



Water and Natural Gas in Coal

FACTS AT YOUR FINGERTIPS

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The Government of Alberta is reviewing the regulations that govern CBM/NGC development.

NATURAL GAS IN COAL DEVELOPMENT

Natural gas in coal (NGC), also known as coalbed methane (CBM), is natural gas extracted from coal seams. NGC/CBM development is in the early stages in Alberta.

In some areas, coal seams containing natural gas are saturated with water. In these areas, water must be extracted in order to lower the seam pressure and release the gas.

The water extracted from the coal may be saline or non-saline (non-saline groundwater has 4,000 milligrams of total dissolved solids or less per litre).

WATER PRODUCED

Any NGC/CBM well that produces water must follow the guidelines and regulations of the Alberta Energy and Utilities Board (EUB).

If an NGC/CBM well might produce non-saline groundwater, a Preliminary Groundwater Assessment must be conducted and submitted to Alberta Environment before drilling starts. This assessment provides an inventory of groundwater and groundwater users in the area potentially affected by the well.

Wells that produce saline water are regulated by the EUB.

AUTHORIZATION FROM ALBERTA ENVIRONMENT

If the water is non-saline, an authorization to divert and use or dispose of the water must be obtained from Alberta Environment.

Before Alberta Environment issues an authorization for water diversion, the well developer must produce a technical report to show that the proposed water diversion:

- will not adversely affect the water supply of other users
- will not cause adverse effects on any aquifer

NGC/CBM wells that produce non-saline groundwater are prohibited from being constructed across distinct aquifers, which prevents the co-mingling of groundwater of different quality and salinity.

NGC/CBM developers are responsible for resolving all allegations of impact on water resources during their preliminary investigations.

CONDITIONS OF AUTHORIZATION

Alberta Environment places conditions on an authorization that require the authorization holder to monitor how much water is produced, and to monitor water levels in production wells and/or observation wells. Monitoring of water quality is also required.

The conditions of an authorization also require the authorization holder to investigate and resolve any allegations of impact to any existing water supply.

PRODUCED WATER

If the produced water is non-saline, Alberta Environment and the EUB may consider surface water discharge or re-injection into an aquifer of a similar or a lower water quality, as long as environmental impacts are addressed.

The federal Department of Fisheries and Oceans (DFO) may also need to approve the discharge of water into a surface water body. For additional information, please refer to the DFO website at: www.pac.dfo-mpo.gc.ca

For more information on water issues and CBM/NGC development visit www.energy.gov.ab.ca and follow the link for "Natural Gas in Coal/Coalbed Methane."

