

Reporting on Infrastructure—SaskEnergy and Highways and Transportation

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Executive summary

Public infrastructure includes the full range of physical assets that the Government uses to provide services like transportation, communication, and energy. In Saskatchewan, some of the Government’s key risks relate to public infrastructure. Factors contributing to these risks are advancing technology, a shifting population base, and aging infrastructure.

Legislators, managers, and the public all require information about how the Government manages these risks. The cost to purchase, operate, and maintain infrastructure can be significant. Good information supports sound decisions. It also helps the public to understand those decisions.

In this chapter, we examined the adequacy of information given to the public primarily in 2001 by two agencies with significant infrastructure. We noted that these two agencies provide a great deal of information to the public. We recommend strengthening information about the condition of the infrastructure and its ability to handle greater demand. We also recommend that information include comparisons of plans to actual results with explanations for significant differences.

In addition, we describe key lessons learned about reporting on infrastructure. In particular, we learned that the way agencies present information and its level of detail affect its usefulness. We also learned that the cost of providing information can be controlled and that Government policies influence the content of reports.

Introduction

Governments use and need public infrastructure to provide a wide range of public services. The nature of government infrastructure varies (e.g., roads, gas lines, power plants, and communications networks). In Saskatchewan, the Government has over \$16 billion invested in infrastructure and spends significant resources each year to buy, improve, or maintain infrastructure.

In recent years, our Office has encouraged the Government to assess how it manages infrastructure, and to improve the information on infrastructure that it gives to the public.

In Chapter 4 of our 2000 Fall Report – Volume 3, we discussed the key risks that governments face related to their investment in infrastructure. To reduce these risks, governments must adequately manage how they:

1. Plan for infrastructure needs,
2. Set clear responsibility for infrastructure,
3. Maintain the capacity of infrastructure,
4. Maintain good information, and
5. Keep the public informed.

In Chapter 3 of our 2001 Fall Report – Volume 2, we discussed the need to keep the public informed about infrastructure. In that chapter, we describe criteria to help governments decide what information to make public about infrastructure.

To identify practical ways that government agencies could report on infrastructure, we looked at the adequacy of information on infrastructure that two government agencies provide—SaskEnergy Incorporated (SaskEnergy), and the Department of Highways and Transportation (Highways). We chose these two agencies because they each have a significant investment in infrastructure and have experience in reporting on their infrastructure to the public.

Adequacy of information about infrastructure

Background

The infrastructure owned by SaskEnergy and Highways is integral to each of their operations and supports their delivery of public services. Both agencies report that their infrastructure is aging, making careful management of it critical.

SaskEnergy, as a Crown corporation, has the exclusive right to own and operate the natural gas distribution and transmission systems in Saskatchewan. It relies on these systems to store and distribute natural gas to its residential and business customers. The systems include more than 78,000 kilometres of underground pipeline, numerous compressor stations, and storage facilities located throughout the province.

In 2001, SaskEnergy spent nearly \$58 million on capital related to its natural gas systems. At December 31, 2001, SaskEnergy had invested almost \$1.3 billion on these systems. Like other Crown corporations, SaskEnergy incurs debt to finance its infrastructure. At December 31, 2001, SaskEnergy had long-term debt of \$623 million.¹

Highways, as a government department, operates the provincial transportation system in Saskatchewan. The public relies on this system to move people and goods safely and efficiently. The transportation system includes 26,220 kilometres of highway, 845 bridges, 18 airports in northern Saskatchewan, 12 ferries, and a barge.²

In the 2001-02 fiscal year, Highways invested \$132 million on capital related to its transportation system. At March 31, 2002, the Department had invested more than \$2.4 billion on its transportation system.³ The Department uses monies from the General Revenue Fund to finance its infrastructure.

¹ *The Strength to Grow, SaskEnergy 2001 Annual Report*, pp. 73.

² *Government of Saskatchewan, Annual Report 2001-2002 Saskatchewan Highways and Transportation*.

³ *Public Accounts 2001-02: Volume 1: Main Financial Statements: General Revenue Fund Notes to the Financial Statements*, pp. 18.

Audit objective, process, and criteria

We examined the adequacy of information that Highways and SaskEnergy made public, primarily in 2001. Later in this chapter, we describe key lessons learned about reporting on infrastructure from this examination.

Officials from each agency helped us identify relevant information about infrastructure. The officials also highlighted key changes that they made to public information up to September 2002. We compared public information about infrastructure (e.g., in annual reports, on web sites, in news releases) to the criteria set out in Exhibit 1. The criteria describe the essential content for adequate public reports about the Government's infrastructure.

We previously reported these criteria in Chapter 3 of our 2001 Fall Report – Volume 2. Executive Council, the Department of Finance, and the Crown Investments Corporation of Saskatchewan (CIC) support the criteria.

Exhibit 1 – Criteria for public information on key infrastructure

Adequate public information about the key infrastructure that a government organization uses to provide public services should briefly describe:

1. the capacity of each major category of infrastructure

- key infrastructure available for use
- condition of the infrastructure
- cost of the infrastructure
- maximum service that the infrastructure could produce in its current condition

2. the extent to which the use of key infrastructure achieved planned results

- actual operating results compared to plans
- actual financial results compared to plans
- reasons for major differences between results and plans

3. the strategies used to manage major risks of the key infrastructure

- identify major risks that may affect the key infrastructure
- actions taken or planned to reduce major risks to acceptable levels

Throughout our audit, we followed Standards for Assurance Engagements established by The Canadian Institute of Chartered Accountants.

Conclusions and recommendations

We found that during 2001 SaskEnergy and Highways gave the public reasonable information about their infrastructure. We also noted further improvements in the information provided in 2002. SaskEnergy provided adequate information about its infrastructure except for information on its condition and the system's ability to meet peak demands for gas. Highways provided adequate information about its infrastructure except that it did not provide sufficient information on key plans for its infrastructure compared to actual results, with differences explained.

- 1. We recommend that SaskEnergy give the public additional information about the condition of its natural gas transmission and distribution systems and the ability of these systems to meet peak demands for gas.**
- 2. We recommend that Highways give the public additional information on its key plans related to highway condition, safety, and reliability, as well as comparisons of plans to actual results with any differences explained.**

Findings by criteria

For each criterion, we set out our expectations (in italics) and our audit findings.

Capacity of each major category of infrastructure

Information about infrastructure will describe capacity in terms of:

- ◆ *the nature and location of key infrastructure available for use;*
- ◆ *the cost of the infrastructure and the method used to decide the cost;*

- ◆ *the processes used for maintaining the infrastructure in good working condition and the average remaining life span of each major category of infrastructure; and*
- ◆ *the maximum service capacity of the infrastructure.*

We found that Highways provided adequate information about the capacity of its infrastructure. For example, maps provided basic information about the location and types of infrastructure. Road advisories posted on its web sites and in local newspapers informed the public about the condition and safety of specific roads and what was done to maintain them. In its 2001 Annual Report and several other reports, Highways stated that the shift from rail to trucks has shortened the service lifespan of many roads. Highways reported that some deteriorating roads have exceeded their expected service capacity or lifespan. Highways provided limited information on the extent of roads in this category and the resulting damage. Information in this area is improving. In the Performance Plan included in its 2002 Annual Report, Highways disclosed the amount of primary pavements beyond their service life. Similar information on other types of highways is not yet made public.

Also in its 2002 Annual Report, Highways improved its information about the condition of various types of highways. For example, it stated that 83.6% of primary highways, 76% of pavements, 31% of thin membrane surfaces and 43% of gravel roads were considered to be in good condition. It clearly described how it determines if a highway is in “good” condition. The Report did not disclose Highways’ planned target for the proportion of highways in good condition.

In addition, we found that in 2002, Highways provided additional information about the cost of its infrastructure. In the 2001-02 Public Accounts - Volume 1, the Government disclosed that the estimated cost of the highways and bridges managed by Highways was \$1.29 billion.⁴In prior years, Highways disclosed only the estimated replacement value of the highways. Both methods provide useful information to the public.

SaskEnergy published good information about the nature, location, and cost of its infrastructure. SaskEnergy provided excellent information in

⁴ This amount represents the estimated cost less accumulated depreciation.

numerous formats about the processes used to maintain its infrastructure in good working condition. It indicated that its systems, although aging, are in good condition. In its 2000 Annual Report, it provided the number and types of pipeline system leaks experienced over a period of several years. It provided the number of unplanned outages and unintended contacts with the pipeline for each system. This information helps the public to understand the condition of the infrastructure.

SaskEnergy did not state directly the condition of its transmission and distribution systems and could better explain the current condition of its systems. SaskEnergy indicates that its systems are safe and reliable, and that no part of its systems is unsuitable for use. SaskEnergy also could state the percentage of its pipeline systems which it plans to examine because it may be at greater risk. It could also provide more information about the steps it takes to address these risks.

SaskEnergy described peak service levels that it met in the past, such as during cold winter days, but could enhance how it explains the systems' ability to handle extremely severe winter weather. The public would find this information useful to understand when SaskEnergy's capacity may be limited, and the process it follows to economically meet growing demand beyond previous peak service volumes.

Extent to which the use of key infrastructure achieved planned results

Government agencies should provide the public with sufficient information to decide whether the use of public infrastructure helped the Government to achieve its planned operating and financial results. Government agencies should compare actual results to targets for key operational information (e.g., number and duration of service interruptions or downtimes, public safety and reliability, impact of the infrastructure on the environment).

Agencies should also compare actual financial results to key financial targets (e.g., expected return on investment, budgeted acquisition, operating or maintenance costs). We also expect agencies to report the reasons for significant differences between planned and actual results for both operational and financial information.

We found that SaskEnergy provided the public with good information about the extent to which the use of its key infrastructure achieved planned operational and financial results. Because the transmission and distribution systems are integral to SaskEnergy's business, a number of its key performance measures relate directly to the safety, reliability, and level of service provided by these systems. SaskEnergy reported its current year actual results and future planned targets for these measures for each system. These measures included unplanned service disruption, unintended contacts with pipelines, and satisfaction with service/reliability. Further, SaskEnergy explained the reasons for significant differences between planned and actual results. Because the 2001 report did not include current year targets, readers needed the prior annual report to compare current period actual with current period targets.

Highways provided good information about the achievement of planned financial results. Highways informed the public about the costs (planned and actual) of its key activities (such as timing, location, and nature of road construction) through news releases, posting in newspapers, on its web sites, and in its annual report. In 2001, information about the achievement of planned operational results was limited. For example, in the 2001 Annual Report, most information on operational results was not compared to key operating plans (e.g., targets for service or safety), and did not explain how the actual operating results differed from plans. The public needs to understand why results differ from plans to help assess the extent to which the use of key infrastructure achieved planned results. We note that Highways' 2002 Annual Report includes improved information about its operational plans and results.

Strategies used to manage key risks of the infrastructure

Government agencies should describe the major risks that affect each major category of their infrastructure. Risks may include those common to the industry, risks related to deferred maintenance, changes in technology, and health or safety concerns. Agencies should also outline their actions to reduce these risks to acceptable levels.

We found that SaskEnergy and Highways described the major risks that they face in using their infrastructure to provide public services. SaskEnergy's risks centre on providing a safe and reliable transmission and distribution system. For example, the risk of unintended physical

contacts with the pipelines that cause damage. Highways' risks centre on factors that put pressure on the ability of the transportation system to provide safe transportation of goods and people in an efficient and sustainable manner. For example, the risk of faster deterioration of roads due to the actual use of roads being different than use expected when roads were designed.

Further, both agencies described their actions and plans for reducing these risks to acceptable levels. For example, to manage the increased use of heavy trucks, Highways disclosed that it makes agreements with truckers about which roads they will use, and plans for increased road repairs. SaskEnergy used a number of public awareness programs to reduce service disruptions caused by unplanned contacts with the pipeline. For example, it promoted its "Call Before You Dig" program to the public through pamphlets, stickers, mass mail-outs, presentations, billboards, newspaper and radio ads, and its web site. Primarily in presentations and its annual report, SaskEnergy described its use of technology to monitor the presence of cracks or defects from the inside of the pipeline before a leak occurs. In July 2002, SaskEnergy augmented its public information on its pipeline safety integrity program by posting a detailed description of the program on its web site.

Key lessons learned

During our work, we highlighted four main lessons evident in how SaskEnergy and Highways inform the public about infrastructure. We noted both similarities and differences in how these two agencies made public their information about infrastructure. Consideration of these lessons will provide other agencies with practical ways of improving their public information on infrastructure.

Presentation matters

The way that information is presented affects the public's understanding of that information.

Both agencies try to avoid technical terms to the extent possible and when the terms were used, they clearly defined them. Often the management and operation of infrastructure can be very specialized and technical. For example, SaskEnergy measures the volume of natural gas

transmitted in terms of petajoules. Its glossary in each of its annual reports explains this term. Agencies must be diligent in explaining infrastructure, its risks, and related activities in terms that the general public can understand.

Both agencies routinely used graphs and charts. The graphs, particularly those showing trends over time, and charts, particularly those comparing planned results to the actual operational and financial results, eased understanding. How agencies display information about infrastructure can influence the public's understanding of the information.

Both agencies emphasized that infrastructure contributes to their success but is not solely responsible for it. For example, Highways explained that highway design and condition affects highway safety, but so do other factors such as weather conditions and driver behaviour. It is important that government agencies explain to the public how their infrastructure influences their operational results. The public also needs to know the extent to which infrastructure helps achieve the desired results. Putting infrastructure information in context makes it more understandable.

Level of detail affects usefulness

The amount of information and how it is communicated affects the usefulness of the information.

In 2001, Highways used many different documents to report key information about infrastructure as opposed to using its annual report as its primary reporting vehicle. Some of these reports were for the general public, while many were developed for specific audiences. Although this approach required the public to read many different reports and assimilate the information to capture the full picture of the transportation system, it did work. For the first time, Highways' 2002 Annual Report provided legislators and the public with summarized information about many aspects of the transportation system. For example, it reported that it considers 83.6% of the primary highway network to be in good condition and 14,000 kilometres of primary pavement as beyond their service life. In addition, Highways routinely meets with stakeholders to share information. For example, Highways meets regularly with representatives of the various regions in the province to discuss completed road work and plans for the roads in those regions.

SaskEnergy took a different approach. It used its annual report as its primary vehicle to provide the general public with summarized information about key aspects of its infrastructure. It then used numerous other forms of public information to provide additional details about various aspects of its infrastructure. This approach allowed it to tailor its communication to specific audiences or target groups, while targeting its annual report to the general public.

For agencies with significant infrastructure, incorporating key information about the infrastructure into their annual reports works well. Most annual reports are written for the general public. Augmenting this information with more detailed information in other public reports is an effective way to satisfy people who desire more detail.

Government policies limit content of reports

In part, what SaskEnergy and Highways reported was influenced by government policies dealing with public disclosure of information. The policies that apply to each agency allow different disclosure.

As stated in Chapter 3 of our 2001 Fall Report – Volume 2, CIC officials noted that the Government's policy to protect the competitive position of its Crown corporations may affect the publication of some information on infrastructure. Generally, we found SaskEnergy was able to provide useful information to the public while complying with this policy.

Consistent with government policies, SaskEnergy, as a CIC Crown corporation, has improved information in its annual reports based on the use of the balanced scorecard approach (see Chapter 2 in our 2000 Spring Report for details on this approach). This approach encourages results-based management including the use of goals, objectives, and measures of success. The CIC has encouraged its Crown corporations to improve public reporting of their results based on the use of the balanced scorecard approach. Because SaskEnergy's infrastructure is integral to its operations, a number of its performance measures relate to the safety, reliability, and service level of its infrastructure. As a result of using this approach, SaskEnergy's annual reports now contain good summary information about most aspects of its infrastructure.

Starting with the year ended March 31, 2002, government departments began reporting using an approach similar to that of the CIC Crown corporations. The new policy places a greater emphasis on reporting results in annual reports rather than activities and encourages government departments to disclose their goals, objectives, and how they measure their results but not the disclosure of their performance measures (targets). These changes in government policy allowed Highways' 2002 Annual Report to contain better information about its infrastructure.

We are encouraged by the recent changes to government policy on the disclosure of information to the public. We look forward to further improvements in the information reported to the public.

Costs can be controlled

Producing information for the public takes time and costs money.

Both SaskEnergy and Highways recognize the importance of controlling the cost of providing information to the public. They control costs by using one communication for multiple purposes. Both agencies routinely integrated key information about their infrastructure into other information and provided this information in a variety of formats, such as presentations to the general public, news releases, strategies and papers to other levels of governments, and annual reports. Rarely did they prepare reports dedicated solely to reporting on infrastructure.

In addition, to reduce the cost of printing and distribution, both agencies made extensive use of their web sites. They both monitored the public's access to their web sites and note that the public regularly accessed information posted on these sites. For example, SaskEnergy's web site was accessed more than 8,000 times monthly.

Both agencies also managed costs by reporting some information at intervals other than annually. For example, Highways, when reporting on the general issues causing increased deterioration of the highways, made reference to previously issued reports. It continued to make these reports accessible to the public. This works well when the situation reported on does not change significantly over time.

Agencies must recognize and keep the need to report on infrastructure in mind while preparing other forms of reports and communications to use a cost-effective way to provide the public with information.

Public disclosure promotes better dialogue

Both Highways and SaskEnergy support public reporting of key information about their infrastructure. They recognize that the public needs to have a good understanding of their infrastructure and how it is managed. This understanding is critical to obtain the public's support for their actions and plans. Publishing key information on infrastructure helps engage the public in dialogue about how to manage their aging infrastructure.

The Government faces some challenging risks related to much of its infrastructure. The *2002-03 Budget Address* notes the need to modernize our transportation, education, and information technology infrastructure.

Infrastructure tends to be expensive. Much of the Government's infrastructure is old and reaching the end of its expected lifespan. In addition, the infrastructure needs of the population are changing as people age and move toward urban areas and our population in northern Saskatchewan grows.

It will be important for the Government to engage the public in dialogue about these important issues. An informed dialogue requires good information about public infrastructure.

We encourage all government agencies with significant infrastructure to examine how they report on infrastructure and consider ways to use these criteria and lessons learned to improve. Better information will be valuable to managers, legislators, and the public.

Government agencies that use these criteria should consider whether they need to adjust the criteria to suit the nature of the infrastructure they use. Careful selection of criteria will help to ensure that government agencies give the public useful information.

We plan to continue focusing attention on the way that the Government manages its infrastructure and informs the public about it.

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