

Concerns About British Columbia's Approach to Coalbed Methane Development

When it released the British Columbia Energy Plan in February 2007, the British Columbia government made a commitment to ensuring that coalbed methane developments in the province conform to best practices.

As outlined in the Energy Plan, these practices would include

- the use of the most advanced commercially viable technologies to reduce impacts
- no surface discharge of produced water
- and on-going, full engagement with local communities and First Nations.

To date, few legislative or policy steps have been taken to codify these best practices in regulation, although the government has clearly stated its intention to disallow surface water disposal for new projects.

More importantly, a systematic framework for assessing whether, and under what conditions, coalbed methane projects are acceptable remains absent, having neither been included in Energy Plan commitments, nor prescribed by existing legislation. Such a framework is urgently needed in British Columbia for three key reasons:

1. Impacts from coalbed methane development are typically greater than impacts from conventional gas extraction. As a result, the risk of exceeding social and ecological impact thresholds is higher.

Although coalbed methane and conventional gas drilling produce a similar end product, coalbed methane extraction has unique features because the methane is contained within coal seams. Differences include:

- Coalbed methane typically requires a higher density of wells than conventional gas in order to be economically viable. Coalbed methane well densities can be one well per 320, 160 or 80 acres, while natural gas wells are typically spaced at one well per 640 acres.

- Some coal seams contain water, which needs to be removed before gas can flow through the well. This “produced water” is a unique feature of coalbed methane wells that creates additional challenges. It may be lightly or highly saline, requiring careful disposal or treatment. Under certain hydrogeological conditions, removing groundwater can affect the flow and temperature of surface water in streams which in turn can have impacts on fish, including salmon.

For more information about the environmental impacts of coalbed methane, see *Coalbed Methane: A Citizen’s Guide* at <http://www.wcel.org/wcelpub/2003/14027.pdf>

2. Coalbed methane projects are not built well by well. Fields are typically developed in their entirety with hundreds of wells — or not at all. Therefore it is appropriate — and important — to consider impacts and risks associated with an entire project’s build-out scenario before granting approvals.

Current regulations in British Columbia treat coalbed methane wells like conventional gas wells, with approvals granted on a well by well basis under most circumstances. Because single well applications do not automatically trigger environmental assessments, there are few opportunities to consider cumulative impacts. This regulatory blind spot is especially problematic when it comes to coalbed methane projects since coalbed methane proponents rarely proceed without the intention of fully developing a particular reserve.

Communities should have an opportunity to assess whether the total footprint of an entire project is acceptable before approvals are granted. As part of this process, proponents should be required to fully disclose land holdings and build-out scenarios; describe plans for reducing and mitigating impacts; and compare the magnitude of likely impacts to baseline ecological information and thresholds. At every stage, adequate resources should be made available for effective community engagement.

3. Some locations where coalbed methane development is being proposed in British Columbia have little or no history of industrial development. In these relatively pristine and remote areas, the question of whether coalbed methane is appropriate at all needs to be considered explicitly — and publicly.

Coalbed methane developments are currently under consideration at coalfields in at least five different parts of the province: the Klappan region near Dease Lake; the Elk Valley area near Fernie; Princeton, in the South Central region; Hudson’s Hope in the Peace River region; and Courtenay/Comox on Vancouver Island.

The ecology and geology of some of these sites make them unlike any area where coalbed methane has been developed in the past. For example, coalbed methane has never been commercially extracted from sub-alpine and alpine regions, or from areas near salmon spawning grounds — both conditions found in the Klappan at the headwaters of the Skeena River. In this case, environmental impacts not historically associated with coalbed methane, such as effects on salmon spawning or loss of key wildlife habitat, may prove to be significant.

Moreover, while exploration wells may only cause incremental impacts in some regions, in relatively undeveloped areas like the Klappan and the Kootenays, they can lead to substantial changes in environmental quality. When coalbed methane is being considered in sensitive environments, communities must be in a position to understand and assess potential impacts early — based on realistic build-out scenarios — and be empowered to allow or fully disallow development.