Energy and Resources

6

Main points

The Ministry of Energy and Resources (Energy and Resources) and its special purpose funds complied with the authorities governing their activities relating to financial reporting, safeguarding public resources, revenue raising, spending, borrowing, and investing. As well, the financial statements of its three special purpose funds (the Oil and Gas Orphan Fund, the Institutional Control Monitoring and Maintenance Fund, and the Institutional Control Unforeseen Events Fund) are reliable.

Energy and Resources and its special purpose funds had adequate rules and procedures to safeguard public resources except that Energy and Resources needs to follow its procedures for ensuring only authorized staff have access to its computer systems and data.

Process Renewal and Infrastructure Management Enhancements (PRIME) project

This chapter also contains our report on Energy and Resources' project management processes for its Process Renewal and Infrastructure Management Enhancements project or PRIME project. Energy and Resources is replacing its 25 year old oil and gas information technology systems with one integrated system. This is a significant project for Energy and Resources.

Energy and Resources project management processes for its PRIME Project were adequate except that it should:

- document its plans for measuring and reporting on the expected benefits of its new oil and gas system
- include in its project status reports to senior management the actual development and maintenance costs incurred to date compared to the project's percentage of completion
- prepare an analysis on the merits of conducting an independent risk assessment on the PRIME project

Introduction

The Ministry of Energy and Resources (Energy and Resources) works to achieve sustainable development of Saskatchewan's diverse energy, mineral and forestry resources, including oil and gas, potash, and uranium. It has a regulatory role with industry and develops and administers various tax and royalty structures related to resources. It also has programs and policies that encourage exploration, research, and value-added investment in resources and resource projects.[1]

Financial overview

Energy and Resources received $80.9 million from the General Revenue Fund for its programs. Information about Energy and Resources' revenues and expenses appear in Energy and Resources' *2010-11 Annual Report* (see www.er.gov.sk.ca). Energy and Resources spending on major programs and revenue include:

	Original Estimates	Actual
	(in millions of dollars)	
Spending		
Central Management Services	$ 20.4	$ 20.4
Forestry Development	1.4	1.6
Revenue and Program Services	3.7	3.5
Petroleum and Natural Gas	7.4	7.8
Exploration and Geological Services	5.7	1.4
Resource and Energy Policy	5.4	46.2
	$ 44.0	$ 80.9

	Original Estimates	Actual
	(in millions of dollars)	
Revenues		
Oil	$ 1,098.3	$ 1,274.1
Crown Land Sales	202.8	467.0
Natural Gas	42.2	29.7
Potash	221.0	262.5
Other Minerals	145.0	133.6
	$ 1,709.3	$ 2,166.9

[1] Saskatchewan. Ministry of Finance. *2011-12 Saskatchewan Provincial Budget: Estimates*, p. 51.

Special purpose funds

Energy and Resources is responsible for the following special purpose funds:

Year Ended March 31
Oil and Gas Orphan Fund
Institutional Control Monitoring and Maintenance Fund
Institutional Control Unforeseen Events Fund

Audit conclusion and findings

In our opinion, for the year ended March 31, 2011:

- **Energy and Resources and its special purpose funds had adequate rules and procedures to safeguard public resources except for the matter described below**

- **Energy and Resources and its special purpose funds complied with the following authorities governing its activities relating to financial reporting, safeguarding public resources, revenue raising, spending, borrowing, and investing:**

  The Crown Mineral Act
  The Energy and Mines Act
  The Economic and Co-operative Development Act **and related regulations (Section 8(a) only)**
  The Freehold Oil and Gas Production Tax Act
  The Mineral Resources Act, 1985
  The Mineral Taxation Act, 1983
  The Oil and Gas Conservation Act
  The Surface Rights acquisition and Compensation Act
  The Pipelines Act, 1998
  The Reclaimed Industrial Sites Act
  The Forestry Resources Management Act, **section 5**
  The Financial Administration Act, 1993
  The Government Organization Act
  The Purchasing Act
  The Public Service Act, 1998

The Revenue and Financial Services Act
Regulations and Orders in Council issued pursuant to the above legislation

- the financial statements of the special purpose funds listed above are reliable

Later in this chapter, we report the results of our audit of Energy and Resources' project management processes to develop and implement its Process Renewal and Infrastructure Management Enhancements project or PRIME project.

User access

Energy and Resources needs to follow its procedures for ensuring only authorized staff have access to its computer systems and data.

Energy and Resources has established procedures for the timely removal of user access to its computer systems and data. However, Energy and Resources did not follow its established procedures. During the audit, we noted nine instances where Energy and Resources had not removed access on a timely basis.

Without following its established procedures for removing user access, Energy and Resources cannot ensure that only authorized individuals have access to its computer systems and data. As a result, Energy and Resources is exposed to the risk of loss of public money and inappropriate access to confidential information.

1. We recommend that the Ministry of Energy and Resources follow its established procedures for removing user access to its computer systems and data.

Process Renewal and Infrastructure Management Enhancements (PRIME) project

Energy and Resources is responsible for overseeing and managing the province's resource sector. Its responsibilities are set out in numerous acts and regulations that govern Saskatchewan's natural resources.

Energy and Resources' mandate is to achieve full and responsible development of Saskatchewan's energy, mineral and forestry resources; work with businesses to expand the Saskatchewan economy by promoting, co-ordinating and implementing policies, strategies and programs that encourage sustainable economic growth; and to optimize revenues to fund government programs and services.[2]

Energy and Resources' existing oil and gas information technology (IT) systems are over 25 years old and its processes are based on the information technology of that era. In fulfilling its mandate, Energy and Resources embarked on a significant initiative to replace those systems and business processes with one integrated information system. Energy and Resources calls this initiative the Process Renewal and Infrastructure Management Enhancements or PRIME project. The system will track oil and gas well information, report oil and gas production and disposition, and bill oil and gas royalties and taxes.

Background

The PRIME project involves redesigning Energy and Resources' business processes using recent advances in information technology, amending oil and gas legislation to accommodate this new technology, and working with the oil and gas industry to better meet its needs and the needs of Energy and Resources.[3]

In July 2009, the Government of Saskatchewan signed a Memorandum of Agreement, with the Government of Alberta, to join the Alberta Petroleum Registry (Registry). The agreement gives Saskatchewan voting rights on the Registry's governance and administrative committees and allows it to make amendments to meet its needs.

The Registry is a joint strategic organization supporting Canada's upstream oil and gas industry and is represented by Government (Alberta Department of Energy, the Alberta Energy Resources Conservation Board and the Saskatchewan Ministry of Energy and Resources), and Industry (represented by the Canadian Association of Petroleum

[2] Taken from the Ministry of Energy and Resources' website: www.er.gov.sk.ca/Overview.
[3] Taken from the Ministry of Energy and Resources' website: www.er.gov.sk.ca/PRIME.

Producers and the Small Explorer and Producers Association of Canada).[4]

The decision to join the Registry was based on a business case and cost-benefit analysis. In 2009, the initial estimated cost of the project was $48.7 million plus or minus fifty per cent over five years with completion of the project set for 2013. As of September 2011, Energy and Resources has spent approximately $22 million on the project and management estimates total cost of the project to be $66.8 million with an estimated completion date of 2015.

The first phase of the PRIME project is the implementation of the Registry and it is planned for April 1, 2012. The Registry will require oil and gas companies to report well production and disposition data on-line and Energy and Resources will subsequently bill those companies the applicable royalties and taxes.

The PRIME project is a significant project for Energy and Resources. The oil and gas industry is a major contributor to the provincial economy and to provincial government revenues. The oil and gas industry contributed $1.8 billion to the Government's General Revenue Fund for the 2010-11 fiscal year.[5] Energy and Resources' oil and gas systems are instrumental in collecting and processing the data necessary for assessing and collecting this revenue and for regulating and encouraging oil and gas development.

Large projects involving process change, complex transactions, information technology, and external stakeholders are inherently risky. Strong project management controls and processes can reduce these risks and increase the likelihood of a project's success. These controls and processes can help ensure projects:

- are done on time
- are done on budget and includes all costs
- meet user needs

[4] Taken from the Petroleum Registry of Alberta's website: www.petroleumregistry.gov.ab.ca.
[5] Ministry of Energy and Resources: *2010-11 Annual Report*, p 27.

Our objective, criteria, and conclusion

The objective of this audit was to assess whether Energy and Resources had adequate project management processes, for the six-month period ending September 30, 2011, to develop and implement its Process Renewal and Infrastructure Management Enhancements or PRIME project.

To conduct this audit, we followed the *Standards for Assurance Engagements* published in the *CICA Handbook - Assurance*.

Exhibit 1 below outlines the criteria that we used to do our work. We based the criteria upon international standards, literature, and reports of other auditors (see selected references in Exhibit 3). We discussed the criteria with Energy and Resources. They agreed with the criteria.

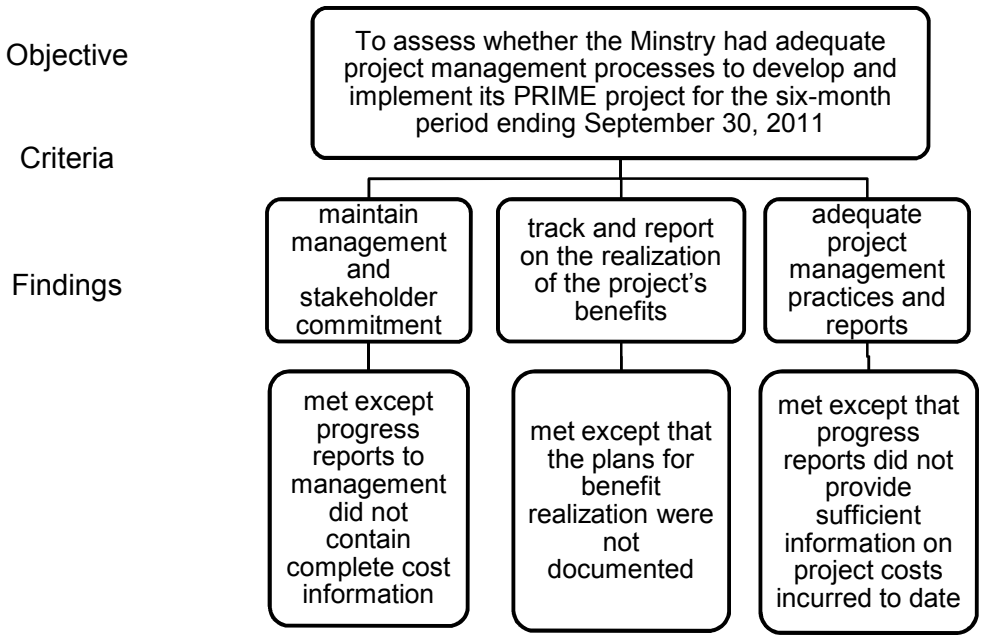
We concluded that for the six-month period ended September 30, 2011, the Ministry of Energy and Resources had adequate project management processes for its PRIME Project except that the Ministry:

- **had not documented its plans for measuring and reporting on the expected benefits of the project**
- **did not report sufficient information to senior management on the project's costs incurred to date and its percentage of completion**
- **should prepare an analysis on the merits of conducting an independent risk assessment**

Key findings and recommendations

Exhibit 1 provides a brief summary of key findings by criterion. Following the exhibit, we set out, in more detail the criteria (expectations) in italics and key findings along with any related recommendations.

Exhibit 1



Maintaining management and stakeholder commitment

We expected the Ministry of Energy and Resources to have project management processes to obtain and maintain strong senior management commitment to the project. We expected senior management would:

- *ensure that the project fits within Energy and Resources' strategic plan*
- *be accountable for the success of the project*
- *establish a strong project team with adequate resources to carry out the project*
- *have clear timely communication and reporting throughout the project*

One of Energy and Resources' key strategies outlined in its strategic plan is to "modernize energy and resource sector business and regulatory systems."[6] The PRIME project is a critical part of this strategy.

Energy and Resources' senior management have taken responsibility for the project. The three Assistant Deputy Ministers (ADM's), who are responsible for the Energy and Resources' branches most affected by the PRIME project, are the sponsors of the project. As the project's sponsors,

[6] Ministry of Energy and Resources; *Plan for 2011-12*, p. 3.

they approved the project charter[7] and they oversee the project. In addition, they and other senior members of management are designated as project champions. This latter responsibility includes ensuring there are adequate resources for the project, quickly resolving obstacles, and actively promoting the project's vision and its benefits.

Energy and Resources has also established a project steering committee called the PRIME Advisory Board. The Board is composed of senior managers with expertise in key aspects of Energy and Resources' oil and gas operations and royalty structures. The Advisory Board meets regularly to monitor the project and make recommendations to keep the project "on track". They also receive monthly reports on the project's status including its risks. One of the project's risks is a lack of sufficient staff with specialized knowledge in key areas (subject matter experts) to work on the project. The shortage arises because these employees are also required to run Energy and Resources' regular operations. The project team, project sponsors, and Advisory Board monitor the management of this risk.

The ADM's receive monthly project progress reports to help them monitor the project. These reports do not provide information on the project's costs incurred to date compared to its percentage of completion. Without this kind of information, it is difficult for senior management to assess if the project is staying within its budget. We describe this issue in more detail under Project management practices and reports.

Tracking and reporting on the realization of the project's benefits

We expected the Ministry of Energy and Resources to:

- *have a process to track the realization of the project's benefits*
- *base these benefits on a strong business case that is consistent with its vision, strategic goals, and objectives*

The business case should outline the full costs of the project and compare the costs to the expected benefits. The project's expected benefits should be measurable and management should have a plan for

[7] A project charter sets out project information such as the project's objective, the roles and responsibilities of project team members, budget, risks, benefits, and reporting structure.

measuring and reporting on the realization of the benefits. A project should not be considered complete until the benefits are realized.

In 2008, Energy and Resources adopted, as one of its key strategies for achieving its strategic vision and goals, "the modernization of its energy and resource sector business and regulatory systems to take advantage of emerging technologies."[8]

Energy and Resources' business case addressed all of the key elements of a solid business case. For example, for the Registry, its business case and cost-benefit analysis considered three options: join the Alberta Petroleum Registry; buy the rights to and customize this registry; or build its own Saskatchewan registry. The cost-benefit analysis showed that joining the Alberta Petroleum Registry provided the most benefits for encouraging and regulating the oil and gas sector.

The expected benefits for the whole project included better services for the industry, reduced well licence turnaround time, better access to data, better data analytical tools, and reduced data errors.

Energy and Resources does not have a documented plan for measuring and reporting on the expected benefits. Without a documented plan, benefits may not be realized, system processes may not be implemented as designed, and system processes may not be optimized.

2. We recommend that the Ministry of Energy and Resources document its plans for measuring and reporting on the expected benefits of its new oil and gas system.

Energy and Resources told us that it plans to use a balanced scorecard system as part of its annual strategic planning processes. Energy and Resources will also use the balanced scorecard to track and monitor the realization of the expected benefits for the PRIME project.

Project management practices and reports

We expected the Ministry of Energy and Resources to have good project management systems and practices to control the development and

[8] Ministry of Energy and Resources: *Plan for 2009-10*, p.2.

implementation of the PRIME project as outlined by the nine areas in Exhibit 2.

The project team should have clear roles and responsibilities and collectively have the necessary experience, skills, and leadership to manage the project. Good project management practices include planning and reporting progress against the plan, managing risks, the quality of work, and communicating progress and successes. These project management practices help ensure that project teams meet deadlines, contain costs, and meet requirements.

The PRIME project has a well-defined project structure with clear roles and responsibilities. Energy and Resources has developed an overall program charter for the project and has assigned a project director to oversee all aspects of the project. The first phase of the project is divided into seven significant components or sub-projects and two affiliated projects. Each sub-project and affiliated project has a project charter, a project sponsor who is a senior Energy and Resources manager with expertise in the area, and a professional project manager. Each project manager's role is to oversee all aspects of their project and provide periodic status reports to the Project Director and the PRIME Advisory Board. These projects also use several employees to provide expert advice on Energy and Resources' business processes. This helps ensure that the new system will adequately meet Energy and Resources' needs.

The project team includes a project management office (PMO) that oversees the sub-projects and affiliated projects. The PMO consists of consultants who collectively have expertise with Energy and Resources' existing business processes and IT systems, project management, change and communication management, and IT architecture. The PMO provides leadership to the sub-project and affiliated project teams including guidance on the design of new business processes, IT architecture design, defining templates to ensure quality development, managing risks, and coordinating and monitoring the project.

The project team also consists of the IT vendor that developed and continues to maintain the Alberta Petroleum Registry. Its role includes modifying the Registry's computer programs to meet Energy and Resources' needs and running tests to ensure the programs process the data correctly. This vendor's expertise helps reduce the project's risk.

Energy and Resources has set up strong processes to monitor the status of the project including its resource requirements, project risks, and the project schedule. It has a system to record and track the project's budget and costs. The project teams meet frequently to discuss the status and risks of the sub-project and affiliated projects. The PRIME Advisory Board meets monthly to review the projects' status reports.

The monthly status reports are critical to the effective monitoring of the PRIME project. The format and content of these reports effectively addresses all of the key elements necessary to monitor progress except that they do not contain information on the costs incurred to date compared to the project's percentage of completion. For example, the September 30, 2011 PRIME Project Performance Report focuses on the current approved budget of $67.2 million compared to the forecasted cost to complete of $66.8 million. No actual costs incurred to date or percentage completion information are included in the reports. The ADM of Corporate and Financial Services meets monthly with members of the project team to review the costs incurred to date and the changes to the forecast.

In addition, the PRIME project budget is composed of development costs of approximately $54 million and maintenance costs of approximately $12 million. The maintenance costs are to cover the higher costs of maintenance expected in the first five years of operations. The status reports do not separately show these budgeted costs and their status.

The performance reports to Energy and Resources' executive (i.e., Deputy Minister and the ADM sponsors) should provide information on the development and maintenance costs incurred to date compared to the project's percentage of completion. Without this information, it is difficult to assess the status of the project and ask timely questions on whether the project will be completed on time, on budget, and will meet the needs of the users.

3. We recommend that the Ministry of Energy and Resources include in its project status reports to senior management the actual development and maintenance costs incurred to date compared to the project's percentage of completion.

We found that the PRIME project's processes for managing the project's scope, quality, human resources, communication, procurement, and the integration of project's various processes are adequate.

The risk management processes for this phase of the project appear to be adequate. However, this project is a high-risk project for Energy and Resources and therefore it should consider an independent risk assessment. The maximum budget for the project is set at $73 million ($48.7 million plus the 50 percent approved contingency). Energy and Resources is now forecasting the project to cost $66.8 million which is approaching the maximum budget. As at September 2011, $22 million of costs has been incurred and the project completion date is expected to be two years later than the original date of 2013. Also, the project has many interdependencies, many external and internal stakeholders, and is critical to the provincial economy. Best practice in risk management for high-risk projects is a timely independent risk assessment. An independent risk assessment would provide a fresh perspective on the project's risks and their impact on the success of the project.

4. We recommend that the Ministry of Energy and Resources prepare an analysis on the merits of conducting an independent risk assessment on the Process Renewal and Infrastructure Management Enhancements project.

Exhibit 2–Project management framework

The three general criteria of a strong project management climate are:

- management commitment to the project
- the project's ability to achieve its objectives and benefits
- good project management systems and practices

We will use the Project Management Institute's standard titled *A Guide to the Project Management Body of Knowledge* as the management framework to support the above three criteria. The nine processes are:

1. *Integration management* – the processes required to ensure that the various elements of a project are properly co-ordinated.

2. *Scope management* – the processes involved in determining what the users need, how the needs will be met and verifying if they are met.

3. *Time management* – the processes to plan, schedule, and control the project's activities to help get the project done on time.

4. *Cost management* – the processes to plan, estimate, and control the project costs.

5. *Quality management* – the processes needed to evaluate if the project is managed well and meets the stakeholders' needs.

6. *Human resource management* – the processes required to make the most effective use of people involved in the project, including stakeholders. This includes change management, training, and staffing.

7. *Communication management* – the processes, including the organizational structure, used to ensure the timely and complete creation, movement, and storage of information.

8. *Risk management* – the processes to identify, evaluate, plan, and respond to risks.

9. *Procurement management* – the processes to decide what to contract for tendering and selecting the best contractor; and negotiating, managing and closing the contract.

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