PEMBINA institute

Briefing Note

Date: January 17, 2017

Issue

The Pembina Institute (Pembina) contends that the Government of Alberta's (GoA) Mine Financial Security Program (MFSP) needs revision to better protect the interests of Albertans.

Summary

- The liability calculations of the MFSP do not currently capture the full cost of closure and reclamation.
- The MFSP as currently designed overvalues the assets held by each oilsands operator.
- The MFSP as currently designed risks burdening Albertans with significant costs associated with remediating and reclaiming oilsands disturbance.

Context

- The stated intent of the MFSP is to “protect the public from paying for end-of-life project closure costs." As such, the program "helps to strike a responsible balance between protecting the people of Alberta from these costs and maximizing industry’s opportunities for responsible and sustainable resource development.”[1]
- Industrial oilsands development began in 1967. In 2013, the latest year for which data is available, 900km^2 of land in the Athabasca region had been disturbed, of which only 1.04km^2 has been certified as reclaimed.[2] Tailings ponds and associated structures constitute 220km^2 of this disturbed land, containing a total volume that now likely exceeds 1 billion cubic meters of fluid waste[2].
- The MFSP was established by Alberta Environment and Sustainable Resource Development (ESRD) in 2010, and taken over by the AER in 2014. According to the

[1] http://www.aer.ca/abandonment-and-reclamation/liability-management/mfsp

[2] http://www.energy.alberta.ca/OilSands/791.asp

Alberta Auditor General's Report, in 2015 just $1.57billion had been collected from the oilsands sector relative to estimated total reclamation costs of $20.8billion.[3]

- Unlike the oilsands sector, Alberta's coal sector has posted full liability.
- Alberta's October 2015 Climate Leadership Plan placed a 100MT cap on oilsands CO_2 emissions. Correspondingly, the Federal Government's ratification of the 2015 Paris Agreement and commitment to meeting Canada's emissions reductions commitments renders the future development trajectory for carbon intensive fuels uncertain.

Considerations

Liability

- Pembina is concerned that the true costs of remediating and reclaiming disturbed land and accumulated fluid tailings waste are not adequately accounted for.
- Per the categories delinated in the MFSP Guide[4], it is not clear if operators are required to include the operational costs of treating tailings in their liability calculations.
- Not only are the known costs of tailings treatment substantial,[5] there are also significant associated risks and uncertanties. Namely, technologies deployed to date have not demonstrated long-term commercial success, Directive 085 tailings management plans submitted in November 2016 are based largely on unproven technologies, and there continues to be an over-reliance on end of pit lakes as tailings treatment options. The final costs of tailings treatment are thus likely to be much higher than are currently estimated.
- In addition to the significant treatment costs, reclamation of tailings facilities is still a relativley new endeavour in the oilsands industry. Historical costs of reclaiming terrestrial uplands are therefore not representative of reclaiming wetlands or uplands that contained treated tailings. The true costs of successfully reclaiming the full oilsands disturbance is therefore still highly uncertain and likely understimated at this time.
- **O**ilsand operators are responsible for calculating their own reclamation liabilities and submitting them annually to the Alberta Energy Regulator. Since the Alberta tax payer is essentially back stoping any mis calculations, there needs to be much greater transparency around liability calculations.

Asset Calculation

[3] Alberta's auditor general report, https://www.oag.ab.ca/webfiles/reports/OAG%20Report%20July%202015.pdf

[4] http://www.aer.ca/documents/liability/MFSP_Guide.pdf

[5] Syncrude spent $1.5 billion on centrifuges at Mildred Lake Mine, Suncor spent $X billion on tailings reduction operations.

- The asset calculation currently treats proven and probable reserves equally, and it also factors oil price declines equally on both revenues and costs to calculate the assets' future value. Incorporating projected price declines is a good approach but costs are not necessarily going to decrease in line with oil prices. Based on these two factors, the asset calculation currently overestimates the future value of an operation's assets. Pembina agrees with the 2015 Auditor's general report that the asset calculation needs to be revised.
- With the provincial, federal and global commitment to curb the most dangerous impacts of climate change come direct impacts on carbon intensive fuels. There is an increased likelihood that the Alberta oilsands will not be developed as currently planned. The remaining bitumen assets that are currently undeveloped will be worth far less than previous estimations. As a result, there is a real risk of oilsand operators defaulting on their closure and reclamation liabilities. Despite these companies' promises to the contrary, there are many precedents for mining companies walking away from closure and reclamation responsibilities when asset values decline (See footnote [6]).

Recommendations

Liability calculations must include the cost to treat and adequately contain treated fluid tailings. Sufficient contingency must be included in liability costs to reflect the significant risks and uncertainties in adequately reclaiming fluid tailings and containment facilities. For operations that include end pit lakes to treat for fluid tailings, additional liabilities should be calculated to reflect the costs of potentially implementing alternative treatment technologies should the lakes prove unsuccessful.

The asset calculation should not include probable reserves, and it should reflect the likelikhood that even proven reserves may become stranded assets in a carbon constrained world.

The Government of Alberta's Mine Financial Secuirty Program should ensure that sufficient funds are collected to protect Albertans from bearing a future clean up bill. In addition, liability calculations need to be made more transparent, to provide Albertans with more confidence that the liability risks are adequately understood and mitigated.

[6] Faro mine operated from 1969 to 1998 and the Yukon government is saddled with $700M cleanup. Giant mine operated from 1948 to 2004 in the Northwest territories, expected to cost the federal tax payer (all of us) $1B to clean up. BC has estimated $500M to clean up abandoned industrial sites, 90% of which are mines.