

19 steps toward responsible oilsands development

It's time to move away from defending the status quo. It's time to set higher standards and improve the rules governing oilsands development. The following 19 missing policies and programs — if properly implemented — could address the majority of unresolved environmental impacts and deal with growing criticism of oilsands developments.

Is Alberta ready for the challenge?



LAND

- ❑ The Alberta Government should legislatively protect at least 50% of its public forest lands from industrial development. Protected areas should be developed and co-managed with Aboriginal peoples.
- ❑ Require establishment of biodiversity offsets for all oilsands development to offset impacts to all habitat types. To ensure a net positive environmental benefit and address existing cumulative effects, offsets should be established with a 3:1 offset ratio — three hectares of land should be conserved or restored for every hectare of new disturbance that occurs within the Boreal Forest Natural Region.
- ❑ Land use plans should mandate that no more than 5% of any Alberta planning region is available to oilsands development at any time.
- ❑ Develop a new, transparent and risk-averse mine security program that ensures the Alberta government collects financial security equivalent to the total liabilities created by oilsands extraction.
- ❑ Follow the recommendations of the Alberta Caribou Committee and demonstrate that all caribou ranges in Alberta meet science-based objectives to maintain caribou populations through a combination of establishing protected areas, setting thresholds on maximum levels of development in caribou habitat, and establishing biodiversity offsets in caribou habitat.

WATER

- ❑ Alberta Environment should complete a water management plan that identifies a science-based Ecosystem Base Flow (EBF) for the lower Athabasca River, as a low-flow threshold below which all water withdrawals would cease. The EBF should be legally enforceable and all water permits issued by the Alberta Government at any one time should be accountable to meet that EBF. In the interim, the low-flow threshold for the lower Athabasca River should be at least 100 m³/s.
- ❑ Measure and map the quantity and quality of groundwater and surface/groundwater interactions, to determine both the short and long-term sustainable yield of non-saline groundwater in the Lower Athabasca's groundwater management areas. Set legal requirements to implement and enforce the sustainable yield of groundwater.
- ❑ Ensure enforceable regulations are in place to protect non-saline groundwater resources by updating and implementing existing guidelines and definitions. To protect more of our finite water resources, the Alberta government should expand its definition of regulated groundwater from the current level of water containing less than 4,000 mg/l of total dissolved solids (or TDS, a measurement of mineral, salt and metal content) to include water with up to 10,000 mg/l TDS.



- New mines should not be approved until the operation adopts a proven technology that eliminates the creation of wet tailings. In the interim, all current mines must be required to conform to the new tailings rules.
- Mine applications that propose the storage of tailings under end pit lakes as their reclamation strategy should not be approved. Existing operations with approved end pit lake plans should be modified to eliminate the need for end pit lakes as long-term storage sites for toxic tailings waste.

AIR

- Establish air emission limits to achieve the World Health Organization's Air Quality Guidelines to protect air quality and human health. Implement a progressive, multi-tiered system that requires varying degrees of action to prevent degradation of ambient air.
- Require oilsands operations to use equipment with the lowest achievable emissions or to deploy best-available technology for air emissions reductions.

GREENHOUSE GASES

- Commit to an Alberta greenhouse gas emissions reduction target consistent with a fair Alberta contribution to prevent dangerous levels of global warming (defined as keeping the global average temperature increase to 2°C, relative to the pre-industrial level).
- Implement a carbon dioxide equivalent (CO₂e) emissions price, as either a full auction cap-and-trade system or a carbon tax covering all combustion and almost all fixed process emissions (i.e., covering the vast majority of Alberta's emissions).
- Mandate the use of capture and storage (CCS) technology to capture greenhouse gas emissions from all major new industrial sources by 2016, This would apply to: all formation carbon dioxide (CO₂) from new natural gas processors; all process CO₂ from new hydrogen production facilities; and all combustion CO₂ from all new coal fired electricity plants, oilsands facilities, and upgraders.

MONITORING

- Ensure full funding of the Alberta Biodiversity Monitoring Institute, either directly from government or through an equitable funding model that requires all natural resource developers who impact biodiversity to contribute as a mandatory component of the regulatory approval process.
- Expand air monitoring to meet scientific needs. Monitoring design should be developed through a consensus-based approach with full stakeholder input, and with government implementing final decisions.
- Disband the Regional Aquatics Monitoring Program and replace it with a comprehensive, scientifically robust monitoring system that is adequately resourced and free of industry influence.
- Make a long-term commitment to fund a regional monitoring network to monitor and assess trends in groundwater levels and groundwater quality indicators.

Want More Information?

This checklist is part of the Pembina Institute's report *Solving the Puzzle: Environmental responsibility in oilsands development*. To download the report and find more information about oilsands, visit:

www.pembina.org