Alberta Petroleum Marketing Commission (APMC)

Management of Agreement to Process Bitumen at the Sturgeon Refinery

February 2018

Summary

The Alberta Petroleum Marketing Commission (APMC) is managing a large-scale arrangement in the energy industry on behalf of the Government of Alberta. The arrangement commits the government to approximately $26 billion over 30 years in pursuit of a favourable return. Now is a critical juncture for the facility at the centre of this arrangement, the Sturgeon refinery, which is set to be operational by mid-2018. The lead-up to the opening of any major operation, such as this refinery, brings new opportunities and risks to the parties involved. The APMC needs to ensure it has the right people, with the right skills, doing the right things at the right times for it to successfully steward this extremely complex and impactful arrangement. Such expertise can be hard to find and can be costly in terms of compensation.

Although the APMC is committing a lot of time and effort to risk management activities, it does not have well-designed risk management systems and lacks sufficient evidence to demonstrate that its systems are operating effectively. For the APMC to prove it is managing risks effectively, these systems are necessary. With the recent turnover of the CEO and part of the board, the need for well-designed, documented and functioning systems is even more important. Further, although the APMC's board (the oversight body) was heavily involved as risks arose, it did not ensure the agency put in place risk management processes adequate for the complexity of the arrangement.

Given the nature of the agreement, the level of public reporting from the APMC is not good enough. The agency is acting as steward of the province's resources, and Albertans have a right to know how it is using those resources. They are currently not receiving that information.

Finally, to maximize the benefits and minimize the risks, the APMC needs well-functioning systems befitting its operations. There is still the time and opportunity to improve the management of risks in Albertans' best interests, but action is needed to ensure all the necessary people and processes are in place at the APMC in time for the start of commercial operations at the Sturgeon refinery.

About This Audit

Business arrangements in the energy sector are of a high-stakes nature: the benefits can be very large, but so are the risks. Contracts can be worth billions of dollars, but success in the arrangements can depend on factors that are difficult to predict, such as the price of oil.

Since 2011, the Government of Alberta has considered a number of energy arrangements of this high-benefit, high-risk kind, entering into two of these arrangements. One is a $26 billion commitment for the government to supply bitumen to the Sturgeon refinery over a 30-year period. In another arrangement, the government planned to pay about $4.6 billion over 20 years to have oil transported to the east coast through the Energy East Pipeline. Subsequent to our audit, TransCanada cancelled this project.

These arrangements are managed by the Alberta Petroleum Marketing Commission (APMC), a commercial agency of the Government of Alberta. Although the Sturgeon arrangement is currently the only large-scale arrangement the APMC manages, the government has given the agency a mandate to explore new arrangements. In particular, the mandate allows the APMC to seek new energy markets and promote value-added activities, such as oil refining. These ventures should align with government policies, and they require approval from the Government of Alberta.

For an agency like the APMC to be successful and demonstrate stewardship when managing substantial commercial agreements, three elements are essential. First, the agency must have highly developed processes for managing risk, as well as the expertise and capacity to act on those processes. Second, the agency should be subject to strong oversight processes to ensure risk management processes and staffing requirements are in place to support the success of the agreements. And third, the agency has an obligation to report on its agreements to Albertans, whose resources it uses.

North West Redwater Partnership arrangement

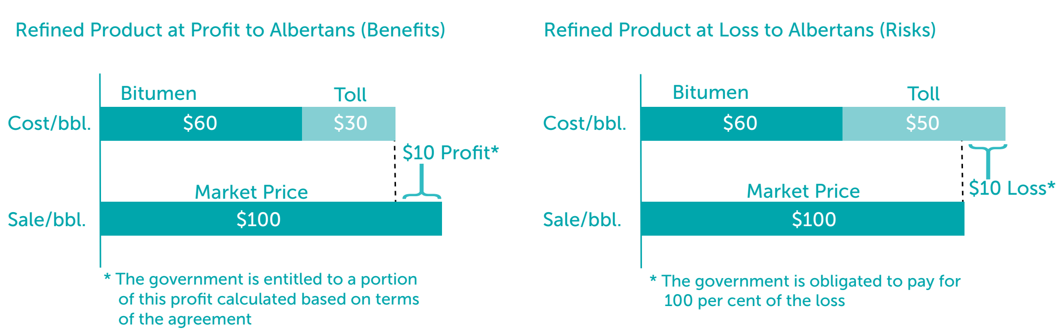
The Sturgeon refinery is owned and operated by the North West Redwater Partnership (NWRP). The APMC's commitment to the project is to provide 37,500 barrels of the province's raw bitumen per day (75 per cent of the refinery's total intake), which the refinery would process into high-quality diesel fuel and other products. The APMC will pay a toll to the refinery. A component of the toll is an operating cost, and another component goes toward recovering NWRP's debt and equity for financing the refinery's construction.

In 2014, the APMC agreed to provide a loan to NWRP to support funding of the refinery, whose facility capital cost had increased from \$5.7 billion to \$8.5 billion. The APMC received a 25 per cent voting right in the decision-making of the partnership as part of the loan agreement. The loan was provided to help NWRP maintain the debt-to-equity ratio at 80:20. The facility capital cost estimate is \$9.4 billion (the total capital cost is estimated to be \$10.2 billion when interest and return on equity during the construction period are included). The Sturgeon refinery is anticipated to be fully operational by June 2018.

Both the debt component of the toll and the APMC's loan are financially important to Albertans, because further increases to the capital cost of the refinery affect both: each time the capital cost increases, the toll that the APMC will have to pay increases as well, as does the size of the loan the APMC provides to NWRP.

Using an example,[1] we illustrate below the financial benefits and risks of the NWRP arrangement. The refined product will typically have a higher market value than the bitumen the government supplies to the refinery—but the difference between the market price and the bitumen cost has to be greater than the toll for the government to make a profit. One risk in this scenario comes from the fact that the market price of refined oil is unpredictable, so a profit after the toll is paid is uncertain. A second risk is that increases in the construction costs of the refinery lead to increases in the toll as NWRP seeks to recover costs. A larger toll makes it harder for the government to make a profit.

Profit/Loss After Toll Payment



1 Hypothetical numbers used for illustration purposes.

Energy East Pipeline arrangement

Under an arrangement with TransCanada, the APMC would have paid about $4.6 billion over 20 years to have oil transported to the east coast through the Energy East Pipeline. At the time of our audit, there was uncertainty over whether the pipeline would receive all the necessary regulatory approvals for it to be built and put into operation. Subsequent to our audit, TransCanada cancelled this project.

Did we examine how the NWRP agreement came into existence?

This audit did not include an examination of the contracting activities to arrive at the original and amended processing agreements with NWRP, signed in 2010 and 2014 respectively. We excluded this from the scope of our audit for two important reasons. First, the processing agreement and accompanying agreements are in place and enforceable, and there is no plausible scenario in which it would make financial sense for the APMC to pull out. Of note, other parties in the agreement can sell their interest under certain circumstances,[2] whereas the APMC cannot. Second, we want this audit to focus on where improvements can be made. Many of the processes used to enter into the agreements are no longer relevant, and most of the individuals who participated in developing and deciding upon the agreements have left the government. As a result, we focused on what processes exist today to manage this significant contract and whether improvements are needed to manage the risks on behalf of Albertans.

Is the NWRP agreement a “good” deal for Albertans?

One question we believe Albertans are likely to have is whether the NWRP agreement represents a good deal for the government. This is a question that cannot be answered definitively and objectively at this time. First and foremost, the processing agreement is a 30-year contract, with an option to renew every five years commencing at the end of the 30-year term. The uncertainty around diesel prices, bitumen prices, interest rates, foreign exchange rates and capital and operating costs over a duration of 30 or more years is considerable. As a result, the expected financial performance of the agreement is premised on the forecasts and assumptions made on these variables. The APMC’s current economic analysis forecasts a positive net present value (NPV). As part of our annual APMC financial statement audit, we examined the cash flow model used to arrive at this number, and we have not identified any problems. However, since the original agreement was signed, the risk exposure has increased without a commensurate change in benefits. In 2011, the estimated NPV for the government was a range of $200 million to $700 million over the life of the project. As of early 2017, that estimate covering the 30-year term is now under $200 million. Many factors, from oil prices to the increases in the Sturgeon refinery capital cost, influence the NPV of the agreement. Consequently, they affect the financial returns to Albertans.

When an organization enters into a commercial transaction, and on an ongoing basis afterwards, it should weigh the benefits against the risks. The government reported on the risks and benefits of the Sturgeon arrangement when it entered into the original contract. However, there is no systematic ongoing analysis of how those risks and benefits have changed. Therefore, it is difficult for the government to appropriately assess and communicate the evolving benefit-to-risk trade-off. For example, potential benefits in the public sector are more complicated because they may involve policy objectives, such as job creation and economic diversification. The APMC needs to work with the Department of Energy to determine what risks and benefits of this arrangement could be reported, when to report them publicly, and who should report what.

2 The other parties have to ensure APMC is satisfied that the proposed buyer has a good reputation and has suitable technical, commercial and financial resources available to it.

The APMC, after it begins to supply bitumen and receive proceeds from the sale of refined products, will be reporting the profit or loss as a result of the agreement. Albertans will then get an annual picture of the financial results over the life of the agreement.

Audit Objective and Scope

The objective of this audit was to determine whether the APMC has adequate systems to manage the risks in its agreements to expand market access and value-added processing.

We did this work because these agreements are complex, have a long-term impact on the government and Albertans, and by nature present significant potential benefits and risks to Albertans.

We based our criteria for this audit on the APMC's responsibilities and applicable legislation. Management agreed that these criteria were suitable for this audit.

The audit focused on three areas: the APMC's risk management, the board's oversight of risk, and the APMC's reporting to Albertans. It also aimed to answer whether there are lessons learned from the Sturgeon and Energy East Pipeline arrangements that the government could apply in its business arrangements.

Early in our planning it was evident that, from a significance perspective, the agreement to process bitumen at the Sturgeon refinery received most of the effort and attention of the APMC outside of its conventional oil marketing activities. As a result, our primary focus when examining the APMC's processes was on its management of the bitumen processing agreement. Our scope did not include an examination of NWRP's processes, only those at the APMC.

Also at the time of audit, there was less activity at the APMC to manage the Energy East Pipeline agreement because of regulatory challenges. Subsequent to our audit, TransCanada announced it would no longer be proceeding with this project.

Audit Responsibilities

The APMC's management is responsible for maintaining effective systems to oversee market access and value-added processing-related activities. Our responsibility is to express an independent conclusion on whether management has adequate systems to achieve the outcomes described in the audit objective.

We conducted our audit in accordance with Canadian Standard on Assurance Engagements 3001 issued by the Auditing and Assurance Standards Board (Canada). The Office of the Auditor General applies Canadian Standard on Quality Control 1 and, accordingly, maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. The Office complies with the independence and other ethical requirements of the Chartered Professional Accountants of Alberta Rules of Professional Conduct, which are founded on fundamental principles of integrity and due care, objectivity, professional competence, confidentiality and professional behaviour.

What We Examined

We examined the APMC's systems to manage risks, analyze results and report to the board and the public on its business arrangements.

We gathered our evidence by performing interviews with staff and board members, inspecting documentation, reviewing correspondence and examining reports to Albertans. We conducted our field work between November 2016 and June 2017 and substantially completed our audit on July 31, 2017.

Conclusion

Because of the significance of the findings, we concluded that the APMC does not have well-designed systems to manage and communicate the risks of its business arrangements and the agency does not have sufficient evidence to demonstrate that its risk management systems are operating effectively.

Why This Conclusion Matters to Albertans

The APMC's mandate has a long-lasting impact on the resources of Alberta. The agency is managing a complex, long-term business arrangement that has significant financial impacts for Albertans today and in the future. The existing business arrangement the APMC is entrusted to manage will commit approximately $26 billion of Albertans' resources over the next 30 years in pursuit of a favourable return.

Because of the structure of the NWRP arrangement, there is no plausible scenario where it would make financial sense to pull out of it. Albertans' resources are therefore committed. Strong oversight and risk management are consequently all the more important.

The government entered into the NWRP arrangement on Albertans' behalf, and ultimately Albertans assume all the associated risks and benefits over a long period of time. They should be confident that the APMC has adequate systems to manage the arrangement in the best interests of the province. Albertans should also receive sufficient public reporting on this arrangement to be able to keep current with the risks they assume and the benefits they receive.

Findings and Recommendations

Risk Management Processes Need Improvement

Context

The sector that the APMC operates in—the energy industry—comes with specific risks, such as volatile commodity prices. The risks are intensified by the high-capital nature of the industry, where contracts can be worth billions of dollars.

By entering into multi-billion dollar commercial contracts, the APMC is committing significant resources in pursuit of a favourable return for Albertans. At the same time, the APMC is expected to prudently manage the risks on behalf of Albertans. Risk management involves, among other things:

- deciding what risks to take by balancing risks against benefits
- mitigating risks
- assessing what expertise is needed to manage risk and ensuring that the expertise is in place
- reporting risks and management's actions to the governance body

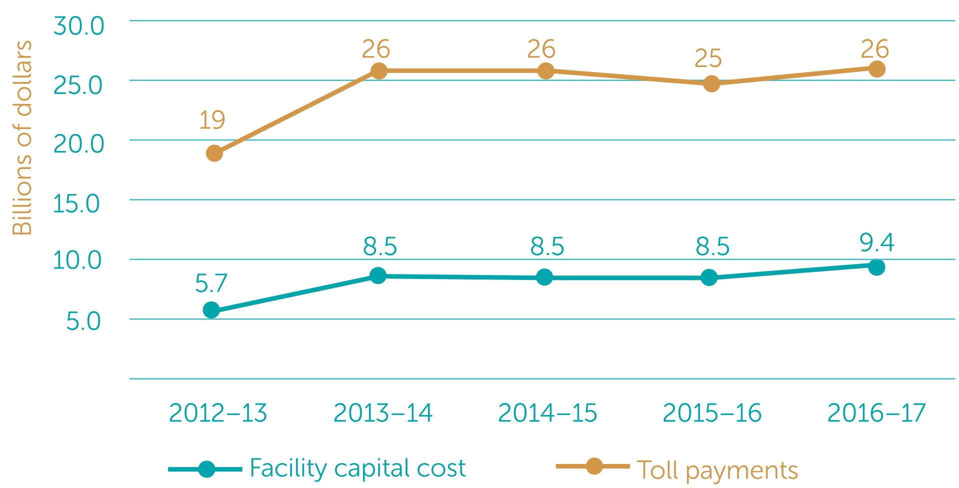
In support of good risk management, ongoing contract monitoring is necessary to ensure the terms and conditions of agreements are complied with by all parties. Complex agreements can include clauses that may be open to interpretation or may require timely and specific actions, and whose details and complexities can be forgotten by organizations. Active and well-documented contract monitoring is therefore vital. Seemingly small oversights can result in missed opportunities or millions of dollars in losses. While many components of the bitumen processing agreement are not active until the refinery is operational and the APMC is supplying bitumen, there are numerous important elements in the agreement that require monitoring, both before and after commercial operations begin.

To protect itself and its stakeholders, an organization must be deliberate about resource planning to ensure it is not unduly harmed by the departure of staff with critical skills. Most important of all, the APMC needs to make sure it brings in the necessary expertise to maximize the benefits and minimize the risks of arrangements. For example, the negotiation of supply agreements for purchasing bitumen to be processed at the Sturgeon refinery requires a specific set of skills. Because of the size of the agreement, even a 10-cent-per-barrel difference in input costs can have an impact of millions of dollars on the APMC's profits.

Agreement to process bitumen at the Sturgeon refinery

Because of the long-term nature of this contract and the $26 billion at stake, it is important that the APMC be able to successfully manage the risks to mitigate the financial exposure to Albertans. The table below outlines the growing facility capital cost of the refinery, together with the toll payments the government will have to pay. Capital cost is one of the many variables influencing the toll payments.

Facility Capital Cost and Toll Payments Trend (billions of dollars)



While there are many risks that the APMC cannot directly control, such as the price of oil and exchange rates, there are opportunities to mitigate and manage those risks as best as possible—for example, by negotiating potentially favourable bitumen supply purchase prices.

It is important to note that there is no direct correlation between how well the APMC is managing risk and the Sturgeon refinery's capital cost increase. NWRP is responsible for actively managing the refinery's day-to-day construction risk. However, as a result of the agreements put in place after the cost estimate increase in 2013, the APMC could have some influence on decisions at the oversight level through its 25 per cent voting interest at the partnership.

Examples of risks specific to the bitumen processing agreement that the APMC has faced or will face soon:

- increases in facility capital costs of $900 million in mid-2017, resulting in larger toll payments. This also resulted in a rise of subordinated debt[3] to NWRP from $324 million to $419 million.
- risks as the refinery transitions into operation, such as disruptions in the supply of bitumen. In the event of insufficient supply, the APMC remains obligated to make payments committed under the contract
- the requirement to pay the debt portion of the toll before refining begins if the commercial operation date is delayed to after June 2018
- loss of corporate knowledge related to the transition of senior management because the CEO left at this critical stage of the project
- a volatile market for the refined product, because of the current economy, resulting in potential losses either annually or over the life of the contract
- decrease in profit if the carbon capture and storage unit, integral to the business case, is delayed or not built

Criteria: the standards of performance and control

The APMC should have systems to manage the risks associated with its business arrangements. The commission should also assess what expertise is needed to manage risks in its business arrangements and ensure the required expertise is in place.

Our audit findings

Key Findings

- The APMC has poorly designed risk management processes with limited evidence that risk management is operating effectively.
- Certain areas of contract monitoring need improvement.
- Staffing needs for today and the future are in the process of being developed.
- Board oversight of risk management functions could be improved.

3 If NWRP goes bankrupt, the APMC does not have a first priority to claim NWRP's assets or earnings for the $419 million it loaned to the partnership.

The APMC board and management are responsive to risks, but a fully functioning risk management system is not in place

APMC management attends NWRP committee meetings and prepares and communicates important information back to the board. We found that discussions, information and analysis shared between the board and management are extensive as important matters emerge, such as construction progress and the status of carbon capture and storage infrastructure. The APMC's management also provides the board with regular updates on ongoing financial and operational matters.

This work is critical for managing risks, but it should not be viewed as a substitute for systemic and evidence-based risk management systems. The APMC does not have a fully functioning and documented risk management system to facilitate proactive and evidence-based identification, evaluation, monitoring, mitigation and communication of risks relating to its business arrangements. Thus, while the board and management assert they are managing risks well, in the absence of a well-designed system and thorough supporting evidence, that assertion cannot be proven. Also, not having sufficient risk management processes increases the chances that risks are not identified or not managed as well as they could be. These systems are also important to ensure that, amid the focus on urgent risks, the APMC still gives attention to risks that are less urgent but still important.

The design of the APMC's enterprise risk management system is inadequate

The APMC's current enterprise risk management system (ERM), introduced in early 2016, does not meet the standards that Alberta Treasury Board and Finance has developed. It lacks broadly accepted elements of what makes a good risk management system. For example:

- there were no timelines or supporting details prepared for the actions to mitigate risk. The actions were unclear and too brief to be useful.
- there was no discussion of residual risks.[4] For example, if the severity and probability of a risk are assessed as high and a mitigating action is identified, it should be clear whether that action reduces the risk to an acceptable level.
- the risk register did not clearly state whether risks identified were related to crude oil marketing, the agreements or something else, or whether they were organization-wide
- probability and severity assumptions were not documented
- important risks such as commodity margins, agency risks and conflicts of interest were not included. Also, in 2012, a number of key risks identified and ranked by the APMC's external consultant were not included as part of the existing register.
- risks were not assigned to an owner, so it is unclear who was responsible for each risk

4 Residual risk is what is left over after natural or inherent risks have been reduced by risk controls.

Below are some specific examples of risks where the lack of a well-designed and functioning risk management system could make the APMC vulnerable.

Examples	
Unresolved response to the price differential risk	A key risk to the APMC is that the difference in price between the refined product and the bitumen the APMC provides could be less than the cost of the toll. This price differential risk is the only processing agreement risk disclosed in the Ministry of Energy's 2016–2017 annual report. (The APMC does not release its own annual report.) However, in the APMC's current risk register, price differential is not listed. Thus, in the APMC's own risk management system it is not clear what mitigating strategies (e.g., hedging), if any, are planned in relation to price differentials. The APMC's residual risk exposure, risk tolerance and approach for something as important as price differential should be clearly documented and understood. In early 2016, management presented a risk management framework to the APMC board that outlined an approach to partially mitigate financial risks, like price differentials. This framework discusses the APMC becoming "hedging enabled." When we asked about the status of this framework, we were told it was a discussion document. The last mention of hedging strategies is in the APMC's 2016 internal annual report, where it states that the strategies are being put on hold. We found no documented explanation as to why or for how long. Management asserts that it is following Treasury Board and Finance's advice that, along with normal risks and costs of hedging, hedging of the price differentials on the Sturgeon refinery arrangement in isolation does not consider the broader impact on the province. Management was unable to provide evidence of the advice given to it and the board nor any supporting financial analysis of this hedging relationship. This arrangement already provides a hedge (although small volumes in comparison to the overall royalties) against the government's opposite exposure to differentials.
Lack of evidence that analysis of agency risk has been completed	Agency risk includes the risk that parties in a contractual agreement can have differing interests that can impact the benefits and costs to one another. As expected, each party in the processing agreement will generally seek to maximize its benefits and minimize its costs within the parameters of the agreement. The parties are working co-operatively, but their interests are not perfectly aligned. Therefore, we would expect to see, from the construction phase to commissioning to operations, that the APMC has analyzed and documented all critical areas where interests may not be aligned and the risk mitigation strategies in place to manage them. We did not find evidence that the APMC documented where misalignment does or could exist and where it is being considered in the various areas of risk management. By the nature of the relationship, the APMC will be relying on NWRP for some activities and processes. The APMC has not documented the extent of the reliance and risk mitigation strategies needed—for example, specific oversight and monitoring activities, audits required.
Risks to APMC when refinery transitions to commercial operations	As the commercial operation date approaches, the APMC is responsible for managing a growing set of risks. The processes and expertise needed at the APMC are impacted by this important transaction. Without a comprehensive plan that outlines the processes, people and resources required to be ready, it is difficult to see the overall level of readiness the APMC envisions when commercial operations begin. Thus, it could be challenging for the board and management to ensure that the APMC is appropriately managing all the necessary activities. We saw evidence that the APMC is advancing important areas to be ready, like developing the processes for procuring bitumen. What we did not see was a cohesive and clear plan to guide the organization.

Overall, an integrated approach to risk management through a robust risk management framework is critical for the APMC to protect the commission from vulnerabilities such as the loss of key management staff and to ensure that the management of risk is uninterrupted. The APMC has taken some early steps, but much more needs to be done.

Certain areas of contract monitoring documentation and execution need to be improved

Because of the complexity of the processing agreement, strong contract monitoring is essential to reduce risk. The APMC's management attends NWRP committee meetings and has ongoing dialogue with the APMC board to discuss important elements of the agreement. These actions are integral to overall contract monitoring.

However, we found limited documentation of what contract monitoring activities are presently taking place for some of the detailed terms and conditions within the agreement. While many provisions of the agreement are not as relevant until commercial operations commence, there are a number of important elements that require detailed consideration during the construction phase. For some important areas, like evidence of required insurance coverage and agreement on the benchmark operating costs, we were provided evidence they are being completed. But for other areas, it was not clear when and how certain contract monitoring elements should be completed, and by whom.

APMC has not completed an audit of refinery capital costs since 2012

The processing agreement enables the APMC to have the refinery capital costs verified going back six years. This provision is important as the capital costs have a direct impact on the toll the APMC will pay. As the APMC does not have its own internal auditors, it relies on the services of the compliance and assurance group within the Department of Energy.

The last time the APMC asked the compliance and assurance group to audit the Sturgeon refinery capital costs was in 2014 for the costs incurred in 2012 (no adjustment to capital cost was identified from this audit). Since that time, the APMC has not requested further audit work to be done. The APMC asserted there was a low risk that the capital cost was incorrect. However, there is insufficient evidence that management properly analyzed and considered this conclusion over the last number of years. When an individual from NWRP asked the APMC in early 2016 if audits were going to be completed to catch up from 2012, the APMC's conclusion was that the necessary staffing resources were not available and that there was minimal risk of material misstatement. In addition, the APMC believed all parties' interests are aligned in keeping the refinery construction cost low. The decision to not proceed with any further audits after 2012 is not supported with sufficient analysis and information.

For audits done before 2012 to determine the eligibility of costs for the initial capital amount and for the remaining term of the contract, inaccuracies were identified in the capital cost. Although management considered these adjustments to be immaterial and did not expect them to reoccur, given the magnitude of the costs involved and the impact on the tolls, it is our view that the APMC has not completed enough analysis and has not provided adequate support to justify not having the subsequent audits completed. Management was not able to define what they considered material.

Overall, there is insufficient documentation to prove that the APMC's contract monitoring is detailed and comprehensive enough to ensure the commission is appropriately managing the risks of various terms and conditions. Contract monitoring will become even more important when commercial operations commence.

Staffing needs for today and the future are in the process of being developed

The APMC's management identified recruitment, retention and training of staff as the number-one risk to the agency. Management outlined planned mitigation strategies including obtaining authority to staff required functions, succession planning, business continuity planning, and cross-training. Aside from cross-training, we saw little evidence that the strategies have significantly progressed. Without a highly functioning and reliable risk management system, resourcing decisions may not effectively align the required expertise with the management of key risks. And because the APMC's risk management and contract monitoring processes are not well documented, it increases the challenge for new staff.

An analysis of resourcing commissioned by the Department of Energy in early 2017 identified a spectrum of approaches when staffing an organization like the APMC. The approaches range from staffing for a contract management approach (fewer employees) to a more hands-on, active approach to managing the agreement (more employees). The APMC is currently deciding on the appropriate staffing model, so it has not yet developed a board-approved resourcing plan.

APMC has not clearly defined the expertise it needs during the construction phase

The APMC's risk register lists construction delays and cost overruns as key risks, and it states two mitigating strategies: ongoing monitoring, and active participation in governance. There is no mention of the resources needed or expertise required to carry out these mitigating activities.

The external staffing analysis performed in early 2017, although focused on future requirements, included information that in general construction and project management experience would be important during the construction, commissioning and operations phases. The APMC's management told us that they considered the interests between all the parties to the agreement to be aligned enough during the construction phase that it would be appropriate to rely on the engineering and project management expertise of counterparties. Also, management indicated that they believe APMC employees attending the NWRP committee meetings related to construction progress do have the knowledge to engage and participate to support the Crown's interests. We did not see documented analysis and evidence to support the claims that interests are aligned or that APMC's expertise was sufficient.

The enactment of the *Reform of Agencies, Board, and Commissions Act* in 2016 impacted the APMC as its former CEO's compensation was more than double the instituted salary cap. The APMC's operations are unique to government, and there are specialized skill sets required to steward the $26 billion processing agreement. The APMC told us it will be able to hire the necessary expertise within the current compensation framework using a variety of approaches, from hiring full-time and part-time employees to contracting skills as required. Until the risk management systems and resourcing plans are complete and all the necessary staffing is in place, there is not sufficient evidence to prove management's assertion.

Board oversight of risk management functions could be improved

Through our discussions with board members and our review of board meeting minutes, it is evident that the board spends considerable time discussing important matters and requiring that management provide detailed information and answer questions as needed. However, we did identify areas where the board could improve its oversight of management's activities:

- The board has a responsibility to ensure management is putting in place sufficient risk management processes. The APMC's roles and mandate document (RMD), signed by the minister and the board chair on August 2, 2017, clearly states this responsibility. The APMC's board and management communicated to us that the commission did not need to comply with the RMD until it was signed. In effect, the APMC was operating without an approved RMD since its mandate was expanded in 2014 to allow the APMC to seek new energy markets and promote value-added activities. In July 2014, the Minister of Energy sent the board and management a letter setting out the direction for the APMC as well as expectations of the minister. This letter did not include the comprehensive list of critical elements that is contained in an RMD. In addition, we did not see evidence of discussions between the board and management about the risk management system or risk identification, monitoring and mitigation, subsequent to the October 6, 2016 meeting where management introduced to the board for the first time its ERM with the top five risks. A sound risk practice would have ensured there were regular and comprehensive management risk reports describing mitigating actions for the risks that management identified. It is management's role to look ahead to anticipate emerging risks, define risk thresholds and establish early warning mechanisms. When the board has good, actionable risk information from management, it can provide better strategic counsel and support to management.
- The board should ensure that management is completing important tasks like preparing a business plan and planning to be ready when the Sturgeon refinery is operational. Doing so will help the board hold management accountable for the execution of strategies and critical activities, for meeting timelines, and for use of resources.
- We found that when some important documents were submitted to the board, such as the strategic plan and the risk management framework for hedging strategies, there was no documented evidence of approval, rejection or direction. The board should clearly document whether it approves a strategic plan or not, so that management has a clear direction to act on the items within the plan.

RECOMMENDATION:
Develop processes for risk management and staff capacity, and ensure board oversight

We recommend that:

- the Alberta Petroleum Marketing Commission develop and document effective processes for managing risk and for ensuring the commission has sufficient expertise to manage its business arrangements
- the board of directors exercise oversight by ensuring the Alberta Petroleum Marketing Commission has these processes in place

Consequences of not taking action

The financial risk to Albertans will be intensified if the APMC does not have proper processes and sufficient staffing capacity to manage the risks of its business arrangements.

There Is Important Information That the APMC Is Not Reporting to Albertans

Context

Accountability for results relies on sound reporting. Many stakeholders, including Albertans, their elected representatives and ministries, need to know if government programs are achieving desired results. Therefore, agencies need to have a clear view of what success represents and put into place systems to measure success. Agencies like the APMC must demonstrate whether the costs and risks taken to achieve results and goals are reasonable, including disclosing important information on significant business transactions that have long-term impacts on Albertans.

Also, government agencies, through sound results analysis, can continue to improve and will better serve the public if they learn from previous successes and failures. Organizations can use the benefit of hindsight to identify valuable lessons for continuous improvement and to help with future decision-making.

Criteria: the standards of performance and control

The APMC should collaborate with the Department of Energy to determine the nature and extent of information to communicate to the Minister of Energy and decide on the appropriate information to report to Albertans about its business arrangements.

The APMC should analyze the results of its business arrangements to ensure it meets strategic objectives and applies lessons learned when planning business arrangements.

Our audit findings

Key Findings

- The APMC's current public reporting through its website and the Ministry of Energy's annual report is insufficient given the significance of the agreements.
- The APMC does not prepare a business plan, nor does it make its annual report public.
- The APMC has not defined what success means for it to be able to measure its performance.
- The APMC has not identified and documented the lessons learned from negotiating and finalizing its two key agreements.

Public reporting is insufficient given the significance of the agreements the APMC is overseeing

Information reported to the public on the benefits and risks of the APMC's processing agreement is inadequate

Considering that the agreement with NWRP results in an estimated $26 billion in payments over the next 30 years, the extent of information shared with Albertans is lacking. The Ministry of Energy's 2016–2017 annual report does highlight the estimated facility capital cost of the refinery ($9.4 billion) and one important risk factor (the price differential between bitumen supplied as feedstock and the market refined products). However, the impact of these two significant items is not discussed further. No other significant benefits or risks are discussed in the annual report.

There are a number of important benefits, some of which are currently being realized, that the APMC is not sufficiently analyzing and disclosing to Albertans, including:

- actual job creation and estimated future employment
- spinoff economic development
- projected tax revenues
- the partial hedge for the government as a result of exposure to bitumen/diesel differentials in relation to other revenue sources like bitumen royalties
- the updated net present value, which is currently estimated by management and confirmed through our annual financial statement audit process to be positive

Management confirmed that the APMC is conducting no standalone analysis of the non-financial benefits being achieved.

The risks that the APMC and, by extension, the Government of Alberta are exposed to are not transparently disclosed and are under-reported. Below are some of the key risks that are not discussed with Albertans:

- the potential for further increases to capital costs, which impact the amount of future toll payments
- the need for increased funding for the APMC if operational losses occur
- potential operational issues at the refinery
- supply disruptions of bitumen needed to meet feedstock requirements
- competition from other diesel producers
- interest rate volatility, which could impact the toll amount
- exchange rate volatility, which impacts future cash flows
- operational success and timing of completion of carbon capture and trunk line infrastructure
- environmental regulation changes that could impact costs at refinery
- disputes between partners, and potential conflicts of interest
- changes in ownership of the refinery

By not completing analysis and providing enough information on benefits and risks, the APMC is not publicly demonstrating it is meeting its ongoing responsibility to steward its agreements. Further, it is not appropriately considering or informing the funders, Albertans, of the risks it is taking on their behalf to achieve what it believes to be benefits worth pursuing.

The APMC could provide additional non-commercially sensitive information for external users to complete their own analysis

External users of government reporting are limited in the quality and extent of analysis they can perform on the processing agreement. The APMC has posted the processing agreement on its website, which outlines key contract terms and conditions. This is important information, and it is prudent that it be shared. However, the APMC has not provided the key assumptions used and analysis of how key variables impact cash flow and net present value.

For example, the APMC provides no information on how financial projections are affected by changes in diesel/bitumen spreads, interest rates, exchange rates, operating costs and capital costs. This lack of disclosure of information outside what is rightfully protected under confidentiality requirements limits the ability of Albertans to make reasonably informed and meaningful conclusions on the potential financial impact of the APMC's processing agreement. The less information the APMC shares with Albertans about the processing agreement, the greater the risk that inaccurate assumptions and analysis from other sources could fill the void.

The APMC does not have its own public annual report
The APMC's financial statements are included in the Ministry of Energy's annual report. Each year, the APMC also submits non-financial information and analysis to the department for inclusion in the ministry's annual report. The department, with minister approval, decides on what non-financial statement information about the APMC to include in the annual report. The APMC does not have its own annual report that it reports externally.

We reviewed the APMC's most recent internal annual report and found that it contains a lot of important and useful information, beyond its financial results, that is not included in any external reporting. For example, it outlines key actions and activities related to the stewardship of the APMC's agreements. While some of the information may indeed be rightfully classified as confidential for commercial reasons, we did not see any evidence that management had analyzed what information is or is not subject to commercial confidentiality. We were also not provided with evidence that a more thorough discussion of benefits and risks and sensitivity analysis would compromise any commercial confidentiality.

Observations of management's actions and a review of board minutes show there has been limited consideration by the APMC and the Department of Energy of what additional information could be shared with Albertans to enhance the quality and quantity of the APMC's public reporting. The roles and mandate document (approved by the minister on August 2, 2017) makes it clear that the APMC must send an annual report to the minister.

The APMC does not prepare a business plan

The *Fiscal Planning and Transparency Act*[5] requires accountable organizations, including most provincial corporations, to make business plans publicly available after they have been provided to the minister. The APMC's roles and mandate document also requires that the APMC submit to the minister a business plan that includes priorities and goals. The APMC does not prepare a business plan. Because the APMC does not have a business plan, there is no clear articulation of its goals, strategies and performance measures.

The board and management believe that the APMC is meeting the legal requirements in the Act via the ministry's business plan. However, the ministry's business plan does not serve as a functional plan for the APMC's operations. The current ministry business plan refers to the APMC only once, listing it as an entity in the ministry. There is no mention in the ministry business plan of the agreements the APMC is managing or any strategies, measures or outcomes related to the APMC's operations. Thus, the APMC needs to provide more adequate business plan reporting to meet the spirit of transparency and accountability laid out in the Act.

The minister and the board have not defined what represents success for the APMC

Both the minister-approved roles and mandate document and the strategic plan fall short of defining what success means for the APMC. The roles and mandate document sets out four areas of responsibility: value-added activity, market access, NWRP, and marketing conventional crude royalty-in-kind. The strategic plan indicates there is a wide range of potential futures for the APMC, but which ones it should follow depend on the

5 *Fiscal Planning and Transparency Act*, SA 2015, c F-14.7, s 10(3).

government's view on how active it wants it to be in pursuing market access and value-added activities within the energy sector. The APMC has not established key performance indicators and targets to allow comparison of expected outcomes with actual results. Nor are there specific timelines set when goals will be achieved.

In the view of the APMC's management, success for the agency is seeking out business opportunities that can enhance petroleum market access and add value to petroleum resources, bringing such opportunities forward for government consideration if they have merit. The APMC has not confirmed with the minister or the Department of Energy whether this measure is a suitable proxy for success. The APMC should consider both activity-based and performance-based measures for its business development activities, since approval of commercially successful projects is infrequent. For example, one measure could be how successfully the APMC has informed the Alberta energy market participants of its initiatives, whether through technical publications, conference presentations or direct conversations with industry participants.

The APMC has not initiated a lessons-learned analysis of the business agreements it has entered into

After the initial negotiation of the processing agreement and the subsequent renegotiation after the facility capital costs escalated from $5.7 billion to $8.5 billion, we did not see any evidence of a thoughtful and thorough analysis of the lessons learned. For example, one of the lessons that management communicated to us that they had learned from the original contracting processes and applied in the 2014 renegotiated contracts, was that the government concluded that a price cap on the facility capital costs of $6.5 billion in the original contract could not be enforced without the risk of the whole arrangement collapsing. Therefore, the cap restriction was removed as part of the negotiation of the amended agreement. However, we did not receive documented evidence to show this analysis was done at the time of the contract renegotiation. An analysis of lessons learned from the Sturgeon refinery contracting processes could be very important to help with any future decisions on contracts for value-added activities, including a processing agreement related to phase two of the Sturgeon refinery. To date, the APMC has not done a retrospective analysis of the structure, timeframe, financial significance and complexity of the processing agreement. It may also be beneficial for the APMC to complete a lessons-learned analysis for the start-up period and the period after the refinery becomes operational.

In addition, the APMC has not completed a lessons-learned analysis related to the Energy East commitment, which could provide valuable information for decision makers on any potential future contracts related to opening up access to markets outside Alberta.

Presently, there is little documented information for incoming management and board members on lessons learned from previous contractual arrangements.

**RECOMMENDATION:
Improve reporting to Albertans**

We recommend that the Alberta Petroleum Marketing Commission prepare a business plan and an annual report that are made publicly available to Albertans. The APMC must be able to demonstrate it has given appropriate consideration to the nature and extent of information it will share with Albertans.

**RECOMMENDATION:
Establish performance measures and targets**

We recommend that the Alberta Petroleum Marketing Commission develop performance measures, set targets and compare results against planned performance.

**RECOMMENDATION:
Complete a lessons-learned analysis**

We recommend that the Alberta Petroleum Marketing Commission complete an analysis of the lessons learned from its significant agreements, at a point in time when the commission deems it useful to do so.

Consequences of not taking action

In order for Albertans and legislators to be able to hold government accountable for results and understand the implications of significant contracts, sufficient information must be available. Albertans could be unfairly surprised if significant risks manifest themselves. Conversely, Albertans may be unaware of some of the important direct and indirect benefits obtained from significant commercial contracts used to promote strategic objectives.

Also, the potential value of learning through previous successes and failures could be lost if the APMC does not adequately analyze and document lessons learned.

The APMC has effective processes for assessing new business opportunities

Context

In response to the expanded mandate for value-added processing and expanding market access, the APMC set up a business development group to identify and analyze business ideas and financially feasible proposals that would provide strategic value to Alberta. The APMC's work is focused on advising the board and the minister on business arrangements that require some form of government involvement. The APMC also performs analysis of energy market matters and advises the minister and the Department of Energy.

Criteria: the standards of performance and control

The APMC should have systems to manage the risks associated with its business arrangements. In particular, it should analyze each new business arrangement and decide whether pursuing it is in the province's interests.

The board of directors should be aware of the key risks in business arrangements and oversee key decisions.

Our audit findings

> **Key Finding**
>
> The APMC's assessment of business development opportunities is supported with good processes.

Overall, we found that the APMC has good processes for assessing business development opportunities. The opportunities covered a wide range and were related to infrastructure, market development and value-added processing. For the projects we sampled, we found that the APMC prepared comprehensive analyses and prepared reports for the board. The APMC's process to explore new business opportunities is an important function as it is necessary for effective benefit and risk analysis. If properly completed, the analysis helps decision makers make informed judgments when approving agreements that merit government support.

Appendix A: Alberta Petroleum Marketing Commission Background

Alberta Petroleum Marketing Commission Background

The Alberta Petroleum Marketing Commission (APMC) is a commercial agency of the Alberta government that was established to collect and sell crude oil[6] on behalf of the province. The APMC's mandate was expanded in early 2014 under the *Building New Petroleum Markets Act* to assist in the development of new energy markets and value-added activity through upgrading and refining in Alberta.

In alignment with its mandate, the APMC has an existing business arrangement with North West Redwater Partnership (NWRP) to facilitate the construction and operation of the Sturgeon refinery, and in 2014 it entered into an agreement with TransCanada to facilitate the building and operation of the Energy East Pipeline.

APMC board structure and governance

The *Alberta Petroleum Marketing Act* empowers the Minister of Energy to appoint up to seven directors to the board. The minister, an elected representative of Albertans, exercises oversight of the board of directors and appoints the chair of the board.

The APMC's corporate board structure is unlike a conventional board, where independent board members are charged with the responsibility to steward the organization. Instead, there are two members from the Alberta public service (internal) and two board members with industry experience from outside the public sector (external). (At the time of the audit, the remaining three board positions were unfilled. Subsequent to our audit, the APMC appointed two new external board members.) The board chair is the deputy minister of the Department of Energy.

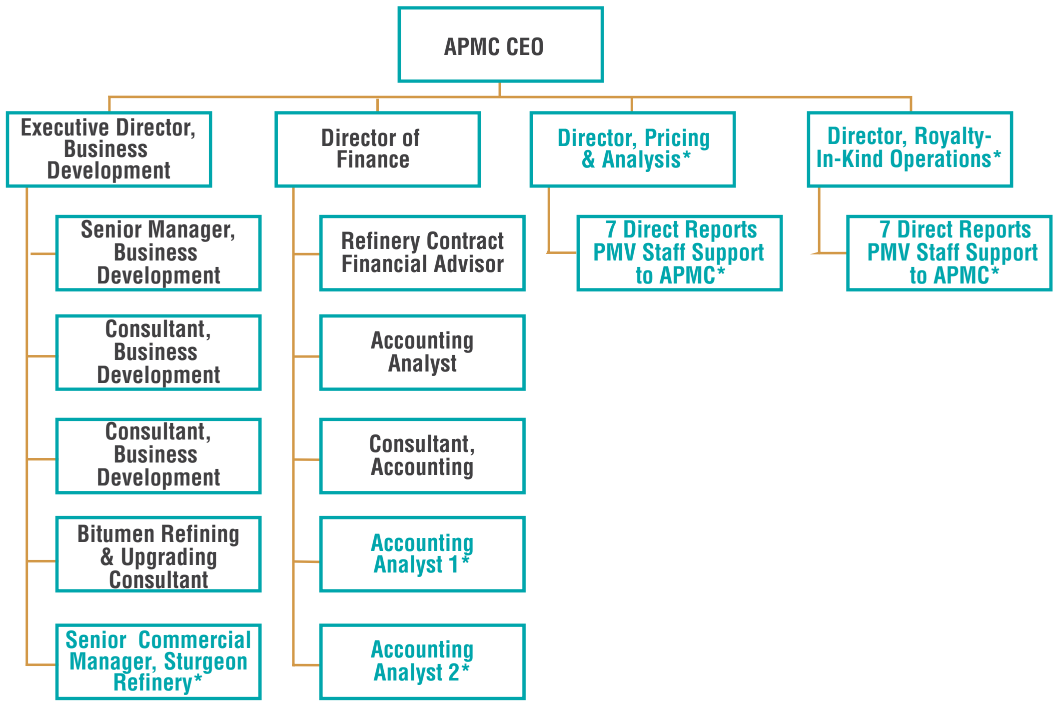
This hybrid board structure, with a mixture of senior government executives and external board members, is not common in Alberta. There could be advantages in operating this structure because it allows the government to closely align the APMC's interests with its own and advance policy implementation through the representation and actions of government officials on the board. At the same time, conflict is inherent in this structure, especially when external industry-experienced board members wish to steward the APMC in a manner that is inconsistent with the policy and direction of government. The APMC's legislation requires every appointed director to act in good faith and with a view to the best interests of the commission. At times, government executives on the board may feel conflicted because they have to act in favour of government department policy instead of what is best for the organization. The board makes decisions as one collective body. For hybrid boards to function effectively, appropriate mechanisms should be in place to respond to conflicts. The Alberta Public Agencies Governance Framework acknowledges that agencies are created to operate at some level of distance from government, and this distance could vary from agency to agency. The framework states that placing government officials on agency boards can make this distance hard to maintain and cites that this can also pose challenges for government officials who must distinguish between their obligations as department or legislative representatives and their role as agency members.

The board also reviews business proposals prepared by the management team and discusses them at the regular board meetings. The board recommends projects that merit government support, but the authority to approve projects resides with the minister.

6 Specifically crude oil royalties, which are royalties collected from petroleum producers in barrels of oil rather than in cash.

APMC organizational chart

The APMC has a small group of staff dedicated to market access expansion and value-added processing activities. In addition, a group with a mix of Department of Energy and APMC staff is dedicated to the long-standing crude oil royalty business. Below shows the APMC's organizational chart.

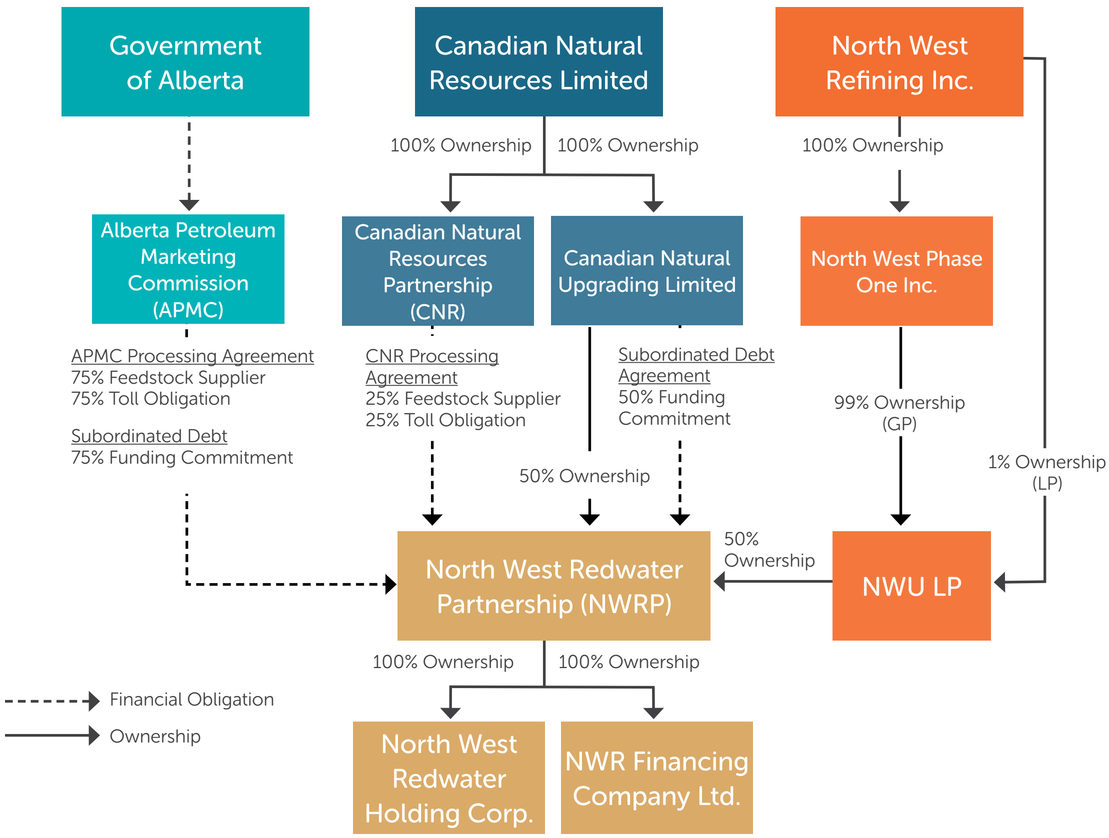


* Indicates Department of Energy employees

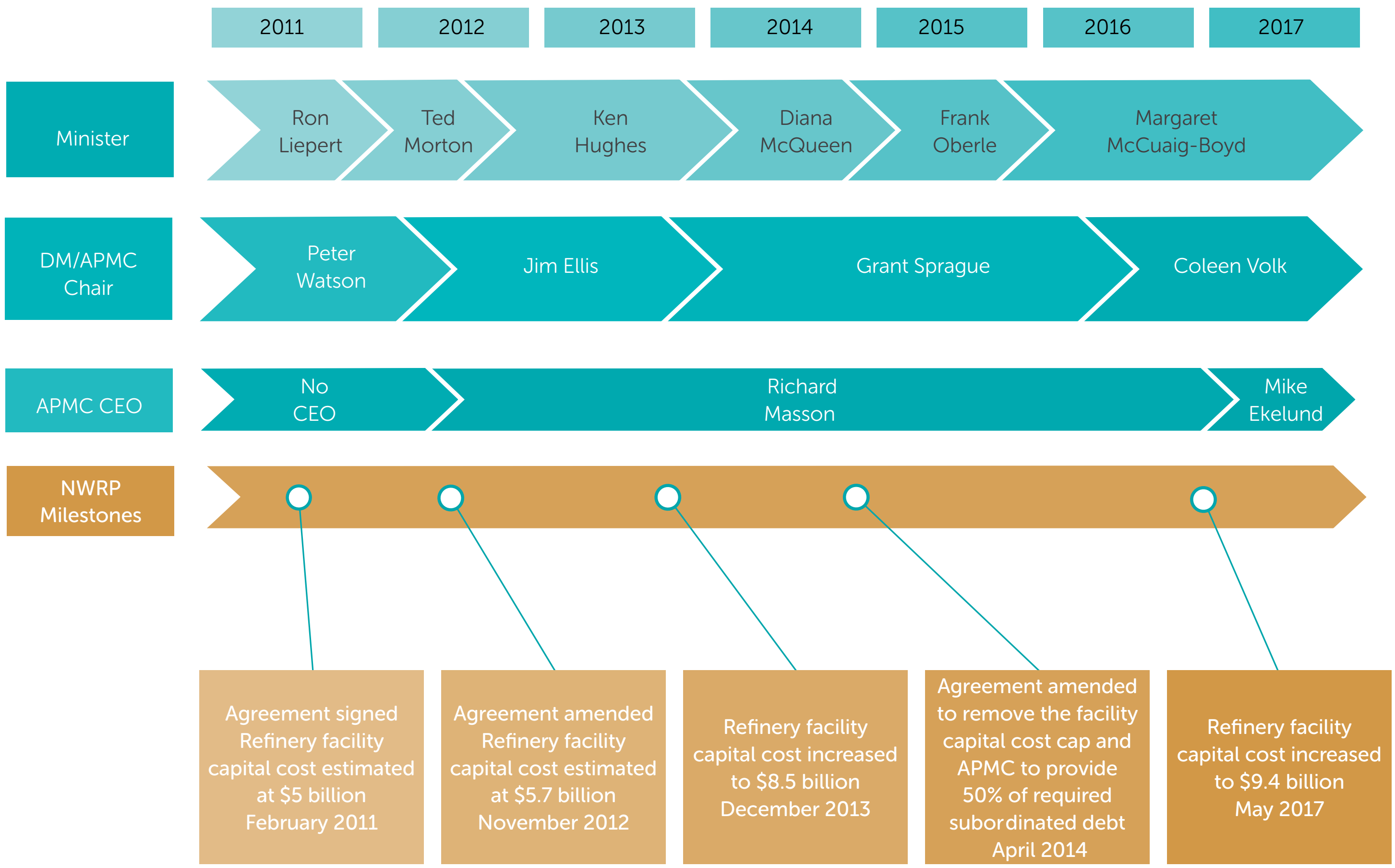
North West Redwater Partnership (Sturgeon Refinery)

The Sturgeon refinery is the first new major refinery to be built in Alberta in over 30 years. Based in Alberta's Industrial Heartland, the project is a 50/50 partnership between North West Upgrading Inc. and Canadian Natural Resources Limited. The refinery is planned to be completed by mid-2018.

NWRP/Sturgeon Refinery Contractual and Ownership Structure



Timeline on NWRP Milestones and Changes in Energy Ministers, APMC Board Chairs and CEOs



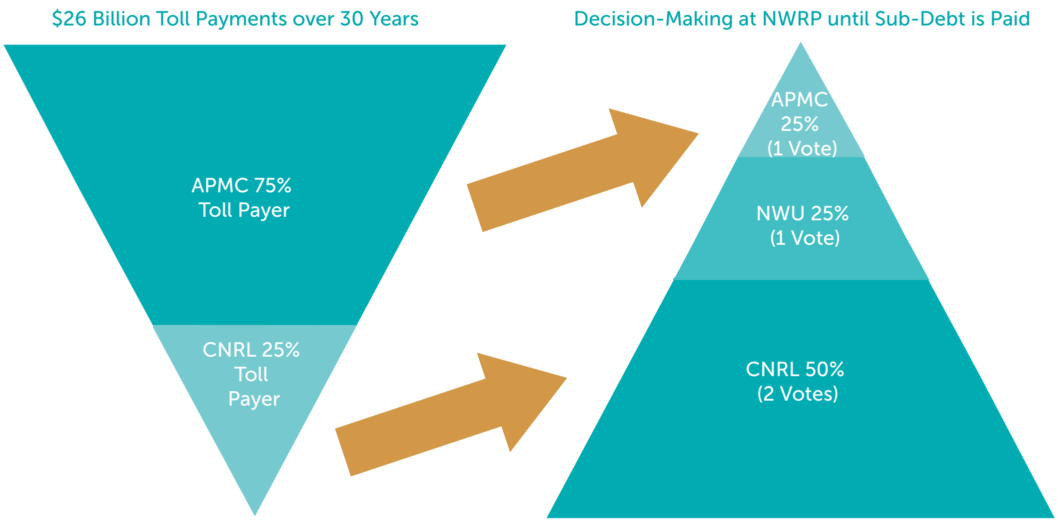
Risk Management and Contract Monitoring of the NWRP agreement

North West Redwater Partnership

NWRP, which has a staff of nearly 400, is responsible for overseeing the day-to-day construction and risk management activities of the Sturgeon refinery.

APMC

As a 75 per cent toll payer in this arrangement, the province took on many of the risks as if it were building the refinery. A substantial amount of risk was transferred to the province through the unconditional nature of the debt component of the toll payments. The CEO (left mid-2017), who took on a lead role in the 2014 NWRP contract renegotiation process, had a thorough understanding of the contracts. He was the main person who oversaw this arrangement, dedicating over 50 per cent of his capacity to it. The CEO also represented the APMC's 25 per cent voting interest in the governance of the project, actively participated in the various NWRP committees and was able to influence construction activity decisions. Below is an illustration of APMC as a 75 per cent toll payer and its decision-making power within the partnership.



APMC staff (mainly the CEO) manage the contract during the refinery construction phase by:

- preparing project status reports and discussing them at APMC board meetings
- participating in various NWRP committees that govern the construction, financing, commissioning, start-up and operations of the refinery
- analyzing significant issues and providing thorough reporting on them to the board

The APMC's involvement in the various NWRP committees includes:

- Executive Leadership Committee
- Operating Committee
- Operations Executive Leadership Committee
- Finance Committee
- Insurance Committee
- Commercial Committee

Energy East Pipeline Project

The proposed Energy East Pipeline project was to include 4,500 km of pipeline from western Canada to refineries and ports in eastern Canada. At the time of the audit the pipeline had not yet been approved, but was expected to transport just over one million barrels of crude oil per day.

The APMC signed an agreement with Energy East Pipeline Limited Partnership in 2013 to transport 100,000 barrels per day of crude oil to Saint John, New Brunswick, through the pipeline for 20 years. Under the agreement, the APMC agreed to pay a monthly fee to Energy East Pipeline Limited Partnership. Part of the fee was a fixed minimum amount: even if no oil were transported, the APMC would be charged an estimated $4.6 billion over the life of the agreement.

Subsequent to our audit, TransCanada announced on October 5, 2017 that it would no longer be proceeding with this project.

Appendix B: Bitumen Royalty-In-Kind and the Sturgeon Refinery Agreement Background

Bitumen Royalty-In-Kind

The government had the objective of using its royalty volumes collected in kind under the Bitumen Royalty-In-Kind (BRIK) program to pursue value-added activities in the province. The incremental investment would create economic activity and jobs from capital project construction and operations. This would improve Alberta's long-term economic sustainability and diversify the products produced in Alberta.

The government, through its agent, the APMC, entered into an agreement with the North West Redwater Partnership (NWRP) to process the government's royalty bitumen. NWRP comprises North West Upgrading Inc. (NWU) and Canadian Natural Resources Ltd. (CNRL). The parties to the agreement agreed that the North West Redwater Partnership would construct and operate the Sturgeon refinery, a bitumen refinery northeast of Edmonton, and upgrade, refine and market royalty bitumen supplied by the APMC and CNRL.

What is "BRIK" (Bitumen Royalty-In-Kind)?

BRIK is a concept that came out of the new royalty framework in 2007 to encourage value-added activities in Alberta. The basic premise was that the government would collect a portion of bitumen royalties "in kind": by taking ownership of a barrel rather than receiving a cash royalty. The government could then direct that bitumen to local value-added endeavours. The bitumen processing agreement originated from the BRIK concept. Over time, it became clear to the Department of Energy and the APMC that arranging for and taking bitumen in kind to supply the Sturgeon refinery was not the most practical and cost-effective approach. As a result, the APMC will be entering into contracts with one or more bitumen producers to secure the bitumen necessary to meet its supply commitments to the refinery. Effectively, the APMC is purchasing bitumen rather than taking it as in-kind royalty. In substance, the objective is maintained but the form has changed, for well-supported reasons.

The Oil Sands Sustainable Development Secretariat report *Responsible Actions: A Plan for Alberta's Oil Sands* (2009) included the following strategies:

- use bitumen royalty-in-kind transactions to facilitate and expand an Alberta bitumen market
- establish a government-led organization to manage Alberta's bitumen royalty-in-kind volumes, in order to maximize the long-term benefits for Albertans
- leverage bitumen royalty-in-kind volumes to develop value-added oil sands products

In mid-2009, the government issued a request for proposals (RFP) soliciting applications in using BRIK. The RFP process resulted in five submissions. The government formed the RFP evaluation team to assess the submissions. The evaluation team consisted of representatives from key departments (Energy, Treasury Board and Finance, Environment, Sustainable Resource Development, and Advanced Education and Technology), consultants (provided assessment on economic feasibility, financeability and technical feasibility) and a fairness monitor to ensure the assessment of RFPs was completed appropriately.

The evaluation team's assessment of the RFP submissions resulted in the rejection of three submissions for non-conformity to RFP requirements. Before the evaluation team finalized its assessment, one of the two remaining applicants withdrew its application. Even though the evaluation team completed substantial assessment of the withdrawn application, it did not present its findings to the decision makers. The team only reported on the one remaining submission (Sturgeon refinery).

The evaluation team completed its report on NWU's proposal in April 2010 with the conclusion that it would be in the government's interest to enter into negotiation with NWU. However, the report highlighted that the proposal, as submitted by NWU, placed a disproportionate risk on the government. The report highlighted key risks and benefits of the NWU proposal along with key ways to improve the risk profile for the government. The government established a team to negotiate with NWU based on a cabinet-approved term sheet. The APMC signed the NWRP agreement in February 2011. Below we summarize the evaluation team's conclusions on key risks and anticipated rewards, along with key events that led to the NWRP contract.

Key risks

Risks	
Price differentials	The price differential between the input (bitumen) and the output (refined products) may not be sufficient to cover the costs of the project. Under the agreement, the government pays a processing fee (toll) for each barrel of its bitumen to be refined. The processing fee includes four elements: an operating toll, a debt toll, an equity toll and an incentive fee. If the processing fee is more than the price differential between input and output products, the government will be in a loss position. Further, the evaluation team noted that the take-or-pay requirement regardless of throughput or completion was a critical issue to be negotiated.
Cost overruns	The evaluation team's assessment, made during the preliminary assessment of the NWU proposal, concluded that the median estimate for facility capital cost was 140 per cent of $5 billion, the estimate provided by NWU. This assessment highlighted a facility capital cost cap of $6.5 billion (130 per cent of $5 billion) as a mitigating control and led to further investigation.
Construction delays	Based on the evaluation team's assessment, it was noted that the overall schedule for engineering procurement and construction of the phase one facility was aggressive. NWRP delayed the project several times. Originally, NWRP expected the refinery to be in production in early 2014.
Project financing	The financeability of this project was one of the highest risks. In order to allow the project to borrow funds from investors, the government had limited ability to shift some of the risks to the project.
Operating risks	The evaluation team concluded there was a risk that failures at the refinery could require refinery shut down for an extended period. The team also concluded that the plant performance and yield assumptions were overstated.
Environmental risks	Refining of heavy oil releases various chemicals into the air and uses large amounts of water. Further, that water will need to be treated at the end of the industrial process. Heavy oil and bitumen contain higher levels of harmful metals such as nickel and vanadium, which must be disposed of by NWRP appropriately.

Anticipated rewards

Anticipated benefits	
Increased benefits	From their assessment of NWU's projection, the evaluation team noted that the government will gain "a substantial incremental value" compared to selling its oil on the open market. The project assessment showed a positive rate of return for the government.
Greater diversification	The evaluation team noted that the NWU proposal would produce a mix of refined products that would be marketed in western Canada and the United States. The team concluded that pushing for growth in bitumen processing within the province in order to diversify the petroleum industry would allow the government to manage the risk of low revenue due to low oil prices. A study commissioned by the government concluded that western Canadian demand would grow and could eventually absorb a substantial portion of the diesel production.
Capturing more of the value add	The evaluation team noted that the NWU proposal would result in capturing more value for Albertans. This would increase value-added petroleum production and so could result in high-paying jobs and increased royalties and taxes to the government. Further, the NWU proposal would create thousands of jobs and generate billions of dollars in economic activity.
Environmental and additional economic advantages	Industrial plants such as upgraders and refineries are usually associated with negative environmental impacts. Clearly, new facilities will pose environmental challenges. However, the evaluation team concluded that the NWU proposal represented a significant step in displaying what is possible for environmental management of oil sands processing facilities. The evaluation team pointed out that the Carbon Capture Storage (CCS) element of this project presents a considerable environmental advantage. It also concluded that the CCS element is in line with government policy on the environment and contributes significantly to the government's current oil sands agenda. The Sturgeon refinery is projected to emit 0.5 megatonnes of CO_2 per year and capture about 1.2 megatonnes per year during the first phase of its operations. NWRP will sell the captured CO_2, as part of the agreement with Alberta Carbon Trunk Line. The CO_2 will be injected into oil wells to enhance oil recovery. This will result in more conventional crude oil produced through enhanced oil recovery, leading to increased government royalties.
Additional markets for Alberta bitumen	Bitumen production will increase considerably over the next 10 to 15 years. The Sturgeon refinery was projected to provide an outlet for this bitumen, taking supply off the market and improving prices for bitumen.

Timeline of events

Date	Event
February 2007	The Finance Minister announced the appointment of a six-member panel of experts to complete the review of the province's royalty systems.
September 2007	The Royalty Review Panel publicly released its report, titled *Our Fair Share*. The 104-page report provided recommendations on how the government could modify the existing provincial royalty structure, and introduced the notion of "adding value."
October 2007	The Government of Alberta (GOA) announced the New Royalty Framework. The government committed to considering options such as taking bitumen royalty-in-kind (BRIK) in order to strategically supply potential upgraders and refineries in Alberta.
February 2008	The Oil Sands Sustainable Development Secretariat issued a 20-year plan for responsible energy oil sands development. The plan emphasized the use of BRIK to maximize long-term benefits to Albertans.
May 2008	The GOA approved a plan to develop a business case for implementation: taking bitumen in kind and processing it in the province.
December 2008	The GOA launched Alberta's Energy Future Strategy, which highlighted upgrading the refining capacity to add value to fossil fuels.
July 2009	The Department of Energy issued an initial Request for Proposals (RFP) soliciting applications in using BRIK. The application period closed on January 27, 2010.
October 2009	The department issued a final amended RFP regarding the use of BRIK. The application period closed on January 27, 2010. The RFP process resulted in five submissions.
January 2010	The GOA formed the RFP evaluation team, which included: • key government departments[7] • consultants to review the proposals' economic feasibility, financeability and technical feasibility • a fairness monitor to monitor the work of the RFP evaluation team The GOA formed the Deputy Ministers Selection Committee to be the intermediary group between the evaluation team and the cabinet. The Selection Committee included deputy ministers from the above key departments.

7 The departments of Energy, Treasury Board and Finance, Environment, Sustainable Resource Development, and Advanced Education and Technology.

Date	Event
April 2010	The evaluation team completed its work, with the following results: • one applicant withdrew its submission for internal reasons. (The evaluation team had substantially reviewed the submission before it was withdrawn.) • three submissions were rejected because they did not conform to the RFP requirements • one submission (the NWU proposal) was reviewed in full The Deputy Ministers Selection Committee received the evaluation team's final report with a recommendation to proceed with negotiation with NWU and CNRL. The government formed the negotiating team[8] to negotiate.
May 2010	The negotiating team completed the term sheet with NWU and CNRL, which the cabinet approved.
February 2011	The government announced that it had successfully negotiated a contract with the NWU and CNRL partnership, with the following details: • the project would construct a new bitumen refinery as part of the government's BRIK initiative • NWU estimated the cost of the refinery to be $5 billion
November 2012	NWRP announced approval of the construction of phase 1 of the Sturgeon refinery. NWRP updated the estimated cost of the refinery to $5.7 billion, with completion to be within three years.
November 2012	The APMC amended and restated the agreement to process royalty bitumen. The facility capital cost increased to $5.7 billion.
November 2013	The APMC became aware of the facility capital cost increase of the refinery from $5.7 billion to $8.5 billion.
November 2013	The department and the APMC started analyzing the impact of the cost increase. The APMC prepared various scenarios for the cabinet to consider, which included terminating the contract and renegotiating the contract based on the cost of $8.5 billion.
December 2013	The APMC amended the agreement in response to the facility capital cost increase to $8.5 billion.

8 The negotiating team included members from the departments of Energy, Justice, Treasury Board and Finance, and Economic Development.

Date	Event
January 2014	The *Building New Petroleum Markets Act* was proclaimed, allowing the Minister of Energy to: • provide specific direction to the APMC based on government priorities • allow the APMC to provide loans or make equity investment in projects, when authorized by the government
April 2014	The APMC signed an amended agreement with NWU and CNRL with the following revisions: • the facility capital cost was updated to $8.5 billion after the cost cap of $6.5 billion was removed • the APMC and CNRL were bound to provide loans (subordinated debt) to NWRP. This resulted in the APMC providing a $324 million subordinated loan to NWRP. • the APMC received a 25 per cent voting interest on the Executive Leadership Committee • return on equity was reduced from 10 per cent to 5 per cent. As at November 30, 2013 the original equity had funded and accrued equity of approximately $824 million that going forward would earn a reduced return of 5 per cent (from the original 10 per cent) paid annually with principal repayment deferred until the full repayment of the subordinated debt • 25 per cent of excess capacity entitlement was transferred to the APMC and CNRL (12.5 per cent each)
May 2017	The Ministry of Energy updated the estimate for the facility capital cost of the Sturgeon refinery to $9.4 billion, with the expected completion date amended to the second quarter in the 2018 calendar year. This resulted in an additional $95 million subordinated debt that the APMC would need to provide to NWRP. The APMC provided $21 million of the required $95 million on May 31, 2017.