



Alberta Wilderness Association
"Defending Wild Alberta through Awareness and Action"

August 14, 2024

Black Bear Power Plant Project
Impact Assessment Agency of Canada
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By Email: BlackBear@iaac-aeic.gc.ca

RE: Black Bear Power Plant Project

The Alberta Wilderness Association (AWA) appreciates the opportunity to provide comments on the Black Bear Power Plant Project proposed south of Swan Hills, Alberta. Founded in 1965, AWA strives to help Albertans understand the intrinsic values that wildlife and wilderness provide, and encourage communities to participate in conservation initiatives that will ensure a legacy for future generations. With over 7,000 members and supporters in Alberta and across Canada, AWA is dedicated to conserving and protecting Alberta's wilderness.

The Black Bear Power Plant Project is proposing to construct a new natural gas power plant, with a capacity of 460 MW that will incorporate carbon capture and storage to reduce greenhouse gas emissions. The project is sited on pine and mixed wood forest that was clearcut in 2005, in an area with extensive oil and gas disturbance. The operation of the project will require additional pipeline and transmission line construction, the exact locations of which are not yet finalized.

AWA does not support continued development of natural gas infrastructure. While we appreciate the consideration given to siting this project within a previously disturbed area and minimizing additional disturbance for construction of required pipelines and transmission lines, we harbour concerns with the proposed project. Given the necessity of transitioning to less harmful energy sources, we suggest that alternative energy sources would provide greater long-term benefits. We would also suggest careful routing of the pipeline and transmission lines to avoid new disturbance, restoration of construction areas to functional habitat where possible, and extensive monitoring of the facility for safety and environmental health.

Canada and Alberta have announced goals to have net-zero carbon emissions by 2050. Globally, Canada is the 10th largest emitter of carbon, with the burning of fossil fuels releasing the majority of carbon dioxide emissions¹. Alberta is the largest emitter of carbon in Canada, accounting for 39 percent of the country's total emissions². While Canada has made progress towards reducing emissions, oil and gas

¹ Environment and Climate Change Canada. 2024. National Inventory Report, 1990–2022: Greenhouse Gas Sources and Sinks in Canada. Retrieved Aug. 8, 2024 from:

https://publications.gc.ca/collections/collection_2024/eccc/En81-4-1-2022-eng.pdf

² Environment and Climate Change Canada. 2024. Greenhouse Gas Emissions: Canadian Environmental Sustainability Indicators. Retrieved Aug. 8, 2024 from:

<https://www.canada.ca/content/dam/eccc/documents/pdf/cesindicators/ghg-emissions/2024/greenhouse-gas-emissions-en.pdf>

emissions have continued to rise³, undercutting progress. The project has promised to comply with net-zero targets, and although natural gas is generally a cleaner alternative to coal or oil, it is still a significant emitter, contributing to over 20 percent of global emissions⁴. The promised efficiency of carbon capture has not been proven, and should not be relied on at this time.

Carbon capture has been suggested to capture 90 percent of emissions; efficiencies beyond that become prohibitively expensive, and are usually not pursued. However, carbon capture at natural gas turbines usually does not reach even this efficiency, especially accounting for the production of carbon capture equipment, and the additional energy needed to run equipment. Emissions overall were reduced only by an estimated 10 percent over 20 years, and carbon capture can encourage further oil and gas development, resulting in higher total emissions and pollution⁵. In Canada, these facilities only captured about 0.5 percent of carbon emissions⁶, not enough to meet emissions reduction targets. At 383tCO₂/GWh without carbon reduction, the project is expected to contribute 1.1 megatonnes of greenhouse gas emissions annually, not accounting for carbon released from deforestation, wetland drainage and land or soil disturbance.

Additionally, carbon capture and sequestration processes can pose risks to human and environmental health. Carbon dioxide leakage, as well as contaminants such as hydrogen sulfide, from pipelines can be responsible for suffocation, acidification of soils and waters, and harm to vegetation, wildlife and people. The US Congressional Research Service has written, “Transporting CO₂ in pipelines is similar to transporting fuels such as natural gas and oil; it requires attention to pipeline design, protection against corrosion, monitoring for leaks, and safeguards against overpressure, especially in populated areas.”⁷ Storage of carbon underground, a common disposal method, can also cause fractures⁸, contaminate groundwater and soil⁹ Considering the proximity to Swan Hills and nearby First Nations communities, high safety requirements and stringent and continuous monitoring must be demanded of any carbon capture systems.

Development of this project will have environmental impacts. In addition to its contribution to climate change, the project requires further disturbance of a recovering forestry plot, and the draining of at least

³ Sawyer, Dave, Anna Kanduth, Bradford Griffin, Franziska Förg, Ross Linden-Fraser, and Arthur Zhang. 2023. Independent Assessment of Canada’s 2023 Emissions Reduction Plan Progress Report. Canadian Climate Institute. Retrieved Aug. 8, 2024 from: <https://climateinstitute.ca/wp-content/uploads/2023/12/ERP-assessment-2023-EN.pdf>

⁴ International Energy Agency. 2024. Greenhouse Gas Emissions from Energy Data Explorer. Why Carbon Capture and Storage Is Not a Net-Zero Solution for Canada’s Oil and Gas Sector Retrieved Aug. 8, 2024 from: <https://www.iea.org/data-and-statistics/data-tools/greenhouse-gas-emissions-from-energy-data-explorer>

⁵ Jacobson, M. Z. 2019. *The health and climate impacts of carbon capture and direct air capture*. Energy & Environmental Science, 12(12): 3567-3574.

⁶ International Institute for Sustainable Development. 2023. Retrieved Aug. 8, 2024 from: <https://www.iisd.org/system/files/2023-02/bottom-line-carbon-capture-not-net-zero-solution.pdf>

⁷ Parfomak, P. W. 2022. *Carbon Dioxide Pipelines: Safety Issues*. US Congressional Research Service. Retrieved from: <https://crsreports.congress.gov/product/pdf/IN/IN11944>

⁸ Gan, W., & Frohlich, C. 2013. *Gas injection may have triggered earthquakes in the Cogdell oil field, Texas*. Proceedings of the National Academy of Sciences, 110(47), 18786-18791.

⁹ He, M., Luis, S., Rita, S., Ana, G., Euripedes Jr, V., & Zhang, N. 2011. *Risk assessment of CO₂ injection processes and storage in carboniferous formations: a review*. Journal of Rock Mechanics and Geotechnical Engineering, 3(1): 39-56; Gholami, R., Raza, A., & Iglauer, S. 2021. Leakage risk assessment of a CO₂ storage site: A review. Earth-Science Reviews, 223, 103849.

one wetland. Wetlands provide many benefits, including carbon storage, drought and flood mitigation, and filtering toxins from water, air and soil. Compaction and disturbance of soil can make re-establishment of vegetation difficult, and reclamation is not guaranteed to succeed. Although we appreciate that a disturbed site was chosen for this project, and that the project plans to take advantage of roads and infrastructure already present rather than creating new disturbance, any development and construction will have adverse impacts.

Clearcutting occurred in the proposed project area nearly 20 years ago, and this is a regenerating forest. While recovering from logging impacts can require centuries, growth has already started in this region, and removing tree cover will impact wildlife habitat and movement through this region. The region is designated a Grizzly Bear Secondary Access Management Area, which buffers and connects core areas, and suggests a possibility of grizzly encounters. For many sensitive species occurring in the region, the project has indicated that the likelihood of occurrence is “Low due to lack of habitat.” However, some, such as the Olive-sided Flycatcher, show preference for edge habitat, including near clearcuts.¹⁰ Other species may prefer mature forest habitat, although still use younger stands to forage or to move between preferred habitat. The loss of regenerating forest habitat will impact the fitness of these species and could further isolate populations.

Given these impacts, AWA cannot support additional natural gas infrastructure development. Burning of fossil fuels needs to be severely restricted to meet Canada’s goals for net-zero emissions, and carbon capture is not a reliable or effective method to curtail emissions. Although we accept other alternatives have been considered, we urge less harmful renewable options, including solar, wind and geothermal where appropriate, be thoroughly explored before committing to additional natural gas generators. The construction of new natural gas infrastructure uses resources that could be applied towards the energy transition, and will only further Alberta’s dependence on fossil fuels.

Thank you for considering our comments. We look forward to hearing your responsible decision.

Sincerely,

ALBERTA WILDERNESS ASSOCIATION



Ruiping Luo
Conservation Specialist

¹⁰ COSEWIC. 2018. Olive-sided Flycatcher (*Contopus cooperi*): COSEWIC assessment and status report 2018. Government of Canada. Retrieved from: <https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/cosewic-assessments-status-reports/olive-sided-flycatcher-2018.html>