-TERM DISABILITY AND WORKERS' COMPENSATION RESULTS

The combined 2019 cost/(income) for the Workers' Compensation plan and the Long-Term Disability plan is (\$1.9) million, a \$1.4 million increase in income (decrease in cost) from our March estimate of (\$0.5) million. The final discount rate used for these plans is 4.25%, which is a 2 basis point increase from our March results.

The actual 2019 cost/(income) for the Long-Term Disability plan is \$(0.1) million, which is the same as the 2019 estimated cost/(income) for the plan provided in March. The actual 2019 cost/(income) for the Workers' Compensation plan is (\$1.8) million, which is a \$1.4 million increase in income from the estimated 2019 cost/(income) of (\$0.4) million for the plan provided in March. The decrease is primarily due to favorable indemnity claims experience in Minnesota and South Dakota.

RESULTS EXHIBITS

Final 2019 benefit costs (prior to potential settlement charges) and 2020-2024 benefit cost forecasts are attached to the end of this letter. Benefit cost results for all plans except the LTD and Workers' Compensation plans have not been updated from the results provided on March 29, 2019. 2019 benefit costs and estimates of 2020-2024 benefit costs summarized by legal entity are 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

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

FORECAST RESULTS

Forecast results are based on the information summarized below.

The following provides a reconciliation of actual 2019 costs to 2020 estimated costs, prior to regulatory effects and potential settlement charges:

Reconciliation of Benefit Costs (prior to regulatory effects and potential settlement charges)

(\$ in Millions)	Qualified Pension ¹	Nonqualified Pension	Retiree Medical	Workers' Compensation	Long Term Disability	Total
Final 2019	\$107.0	\$3.6	(\$2.0)	(\$1.8)	(\$0.1)	\$106.7
Historical asset performance	11.5	0.0	0.0	0.0	0.0	11.5
Expected liability, asset, and loss amortization changes	(14.2)	0.0	1.3	2.1	0.5	(10.3)
Initial 2020 Estimate	\$104.3	\$3.6	(\$0.7)	\$0.3	\$0.4	\$107.9

¹Qualified 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.

DATA, ASSUMPTIONS, METHODS AND PLAN PROVISIONS FOR BENEFIT COSTS

The 2019 benefit costs, and estimated 2020-2024 costs reflect the following data, assumptions, methods and plan provisions:

Data

For the qualified and nonqualified pension plans and the retiree medical plan, the 2019 benefit cost results and estimates for 2020-2024 are based on participant data as of January 1, 2018, projected to the end of the year based on status, compensation and benefit changes through November 30, 2018, and known retirements for December 2018. Actual new entrants through November 30, 2018, and expected new entrants through December 31, 2018, are included. See our March 29, 2019, letter for more details. For the Workers' Compensation and Long-Term Disability plans, the 2019 benefit cost results and estimated costs for 2020-2024 are based on participant data as of January 1, 2019.

Economic Assumptions

The key assumptions used to determine the actual 2019 and estimated 2020-2024 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 17, 2019 Results	
Benefit Cost	
Discount Rate – ASC 715:	
Xcel Energy Pension Plan	4.31%
NCE Nonbargaining Pension Plan	4.25%
SPS Bargaining Pension Plan	4.37%
PSCo Bargaining Pension Plan	4.36%
Nonqualified Pension Plan	4.26%
Retiree Medical and Life Insurance Plan	4.32%
Workers' Compensation and LTD	4.25%
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)	5.30%
Discount Rate – Aggregate Cost	7.10%
Salary Scale¹	3.75%
Initial Medical Trend:	
Pre-Medicare	6.50%
Post-Medicare	5.30%
Ultimate Medical Trend	4.50%
Year Ultimate Trend is Reached	2023

¹ Career 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 3.50% to 4.10% in all years. The pre-PPA lump sum conversion interest rate was updated from 2.75% to 3.10%.
- The interest crediting rate for the 5% cash balance formula was updated from 2.75% to 3.10%. The interest crediting rate for the Retirement Spending Account was updated from 2.50% to 3.60%.
- The HRA trend assumption remains at 2.0%.

Demographic Assumptions

- Active participant counts are assumed to remain level throughout the forecast period.
- 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-2016 methodology.
- The mortality assumption for converting lump sums to annuities or annuities to lump sums is the 2018 IRS mortality tables projected to the commencement date using the SOA MP-2017 methodology.
- Retirement rates were updated to reflect later retirement ages as indicated in our January 4, 2019 letter. The decrement timing model was also updated from beginning of year to middle of year decrements.

Pension Contributions

The benefit cost forecasts reflect 2019 contributions of \$150 million made on January 2, 2019, and planned contributions provided by Xcel Energy for 2020 through 2024. The table below summarizes the amounts assigned to each plan over the forecast period:

Plan	Year					
	2019	2020	2021	2022	2023	2024
Xcel Energy Pension Plan	\$ 90.0	\$ 85.0	\$ 68.0	\$ 48.0	\$ 45.0	\$ 60.0
NCE Nonbargaining Plan	5.0	15.0	12.0	12.0	10.0	5.0
SPS Bargaining Plan	15.0	10.0	10.0	5.0	10.0	0.0
PSCo Bargaining Plan	40.0	40.0	35.0	35.0	35.0	35.0
Total Contribution	\$ 150.0	\$ 150.0	\$ 125.0	\$ 100.0	\$ 100.0	\$ 100.0

- Contributions in 2020 and beyond are assumed to be paid on January 15 and assigned to the prior plan year.
- The above planned contributions may not be sufficient to meet minimum requirements under all economic scenarios. As noted above, an additional contribution of \$4 million is required during calendar year 2019 to satisfy minimum funding requirements. The planned contributions will be reviewed later this year and updated as needed to reflect current economic conditions and Xcel Energy's capital plans.

Plan Provision Updates

- Effective February 22, 2018, employees hired or rehired into the PSCo Bargaining Plan receive a 5% Cash Balance benefit. Due to the one year participation requirement, new hires will not be included in the valuation until year-end 2019. Rehired employees and transfers participate immediately.

DATA, ASSUMPTIONS, METHODS AND PLAN PROVISIONS FOR PENSION PLAN FUNDING

Data

The 2019 pension funding results are based on data as of January 1, 2019. The January 1, 2019 census data will be summarized in our upcoming data memos which are expected to be provided within the next month.

Economic Assumptions

All economic assumptions for the funding results are the same as noted above under the Benefit Cost section, except the discount rates. The discount rates equal to the effective interest rates which are noted in the results sections above. The effective interest rates were determined using the following 3-segment rates:

- 3-segment rates reflecting stabilization (3.74% / 5.35% / 6.11%)
- 3-segment rates not reflecting stabilization (2.28% / 3.87% / 4.46%)
- Applicable month: September

Demographic Assumptions

All demographic assumptions for the funding results are the same as noted above under the Benefit Cost section, except the mortality assumption. The mortality assumption reflects the IRS prescribed static mortality assumption for 2019 valuations.

Plan Provision Updates

All plan provisions valued for the funding results are the same as noted above under the Benefit Cost section.

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. We have relied on all the data and information provided as complete and accurate. We have reviewed this information for overall reasonableness and consistency, but have neither audited nor independently verified this information. Based on discussions with and concurrence by the plan sponsor, assumptions or estimates may have been made if data were not available. We are not aware of any errors or omissions in the data that would have a significant effect on the results of our calculations. 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.

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.

As required by U.S. GAAP, the actuarial assumptions and methods employed in the development of the pension and other postretirement benefit cost and other financial reporting have been selected by Xcel Energy Inc. Willis Towers Watson has concurred with these assumptions and methods. U.S. GAAP requires that each significant assumption "individually represent the best estimate of a particular future event. 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, plan provisions and other information, outlined in the actuarial valuation reports to determine accounting requirements for the plan for the plan year beginning January 1, 2019 dated March 29, 2019. Therefore, such information, and the reliances and limitations of the valuation report and its use, should be considered part of this letter.

The funding results prepared in this letter are subject to Actuarial Standard of Practice (ASOP) 51 regarding disclosure of significant risks related to the calculation of actuarially determined contributions. We will follow up with our ASOP 51 statement within 30 days and this statement should be considered part of this report.

The undersigned consulting actuaries are members of the Society of Actuaries and meet the "Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States" relating to pension and postretirement welfare plans. Our objectivity is not impaired by any relationship between the plan sponsor and our employer, Willis Towers Watson US LLC ("Willis Towers Watson").



Mr. Richard R. Schrubbe
May 17, 2019

NEXT STEPS

If you have any questions or would like to discuss, please contact Mark at 952-842-6445, Kristoff at 952-842-6359 or Ali at 952-842-6225.

Sincerely,

Handwritten signature of Mark A. Afdahl in cursive.

Mark A. Afdahl, FSA, EA
Director, Retirement

Handwritten signature of Kristoff M. Hendrickson in cursive.

Kristoff M. Hendrickson, FSA, EA
Director, Retirement

Handwritten signature of Ali Rehan Rattansi in cursive.

Ali Rehan Rattansi, ASA, EA
Associate Director, Retirement

cc: Todd Degrugillier — Xcel Energy Inc.
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XCEL ENERGY INC. - Qualified Pension Plans
 Cost by Legal Entity
 (\$ in Thousands)

EXHIBIT I
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2019 Xcel Energy Pension Plan (XEPP)	Amortizations				Net Cost	Settlement Charge ¹	Aggregate Cost Compensation Method	Aggregate Cost 20-year Amortization Method	January 1 Prepaid (Accrued)	Contribution	PBO
	Service Cost	Interest Cost	Expected Return on Assets	Prior Service Cost							
Discontinued Operations ²	-	3,051	(4,488)	-	3,050	-	N/A	N/A	33,632	3,785	73,890
Xcel Energy Nuclear	5,834	4,153	(6,079)	(214)	630	4,324	3,834	3,362	(6,658)	5,052	100,213
NSP - MN	19,598	32,928	(48,176)	100	29,598	34,030	30,873	27,312	313,067	41,669	806,830
NSP - WI	4,433	5,709	(8,358)	(30)	4,447	6,203	N/A	N/A	43,681	7,239	139,764
Xcel Services ³	21,737	26,095	(38,200)	(985)	13,112	21,759	N/A	N/A	84,737	32,227	632,568
XEPC (former EMF)	-	23	(33)	-	2	(6)	N/A	N/A	(58)	28	546
Total XEPP	51,602	71,959	(105,312)	(1,729)	50,821	87,941	34,707	30,704	486,401	90,000	1,753,811
NCE Non-Bargaining Pension Plan											
Discontinued Operations - Cheyenne	-	146	(203)	-	146	89	N/A	N/A	1,545	65	3,501
PSCo	3,915	7,642	(10,625)	(165)	3,321	4,088	N/A	N/A	17,104	3,434	187,998
SPS	2,431	3,347	(4,645)	(137)	2,808	3,604	N/A	N/A	23,427	1,501	85,030
Total NCE	6,346	11,135	(15,473)	(302)	6,075	7,781	N/A	N/A	42,076	5,000	274,630
SPS Bargaining Plan											
SPS	6,377	16,788	(23,998)	-	8,741	7,908	N/A	N/A	120,664	15,000	394,752
Total SPS	6,377	16,788	(23,998)	-	8,741	7,908	N/A	N/A	120,664	15,000	394,752
PSCo Bargaining Plan											
Discontinued Operations - Cheyenne	-	416	(547)	-	421	290	N/A	N/A	6,218	386	9,983
PSCo	21,667	43,985	(57,881)	(3,212)	22,122	26,681	N/A	N/A	242,695	39,814	1,041,247
Total PSCo	21,667	44,401	(58,428)	(3,212)	22,543	26,971	N/A	N/A	248,913	40,000	1,051,210
Total Xcel Energy	85,992	144,283	(203,211)	(4,643)	88,180	110,601	34,707	30,704	878,054	150,000	3,474,403

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.

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

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	Amortizations			Settlement Charge ¹	Aggregate Cost Compensation Method	Aggregate Cost 20-year Amortization Method	January 1 Prepaid (Accrued)	Contribution	PBO
	Service Cost	Interest Cost	Expected Return on Assets						
2020									
Xcel Energy Pension Plan (XEPP)									
Discontinued Operations ²	-	2,940	(4,360)	-	1,653	N/A	35,764	3,508	70,641
Xcel Energy Nuclear	5,653	4,261	(6,317)	(214)	3,981	3,621	(7,930)	5,102	102,753
NSP - MN	18,652	31,809	(47,102)	100	32,306	27,303	320,706	38,471	774,803
NSP - WI	4,190	5,607	(8,310)	(30)	5,773	N/A	44,717	6,731	135,558
Xcel Services ³	21,406	25,961	(38,475)	(965)	20,954	N/A	95,205	31,161	627,582
XEPC (former EMI)	-	23	(34)	-	(7)	N/A	(22)	27	543
Total XEPP	49,901	70,601	(104,596)	(1,129)	64,660	30,924	488,460	85,000	1,711,980
NCE Non-Bargaining Pension Plan									
Discontinued Operations - Cheyenne	-	139	(197)	-	89	N/A	1,521	193	3,432
PSCO	3,808	7,483	(10,620)	(165)	3,967	N/A	16,450	10,295	183,356
SPS	2,346	3,243	(4,595)	(137)	3,368	N/A	21,324	4,512	80,369
Total NCE	6,154	10,865	(15,412)	(302)	7,444	N/A	39,295	15,000	267,157
SPS Bargaining Plan									
SPS	6,295	16,863	(24,199)	-	7,619	N/A	127,756	10,000	396,644
Total SPS	6,295	16,863	(24,199)	-	7,619	N/A	127,756	10,000	396,644
PSCO Bargaining Plan									
Discontinued Operations - Cheyenne	-	398	(526)	-	282	N/A	6,314	363	9,549
PSCO	21,378	44,019	(69,203)	(2,650)	26,393	N/A	255,628	39,637	1,042,824
Total PSCO	21,378	44,417	(68,729)	(2,650)	26,675	N/A	261,942	40,000	1,052,373
Total Xcel Energy	83,728	142,746	(302,938)	(4,081)	105,398	30,924	917,453	150,000	3,428,264

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 Elcigne

Assumptions

Discount Rate - U.S. GAAP

XEPP 4.31%

NCE 4.25%

SPS 4.37%

PSCO 4.36%

Discount Rate - Aggregate Normal Cost

Salary Scale 7.10%

Expected Return on Assets 3.75%

XEPP 7.10%

NCE 6.90%

SPS 6.75%

PSCO 6.50%

Assumed Mortality Table

Bargaining Participants

Non-bargaining Participants

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

Contributions are allocated based on PBO for each legal entity.

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RP-2014 Blue Collar projected with generational mortality improvements using an adjusted SOA MP-2016 methodology

RP-2014 White Collar, as adjusted for 2014 Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2016 methodology

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

Amortizations

	Service Cost	Interest Cost	Expected Return on Assets	Prior Service Cost	Net (Gain)/Loss	Settlement Charge ¹	Net Cost	January 1 Prepaid (Accrued)	Expected Benefit Payments
Discontinued Operations ²	-	30	-	-	(53)	-	(23)	(1,291)	91
Xcel Energy Nuclear	80	22	-	-	(13)	-	89	(963)	42
NSP - MN	33	142	-	-	318	-	493	(272)	472
NSP - WI	17	19	-	-	2	-	38	(458)	49
PSCo ³	41	126	-	-	300	-	467	(58)	416
SPS	11	67	-	-	120	-	198	(462)	251
Xcel Services ⁴	721	898	-	133	578	-	2,330	(16,717)	4,048
XEPC (former EMI)	-	-	-	-	(3)	-	(3)	(27)	-
Total Xcel Energy	903	1,304	-	133	1,249	-	3,589	(19,948)	5,369

¹ Settlement accounting may be required if lump sum benefit payments exceed the sum of service cost and interest cost. No settlements have been estimated at this time.

² Includes NRG, BMG, Viking, Natargas, Quibx, Seren and UE

³ Includes Fort St. Vrain

⁴ Includes Eloigne

Assumptions

Discount Rate	4.26%
Salary Scale (career average)	3.75%
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-2016 methodology

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

	Amortizations						Expected Benefit Payments	
	Service Cost	Interest Cost	Expected Return on Assets	Prior Service Cost	Net (Gain)/Loss	Settlement Charge ¹		Net Cost
2020								
Discontinued Operations ²	-	29	-	-	(46)	-	(17)	(1,177)
Xcel Energy Nuclear	87	25	-	-	(9)	-	103	57
NSP - MN	36	137	-	-	310	-	483	(293)
NSP - WI	19	20	-	-	4	-	43	(447)
PSCo ³	45	121	-	-	291	-	457	(109)
SPS	12	64	-	-	119	-	195	(409)
Xcel Services ⁴	785	832	-	133	637	-	2,387	(14,999)
XEPC (former EMI)	-	-	-	-	(2)	-	(2)	(24)
Total Xcel Energy	984	1,228	-	133	1,304	-	3,649	(18,168)

¹ Settlement accounting may be required if actual lump sum payments exceed the sum of service cost and interest cost. No settlements have been estimated at this time.

² Includes NRG, BMG, Viking, Natrogas, Quixx, Seren and UE

³ Includes Fort St. Vrain

⁴ Includes Eloigne

Assumptions

Discount Rate 4.26%
 Salary Scale 3.75%

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-2016 methodology
 Estimates reflect a 5% load on the projected liabilities to reflect the potential for demographic experience that is less favorable than expected.
 See May 17, 2019 letter for additional information on data, assumptions, methods and plan provisions.

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

	Amortizations							Contribution
	Service Cost	Interest Cost	Expected Return on Assets	Prior Service Cost	Net (Gain)/Loss	Net Cost	January 1 Prepaid (Accrued)	
2019								
Discontinued Operations ¹	-	309	(71)	(110)	79	207	(4,760)	656
Xcel Energy Nuclear	14	36	-	57	(15)	92	(822)	17
NSP - MN ²	112	3,091	(129)	(3,075)	1,523	1,522	(50,755)	7,187
NSP - WI	27	528	(23)	(351)	299	480	(6,998)	1,168
PSCo	478	15,826	(18,936)	(5,399)	2,936	(5,295)	47,175	-
SPS ³	879	1,741	(2,039)	(466)	(420)	(305)	(13,234)	-
Xcel Services ³	43	1,132	(93)	(565)	676	1,253	(12,591)	1,587
XEPC (former EMI)	-	1	-	-	(4)	(3)	(117)	5
Total Xcel Energy	1,553	22,464	(21,231)	(9,909)	5,074	(2,049)	(42,102)	10,622

¹Includes NRG, BMG, Viking, Natrogas, Cheyenne, Quixx and UJE.

²Includes Eloigne and Seren.

³Includes Executive Life Insurance benefits.

Assumptions

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

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.

Non-bargaining:

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.

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

	Amortizations							Contribution
	Service Cost	Interest Cost	Expected Return on Assets	Prior Service Cost	Net (Gain)/Loss	Net Cost	January 1 Prepaid (Accrued)	
2020								
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
PSO	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

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

²Includes Eloigne and Seren.

³Includes Executive Life Insurance benefits.

Assumptions

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

Bargaining:

Non-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.
 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.

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

Fiscal Year Ending	2018	2019	2020	2021	2022	2023	2024
	Actual	Actual	Budget	Budget	Budget	Budget	Budget
U.S. GAAP							
<u>Discount Rate- Workers' Compensation</u>	3.51%	4.25%	4.25%				
<u>Former NSP - Workers' Compensation</u> ¹							
MN/SD	339	(1,517)	270				
MI/WI	(53)	(22)	3				
Subtotal	286	(1,539)	273				
<u>Former NCE - Workers' Compensation</u> ¹							
Colorado - PSCo	555	-250	52				
<u>Deductible States - Workers' Compensation</u>							
Deductible States - SPS (KS, OK, NM, and TX)	-3	0	0				
Total Xcel Energy Workers' Compensation	838	(1,789)	325				
<u>Discount Rate - LTD Income</u>	3.51%	4.25%	4.25%				
LTD Income							
<u>Discontinued Operations - Cheyenne</u>	(21)	11	4				
<u>Discontinued Operations</u> ²	89	89	22				
NSP-MN	(22)	(153)	226				
NSP-WI	(258)	(16)	48				
PSCo	(117)	70	37				
SPS	(7)	(76)	16				
Utility Engineering	(3)	(3)	1				
Xcel Services	91	3	8				
XEPC	3	-	-				
Total Xcel Energy LTD Income	(245)	(75)	362				
Total Xcel Energy U.S. GAAP	593	(1,864)	687				

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.

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