

What is coal seam gas extraction?

Coal seam gas (CSG) and tight sands gas are two forms of unconventional gas that are currently being targeted in the Northern Rivers region. They require 'unconventional' methods of extraction such as horizontal drilling, multiple drilling, hydraulic fracturing and acidizing.

Hydraulic fracturing (fracking) is often used to extract commercial quantities of gas. It involves blasting a mixture of water, sand and chemicals deep into the ground to open pathways through which methane gas can flow.

[Government authorities in the USA have linked fracking to contamination of groundwater, a higher incidence of earthquakes, and gas migration into water bores and wells.](#)

To extract gas from coal seams, large volumes of water must be removed to facilitate gas flow. This wastewater is often highly saline and can contain a range of organic compounds, heavy metals and radionuclides that are toxic to humans and other species.

It also contains the wide variety of chemicals that are used in drilling and fracking, some of which are known to be harmful to human health and many others that have not been tested for their toxicity.

Full-scale unconventional gas production involves large scale industrialization of rural landscapes. This includes thousands of wells, noisy compressor stations, large wastewater holding dams and treatment plants, plus extensive networks of pipelines, power cables and roads. [All of this for a non-renewable resource that has a lifespan of less than 25 years.](#)

Where is this happening?

Most of the Northern Rivers region is covered by petroleum licences and applications. Three companies, Metgasco Ltd, Arrow Energy and Red Sky Energy are currently exploring for gas with around 100 test wells/core holes drilled to date. Metgasco has approval for a 30-45 well gas field and a 30MW power plant near Casino and has plans to pipe gas from the region interstate and/or overseas.

What are some of the concerns?

The National Water Commission says CSG mining 'risks having significant, long-term and adverse impacts' on water resources including depletion and contamination of ground and surface water systems. In May 2012 the Queensland Water Commission identified significant drops in bore levels on farms from CSG operations. [There is no proven safe way to dispose of the millions of litres of contaminated water that is extracted from coal seams in CSG extraction.](#)

A wide range of toxic air pollutants are released from venting, flaring, compressor stations and wastewater evaporation in unconventional gas operations. Methane migration through existing or induced subsurface fractures also poses a considerable risk.

Doctors for the Environment Australia 'regards the development of coal seam gas (CSG) mining in Australia as a significant threat to public health', saying that some of the compounds associated with CSG extraction can produce short-term health effects and may contribute to systemic illness and/or cancer many years later. [Residents in Queensland living close to CSG operations have reported headaches and nosebleeds occurring in children.](#)

CSG extraction on farms leads to loss of productive land and reduces food growing capacity. Landholders have reported decreased land values after gas wells are approved in their locality. Gas operations in forested areas lead to the loss of large areas of native vegetation and represent a serious danger to threatened plants, animals and communities.

How does this affect you?

Unconventional gas exploration could happen anywhere in the red areas on the map and the pink areas if current applications are approved. If this industry expands in the region rural landscapes and natural areas will be turned into industrial zones. Contamination and depletion of water supplies and destruction of food producing land from gas extraction means that everyone is affected. [Whether you live on a farm or in a village or town, this industry will affect you.](#)

