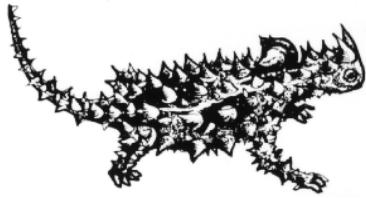


Arid Lands Environment Centre, Inc.



Independent Scientific Panel Inquiry into Hydraulic Fracture Stimulation in Western Australia 2017: ALEC Submission

The Arid Lands Environment Centre (ALEC) is central Australia's peak environmental organisation advocating for the protection of nature and the ecologically sustainable development of the arid lands since 1980.

ALEC is involved in the development and implementation of land management and conservation initiatives in the deserts of Australia. This includes advocating for sustainable economic opportunities that preserve and protect the unique and sensitive environments of the arid zone and climate change action.

ALEC is opposed to the development of any new fossil fuel projects in Australia, including onshore unconventional gas. Hydraulic fracturing is a highly risky process that has contaminated water resources, soil resources, increased atmospheric pollution and elevated disease in human populations.

ALEC has prepared multiple submissions and presentations to the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory. Our position has been informed by thorough research into the climate, water and legal issues of hydraulic fracturing. Our absolute position against the development of unconventional gas resources is justified on the understanding that it poses an acceptable risk to climate and water.

There is robust peer reviewed scientific evidence that unconventional natural gas development has led to elevated health risks, incidents of water contamination and elevated levels of air pollutants.¹ Hydraulic fracturing of shale and tight gas reserves has caused the migration of elevated levels of heavy metals, radionuclides and methane from creating additional connections between aquifers, well integrity failures and surface spills. It is definitively a risk to environmental quality.

Fugitive emissions are certain from an unconventional gas industry, despite the best attempts at mitigation. Fugitive emissions from a new gas industry will add additional carbon emissions at a time when Australia is committed to emissions reduction targets.

When considering the totality of greenhouse emissions through a life cycle assessment of development of the unconventional methane resources of WA, the climate impact of the industry becomes astronomical. Total emissions from the development of WA's five onshore basins would be roughly equal to all of Australia's emissions sources for the year

¹ Hays, J. & Shonkoff, S. "Toward and Understanding of the Environmental and Public Health Impacts of Unconventional Natural Gas development: A Categorical Assessment of the Peer-Reviewed Scientific Literature, 2009-2015" (2016) Plosone
<<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0154164>>

2014 for 20 years.² It is simply scientifically impossible to develop unconventional gas reserves in WA and prevent the catastrophic impact of ongoing climate change. The development of this industry is not consistent with taking appropriate mitigation strategies to avoid catastrophic levels of warming.

Arid environments are typically remote to very remote and industrial infrastructure is limited. Ecosystems are naturally vulnerable to changes and susceptible to increased pressures such as weeds and clearing. Hydraulic stimulation will irreversibly degrade the amenity of the arid lands and threaten vital water resources.

The moratorium on hydraulic stimulation of unconventional gas reserves in WA must remain in place in order to prevent Australia breaching its emission target obligations and preserve the quality and quantity of water resources.

² Bista, S., Jennings, P., & Anda, M. "Cradle to grave GHG emissions analysis of shale gas hydraulic fracking in Western Australia" (2017)