

SASKATCHEWAN MEGAPROJECTS IN THE 1980s: THE UGLY, THE BAD AND THE GOOD

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EXECUTIVE SUMMARY

Canada has had a troubled history of governments pursuing megaprojects that entail large losses of taxpayer money, leading politicians later to bemoan the fact that the project should never have been undertaken. Would better advance assessment avoid such losses? This paper looks at the question in the context of the history of three energy-related megaprojects in Saskatchewan in the 1980s: the NewGrade Heavy Oil Upgrader, the Bi-Provincial Heavy Oil Upgrader and rural gasification, respectively the Ugly, the Bad and the Good. The two upgraders were undertaken at a time of serious economic malaise in the province. The desire to build the economy and create sustainable jobs may have blinded political leaders to the reality that these projects did neither, at least at the time they were being built and for the first decade of their existence. The rural gasification initiative had much more sound economic rationale and a more defensible role for the government.

The history of the projects and their varied institutional structures yields a number of simple economic tests that should be applied to public projects, which I call the **sand test** and the **couch test**. The two tests provide an intuitive check on the reasoning often invoked on behalf of public megaprojects. These tests indicate that Saskatchewan should not have pursued the NewGrade Upgrader when it did, that the Bi-Provincial Upgrader had a better rationale but would likely not have passed at least one of the tests of reasonableness, and that rural gasification was a sound idea that has likely yielded net benefits for the province.

"I guess the one saving grace is that we were probably all stupid together."

- Ralph Klein, 1994, referring to the Bi-Provincial Upgrader

1. INTRODUCTION: THE LURE OF MEGAPROJECTS

Politicians have long known that the word “investment” can be a useful substitute for “spending.” Nobody would think it wise to spend a billion dollars of public money building assets known to be worth less than half that amount. Somehow, the same undertaking can sound like a good thing when it is called “investing.” The problem is that it is often easy to sell an expensive project by overstating the likely benefit of the assets being developed, and since public investments tend to have an uncertain valuation, this gambit is not easy to spot ahead of time. Nor are there necessarily incentives in place to guide sound decision-making. The individuals making the investment decision get to enjoy the public credit at the typical hardhat-and-shovel sod turning as the project gets underway, but they may be long gone by the time the losses on the asset and the negative return on the investment become known.

If public officials have the self-discipline to apply reasonable cost-benefit analysis methodologies, wasteful investment can sometimes be avoided when the projects have readily available valuations based on observable market prices. However, Canada has had a troubled history of money-losing megaprojects that were undertaken even when signals were clear in advance that the costs would exceed the benefits. Examples include the Bricklin car plant in New Brunswick, the Sprung greenhouse in Newfoundland, massive wind and solar farms in Ontario and elsewhere and so forth.

This study examines the experience of Saskatchewan in the 1980s and 1990s with three energy-related megaprojects: two heavy oil upgraders and the extension of natural gas service into rural areas. A motivation for looking at these projects is that while they were all undertaken in one province under the same government (Grant Devine’s Progressive Conservatives [PC]), they differed substantially in their underlying economic characteristics and subsequent

payoffs. Understanding how these contrasts provided signals of subsequent success or failure might help prevent future losses.

As with most megaprojects, a mix of considerations, including a desire to promote employment and economic growth during tough economic times, motivated these undertakings. The vision of the creation of local employment can blind decision-makers to the unseen but widespread destruction of wealth that is going on in the background. I propose two simple tests that should be applied to public projects. The first is the **sand test**, which applies when a jurisdiction proposes a project to take advantage of some local resource or natural endowment. The observation that “we have plenty of heavy crude in the ground” can lead people to assume that it ought to be extracted and processed. But every jurisdiction has a lot of sand that potentially could be made into glass. The private sector typically refuses to do so because the market value of the glass would not cover the cost of mining the sand. Were the government to impose an arbitrary public policy objective of expanding glass production just because the sand is there, it would amount to forcing the conversion of valuable inputs into lower-valued outputs, which is mere wealth destruction. In the same way, just because a resource is present does not mean that associated extraction and processing industries should be built, unless the benefit clearly justifies the cost of development. If private investors are unwilling to undertake the work and there is no compelling rationale for the government to usurp their role, this is a good indicator that the project should not proceed.

The second is the **couch test**, which applies when the main rationale for government support of a project is job creation. Even assuming that the job-creation estimates are valid, we could then ask whether it would cost less to employ the same number of people to sit on the couch at home and do nothing. Not because we want people to sit on their couches, but if the project has no value beyond job creation, it does not make sense to recruit for occupations that require a high wage to attract applicants. If all we want

to do is count up the number of hires, then it makes sense to advertise positions that will attract the most applicants at the lowest possible cost. Offering to pay people to sit on the couch at home is likely to attract willing applicants even at a very low pay rate. If the labour market is sufficiently slack that we could hire large numbers of people to sit on their couches for, say, \$40,000 per year and the project will create jobs at a cost of \$100,000 per year, then we are overpaying for job creation associated with the project.

Application of these tests, and other considerations based on standard economic reasoning, would certainly have prevented the building of one of the two upgraders, but it would likely have supported the rural gasification project. The other upgrader would likely not have been built, but its rationale was somewhat more favourable at the time.

To understand how these projects came about, it is important to know the historical setting. Like most western jurisdictions, Saskatchewan was confronting some serious economic challenges in the early 1980s. The recession of 1981-1982 had pushed unemployment up from 4.2 per cent in 1979 to more than 8 per cent in 1984. Agricultural employment in particular had fallen by more than 10,000 workers during that period. When a new government was elected in 1982, job creation and economic diversification were top priorities. This election also marked a shift away from the interventionist tradition of the New Democratic Party (NDP) toward the free market thinking of the new PC cabinet under Grant Devine. The PCs began a process of privatization and deregulation aimed at implementing a pro-market, pro-growth platform. The upgrader initiatives began with an emphasis on private sector partnership, but, over time, the underlying economics of the two projects worked against this intent and put the Saskatchewan government in a dominant role. Had the PCs been more resolute in applying their market-based principles at the early planning stages of these projects, it is likely that at least one of the upgraders would not have been built and that large losses would have been avoided.

The next section provides a critical history of the heavy oil upgrader projects, explains how and why they differed and summarizes their fiscal impact on the province. Section 3 critiques the public policy objectives behind the upgrader projects and discusses the questions that should have been asked at the planning stage. Section 4 explains the rural gasification initiative and contrasts it with the upgraders. Section 5 draws some general conclusions.

2. THE BI-PROVINCIAL AND NEWGRADE UPGRADER PROJECTS

2.1 Early Discussions¹

Saskatchewan has large deposits of heavy oil that cannot be used in conventional refineries without first upgrading it into light synthetic crude. To get heavy oil to a processing facility via a pipeline requires use of a diluent called pentene. Once the oil is diluted, there are few facilities that can process the heavy crude, and as of the early 1980s, none was in Canada, which meant that Saskatchewan was not able to capitalize on its oil deposits during the 1970s when prices were very high. In the 1980s, the development of enhanced oil recovery techniques promised to yield even larger amounts of heavy oil, yet marketability remained an acute problem. Therefore, discussion turned to ways to upgrade the deposits at source and thereby made marketable to ordinary refineries. The potential revenue of an upgrader is entirely determined by the price differential between light crude and heavy oil. In general, high oil prices mean a higher differential and greater potential revenue for an upgrader.

In 1981, under the Allan Blakeney-led NDP, the government of Saskatchewan assembled the working group the Plains Consortium to develop an upgrader. The group consisted of Husky Oil, Gulf, Shell, PetroCan and a provincial Crown corporation called SaskOil. The consortium announced its intention to investigate two potential sites for an upgrader: northwest of Moose Jaw and north of Wilkie. The latter was chosen because it is near the large oil deposits of Lloydminster.

These plans ran aground in April 1982 when the NDP lost to Grant Devine and the PCs, which formed a majority government. The Plains Consortium promptly folded, but Husky Oil began discussions with Saskatchewan, Alberta and Ottawa about the possibility of building an upgrader at Lloydminster. The new Saskatchewan energy minister Colin

Thatcher proposed to Federated Co-operatives Limited (FCL), which owned and operated the Consumers Co-operative Refinery Limited (CCRL) in Regina, that it consider building an integrated upgrader/refinery in Moose Jaw. However, FCL found that building a new facility would cost much more than simply adding an upgrader to its refinery in Regina. With forecasts then circulating about declining Alberta light crude production and growing shortages of pentene, CCRL began to worry about the viability of its long-term input stream. The idea of building an upgrader made some sense. However, it carried a number of risks for CCRL including the inability to exploit price variability in the spot market and the resulting inability to source light crude from other places.

Thus, by early 1983, two upgrader projects were under consideration: one at Lloydminster under the leadership of Husky Oil and one at Regina under the leadership of CCRL. Both were to yield 50,000 barrels of oil per day. Both upgrader projects eventually got under way in 1988, but, owing to the unique characteristics and players involved, the paths that led to that point were very different.

2.2 Negotiations Over the Bi-provincial Upgrader

The Devine government was strongly oriented toward encouraging market-led, private sector activity and was in the process of privatizing some of the many Crown corporations that were built or acquired by previous NDP governments. At the same time, in view of the serious economic problems confronting the province, the PCs were highly motivated to see the upgrader projects get under way. They entered negotiations on two fronts: one for the Lloydminster site, which would come to be called the Bi-Provincial Upgrader, and one for the Regina site (CCRL). Despite the similarities of the projects, the deals that were eventually reached had some substantial differences that figure prominently in any assessment of the wisdom of the investments.

Husky Oil already operated in Lloydminster, producing heavy oil from nearby oil fields and using it to produce asphalt. An upgrader would provide a substantial increase in the market for its heavy oil production. However, the project was too big for Husky to undertake alone. The cost of building an upgrader was estimated at \$1.4-billion while the company's equity was only \$900-million.² In August 1983, Husky proposed a somewhat complex arrangement to the governments of Saskatchewan and Alberta. Two companies would be created, one in Saskatchewan and one in Alberta, and Husky's production assets would be sold to them for \$790-million, split 60/40 between Saskatchewan and Alberta respectively. The money would come from three sources: \$225-million from Husky and other equity partners, \$180-million in government grants and \$385-million in debt backed by government guarantees. Additional funds would be needed to build the upgrader, and these would take the form of \$850-million in government-guaranteed debt and \$50-million in equity from the two new companies. The federal and provincial governments would also cut royalty rates to help the new entities build their cash flow.

Both provincial governments expressed concerns about the proposal and pushed back against it, but they also indicated a desire to keep pursuing discussions. In October 1983, Husky presented a revised offer that reduced the size of the government contribution but still supported the private sector portion with a promise of reduced royalties. Further negotiations took place, and in June 1984, they reached an agreement. Husky would build a \$1.40-billion upgrader under its existing corporate structure (without creating new entities) and invest \$900-million to develop feedstock capacity in the oil fields. Adding in the estimated operating costs for the first five years brought the total to \$3.2-billion. Ottawa would provide \$780-million in loan guarantees, and Saskatchewan and Alberta would each guarantee \$390-million, yielding \$1.56-billion in guaranteed debt financing.

This proposal put substantial risk on Husky Oil, and it exposed both provinces to up to \$390-million in default risk.

However, the federal risk suddenly took on new meaning in late 1984 when the Mulroney Tories were elected and announced that they were not bound by the previous government's promises. In September 1985, the federal government indicated that it intended to seek outside reviews of the proposal. Husky continued to undertake preliminary expenditures on the project, but it and the provinces were expressing growing concerns about the changed tone in Ottawa. The Tories commissioned one review by an independent consultant, who expressed the view that it was sound, and one from the Toronto Dominion Bank (TD), which was concerned that the downside risk due to exposure to oil prices made the project more risky than Husky was saying. In particular, TD expressed its view that the government would have to be prepared to cover substantial operating losses.

In June 1986, the federal government came back with a new proposal that would make Husky responsible for cost overruns and would involve two-thirds of the debt being unguaranteed. Saskatchewan and Husky both said no. Husky attempted a counterproposal, but it, too, was rejected, and soon the project seemed to be in serious doubt.

Negotiations continued through 1987 and 1988, with numerous proposals, counterproposals and occasional ultimatums. With a federal election looming, Ottawa was gradually becoming more accommodating in hopes of avoiding an embarrassing issue on the campaign trail. At the same time, oil prices had fallen to \$13.35 per barrel, severely undermining the revenue projections and the financial viability of the projects.

In September 1988, an agreement that relied entirely on equity contributions with no loan guarantees was reached. Canada would contribute \$400-million, Husky \$340-million, Alberta \$305-million and Saskatchewan \$222-million. The share structure gave some priority to Canada, Alberta and Husky in dividend claims. Partners were required to contribute to operating losses in proportion to their equity, up to a maximum of \$50-million annually.

Within Alberta and Saskatchewan, the media response was supportive, but further away, the deal was denounced as irresponsible pork-barrelling. In the ensuing federal election, only the Reform Party opposed the deal. At the provincial level, the opposition parties accepted it without quarrel.

2.3 Negotiations over the CCRL Upgrader

In sharp contrast with the negotiations with Husky, the private sector partner in the Regina proposal refused from the outset to accept any financial risk. Indeed, the opening stance of CCRL was so lopsided in its risk allocation that the province ought to have walked away. Instead, its acceptance of the opening terms signalled a weakness in its position that would bedevil the undertaking throughout its lifetime.

CCRL had been invited to join the Plains Consortium but had refused.³ After the 1982 election, the Devine government approached the owners of the CCRL refinery in Regina, FCL, about building a heavy oil upgrader in Moose Jaw. This option was soon shown to be much more expensive than adding one to the existing CCRL site in Regina. While CCRL management agreed that an upgrader would ensure a secure input supply, it would also impair CCRL's ability to exploit price fluctuations in the spot market for light crude. Since a network of retail co-operatives in Western Canada owns FCL, it must undertake democratic consultations with the retail system owners when contemplating management initiatives. Therefore, in early 1983, the FCL network undertook a debate on the upgrader option and eventually settled on four conditions for entering into negotiations.⁴

- (1) CCRL could not be placed at financial risk.
- (2) The retail system owners would not make any financial investments in the project.
- (3) There could be no risk of financial loss.
- (4) CCRL must manage the facility.

This extraordinary list stated, in effect, that FCL/CCRL would invest nothing in the project, bear none of the risk and yet assume full managerial control. Mark J. Stobbe drily notes: "If this had been the opening position for a normal, commercially driven, partnership arrangement, this position would have inevitably been interpreted by the Saskatchewan government as a fairly simple and straightforward no."⁵

With these demands at the ready, in August 1983, FCL and Saskatchewan (alongside then-federal energy minister Jean Chretien) announced their intentions to begin negotiations. Provincial representatives at the talks soon balked at the FCL position, but FCL went over their heads to the Cabinet and had one of the negotiators removed,⁶ paving the way for Saskatchewan to eventually capitulate to their demand not to face any financial risk.

The initial plan proposed the creation of a new commercial entity known as NewGrade Energy Inc., which would own and operate the upgrader at the Regina CCRL site. Thirty per cent of the estimated \$635-million construction cost was to be covered by an equity investment split evenly among FCL, Saskatchewan and another yet-to-be-identified private sector partner. The remaining 70 per cent was to be borrowed, with Saskatchewan and Ottawa each guaranteeing half the loans. Furthermore, the FCL equity investment was funded by a loan from Saskatchewan that was to be repaid out of upgrader profits (to a maximum of 40 per cent) and up to 5 per cent of CCRL profits. NewGrade would be responsible for all costs of operating the upgrader and the capital investments in the CCRL refinery that were necessary to accommodate the upgrader. CCRL agreed to buy the output of NewGrade according to a pricing formula set out in the agreement.

At this point, Saskatchewan was on the hook for 35 per cent of the project in the form of loan guarantees and 20 per cent in the form of its own equity stake and the financing for FCL's, for a total of 55 per cent of the project cost. Meanwhile, it had promised FCL complete managerial control and immunity from any financial losses. Clearly, this

was a weak bargaining position, and the situation would only worsen in the years ahead. The size of the loan guarantees meant that Saskatchewan was always over a barrel: It would face catastrophic budgetary losses should the project be shut down and a default occur, which pretty much forced it to cover what would soon be chronic operating losses.

Negotiations about the details moved slowly after 1983, and by mid-1985, they were stalled. No additional private sector partner had come forward. Saskatchewan wanted to revisit some issues in the sharing of risk, but FCL and CCRL considered any such discussions an attempt to renege on the initial agreement. Another source of difficulty was that the NewGrade board was comprised of FCL and Saskatchewan representatives with competing priorities, which led to internal dysfunction. In spring 1985, the Devine government referred the file to the Crown Investments Corporation (CIC), which promptly determined that the project was not viable.⁷ CIC flagged the high debt load and high probability of operating losses in the early years as particular concerns. Other concessions proposed by the Saskatchewan government faced written objections by government analysts and negotiators.⁸

CCRL meanwhile began to seek more-favourable management fees and a reduction in board oversight. Notwithstanding the exceedingly good terms FCL had won from the province, in June 1985, it concluded the project would never be viable or beneficial, and it indicated its intention to pull out. FCL was particularly concerned that the project would never pay off its debt, and this would hamper the ability of CCRL to source the lowest cost crude input. Saskatchewan asked FCL to hold off making this decision public while it worked out a response. The response took the form of even more concessions: an offer to buy out 5 per cent of FCL's equity stake and cover the missing equity from the non-existent additional private sector partner. This raised the debt portion to 80 per cent. The offer was sufficient to convince FCL to stay on board, and construction work began in October 1985. However, the federal government soon balked at the arrangements,

and in response, Saskatchewan agreed to indemnify Ottawa up to the full amount of its loan guarantees. The entire project risk was now on Saskatchewan, and every other party involved had signalled a belief that the project was financially doomed.

Even with the loan guarantees in place, lenders were slow to come on board. Financing to cover construction costs was secured, but NewGrade was expected to run out of operational cash within its first two years. As of the fall of 1987, the basic agreements were signed and construction was underway, but lurking on the horizon was a dramatic fall in oil prices that would lock NewGrade into operating losses for many years to come.

2.4 Operating Challenges and the Fiscal Crisis

At the end of the 1980s and heading into the 1990s, one of the major challenges facing both upgraders was the collapse in the world price of oil. For both operations, this translated into sharply reduced net revenue. The situation was worsened for NewGrade because so much of its financing was through debt, and this was an era of high interest rates. However, cash flow was a problem for Bi-Provincial as well.

In 1987, Hong Kong investor Li Ka-shing bought 52 per cent of Husky Oil, and five years later, he bought 43 per cent more, raising his ownership stake to 95 per cent (the remainder was owned by the Canadian Imperial Bank of Commerce). Ka-shing agreed to inject \$300-million into Husky to cover its equity stake in the upgrader. Meanwhile in 1991, weak revenue and construction cost overruns meant Bi-Provincial was running at a loss, and its owners needed to inject cash. Saskatchewan had previously authorized \$32-million to cover cost overruns in December 1990, but the situation changed in November 1991 when the NDP led by Roy Romanow came to power and signalled that it felt no obligation to follow the commitments of its predecessor. In

early 1992, Husky indicated it would need another injection of cash to cover cost overruns, and this time Saskatchewan refused. Stobbe reports that one negotiator offered just enough money to paint the upgrader white to advertise its status as a white elephant,⁹ and Janice MacKinnon reports that the offer was actually to paint the upgrader black, so it could be mothballed.¹⁰ Alberta and Ottawa reacted angrily to this decision, as they could see the potential for their equity stakes to become worthless. Husky also threatened to mothball the facility, but Saskatchewan still did not yield, as it had already concluded the expected dividend yield would be zero. Eventually, Husky and the federal government covered the cost overruns, diluting Saskatchewan's equity stake.

Later that year, in November 1992, the Bi-Provincial Upgrader officially opened, but celebrations were muted since oil prices were very low. The facility immediately began racking up operating losses.

NewGrade likewise was operating in the red. However, its problems were exacerbated by the awkward management structure wherein CCRL had autonomy in management, and FCL and Saskatchewan appointed members to its Board of Directors, whose priorities were often in conflict with theirs. For example, shortly after CCRL switched to NewGrade synthetic crude, its customers discovered its diesel fuel congealed at low temperatures. FCL faced the ire of its customer base of Prairie farmers and sought an immediate solution. The engineering resolution would require a costly change to CCRL's equipment, which raised the question of whether CCRL or NewGrade should pay for it. In addition, the government representatives on the NewGrade board wanted to research whether less costly fixes were available. CCRL management, however, opted for speed, directly implementing the engineering solution and resolving the customer complaints but creating internal acrimony that affected the board for years afterwards.¹¹

By 1992, just as the principal payments on the NewGrade Upgrader were to begin, Saskatchewan faced a serious fiscal crisis.¹² The 1992 NDP budget closed 52 hospitals, slashed

nearly 10 per cent of the civil service and hiked taxes.¹³ By then, Saskatchewan had lost \$232-million on NewGrade, including \$75-million in 1991 alone.¹⁴ While covering the ongoing operating losses was ruinous, an even worse situation would have existed if the upgrader were to go into default, since the loan guarantees would be triggered and would effectively push the government of Saskatchewan into bankruptcy. Saskatchewan appealed to FCL to change the operating agreement and place more financial risk on CCRL. FCL rejected the demands, and the province responded in November 1992 by publicly attacking FCL's position and by appointing retired Supreme Court judge Willard Estey to conduct an inquiry into the project.

Estey's report appeared in spring 1993, and it concluded that the project had too high a debt load to be fiscally sustainable. It recommended eliminating the loan guarantees and obtaining from the project partners a cash injection and an agreement to share future losses. FCL immediately rejected this proposal. In May 1993, with FCL still refusing to budge, the province drafted Bill 90, which would override the original contracts and force FCL to take on the financial risk associated with NewGrade.

What ensued was a political battle between the management of FCL and the Romanow government for the backing of the co-op members throughout the province. The government was roundly attacked for proposing to tear up contracts, but FCL was also criticized for holding on to what appeared to be an exploitive position that put the whole province at risk. By July, public opinion had swung behind the government, with a poll showing 54 per cent supported the legislation and only 28 per cent opposed it.¹⁵ In August, FCL relaxed its position and agreed to invest \$75-million and take on a loss risk of up to \$40-million going forward, contingent upon Ottawa contributing \$150-million.

However, in 1993, the Chretien government was elected, and fresh uncertainties arose, as the new government failed to signal any interest in supporting NewGrade. The situation remained unresolved up to March 1994 when creditors

sought funding to cover new losses. At that point, if Saskatchewan refused, the upgrader would go into default. The Saskatchewan premier asked the finance department to prepare plans for handling a \$600-million loan default.¹⁶ Discussions thereafter involved all parties including the federal government. Finally, in June 1994, Ottawa agreed to contribute \$125-million and in exchange renounced any further interest in the project. Contributions from other parties cut the NewGrade debt to \$234-million, and with lower interest payments, the upgrader was finally profitable. It would go on to become a money-making asset for the province, paying off its remaining debt by 2007, at which time Saskatchewan sold its stake to FCL for \$325-million.

At the same time, the Bi-Provincial Upgrader was facing losses averaging \$3-million per month, with the expectation that it would be out of cash by summer 1994. This gave rise to intense negotiations about its future. That summer, Husky offered to buy out Alberta and Canada at seven and one-half cents on the dollar.¹⁷ To the surprise of the others at the table, Saskatchewan turned around and offered to buy out everyone, including Husky, at the same price.¹⁸ Alberta and Canada, desperate to disown the project, tendered their stakes to Saskatchewan, which then rebalanced its equity contributions to become a 50-50 partner with Husky at a cost of \$43-million. This was a fortuitous purchase: As oil prices recovered and Husky implemented plans to make the operations more efficient, the Bi-Provincial Upgrader became profitable, and four years later Saskatchewan sold its stake to Husky for \$310-million, thus recovering its initial investment.¹⁹

Stobbe tabulates all the financial flows from Saskatchewan to the two upgrader entities, including proceeds from eventual asset sales.²⁰ When Bi-Provincial was sold in 1999, the net loss to the province stood at \$330-million, taking into account capital losses and accumulated operating losses. When NewGrade was sold in 2007, the net loss stood at \$735-million, for a loss of \$1.065-billion between the two projects.

3. A CRITICAL LOOK AT THE PUBLIC POLICY OBJECTIVES BEHIND THE UPGRADERS

Stobbe notes that there was a strong consensus between the NDP and PC parties as to the desirability of building the upgraders.²¹ He lists five objectives that enjoyed bipartisan support in the years leading up to their construction.

1. Providing a secure, stable market for Saskatchewan heavy crude oil, thereby promoting the development of the province's oil industry, which resulted in an expansion in production;
2. Creating jobs for Saskatchewan residents and opportunity for Saskatchewan companies;
3. Increasing the royalties and other revenue the province would receive from increased oil production and the increased economic activity;
4. Providing for import substitution by allowing Saskatchewan heavy crude oil to be used within the province; and
5. Enhancing the long-term future of the province's only remaining refinery capable of producing gasoline and diesel by ensuring security of feedstock supply in the face of declining supplies of Alberta light crudes.

It is arguable that the upgrader projects achieved these goals. Stobbe concludes that they largely met them, but at a significant cost.²² However, were the goals valid in the first place?

Goal number 1 must be seen as problematic for a free market-oriented government. Why is it a public policy goal to ensure a secure, stable market for a specific resource deposit? If development of a raw material into a value-added output is profitable, the private sector will undertake it, and if not, there needs to be a valid public rationale for the government to be involved in trying to circumvent the negative market judgment. The **sand test**, as explained in the introduction, applies here. Every jurisdiction, including

Saskatchewan, has a great deal of sand that could potentially be made into glass, but the private sector is typically uninterested in doing so because the market value of the glass would not cover the cost of mining the sand. That being the case, the government should not override this judgment using taxpayer dollars. In the same way, just because heavy oil is in the ground does not mean it ought to be made into synthetic crude. When doing so causes persistent financial losses, it implies that the process yields a product worth less than the inputs used to create it, which amounts to destruction of social wealth. It would have been better to call them heavy oil downgraders.

Goal number 2 is valid in principle, but must be subject to the **couch test**: If job creation is the goal, would it cost less to employ the same number of people to sit on the couch at home and do nothing? Stobbe noted that the CCRL upgrader provided approximately 1,500 construction jobs and "several hundred" operating jobs.²³ If we set the operational employment at 300 people per year over the 20 years from construction completion through to its sale to FCL, the total is 6,000 person-years plus 1,500 person-years of construction work for 7,500 person-years of employment. The cost to the province, as noted above, was \$735-million, which means Saskatchewan spent close to \$98,000 per person-year of employment at NewGrade. At Bi-Provincial, using the same numbers for construction and annual operations but noting that the province owned the facility for only 11 years yields 4,800 person-years of work at a cost of \$330-million, or \$68,750 per person-year of work. If employment were the only goal, the province could have offered potential employees a lower amount, e.g., \$40,000 annually, to sit on the couch at home. Adding in secondary multiplier effects to make the upgrader outcome seem more valuable is not valid in this context because there would also be multiplier effects when couch-sitters spend their income. In the upgrader case, the workers were busy turning low-value heavy oil into lower-value synthetic crude, so the multiplier effect should also be applied to the wealth destruction taking place. In sum, the fact that the upgraders created employment is not enough to validate

them as public policy initiatives, since the cost per person-year of employment was so high.

It might be argued that the upgraders continued operating in subsequent years and employed hundreds of people under profitable conditions, which adds to their value as public investments. However, the profits depended significantly on the fact that Saskatchewan (and Ottawa and, in the case of Bi-Provincial, Alberta) wrote off large amounts of capital and freed the upgraders from having to pay interest costs or earn competitive rates of return on sunk capital. Profits also depended on the fact that in the years after the upgraders were sold, oil prices increased, and the facilities finally became lucrative.

In the 1990s, the price differential between heavy and light crude ranged from \$2 to \$9, and the upgraders ran constant losses. Saskatchewan sold its stake in Bi-Provincial in 1998 as oil prices began rising. Being debt-free, that operation was profitable sooner than NewGrade was, and in summer 1998, Husky announced a \$500-million facility expansion. Over the next decade, the differential rose to more than \$30, even reaching \$45 at one point in 2007. That was the year FCL bought out Saskatchewan and then announced a \$1.9-billion expansion.²⁴

The years after privatization were extremely profitable for both upgraders but that was because market conditions had become so favourable that the private owners would likely have been willing to build the facilities themselves. Therefore, the continued operation of the projects after privatization is not part of the benefits attributable to the original investment, since the investments would likely have been made anyway.

Goal number 3 was undermined by the fact that Husky received a break on royalties as part of the Bi-Provincial deal. In general, any incremental gains in royalties were more than offset by the direct losses to the treasury. Stobbe notes that provincial royalty revenue did not change

much when the upgraders came on stream; instead, the big increases occurred many years later when oil prices rose.²⁵

Goals 4 and 5 do not have a strong public policy justification. CCRL indicated its reluctance to source crude exclusively from NewGrade rather than being able to trade for it in the spot market. Therefore, it is not clear that the other participants in the industry even shared goal number 4 in the early stages. In general, import substitution is not advantageous for an economy if it ends up forcing people to purchase costlier goods solely because they are domestically produced.

A further point in evaluating the upgrader programs is that in the case of NewGrade, Saskatchewan found itself continually negotiating from a position of extreme weakness. It accepted initial terms with FCL that were unreasonably disadvantageous to the province, signalling that it was desperate to get a deal and unwilling to walk away under any circumstances. FCL understandably leveraged this situation to its constant benefit. The financing arrangement, centred as it was around heavy borrowing, with Saskatchewan guaranteeing the debt, created a poison pill that forced the province to cover seemingly endless operating losses since the alternative – a default event – would have been fiscally catastrophic. The contrast with Bi-Provincial was stark. In that case, the involvement of another provincial government and a major private sector partner and the reliance on equity financing rather than guaranteed debt gave Saskatchewan a freer hand to negotiate from strength, since it could credibly threaten to walk away. An important lesson, therefore, is that a government should not get into situations where it is negotiating from weakness. This is hardly a new insight. The historical record indicates that the government of Saskatchewan ignored warnings on this very point all along the way. The political circumstances make it understandable that the government was desperate to show success at job creation. However, any number of “jobs” can be created simply by hiring people to sit at home on the couch at taxpayer expense. Most reasonable

observers would dismiss this as bad public policy. Even worse is a policy that pays people much more than couch-sitting wages to turn low-valued inputs into even lower-valued outputs. That is what the NewGrade project did, as did, to a lesser extent, Bi-Provincial.

Overall, while the upgraders arguably achieved the province's policy objectives, the objectives were not sound, and they led the province toward some costly policy errors. The province should have walked away from NewGrade when FCL first proposed its conditions, and it should have held off investing in Bi-Provincial until a credible case was made that the oil price differential would soon be high enough to make the project profitable.

4. RURAL GASIFICATION

Another energy-related project initiated in the early 1980s was the extension of natural gas pipelines to unserved rural communities. When the then-opposition PCs proposed this in 1981, the NDP government ridiculed the idea as too expensive and infeasible. In December 1981, NDP member Dennis Banda denounced the idea in the legislature as follows:

Perhaps the cruellest hoax of all is the promise that they would make a province-wide natural gas distribution system. In 1979, the Saskatchewan Power Corporation (SPC) examined the feasibility of that type of a system. To build such a system would cost, in 1981 terms, over \$1-billion. SPC's research examined two possibilities – a system that would include all farms, towns, villages and hamlets, and a system that would include just the farms. The capital, the financing and the service costs were included. The complete system would involve over 12,000 hook-ups in the towns, villages and hamlets, and over 48,000 farm hook-ups. The average cost per hook-up would be over \$19,000. The system involving just farms would cost an average of nearly \$21,000 a farm to build. And this is before the cost of gas to be consumed is even considered, Mr. Speaker. Even before this year's Alberta-Ottawa energy agreement, it was known that the Alberta border price for gas will more than double in 1986.

This rural gasification scheme is simple Tory deception and economic trickery. They never say who will pay and they never say how it can be done. Well, Mr. Speaker, everyone could pay. But income taxes would have to double for the next five years. Yet Conservatives want a tax cut. All the gas customers, new and existing, could pay. Yet the Conservatives want gas prices frozen.²⁶

The Conservative member Paul Rousseau responded to this criticism by pointing to the success of a similar program in Alberta.

In Alberta, again, they implemented far more rural gasification than what we're looking at in Saskatchewan, at a cost of \$165 million.

I know how they arrive at a figure of a billion dollars. It's easy. The government goes to Sask Power. It says to the president of Sask Power that it wants an estimate which says it's going to cost a billion dollars to do the gasification. So, he obliges and hands it over. That's it. It's going to cost a billion dollars. Nonsense! They don't want to do rural gasification in this province. That's very clear. They've made it very clear to the people of Saskatchewan that they don't want it.²⁷

The next year, the PC party took power and immediately ordered work to begin on the rural gasification plan. The official name was the Saskatchewan Natural Gas Distribution Program (SNGDP), but it was known more colloquially as rural gasification. At the start of the program, there were an estimated 55,000 farms and 15,000 residences in small towns and villages throughout the province that did not have access to gas. The plan implemented in 1982 targeted 25,000 farms and 10,000 households as potential gas customers. The NDP claim that hook-ups would cost around \$20,000 per household was inaccurate: SaskPower estimated the cost would be \$10,400 per rural location and \$8,000 per urban household.²⁸ The total estimated cost of the program was pegged at \$340-million over seven to 10 years.

At this point, it began to sound like a megaproject, but there were important differences right at the start that made it a much more attractive undertaking. Of the \$340-million, \$65-million was to be recovered up front through construction charges paid by customers, and SaskPower would invest the remaining \$275-million on the expectation of recovering the funds through future sales. Hence, the province did not have to make a cash equity investment or guarantee any loans.

Another difference is that unlike the upgraders where the province was trying to play a role that properly belonged to

the private sector, in the case of the SNGDP, the province had a logical role to play in co-ordinating easements among thousands of landowners.

A challenge in implementing the program was the short 120-day construction season on the Prairies. Additionally, while almost 90 per cent of the provincial population was estimated to live sufficiently near a gas pressure regulating station to be able to get connected, the low population density meant an average of two kilometres of gas pipeline would need to be installed per customer.²⁹ SaskPower opted for an installation system that involved competitive tenders to hire independent contractors capable of using ploughing trains with a mandated capability of installing 16 kilometres per day. The ploughing system cut a narrow trench, laid the pipe approximately a metre below the surface and then restored the surface. While minimizing surface disruption and speeding up distribution, it meant the lines had to be run across privately owned fields, which necessitated obtaining easements from thousands of landowners. SaskPower had the authority to expropriate such easements, but did not have to do so. Since the landowners were mostly applicants to get gas, the design of the program on such a large scale induced widespread co-operation. Landowners had a strong incentive to grant an easement, even though they got no payment for doing so, because it meant they too could get gas. Between 1983 and 1986, SaskPower obtained easements to place pipe in more than 25,000 quarter sections of land, with no compensation offered or paid except for damage to crops during installation.³⁰ This was one of the strongest indications of the customer interest in seeing gasification proceed.

The design of the program paid off in the efficiency of its implementation. As of 1986, more than 7,000 urban customers and 10,000 rural customers had been reached. The initial budget estimates totalled \$163-million, or \$9,400 per customer. However, the actual cost came in at \$140-million or \$8,100 per customer, 14 per cent below the estimate. The overall target for the program was to have

all but the most-remote customers served: 35,000 of the original 55,000 target customers.

The sand test can be applied in this case, but the outcome is favourable. The project did not aim to create an artificial market for a low-value resource. Natural gas was already being extracted, and it faced a stable or rising market demand. The project was motivated by the benefits for the end users, not the creation of an arbitrary market for owners of an in situ resource. The couch test does not apply to the project, since it was never sold as a job-creation strategy. The objective was to supply gas to customers, and employment numbers in the pipeline installation companies did not figure into the public discussion of the outcome.

Thus, in contrast with the upgrader megaprojects, rural gasification had features that made it a fundamentally sound initiative and one that the government had a legitimate role in. It was driven by customer demand and would ultimately be financed by market participants. It required widespread government-level co-ordination for implementation, but its reliance on competitive tender and voluntary easements kept the costs down. Giving customers access to natural gas allowed a potentially long-term reduction in energy costs for thousands of households that would otherwise be limited to electricity and propane.

5. CONCLUSIONS

The Devine government made major changes to Saskatchewan's economy in the 1980s. The focus of this report has been on three energy-related megaprojects: two heavy oil upgraders and rural gasification. Post hoc criticism of such projects needs to be tempered by the observation that no one has perfect foresight, and decision-makers can only be expected to make use of information available at the time of the decision, not the information that only emerges years later. The three projects can be roughly summarized as the Ugly, the Bad and the Good.

The Ugly: During the development and implementation of the NewGrade heavy oil upgrader, there was ample evidence that it was an unsound investment for the province. Private sector interest was nil, as was interest from the federal government. From the outset, the province was negotiating from a position of fatal weakness by completely indemnifying CCRL against any losses while allowing it to manage the facility on its own terms. The financing arrangement was heavily stacked toward debt when interest rates were at historic highs, and the loan guarantees put the province in a position of having to cover unlimited operating losses or risk triggering a default that could bankrupt the province. While the government could not be faulted for failing to predict how long low oil prices would last, it can be faulted for pursuing the project long after sufficient negative signals had indicated it was fiscally unsound and for configuring it in a way that exacerbated the underlying financial risks.

The Bad: The Bi-Provincial Upgrader had a private sector partner willing to make substantial investments, as well as other government partners that were willing to contribute and share the risk. Saskatchewan's involvement was reasonable under the circumstances, and the greater strength of its bargaining position was reflected in its willingness to stand up to the other partners at key points and defend its own interests. Its later decision to buy out

Alberta and Ottawa was shrewd and allowed it to obtain a substantial profit that would mitigate its accumulated losses to that point. However, the underlying problems of the project meant that Saskatchewan paid, in the end, about \$70,000 per person-year of employment created by Bi-Provincial. While less than the cost of NewGrade, this is still too steep to justify the undertaking as an economic diversification scheme. When oil prices rose after the end of the 1990s, both upgraders would have been very low-risk undertakings for Saskatchewan, but similarly, the private sector would have been willing to undertake them too, as proven by the fact that the firms involved invested heavily to triple capacity in response to prevailing market conditions.

The Good: Despite the warnings from the government side, the then-opposition plan for rural gasification was sound, or at least was capable of being configured in a way that posed minimal economic risk and offered a substantial social upside. The buy-in from thousands of potential consumers through sharing construction costs and granting land easements proved that the public perceived a tangible benefit to the plan. In addition, mid-way through the program, the project was running below projected costs and with the ongoing strong co-operation of the landowners who needed to play host to the new pipelines.

ENDNOTES

¹ This section draws heavily from Mark J. Stobbe, "Public-Private Partnerships in Saskatchewan: A Tale of Two Upgraders," Master of Arts Thesis, University of Saskatchewan, March 2014, an authoritative history of the upgrader projects.

² Stobbe, "Public-Private Partnerships," 53.

³ *Ibid.*, 28.

⁴ *Ibid.*, 33

⁵ *Ibid.*

⁶ Janice MacKinnon, *Minding the Public Purse: The fiscal crisis, political trade-offs, and Canada's future*. Montreal: McGill-Queen's Press, 2003, 48.

⁷ Stobbe, "Public-Private Partnerships," 36.

⁸ MacKinnon, *Minding the Public Purse*, 48.

⁹ Stobbe, "Public-Private Partnerships," 115.

¹⁰ MacKinnon, *Minding the Public Purse*, 86.

¹¹ Stobbe, "Public-Private Partnerships," 102.

¹² MacKinnon, *Minding the Public Purse*, 87.

¹³ Stobbe, "Public-Private Partnerships," 130-131.

¹⁴ MacKinnon, *Minding the Public Purse*, 86.

¹⁵ *Ibid.*, 91.

¹⁶ *Ibid.*, 92.

¹⁷ Stobbe, "Public-Private Partnerships," 169. Note that MacKinnon pegs the offer at three cents on the dollar. See MacKinnon, *Minding the Public Purse*, 94.

¹⁸ MacKinnon, *Minding the Public Purse*, 94.

¹⁹ *Ibid.*, 95; Stobbe, "Public-Private Partnerships," 170.

²⁰ Stobbe, "Public-Private Partnerships," 199-202.

²¹ *Ibid.*, 192.

²² *Ibid.*, 206.

²³ *Ibid.*, 99.

²⁴ *Ibid.*, 198, 204.

²⁵ *Ibid.*, 195.

²⁶ Saskatchewan, Legislative Assembly, *Hansard* (7 December 1981) at 252.

²⁷ Saskatchewan, Legislative Assembly, *Hansard* (7 December 1981) at 279.

²⁸ R.G. Kane, "Distribution of Natural Gas to Rural Saskatchewan – The Saskatchewan Natural Gas Distribution Program." Presentation at the American Gas Association Distribution/Transmission Conference, Chicago, Illinois, April 1986, SaskPower mimeo.

²⁹ *Ibid.*

³⁰ *Ibid.*

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