



GOVERNMENT OF
WESTERN AUSTRALIA

Implementation Plan

Implementation of the Government's
response to the Independent Scientific Panel
Inquiry into Hydraulic Fracture Stimulation
in Western Australia

July 2019

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Ministerial Foreword

This Implementation Plan responds to the Final Report of the Independent Scientific Panel Inquiry into Hydraulic Fracture Stimulation in Western Australia.

The McGowan Government will support a safe, responsible and compliant approach to petroleum development, both onshore and offshore in Western Australia.

The Government announced the establishment of the Independent Scientific Panel Inquiry into Hydraulic Fracture Stimulation in Western Australia on 5 September 2017. The Panel handed its Final Report to the Government on 12 September 2018, which included 91 findings and 44 recommendations.

Following careful consideration of the Inquiry's Report, including the finding that the risk from hydraulic fracture stimulation is low, the Government accepted in-principle the Inquiry's recommendations; and on 27 November 2018 announced a raft of new, world-class controls to ensure risks associated with hydraulic fracture stimulation are low and manageable.

A Senior Officials Steering Group has been formed, which includes officials from the Departments of the Premier and Cabinet; Water and Environmental Regulation; Mines, Industry Regulation and Safety; Health; Biodiversity, Conservation and Attractions; Jobs, Tourism, Science and Innovation; Planning, Lands and Heritage; and Treasury.

The Senior Officials Steering Group has been tasked with developing this Implementation Plan, which is designed to address the Inquiry's recommendations and the Government's Decisions relating to hydraulic fracture stimulation, and overseeing the implementation of actions. The Implementation Plan outlines the methodology and timelines of this process.

The application of the Implementation Plan gives effect to the McGowan Government's clear decision to accept the recommendations of the Inquiry, providing balanced and responsible policy that supports economic development, new jobs, environmental protection and landowner rights.



Bill Johnston MLA
Minister for Mines and Petroleum



Stephen Dawson MLC
Minister for Environment

Background

On 5 September 2017, the Western Australian Government (the Government) announced an Independent Scientific Panel Inquiry into Hydraulic Fracture Stimulation in Western Australia (the Inquiry).

The Inquiry handed its final report (the Report) to the Government on 12 September 2018. The Report contains 91 findings and 44 recommendations.

The Government accepted in-principle the Inquiry's recommendations; and on 27 November 2018 announced its Policy Decisions (Government's Decisions) relating to hydraulic fracture stimulation in Western Australia.

Government's Policy Decisions

Government's Decisions relating to hydraulic fracture stimulation in Western Australia:

1. lift the hydraulic fracture stimulation moratorium on all onshore petroleum titles existing as of 26 November 2018; and maintain the ban over the South-West, Peel and Perth Metropolitan regions (*Implementation Plan Action 1*);
2. ban hydraulic fracture stimulation in national parks, the Dampier Peninsula, and other iconic natural heritage areas (to be defined and delineated on maps) (*Implementation Plan Action 2*);
3. introduce a requirement for consent of relevant Traditional Owners and private landowners before hydraulic fracture stimulation production is permitted (*Implementation Plan Action 5a / 5b*);
4. restore the 10 per cent royalty rate for all onshore petroleum (*Implementation Plan Action 17*);
5. establish a Clean Energy Future Fund (with a \$9-million seed allocation), using net royalties from onshore hydraulic fracture stimulation petroleum projects, to support facilitation of clean energy developments (*Implementation Plan Action 18*); and
6. prohibit hydraulic fracture stimulation within 2,000 metres of gazetted Public Drinking Water Source Areas (*Implementation Plan Actions 2 & 7*).

The McGowan Government intends to implement the Inquiry's recommendations and Government's Decisions by the end of 2020.

Inquiry Themes

The McGowan Government acknowledges stakeholder feedback expressed during the Inquiry, including both community support and opposition for hydraulic fracture stimulation, and affirms the Government's commitment to a safe, responsible and compliant approach to oil and gas development for the benefit of all Western Australians.

Reforms

While Western Australia is held in high regard globally for its comprehensive regulatory framework developed during the past 50 years for exploration and production in the petroleum industry, the Government will ensure the laws in place hold companies accountable to high standards.

Implementation of the Inquiry's recommendations, including the new requirement for all applications for onshore hydraulic fracture stimulation exploration and production proposals to be referred to the Environmental Protection Authority (EPA) for assessment under the *Environmental Protection Act 1986* (EP Act), will reinforce Western Australia's reputation as a world-class regulator and boost community confidence.

Land

The State Government recognises the importance of the land, people's connection to it and the need to safeguard the environment in general. This is reflected in the Government's Decision to ban hydraulic fracture stimulation in national parks, the Dampier Peninsula, and iconic natural heritage areas; and to provide Traditional Owners and private landowners with the right to decide whether hydraulic fracture stimulation production can occur on their land. Implementation of the Government's Decisions will ensure respect and recognition of landowner rights.

Water

The Government's Decision to prohibit hydraulic fracture stimulation within 2,000 metres of gazetted Public Drinking Water Source Areas sends a strong message to industry on the importance of safeguarding our water supplies. This will be reinforced by implementation of the Inquiry's recommendations requiring baseline and routine monitoring of groundwater, strengthening of regulations governing the use and assessment of chemicals associated with hydraulic fracture stimulation, comprehensive geomechanical risk analysis, and site water audits.

Greenhouse Gas (GHG)

The Government acknowledges that GHG emissions are an important issue for Western Australians and is focused on renewed action on emissions. The implementation of the Inquiry's recommendations on GHG and establishment of the Clean Energy Future Fund (CEFF) to support projects facilitating clean energy developments demonstrates the Government's long-term commitment to a low-carbon economy.

Public Health

The Government places a high priority on ensuring hydraulic fracture stimulation and its associated activities do not have an adverse impact on human and animal health, directly through potential exposure to chemicals, and for humans, indirectly through stress and anxiety caused by health fears and concern over effects on their livelihoods. The Government is confident that by reinforcing already robust regulations through implementation of the Inquiry's recommendations, any potential health risks associated with hydraulic fracture stimulation are low and manageable.

The Department of Health (DoH) will review and provide advice to the EPA for proposals referred to it where there is potential for public health impacts from chemicals proposed to be used in hydraulic fracture stimulation.

Social Surroundings

In Western Australia, as has been the experience nationally, hydraulic fracture stimulation has generated a wide range of inter-related economic, social and environmental concerns. The Government believes that any hydraulic fracture stimulation projects and associated activities must not have an adverse impact on communities and cultural values. Aligning community and resource companies' expectations is essential for development of any hydraulic fracture stimulation projects. Establishing a clear understanding of community expectations requires a case-by-case and site-specific approach. Implementation of the Government's Decisions highlights the importance of the need for industry to build positive relationships with the communities within which they plan to operate.

Risk from Hydraulic Fracture Stimulation

The Inquiry found that the risk from hydraulic fracture stimulation is low. Implementing the Inquiry's Recommendations and Government's Decisions will introduce additional measures to ensure risks associated with hydraulic fracturing are reduced even further.

These measures include the requirement for the EPA to consider peer-reviewed, site-specific, risk assessments for potential long and short term health risks, including:

- the impact on air quality and human health from hydraulic fracturing;
- the health risk from chemicals to be used in hydraulic fracturing and chemicals expected to be present in produced and flow-back water; and
- the impact on social surrounds from hydraulic fracture operations including noise, dust and vehicular movements.

Implementation Plan

The Implementation Plan describes the actions required to implement the Inquiry's recommendations and the Government's Decisions (see Appendix A) following its consideration of the Inquiry's Report.

Many of the recommendations and Government's Decisions apply to more than one implementation action. They have been consolidated into 20 key actions (see Implementation Actions section), which detail:

- the key action required to implement the respective recommendations and Government's Decisions;
- the recommendations or Government's Decisions the action addresses;
- the sub-actions, being the high-level steps, considerations and consultation to be undertaken to implement the action;
- the expected completion date of the key action; and
- the key stakeholders to be consulted.

A Senior Officials Steering Group (SOSG) has been formed to develop the Implementation Plan and oversee the delivery of the actions contained in the Implementation Plan. The Group is co-chaired by the Department of Water and Environmental Regulation (DWER) and the Department of Mines, Industry Regulation and Safety (DMIRS). DWER and DMIRS will lead the implementation project, under the direction of the SOSG.

Stakeholder Consultation

The Government recognises that effective and ongoing stakeholder engagement enables better-planned and more informed policies, projects and services, including a greater understanding and management of issues and potential risks.

Stakeholders will have the opportunity to contribute during the application of the Implementation Plan. Impacted stakeholders will be consulted on relevant actions and involved throughout the implementation process as outlined in Implementation Actions.

Implementation will require reforms to be made across a number of State Government agencies. A dedicated Implementation Plan website has been developed to provide a single source of information for stakeholders and parties interested in the Implementation Plan.

A range of consultation methods are anticipated to be used throughout the stakeholder consultation process where required, including:

- conducting workshops and briefings with impacted stakeholders;
- releasing draft proposals for public comment and feedback;
- publishing response to feedback on the dedicated Implementation Plan website; and
- informing stakeholders through the Implementation Plan website once actions have been completed.

Where appropriate, exposure drafts in the form of discussion papers, draft guidance material, codes of practice and other relevant proposals will be released on the Implementation Plan website for public comment.

Implementation Actions

Action 1 – Lifting hydraulic fracture stimulation moratorium

Action #	Recommendation / Government Decision #	Completion Date
	GDI, GD2, GD6	August 2019
1	Lift the hydraulic fracture stimulation moratorium on all onshore petroleum titles existing as of 26 November 2018; and maintain the ban over the South-West, Peel and Perth Metropolitan regions.	
1.1	Draft and enact amendments to the Petroleum and Geothermal Energy Resources (Hydraulic Fracturing) Regulations 2017.	
1.2	Inform stakeholders via the Implementation Plan website once the moratorium is lifted on existing onshore exploration, retention and production licences.	
1.3	Inform stakeholders via the Implementation Plan website once the action is completed.	

Stakeholders Community, Industry, Industry Associations and Government Agencies.

Action 2 – Hydraulic fracture stimulation no-go areas

Action #	Recommendation / Government Decision #	Completion Date
	R2, GD2, GD6	October 2019
2	Prohibit hydraulic fracture stimulation within 2,000 metres of gazetted Public Drinking Water Source Areas, in national parks, the Dampier Peninsula, and other iconic natural heritage areas (to be defined and delineated on maps).	
2.1	Undertake discussions with impacted stakeholders to define and map the Dampier Peninsula ban boundary.	
2.2	Include amendment in the Petroleum and Geothermal Energy Resources (Hydraulic Fracturing) Regulations 2017 (see Action 1.1) prohibiting hydraulic fracturing in the Dampier Peninsula, national parks and within 2,000 metres of gazetted Public Drinking Water Source Areas.	
2.3	Define, and identify 'places of iconic natural heritage' within, and in the vicinity of, onshore petroleum titles existing as of 26 November 2018.	
2.4	Release proposed list of 'places of iconic natural heritage' for public comment and feedback via the Implementation Plan website.	
2.5	Publish response to feedback on the Implementation Plan website.	
2.6	Inform stakeholders via the Implementation Plan website once the action is completed.	

Stakeholders Community, Native Title Representative Bodies, National Native Title Council, Traditional Owners, Industry, Industry Associations, Local Governments and Government Agencies.

Action 3 – Acreage release process for hydraulic fracture stimulation

Action #	Recommendation / Government Decision #	Completion Date
	R2, R44	October 2019
3	<p>Ensure appropriate and adequate community consultation for acreage releases associated with hydraulic fracturing.</p> <p><i>Note: This action will be addressed through implementation of the Government's Decisions 1 and 2, and Inquiry's Recommendation 34, which will preclude hydraulic fracture stimulation over land subject to future petroleum acreage releases or places of iconic natural heritage (see Actions 1, 2 and 7).</i></p>	

Action 4 – Early and ongoing engagement with local communities

Action #	Recommendation / Government Decision #	Completion Date
	R22, R23, R25, R29, R30	October 2019
4	Develop a hydraulic fracturing stakeholder engagement and consultation guide covering whole of project lifecycle for industry and Government.	
4.1	Determine stakeholder engagement and consultation opportunities in a project lifecycle.	
4.2	Draft hydraulic fracturing stakeholder engagement and consultation guide.	
4.3	Release the draft guide for public comment and feedback via the Implementation Plan website.	
4.4	Publish response to feedback on the Implementation Plan website.	
4.5	Publish stakeholder engagement and consultation guide.	
4.6	Inform stakeholders via the Implementation Plan website once the action is completed.	
Stakeholders	Community, Native Title Representative Bodies, National Native Title Council, Traditional Owners, Industry, Industry Associations, Agricultural / Farming Representative Bodies and Government Agencies.	

Action 5a – Right of consent – Traditional Owners

Action #	Recommendation / Government Decision #	Completion Date
	GD3	December 2020
5a	Introduce a requirement for consent of relevant Traditional Owners before hydraulic fracture stimulation production is permitted.	
5a.1	Draft process and procedures to give effect to the Traditional Owners' consent.	
5a.2	Inform, and where required direct, existing onshore petroleum production licence holders requiring consent of relevant Traditional Owners for hydraulic fracture stimulation production projects on Aboriginal lands.	
5a.3	Release draft process and procedure documentation for considering Traditional Owners' consent via the Implementation Plan website.	
5a.4	Implement procedures.	
5a.5	Inform stakeholders via the Implementation Plan website once the action is completed.	
Stakeholders	Community, Native Title Representative Bodies, National Native Title Council, Traditional Owners, Industry and Industry Associations.	

Action 5b – Right of consent – private landowners

Action #	Recommendation / Government Decision #	Completion Date
	GD3	December 2020
5b	Introduce a requirement for consent of relevant private landowners before hydraulic fracture stimulation production is permitted.	
5b.1	Inform, and where required direct, existing onshore petroleum production licence holders requiring consent of private landowner(s) prior to the commencement of hydraulic fracture production on freehold land.	
5b.2	Draft legislative amendments / policy to require consent of private landowners for hydraulic fracturing production on freehold land.	
5b.3	Release draft legislative amendments / policy for public comment and feedback via the Implementation Plan website.	
5b.4	Publish response to feedback on Implementation Plan website.	
5b.5	Enact legislative amendments / implement policy.	
5b.6	Inform stakeholders via the Implementation Plan website once the action is completed.	
Stakeholders	Community, Agricultural / Farming Representative Bodies, Industry and Industry Associations.	

Action 6 – Access requirements

Action #	Recommendation / Government Decision #	Completion Date
	R3	December 2020
6	Strengthen access requirements for the location, maintenance, operation and remediation of infrastructure, and compensation for residual damage to the subsequent productive use of the land, for hydraulic fracturing projects.	
6.1	Consult with impacted stakeholders to develop appropriate mechanisms for access and compensation with relevant Traditional Owners, private landowners and lease holders, for the location, maintenance, operation and remediation of infrastructure, and compensation for residual damage to the subsequent productive use of the land, for hydraulic fracturing production projects.	
6.2	Release the draft legislative amendments, agreements and guidance material (if required) for public comment and feedback via the Implementation Plan website.	
6.3	Publish response to feedback on Implementation Plan website.	
6.4	Enact legislative amendments, and publish guidance material and template agreements (if required).	
6.5	Inform stakeholders via the Implementation Plan website once the action is completed.	
Stakeholders	Community, Native Title Representative Bodies, National Native Title Council, Traditional Owners, Industry, Industry Associations, Agricultural / Farming Representative Bodies and Government Agencies.	

Action 7 – EPA assessment for all onshore hydraulic fracture proposals

Action #	Recommendation / Government Decision #	Completion Date
7	R1, R2, R6, R9, R10, R14, R15, R16, R17, R18, R19, R20, R24, R25, R27, R28, R30, R31, R34, GD2, GD6	December 2020
7	<p>All applications for onshore hydraulic fracture stimulation exploration and production proposals to be referred to the EPA for assessment under the EP Act.</p> <p>7.1 Amend the Environmental Protection Regulation 2C to define all onshore oil and gas exploration and production proposals involving hydraulic fracture stimulation as being of a prescribed class, which will require referral to the EPA for assessment.</p> <p>7.2 Consult with impacted stakeholders in the amendment of the Regulations.</p> <p>7.3 Finalise update of administrative procedures and processes to ensure all onshore hydraulic fracture stimulation exploration and production proposals will be assessed under Part IV of the EP Act considering, among other things:</p> <ul style="list-style-type: none"> • cumulative impacts from hydraulic fracture stimulation exploration and production on public ecosystem fragmentation; • the suitability of chemicals used in hydraulic fracture stimulation and their approval for use in Australia, including; <ul style="list-style-type: none"> – a presumption against approval of Benzene, Toluene, Ethylbenzene and Xylene (BTEX) for use as drilling and hydraulic fracturing fluids; – recommending the minimisation or avoidance of the use of known or suspected carcinogens, mutagens, developmental toxicants and endocrine disruptors in drilling and hydraulic fracture fluids; – the cumulative, short and long-term public health risk from chemicals used in onshore hydraulic fracturing exploration and production and chemicals expected to be present in produced and flow-back water; • the requirement for peer-reviewed, site-specific human health, air quality and noise risk assessments; • baseline and routine surveillance groundwater quality monitoring, including methane concentrations; • the comprehensive list of analytes in groundwater, likely in produced and flow-back water, including geogenic chemicals and radon; • the requirement for a site water balance, accounting for water produced, evaporated and disposed, to enable detection of significant leakage of fluids and determine whether remedial action to track any contaminants is warranted; • impacts on Traditional Owners' cultural heritage; • the acceptability of the Aboriginal Heritage Management Plan; • separation of 2,000 metres between any hydraulic fracture stimulation activity and gazetted Public Drinking Water Source Areas; • in the absence of a local health risk assessment indicating otherwise, separation of 2,000 metres between any hydraulic fracture stimulation activity and sensitive receptors, such as residences, schools and settlements; • proposed national parks and places of iconic natural heritage; • baseline and ongoing air quality monitoring conditions over the lifecycle of the wells; • a social impact analysis, documenting potential impacts to social surroundings; • baseline monitoring for GHG prior to assessment; 	

Action #	Recommendation / Government Decision #	Completion Date
	R1, R2, R6, R9, R10, R14, R15, R16, R17, R18, R19, R20, R24, R25, R27, R28, R30, R31, R34, GD2, GD6	December 2020
	<ul style="list-style-type: none"> • cumulative impacts of noise from hydraulic fracture stimulation and associated activities on places within proximity to people and domestic animals; • cumulative impacts by volatile organic compounds and dust from hydraulic fracture stimulation exploration and production on local and regional ecosystems and public health; • proposed measures to minimise the generation of dust throughout all operations when compared to baseline monitoring; • baseline road use statistics, periodic monitoring and impacts; and • acquisition of baseline information and developing processes to ensure the documentation and systematic monitoring of matters relating to amenity, aesthetics and sense of place in assessments. 	
7.4	Implement process for DWER to refer proposals where there is potential for public health impacts to DoH for review.	
7.5	Develop options for EPA guidance material in consultation with impacted stakeholders relating to assessment of all onshore hydraulic fracture stimulation exploration and production proposals.	
7.6	Release draft discussion papers / policy and guidance material for public comment and feedback.	
7.7	Publish response to feedback on the Implementation Plan website.	
7.8	Enact regulations / implement policy and processes, and publish guidance material.	
7.9	Inform stakeholders via the Implementation Plan website once the action is completed.	
Stakeholders	Community, Native Title Representative Bodies, National Native Title Council, Traditional Owners, Industry, Industry Associations and Government Agencies.	

Action 8 – Public health impact

Action #	Recommendation / Government Decision #	Completion Date
	R6, R16, R18	May 2020
8	DoH to review proposals where there is potential for public health impacts.	
8.1	Develop a process for DoH to review and provide advice to the EPA on the robustness of referred, peer-reviewed, site-specific risk assessments for the cumulative and short and long term health risk from: <ul style="list-style-type: none"> • chemicals proposed to be used in hydraulic fracture stimulation or expected to be present in produced or flow-back water; and • air-borne chemicals (including volatile organic compounds and dust) on human health arising from hydraulic fracture. 	
8.2	Release draft discussion papers / policy and guidance material for public comment and feedback.	
8.3	Publish response to feedback on the Implementation Plan website.	

Action #	Recommendation / Government Decision #	Completion Date
	R6, R16, R18	May 2020
8.4	Publish policy and guidance material.	
8.5	Implement process to assess the robustness of referred peer-reviewed, site-specific risk assessments.	
8.6	Inform stakeholders via the Implementation Plan website once the action is completed.	
Stakeholders	Community, Industry, Industry Associations and Government Agencies.	

Action 9 – Chemicals register

Action #	Recommendation / Government Decision #	Completion Date
	R6	April 2020
9	Create a publicly accessible register of chemicals assessed for hydraulic fracture use in Western Australia.	
9.1	Develop a within Government process to collate and maintain a register of chemicals used in hydraulic fracture stimulation as referred for review.	
9.2	Implement systems and processes to ensure public access to the register.	
9.3	Inform stakeholders via the Implementation Plan website once the action is completed.	
Stakeholders	Community, Industry, Industry Associations and Government Agencies.	

Action 10 – GHG emission offsets

Action #	Recommendation / Government Decision #	Completion Date
	R13	April 2020
10	Investigate data requirements to estimate additional GHG emissions, and develop a policy framework setting out Government's expectations for GHG offsets for proposals assessed under Part IV of the EP Act.	
10.1	Investigate data requirements to estimate additional GHG emissions.	
10.2	Consult with impacted stakeholders in the development of options.	
10.3	Assess the feasibility of a policy framework setting out Government expectations for GHG offsets for proposals assessed under Part IV of the EP Act.	
10.4	If feasible, release draft policy for public comment and feedback via the Implementation Plan website.	
10.5	Publish response to feedback on the Implementation Plan website.	
10.6	Implement policy framework.	
10.7	Inform stakeholders via the Implementation Plan website once the action is completed.	
Stakeholders	Community, Industry, Industry Associations and Government Agencies.	

Action 11 – Code of practice

Action #	Recommendation / Government Decision #	Completion Date
	R4, R5, R6, R7, R8, R10, R11, R12, R14, R15, R21, R32, R33, R35	December 2020
11	Develop an enforceable Code of Practice and implement the intent of the recommendations for a code that defines and prescribes minimum standards for onshore exploration and production proposals involving hydraulic fracturing.	
11.1	Consult with impacted stakeholders in the development of the Code.	
11.2	Draft Code of Practice based on quality-assured scientific research and information.	
11.3	Release draft Code of Practice via the Implementation Plan website for public comment and feedback.	
11.4	Publish response to feedback on Implementation Plan website.	
11.5	Publish Code of Practice and direct existing onshore petroleum title holders requiring compliance with the Code as a minimum standard.	
11.6	Inform stakeholders via the Implementation Plan website once the action is completed.	
Stakeholders	Community, Industry, Industry Associations, CSIRO and Government Agencies.	

Action 12 – Non-compliance hotline

Action #	Recommendation / Government Decision #	Completion Date
	R26	April 2019
12	Establish a central point of contact within Western Australian Government agencies for hydraulic fracture stimulation non-compliance complaints.	
12.1	Utilise DWER 24 hour Pollution Watch Hotline as a central point of contact for complaints relating to hydraulic fracture stimulation non-compliance.	
12.2	Update relevant agency websites to reflect the change and inform stakeholders of 24-hour Pollution Watch Hotline.	
12.3	Inform stakeholders via the Implementation Plan website once the action is completed.	
Stakeholders	Community and Government Agencies.	

Action 13 – Penalties (environmental compliance tools)

Action #	Recommendation / Government Decision #	Completion Date
	R40	December 2020
13	Introduce a new system of penalties for environmental offences for inclusion in the <i>Petroleum and Geothermal Energy Resources Act 1967</i> .	
13.1	Investigate existing penalties under EP Act and PGER Act, and those applicable to other Australian jurisdictions.	
13.2	Consult with impacted stakeholders in the development of options.	
13.3	Draft legislative amendments.	
13.4	Release draft legislative amendments for public comment and feedback via the Implementation Plan website.	
13.5	Publish response to feedback on the Implementation Plan website.	
13.6	Enact legislative amendments.	
13.7	Inform stakeholders via the Implementation Plan website once the action is completed.	

Stakeholders Community, Industry, Industry Associations and Government Agencies.

Action 14 – Past environmental performance

Action #	Recommendation / Government Decision #	Completion Date
	R41	December 2020
14	Consider applicant’s past environmental performance before granting titles.	
14.1	Investigate legislative reform mechanisms to introduce additional assessment criteria.	
14.2	Draft legislation / legislative amendments to enact the preferred legal mechanism.	
14.3	Release draft legislative amendments for public comment and feedback via the Implementation Plan website.	
14.4	Publish Government response to feedback on Implementation Plan website.	
14.5	Enact legislative amendments.	
14.6	Inform stakeholders via the Implementation Plan website once the action is completed.	

Stakeholders Community, Industry, Industry Associations and Government Agencies.

Action 15 - Transparency

Action #	Recommendation / Government Decision #	Completion Date
	R5, R10, R21, R36, R37, R38	December 2020
15	Improve transparency and timeliness of provision of data.	
15.1	Draft legislative amendments to enact improved transparency and timeliness of provision of data where required.	
15.2	Release draft legislative amendments for public comment and feedback via the Implementation Plan website.	
15.3	Publish Government response to feedback on Implementation Plan website.	
15.4	Enact legislative amendments and implement systems and processes to facilitate public access to information.	
15.5	Inform stakeholders via the Implementation Plan website once the action is completed.	

Stakeholders Community, Industry, Industry Associations and Government Agencies.

Action 16 - Separation of regulation and promotion of industry

Action #	Recommendation / Government Decision #	Completion Date
	R42	April 2019
16	Ensure better separation of the auditing and compliance, and the promotion of the petroleum industry.	
16.1	Department of Jobs, Tourism, Science and Innovation to be responsible for promotion of the petroleum and other resource industries.	
16.2	Update relevant agency websites to reflect the change.	
16.3	Inform stakeholders via the Implementation Plan website once the action is completed.	

Stakeholders Community, Industry, Industry Associations and Government Agencies.

Action 17 - Removing royalty rate discount

Action #	Recommendation / Government Decision #	Completion Date
	GD4	December 2020
17	Remove royalty discount for tight gas and restore the royalty rate to 10 per cent for all onshore petroleum projects using hydraulic fracture stimulation.	
17.1	Draft legislative amendments to enact removal of royalty discount for tight gas and restore royalty rate to 10 per cent for all onshore petroleum.	
17.2	Release draft legislative amendments for public comment and feedback via the Implementation Plan website.	
17.3	Publish Government response to feedback on Implementation Plan website.	
17.4	Enact legislative amendments.	
17.5	Inform stakeholders via the Implementation Plan website once the action is completed.	

Stakeholders Community, Industry, Industry Associations and Government Agencies.

Action 18 – Clean Energy Future Fund (CEFF)

Action #	Recommendation / Government Decision #	Completion Date
	GD5	April 2020
18	Establish the CEFF, administered by DWER, and allocate net royalties from onshore hydraulic fracture stimulation petroleum projects to the CEFF.	
18.1	Establish CEFF and arrange transfer of seed funding.	
18.2	Obtain Minister for the Environment and Minister for Energy agreement for governance arrangements for CEFF. Fund to be administered by DWER.	
18.3	Implement process to allocate net royalties from onshore petroleum projects using hydraulic fracture stimulation to the CEFF.	
18.4	Inform stakeholders via the Implementation Plan website once the action is completed.	
Stakeholders Community, Industry, Industry Associations and Government Agencies.		

Action 19 – Financial assurances

Action #	Recommendation / Government Decision #	Completion Date
	R39	December 2020*
19	Implement financial assurances to adequately protect the State from potential liabilities associated with hydraulic fracture stimulation in Western Australia.	
19.1	Consult with impacted stakeholders in the development of options.	
19.2	Release preferred options paper for public comment and feedback via the Implementation Plan website.	
19.3	Publish Government response to feedback on the Implementation Plan website.	
19.4	Draft required legislation / legislative amendments to enact preferred option. * Timeline may extend beyond December 2020.	
19.5	Release draft legislation / legislative amendments for public comment and feedback via the Implementation Plan website.	
19.6	Publish Government response to feedback on the Implementation Plan website.	
19.7	Enact legislation / legislative amendments.	
19.8	Inform stakeholders via the Implementation Plan website once the action is completed.	
Stakeholders Community, Industry, Industry Associations and Government Agencies.		

Action 20 – Cost recovery

Action #	Recommendation / Government Decision #	Completion Date
	R43	December 2020*
20	Develop cost recovery to enhance environmental auditing and compliance functions of Government.	
20.1	Determine the level of resourcing for full implementation of the existing regulatory regime.	
20.2	Consult with impacted stakeholders on cost recovery options.	
20.3	Release options for public comment and feedback via the Implementation Plan website.	
20.4	Publish Government response to feedback on the Implementation Plan website.	
20.5	Draft legislation / legislative amendments to enact the preferred legal mechanism. *Timeline may extend beyond December 2020.	
20.6	Release draft legislation / legislative amendments for public comment and feedback via the Implementation Plan website.	
20.7	Publish Government response to feedback on the Implementation Plan website.	
20.8	Enact legislation / legislative amendments.	
20.9	Inform stakeholders via the Implementation Plan website once the action is completed.	
Stakeholders	Community, Industry, Industry Associations and Government Agencies.	

Implementation Timeline

Implementation of key actions will require reforms to be made across a number of State Government agencies, which may impact on the target timeframes shown below.

Action	2019										2020										
	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
1																					
2																					
3																					
4																					
5																					
6																					
7																					
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Progress Reporting and Updates

Delivering this Implementation Plan will require a considered approach across a number of State Government agencies, allowing for adjustments if required to better meet the needs of the Government, stakeholders and the community.

Some of the recommendations may require further policy development, consultation and new legislation to achieve the best outcome.

Progress on Implementation Plan actions will be reported via a dedicated website designed to provide a single source of information, including access to regular updates.

For more information about the Government's response to the Inquiry, please visit: www.hydraulicfracturing.wa.gov.au

Frequently Asked Questions

What is the purpose of the Implementation Plan?

The Implementation Plan details how and when the Government will action its policy decisions and the recommendations of the Inquiry.

Will the State Government consult in relation to the Implementation Plan?

No consultation has been carried out on the development of the Implementation Plan itself – as this is the Government's response to the Inquiry Report – which considered extensive stakeholder feedback. However, stakeholders will be consulted as we work to implement various actions from the Implementation Plan.

What will the consultation process involve?

A range of consultation methods are anticipated to be used throughout the stakeholder consultation process where required, including:

- conducting workshops and briefings with impacted stakeholders;
- releasing draft proposals for public comment and feedback;
- publishing responses to feedback on the website; and
- informing stakeholders through the website once actions have been completed.

Will the State Government implement all of the Inquiry's recommendations?

The Government has accepted in-principle all of the Inquiry's 44 recommendations. The Implementation Plan outlines the Government actions to implement all of the recommendations.

When will the Government implement all of the actions?

The Government aims to implement the Inquiry's recommendations through the Implementation Plan by the end of 2020. However, implementation of some actions will require complex and lengthy reforms across a number of agencies, involving further policy development, and changes to legislation and processes, which may take a number of years to fully implement.

Who is responsible for implementing the Inquiry's recommendations?

Overall responsibility belongs to the Minister for Mines and Petroleum and the Minister for Environment. A Senior Officials Steering Group (SOSG) has been formed to oversee the delivery of the Implementation Plan actions. The SOSG is co-chaired by the Department of Water and Environmental Regulation (DWER) and the Department of Mines, Industry Regulation and Safety (DMIRS). DWER and DMIRS will lead the implementation project, under the direction of the SOSG.

Who are the members of the SOSG?

The SOSG membership consists of officials from the Departments of the Premier and Cabinet; Water and Environmental Regulation; Mines, Industry Regulation and Safety; Health; Biodiversity, Conservation and Attractions; Jobs, Tourism, Science and Innovation; Planning, Lands and Heritage; and Treasury.

Has the moratorium on hydraulic fracturing been lifted across Western Australia?

No. The moratorium remains in place and hydraulic fracturing is banned in Perth, Peel and the South-West regions, national parks, the Kimberley's Dampier Peninsula, iconic natural heritage areas (to be defined and delineated on maps), and within 2,000 metres of gazetted Public Drinking Water Source Areas.

Will the moratorium on hydraulic fracturing be lifted?

The moratorium will only be lifted on land covered by onshore petroleum titles (exploration permits, retention licences and production licences) existing as of 26 November 2018.

What work is needed to enact State Government's policy on hydraulic fracturing?

Amendments to the Petroleum and Geothermal Energy Resources (Hydraulic Fracturing) Regulations 2017 are currently being drafted to enact the Government's policy – a process that should be completed by mid-2019.

When will companies be able to submit proposals for hydraulic fracturing?

Companies can submit hydraulic fracturing proposals to DMIRS and refer them to the EPA at any time. Proposals received by DMIRS will be referred to the EPA for assessment.

How will onshore hydraulic fracturing proposals be referred to the EPA?

While the administrative framework is being implemented, existing title holders are expected to self-refer proposals for hydraulic fracturing projects to the EPA for assessment. If a proposal has not been referred, DMIRS will refer the proposal to the EPA.

What protection from hydraulic fracturing will be provided for our water sources?

The Government's policy decision to prohibit hydraulic fracture stimulation within 2,000 metres of gazetted Public Drinking Water Source Areas sends a strong message to industry on the importance of safeguarding our water supplies. This will be reinforced by the implementation of the Inquiry's recommendations requiring baseline and routine monitoring of groundwater, strengthening of regulations governing the use and assessment of chemicals associated with hydraulic fracture stimulation, comprehensive geomechanical risk analysis, and site water audits.

What protection from hydraulic fracturing will be provided for water sources not gazetted as Public Drinking Water Source Areas?

In addition to the 2,000 metre exclusion zones around gazetted Public Drinking Water Source Areas, in the absence of a local health risk assessment indicating otherwise, a 2,000 metre buffer zone will apply around residences and settlements, which includes bores, rainwater tanks, dams and tributaries. There will also be strong protection of water sources with referrals of all onshore hydraulic fracture proposals to the EPA for assessment under the EP Act.

What protection from hydraulic fracturing will be provided for our environment?

The State Government's policy decision to ban hydraulic fracturing in national parks, the Dampier Peninsula and other iconic natural heritage areas (to be defined and delineated on maps), demonstrates the Government's commitment to safeguard our environment. Environmental protection will be strengthened further with the new requirement for all applications for onshore hydraulic fracture stimulation exploration and production proposals to be referred to the EPA for assessment under the EP Act.

What protection from hydraulic fracturing will be provided for conservation areas not deemed a National Park?

Hydraulic fracturing is not permitted in national parks, the Dampier Peninsula and iconic natural heritage areas (to be defined and delineated on maps). Additionally, any applications for exploration and production hydraulic fracturing in the titles that existed at the time of the State Government's policy decision on 26 November 2018 will be referred to the EPA for assessment, which will allow for consideration of options to protect other areas with important conservation values.

APPENDIX A – Government Decisions and Scientific Panel Recommendations

GOVERNMENT DECISIONS (announced on 27 November 2018)

Government Decision 1

Lift the hydraulic fracture stimulation moratorium on all onshore petroleum titles existing as of 26 November 2018; and maintain the ban over the South-West, Peel and Perth Metropolitan regions.

Government Decision 2

Ban hydraulic fracture stimulation in national parks, the Dampier Peninsula, and other iconic natural heritage areas (to be defined and delineated on maps).

Government Decision 3

Introduce a requirement for consent of relevant Traditional Owners and private landowners before hydraulic fracture stimulation production is permitted.

Government Decision 4

Restore the 10 per cent royalty rate for all onshore petroleum.

Government Decision 5

Establish a Clean Energy Future Fund (with a \$9-million seed allocation), using net royalties from onshore hydraulic fracture stimulation petroleum projects, to support facilitation of clean energy developments.

Government Decision 6

Prohibit hydraulic fracture stimulation within 2,000 metres of gazetted Public Drinking Water Source Areas.

PANEL RECOMMENDATIONS

(Final Report of the Independent Scientific Panel Inquiry into Hydraulic Fracture Stimulation in Western Australia)

Recommendation 1

The cumulative impacts of landscape clearing and fragmentation depend on scale and duration. Such impacts should be anticipated and assessed prior to development approval, with the eventual rehabilitation and restoration of redundant infrastructure clearing meeting the expectations of both regulators and the community.

Recommendation 2

The Western Australian Government, in consultation with the community, should identify places of iconic natural heritage and exclude those places from future exploration and development for unconventional oil and gas associated with hydraulic fracture stimulation, sufficient to protect their values from direct development or by proximity to increased traffic, noise, light or visual impacts. These consultations should be a formal part of the process by which the Western Australian Government releases acreage for potential development.

Recommendation 3

Access to productive land should require an agreement with the Traditional Owners, landholder or leaseholder regarding the location, maintenance, operation and remediation of infrastructure, as well as compensation for residual damage to the subsequent productive use of the land.

Recommendation 4

An early warning system based on a 'traffic light scheme' should be implemented to prevent adverse geo-mechanical events reaching a size of any consequence to land or hydrogeology.

Recommendation 5

That baseline and routine surveillance groundwater quality monitoring, including methane concentrations, should be included in an enforceable Code of Practice and results made publicly available before commencement of drilling operations and thereafter.

Recommendation 6

The regulations governing the use and assessment of chemicals associated with hydraulic fracture stimulation should be strengthened and clarified, specifically:

- All chemicals proposed for use must be approved for use in Australia. It should be the regulator's responsibility to check that all the proposed chemicals are listed on the Australian Inventory of Chemical Substances (AICS), Australian Pesticides and Veterinary Medicines Authority (APVMA), Therapeutic Goods Administration (TGA) or Food Standards Australia and New Zealand (FSANZ) inventories prior to approval being granted.
- That a ruling is sought from APVMA on the need to register biocides used for hydraulic fracture stimulation in Western Australia (in line with the existing ruling on the use of these chemicals in the extraction of coal seam gas).
- The use of Benzene, Toluene, Ethylbenzene and Xylene (BTEX) in drilling and hydraulic fracturing fluids should be banned.
- Chemicals that are known or suspected carcinogens, mutagens, developmental toxicants and endocrine disruptors should be identified as part of the information disclosed on chemicals. Use of chemicals with these properties should be minimised or avoided in all operations.
- An enforceable Code of Practice should include the requirement to test for, and assess the risk from, a comprehensive list of analytes in groundwater, produced and flowback water, including geogenic chemicals and radon.
- The use of ecotoxicity testing should be considered to better assess the potential for impacts from the mixture of chemicals present in produced or flowback water.
- The Western Australian Department of Health (DoH) should review and provide advice on information and risk assessments provided on chemicals proposed to be used in hydraulic fracture stimulation, or expected to be present in produced or flowback water, and determine a list of low risk chemicals for hydraulic fracture stimulation, where detailed assessment of risk is not required to be provided. This would encourage industry to use lower risk chemicals instead of other chemicals that require more detailed risk assessment.

Recommendation 7

All hydraulic fracture stimulation operations should be preceded by a comprehensive geomechanical risk analysis according to an enforceable Code of Practice.

Recommendation 8

A site water audit should be required, accounting for water produced, evaporated and disposed, to detect significant leakage of fluids and determine whether remedial action to track any contaminants is warranted.

Recommendation 9

A separation of 2,000 metres from oil and gas wells associated with hydraulic fracture stimulation to bores used for Public Drinking Water Sources is warranted under the precautionary principle, as recommended by the Department of Health (DoH) and the Water Corporation. This is necessary for public confidence, irrespective of a low risk.

Recommendation 10

Baseline measurements of atmospheric levels of greenhouse gas (GHG) should be acquired prior to the development of onshore wells employing hydraulic fracture stimulation, and should be the responsibility of the regulator. Atmospheric concentrations and process leakage of methane should subsequently be monitored over every well's entire life cycle, and detected leaks must be fixed by the operator, with GHG emission monitoring results publicly reported. These requirements should be part of an enforceable Code of Practice.

Recommendation 11

The Western Australian Government should implement an emissions monitoring program of decommissioned wells with respect to well integrity in general and methane emissions specifically, complemented by a research program to give further confidence to their long-term containment.

Recommendation 12

Apart from the early exploratory phase of development, reduced emissions (green) completions should be a requirement, regulated and monitored as per the United States Environmental Protection Agency (U.S. EPA) New Source Performance Standards 2016.

Recommendation 13

Consideration should be given to offsetting the additional greenhouse gas (GHG) emissions from any onshore unconventional oil and gas production associated with hydraulic fracture stimulation. As a minimum, this should extend to the increase in 'fugitive' emissions over conventional upstream oil and gas production, plus reservoir carbon dioxide discharged to the atmosphere.

Recommendation 14

An enforceable Code of Practice should include measures to minimise the generation of dust throughout all operations and require the regular maintenance of all vehicles.

Recommendation 15

Baseline air quality monitoring for volatile organic compounds and dust, and ongoing monitoring of air quality should be incorporated into an enforceable Code of Practice and be made publicly available.

Recommendation 16

Potential impacts to air quality and human health should be assessed in a site-specific risk assessment.

Recommendation 17

Baseline noise levels should be established, a site-specific noise assessment completed and ongoing noise monitoring conducted over the life of a project, with the aim of minimising noise generated by hydraulic fracture stimulation and/or vehicular movements, especially in places within proximity to people and domestic animals.

Recommendation 18

Site-specific health risk assessments, that have been peer-reviewed and provided to the Western Australian Department of Health, should be required for all unconventional oil and gas proposals associated with hydraulic fracture stimulation, addressing potential short and long-term health impacts.

Recommendation 19

As a precautionary approach is justified, and in the absence of a local health risk assessment indicating otherwise, unconventional oil and gas wells associated with hydraulic fracture stimulation and processing plants should be located at least 2,000 metres from sensitive receptors such as residences, schools and settlements, as reflected in current Environmental Protection Authority (EPA) guidelines.

Recommendation 20

Risk assessments of impacts to the social surroundings from hydraulic fracture stimulation associated with unconventional oil and gas developments should be done on a case-by-case basis.

Recommendation 21

Risk assessments and accountable disclosure of risks should be transparent, timely and publicly available as a guiding principle underlying an enforceable Code of Practice.

Recommendation 22

Communication and engagement with affected communities should be a priority at the earliest opportunity and at every stage of an unconventional oil and gas development associated with hydraulic fracture stimulation.

Recommendation 23

Communication with Aboriginal people should be conducted by trusted informants in a language commonly used and understood by the local people. If English is not commonly used, then translators should be available to convey information.

Recommendation 24

Amenity and what constitutes aesthetic enjoyment, or a sense of place, as determined by people who live in the communities proximate to hydraulic fracture stimulation activities, should be systematically and scientifically documented from the commencement of a hydraulic fracture stimulation project involving multiple well sites (moving from the exploration phase into the development and production phases). Baseline information and site-specific data collection should be a priority and systematically monitored and updated.

Recommendation 25

Petroleum companies' commitment to building moral consent should be part of the assessment for licence procedures.

Recommendation 26

There should be a clear point of contact within Government for complaints or concerns to enhance social licence to operate.

Recommendation 27

Baseline road use statistics measuring volumes of vehicle movements and the type of vehicles using road infrastructure should be undertaken before hydraulic fracture stimulation activities commence, and monitored at periodic intervals throughout the lifecycle of the development.

Recommendation 28

Roads regularly used by heavy vehicles should be upgraded (widened and sealed if necessary), with recompense from the proponent directed to local government authorities to assist with monitoring traffic usage of road infrastructure, road maintenance and upgrades.

Recommendation 29

Cultural orientation should be made regularly available to hydraulic fracture stimulation employees including contractors in addition to relevant government employees to raise heritage awareness, including issues specific to Aboriginal heritage. Cultural orientation regarding Aboriginal matters should be conducted by local Traditional Owner groups or their approved cultural awareness providers.

Recommendation 30

An Aboriginal heritage management plan should be implemented at the earliest opportunity when potential risk is identified for a particular site of Aboriginal heritage or significance. The Aboriginal heritage management plan should have input from those Aboriginal people and groups whose land is under consideration for petroleum development using hydraulic fracture stimulation, and should identify the role Traditional Owners will play in monitoring the condition and protection of their cultural heritage. The Aboriginal heritage management plan should require the approval of local Traditional Owners.

Recommendation 31

Governments and resource companies should invest more in understanding and measuring the social dimensions of change and its links to mental health: A comprehensive local social impact analysis should be undertaken prior to the commencement of any activities associated with hydraulic fracture stimulation occurring.

Recommendation 32

The Western Australian Government should develop a Code of Practice that adequately defines and prescribes the minimum standards and requirements for all onshore oil and gas activities involving hydraulic fracture stimulation, over the full development lifecycle. This Code of Practice should be made enforceable.

Recommendation 33

To further ensure well integrity and thus environmental protection and public safety, well design, construction and testing should be assessed by an independent, certified expert well examiner, reporting to the regulator as a required part of commissioning, licensing and decommissioning.

Recommendation 34

The Environmental Protection Authority (EPA) should assess all onshore unconventional oil and gas developments associated with hydraulic fracture stimulation. To ensure issues of scale and cumulative impact are adequately considered, this should extend not only to individual wells during the exploratory phase of a development, but to the environmental assessment of proposed unconventional oil and gas fields if development may go forward.

Recommendation 35

Appropriate standards for site rehabilitation and post-closure monitoring should be included in an enforceable Code of Practice.

Recommendation 36

Baseline and subsequent environmental monitoring data collected as a regulatory requirement in the licensing, approval and auditing of unconventional oil and gas developments associated with hydraulic fracture stimulation should be made publicly and easily available, by default.

Recommendation 37

Once the Environmental Plans required under the *Petroleum and Geothermal Energy Resources Act 1967* (PGER Act) are deemed sufficient for consideration, they should be published in full at the time of assessment.

Recommendation 38

Reports of environmental and public safety non-compliance, incidents and their investigation, and government environmental performance audits, should be made routinely publicly available once they would otherwise be reasonably subject to a Freedom of Information request.

Recommendation 39

The Western Australian Government should require appropriate financial assurances or insurances to cover potential environmental liabilities, as well as contributions to a fund to cover liabilities defaulted by other unconventional oil and gas operations associated with hydraulic fracture stimulation in Western Australia.

Recommendation 40

Environmental offences, and a system of penalties scaled for seriousness of harm and degree of deliberate intent, as per the *Environmental Protection Act 1986* (EP Act), be incorporated into the *Petroleum and Geothermal Energy Resources Act 1967* (PGER Act). These penalties should extend to both the company and its directors.

Recommendation 41

Future access to tenements should consider the past environmental record of the applicant.

Recommendation 42

The Western Australian Government should consider better separating environmental auditing and compliance of unconventional oil and gas development employing hydraulic fracture stimulation from the department that promotes and allocates resources to that industry.

Recommendation 43

The capability and capacity for the environmental auditing and compliance functions of government must be sufficient to assure environmental protection and safety, so this must be adequately resourced and include cost recovery from industry.

Recommendation 44

Stakeholder consultation on proposed releases of acreage for onshore unconventional oil and gas development should become a formalised and regular requirement.

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