

March 23, 2011

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<p>Alberta Utilities Commission Facilities Division Fifth Avenue Place 4th Floor, 425 – 1st Street S.W. Calgary, Alberta, T2P 3L8</p> <p>Attention: Douglas A. Larder, Q.C., General Counsel</p>	<p>Alberta Environment Regulatory Approval Centre 9th Floor, 9820 – 106 Street Edmonton, AB, T5K 2J6</p> <p>Attention: Andy Lamb, Director Central Region</p>

Dear Mr. Larder, Mr. Lamb,

**Re: HR Milner Power Plant Expansion Project – Grande Cache Area
Application 1604766
Proceeding ID 203
Statement of Concern and Intervener Submission**

Please accept this letter as a Statement of Concern regarding Alberta Environment Application No. 012-9814 and a Intervener Submission/Letter of Objection to AUC Application number 1604766 on behalf of the Pembina Institute.

The Pembina Institute is a not-for-profit non-government organization. It has a 25-year history as credible, independent, non-partisan advocate for sustainable energy practices and policies in Alberta. The Institute has been appeared before the Alberta Utilities Commission and its predecessor (the AEUB) in regulatory proceedings for coal fired power plants on several occasions, including:

- Alberta Utilities Commission Proceeding ID No. 992 – Capital Power application for amendment (Hearing in 2011),
- Alberta Energy and Utilities Board hearing in 2002 into TransAlta Keephills 3 Coal-fired Power Plant expansion,



- Alberta Energy and Utilities Board 2001 hearing into Epcor Genesee 3 Coal-fired Power Plan expansion.

The Pembina Institute has been among Canada's leading environmental organizations on energy issues and the issue of climate change at the federal level in Canada for over 15 years. The Institute tracks the science of climate change and provides information about policy solutions to address climate change, and about Canada's responsibility to tackle climate change, to the public, government decision makers and leading corporations.

The Pembina Institute objects to the application by Maxim Power Corp. for approval to construct and operate a coal-fired 500 megawatt (MW) power generating unit at its existing HR Milner facility site in the Grande Cache area under the *Hydro and Electric Energy Act* and *Section 36 of the Water Act*.

The Pembina Institute has volunteer board members, staff members and individual members who reside in Alberta. All Albertans, including the staff and board of the Pembina Institute and its members, are directly and adversely impacted by this project that will create significant increases in greenhouse gas emissions and other air pollutants. The Pembina Institute therefore requests that the Alberta Utilities Commission hold a public hearing to consider this application.

This approval, if granted, would result in significant increases in greenhouse gas emissions in Alberta. The facility would also discharge large volumes of acidifying emissions (sulphur dioxide, nitrogen oxides), particulate matter, and mercury into the air, affecting a large area of the province, and would consume fresh water and potentially impact fish and fish habitat.

Alberta's GHG emissions are very large on a per capita basis, both compared to other provinces and to the global average. Alberta's total cumulative contribution to global anthropogenic GHG emissions is made up of contributions from sources that range from very small individual emissions to very large industrial point sources. Large-scale coal fired power plant units, such as the proposed 500 MW facility, which could emit 3.01 million tonnes (Mt) of CO₂e/year for 45 years, are among the very largest incremental sources of GHG emissions in Canada. The proposed facility would be a significant source of new and additional GHG emissions, at a time when Alberta and Canada have established emission reduction targets.

Climate change is expected to directly impact Albertans in a number of ways, including through the increased frequency and extent of extreme weather events such as storms or droughts.

A decision to approve the proposed project will have a direct impact on all emitting sectors in the Alberta economy and individual Albertans, including members of the Pembina Institute. The province will be forced to factor in the 3.01 Mt emission growth associated with proposed plant into

its plans to achieve Alberta's GHG reduction goal. The Alberta government's expected level of GHG emission reductions from other emitting sectors and from individuals would need to be increased to compensate for the incremental new emissions associated with the proposed facility.

The Pembina Institute and its members are directly and adversely impacted by this project and request that the Alberta Utilities Commission hold a public hearing to consider this application. The Pembina Institute's offices in Edmonton and in Drayton Valley and several of its volunteer board members, staff members, and individual members are downwind of the proposed facility. The proposed facility would impact the air quality in the Edmonton and Drayton Valley. These areas are already impacted by emissions from coal-fired power plants combined with emissions from other industrial and non-point sources.

Background

Reasons for the Pembina Institute's objection and concern

The Pembina Institute objects to Maxim Power Corp.'s application for an Alberta Environment Approval and an AUC *Hydro and Electric Energy Act* approval for the following reasons:

1. Greenhouse Gas Emissions and Climate Change

The proposed project is expected to release 3.01 MT a year of CO₂-equivalent based on an emission rate of 762 kg CO₂e/MWh.

The burning of coal represents the largest source of GHG emissions in Alberta. Alternatives exist to burning coal that produce significantly lower GHG and other air emissions.

Alberta has the most GHG intensive electricity generation system in Canada. In 2008 in Alberta:¹

- 48,400 GWh of electricity were generated from coal
- Approximately 1,000 tonnes of GHGs are produced per GWh generated from coal
- Coal-fired power produced 48.4 Mt of GHGs
- Total emissions from all sources in Alberta was 244 Mt of GHGs
- Therefore, in 2008 about 20 per cent of Alberta's total GHG emissions came from coal-fired electricity generation
- Coal generated more than 82 per cent of Alberta's electricity in 2008.

¹ Data from Canada's National Inventory Report, 2010 – part III

The Intergovernmental Panel on Climate Change (IPCC) describes the warming of the climate system as “unequivocal,” pointing to the evidence of rising air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level.

Average global surface temperature has risen more than 0.7°C above its 1850 level, and as IPCC stated in 2007, “most of the of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations.”

Because some greenhouse gases persist in the atmosphere for decades or even hundreds of years, every new GHG molecule adds to the cumulative problem. Even if all new emissions ceased today, global average surface temperatures are expected to roughly double as a result of the delayed effect of emissions already in the atmosphere.

Greenhouse gases affect all areas of the globe, including Alberta. The persistence of the pine beetle epidemic in Western Canada is one example of a current impact that can be attributed to climate change. Rising global surface temperatures place Alberta at risk of increased severity of storms, flooding, stresses on water supply and droughts.

The threat of climate change has only worsened in the last decade. Global emissions of GHGs have risen faster than predicted. Arctic ice is melting faster than predicted. Sea levels are rising faster than predicted, and few jurisdictions are yet taking policy action commensurate with the threat.

Eight of the world’s major GHG-emitting countries, including Canada, agreed at the G8 Summit in July 2009 to “recognize the scientific view that the increase in global average temperature above pre-industrial levels ought not to exceed 2°C.” According to IPCC analysis, industrialized countries should reduce their GHG emissions to between 25–40% below 1990 by 2020 to keep global concentrations of CO₂-equivalent to 450 parts per million,² a level considered to afford a fair chance of staying below 2°C in global average warming, relative to the pre-industrial level. Canada has formally recognized the broad scientific view that global temperatures must remain below 2°C.

Commons sense dictates then adding 3.01 Mt/y for 45 years is significant, and could undermine Alberta and Canada’s ability to do its fair share in tackling the global problem of climate change. It is not in the public interest to approve the proposed project when other sources of power generation can meet demand while emitting significantly fewer GHGs. Alberta’s future demand for

² See Box 13.7, IPCC Fourth Assessment Report, Working Group III, Chapter 13 (Policies, Instruments and Co-operative Arrangements).

electricity could be met through a combination of natural gas fired power and renewable energy using technology that is already in commercial use today, even if even electricity demand doubles in the next 20 years.³

Alberta Government

GHG emissions from coal burning power plants have been identified by the Government of Alberta and the Government of Canada as being in need of significant reduction.

The two most recently approved coal fired power plants in Alberta (Genesee 3 in 2001 and Keephills 3 in 2002) have Alberta Utility Commission conditions requiring that the plants offset approximately half of their total GHG emissions, such that the net emissions from the facilities would match that of a more efficient natural gas combined cycle plant.

In 2008, the Alberta Government released its *Climate Change Strategy*, which commits Alberta to a 200 megatonne (Mt) emission reduction relative to projected business-as-usual emissions by 2050. The strategy includes a 2020 goal to stabilize greenhouse gas emissions and begin making absolute emission reductions.⁴ Because Alberta has set a GHG reduction goal for the province, any incremental increase in GHGs that is approved by the Government of Alberta will result in the province needing to impose deeper reductions on other regulated industrial sectors and/or implement policies to control emissions from sources that are not covered by regulation today.

The Pembina Institute and its members are directly and adversely affected when the Government of Alberta acts in a manner that is contrary to the Government's stated GHG reduction goals. The Pembina Institute and its members, and all Albertans, have a legitimate expectation that the Government of Alberta will act in a manner that contributes to its stated goals. In approving the current application, the Government of Alberta would be acting contrary to its publicly stated goals for GHG reduction.

Federal Government

Approval of this project is inconsistent with recently announced federal government climate change and energy policy.

On June 23, 2010, then-Federal Minister of Environment Jim Prentice announced a new proposal to reduce greenhouse gas emissions from coal-fired power plants through the imposition of standards

³ Greening the Grid: Powering Alberta's Future with Renewable Energy, Pembina Institute, 2009.

⁴ Alberta Environment: Report on 2008 Greenhouse Gas Emissions, April 2010. Government of Alberta.

that will “be based on parity with the emissions performance of high efficiency natural gas generation.” Draft regulations are to be published in the Canada Gazette in 2011.⁵

In an August 20, 2010 document entitled *Backgrounder: Key Elements of Proposed Regulatory Approach* states that the federal proposal applies to all new facilities. It further specifies that the “performance standard would be set at the emissions intensity level of Natural Gas Combined Cycle (NGCC) technology, a high-efficiency type of natural gas generation¹, and would be in the range of 360 to 420 t/GWh; this is also the performance of an average coal-fired power plant employing carbon capture and storage (CCS) technology with a capture rate of approximately 70% of its emissions.” The federal proposal would not allow offsets for compliance.

While the proposed regulations would come into effect as of 2015, then-Minister of the Environment Jim Prentice committed to “guard against any rush to build non-compliant coal plants in the interim” in the speech that announced the regulatory proposal.

Furthermore, approval of this project by the AUC is incompatible with the Government of Canada’s commitment to ensure that 90 percent of Canada’s electricity is generated from non-emitting sources by 2020.⁶

2. Criteria Air Contaminants and Mercury

The facility would result in a significant increase in total loading of air contaminants in the region and impacts on the environment and human health in the form of acidifying emissions (sulphur dioxide, nitrogen oxides), ozone precursors (nitrogen oxides), particulate matter and mercury.

These scale of emission increases are avoidable. Demand for power can be met with substantially lower emitting sources of electricity.

3. Water Quantity/Quality and Fish

The facility will impact the Smoky River. The facility would require the construction of a water intake structure, which could directly impact fish and fish habitat. The facility would require the extraction of approximately 6 million m³ of fresh water annually. This represents a substantial

⁵ Environment Canada: “Backgrounder: Canada’s Electricity Story” and News Release: “Government of Canada Regulates Emissions from Electricity Sector,” both dated June 23, 2010.

⁶ Government of Canada, *Fifth National Communication on Climate Change: Actions to Meet Commitments Under the United Nations Framework Convention on Climate Change* (Ottawa, ON: Government of Canada, 2010), 41. Available online at http://unfccc.int/resource/docs/natc/can_nc5.pdf

increase in water consumption from the current rate of 1 million m³/year. The facility would discharge wastewater.

We note that the proposed project will require authorization under Section 35 of the *Fisheries Act*.

The Pembina Institute requests that the AUC convene a public hearing to consider this application and that the AUC specifically consider the following issues:

1. the regional, provincial, national and global impacts of GHG emissions from the proposed project;
2. the regional and provincial impacts of criteria air contaminant and mercury emissions from the proposed project; and
3. the potential downstream impacts on fish and fish habitat resulting from water quality and water quantity changes resulting from the proposed project.

Yours truly,

Original signed
Chris Severson-Baker
Pembina Institute