

Climate Change Legal Roadmap: Oil Sands Emission Limit under the Climate Change Leadership Plan



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Introduction

In late 2015, the Alberta Government released its *Climate Leadership Plan* (the “*ACLP*”) which is a policy document based upon the recommendations made in the *Climate Change Advisory Panel Report* (the “*Advisory Panel Report*”).¹ The *ACLP* focuses on four key areas for further development:

- implementing a new carbon price on greenhouse gas (GHG) pollution,
- phasing out coal-generated electricity and developing more renewable energy,
- legislating an oil sands emissions limit, and
- employing a new methane emission reduction plan.

Specifically, with respect to oil sands emissions, the policy approach includes:²

- **An oil sands specific output-based allocation approach** will replace the current approach. A \$30/tonne carbon price will be applied to oil sands facilities based on results already achieved by high performing facilities.
- **A legislated emissions limit on the oil sands** of a maximum of 100Mt in any year with provisions for cogeneration and new upgrading capacity.

While the *ACLP* sets policy guidance for climate change legislative action in Alberta, it is a very high-level document. There is not a great amount of detail on the tools and mechanisms that will be used to achieve the policy goals set in the *ACLP*.

¹ The Alberta Climate Leadership Panel was established in mid-2015 for the purposes of providing advice to the Government of Alberta to inform the development of a comprehensive climate change strategy. The Panel engaged with Albertans, reviewed existing climate change policies, and provided advice to the Minister of Environment and Parks.

² See Government of Alberta website at <https://www.alberta.ca/climate-oilsands-emissions.aspx>.

The ELC's Climate Change Legal Roadmap

The ELC is publishing a series of reports – the **Climate Change Legal Roadmap** – outlining climate change actions taken in other jurisdictions and making recommendations for Alberta.

The ELC has already published two reports in this series:

A Snapshot of Alberta's Climate Change Law & Policy

Carbon Pricing Recommendations for Alberta: Lessons from the Latest Developments in WCI Jurisdictions

In response to this dearth of policy detail, the ELC is publishing a series of reports – the **Climate Change Legal Roadmap** – outlining climate change actions taken in other jurisdictions and making recommendations for Alberta. The ELC has already published two reports in this series: [A Snapshot of Alberta’s Climate Change Law & Policy](#) and [Carbon Pricing Recommendations for Alberta: Lessons from the Latest Developments in WCI Jurisdictions](#). This particular report looks at oil sands emissions limits as proposed by the *ACLP*.

Oil Sands Specific Output-based Allocation Approach

Oil sands facilities are currently subject to the *Specified Gas Emitters Regulation*³ (“SGER”) under the *Climate Change and Emissions Management Act*.⁴ The regime established by this legislation creates emission intensity limits for certain facilities, and creates a system for the use of emission offsets and credits.

The SGER currently sets emission intensity limits for facilities releasing at least 100,000 tonnes of CO₂e. Emissions intensity is defined as "the quantity of specified gases released by a facility per unit of production from that facility".⁵ The SGER requires increasingly greater reductions in net emissions intensity (as compared to an emissions intensity baseline for each facility determined in accordance with Part 4 of the SGER) on an annual basis. The net emissions intensity is determined by subtracting emission offsets, fund credits and emission performance credits from total annual emissions.

In addition to setting emission intensity limits, the SGER establishes a system of emission offsets and credits. Under the SGER, an emission offset can be obtained by a reduction in the release of specified gases (not including an emission performance credit); a geological sequestration of specified gases; or a capture of specified gases that are geologically sequestered. Performance credits are obtained when the actual emissions intensity of a facility is less than the applicable net emissions intensity for the facility for the year. A person may obtain fund credits by

³ Alta. Reg, 129/2007.

⁴ S.A. 2003, c. C-16.7.

⁵ SGER at s. 1(1)(h).

contributing money to the Climate Change and Emissions Management Fund (the current carbon price is \$30⁶).

The *Advisory Panel Report* recommends that the SGER be replaced with a *Carbon Competiveness Regulation* (“CCR”) in which a carbon price is applied to industrial emissions.⁷ Rather than being compared to its baseline performance, an industrial facility will be compared to performance by similar facilities. In other words, a facility will be required to meet the GHG emissions performance of the “best-in-class facilities” or use emission offset credits, performance credits or fund credits for excess GHG emissions.⁸ The CCR regime is still under development and is expected to be in place by 2018.

The *Advisory Panel Report*⁹ recommends that an oil sands specific output-based allocation approach will be used under the CCR regime. Each oil sands facility will receive emissions permits that reflect the top quartile of performance in *in situ* and mined production of bitumen. In addition, a parallel good-as-best gas standard for electricity will apply to net sales from co-generation facilities. These two factors will determine the output-based allocation for oil sands facilities under the CCR regime.

The CCR regime will require that a facility will be required to meet the GHG emissions performance of the “best-in-class facilities” or use emission offset credits, performance credits or fund credits for excess GHG emissions.

⁶ Ministerial Order 13/2015, available at <http://aep.alberta.ca/climate-change/guidelines-legislation/specified-gas-emitters-regulation/documents/ClimateChangeEmissionsFund-MO-13-2015.pdf>.

⁷ *Advisory Panel Report* at 5.

⁸ The use of offset credits and performance credits will be limited to 30% under the CCR regime. This restriction was put into place with a policy decision issued March 3, 2017 available at <http://aep.alberta.ca/climate-change/guidelines-legislation/specified-gas-emitters-regulation/documents/DMLetter-AllocationSystems-Mar03-2017.pdf>.

⁹ *Advisory Panel Report* at 31 and 61.

Legislated Emissions Limit on the Oil Sands

As mentioned, a key pillar of the *Climate Leadership Plan* is the imposition of a limit on oil sands GHG emissions. In December 2016, the *Oil Sands Emissions Limit Act* (OSELA)¹⁰ became law. The OSELA is a brief piece of legislation that establishes the GHG emissions limit for oil sands sites, provides exceptions to the emissions limit, and establishes the authority to make regulations under the act.

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Section 2 of the OSELA establishes an annual GHG emissions limit of 100 MT for all oil sands sites combined.¹¹ The calculation of this limit excludes emissions from several sources including:

- cogeneration emissions attributable to the electric energy portion of the total energy generated;
- upgrading emissions attributable to upgraders that complete their first year of commercial operation after December 31, 2015 or attributable to the increased capacity resulting from the expansion (after December 31, 2015) of upgraders that complete their first year of commercial operation on or before December 31, 2015;
- prescribed experimental schemes;
- prescribed primary production; and
- prescribed enhanced recovery operations.

The OSELA indicates that **experimental schemes, primary production, and enhanced recovery operations** will be defined by regulation (to be developed at a later date).¹²

¹⁰ SA 2016, ch. O-7.5.

¹¹ OSELA at s. 2.

¹² OSELA at s. 1.

Section 3 establishes the regulatory power of the Cabinet under the OSELA. This includes the authority to make regulations “establishing and governing mechanisms to keep greenhouse gas emissions from oil sands with the limit established by s.2”. This authority encompasses the power to prescribe thresholds (including limits, triggers, ranges, measures or indices) and to establish a system of greenhouse gas emissions allowances for purchase, auction, trade and retirement.

A rather unusual provision provides that the OSELA “shall be construed as forming part of the *Climate Change and Emissions Management Act*, and the *Climate Change and Emissions Management Act* shall be construed accordingly.”¹³ This is consistent with OSELA’s regulatory authority provision which indicates that regulations pertaining to the act may be promulgated under the *Climate Change and Management Act* (as well as the OSELA).¹⁴

Commentary on the Oil Sands Emissions Limit

The *Advisory Panel Report* provided recommendations to the Alberta Government for development of its *Climate Leadership Plan*. While the *Advisory Panel Report* included discussion of emissions from oil sands activities, it did not suggest that a 100 MT cap be imposed on the industry. This means that there is no discussion or rationale provided in the *Advisory Panel Report* for the 100 MT cap. Similarly, while the *Climate Leadership Plan* indicates that such a limit will be imposed, it provides no discussion or rationale as to how the 100MT limit was derived.¹⁵

While the Advisory Panel Report included discussion of emissions from oil sands activities, it did not suggest that a 100 MT cap be imposed on the industry. This means that there is no discussion or rationale provided in the

¹³ OSELA at s. 4.

¹⁴ OSELA at s. 3.

¹⁵ Professor Bankes has stated that “[his] guess is that 100Mt was entirely arbitrary”. See Nigel Bankes, Oils Sands Emissions Limit Legislation: A Real Commitment or Kicking It Down the Road, ABLawg November 3, 2016 at <<<http://ablawg.ca/2016/11/03/oil-sands-emission-limit-legislation-a-real-commitment-or-kicking-it-down-the-road/>>>.

Advisory Panel Report for the 100 MT cap. Similarly, while the Climate Leadership Plan indicates that such a limit will be imposed, it provides no discussion or rationale as to how the 100MT limit was derived.

The Government of Alberta, in introducing its 100 MT limit policy, stated:¹⁶

The 100 Mt limit provides room for growth and development of our resource as a basis for a strong economy. Overall, Alberta’s new approach will incent changes that see the number of produced barrels increase relative to associated emissions. The future production achievable within the annual 30Mt “room” in the limit will be higher than at any time in our past or present. And Alberta will be able to sell its product into global markets as one of the world’s most progressive and forward-looking energy producers. ...

The annual emissions limit was jointly recommended to government by Canadian and international leaders in Alberta’s oil sand industry and leaders in Canadian and international environmental organizations. Government will begin immediately to seek the advice of the industry, regulators, environmental organizations and Indigenous and Metis communities on the implementation of the 100 Mt limit.

As indicated by Ellerman:¹⁷

While in theory the cap should be the level that will avoid harmful effects, an increasingly frequent solution is that the cap is set at a level that would be achieved if “best” technology were to be required of all, or, especially in the case of greenhouse gas controls, at a level that is presumed to be a step in the direction of reducing emissions to some ultimate goal.

¹⁶ See Government of Alberta website at <https://www.alberta.ca/climate-oilsands-emissions.aspx>.

¹⁷ A. Danny Ellerman, “A Note on Tradeable Permits”, (2005) 31 Environmental & Resource Economics 123 at 127.

It is not clear which of these approaches, if any, played a role in deriving the 100 MT emission limit. Likely, this limit will need to be reviewed periodically with specific objectives set into place. The OSELA does not indicate that the 100 MT will be subject to review in the future.

At first glance, the OSELA appears to establish a firm annual 100 MT cap on the oil sands industry. However, as expressed by Nigel Bankes,¹⁸ the OSELA is “kicking it down the road”. Without supporting regulations, it is not clear exactly which aspects of oil sands activity will be included in calculating the 100 MT limit (as OSELA creates a discretion to exclude certain as yet undefined activities).

Furthermore, while OSELA sets an emission limit, it does not provide any detail on the approach and mechanisms to stay within this limit. Such details await future regulations and, as pointed out by Nigel Bankes,¹⁹ will require consequential amendments to other pieces of legislation such as the *Oil Sands Conservation Act*.²⁰ Simply imposing the cap without providing guidance to regulators and industry as to its implementation and monitoring will have no effect.

As a matter of implementation, the OSELA does not indicate how the cap will be allocated to current and future emitters. This raises numerous questions²¹ such as whether existing producers have a share of the cap, does that share decline over time, how will shares of the cap be allocated to new producers, and will shares be assignable. Furthermore, the OSELA does not indicate what happens if the cap is exceeded.

The OSELA does imply that a market for greenhouse gas emissions allowances for purchase, auction, trade and retirement may be established.²² However, the decision to do so and the details of such a market are left to another day. If a cap and trade market is to be established, allocating emission rights is a prerequisite.²³

¹⁸ *Supra.* note 15.

¹⁹ *Ibid.*

²⁰ *Oil Sands Conservation Act*, RSA 2000, c. O-7.

²¹ *Supra.* note 15.

²² OSELA at s. 3.

²³ *Supra.* note 15.

In his review of OSELA, Nigel Bankes²⁴ makes several recommendations to improve the efficacy of the legislation. Firstly, in order to provide for legal implementation of the cap, consequential amendments to other legislation are required (notably the *Oil Sands Conservation Act* to require annual reports on current and projected GHG emissions and a requirement that a proposed project will not result in the cap being exceeded). Secondly, there is a need to address legal status of emitters vis a vis the cap (especially, are there existing emissions rights or revocable licenses that can be traded? If the cap is reached, how do new entrants get entitlements?). Finally, there should be periodic review of the level of the cap that “takes[] into account the values and principles embedded in the *Paris Agreement* and provincial values enumerated in the preamble to [OSELA]”.²⁵

Oils Sands Advisory Group

Some of the above questions about implementation of the oil sands emissions limit have been addressed by the Oil Sands Advisory Group (the “OSAG”)²⁶ which was established in July 2016 and is comprised of members from industry, environmental organizations and Indigenous and non-Indigenous communities. The OSAG is mandated to advise government on the oil sands aspects of the Climate Leadership Plan with a primary focus on:

- determining how to implement the 100 megatonne per year carbon emissions limit for the oil sands industry;
- developing durable, effective structures and processes to address local and regional environmental issues (i.e., air, land, water, biodiversity, cumulative effects); and
- providing advice to government on investing carbon price revenue in innovations to reduce future emissions intensity.

The OSAG report, entitled *Recommendations on Implementation of the Oils Sands Emissions Limit established by the Alberta Climate Leadership Plan* (the “OSAG Report”),²⁷ was issued in

²⁴ *Supra.* note15.

²⁵ *Supra.* note 15.

²⁶ See information about OSAG at <https://www.alberta.ca/oilsands-advisory-group.aspx>.

²⁷ Available at <https://open.alberta.ca/publications/9781460134740>.

June 2017. The OSAG Report summarizes its recommended approach for implementing the emissions limit as follows:²⁸

- a) A series of actions intended to work in concert with the carbon levy and other elements of the ACLP to deliver significant improvements in GHG efficiency in the oil sands, such that the likelihood of the emissions limit being reached is significantly diminished;
- b) Ensuring that oil sands operations and production growth under the emissions limit are not constrained by the emissions limit prior to the emissions limit being reached; and,
- c) Providing Alberta with the option of managing Emissions Scarcity, if and when it arises, through either delaying the commencement of construction of new projects or requiring specified reductions in the emissions of those oil sands facilities falling in the two worst performing quartiles in terms of GHG efficiency.

The recommendations in the OSAG Report are consensus based but conditional on three understandings:²⁹

- a) The recommendations are “strategic level” and implementation will “require a greater level of detail in the regulation and policy required to make them operational”. OSAG indicates that it believes there is value in engaging OSAG proactively in the regulatory drafting stage.
- b) Consensus is in relation to the overall package of recommendations, “[c]onsensus may or may not exist with respect to different elements of the package on a stand-alone basis or if the government chooses to implement the emissions limit in a manner that is materially different than the substance of these recommendations”.
- c) All final decisions on how the emissions limit is implemented rest with the government.

The OSAG Report recommendations are designed to work in concert with the carbon levy and other aspects of the ALCP to achieve significant improvements in the oil sands sector vis a vis GHG emissions with the goals of:

²⁸ OSAG Report at 1.

²⁹ OSAG Report at 2.

- significantly diminishing the likelihood of reaching the 100 MT emissions limit;
- ensuring that oil sands operations and production growth under the emissions limit are not constrained by the emissions pre-scarcity (i.e. when aggregate GHG emissions are less than 100 MT); and
- providing the option of managing emissions scarcity either through delaying commencement of construction of new projects or requiring reductions in existing oil sands facilities that fall into the two worst performing quartiles in terms of GHG efficiency.

The above should be implemented in a manner that is administratively simple.

The OSAG recommends that its approach be implemented through a new regulation – the Oil Sands Emissions Limit Implementation Regulation (the “OSELIR”) – administered by the Alberta Energy Regulator.

The OSAG recommends that its approach be implemented through a new regulation – the Oil Sands Emissions Limit Implementation Regulation (the “OSELIR”) – administered by the Alberta Energy Regulator and the ACCO.³⁰ It is expected the respective roles of AER and ACCO in this regard will be defined during development of the specifics of the OSELIR. The OSELIR will establish annual authorizations allowing each oil sands facility to emit a specified amount of GHG in a calendar year which cannot be exceeded (although prior to emissions scarcity, the Regulator must issue additional authorizations to cover any overages in actual emissions³¹). In any year, the annual authorizations issued by the regulator cannot exceed the emissions limit.

³⁰ OSAG Report at p. 6, the OSAG states “[w]hile OSAG expects the AER will continue to be the primary regulator for oil sands, it also believes ACCO will take on an increasing role in relation to administration of the emissions limit and advancing innovation in relation to the sector”. The OSAG does not indicate the full name of the ACCO but presumably it is referring to the Alberta Climate Change Office.

³¹ OSAG Report, Appendix A at para. 6.

The manner in which annual authorizations are determined will vary depending upon the room left in the 100 MT emissions limit. Prior to emissions scarcity, each oils sands operator will be granted annual authorizations equivalent to its emissions for that year. Once emissions scarcity is reached, any approved new project or expansion of existing facilities will require government permissions to proceed to construction. To ensure the emissions limit is not exceeded, new projects may be restricted from commencing construction until such time as emissions scarcity no longer exists and/or the regulator may restrict the allocation of annual authorizations to oil sands facilities in the two worst performing quartiles in terms of GHG efficiency to the extent necessary.

In order to assist with the development of annual authorizations, there are two types of annual forecasting recommended: Annual Facility Level GHG Forecasts prepared by each oil sands facility and Annual Long Term Oil Sands Emissions Forecast prepared by the regulator (providing a 10 year forecast for the sector). It is recommended that, when oil sands emissions reach 80 MT, actions be taken to increase the preparedness of oil sands operators for emissions scarcity and to contribute to improved GHG emissions intensity in the sector. At the point when the aggregate annual forecast emissions exceed 90 MT, it is recommended that an operational reserve be established to provide for operational variance between forecasts and actuals. When emissions reached 95 MT, additional actions such as reviewing the standards to be used by oil sands facilities developing their Annual Facility Level GHG Forecasts, requiring the Annual Long Term Oil Sands Emissions Forecast prepared by the Regulator to place increasing attention on the oil sands emissions trend, and the potential impacts on existing operators and new projects in the event emissions scarcity is reached will be required.

The OSAG also recommends that, if the emissions limit is approached in the future and provided that Canada and Alberta are on track to meeting their 2050 GHG emissions reduction targets, the “emissions limit should be amended by the government at that time as necessary to ensure that production from any project that has an emissions intensity better than the competing barrel in the U.S. market (on a wells to tank basis) is not constrained”.³²

³² OSAG Report at 10.

An additional recommendation made by the OSAG is that the approval process for new projects (both new facilities and expansions of existing facilities) should include a Best Available Technology Economically Achievable (BATEA) determination and a GHG management plan. In addition, the renewal process under the *Environmental Protection and Enhancement Act*³³ for existing facilities should be amended to require submission of a GHG management plan. To support these additional requirements, it is recommended that the current BATEA principles used by the Government of Alberta should be reviewed and updated.

The OSAG also commented on the potential use of mitigation offsets as a tool in the implementation of the emissions limit. While no consensus was reached by OSAG on the use of offsets, all members agreed that the “potential use of offsets as a tool in implementing the emissions limit does not become relevant until the emissions limit is approached”.³⁴

The OSAG also provided the following clarifications and observations:³⁵

- a) The economy-wide carbon price should apply to oil sands;
- b) The carbon pricing system, and specifically the output-based allocation methodology, is complementary to the recommended emissions limit system as part of the integrated carbon policy framework, but should be maintained as discrete mechanism; and
- c) The definition of upgrading included in the emissions limit should be further reviewed to ensure that the necessary flexibility is being provided to enable emissions associated with value-adding upgrading activities to be included within the 10 Mt upgrading provision.

At this stage, the recommendations made in the OSAG Report are still merely recommendations and are not yet in place.

³³ *Environmental Protection and Enhancement Act*, RSA 2000, c. E-12.

³⁴ OSAG Report at page 9.

³⁵ OSAG Report at page 10.

Recommendations & Conclusions

Based upon the forgoing, the ELC makes several recommendations for implementing the oil sands emissions limit.

- Clarity is required on what activities contribute to oil sands emissions for the purpose of calculating the emissions limit imposed by the OSELA. Regulations are necessary to provide definitions of **experimental schemes**, **primary production**, and **enhanced recovery operations**. The ELC recommends narrow definitions of these excluded activities to ensuring most oil sands emissions form part of the emissions limit calculation.
- Clarity on the allocation of the emissions limit to existing sands facilities. The recommendation by the OSAG is to provide annual authorizations in the amount of emissions currently being emitted by each oil sands facility (leaving the time for restrictions until the emissions limit is more closely approached). The ELC recommends that annual authorizations be issued on the basis of best-performing facilities emissions to encourage reductions in the short-term rather than allowing emissions to grow unchecked until the emissions limit is approached. The ELC recognizes this will likely require a phase-in period to allow facilities to reach best-in-class standards prior to annual authorization restrictions being imposed.
- Clarity on allocation of the emissions limit to new facilities. The OSAG recommends that, once the emissions limit is reached, new facilities must either be postponed and/or existing facilities must be granted reduced annual authorizations. Guiding principles must be embedded in regulation and the preferred approach must be explicitly addressed either through regulation or policy.
- The regulation must explicitly address the legal status of annual authorizations. Based on the OSAG recommendations, it seems that a revocable license is recommended (given that an annual authorization might be reduced as the emissions limit is reached).

However, it should be clarified as to exactly what rights accompany annual authorizations including the rights and restrictions to transfer, trade or sell such.

- As noted by Nigel Bankes, consequential amendments to other legislation are required. Notably the *Oil Sands Conservation Act* should be amended to require annual reports on current and projected GHG emissions and to impose a requirement that a proposed project will not result in the cap being exceeded.

- There should be legislated, periodic review of the level of the cap. The review should take into account the provincial values enumerated in OSELA, Alberta's commitments and requirements under federal legislation and policy, and Canada's international obligations and commitments (such as under the *Paris Agreement*). The ELC does not foresee a circumstance in which the emissions limit should be increased.