BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Nancy Lange	Chair
Dan Lipschultz	Commissioner
Matthew Schuerger	Commissioner
Katie J. Sieben	Commissioner
John A. Tuma	Commissioner

In the Matter of Northern States Power Company's Petition for Approval of its 2016–2018 Triennial Nuclear Plant Decommissioning Accrual

ISSUE DATE: February 27, 2017

DOCKET NO. E-002/M-14-761

ORDER DIRECTING XCEL TO ANALYZE FUND INVESTMENTS AND RETAIN OUTSIDE EXPERT

PROCEDURAL HISTORY

Every three years since 1987, the Commission has undertaken complete review of the financial plan to decommission the Monticello and Prairie Island Nuclear Generating Facilities.[1] In the years between triennial filings, Northern States Power Company d/b/a Xcel Energy (Xcel or the Company) files an annual letter discussing the financial performance of funds accrued for the eventual decommissioning.

On October 5, 2015, the Commission issued an order approving Xcel's most recent decommissioning study and setting additional filing requirements for its annual informational report.

On April 1, 2016, Xcel filed its annual informational report.

On August 15, 2016, the Minnesota Department of Commerce (the Department) filed comments on the report, recommending changes in Xcel's investment strategy and reporting requirements.

By September 6, 2016, Xcel and the Department had each filed reply comments.

On December 21, 2016, the Commission met to consider the matter.

[1] The Commission required periodic reviews prior to 1987, but less frequently. *In the Matter of the Petition of Northern States Power Company for Depreciation Certification for Expected Decommissioning Costs for the Monticello and Prairie Island Nuclear Steam Generating Facilities*, Docket No. E-002/D-86-604, Findings of Fact, Conclusions of Law and Order (October 27, 1987).

FINDINGS AND CONCLUSIONS

I. Summary

In this order the Commission directs Xcel to include in its annual filing the average annual return on the Nuclear Decommissioning Trust Fund (NDT) portfolio, as well as the returns on a variety of other investment alternatives, calculated over a variety of periods.

The Commission also directs Xcel to re-evaluate its investment mix in order to reduce management fees and increase returns, and to retain a third-party expert to evaluate the NDT's investment strategy.

II. Background

A. Xcel's Nuclear Power Plants

Xcel operates three nuclear-powered generators. The federal Nuclear Regulatory Commission has licensed the Monticello Nuclear Generating Plant to operate through 2030, and the two generators at the Prairie Island Nuclear Generating Plant to operate through 2033 and 2034.

The Commission seeks to ensure that the rates Xcel charges for electricity reasonably reflect the expected cost to decommission its nuclear facilities, spread over the expected lives of the plants. Periodically the Commission reviews Xcel's plans for decommissioning the plants at the end of their operating lives. The primary purpose of this review is to estimate the cost to decontaminate and remove the nuclear facilities. Based on that cost estimate, the Commission approves accrual and investment plans intended to provide sufficient resources to pay the future decommissioning costs. The Commission directs Xcel to deposit these accruals in the NDT.

B. Nuclear Plant Decommissioning Trust Funds

A public utility may accrue funds for decommissioning a nuclear power plant via a nuclear plant decommissioning trust fund, provided the fund meets certain criteria.[2] However, the creation of a decommissioning fund that meets the criteria does not relieve the utility of its obligations to decommission its nuclear power plants.[3]

The fund must be independent of the utility.[4] The utility may provide overall investment policy to the fund's trustees or investment managers in writing.[5] The utility should monitor the performance of all fund managers, and replace them if they are not acting properly.[6] But the utility must not act as the investment manager, engaging in day-to-day management of the fund or mandating individual investment decisions.[7]

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[2] 18 C.F.R. § 35.32(a).

[3] *Id.* § 35.32(b).

[4] *Id.* § 35.32(a)(1).

[5] *Id.* § 35.32(a)(2).

[6] *Id.* § 35.32(e).

[7] *Id.* § 35.32(a)(2).

The fund's investment managers must exercise the standard of care that a prudent investor would use in the same circumstances.[8] In particular, the utility and the managers shall bear tax consequences in mind when selecting investments.[9]

Fund assets must not be diverted to any purpose other than decommissioning the nuclear power plant or paying the fund's administrative costs, unless otherwise authorized by the Federal Energy Regulatory Commission (FERC).[10] If the Fund balance grows beyond the amount that the utility will need to decommission its nuclear plants, the utility must return the excess to ratepayers after decommissioning has been completed.[11]

C. The Commission's October 5, 2015 Order

In its most recent informational filing of April 1, 2016, Xcel sought to respond to the Commission's October 5, 2015 order, including the following ordering paragraphs:

> 7. The Commission approves a change in the investment mix to a target weight of 50% equities.
>
> 8. In its next annual decommissioning filing, Xcel shall include possible benchmarks and methodologies for assessing annual performance of the Qualified Trust [NDT] Fund.[12] The filing must include, at a minimum proposals for:
>
>   a. Annual performance benchmarks.
>
>   b. The date the Qualified Trust Fund's achieved returns will be measured against the benchmarks.
>
>   c. The date Xcel will make a compliance filing comparing the Qualified Trust Fund's achieved returns to the benchmarks.
>
>   and a discussion of:
>
>   d. The acceptable deviation level between the performance benchmarks and the Qualified Trust Fund's achieved returns. (For example: 100 basis points.)
>
>   e. The amount of any true-up, in dollars, that falls outside of the acceptable band, if applicable.

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[8] *Id.* § 35.32(a)(3).

[9] *Id.* § 35.32(a)(9).

[10] *Id.* § 35.32(a)(6).

[11] *Id.* § 35.32(a)(7).

[12] The Commission used the term *Qualified Trust Fund* to distinguish between the NDT, which qualifies for special tax treatment, and an escrow fund. This distinction is no longer required because the Commission authorized the consolidation of these two funds. October 5, 2015 Order at 7 (Ordering Paragraph 4).

f. The date on which the true-up would take place.[13]

III. Xcel's Informational Report

A. Investment Philosophy

Xcel states that it has instructed the NDT managers to invest with four dynamics in mind.

First, because Xcel does not anticipate needing to decommission any of its nuclear generators for many years, and anticipates maintaining a balance through 2091, the managers can take advantage of long-term investment opportunities. This means that the managers may pursue investments that are unprofitable in the short run but remunerative in the longer term.

Second, because the fund will operate for many years, the fund managers should bear in mind the goal of offsetting the effects of inflation over this period.

Third, the NDT assets are subject to federal taxes. Consequently, the fund's managers should invest not with the goal of achieving the highest gross returns, but the highest returns net of taxes.

Fourth, the fund's size permits the investors to invest in a diverse range of assets. This promotes stability by minimizing the risk that a large share of the classes would lose value simultaneously. Consistent with the Commission's October 5, 2015 order, Xcel has directed the fund managers to increase the share of the fund invested in stocks from 35 percent to 50 percent, while reducing the share invested in fixed income assets (such as bonds) to 15 percent, and the amount invested in other assets to 35 percent.

B. Investment Performance and Proposed Benchmark

In response to the Commission's directive to propose a performance benchmark for the NDT, Xcel proposes the following:

Because the NDT managers invest in 13 separate asset classes, Xcel proposes to create a benchmark that reflects this level of diversification. Specifically, Xcel invites the Commission to compare the NDT performance to a composite benchmark calculated based on the weighted sum of the performances of 13 investor industry benchmarks corresponding to the 13 asset classes. For example, if a NDT trust manager had the responsibility for investing 10 percent of the fund balance in U.S. corporations, Xcel's proposed benchmark would give a 10 percent weight to the performance of the Russell 3000 stock index, a familiar measure of the growth of the U.S. stock market generally.

When Xcel compares the growth of the NDT to the growth of its proposed benchmark, Xcel finds that the fund has grown faster than the benchmark by an average of 1.4 percent per year since 2009—even after accounting for the fees charged by the fund managers.

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[13] This docket, Order Approving Nuclear Decommissioning Study, Assumptions, and Annual Accrual, and Setting Filing Requirements, at 7 (October 5, 2015).

Xcel proposes that the Commission evaluate the performance of the fund and the benchmark over the five-year period ending December 31, 2020—although Xcel is also open to comparing the fund and the benchmark over some different five-year periods. In any event, Xcel proposes to include information on the growth of the NDT in its regular April 1 compliance filings.

IV. The Department's Position

A. Overview

The Department agrees that the NDT's asset allocation is based on sound economic theory, and that the returns that the NDT has earned on each of its asset classes exceeds the appropriate benchmarks. But given the length of time over which the fund will be earning returns, the Department argues that Xcel has adopted an excessively conservative investment strategy that gives undue emphasis to avoiding losses at the expense of achieving gains. In other words, Xcel's arguments in defense of the fund's investment strategies overstate the benefits of diversification, and understate the cost of the investment strategy.

B. Questions Regarding Actively Managed Funds

The Department questions the merits of hiring 11 separate investment firms to manage the fund's various asset classes at an annual cost of $10.6 million. The Department argues that investing in investment indexes also provides diversification, because the indexes reflect a standardized bundle of multiple securities. And the Department argues that actively traded funds tend to grow slower than funds invested in comparable investment indexes, in part because indexed funds incur lower management fees.

C. Questions Regarding Extent of Diversification

Investors value diversification when the growth rates in various investments are uncorrelated—that is, when one investment is unlikely to grow or shrink in sync with other investments, and therefore fluctuations in the growth rates of any one class will tend to offset fluctuations in the other classes.

But the Department argues that some of Xcel's asset classes seem highly correlated. For example, the growth rate for the class that invests in the stocks of U.S. firms with relatively small capitalization (US Small Cap Equity) correlates 93 percent with the growth rate for the class that invests in the stock of U.S. firms not traded on public exchanges (US Private Equity). Yet the return on U.S. Private Equity exceeds the return on U.S. Small Cap Equity.

If the fund's managers had taken the funds invested in U.S. Small Cap Equity and instead added it to the amounts invested in U.S. Private Equity, the fund could have increased its returns and avoided the management fees associated with the U.S. Small Cap Equities, while incurring only a small increase in risk.

D. Questions Regarding Risk/Reward Trade-Off

Xcel emphasizes that the assets under active management earn more than comparable benchmarks of growth for the same asset class. But the Department argues that many of these assets grow so slowly as to be inappropriate for a fund with a planning horizon as long as the NDT. The Department disputes Xcel's claim that the NDT's investment strategy is justified either by its high returns relative to its risk, or its low risk relative to its returns.

The Department argues that the NDT has grown more slowly than either stocks or bonds, whether measured over the past 10 years or over the past 20. Specifically, the fund has grown more slowly than the Standard & Poor's 500 Index (S&P 500), a collection of stocks from the largest 500 firms traded on the New York Stock Exchange and the NASDAQ Stock Exchange. This outcome is perhaps not surprising: The S&P 500 consists entirely of equities, which have both the largest potential for growth and the greatest risk. However, the NDT also underperformed United States Treasury Securities with a 10-year maturity (10-year Treasury Notes). Treasury notes have virtually no risk of default because payments come directly from the U.S. Treasury.

Similarly, the Department finds that the NDT grew more slowly than did investment strategies that include a variety of investment options. For example, the Department calculated that the NDT grew more slowly than would a fund invested using a collection of investment indexes provided by the Vanguard brokerage firm, allocated using the Moderately Aggressive Growth Allocation proposed by the Charles Schwab brokerage firm, as follows:

Fund Name	Weight
Vanguard Large Cap Exchange Traded Fund (ETF)	45%
Vanguard Small Cap ETF	15%
Vanguard Total World Stock ETF	20%
Vanguard LT Corporate Bond ETF	20%

Finally, the Department expressed its strongest concerns about the fund's investment in relatively exotic assets such as hedge funds, real estate, commodities, and debt issued by privately held companies and emerging markets. The Department questioned whether the returns were commensurate with the added risk and loss of liquidity. In analyzing these assets, the Department calculated the asset class's Sharpe ratio (measuring return per unit of risk) and the class's required rate of return based on the Capital Asset Pricing Model (CAPM); both of these measures indicated that the cost of these investments was not worth the risk.

E. Questions Regarding Prohibitions on Incentive Plans

The Department disputes Xcel's argument that FERC regulations bar the creation of an incentive mechanism. The Department acknowledges that the regulations restrict the use of dollars that have been deposited into the fund, but the Department is not persuaded that the rules bar the creation of an incentive mechanism that might operate outside the fund.

Moreover, the Department argues that the Commission acknowledged the need to evaluate the performance of the NDT's managers based on how the fund grows relative to some benchmark investment:

> [T]he Commission agrees with the Department's view that an appropriate benchmark to evaluate investment performance is needed, and that the Company should expect that fund performance will not just be evaluated, but regulated to ensure investment incentives and performance are consistent with ratepayer interests.[14]

[14] October 5 order, at 5.

F. Recommendations

In conclusion, the Department offers three general recommendations:

First, the Department recommends that NDT managers re-evaluate the fund's investment mix with the purpose of increasing returns and reducing fees, and sell off most of the investments in exotic assets.

Second, the Department recommends that Xcel annually report the annual returns on the NDT, on each of the fund's asset classes, and on a variety of alternative investment options.

Third, the Department recommends that the Commission create an incentive mechanism to reward or penalize Xcel to the extent that the NDT's growth rate over the prior five years exceeds or lags the growth rate of a benchmark portfolio of investments by more than 100 basis points (1.0 percent). As a benchmark, the Department recommends using a portfolio of investment indexes allocated according to the Charles Schwab Moderately Aggressive Growth Allocation, discussed above.

V. Xcel's Reply

A. Opposition to the Department's Investment Strategies

The Department argues that the NDT managers should invest 80 percent of the fund's assets in stocks and 20 percent in cash investments (such as certificates of deposit or CDs) or assets providing fixed returns (such as bonds). While Xcel supported the Commission's decision to increase the share of the fund invested in stocks to 50 percent in order to accelerate the fund's growth, Xcel argues that the Department's recommendation goes too far.

According to Xcel, investing 80 percent of the fund's assets in stocks would be inconsistent with mainstream investment strategy for a fund such as the NDT, and inconsistent with the strategies employed by other nuclear decommissioning trust funds that Xcel has analyzed. Xcel acknowledges that the Department's allocation would have performed well since 2008 as the U.S. stock market rebounded following the recent recession. But the Commission previously concluded that this fact would not justify tampering with the fund's resource allocations:

> The Commission is persuaded not to impose at this time on the Company's investment strategies. As the Company explained at the Commission meeting, because of fund structure and other limitations, the historic performance of the fund is not necessarily illustrative of the performance of the Company's proposed strategy.[15]

Indeed, Xcel's analysis suggests that prospectively the NDT's current asset allocation will grow faster than the Department's benchmark. In part, this reflects the fact that the Department's proposed allocation would increase the share of the fund's wealth invested in cash and fixed income assets, which tend to be less risky but also less remunerative than stocks over time.

[15] October 5 order, at 5.

Also, while the Department objects to the cost of retaining 11 firms for investing in various asset classes, Xcel argues that the growth achieved by these asset classes is greater than the growth of benchmarks for each of the classes, even after accounting for the cost of their fees.

B. Opposition to Incentive Structure Tied to Benchmarks

Xcel opposes creating financial incentives to encourage Xcel to get the NDT to grow at the same rate as a benchmark, citing three arguments.

First, Xcel argues that such incentives are unnecessary because Xcel already has incentive to maximize the fund's returns for a given level of risk. Federal regulations declare that Xcel has a fiduciary duty to maximize the fund's returns for a given level of risk,[16] and that the existence of the fund does not relieve Xcel of any duty to provide for decommissioning its plants.[17]

Second, Xcel argues that any mechanism to reward or punish Xcel for how the NDT grows in the short run would only distract the fund managers from focusing on the long term. As the deadline for any comparison approached, fund managers would have an incentive to invest in riskier assets in the hope of boosting returns in the short run. This would tend to make the fund riskier than intended—and, in any event, would cause the investors to incur needless costs in abandoning long-term investments prematurely in order to pursue short-term gain.

And ultimately, Xcel argues, a decision to reward and punish Xcel based on whether the fund grew at the same rate as a benchmark would drive Xcel to invest the fund's assets in the same manner as the benchmark.

Third, Xcel argues that an incentive mechanism would likely conflict with federal rules. Those rules clarify that the fund managers are not liable for ensuring that the fund's balance reaches the amount required for decommissioning the plant. Also, it could be challenging to design a system of rewards and punishments for achieving investment benchmarks, given that federal rules restrict the use of the fund's assets for purposes other than paying for decommissioning.[18]

C. Recommendation

In sum, Xcel argues that the NDT is invested in a manner that achieves the benefits of diversity, tax management, and inflation management, and that the fund is growing at a faster pace than its benchmarks even after accounting for management fees. Consequently, Xcel argues for maintaining its current investment strategy—at least until it has gained five years of experience implementing the new asset allocation of 50 percent stocks.

In any event, Xcel emphasizes that the utility has little financial stake in this matter. According to Xcel, the NDT functions to offset the amount that future ratepayers must contribute to decommission Xcel's nuclear generators, and any difference between the fund balance and the decommissioning costs will accrue to those ratepayers.[19] Consequently the path of least

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[16] 18 C.F.R. § 35.32(a)(3).

[17] *Id*., § 35.32(b).

[18] *Id*., § 35.32(a)(6).

[19] *Id*., § 35.32(a)(7).

resistance for Xcel would be to simply accept the Department's proposals. Nevertheless, Xcel is making the effort to oppose the Department's recommendations—not due to self-interest, Xcel claims, but out of a sincere desire to promote the ratepayers' best interest.

VI. Commission Action

A. Introduction

Investment strategies can be difficult to evaluate because, as the Commission previously acknowledged, the historic performance of the fund is not necessarily illustrative of the performance of the Company's proposed strategy.[20] This poses a challenge for the person who selects an investment strategy—as well as for those who must evaluate the results of that strategy.

The Commission observes that the NDT has earned rather modest returns over the span of 20 years or more, yet the Commission has thus far been unable to fashion an appropriate remedy. Consequently, the Commission will now adopt a two-pronged approach for addressing this matter: The Commission will direct Xcel to include more information in its annual April 1 informational filings to provide additional perspective from which to evaluate the fund's performance. And the Commission will direct Xcel to re-evaluate how the fund is currently invested, and to retain a third party expert to conduct his or her own evaluation.

B. Additional Reporting

First, the Commission will direct Xcel to provide additional information in its annual April 1 informational filings to provide context for evaluating the performance of the NDT. The additional information will include the growth rates of various investment alternatives, calculated over various periods.

The Commission will continue to direct Xcel to report on the growth in the NDT. Given Xcel's emphasis on the distinctions among asset classes, the Commission will also direct Xcel to report on the growth of each asset class within the NDT.

The Commission will further direct Xcel to file information on the growth rates of other benchmarks it has cited, including the growth rates of other nuclear decommissioning funds. If Xcel identifies some other benchmarks that it believes would provide additional perspective on the fund's performance—or if Xcel and the Department agree on some benchmarks—Xcel should feel free to include them as well.

The Commission will also direct Xcel to incorporate many of the benchmarks cited by the Department. These include the Standard & Poor's 500 stock market index and 10-year Treasury notes. And they include the Department's favored benchmark, consisting of Vanguard ETFs allocated according to the Charles Schwab Moderately Aggressive Allocation, discussed above.

Finally, the Commission will direct Xcel to report on each of these investment alternatives every April 1, calculated for a period covering the prior five, ten, and twenty calendar years.

[20] October 5 order, at 5.

The Commission acknowledges that it only recently authorized changing the investment mix in the NDT to 50 percent equities, 15 percent fixed income securities, and 35 percent other investments. It is understood that Xcel will not be able to provide a full evaluation of this investment mix until after December 31, 2020. Nevertheless, by reviewing the performance of a variety of investment alternatives, over a variety of periods, the Commission will be able to gain a better perspective from which to evaluate the NDT's performance.

C. Re-evaluation of Investments

Second, the Commission shares the Department's concerns about the low growth and high fees associated with the NDT's investments strategy. Consequently, the Commission will adopt the Department's recommendation to direct Xcel to re-evaluate the fund's investment strategy.

In addition, the Commission will direct Xcel to retain a third-party expert in long-term institutional investment strategies to also evaluate Xcel's investment strategy. This expert will analyze how the fund's assets could best be invested to ensure that the trust amasses sufficient funds to meet the decommissioning costs by the time they will have to be borne, and maximize the return from the investment consistent with the appropriate risk level. The expert will be charged with the duty of filing a report on his or her conclusions within six months.

By pursuing these two paths—acquiring objective information about alternative investment opportunities, as well as receiving more subjective recommendations of knowledgeable parties—the Commission will lay the foundation for making further decisions about the NDT in the future.

ORDER

1. Xcel shall include in its annual compliance filings in this docket the following information:

   A. the average annual return on –

      1) the Nuclear Decommissioning Trust Fund (NDT) portfolio, including and the return on each individual asset,

      2) the Standard & Poor's 500 stock market index,

      3) 10-year treasury notes,

      4) other qualified nuclear decommissioning trust funds,

      5) any other benchmarks proposed by Northern States Power Company d/b/a Xcel Energy, or jointly by Xcel and the Minnesota Department of Commerce, and

      6) Vanguard Exchange-Traded Funds (ETFs) invested according to the Charles Schwab Moderately Aggressive Asset Allocation as set forth below:

Fund Name	Weight
Vanguard Large Cap ETF	45%
Vanguard Small Cap ETF	15%
Vanguard Total World Stock ETF	20%
Vanguard LT Corporate Bond ETF	20%

B. calculated over the five-, ten-, and twenty-year periods ending in the calendar year preceding the filing.

2. Regarding the investment strategy of the NDT:

   A. Xcel shall re-evaluate its investment mix with the purpose of reducing the NDT's investment management fees and increasing the annual return on its investment portfolio.

   B. Xcel shall retain a third-party expert in long-term institutional investment strategies to evaluate Xcel's investment strategy with respect to the NDT with a goal of assuring sufficient funding to meet the decommissioning obligations at the time they are expected to come due and maximize return from the investment consistent with the appropriate risk level. The expert shall file a report on the matter with the Commission within six months of this order.

3. This order shall become effective immediately.

BY ORDER OF THE COMMISSION

Daniel P. Wolf
Executive Secretary