



May 15, 2020

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

2020 VALUATION RESULTS AND 2021-2025 COST ESTIMATES

Dear Rick:

This letter summarizes the results of the 2020 plan year IRS funding valuations for Xcel Energy's qualified pension plans. Also included are final 2020 costs and updated 2021-2025 cost estimates for the Long-Term Disability (LTD) and Workers' Compensation plans, the Xcel Energy Pension Plan and the Nonqualified Pension Plan. The results for these plans have been updated from the February 7, 2020 results to reflect the following:

- 2020 census data and final discount rate for the LTD and Workers' Compensation plans.
- Final Mankato Energy Center (MEC) census data for 2020 Xcel Energy Pension Plan cost. The 2021-2025 Xcel Energy Pension Plan cost estimates also assume the MEC sale closes and all benefits are paid by the end of 2020.
- A \$2.0 million 2020 settlement charge estimate for the Nonqualified Pension Plan.

2020 costs and 2021-2025 cost estimates for all other plans are unchanged from February 7, 2020.

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.

Suite 1700
8400 Normandale Lake Boulevard
Minneapolis, MN 55437

T +1 952 842 7000
F +1 952 842 7001
W willistowerswatson.com

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	5.22%	5.14%	5.38%	5.35%
Contribution Requirements for the 2020 Plan Year (as of January 1, 2020)				
Minimum Required Contribution Before Funding Balance	\$81.9	\$9.8	\$12.4	\$38.6
Minimum Required Contribution After Funding Balance	\$0.0	\$0.0	\$0.0	\$0.0
2020 PBGC Premiums				
PBGC Variable Rate Premiums	\$0.0	\$0.0	\$0.0	\$1.5

For all plans, there is sufficient funding balance to satisfy the entire 2020 plan year minimum funding requirements.

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 2020 plan year funded percentages:

Minimum Funding and Benefit Restrictions – 2020 (\$ in Millions)	Xcel Energy Pension Plan	NCE Nonbargaining Plan	SPS Bargaining Plan	PSCo Bargaining Plan
1. Effective Interest Rate	5.22%	5.14%	5.38%	5.35%
2. Target Liability as of January 1	\$1,489.1	\$225.3	\$333.2	\$931.3
3. Actuarial Value of Assets as of January 1 ¹	\$1,591.4	\$234.3	\$378.7	\$960.2
4. Funding Balance as of January 1	\$223.2	\$11.4	\$70.1	\$139.3
5. Funded Percentage before funding balance reduction from plan assets [(3) / (2)]	106.9%	104.0%	113.7%	103.1%
6. Funded Percentage with funding balance reduction from plan assets (FTAP) [((3) – (4)) / (2)]	91.9%	99.0%	92.6%	88.1%
7. Preliminary Adjusted Funding Target Attainment Percentage (AFTAP) ²	106.9%	104.0%	113.7%	103.1%

¹ Includes present value of receivable contributions

² If Actuarial Value of Assets/Target Liability >= 100%, the AFTAP matches line 5; otherwise it matches line 6

Benefit Restrictions

Based on the 2020 funding results, benefit restrictions are not expected to apply for the 2020 plan year since the preliminary AFTAP for each plan exceeds 80.0%. The PSCo Bargaining Plan was certified on March 31, 2020 and no benefit restrictions apply for the 2020 plan year. We will provide our certification of the funded status for the other plans prior to the September 30, 2020 deadline.

Funding Balances

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

(\$ in Millions)	Xcel Energy Pension Plan	NCE Nonbargaining Plan	SPS Bargaining Plan	PSCo Bargaining Plan
Funding Balances at January 1, 2019	\$202.2	\$4.5	\$61.2	\$117.9
Funding Balances used for the 2019 plan year	(49.3)	(4.5)	(7.8)	(13.5)
Excess contributions elected to be added to funding balance	37.8	11.4	5.4	12.7
Investment experience adjustments	32.5	0.0	11.3	22.2
Amount of funding balance forfeited for AFTAP purposes	0.0	0.0	0.0	0.0
Funding Balances at January 1, 2020	\$223.2	\$11.4	\$70.1	\$139.3

PBGC Premiums

The PBGC variable rate premium amounts in the table on page two are based on the Alternative Premium Funding Target for all four plans. This assumes that the NCE Nonbargaining Plan and the PSCo Bargaining Plan switch to the Alternative Premium method this year to reduce premiums. Once an election is made to change methods, that election can not be changed again for five years. Similar to prior years, we will analyze and discuss the method alternatives with you in early September before a final decision is required in early October.

The plans can eliminate variable rate premiums with the September 15, 2020 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, 2020)	\$0.0	\$0.0	\$0.0	\$35.3

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, 2020 (i.e., the 2020 plan year). The valuation date for the 2020 plan year is January 1, 2020. The January 1, 2020 4010 FTAPs for all Xcel Energy pension plans are as follows:

4010 FTAP – 2020 (\$ in Millions)	Xcel Energy Pension Plan	NCE Nonbargaining Plan	SPS Bargaining Plan	PSCo Bargaining Plan
1. Effective Interest Rate	3.95%	3.89%	4.06%	4.04%
2. Target Liability as of January 1	\$1,655.8	\$247.3	\$386.3	\$1,070.6
3. Actuarial Value of Assets as of January 1	\$1,591.4	\$234.3	\$378.7	\$960.2
4. Funding Balance as of January 1	\$223.2	\$11.4	\$70.1	\$139.3
5. Funded Percentage with funding balance reduction from plan assets (4010 FTAP) [$((3) - (4)) / (2)$]	82.6%	90.1%	79.9%	76.7%

Based on the results above, a filing will be required for the 2020 information (fiscal) year unless additional contributions for the 2019 plan year are made on or before September 15, 2020. 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, 2020 of \$0.4 million, and \$35.6 million to the SPS Bargaining Plan, and PSCo Bargaining Plan respectively (amounts as of January 1, 2020). If no action is taken and a 4010 filing is required for the 2020 information year, the submission deadline will be April 15, 2021.

LONG-TERM DISABILITY AND WORKERS' COMPENSATION RESULTS

The combined 2020 cost/(income) for the Workers' Compensation plan and the Long-Term Disability plan is \$1.6 million, a \$0.1 million decrease in cost from our February estimate of \$1.7 million. The final discount rate used for these plans is 3.41%, which is a five basis point decrease from our February results.

The actual 2020 cost/(income) for the Long-Term Disability plan is \$0.9 million, which is the same as the 2020 estimated cost/(income) for the plan provided in February. The actual 2020 cost/(income) for the Workers' Compensation plan is \$0.8 million, which is a \$0.1 million decrease in cost from the estimated 2020 cost/(income) of \$0.9 million for the plan provided in February. The decrease is primarily due to higher than expected medical payments in Minnesota and South Dakota and favorable indemnity claims experience in Colorado, which was partially offset by unfavorable incurred indemnity and medical claims experience in Minnesota and South Dakota.

RESULTS EXHIBITS

Final 2020 benefit costs (prior to potential/final settlement charges) and 2021-2025 benefit cost forecasts are attached to the end of this letter. Except as noted on page one of this letter, benefit cost results and forecasts are unchanged from the results provided on February 7, 2020. 2020 benefit costs and estimates of 2021-2025 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 2020 costs to 2021 estimated costs, prior to regulatory effects and potential qualified plan 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 2020²	\$103.6	\$4.2	(\$4.4)	\$0.8	\$0.9	\$105.1
Historical asset performance	(6.0)	0.0	0.0	0.0	0.0	(6.0)
Expected liability, asset, and loss amortization changes	(12.3)	0.0	(0.5)	(0.5)	(0.6)	(13.9)
Reduced loss amortization from estimated 2020 settlement charge	0.0	(0.3)	0.0	0.0	0.0	(0.3)
Initial 2021 Estimate	\$85.3	\$3.9	(\$4.9)	\$0.3	\$0.3	\$84.9

¹ 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.

² Not including estimated 2020 settlement charges.

DATA, ASSUMPTIONS, METHODS AND PLAN PROVISIONS FOR BENEFIT COSTS

The 2020 benefit costs, and estimated 2021-2025 costs reflect the following data, assumptions, methods and plan provisions:

Data

For the qualified and nonqualified pension plans and the retiree medical plan, the 2020 benefit cost results and estimates for 2021-2025 are based on participant data as of January 1, 2019, projected to the end of the year based on status, compensation and benefit changes through November 30, 2019, and known retirements for December 2019. Actual new entrants through November 30, 2019, and expected new entrants through December 31, 2019 are included for the pension plans. Mankato Energy Center employees are also included for the Xcel Energy Pension Plan. See our February 7, 2020 letter and February 28, 2020 valuation report appendices for more details. For the Workers' Compensation and Long-Term Disability plans, the 2020 benefit cost results and estimated costs for 2021-2025 are based on participant data as of January 1, 2020.

Economic Assumptions

The key assumptions used to determine the actual 2020 and estimated 2021-2025 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 15, 2020 Results	
Benefit Cost	
Discount Rate – ASC 715:	
Xcel Energy Pension Plan	3.48%
NCE Nonbargaining Pension Plan	3.39%
SPS Bargaining Pension Plan	3.58%
PSCo Bargaining Pension Plan	3.58%
Nonqualified Pension Plan	3.33%
Retiree Medical and Life Insurance Plan	3.47%
Workers' Compensation and LTD	3.41%
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)	4.50%
Discount Rate – Aggregate Cost	7.10%
Salary Scale¹	3.75%
Initial Medical Trend:	
Pre-Medicare	6.00%
Post-Medicare	5.10%
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 4.10% to 3.25% in all years. The pre-PPA lump sum conversion interest rate was updated from 3.10% to 2.50%.
- The interest crediting rate for the 5% cash balance formula was updated from 3.10% to 2.50%. The interest crediting rate for the Retirement Spending Account was updated from 3.60% to 2.50%.

Demographic Assumptions

- Active participant counts are assumed to remain level throughout the forecast period.
- The mortality assumption was updated from the RP-2014 Collar distinct tables, as adjusted for 2014 Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2016 methodology to the Pri-2012 Collar distinct tables, as adjusted for 2019 Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2019 methodology.
- The mortality assumption for converting between lump sums and annuities was updated to the 2020 IRS for 2020 commencements, the 2021 IRS table for 2021 commencements and the 2021 IRS table projected to commencement date using the MP-2019 improvement scale for commencements in 2022 and beyond.

Pension Contributions

The benefit cost forecasts reflect 2020 contributions of \$150 million made on January 2, 2020, and planned contributions provided by Xcel Energy for 2021 through 2025. The table below summarizes the amounts assigned to each plan over the forecast period:

Plan	Year					
	2020	2021	2022	2023	2024	2025
Xcel Energy Pension Plan	\$ 85.1	\$ 68.0	\$ 48.0	\$ 70.0	\$ 90.0	\$ 75.0
NCE Nonbargaining Plan	15.0	12.0	12.0	15.0	5.0	5.0
SPS Bargaining Plan	10.0	10.0	5.0	0.0	5.0	15.0
PSCo Bargaining Plan	40.0	35.0	35.0	15.0	55.0	60.0
Total Contribution	\$ 150.1	\$ 125.0	\$ 100.0	\$ 100.0	\$ 155.0	\$ 155.0

- Contributions in 2021 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. 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 January 1, 2020, the "greater-of" calculation for NSP Bargaining employees was extended through 2022.

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

Data

The 2020 pension funding results are based on data as of January 1, 2020 with the inclusion of 21 Mankato Energy Center employees within the Xcel Energy Pension Plan. The January 1, 2020 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 and interest rates for converting between form of payment types. For funding purposes, the discount rates and form of payment conversions are based on the following 3-segment rates:

- 3-segment rates reflecting stabilization (3.64% / 5.21% / 5.94%)
- 3-segment rates not reflecting stabilization (2.79% / 3.92% / 4.38%))
- 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 2020 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

This valuation has been conducted in accordance with generally accepted actuarial principles and practices. However please note the information discussed below regarding this valuation.

Reliances

In preparing the results presented in this report, we have relied upon information regarding plan provisions, participants, assets, sponsor accounting policies and methods and sponsor elections provided Xcel Energy Inc. and other persons or organizations designated by Xcel Energy Inc. In addition, the results in this report are dependent on contributions reported for the prior plan year and maintenance of funding balance elections after the valuation date. 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.

Assumptions and methods under ERISA and the Internal Revenue Code for funding purposes

The plan sponsor selected, as prescribed by regulation, key assumptions and funding methods (including the mortality assumption, asset valuation method and the choice among prescribed interest rates) employed in the development of the contribution amounts and communicated them to us in the letter(s) dated March 13, 2020. To the extent not prescribed by ERISA, the Internal Revenue Code and regulatory guidance from the Treasury and the IRS, or selected by the sponsor, the actuarial assumptions and methods employed in the development of the contribution amounts have been selected by Willis Towers Watson, with the concurrence of the plan sponsor. It is beyond the scope of this actuarial valuation to analyze the reasonableness and

appropriateness of prescribed methods and assumptions, or to analyze other sponsor elections from among the alternatives available for prescribed methods and assumptions. Other than prescribed assumptions, ERISA and the Internal Revenue Code require the use of assumptions each of which is “reasonable (taking into account the experience of the plan and reasonable expectations), and which, in combination, offer the actuary’s best estimate of anticipated experience under the plan.” The results shown in this report have been developed based on actuarial assumptions that, to the extent evaluated or selected by Willis Towers Watson, we consider to be reasonable. Other actuarial assumptions could also be considered to be reasonable. Thus, reasonable results differing from those presented in this report could have been developed by selecting different reasonable assumptions. Note that any subsequent changes in methods or assumptions for the 2020 plan year for any plan will change the results shown in this report for such plan, and could result in plan qualification issues under IRC §436 if the application of benefit restrictions is affected by the change.

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

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. The ASOP 51 appendices in the actuarial valuation reports to determine funding requirements for the plan year beginning January 1, 2020 dated March 31, 2020 (PSCo) and January 1, 2019 dated September 30, 2019 (All other plans) should be considered part of this report.

Assumptions and methods under US-GAAP

As required by U.S. GAAP, the actuarial assumptions and methods employed in the development of the pension cost and other financial reporting have been selected by Xcel Energy Inc. Willis Towers Watson has concurred with these assumptions and methods, except for the expected rate of return on plan assets selected as of January 1, 2020. A complete evaluation of the expected return assumption was outside the scope of Willis Towers Watson’s assignment and would have required substantial additional work that we were not engaged to perform. Based on information Willis Towers Watson received from Xcel Energy Inc.’s investment advisors, we do not believe the expected return on plan assets assumption is significantly biased. U.S. GAAP requires that each significant assumption “individually represent the best estimate of a particular future event.” The results shown in this report have been developed based on actuarial assumptions that, to the extent evaluated by Willis Towers Watson, we consider to be reasonable. Other actuarial assumptions could also be considered to be reasonable. Thus, reasonable results differing from those presented in this report could have been developed by selecting different reasonable assumptions. Note that any subsequent changes in methods or assumptions for the January 1, 2020 measurement date will change the results shown in this report.

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 (excluding MEC) is calculated based on plan assets allocated to each subsidiary in proportion to the PBO for each subsidiary. For 2020, pension cost for MEC has been calculated assuming the beginning of year asset value is \$0. 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.

Nature of actuarial calculations

The results shown in this report are estimates based on data that may be imperfect and on assumptions about future events that cannot be predicted with any certainty. The effects of certain plan provisions may be approximated, or determined to be insignificant and therefore not valued. Reasonable efforts were made in preparing these valuations to confirm that items that are significant in the context of the actuarial liabilities or costs are treated appropriately, and are not excluded or included inappropriately. Any rounding (or lack thereof) used for displaying numbers in this report is not intended to imply a degree of precision, which is not a characteristic of actuarial calculations. If overall future plan experience produces higher benefit payments or lower investment returns than assumed, the relative level of plan costs or contribution requirements reported in this valuation will likely increase in future valuations (and vice versa). Future actuarial measurements may differ significantly from the current measurements presented in this report due to many factors, including: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for the measurements (such as the end of an amortization period); or additional contribution requirements based on the plan's funded status; and changes in plan provisions or applicable law. It is beyond the scope of this valuation to analyze the potential range of future pension contributions, but we can do so upon request.

Limitations on use

This report is provided subject to the terms set out herein and in our engagement letter dated June 1, 2011 and any accompanying or referenced terms and conditions. The information contained in this report was prepared for the internal use of Xcel Energy Inc. and its auditors in connection with our actuarial valuation of the pension plans. It is not intended for and may not be used for other purposes, and we accept no responsibility or liability in this regard. Xcel Energy Inc. may distribute this actuarial valuation report to the appropriate authorities who have the legal right to require Xcel Energy Inc. to provide them this report, in which case Xcel Energy Inc. will use best efforts to notify Willis Towers Watson in advance of this distribution. Further distribution to, or use by, other parties of all or part of this report is expressly prohibited without Willis Towers Watson's prior written consent. Willis Towers Watson accepts no responsibility for any consequences arising from any other party relying on this report or any advice relating to its contents.

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 year beginning January 1, 2020 dated February 28, 2020 for all plans other than Workers' Compensation and LTD and for the plan year beginning January 1, 2020 to be delivered in the next month for the Workers' Compensation and LTD plan. The results are also based on the actuarial valuation reports to determine funding requirements for the plan year beginning January 1, 2020 dated March 31, 2020 for the PSCo Bargaining Plan and except as noted above the plan year beginning January 1, 2019 dated September 2019 for the other plans. Therefore, such information, and the reliances and limitations of the valuation report and its use, should be considered part of this letter.

Professional qualifications

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.



Mr. Richard R. Schrubbe
May 15, 2020

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 black ink.

Mark A. Afdahl, FSA, EA
Director, Retirement

Handwritten signature of Kristoff M. Hendrickson in black ink.

Kristoff M. Hendrickson, FSA, EA
Director, Retirement

Handwritten signature of Ali Rehan Rattansi in black ink.

Ali Rehan Rattansi, ASA, EA
Associate Director, Retirement

cc: Todd Degrugillier — Xcel Energy Inc.
Darla Figoli — Xcel Energy Inc.
Levi Glines — Xcel Energy Inc.
Kris Lindemann — Xcel Energy Inc.
Ruth Lowenthal — Xcel Energy Inc.
Garrett Mikrut — Xcel Energy Inc.
Debbie Robin — Xcel Energy Inc.
Jeff Savage — Xcel Energy Inc.
Sarah Soong — Xcel Energy Inc.
Brian Van Abel — Xcel Energy Inc.
Greg Zick — Xcel Energy Inc.

Mark Anderson — Willis Towers Watson
Beth Fernandez — Willis Towers Watson
Zach Hansen — Willis Towers Watson
Anne Judd — Willis Towers Watson
Scott Lund — Willis Towers Watson
Nancy Monson — Willis Towers Watson
Jim Shaddy — Willis Towers Watson
Ariah Tough — Willis Towers Watson

http://natct.internal.towerswatson.com/clients/609084A/XcelIRETActuarial-2020/Documents/Projections/May/L_05152020_Schrubbe_2020_Cost_Funding.docx

-

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

	Amortizations				Settlement Charge ¹	Aggregate Cost		January 1 Prepaid (Accrued)	Contribution	PBO
	Service Cost	Interest Cost	Expected Return on Assets	Prior Service Cost		Compensation Method	20-year Amortization Method			
2020										
Xcel Energy Pension Plan (XEPP)										
Discontinued Operations ²	-	2,572	(4,525)	-	1,392	-	N/A	35,792	3,493	76,854
Xcel Energy Nuclear	5,830	3,543	(6,236)	(214)	3,797	-	3,529	(7,919)	4,846	105,931
NSP - MN	21,118	27,680	(48,698)	179	31,904	-	27,855	320,792	39,113	836,251
NSP - WI	4,723	4,790	(8,441)	(24)	5,812	-	N/A	44,732	6,734	143,385
Xcel Services ³	23,511	22,522	(39,614)	(985)	20,625	-	N/A	95,273	30,787	675,394
XEPC (former EMI)	-	21	(35)	-	(7)	-	N/A	(22)	27	714
Mankato Energy Center ⁴	78	-	-	-	78	-	N/A	-	78	-
Total XEPP	55,260	61,128	(107,549)	(1,044)	63,601	-	31,384	488,648	85,078	1,838,529
NCE Non-Bargaining Pension Plan										
Discontinued Operations - Cheyenne	-	116	(200)	-	67	-	N/A	1,426	193	3,579
PSCo	3,875	6,204	(10,688)	(165)	3,117	-	N/A	15,687	10,379	191,074
SPS	2,484	2,632	(4,525)	(137)	3,093	-	N/A	20,024	4,428	81,928
Total NCE	6,359	8,952	(15,413)	(302)	6,277	-	N/A	37,137	15,000	276,581
SPS Bargaining Plan										
SPS	7,148	15,243	(24,816)	-	8,052	-	N/A	127,961	10,000	436,854
Total SPS	7,148	15,243	(24,816)	-	8,052	-	N/A	127,961	10,000	436,854
PSCo Bargaining Plan										
Discontinued Operations - Cheyenne	-	351	(529)	-	270	-	N/A	6,314	354	10,217
PSCo	26,603	39,586	(59,815)	(2,650)	29,708	-	N/A	255,652	39,646	1,138,688
Total PSco	26,603	39,937	(60,344)	(2,650)	29,978	-	N/A	261,966	40,000	1,148,905
Total Xcel Energy	95,370	125,260	(208,122)	(3,996)	107,908	-	31,384	915,712	150,078	3,700,869

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 Elongne

⁴ Cost reflects final census data. See May 15, 2020 letter for additional details.

Assumptions

Discount Rate - U.S. GAAP

XEPP 3.48%

NCE 3.39%

SPS 3.58%

PSCo 3.58%

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 15, 2020 letter for additional information on data, assumptions, methods, and plan provisions.

Contributions already made are allocated in accordance with the January 2, 2020 contribution directives.

© 2020 Willis Towers Watson. All rights reserved. Proprietary and Confidential. For Willis Towers Watson and Willis Towers Watson client use only

Pri-2012 Blue Collar, as adjusted for 2019 Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2019 methodology
Pri-2012 White Collar, as adjusted for 2019 Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2019 methodology

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

EXHIBIT II
Page 1 of 6

Amortizations

2020	Service Cost	Interest Cost	Expected Return on Assets	Prior Service Cost	Net (Gain)/Loss	Settlement Charge¹	Net Cost	January 1 Prepaid (Accrued)	Expected Benefit Payments
Discontinued Operations ²	-	22	-	-	(58)	-	(36)	(1,265)	91
Xcel Energy Nuclear	98	23	-	-	2	-	123	(715)	63
NSP - MN	34	104	-	-	309	-	447	(345)	436
NSP - WI	17	15	-	-	4	-	36	(448)	50
PSCo ³	54	87	-	-	294	-	435	(8)	472
SPS	15	64	-	-	170	-	249	(416)	275
Xcel Services ⁴	840	848	-	133	1,143	2,000	4,964	(17,481)	6,663
XEPC (former EMI)	-	-	-	-	(2)	-	(2)	(24)	-
Total Xcel Energy	1,058	1,163	-	133	1,862	2,000	6,216	(20,702)	8,050

¹ Settlement charge of \$2M is a high-level estimate and assumes \$3.6 million of lump sum payments representing approximately 9% of the projected liability

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

³ Includes Fort St. Vrain

⁴ Includes Eloigne

Assumptions

Discount Rate	3.33%
Salary Scale (career average)	3.75%
Assumed Mortality Table	Pri-2012 White Collar, as adjusted for 2019 Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2019 methodology

See May 15, 2020 letter for additional information on data, assumptions, methods, and plan provisions.

© 2020 Willis Towers Watson. All rights reserved. Proprietary and Confidential. For Willis Towers Watson and Willis Towers Watson client use only

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	
2020							
Discontinued Operations ¹	-	242	(75)	(111)	57	113	606
Xcel Energy Nuclear	16	33	-	95	(9)	135	20
NSP - MN ²	143	2,466	(115)	(3,014)	1,279	759	6,880
NSP - WI	35	429	(14)	(337)	240	353	1,140
PSCo	248	12,690	(17,378)	(3,762)	1,542	(6,660)	-
SPS ³	1,021	1,448	(1,897)	(425)	(411)	(264)	-
Xcel Services ³	54	968	(37)	(365)	577	1,197	1,645
XEPC (former EMI)	-	1	-	-	(3)	(2)	2
Total Xcel Energy	1,517	18,277	(19,516)	(7,919)	3,272	(4,369)	10,293

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

²Includes Elbogne and Seren.

³Includes Executive Life Insurance benefits.

Assumptions

Discount Rate	3.47%
Expected Return on Assets	4.50%
Medical Trend	Pre-65
Initial (2020)	6.00%
Ultimate	4.50%
Year Ultimate Reached	2023
Assumed Mortality Table	

Bargaining:

Non-bargaining: PriH-2012 Blue Collar headcount-weighted table adjusted for Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2019 methodology.
 PriH-2012 White Collar headcount-weighted table adjusted for Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2019 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 15, 2020 letter for additional information on data, assumptions, methods, and plan provisions.

© 2020 Willis Towers Watson. All rights reserved. Proprietary and Confidential. For Willis Towers Watson and Willis Towers Watson client use only

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

Exhibit VI
Page 1 of 1

<i>Fiscal Year Ending</i>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>
	Actual	Actual	Budget	Budget	Budget	Budget	Budget
U.S. GAAP							
<i>Discount Rate- Workers' Compensation</i>	4.25%	3.41%	3.41%	3.41%	3.41%	3.41%	3.41%
<i>Former NSP - Workers' Compensation¹</i>							
<i>MN/SD</i>	(1,517)	707	210	197	182	171	159
<i>MI/WI</i>	(22)	(46)	2	2	3	2	3
<i>Subtotal</i>	(1,539)	661	212	199	185	173	162
<i>Former NCE - Workers' Compensation¹</i>							
<i>Colorado - PSCo</i>	(250)	95	40	39	37	36	34
<i>Deductible States - Workers' Compensation</i>							
<i>Deductible States - SPS (KS, OK, NM, and TX)</i>	-	-	-	-	-	-	-
Total Xcel Energy Workers' Compensation	(1,789)	756	252	238	222	209	196
<i>Discount Rate - LTD Income</i>	4.25%	3.41%	3.41%	3.41%	3.41%	3.41%	3.41%
LTD Income							
<i>Discontinued Operations - Cheyenne</i>	11	(27)	3	1	2	2	-
<i>Discontinued Operations²</i>	89	93	19	17	17	15	14
<i>NSP-MN</i>	(153)	516	177	166	156	146	137
<i>NSP-WI</i>	(16)	(54)	36	33	31	29	28
<i>PSCo</i>	70	177	25	21	16	14	11
<i>SPS</i>	(76)	79	9	6	4	2	1
<i>Utility Engineering</i>	(3)	(3)	1	1	1	2	-
<i>Xcel Services</i>	3	93	6	6	4	4	3
<i>XEPC</i>	-	-	-	-	-	-	-
Total Xcel Energy LTD Income	(75)	874	276	251	231	214	194
Total Xcel Energy U.S. GAAP	(1,864)	1,630	528	489	453	423	390

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.

See May 15, 2020 letter for additional information on data, assumptions, methods, and plan provisions.

© 2020 Willis Towers Watson. All rights reserved. Proprietary and Confidential. For Willis Towers Watson and Willis Towers Watson client use only