Saskatchewan Power Corporation

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Main points

SaskPower, as a power-producer, must operate with a very long-time horizon. Power plants are expected to operate for up to 50 years. Maintaining and building power plants is expensive. SaskPower spends about $125 million each year to maintain its plants. Over the last five years, SaskPower has invested $1 billion in its plants. SaskPower expects to continue making large investments in plants over the next 20 years to deal with both aging plants and growing electricity needs. The longer-term nature of the power industry, along with the high cost of infrastructure, increases the importance of good planning.

This chapter reports on the adequacy of SaskPower's processes at December 31, 2005 to plan for its infrastructure needs related to generating electricity. These processes help make sure SaskPower supplies enough electricity to meet the province's electricity needs. The chapter notes SaskPower had good processes to identify its power generation needs and set strategies to manage its plants. SaskPower needs to better document its processes and improve processes to ensure analyses of risks and alternative strategies are consistent.

Also, for the year ended December 31, 2005, SaskPower, its three subsidiaries, and the Power Corporation Superannuation Plan each had reliable financial statements, had adequate processes to safeguard public resources, and complied with the authorities governing their activities related to financial reporting, safeguarding public resources, revenue raising, spending, borrowing, and investing.

Introduction

Saskatchewan Power Corporation (SaskPower) is the principal supplier of electricity in Saskatchewan. SaskPower generates, buys, distributes, and sells electricity to more than 400,000 customers.

SaskPower prepares consolidated financial statements to report on its activities. The consolidated financial statements include the financial activities of SaskPower and the companies it wholly owns and controls.

In 2005, SaskPower had revenue of $1.3 billion and net income of $135 million. At December 31, 2005, it held assets of $4.1 billion.

SaskPower owns three companies: NorthPoint Energy Solutions Inc., SaskPower International Inc., and Power Greenhouses Inc. As well, SaskPower sponsors and manages the Power Corporation Superannuation Plan. The following provides a brief description of each. SaskPower makes its annual report and the audited financial statements of its subsidiaries available to the public at http://www.saskpower.com/aboutus/corpinfo/corpinfo.shtml.

NorthPoint Energy Solutions Inc. (NorthPoint)

NorthPoint trades electricity. The trading functions include selling power and buying power for domestic use when a shortfall occurs or lower cost power is available. Effective January 1, 2005, NorthPoint manages SaskPower's natural gas supplies for its natural-gas fired power plants.

In 2005, NorthPoint had revenue of $53.5 million including $7.2 million in service fees from SaskPower and net income of $12.2 million. At December 31, 2005, it held total assets of $33.7 million. Additional information is available at http://www.northpointenergy.com.

SaskPower International (International)

As part of SaskPower's diversification strategy, International invests in power-related projects such as the Centennial Wind Project and sells flyash – a by-product of burned coal.

In 2005, International had revenue of $26 million and net income of $4 million. At December 31, 2005, it held assets of $425 million. Additional information is available at http://www.saskpowerinternational.com.

Power Greenhouses Inc. (Greenhouse)

Greenhouse distributes tree seedlings for reclamation, habitat development, and restoration. It grows the seedlings using waste heat from the Shand Power Station.

In 2005, SaskPower reimbursed Greenhouse for all of its expenses totaling $1 million. At December 31, 2005, Greenhouse held assets of $4 million. Additional information is available at http://shand.saskpower.com.

The Power Corporation Superannuation Plan (Plan)

A cabinet-appointed board is responsible for the administration of the Plan. The Plan is a defined benefit pension plan closed to new members since October 1, 1977. It has 527 active members and about 1,700 pensioners.

In 2005, the Plan received contributions of $6.8 million and paid $40.5 million to members. At December 31, 2005, the Plan held assets of $774.1 million and had liabilities of $773.1 million.

Our audit conclusions and findings

Deloitte & Touche LLP is the appointed auditor for SaskPower, NorthPoint, International, and the Plan. Meyers Norris Penny LLP is the appointed auditor for Greenhouse. Our Office and the appointed auditors worked together using the framework recommended by the *Report of the Task Force on Roles, Responsibilities, and Duties of Auditors*[1]. The appointed auditors and our office formed the following opinions.

In our opinion, for the year ended December 31, 2005:

- **the financial statements of SaskPower, its companies, and the Plan are reliable**

[1] To view this report, see our website at www.auditor.sk.ca/rrd.html.

- **SaskPower, its companies, and the Plan had adequate rules and procedures to safeguard public resources**

- **SaskPower, its companies, and the Plan complied with authorities governing their activities related to financial reporting, safeguarding public resources, revenue raising, spending, borrowing, and investing**

In the next section, we report on SaskPower's processes used to make sure it has the necessary infrastructure to meet the province's electricity needs.

Processes to plan for infrastructure needs

As previously noted, Saskatchewan Power Corporation (SaskPower) supplies most of the electricity consumed in Saskatchewan. SaskPower is able to supply about 3,500 megawatts of electricity.[2] In 2005, SaskPower supplied about 87% of this amount from its own power stations. It purchased the remainder (450 megawatts) from other producers.

In 2005, SaskPower provided customers with about 17,000 gigawatt hours[3] of electricity, an increase of 1.4% from 2004.

SaskPower's generating infrastructure is its power plants. These include three coal-fired power stations, seven hydroelectric stations, four natural gas stations, and one wind generation facility. Most of the power-generating stations were built before 1970. As its *2005 Annual Report* states, "during the next 20 years, SaskPower will be making major decisions concerning the refurbishment or replacement of its entire generating fleet."

At December 31, 2005, the power stations had a book value of $2.9 billion and a net book value of $1.8 billion. From 2000-2005, SaskPower invested just over $1 billion[4] on upgrading and expanding its power stations.

[2] Megawatts are units of measure for electricity. A megawatt is approximately the amount needed to power 400 homes at any given moment.
[3] Gigawatts are units of measure for electricity. A gigawatt hour is one thousand megawatts delivered for one hour.
[4] SaskPower *2005 Annual Report*.

Audit objective and criteria

The objective of this audit was to assess whether SaskPower had adequate processes at December 31, 2005 to plan for infrastructure needs related to generating electricity.

This audit focused on the processes SaskPower uses to make decisions about the power stations that it owns or plans to own and operate. Because it is very expensive to build and maintain power plants and these plants need to work for a long time (20 to 50 years depending on the energy source), planning in the power industry must take a very long view. SaskPower defines near term as up to five years, medium term as six to ten years, and long term as greater than 10 years.

Table 1 outlines the criteria (main elements) that we looked for in the audit. The criteria are based upon international standards, literature, and criteria used by other legislative auditors. SaskPower agreed with these criteria. We describe these criteria in more detail under key findings.

Table 1—audit criteria

To have adequate processes to plan for its infrastructure needs related to generating electricity, key processes would:
1. Identify infrastructure needs over near, medium, and long term
2. Set strategies to manage infrastructure
3. Plan for financial implications of infrastructure strategies

We followed *The Standards for Assurance Engagements* established by The Canadian Institute of Chartered Accountants in carrying out this audit.

Conclusion

At December 31, 2005, SaskPower had adequate processes to plan for infrastructure needs related to generating electricity except for the matters reported in this chapter relating to the following:

- **the need to better document certain procedures that SaskPower uses to identify infrastructure needs and set strategies to manage infrastructure**

- **the need to improve processes to ensure consistent analysis of risks and alternative strategies**

Key findings

In this section, we describe our expectations (*in italics*) and set out our key findings.

Identify infrastructure needs over near, medium, and long term

We expected SaskPower would have processes to:

- *summarize its existing infrastructure*
- *identify risks related to its electricity needs*
- *describe the gaps between the existing infrastructure and the infrastructure needed given its strategic direction and planned sources for electricity*
- *identify the key assumptions that support key planning decisions*

SaskPower has good processes for maintaining up-to-date financial and operating records for its power plants and equipment. These records include production capacity, age of the equipment, and life expectancy (under varying maintenance scenarios). This information is adequate to help both the executive and the Board understand the current state of SaskPower's existing infrastructure.

As part of its annual overall business planning processes, SaskPower identifies, documents, and evaluates significant risks. These include risks that affect its ability to supply enough electricity or that influence demand. Examples include changing environmental regulations or the gain or loss of large customers.

SaskPower has maintenance plans that extend up to 25 years. To prepare these, it evaluates risks such as breakdowns in generating equipment and the risks involved with maintenance contracts. As well, when SaskPower decides on major projects, it has extensive processes to identify and assess related risks.

Although SaskPower has identified and evaluated significant risks, it has not documented an overall risk management strategy for electricity generation. We note that SaskPower's Annual Report 2005 states the

Board of Directors approves a risk management framework. However, this framework focuses primarily on financial risks and does not address infrastructure risks.

Because SaskPower does not include infrastructure risks in its risk management framework, SaskPower may not identify, evaluate, and treat all significant risks that impact electricity generation consistently.

1. We recommend SaskPower expand its risk management framework to include risks related to electricity generation.

One of SaskPower's key processes is to revise annually its analysis of its electricity needs and its ability to meet those needs. This analysis is a critical part of the infrastructure plan. It estimates demand and capacity for the next 20 years.

To estimate demand and capacity, SaskPower reviews and updates its significant assumptions and forecasts. These reviews and forecasts include a demand forecast based on expected customer needs and weather. They also include supply assumptions such as the cost of coal and natural gas.

This process allows SaskPower to identify where it must maintain its existing capacity, build new capacity, or purchase power. SaskPower's plans show the decision points and timelines that it must meet to address needs and avoid supply gaps. It does this for the near, medium, and long term. The plans consider alternative energy sources, setting out options for meeting needs based on strategic direction and different sources for power.

SaskPower has good processes for preparing this analysis; however, the processes are not documented.

2. We recommend SaskPower document its procedures for preparing its analysis of electricity needs and its ability to meet those needs.

Set strategies to manage infrastructure

We expected SaskPower would have processes to:

- *align its infrastructure plan with its strategic goals and planned sources for electricity*
- *reflect applicable industry and environmental standards in its planning*
- *select strategies to reduce its risks to a tolerable level and to confirm its strategies with its stakeholders*

SaskPower's infrastructure plan consists of several documents including its annual business plan, the plans of the core business units, as well as various planning summaries and decision items for the Board.

SaskPower outlines its near-term strategic priorities in its business plan and annual report.

To prepare reliable plans, SaskPower has detailed guidelines and other documented processes that set out key actions and assign responsibilities for planning. These guidelines require that the plans align with SaskPower's overall business plan and existing strategic priorities. For new projects, SaskPower's processes require that projects identify alternative sources of power and align with SaskPower's strategic priorities.

SaskPower does not have a strategic plan that sets out its strategic goals and objectives over the mid and long term. Staff must interpret strategic information contained in various documents to prepare infrastructure plans and alternate strategies to address infrastructure needs. At times, this requires placing greater emphasis on one strategic priority over another. For example, SaskPower recognizes it must provide a reliable, cost-effective supply of power while considering the impact on the environment. In assessing strategies, it may decide to pursue more costly sources of power that are more environmentally friendly such as wind.

Without clear strategic guidance for the mid and long term, SaskPower may not prioritize or assess infrastructure alternatives consistently. As well, it may not align infrastructure plans with its most important strategic goals.

At March 2006, SaskPower is developing a new strategic plan and the Board expects to approve it in October 2006.

3. We recommend SaskPower use its new strategic plan to assess alternative strategies that address identified infrastructure needs.

SaskPower monitors regulatory changes and changes in environmental standards. It assesses their impact on operations and finances over the near, medium, and long term. The Board receives information on regulatory developments and their impact on infrastructure planning.

SaskPower's processes for preparing its infrastructure plan reflect the impact of industry and environmental standards. SaskPower is also a member of the Canadian Electrical Association and the Midwest Reliability Organization (which in turn is part of an international reliability council). These memberships help SaskPower monitor requirements and developments.

As noted earlier, SaskPower has identified and evaluated significant business risks. SaskPower sets out in its business plan specific activities to manage its risks. SaskPower does not explicitly identify levels of risk that it has decided to tolerate. Rather there is implicit tolerance of risk demonstrated by including the expected costs related to Kyoto Protocol[5] in fuel and purchased power budgets.

At the project level, Sask Power identifies and analyzes various risks. When management recommends their preferred option to the Board, management briefly describes reasons and outlines the impact on some risks. However, management does not clearly set out the residual risks of the recommended option and record why these risks are acceptable.

Risk management is not just making decisions based on risks but understanding and staying on top of risks that remain or occur because of decisions. Documenting the nature and extent of risks that remain helps management monitor and treat the risks.

[5] Kyoto Protocol refers to the international treaty on climate called the Kyoto Protocol to the United Nations Framework Convention on Climate Change.

4. We recommend SaskPower document the nature and extent of specific infrastructure risks that it accepts when it approves projects.

SaskPower works with different stakeholders at different times in planning for its infrastructure needs. It has processes to confirm its maintenance schedules internally and consults with suppliers on maintenance projects.

SaskPower's communication strategy includes a website that provides information on electricity generation stations and the environment. SaskPower also participates in media interviews, does presentations, and prepares an annual report. SaskPower's *2005 Annual Report* outlines infrastructure strategies along with the principal considerations in making decisions.

Plan for financial implications of infrastructure strategies

We expected SaskPower to have processes to:

- *estimate life cycle (planning, operation, maintenance, disposal, or renewal) costs for planned infrastructure*
- *identify the sources of money to carry out its infrastructure strategies*

SaskPower has rigorous processes for evaluating proposed capital projects. These processes include detailed economic and strategic analyses, business and risk analyses, and evaluation of alternatives. Project evaluation processes also include documenting project strengths and weaknesses and analyzing the impact on SaskPower's business plan and long-term debt. Project proposals include detailed estimates of the condition of existing infrastructure.

SaskPower has maintenance plans extending over the near, medium, and long term. SaskPower updates these maintenance plans as new information becomes available.

SaskPower identifies its financial needs related to infrastructure and sources of money for the near term. It does this in its business plan and annual report as well as in supporting documentation for major projects.

Selected references

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Risk Management Guidelines HB 436:2004 (Companion to AS/NZS 4360:2004). Standards Australia/Standards New Zealand.