

Natural Gas from Coal and the Environment

Protecting the environment is a vital part of any onshore drilling project. The departments of Environment and Labour and Energy enforce strict environmental standards and closely oversee all projects. Companies are required to file comprehensive documents before drilling and teams regularly monitor drilling and production sites to ensure that they meet applicable standards and laws.

WELL SITES

Thanks to advances in drilling technologies, explorers can now drill multiple wells from a single above-ground site. This reduces the need for new roads and protects existing green space.

A typical well site measures 100 by 200 metres and is often situated on or near previously cleared areas. The land for well sites is obtained through agreement between the land owner and the exploration company. Explorers are not allowed on private land without the consent of the landowner.

Once drilling is completed, the activity at the site is immediately reduced. Work begins shortly afterwards to reclaim and replant disturbed vegetation.

If coal gas is found and production begins, very little equipment is needed to produce gas. A typical site includes a number of small buildings and well heads depending on the site; the rest of the site is reclaimed with replanted vegetation. Typically, the gas is piped outside the immediate area using small diameter pipelines.



COAL MINE BROOK #13 WELL, SPRINGHILL, N.S.

ONSHORE GAS
EXPLORATION
& DEVELOPMENT

NOVA SCOTIA
Department of Energy



WATER PRODUCTION AND MANAGEMENT

To access coal gas, operators sometimes need to pump large quantities of water from coal seams. This dewatering of coal allows explorers to reduce the pressure in the seam and access the natural gas.

Any water that is brought to the surface must be disposed of in a safe and environmentally responsible manner. The Nova Scotia government closely monitors and regulates all water treatment activities.

There are several options depending on the chemistry and volume of the produced water. One such option is to create new wetlands, however the options and considerations vary depending on the well.

AIR QUALITY

Natural gas from coal is almost pure methane and can often be fed straight from the well into a pipeline and delivered directly to homes and businesses without processing. Typically there are no harmful by-products released into the air.

FLARING

Flaring is the burning off of natural gas and occurs for operational reasons or when the gas cannot be economically conserved. The production of natural gas from coal requires very little flaring. Most flaring that is required happens after drilling and before the natural gas is fed into the pipeline. Companies are required to notify the Nova Scotia government if flaring is required for safety reasons. They are also required to make local residents aware of any planned flaring.

PROTECTING WILDLIFE

The Nova Scotia government and exploration companies ensure that activity associated with any petroleum related drilling activity does not harm local wildlife or their habitat and that wells are strategically placed to avoid disturbing natural habitats. Once all of the usable gas has been extracted, wells are plugged and permanently sealed with cement to stop the flow of any remaining gas and water. The well head is cut off below the surface, the site is cleared, and the lease area is restored to its natural condition.

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