



ENGINEERS
AUSTRALIA

ENGINEERS AUSTRALIA WA OIL AND GAS COMMITTEE: HYDRAULIC FRACTURE STIMULATION POLICY BRIEF

Introduction

In 2017 the WA State Government moved to ban hydraulic fracture stimulation (fracking) in the Perth metropolitan, Peel and South-West regions of Western Australia and imposed a moratorium on the remainder of the State until recommendations from an inquiry (established under the Environmental Protection Act 1986) were available to inform future policy.

The inquiry was announced on 5th September 2017 and submissions closed in March 2018, with the report expected to be released in August 2018.

The terms of reference are to identify the impacts of fracking, adopt an evidence based approach to assess risk, describe regulatory mechanisms to manage risk and to hold community meetings.

The inquiry specifically built on the 2015 report from the Standing Committee on Environment and Public Affairs.

What is fracking?

Hydraulic fracture stimulation, commonly known as fracking, is a process deployed to enhance the recovery from unconventional (low permeability) deposits, where the gas may not flow freely into the well. The method consists of pumping fluids and proppants under high pressure into the rock deposit to create fine fractures and increase the rock permeability.

Oil and gas is then produced from the well in the immediate vicinity of the induced fractures, leading to increased production rates and enhancing overall well recovery. This process can then be repeated with multiple fracking stages, using horizontal drilling technology to exploit the formation.

Current regulatory environment

In 2015, the WA State Government published a regulatory framework for Shale and Tight Gas in Western Australia. The framework was founded on a 'whole of government approach', this was to allow public sector agencies to work collaboratively across portfolios to achieve an integrated response to the development of these resources.

A range of State Government agencies, principally the Department of Mines, Industry Regulation and Safety (DMIRS), regulate a variety of elements with respect to shale and tight oil and gas developments (along with all other oil and gas developments in State jurisdiction) under the legislative powers relevant to each agency. These include the Department of Water and Environment Regulation, Department of Health and Department of Aboriginal Affairs.

Risks identified

The current enquiry has been established under the Environmental Protection Act, and hence the scope was limited to consider the potential impacts on the environment, and any material harm that those impacts may in turn have on the social surrounds (including heritage, human health and safety) and beneficial uses of that environment.

It excluded harm or loss that did not arise directly from degradation to or loss of biological values. It also did not consider the comparative effects of oil and gas versus other energy sources nor the consequences of pollution more generally.

Four main areas of risk due to fracking have been identified:

1. Land impacts, including damage to soil quality, loss of biodiversity and reduction in beneficial use (e.g. agriculture);
2. Air impacts, including air pollutants and an increase in greenhouse gas emissions;
3. Water impacts, including adverse effects on water quality (for example from well leakage or chemical spillage), reduction in water quantity and reduction in beneficial use; and

Social impacts (loss of Aboriginal heritage, reduction in amenity, public safety and seismic events).

Recommendations

The 2017 inquiry report has not been released and no recommendations are yet available. However the 2015 study made 12 recommendations:

- Two related to changes in acts or regulations;
- Three regarding government agencies, in respect of relating to each other and recommendation of a new statutory body;
- One to establish a working group;
- Two regarding the use of chemicals;
- Two regarding the use of water;
- One to establish a rehabilitation fund; and
- One to proceed on the basis of facts.

Conclusions

Engineers Australia does not have a policy position on fracking, however it is important for members to be informed as to the risks and benefits of this activity. This briefing note summarises the issues from the 2017 and 2015 government inquiries and provides links for further research.