

Chapter 30

SaskPower—Maintaining Above-Ground Assets Used to Distribute Electricity

1.0 MAIN POINTS

Reliable electricity is critical to economic growth and security, as well as for Saskatchewan residents to maintain their expected quality of life. Saskatchewan Power Corporation is responsible for maintaining its infrastructure to provide customers with safe, reliable power sources and to reduce unplanned power outages.

By July 2024, we found SaskPower implemented the final two recommendations we first made in 2018 about its processes to maintain above-ground distribution assets (e.g., voltage regulators).

SaskPower formally assessed and reported to senior management about the consequences of not completing planned maintenance for above-ground assets (e.g., risk of power outage or safety issues). Senior management signed off on maintenance deferrals with potentially significant impact—there were two such deferrals in 2023–24.

Formally assessing and reporting the consequences of not completing planned maintenance helps to ensure the right maintenance is done at the right time.

2.0 INTRODUCTION

2.1 Background

Saskatchewan Power Corporation is the principal supplier of electricity in Saskatchewan, under the mandate and authority of *The Power Corporation Act*. Each year, it generates, transmits, and distributes power to more than 550,000 customers over approximately 652,000 square kilometers.¹

SaskPower is responsible for the maintenance and capital replacement/refurbishment of assets used to distribute electricity—both above and below ground. At March 31, 2024, it recorded a net book value for distribution assets of about \$3.2 billion, including around 145,000 circuit kilometers of distribution lines (i.e., average of three customer accounts per circuit kilometre).²

Figure 1 describes the above-ground assets used to distribute electricity included in our follow-up audit.³

¹ *SaskPower 2023–24 Annual Report*, p. 11.

² *Ibid.*, pp. 5 and 78.

³ We excluded wood poles from this follow-up audit as we did not find significant gaps in SaskPower's maintenance processes relating to this asset category in our original audit.

**Figure 1—Description of Above-Ground Distribution Assets Included in Follow-up Audit**

Asset Type	Purpose
Voltage Regulator	<ul style="list-style-type: none"> Continually adjusts (raises or lowers) the voltage on the distribution system to ensure customers receive power within acceptable limits
Recloser	<ul style="list-style-type: none"> Automatically isolates the distribution system to protect the public and prevent irreparable damage to assets from a sustained short circuit Improves service continuity by automatically isolating and restoring power to power lines during momentary interruptions, such as from lightning or wildlife contacts
Overhead Switch	<ul style="list-style-type: none"> Enables isolation of a power-line section, resulting in fewer customers affected when an outage is required for scheduled maintenance or repairs; allows customers to be serviced from different feeders during a power outage so electricity can be restored while repairs are ongoing
Capacitor Bank	<ul style="list-style-type: none"> Stores electrical energy to help tune and optimize the operation of the distribution network, thereby deferring the need and expense of additional capacity on the electrical delivery system
Poletop Transformer	<ul style="list-style-type: none"> Transforms higher voltages from distribution power lines down to a useable voltage that end users can utilize; provided as close to customers' sites as possible to avoid energy losses amplified at lower voltages
Power-Line Conductor	<ul style="list-style-type: none"> Electrical wires and associated hardware that transmit electrical energy along long distances; consists of one or more conductors (i.e., physical wire) suspended by towers or poles, often in groups of three.

Source: Office of the Provincial Auditor of Saskatchewan from SaskPower records.

Planning for and completing required maintenance is essential for providing customers with a reliable source of power in a safe and cost-effective way.

2.2 Focus of Follow-Up Audit

This chapter describes our second follow-up audit of management's actions on the two remaining recommendations we made in 2018.⁴

We concluded Saskatchewan Power Corporation had effective processes for the period ended April 30, 2018, except in the areas of our seven recommendations, to maintain above-ground assets used to distribute electricity. By March 2022, SaskPower implemented five of our seven recommendations.⁵

To conduct this audit engagement, we followed the standards for assurance engagements published in the *CPA Canada Handbook—Assurance* (CSAE 3001). To evaluate SaskPower's progress toward meeting our recommendations, we used the relevant criteria from the original audit. SaskPower management agreed with the criteria in the original audit.

To perform this follow-up audit, we discussed with management actions taken relating to the outstanding recommendations and examined supporting documents (e.g., maintenance deferral assessments, reports to senior management).

3.0 STATUS OF RECOMMENDATIONS

This section sets out each recommendation including the date on which the Standing Committee on Crown and Central Agencies agreed to the recommendation, the status of the recommendation at July 5, 2024, and Saskatchewan Power Corporation's actions up to that date.

⁴ *2018 Report – Volume 2, Chapter 25*, pp. 169–189.

⁵ *2022 Report – Volume 1, Chapter 25*, pp. 239–248.

3.1 Consequences Assessed for Deferred Maintenance

We recommended where Saskatchewan Power Corporation does not follow its plan for maintaining above-ground assets used to distribute electricity, it formally assess the consequences of not completing such maintenance.

(2018 Report – Volume 2, p. 185, Recommendation 6; Crown and Central Agencies Committee agreement September 17, 2019)

Status—Implemented

Saskatchewan Power Corporation formally assessed the consequences of not completing planned corrective maintenance for above-ground distribution assets.

By July 2024, SaskPower required quarterly comparisons of planned and completed corrective maintenance. Staff from its asset planning and operations divisions discussed reasons for maintenance behind or ahead of schedule, and adjusted plans to complete maintenance accordingly. At the end of the fiscal year, they recorded decisions to defer maintenance to another year and the consequences of not completing the maintenance as planned (e.g., risk of power outage or safety issues). If the deferred maintenance exceeded pre-established thresholds (e.g., change greater than 10% of overall planned work for a geographical area), the divisions required approval from senior management (e.g., relevant vice-president) for the change.

We found SaskPower documented incomplete maintenance, consequences of not completing planned maintenance as of March 31, 2024, and actions required to address the incomplete maintenance. We also found senior management approved, as required, the two maintenance deferrals that exceeded its pre-established thresholds.

Formally assessing and determining the consequences of not completing planned corrective maintenance decreases the risk of distribution asset failure. Such failures can contribute to more and/or longer unplanned power outages and higher costs for repairing or replacing assets.

3.2 Reports to Senior Management Outline Maintenance Activities and Deferral Consequences

We recommended Saskatchewan Power Corporation regularly report to its senior management on the status of its maintenance activities and, if applicable, the consequences of not completing planned maintenance for above-ground assets used to distribute electricity. (2018 Report – Volume 2, p. 188,

Recommendation 7; Crown and Central Agencies Committee agreement September 17, 2019)

Status—Implemented

Saskatchewan Power Corporation reported quarterly to its senior management on the status of maintenance activities, including all maintenance activities completed for above-ground distribution assets and the consequences of not completing planned maintenance.



In 2023, SaskPower established a policy and related procedures setting out maintenance reporting requirements. Its procedures require quarterly reports to its Operations Executive Committee showing planned to actual and forecasted activity, along with explanations for differences. The procedures also require details for added, cancelled, and deferred maintenance activities with documented consequences for the changes.

SaskPower documented its processes for preparing reports to senior management to support consistent reporting over time, including thresholds for when to explain variances between planned and actual results.

We found SaskPower prepared reports for senior management for all four quarters in 2023–24 as expected, which included all types of preventative and corrective maintenance applicable to above-ground distribution assets. The fourth quarterly report provided details of incomplete maintenance deferred to the next year with explanations of the consequences of deferring such maintenance.

Comprehensive reports to senior management about maintenance completed and consequences of not completing expected maintenance help senior management assess whether the right maintenance is done at the right time.