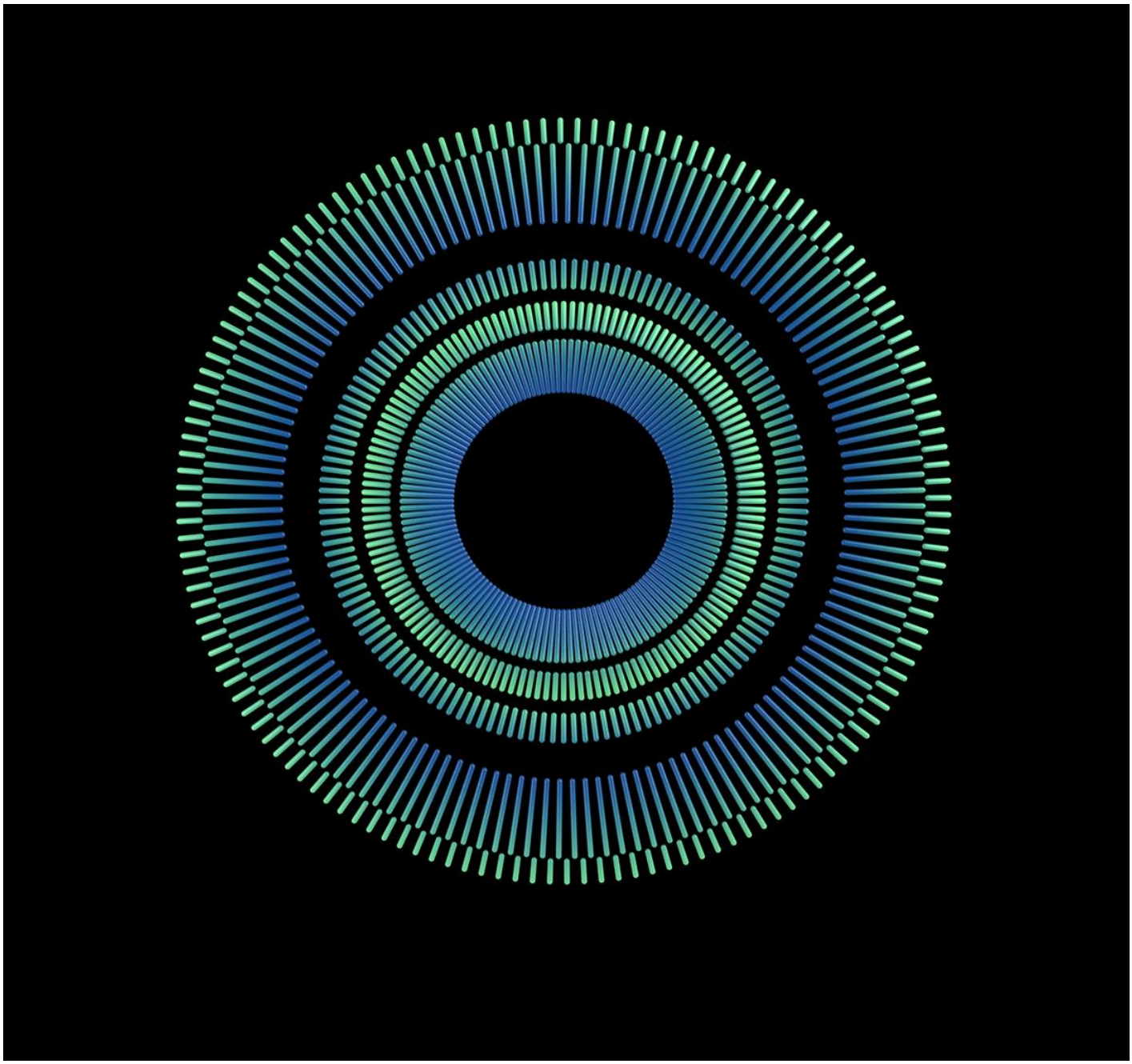
Deloitte.



Proposed Petroleum Regulations - Regulatory Impact Statement

Proposed Petroleum Regulations 2021

Contents

Abbreviations i

Glossary ii

Executive summary iii

1 Background 10

1.1 Moratorium historical framework 10
1.2 Background to the legislative and regulatory framework 11
1.3 Developments in the Victorian petroleum landscape since 2011 17
1.4 Overview of the current status of the Victorian gas market 18
1.5 Preparation of this RIS 20
1.6 Structure of this RIS 22

2 Problem statements 23

2.1 Problem 1 – Onshore conventional petroleum resource development is insufficiently encouraged in Victoria 23
2.2 Problem 2 – The petroleum industry lacks social license to operate 24
2.3 Problem 3 – Victoria's social and environmental interests are insufficiently protected 24

3 Development of Options 25

3.1 Objectives 25
3.2 Options development 25
3.3 Feasible Options 26
3.4 Options 27

4 Options analysis 36

4.1 Method of assessment 36
4.2 Criteria 37
4.3 MCA Scoring 37
4.4 Detailed assessment of the costs and benefits of the Options – mapped to the key amendments 38
4.5 Criteria mapped to Status Quo, Options 1 and 2 39
4.6 Costs 48

5 Impact on competition and small business 51

5.1 Competition 51
5.2 Small business impacts 52

6 Implementation and evaluation 55

6.1 Implementation 55
6.2 Evaluation 55
6.3 Enforcement 57

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited ("DTTL"), its global network of member firms, and their related entities. DTTL (also referred to as "Deloitte Global") and each of its member firms and their affiliated entities are legally separate and independent entities. DTTL does not provide services to clients. Please see www.deloitte.com/about to learn more.

Liability limited by a scheme approved under Professional Standards Legislation.

Member of Deloitte Asia Pacific Limited and the Deloitte Network.

©2021 Deloitte Access Economics. Deloitte Touche Tohmatsu

Charts

Chart 1.1 : Residential energy use by fuel type, 2018-19. 19

Tables

Table 1.1 : Annual gas consumption and peak daily demand from 2014-2020, Victoria. 19
Table 1.2 : Annual gas supply and consumption forecast for 2020-2024, Victoria. 20
Table 3.1 : Fee units payable under the Regulations and FY21 dollar amounts (linked to CPI) 34
Table 4.1 : MCA Scale 36
Table 4.2 : MCA criteria and weights 37
Table 4.3 : MCA results 38
Table 5.1 : Competition assessment questions 51
Table 6.1 : Implementation and evaluation actions 55
Table B.1 Consultation themes 62
Table C.1 : The three types of permissioning documents 77

Figures

Figure 1.1 : Timeline of key government decisions in Victoria's petroleum sector 11

Disclaimer: This communication contains general information only, and none of Deloitte Touche Tohmatsu Limited ("DTTL"), its global network of member firms or their related entities (collectively, the "Deloitte organisation") is, by means of this communication, rendering professional advice or services. Before making any decision or taking any action that may affect your finances or your business, you should consult a qualified professional adviser. No representations, warranties or undertakings (express or implied) are given as to the accuracy or completeness of the information in this communication, and none of DTTL, its member firms, related entities, employees or agents shall be liable or responsible for any loss or damage whatsoever arising directly or indirectly in connection with any person relying on this communication. DTTL and each of its member firms, and their related entities, are legally separate and independent entities.

Abbreviations

Short name	Full name
AEMO	Australian Energy Market Operator
Amendment Act	*Petroleum Legislation Amendment Act 2020*
CoP	Code of practice
CSG	Coal seam gas
CSIRO	Commonwealth Scientific and Industrial Research Organisation
'DJPR' or 'the Department'	the Victorian Department of Jobs, Precincts and Regions
EMP	Environment Management Plan
Fracking Ban Act	*Resources Legislation Amendment (Fracking Ban) Act 2017* (Vic)
FTE	Full Time Equivalent
GISERA	Gas Industry Social and Environmental Research Alliance
GED	General Environmental Duty
GJ	Gigajoule
GSOO	AEMO's Gas Statement of Opportunities
LIA	Legislative Impact Assessment
LNG	Liquified natural gas
MCA	Multi-criteria analysis
MMBtu	Million British Thermal Units
NOPSEMA	National Offshore Petroleum Safety and Environmental Management Authority
NOPTA	National Offshore Petroleum Titles Administrator
OPGGS Act	*Offshore Petroleum and Greenhouse Gas Storage Act 2006* (Cth)
Petroleum Act	*Petroleum Act 1998* (Vic)
PEP	*Petroleum Exploration Permit*
Petroleum Regulations	Petroleum Regulations 2011 (Vic)
PJ	Petajoule
'SLO' or 'Social license'	Social license to operate
VAGO	Victorian Auditor-General's Office
VGP	Victorian Gas Program
VGPR	Victorian Gas Planning Report
WOMP	Well Operations Management Plan

OFFICIAL

Glossary

Name	Description
Conventional gas	Natural gas that can be produced from reservoirs using traditional drilling, pumping and compression techniques. Usually conventional gas has migrated upwards from a source rock into the overlying porous and permeable formation, and this enables it to be more readily extracted. This gas is recovered via a well using naturally occurring gas pressure due to the ability of the gas to move through permeable rock. Conventional gas extraction does not involve dewatering or hydraulic fracturing.
Hydraulic fracturing (known as fracking)	The injection of a substance or substances into a bore under pressure for the purposes of stimulating a geological formation (also known as fracking).
Offshore gas	Natural gas that is located within State or Australian waters. Victorian offshore gas is natural gas located within state waters (to 3 nautical miles off the Victorian coastline).
Onshore gas	Natural gas reserves drilled from the Australian landmass.
Unconventional gas	Gas that is found in geological formation with low permeability which cannot flow through rock to a wellbore. Fracking is typically used to recover the gas.

OFFICIAL

Executive summary

Purpose of this Regulatory Impact Statement

In June 2020, the Victorian Parliament passed the *Petroleum Legislation Amendment Act 2020* (the Amendment Act) which amended the *Petroleum Act 1998* (the Petroleum Act) to allow for an orderly restart of conventional gas exploration and production. The focus of changes to the regulations is on enhancements aimed at improving community confidence in the onshore conventional gas industry.

This Regulatory Impact Statement (RIS) was prepared to facilitate consultation on new proposed Petroleum Regulations 2021 (proposed regulations) to support the orderly restart of the onshore conventional gas industry. In Victoria, regulations sunset every ten years to allow government to periodically assess changes in technology, community expectations and business practices, and to update the regulations accordingly.[1]The current Petroleum Regulations 2011 were due to sunset on 24 May 2021. The regulations were re-made for a short interim period. This RIS analyses the potential impacts of several options in making new regulations.

If the Petroleum Regulations 2011 were allowed to sunset, industry could only be regulated under the Petroleum Act. The Department of Jobs, Precincts and Regions (DJPR) considers the absence of specific regulations would present the following problems:

- onshore conventional petroleum resource development would be insufficiently encouraged in Victoria
- the petroleum industry would lack a 'social license' to operate
- Victoria's social and environmental interests would be insufficiently protected.

To address these problems, the re-make of regulations, including the addition of new regulations, are intended to:

- encourage onshore conventional gas exploration and development in Victoria
- build community social license in the onshore conventional gas resource sector, and
- minimise risk to improved outcomes for the environment, public safety, and amenity as they relate to gas development in Victoria.

These reform objectives form the criteria for assessment of the options under consideration within this RIS.

Scope of the RIS

The Petroleum Act is the primary legislation regulating petroleum exploration and production in Victoria. It sets out that petroleum resources in Victoria are the property of the Crown, and that it is an offence to explore or produce petroleum without an authorisation. The Petroleum Act also creates an offence for carrying out hydraulic fracturing.

In summary, the Petroleum Act creates the framework for the grant of exploration permits, retention leases and production licences, including acreage release processes where relevant, and provisions relating to the administration of these authorities, including provisions for renewal (exploration permits), surrender, cancellation and expiry. The Petroleum Act provides for approval and regulatory oversight of activities undertaken under these authorities via operation plans, petroleum production development plans and storage development plans.

[1] *Subordinate Legislation Act 1994* and the Victorian Guide to Regulation, Toolkit 1: Purposes and types of regulation, page 5.

The Petroleum Act also establishes a royalties regime and rent for Crown land occupation. It specifies certain information that must be provided to the Minister, such as reports and geological data. The detailed requirements of these plans and information requirements are set out in the Petroleum Regulations 2011.

The Petroleum Act governs underground storage of petroleum, special drilling authorisations, special access authorisations and interactions with planning laws, and significant environment or aboriginal heritage areas. In addition, it provides for enforcement powers such as those in relation to inspections and issuing improvement and prohibition notices. The Act includes a rehabilitation regime in relation to petroleum operations, as well as certain other administrative arrangements.

This RIS and the draft regulations have been developed to reflect the amendments introduced by the *Petroleum Legislation Amendment Act 2020* (the Amendment Act), namely:

- to provide for submissions from the Victorian community to be taken into account in the making of certain decisions under the Petroleum Act, and
- to enable prescribed social, environmental, and economic factors to be considered in the making of certain decisions under the Petroleum Act.

Some of the changes required to enable the Amendment Act are in these areas of the regulations, and are the focus of the options in this RIS:

- authority, applications and grants
- conduct of operations, and
- information requirements.

The Victorian government's decision to lift the moratorium was taken in 2020. This RIS is focussed on implementing that decision using the best option for the new regulations.

There are also certain minor and technical components of the regulation remake that are not considered in detail in this RIS. These relate to:

- dealing with existing authorities
- storage development plans and petroleum production development plans
- technical requirements in an operation plan including in relation to well construction and decommissioning
- manner and timing of payment of royalties, and
- enforcement and administrative matters, including review of penalties for certain requirements under the regulations.

The *Subordinate Legislation Act 1994* requires a RIS to consider "other practicable means of achieving those objectives, including other regulatory as well as non-regulatory options". In this instance, the Petroleum Act and amendments introduced through the Amendment Act are designed to be enabling. Without supporting regulations there would not be sufficient detail in the Petroleum Act to give authority holders or government necessary clarity to make decisions. It would also not be effective to replace regulations with guidelines for example, due to the highly technical and complex nature of petroleum exploration and development. On this basis, non-regulatory options are considered to be infeasible and outside the scope for assessment in this RIS. This is consistent with the frameworks of the Commonwealth and all States and Territories, which operate using legislation (regulations) to establish and regulate the petroleum industry in their jurisdictions.

In recognition that many parts of the onshore conventional gas industry haven't been operational in Victoria in the last seven years, relevant industry fee levels set in the Petroleum Regulations 2011 will be maintained. Fees will be considered as part of a broader fees and charges review that will be undertaken by the department in 2021/22.

Summary of Options

This RIS analyses three options in detail, which are compared to the Base Case of allowing the regulations to sunset:

- Status Quo – reinstate the current Petroleum Regulations 2011 for a further 10 years with no changes
- Option 1 – Outcomes focussed regulations
- Option 2 – Standards based regulations.

Table i summarises these options.

Table i: Summary of options considered

Option	Summary	Is it a feasible or viable Option?
Base Case – Allow Regulations to sunset.	The Base Case option involves no intervention. In this case, that would mean allowing the existing Petroleum Regulations 2011 to sunset. The Act would then operate without supporting regulations. For the purposes of this RIS, the Base Case is the reference case (i.e. the case against which the Status Quo, Option 1 and Option 2 are compared).	**No** and **No** - Option is not feasible (i.e. it is unworkable), therefore also not viable.
Status Quo - Remake current regulations.	The Status Quo would consist of a remake of the Petroleum Regulations exactly as they currently stand for a further 10 years with no changes. In other words, the existing regulations would be reissued in their current form, until October 2031.	**Yes** - Option is feasible (workable), but **No**, not viable (i.e. low CBA ratio).
Option 1 – Outcomes focussed	Option 1 would involve introducing regulations that reflect the amendments to the Petroleum Act and the requirement to re-start the industry, and at the same time are more outcomes and objectives focussed than the Status Quo.	**Yes** and **Yes** - Option is both feasible and viable.
Option 2 – Standards based **(PREFERRED)**	Option 2 would involve introducing regulations that reflect the amendments to the Petroleum Act and the requirement to re-start the industry, but which are more prescriptive than both the current regulations and Option 1. This Option also includes the making of a legislative Code of Practice on drilling and well management.	**Yes** and **Yes** - Option is both feasible and viable.

Assessment of options

A multi-criteria analysis (MCA) was used to establish the preferred option, due to the limited availability of quantitative evidence of the impacts of the proposed options. The Base Case is excluded from detailed analysis as an option due to it being infeasible as the Petroleum Act alone does not provide enough specificity to operate, without the supporting regulations.

The restart of the onshore conventional gas industry requires regulations to provide certainty around how the industry will operate and how risks and consultation will be managed. It is extremely unlikely that the Victorian government would allow the regulations to lapse (i.e. the Base Case) as this would effectively stall the re-start of the industry and be contrary to the government's objectives.

The current regulations were extended as is for a short period, to allow sufficient time for community and industry consultation on the new draft regulations. Once this process is completed, the new Petroleum Regulations will be finalised, and are anticipated to commence in October 2021.

Where we consider the Status Quo option in this RIS, we are referring to a long-term extension of the current version of the regulations for another 10 years. The short extension mentioned above is a short-term temporary measure to ensure coverage.

The MCA involved:

- specifying several assessment criteria informed by policy strategy and objectives
- assigning a weighting to each criterion
- assigning scores for each option (relative to the Base Case) for each criterion, and
- calculating a weighted score for each option.

The following costs and benefits criteria were used for the analysis:

Benefits

- encourage onshore conventional petroleum resource exploration and development in Victoria
- build community social license in the onshore conventional petroleum resource sector
- minimise risk to improve outcomes for the environment, public safety, and amenity as they relate to petroleum development in Victoria.

Costs

- cost to industry
- cost to government.

In the MCA, a higher (positive) score for costs indicates a lower cost to industry and government than the Base Case.

The Base Case option is the weakest option, due to the high degree of uncertainty inherent in a regulatory regime where there is a primary piece of legislation cross-referencing requirements in regulations that do not exist because they have sunsetted. The Base Case of sunsetted regulations is considered to be the most expensive option for both industry and government, due to the risk that it would effectively halt the relevant activity.

Table ii presents the results of the MCA. Options are scored against the Base Case, which is assigned a score of zero for all criteria. Option 2 receives the highest weighted score of 4.92. This is followed by Option 1 with a weighted score of 4.00. The Status Quo option has a lower benefit-cost ratio than both Options 1 and 2, as the regulations would not align with the Petroleum Act (as amended) in 2020, and would not include the changes required to address the problem statements set out above.

Table ii: MCA results

Criteria	Base Case	Status Quo	Option 1	Option 2
Encourage onshore conventional petroleum resource exploration and development in Victoria. (16.67% weighting)	0	2	4	5
Build community social license in the onshore conventional petroleum resource sector. (16.67% weighting)	0	1	4	7
Minimise risk to improve outcomes for the environment, public safety, and amenity as they relate to petroleum development in Victoria. (16.67% weighting)	0	3	4	7
Cost to industry (positive score is lower cost than Base Case) (25% weighting)	0	2	5	3
Cost to government (positive score is lower cost than Base Case) (25% weighting)	0	2	3	4
Weighted score	**0.00**	**2.00**	**4.00**	**4.92**

Based on the results of the MCA, Option 2 would provide the highest net benefit across all of the criteria and best achieves the objectives of the Act, and so is incorporated as the preferred option in the attached draft Petroleum Regulations 2021.

Option 2 performs most strongly in each of the benefit categories of the impact assessment. The certainty and assurance provided by the specificity of Option 2 is important for incentivising investment in Victoria, particularly in the context of the re-start of the industry. Option 2 would also be most effective in building social license in the Victorian onshore petroleum industry, a clear message heard during the Victorian Gas Program consultations. The more prescriptive consultation and risk management requirements under Option 2 relative to Option 1 will help provide communities with confidence that concerns and risks would be properly addressed. Option 2 is also best placed to enable risk identification and mitigation, due to its more detailed information and reporting requirements.

On the costs side, the Base Case of the regulations sunsetting is the most expensive option for both industry and government, due to the risk that it could effectively halt the relevant activity. All costs in the Status Quo and Options 1 and 2 have received a positive score compared to the Base Case (a positive costs score means that the Status Quo or Option 1 or 2 is lower cost compared to the Base Case). When comparing options, the higher the costs score, the lower the cost.

In Option 2, the industry costs are likely to be higher overall when compared to Option 1 because of the additional reporting and information requirements, and this is reflected in the lower score. However, these costs are offset by the benefits this additional activity will provide.

In using the MCA to calculate the benefit-cost ratio, the higher costs for industry in Option 2 are outweighed by the strong benefits of building social license and reducing risk to amenity, the environment and communities, which were identified as key outcomes of the Victorian Gas Program. The additional levels of reporting and community engagement in Option 2 will be key to achieving those benefit criteria. This will help to build trust in the industry long-term and ensure the best outcomes for all Victorians.

The following table compares the preferred option (Option 2) to the current regulations (Status Quo) to illustrate changes.

Area of Act	Current Regulations - 2011 Petroleum Regulations	Preferred Option Option 2 – Standards based

Authority applications / grant
• work program and other application requirements for permits, leases, licenses, tenders
• public input processes to tender/grant decision
• decision-making criteria
• licence conditions
• administrative processes following grant decision
• special access authorisations / special drilling authorisations
	• No additional prescribed requirements in relation to these matters (the Act requirements apply)
	• Note: New legislative provisions for advertising, public comment, and prescribing decision-making criteria will take effect 1 July 2021
		• Regulations to explicitly prescribe licensing and application requirements, including risk/impact assessment information
		• Application/notice requirements under the regulations would be detailed and specific and directly linked to the decision-making criteria
		• Strong prescription around Minister's decisions; Minister's decision-making power fettered by needing to take into account certain matters (including but not limited to specific social, environmental, economic factors, submissions etc.)
		  ○ Decision-making criteria involves a balancing test of benefits and impacts
		  ○ Evidence of triple-bottom-line factors influenced by various sources, including public submissions, authority applicant/holder and existing govt data/assessment
		• A more prescriptive approach to community consultation, whereby in addition to the work program, authority holders would be required to specify and commit to undertaking community consultation around specified requirements under operation plan (see below).

Area of Act	Current Regulations - 2011 Petroleum Regulations	Preferred Option Option 2 – Standards based
Conduct of operations • operation plan (including notice, consultation) • consent/notice requirements • compensation • rehabilitation/ bond • Code of Practice • incident reporting	• Operation plan - outcomes-based approach focused on identifying, mitigating and monitoring environmental and safety/ integrity risks. Operation plan must include description of operation, EMP, WOMP, and undertake regular reviews. • Report on incident that causes, or could have caused, substantial damage (environment, integrity of operation or the immediate area; or is indicative of a possible future incident; report must be given as soon as is practicable; written follow up report	• Prescriptive elements as requirements for operation plan, including EMP, WOMP (management of underground component) • General rehabilitation requirements would be prescribed (above ground component) as part of a rehabilitation plan that sits under the operation plan. • Prescribe requirements for liability assessment information to be provided with the operation plan. • Competency standards to be applied for well construction and decommissioning. • Prescribed requirement to specify and commit to community engagement during activities under the operation plan. • Prescribed requirement for industry to baseline, monitor and report against aquifer impacts. • Prescribe requirement for EMP to provide an estimate of hydrocarbon emissions from the operation and how these will be minimized. • Stronger prescription for consultation processes in relation to preparation of an operation plan (e.g. requirements to make operations plans or other information available in support of the notice requirements). • Regulations would be supported by a Code of Practice for well operations management, which will also be a legislative instrument and used for enforcement • Prescriptive incident reporting requirements to align with comparable regulatory regimes (e.g. under offshore petroleum framework).
Information • reporting / submission of samples • release of information • petroleum register	• annual report, including petroleum operation activities (if any); conclusions derived from petroleum exploration activities and reports and studies relating to those activities. • Reports of surveys, drilling and other activities • monthly report by holder of production licence • No additional prescribed requirements for register or release of information (Act requirements apply)	• Regulations to explicitly prescribe all geological survey and well data, samples and drill cores to be provided by industry to government • Regulations will prescribe information to be provided within specified timeframes • Strengthened/new reporting requirements in the regulations (for example, reporting against rehabilitation progress/ changes in liability, and well construction and closure reporting)

Implementation Plan

The following ancillary components will also be developed to support the new regulations:

- guidance material for the transition
- the code of practice to accompany the regulations
- staff to regulate and administer the requirements of the regulations, and
- a process for publication of some data under the regulations.

Evaluation Strategy

The success of the new regulations will be evaluated by examining indicators that show how well they address the problem statements, including:

- the level of investment and exploration in the Victorian onshore conventional petroleum sector
- the extent of cooperation and information sharing between industry and community, and
- the quantity and extent of environmental incidents occurring in the petroleum sector.

Fees and charges

The current regulations provide for a range of fees and charges to apply to authorisations, including annual fees, application fees, and renewal fees. A broader review of the existing fees and charges is intended to be undertaken to consider their appropriateness and whether any changes need to be made (such as the introduction or removal of any fees / charges). It is therefore proposed that the existing fees and charges will remain unchanged under the proposed regulations.

Public consultation

The department welcomes feedback from all interested members of the public on any matters they feel would improve the proposed regulations. The proposed regulations are not final, and improvements or changes may be made in response to public comment. The consultation period for this RIS will be open for 28 days, and written comments can be submitted via www.engage.vic.gov.au/regulatory-impact-statement-draft-petroleum-regulations.

1 Background

1.1 Moratorium historical framework

In August 2012, the Victorian Government announced a moratorium on onshore hydraulic fracturing and coal seam gas exploration in Victoria, with immediate effect. This included a hold on approvals to undertake hydraulic fracturing exploration, new coal seam gas exploration permits, and a legislative ban on the use of BTEX (benzene, toluene, ethylbenzene and xylene) chemicals.

In November 2013, the moratorium was extended while the government conducted water science studies and undertook community consultation.

In May 2014, the Victorian Government further extended the moratorium to **all** onshore gas exploration permits. The government actioned the moratorium in order to undertake further water science studies and community engagement programs that would inform onshore unconventional gas policies. This meant that exploratory work possible under the August 2012 moratorium could no longer be completed, and companies would not be compensated for any losses. Certain authorities, specified in section 17A(3) of the Amendment Act, were exempt from the moratorium. New regulatory decisions on applications to undertake work and operations were halted.

In May 2015, the Victorian Government launched a Parliamentary Inquiry into onshore unconventional gas exploration and production in Victoria. The final '*Inquiry into Onshore Unconventional Gas in Victoria*'[i] report was tabled in Parliament on 8 December 2015. The final report, which was not unanimous, proposed a range of recommendations, but did not reach a majority decision on the key issue of whether to ban the unconventional gas industry in Victoria or provide a five-year extension of the current moratorium.

In 2017 the Victorian Government passed the *Resources Amendment Legislation (Fracking Ban) Act* 2017 (Vic) (Fracking Ban Act). The main purpose of this Act was to amend the *Petroleum Act 1998* (Vic) (the Petroleum Act) to:

- ban hydraulic fracturing
- impose a moratorium on petroleum exploration and petroleum production in the onshore areas of Victoria until 30 June 2020, and
- enable the Minister to pay for the surrender of certain exploration permits, retention leases and production licences.

In March 2020, the Victorian Government introduced the Constitution Amendment (Fracking Ban) Bill 2020 (Vic) and the Parliament passed the bill in March 2021. The amendments enshrine the prohibitions on hydraulic fracturing and coal seam gas exploration and mining into the *Constitution Act 1975* (Vic). They also prohibit Parliament from repealing, altering or varying any sections of the Petroleum Act or the *Mineral Resources (Sustainable Development) Act 1990* (Vic) that relate to the prohibition on fracking, or CSG exploration or licences.

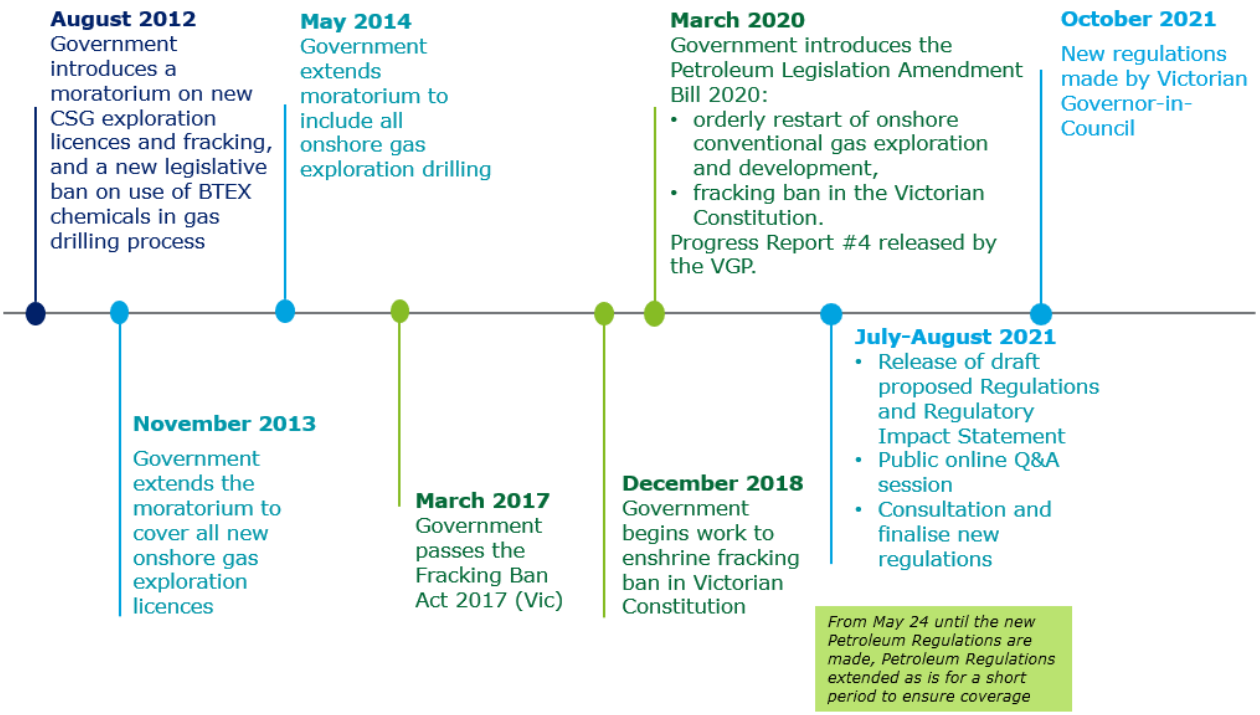
1.1.1 Impending orderly restart of the industry following the moratorium being lifted

In June 2020, the Victorian Parliament passed the *Petroleum Legislation Amendment Act 2020* (Vic) (the Amendment Act). This Act follows rigorous consideration of scientific research complied through the Victorian Gas Program. The comprehensive scientific research assessed the risks, benefits and impacts associated with onshore conventional gas and confirmed that natural gas production is safe and sustainable. The purpose of this legislation was to amend the Petroleum Act to allow for the lifting of the moratorium on onshore petroleum exploration and development in Victoria, as well as:

- provide for submissions from the Victorian community to be taken into account in the making of certain decisions under the Act
- enable prescribed social, environmental and economic factors to be taken into account in the making of certain decisions under the Act.

Chart 1.1 illustrates the timeline of key government decision dates in Victoria's petroleum sector.

Chart 1.1: Timeline of key government decisions in Victoria's petroleum sector



1.2 Background to the legislative and regulatory framework

In Victoria, the Petroleum Act provides the main legislative framework for the regulation of onshore natural gas exploration and production. The Petroleum Act is supported by the Petroleum Regulations 2011 (Vic) (the Petroleum Regulations).

Earth Resources Regulation (ERR), within the Department of Jobs, Precincts and Regions (DJPR), is the regulator for onshore petroleum operations in Victoria. ERR reports to the Minister for Resources on the management of onshore petroleum resources activities in Victoria.

The Petroleum Act 1998 (Vic) (Petroleum Act)

The Petroleum Act has two main objectives. First, to encourage the exploration for petroleum in Victoria and to promote petroleum production for the benefit of all Victorians by providing:

(a) an orderly, fair and competitive system for granting authorities enabling petroleum exploration and production; and
(b) clear and effective administrative frameworks for organising petroleum development activities; and
(c) fiscal regimes that offer petroleum explorers a fair return while benefiting all Victorians; and
(d) easy and effective access to information on Victoria's petroleum geology.

Second, in encouraging petroleum exploration and production, the Petroleum Act seeks to have regard to economic, social and environmental interests by ensuring—

(a) the efficient exploration for, and production of, petroleum;
(b) that the impacts on individuals, public safety, public amenity and the environment as a result of petroleum activities will be minimised as far as is practicable;
(c) that land affected by petroleum activities is rehabilitated;
(d) that there will be just compensation for access to, and the use of, land; and
(e) that petroleum explorers and producers will comply with all authority conditions that apply to them.

The Petroleum Act also provides for the issuing of:

- exploration permits, which authorise the holder to undertake petroleum exploration in the permit area
- retention leases, which enable the holder of an exploration permit to retain certain rights to a petroleum discovery that is not currently commercially viable, but might become viable to develop within 15 years
- production licences, which authorise the holder to carry out petroleum production and exploration in the licence area.

A summary of the key provisions in the Petroleum Act is provided below.

Allocating petroleum rights

Petroleum exploration requires a petroleum exploration permit (PEP). Petroleum tenements are released by the Minister under acreage releases and companies are invited to tender for them. The Petroleum Act also allows for the following authorities to be issued to manage petroleum exploration and production activities:

- petroleum retention lease – enables the holder of a PEP to retain certain rights to a petroleum discovery that is not yet commercially viable but might become viable within 15 years
- petroleum production licence – allows for the exploration and production of petroleum at a particular site
- petroleum special access authorisation
- petroleum special drilling authorisation.

Authorising exploration activities

Once the Minister has granted the PEP, the authority holder must submit an operation plan and have it accepted by the Minister prior to commencing exploration activity. The plan, which is completed by the authority holder, describes the proposed activities and must be prepared in accordance with section 161 of the Act and the Petroleum Regulations 2011 which include:

- description of the proposed activities
- environment management plan (EMP)
- risk assessments and management commitments
- rehabilitation commitments
- development plan
- well operation management plan (WOMP) (where relevant).

The petroleum exploration activity must also comply with the requirements of all other applicable legislation including the *Aboriginal Heritage Act 2006* in relation to aboriginal cultural heritage management.

Authorising production activities

Petroleum production requires a petroleum production licence, which may only be applied for in respect of any part of the permit or lease area on which the holder has discovered petroleum or a reservoir. Similar to an exploration permit, to carry out operations under a petroleum production licence, an accepted operation plan and a production development plan that includes a reservoir management plan, are required. These plans must address all relevant prescribed requirements in the Regulations and comply with all other relevant State and National legislation and local Government requirements.

Land access arrangements

Petroleum exploration cannot be carried out on private land without:

- obtaining consent of the owner and occupier, or
- a compensation agreement being entered into with the owner and occupier of the land, or
- the Victorian Civil and Administrative Tribunal determining the compensation payable to the owners and occupiers of the land, and

- written consent of the Minister.

The Petroleum Act specifies that the "Crown owns all petroleum on or below the surface of any land in Victoria that came to be on or below that surface without human assistance".[ii] Therefore, no compensation is payable to landowners for petroleum that is extracted from their land. However, compensation is payable by an authority holder to landowners for any loss or damage that has been, or will be, sustained in relation to the land as a direct, natural and reasonable consequence of the approval of any petroleum operation or the carrying out of any petroleum operation under the authority.[iii] Petroleum exploration does not require a planning permit. The holder of the authority must hold insurance and provide a bond for any rehabilitation work that may be necessary. The holder of the authority must also provide the landowner or occupier with 21 days written notice of any operations taking place.

Rehabilitation and closure

The Petroleum Act sets out the framework for the rehabilitation of land. It specifies that the holder of an authority must rehabilitate any land that is used in carrying out any operation under the authority and must, as far as is practicable, complete the rehabilitation of the land before the authority, or any renewed authority, ceases to apply to the land. Rehabilitation must follow the measures as specified in the authority's accepted operation plan.

Additionally, the holder of an authority must not carry out a petroleum operation unless they have obtained a rehabilitation bond that is acceptable to the Minister and is for an amount as specified by the Minister. The rehabilitation bond provides financial security for rehabilitation to occur if the authority holder is unable to do so.

Managing environmental impacts

The petroleum regulatory framework requires industry to protect the environment when carrying out petroleum activities. The EMP prepared as part of the operation plan (required by the current regulations) outlines any risks to the environment arising from the proposed activity and how they will be eliminated as far as reasonably practical. The plan must define measures by which performance will be measured against and include an implementation strategy. As a part of the operation plan, the plan must be accepted by the minister before any operations are carried out.

Managing social impacts

The current Petroleum Regulations contain requirements for community consultation to manage social impacts but are not prescriptive as to how they need to be addressed. The implementation plan in the EMP must provide for appropriate consultation ongoing for the life of the operation with relevant interested people and organisations and provide a report on this consultation. There are no requirements for when this consultation takes place, but it can occur:

- when determining an acreage area stage
- at the acreage release stage
- at the rights allocation stage
- during preparation of environmental approvals.

Penalties and enforcement

The Petroleum Regulations also contain penalties for breaches of the regulations. The penalty units attached to these breaches are generally in line with resource legislation in other Australian jurisdictions.

Promoting economic impacts

The objective of the Petroleum Act is to *encourage the exploration for petroleum in Victoria and to promote petroleum production for the benefit of all Victorians.* Further, one objective of the Petroleum Amendment Act is to *encourage onshore conventional petroleum resource exploration and development in Victoria.*

Rights to explore for petroleum in Victoria are allocated on a competitive tender basis, which ensures that maximum economic benefit is realised by providing the rights to the applicant with the best proposed work program and ability. The minister must consider the merits and likelihood of a work program being carried out, cognisant of the potential return of a petroleum resource to the authority holder and Victorian public.

Other relevant legislation

In addition to the above regulatory framework, authority holders are subject to other Victorian and Commonwealth legislation which governs certain aspects of the petroleum industry. These include the following legislation as well as relevant subordinate codes and standards[2];

Legislation potentially of relevance to Victorian authority holders	
Aboriginal Heritage Act 2006	Catchment and Land Protection Act 1994
Environment Protection and Biodiversity Conservation Act 1999 (Cth)	Flora and Fauna Guarantee Act 1998
Planning and Environment Act 1987 and associated Victorian Planning Provisions	Water Act 1989
Wildlife Act 1975	Heritage Act 2017
Occupational Health and Safety Act 2004	Environment Protection Act 1970 (SEPP S160 Groundwaters of Victoria) (SEPP S13 Waters of Victoria) (SEPP Medium scenario Noise from Industry, Commerce and Trade) (SEPP S19 Ambient Air Policy)
Independent Contractors Act 2006	Fair Work Act 2009
Environment Effects Act 1978	Traditional Owner Settlement Act 2010
Climate Change Act 2017	Customs (Prohibited Exports) Regulations 1958 (Cth) implementing the Australian Domestic Gas Security Mechanism
Native Title Act 1993 (Cth)	

International and national standards and self-regulation

Standards and self-regulation are designed to ensure best practice from industry by creating requirements that are above and beyond what is required under the legislative framework. In the Victorian petroleum industry, the regulatory framework is designed to be the minimum standards required, while international and national standards are expected to be met on top of this. These standards principally relate to environmental management standards.

The Victorian gas industry operates to the level of several international and national standards, including:

- Environmental Manual for Worldwide Geophysical Operations – International Association of Geophysical Contractors, 2013
- Environmental Management in Oil and Gas Exploration and Production – Industry and Environment Office of the United Nations Environment Programme, 1997
- Exploration and Production Waste Management Guidelines – E&P Forum, 1993
- Code of Environmental Practice – Australian Petroleum Production and Exploration Association, 2008

[2] Information provided by the Department

- Code of Environmental Practice – APGA, 2017

In addition, the petroleum industry implements its own standards under the International Organization for Standardization (ISO) regime.

The Petroleum Regulations 2011

The Petroleum Regulations 2011 are made pursuant to the Petroleum Act. They provide detail on what is required to meet the objectives and requirements of the Act. The objects of the Petroleum Regulations are to:

(a) provide for the elimination and minimisation, so far as is practicable, of the environmental and public health and safety hazards and risks involved in undertaking petroleum operations;
(b) prescribe requirements for operation plans; and
(c) prescribe various administrative matters, fees and other requirements authorised by the Act.

The Victorian Government has committed to remaking the regulations to support the orderly restart of the onshore conventional gas industry. The new Regulations will implement the reforms from the Amendment Act and the findings of the Victorian Gas Program. The Amendment Act extended the moratorium to 30 June 2021 to allow for an orderly restart of the industry. The Petroleum Regulations were due to sunset on 24 May 2021 and would have expired unless re-made. The current regulations were extended on 23 May 2021 for a short period, to allow sufficient time for community and industry consultation on the new draft regulations. Once this process is completed, the new Petroleum Regulations will be finalised, and are anticipated to commence in October 2021.

The key provisions of the Petroleum Regulations are summarised on Table 1 on the following page.

Table 1 – Summary of Petroleum Regulations (note this is not an exhaustive list)

Item	Summary
Objectives	To provide for elimination and minimisation of environmental, public health, safety hazards and risks in undertaking petroleum operations; to prescribe requirements for operation plans; and to prescribe various administrative matters, fees and other requirements authorised by the Petroleum Act
Operation plan	Sets out the requirements for an operation plan including for an environment management plan, a statement of activities, and a well operation management plan (WOMP). Includes requirements for risk identification and at minimum a 5-yearly review of the plan (unless required earlier due to a change in risks) with an associated report to the Minister.
Environment management plan (EMP)	EMP must describe the environment values (including cultural, historical, aesthetic, social, recreational, ecological, biological, landscape and economic aspects) that may be affected by the petroleum operation. Must assess the environment effects and risks of the petroleum operation, as well as set environmental performance standards. An implementation strategy must also be developed that includes the performance objectives and standards and the practices to ensure adverse effects or risks are eliminated or as far as reasonably practicable, and that the standards are met. Includes a requirement for record of emissions and discharges into the air, or onto or below land. Includes requirement for appropriate consultation on environmental performance, ongoing for the life of the operation, with relevant government agencies and 'other relevant interested people and organisations'.
Well operation management plan (WOMP)	The WOMP must include details of: the design and equipment of the well; proposed drilling; process for connection; management of maintenance; how suspension and abandonment of the well are to be managed. It must identify risks and set out how those risks will be eliminated or mitigated.
Petroleum production development plans (PPDP)	The PPDP must contain a description of the operation, plant and equipment, relevant data and data studies, and a reservoir management plan. The PPDP must be reviewed within 12 months of production and then yearly.
Storage development plans	A storage development plan must include a description of the petroleum operation, existing data and proposed data studies, and a reservoir management plan. The storage development plan must be reviewed within 12 months and then yearly.
Reporting	The types of reports required from authority holders include: - annual reports - reports of surveys, drilling and other activities - report by holder of production licence - incident reporting
Royalties and Rent, pecuniary interest statements	Timing and manner of payment of royalties and methodology for determining rent payable for the occupancy of Crown Land.
Administrative matters and fees	Provision for application fees, fees for renewal of exploration permit, annual fees for exploration permit, retention lease or production licence, fees for transfer of an exploration permit, retention lease or production licence. Fees for a suspension or variation of conditions of an exploration permit, retention lease or production licence. Fees for registration of documents, inspection of or copy of documents.

OFFICIAL

1.2.1 Offshore - National and Victorian legislative framework

Any petroleum found onshore, or up to three nautical miles offshore from the seashore, is owned and regulated by the relevant state. Any petroleum that exists offshore from the three nautical mile limit and to the extent of Australia's Exclusive Economic Zone (200 nautical miles from the coastline) is owned and regulated by the Commonwealth.

Offshore gas development in Victorian waters is regulated under the Victorian *Offshore Petroleum and Greenhouse Gas Storage Act 2010* (Vic OPGGSA) while any offshore gas development in Commonwealth waters is regulated under the Commonwealth Offshore Petroleum and Greenhouse Gas Storage Act 2006 (Cwth OPGGSA). The Victorian legislation largely mirrors the Commonwealth legislation.

Both the Vic OPGGSA and Cwth OPGGSA broadly operate in a similar way to the onshore framework. This is centred on the allocation of rights and the approval of activities. Rights are allocated via titles, to facilitate the discovery and production of petroleum for the benefit of constituents in a jurisdiction. Activities are managed via plans to assess and mitigate risk.

The Commonwealth established the National Offshore Petroleum Titles Administrator (NOPTA) to handle the day-to-day administration of all titles in Commonwealth waters, and the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) to serve as the national regulator for health and safety, well integrity, and environmental management. NOPSEMA also operates in state coastal waters if regulatory powers and functions have been conferred by state governments. Victoria has conferred well integrity and occupational health and safety functions on NOPSEMA while retaining environmental management responsibility.

1.3 Developments in the Victorian petroleum landscape since 2011

1.3.1 Findings of the Victorian Gas Program (VGP)

The VGP was a three-year program which began in 2017 and finished in 2020. The program's aim was to improve the understanding of the potential for new onshore conventional gas discoveries in Victoria, as well as the risks, benefits and impacts of allowing exploration and production. The findings were informed by a suite of scientific research, as well as extensive stakeholder engagement. The VGP also helped to determine if Victoria's current underground gas storage capacity could be expanded. The fifth VGP progress report was released in December 2020 and details the findings of the program to date.

The report outlined that there is an estimated 128-830 PJ of prospective onshore conventional gas in Victoria, worth approximately $0.6-$3.8 billion at current prices.[3,iv] This volume of gas is unlikely to materially impact gas prices or demand in Victoria but its development would supplement Victoria's diminishing domestic supplies, and support regional jobs and economic development over a number of years. Production of the estimated gas resources could create up to 6,400 jobs over the lifespan of the projects, generate $300 million annually in gross regional product and $43 million in royalties per year, starting as early as 2023-24.[4] Additionally, it would support approximately two million Victorian customers who currently depend on gas for heating, cooking and industrial uses.

VGP assessments identified prospective areas for conventional gas including west, central and eastern areas of the onshore Otway Basin, and the central onshore area of the Gippsland Basin. South-West Victoria and Gippsland would be the main regions to benefit, where potentially significant onshore conventional gas resources were identified.

The program's environmental studies showed that developing these gas resources to secure local gas supply would not compromise the state's groundwater supplies or agricultural sector. It would also have a negligible impact on Victoria's greenhouse gas emissions. The reports also found that the existing regulatory framework is robust for managing environmental and safety risks, but community engagement and industry transparency could be improved.

[3] Estimated at $4.56/GJ
[4] This is based on the high scenario.

The VGP also contained a community engagement component whereby the team engaged with local government, industry, farmers, school students, and environmental and community groups. These engagements were focussed on communities in close proximity to petroleum basins, i.e. Gippsland and Otway. The consultations found that about 80 per cent of Victoria's communities would support or tolerate onshore conventional gas development. Support would be enhanced by providing genuine engagement opportunities and more information about industry activity and how the communities interests were being managed. Additionally, communities perceive effective governance and strong regulations as important in achieving social license to operate ('SLO' or 'Social license').

The gas industry has a relatively high output per worker because it is a capital-intensive industry. In FY19, the average value added per gas industry employee in the Great South Coast region was $165,000, significantly higher than the regional average of $113,000. The gas industry also supports a high level of indirect employment due to its high capital intensity. For each of the 19,000 direct jobs in the Australian gas industry, approximately 10 jobs are supported indirectly, compared to 1.9 in the average industry.[5] This consists of 5.4 jobs within the supply chain and 4.6 in the wider economy. Direct jobs created in the gas industry tend to be located in regional locations, close to operations.

1.3.2 Climate change policy and gas

The Victorian government has a target of net zero CO2 emissions by 2050, enshrined in the *Climate Change Act 2017* (Vic). As part of achieving this emissions reduction target, the Victorian Government will set interim targets every five years to 2050. The Government has committed to pledging contributions to emission reduction in key emissions producing sectors, and other levels of government, businesses and communities are also able to pledge contributions (the 'sector pledges').

The government has already set renewable energy generation targets of 25% by 2020, 40% by 2025 and 50% by 2030.[6] The Victorian government has also set emissions reduction targets of a reduction of 28 – 33% by 2025, and a reduction of 45 – 50% by 2030 on 2005 levels.

The 2020-21 Victorian State Budget, included funding to develop a gas roadmap. This will detail the transition pathways and propose regulatory and policy mechanisms to achieve Victoria's emissions reduction targets through reduced fugitive emissions, more efficient use of gas, electrification and increased use of hydrogen and biogas whilst maintaining energy security, reliability, safety and affordability for end users.

1.4 Overview of the current status of the Victorian gas market

1.4.1 The Victorian gas market

The Victorian Gas Market, known as the Declared Wholesale Gas Market (DWGM) was established in 1999 to enable competitive, dynamic trading based on injections into, and withdrawals from, the transmission system that links multiple producers, major users, and retailers. The DWGM is supported by production facilities in Gippsland and Port Campbell, and transportation pipelines between Victoria and New South Wales (NSW), South Australia (SA) and Tasmania (TAS). In the 1970s, gas was established as a reliable and cheap energy source in Victoria due to historically large levels of supply from the Otway, Gippsland and Bass basins.

However, more recently, Victoria's ability to meet gas demand from local sources has reduced. This has been due to a moratorium on unconventional petroleum exploration, regulatory restrictions, and an accelerated depletion of traditional gas fields. These factors have led to Victoria relying upon gas supply from Queensland, particularly during peak periods, to meet shortfalls.

The situation in March 2021 has improved on previous years. The 2021 Victorian Gas Planning Report[v] now forecasts supply adequacy until at least 2025, a two-year improvement on the 2020 report.[vi]

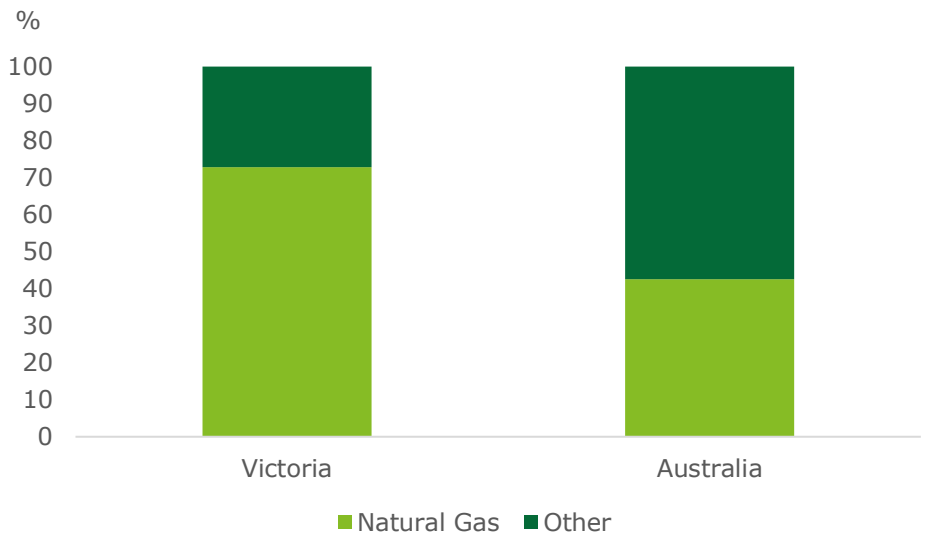
---

[5] AlphaBeta's report for National Energy Resources Australia, Preparing Australia's future oil and gas workforce, 2019.
[6] Department of Environment Land Water and Planning (2019), Victoria's renewable energy targets https://www.energy.vic.gov.au/renewable-energy/victorias-renewable-energy-targets

This is primarily a result of the commitment from Australian Industrial Energy to proceed with construction of the 500 terajoule per day liquefied natural gas (LNG) import terminal in Port Kembla.

As illustrated in Chart 1.1 gas consumption in Victoria is relatively high compared to other states, providing 73% of residential energy use in 2018-2019 compared to an Australian average of 43%.[vii] This is because in the cold climate, almost all Victorian houses have space heating – whereby central gas heaters with ducting take warm air to multiple rooms. A large amount of this heating, including fixed heating, gas log fires and ducted heating is fuelled by gas. Almost half of all gas used in Australian homes is used for heating in Victoria.[viii]

Chart 1.2: Residential energy use by fuel type, 2018-19.



Source: Department of Industry, Science, Energy and Resources, Australian Energy Statistics, Table K, October 2020.

1.4.2 Supply and demand balance

Annual gas consumption in Victoria has fluctuated between 210 PJ and 240 PJ over the past six years (refer Table 1.1).

Table 1.1: Annual gas consumption and peak daily demand from 2014-2020, Victoria.

	2014	2015	2016	2017	2018	2019	2020
Total Victorian Consumption (PJ)	217	218	211	241	220	232	220
Actual DTS peak total Demand (TJ/d)	1,214	1,179	1,187	1,279	1,132	1,308	NA

Source: AEMO (2021)

While current forecasts demonstrate that Victorian gas production should meet annual demand until 2025, the supply-demand balance is tightening. AEMO has previously highlighted the possibility of gas shortfalls in the future.[ix] This tightening supply-demand balance is expected to be exacerbated in winter when consumption (25-30 PJ/month) can reach up to three times the monthly consumption of summer (10 PJ/month).[x] Even with the added capacity of the Port Kembla import terminal, peak supply capacity is forecast to reduce from 1,585TJ/d to 1,378TJ/d in 2025.

Over the next five years, Victorian gas consumption is expected to slightly decrease from 220PJ in 2020 to 192PJ in 2025 (refer Table 1.1 and Table 1.2). Consumption forecasts have been downgraded between the 2020 and 2021 VGPR.

Table 1.2: Annual gas supply and consumption forecast for 2020-2024, Victoria.

	2021	2022	2023	2024	2025
Total supply available (PJ)	360	341	287	261	205
Total Victorian Consumption (PJ)	207	202	199	196	192
Surplus/Shortfall quantity (PJ)	**153**	**139**	**88**	**65**	**13**

Source: AEMO (2020)

There is increasing uncertainty in the forecasts of supply adequacy as the production timeframe for any particular gas field is difficult to predict. Recent COVID-19 linked reductions in international LNG demand and fluctuating spot prices contribute to this uncertainty. The timing of new investments and supply in Victoria, following the removal of the ban on onshore conventional gas exploration and development (discussed below) also remains unclear.

1.4.3 Recent developments

Supply and demand uncertainty caused by COVID-19 are impacting forecasts of supply adequacy due to disruptions to the global LNG market. In the long term, if low international prices result in less expenditure for exploration, supply may be negatively affected further. However, recent spot and forward prices indicate that LNG may recover in 2021. Colder weather in importing nations, production outages and shipping congestion have resulted in Asian spot prices increasing to $15/MMBtu in December 2020. This was the highest that prices have been since 2014.[xi]

The ACCC Gas Inquiry 2017 – 2015 January 2021 interim report indicates that the ACCC expects sufficient gas supply produced to meet forecast domestic and export demand on the East coast in 2021. However, conditions are tighter than anticipated in 2020.[7]

The ACCC notes that there is a potential for a shortfall of 30 PJ to emerge as early as 2024 in the southern states (including Victoria), unless an LNG regasification terminal or speculative resources are developed. This risk was also reported in the January 2020 ACCC Gas Inquiry report, and the ACCC states that 'it is concerning that less progress has been made than we would expect, and that we find ourselves one year closer to a potential shortfall'.[8] It should be noted that the ACCC report took into account information to August 2020, therefore may not have included more recent discoveries.[9] However, as noted in the March 2021 VGPR, the Port Kembla LNG import terminal is likely to address this shortfall.

1.4.4 Implications for these regulatory reforms

The tight gas supply and demand balance in Victoria, and the risk of shortfall in gas supply, means that encouraging petroleum development to bring on additional gas supply is key to meeting the needs of Victorian customers in the long-term.

1.5 Preparation of this RIS

The key purpose of this RIS is to assess the impact of different options for replacing the sunsetting Petroleum Regulations.

[7] ACCC Gas Inquiry 2017 – 2025, January 2021 Interim report, page 7.
[8] Ibid.
[9] This may include for example the Beach Energy announcement in relation to the Otway Basin indicating a 6% increase to 2P reserves to 97 PJ (date 15 February 2021, as compared to 30 June 2020).

The general approach to the assessment was as follows:

(1) Identification of the problem

This involved consideration of the nature and extent of the problem that the proposed regulations aim to address, including the need for government intervention, the risks of non-intervention and the objectives of such intervention.

(2) Identification of the options to achieve the objectives of the proposed regulations

The proposed regulations and alternative options were developed by government and informed by the RIS consultation (see Appendix B for details of consultation undertaken). The establishment of options allowed possible costs and benefits to be examined as part of the stakeholder consultation.

(3) Stakeholder consultations

Targeted pre-RIS stakeholder consultation was undertaken by Deloitte and DJCS to gather relevant information on the impact of the proposed regulations and possible options on different groups for different groups. The consultation process and attendees is set out at Appendix B and included all authority holders in Victoria, relevant government agencies, and local councils and community groups.

The consultations from the VGP were also used to inform the development and testing of the Options. The VGP also contained a community engagement component that focussed on communities in close proximity to petroleum basins, i.e. Gippsland and Otway. The consultations found that the majority of affected communities were at least tolerating onshore conventional gas, but improvements could be made through increased transparency and genuine engagement opportunities. Additionally, communities perceive effective governance and strong regulations as important in achieving social license. This feedback was considered in developing the Options and framing the criteria and weightings for the MCA.

(4) Assessment of the costs and benefits

Consistent with the requirements of the *Victorian Guide to Regulation*, an assessment of the costs and benefits under all options, relative to a reference case (the Base Case) was undertaken. The analysis included the quantification, where possible, of benefits to industry, government, and the Victorian community.

The analysis also assessed the costs to businesses and councils of complying with regulations, and the costs to government of implementing and administering regulations. The analysis reflected data held by DJPR, data held by the Earth Resources Regulator, data gathered through independent research and information provided by stakeholders.

(5) Assessment of the other impacts

We have considered the likely impacts of the preferred option on industry competition and small businesses. This part of the RIS draws on stakeholder consultations.

(6) Implementation, enforcement, and evaluation

These sections describe the arrangements for implementation, enforcement and evaluation of the preferred option.

1.5.1 Public comment

This RIS and the proposed regulations will be publicly released for a 28-day period to provide businesses, members of the public and other interested parties the opportunity to provide feedback through a formal submission process.

The proposed regulations and RIS will be made available on DJPRs website and *Engage Victoria*, the Victorian Government's Online Consultation platform.

1.5.2 Addressing public comment

DJPR will consider all submissions received during the period of public review. DJPR will prepare a Statement of Reasons summarising the submissions received and their response. Submissions to the RIS and draft regulations, and the Statement of Reasons, will also be made available through the Engage Victoria website.

1.6 Structure of this RIS

In Victoria, if a regulatory proposal may change regulation and is likely to result in a significant economic or social burden on the community, a Regulatory Impact Statement (RIS) must be prepared. The RIS must comply with the Department of Treasury and Finance *Guide to Regulation* and the *Subordinate Legislation Act 1994.*

The Victorian Guide to Regulation has a clear and structured framework for drafting an impacts assessment which includes a RIS. In this case, the RIS must contain seven key elements, and this accords with the structure of this report which is structured as follows:

Chapter 2 – Problem statement
Chapter 3 – Options development
Chapter 4 – Options analysis and preferred option
Chapter 5 – Impact on competition and small business
Chapter 6 – Implementation and evaluation
Appendix A – Detailed options analysis
Appendix B – Stakeholder engagement
Appendix C - Cross jurisdictional analysis

In addition, relevant to all seven components is an overriding requirement that the degree of detail and depth of analysis must be commensurate with the magnitude of the problem and with the size of the potential impact of the proposal.

Limitations

This report is prepared solely for the Department of Jobs, Precincts and Regions. This report is not intended to and should not be used or relied upon by anyone else and we accept no duty of care to any other person or entity. The report has been prepared for the purpose of preparing a Regulatory Impact Statement for assessing options for the remaking of the Petroleum Regulations 2011. This report should not be used or referred to for any other purpose.

2 Problem statements

In order to justify the need for government intervention, a RIS must establish the problem that the proposed regulations are seeking to address. This Chapter outlines the potential issues that exist in the absence of the Petroleum Regulations.

The key objective for re-making and updating the Petroleum Regulations is to support and encourage the orderly restart of the onshore conventional gas industry in Victoria and to fully implement reforms arising from the Amendment Act and the findings of the VGP. Without sufficient and appropriate regulation, it will be difficult for the industry to re-start effectively and respond to the findings of the VGP.

As required by the Victorian Guide to Regulation, the problems outlined below were developed with reference to the Base Case. That is, these problems are likely to be realised if the Petroleum Regulations 2011 sunsetted and the Petroleum Act was operating in isolation without supporting regulations.

2.1 Problem 1 – Onshore conventional petroleum resource development is insufficiently encouraged in Victoria

The objectives of the Petroleum Act are to encourage the exploration for petroleum in Victoria and to promote petroleum production for the benefit of all Victorians by providing:

- an orderly, fair, and competitive system for authorities enabling petroleum exploration and production
- a clear and effective administrative framework for organising petroleum development activities
- a fiscal regime that offers petroleum explorers a fair return while benefiting all Victorians
- easy and effective access to information on Victoria's petroleum geology.

Petroleum exploration and development is dependent on perceptions of prospectivity and the likelihood of discovering and developing commercially viable resources. It is also dependent on effective regulatory frameworks that minimise barriers to investment. The Petroleum Act only provides a high-level framework and requires supporting regulations to expand on the provisions of the Act and provide the regulatory detail needed to enable effective petroleum resource development in the state. Without this framework, there is a great deal of uncertainty with regard to implementing the Petroleum Act, both for industry and government.

When processes are not formally established for the development of documents such as operation plans, development plans, and storage development plans, there can be unnecessary and avoidable costs for both industry and government, such as:

- increased effort from industry to determine what needs to be included
- risk of arbitrary or inconsistent decision-making by government (including ERR)
- generation and provision of excessive information by industry as regulatory requirements are not understood
- uncertainty and inconsistency in government decision making and time delays in processing plans.

In the absence of a formally established process, it is likely to be more difficult and costly for ERR to monitor and assess compliance with relevant legislation and performance against certain objectives. The role of monitoring and assessing compliance can be quite extensive for the Minister, particularly if there is no clear framework causing additional assessment and discretion to be exercised.

In relation to data collection, a lack of detailed requirements also means that information on Victoria’s geology is difficult to obtain for industry and government, further inhibiting petroleum development.

2.2 Problem 2 – The petroleum industry lacks social license to operate

The term 'social license to operate' refers to the perceptions of local community and stakeholders that a project, a company, or an industry that operates in a given area or region is socially acceptable, legitimate and has ongoing approval. The extent and nature of social license and community engagement benefits are difficult to measure and largely intangible. However, information relating to a project's community impacts and the associated costs and benefits are crucial as it informs decisions that are made relating to the project. Without specificity in the regulations on what constitutes adequate community consultation, the government or ERR may not receive full and accurate information to inform decision-making, and community would not be confident that their concerns will be addressed.

One way that public interest is expressed is through community engagement; inadequate community consultation and poor transparency regarding regulatory decisions can limit the social license of petroleum industry activities, leading to a lack of trust and acceptance of the industry. Without specifying regulatory requirements for consultation, the industry will have limited clarity regarding the required standards for adequate stakeholder engagement to meet both community and government expectations.

When community consultation and engagement is insufficient, it can lead to limited industry and government understanding of how petroleum exploration and production activities can impact the community. On the other side, insufficient engagement means that the community has limited understanding on how the industry and government are mitigating these risks. This often leads to a lack of assurance in the community that the project, company or industry is socially acceptable and legitimate. and transparent decision-making by government agencies including ERR is important for public and industry acceptance of regulatory decisions. Without regulations, there is a lack of clarity on the information that must be obtained and considered by the regulator or guidance on agreed outcomes. This could lead to resource development that is inconsistent with the Act or unnecessary regulatory costs and delays.

2.3 Problem 3 – Victoria's social and environmental interests are insufficiently protected

The Crown owns all naturally occurring petroleum in Victoria and is obliged to encourage petroleum exploration and production in line with the state's interests.

At the same time, petroleum exploration and production activities are inherently risky and have the potential to cause harm to the environment, public safety, and amenity. Without regulations, risks to the environment and public safety are unable to be effectively managed by ERR and regulated parties. This is because there is insufficient specificity regarding the Petroleum Act's objectives to:

- ensure safe and efficient exploration for and production of petroleum
- minimise the impacts on individuals, public amenity and the environment as far as is practicable
- to ensure that the land affected by petroleum activities is rehabilitated.

Further, the Petroleum Act alone does not provide the state with sufficient information to:

- understand the social and environmental impacts of resource development
- ensure the effective management of petroleum resources is consistent with the public interest for the benefit of all Victorians.

Under Part 1(a) of the Amendment Act, the Petroleum Act will be amended so that prescribed social, environmental and economic factors must be taken into account in the making of certain decisions under the Act. Regulations are required to provide the prescription of these requirements. In addition, the Act alone does not contain any detailed provisions for risk mitigation such as EMPs or incident reporting. Without these provisions, environmental and social risks may not be appropriately managed. For example, regulations can be made with respect to:

- the information to be contained in work programs, development plans, unit developments, operation plans, and other plans, manuals and reports required of authority holders
- ensuring that precautions will be taken against flooding, and prescribing methods to be adopted if wells are abandoned
- the production testing of wells, including flaring.

3 Development of Options

3.1 Objectives

3.1.1 Objectives of the Petroleum Act

The objectives of the Petroleum Act are to encourage the exploration for petroleum in Victoria and to promote petroleum production for the benefit of all Victorians by providing:

- an orderly, fair, and competitive system for authorities enabling petroleum exploration and production
- a clear and effective administrative framework for organising petroleum development activities
- a fiscal regime that offers petroleum explorers a fair return while benefiting all Victorians
- easy and effective access to information on Victoria's petroleum geology.

3.1.2 Objectives of the regulatory remake

The objectives we are assessing the regulations against for the purposes of this RIS are:

1. encourage onshore conventional petroleum resource exploration and development in Victoria;
2. build community social license in the onshore conventional petroleum resource sector; and
3. minimise risk to improve outcomes for the environment, public safety and amenity as they relate to petroleum development in Victoria.

These overarching objectives address the problems identified in Chapter 2.

3.2 Options development

As part of the RIS process, it is necessary to consider different options that could achieve the Victorian Government's objectives. The *Subordinate Legislation Act 1994* requires a RIS to consider "other practicable means of achieving those objectives, including other regulatory as well as non-regulatory options".

In this instance, the Petroleum Act and amendments introduced through the Amendment Act are designed to be enabling. Without supporting regulations there would not be sufficient detail in the Petroleum Act to give authority holders or government necessary clarity to make decisions. It would also not be effective to replace regulations with guidelines for example, due to the highly technical and complex nature of petroleum exploration and development. On this basis, non-regulatory options are considered to be infeasible and outside the scope for assessment in this RIS. This is in line with the frameworks of the Commonwealth and all States and Territories, which operate using legislation (regulations) to establish and regulate the petroleum industry in their jurisdictions. The range of feasible options for addressing the problem is considered within this context.

We have considered the approaches in other jurisdictions and these are outlined at Appendix C Commonwealth and State regulatory approaches.

Authority holders have mixed views as to whether a more objectives based or prescriptive approach to regulation is preferable. They mentioned that each approach has desirable components, and distinct costs and benefits. As such, the preferred option for industry will depend on the circumstances in the particular market, and the exact requirements of the prescriptive option.

This RIS considers four options to achieve the above objectives, namely:

- Base Case (do nothing, regulations lapse)
- Status Quo: remake the 2011 Petroleum Regulations as they are
- Option 1: Outcomes focussed regulations
- Option 2: Standards based regulations.

A description of each of the options and how they relate to the problem statements is outlined below. High-level information relating to what each of the options would include under the various areas of the Petroleum Act is provided overleaf. See Appendix A for a more detailed options table.

3.3 Feasible Options

Detailed analysis is limited to options that are determined to be feasible.

In this RIS, the Base Case is considered to be infeasible as the Petroleum Act alone does not provide enough specificity to operate without supporting regulations. The restart of the industry requires regulations to provide certainty around how the industry will operate and how risks and consultation are best managed. Despite its infeasibility, in line with best practice, the Base Case should be presented as the reference point from which the MCA scores are derived.

The Status Quo also presents difficulties because although the regulations go some of the way to achieving the goals of the Act they have the following deficiencies:

- they do not fully align or support the Petroleum Act (as amended)
- they do not provide sufficient support and assurance to industry
- they do not include all the detail that the Petroleum Act (as amended) requires
- they do not contain appropriate requirements for community consultation, based on the feedback from the VGP.

While the Status Quo option does address some issues it is unviable. Infeasible means that the option is not possible, impractical and would severely hinder the operation of the industry, whereas an unviable option is feasible but clearly undesirable or overly burdensome from the perspective of all stakeholders. There is a possibility that the re-made regulations could be supplemented by guidelines or other guidance material which could go some way to clarifying the requirements and increasing the consistency with the Petroleum Act (as amended). However, there would still be significant deficiencies and it would not be appropriate to replace the legislative framework with a non-legislative option, as the petroleum exploration and production activities are high-risk and complex.

The assessment below demonstrates that the three feasible options are the Status Quo, Option 1 and Option 2. The Status Quo and the Options are subject to further detailed discussion of their relative costs and benefits, as compared to the Base Case. The preferred option will be one of the two viable options, Options 1 and 2, therefore more focus is placed on these options.

3.4 Options

The table below sets out the options considered in this RIS.

Option	Summary	Is it a feasible or viable Option?
Base Case – Allow Regulations to sunset.	The Base Case option involves no intervention. In this case, that would mean allowing the Petroleum Regulations to sunset. The Act would then operate without supporting regulations. For the purposes of this RIS, the Base Case is the reference case (i.e. the case against which the Status Quo, Option 1 and Option 2 are compared).	**No** and **No** - Option is not feasible (i.e. it is unworkable), therefore also not viable.
Status Quo - Remake current regulations.	The Status Quo would consist of a remake of the Petroleum Regulations exactly as they currently stand. In other words, the existing regulations would be re-issued in their current form for a further 10 years, until October 2031.	**Yes** - Option is feasible (workable), but **No**, not viable (i.e. low CBA ratio).
Option 1 – Outcomes focussed	Option 1 would involve introducing regulations that reflect the amendments to the Petroleum Act and the requirement to re-start the industry, and at the same time are more outcomes and objectives focussed than the Status Quo.	**Yes** and **Yes** - Option is both feasible and viable.
Option 2 – Standards based **(PREFERRED)**	Option 2 would involve introducing regulations that reflect the amendments to the Petroleum Act and the requirement to re-start the industry, but which are more prescriptive than both the current regulations and Option 1. This Option also includes the making of a legislative Code of Practice on drilling and well management.	**Yes** and **Yes** - Option is both feasible and viable.

This RIS therefore considers Option 1 - Outcomes focussed regulations, and Option 2 - Standards based regulations in more detail than the Base Case and the Status Quo. The Status Quo and the two Options are compared to the Base Case for the purpose of this analysis.

The table overleaf and discussion below provides more detail on each of the options. A summary comparison of Options 1 and 2 against the Status Quo, aligned to the issues of authority applications, operational matters and information provision, is set out in Appendix A.

Base Case

The Base Case option involves allowing the Regulations to sunset such that **the Act would operate without supporting regulations.**

This would mean authority holders must attempt to develop suitable plans without the details provided in the Regulations. The Department may develop guidance materials such as a code of practice.

The only consultation requirement would be with land holders, and avoiding environmental damage requirements would be limited to the requirements of the Environment Protection Act 2017.

Status Quo

The Status Quo option would involve **a remake of the regulations exactly as they currently exist**. The current regulations would be made valid for approximately another 10 years.

- The regulations would not detail what a work program must contain, and have vague consultation requirements.
- The Minister must take into account any submissions when considering applications for exploration, however the Minister's decision only considers the commercial viability, not social or environmental interests
- In the required operation plan, the current regulations require sufficient information to be provided to relevant persons about the potential impacts of the operation and submissions can be provided in this process. The authority holder must prove to the Minister that these submissions have been considered.

New Regulations - Option 1 – Outcomes focussed

Option 1 would be focussed on **objectives and outcomes**. This option would be similar to the Status Quo with some modernisation to better meet the objectives of the Act – the level of detail required from authority holders and to be considered by the Minister would be prescribed at a level between the Status Quo and Option B. The Ministerial decision making criteria would be limited to:

- Consideration of issues raised in public submissions
- Core evidence for public interest matters (economic, social and environmental) would come from public submissions and Ministerial consultations.

The regulations would require greater community consultation in the work program and detail some requirements for submission processes in the Act. This option would also include broad requirements for data, samples and cores and have flexibility over timeframes for the Minister and authority holder.

New Regulations - Option 2 – more detailed

Option 2 contains **more detailed regulations as compared to the other 3 Options**, and gives the Minister less discretion than the other options. In this option, the Minister would:

- Have to take into account certain submissions and social, environmental and economic factors when making a decision regarding an application.
- Have to include analysis of the benefits and impacts under the criteria informed by information from the authority holders, public submissions and government data in the decision-making process.

The regulations would require more information and scrutiny over the consultation process and require stronger evidence of adequate community consultation. This option would also have strengthened requirements for geologic data, samples and cores under specific timeframes. There will be additional reporting for activities undertaken, incidents and well completion, decommissioning and rehabilitation.

The regulations would prescribe licensing and application requirements and include other elements such as EMP, WOMP and rehabilitation plans. The regulations would be supported by a Code of Practice.

Code of Practice

A code of practice is being considered based on similar codes in other states (QLD, NT, NSW). It would contain these 3 components:
1.Principles: fundamental requirements that **must** be adhered to
2.Means of compliance: enforceable by ERR and **must** be complied with
3.Good industry practices: recommended practices, methods and techniques

OFFICIAL

3.4.1 Base Case

The Base Case option involves no intervention. In this case, this would mean allowing the current Regulations to sunset. If that occurred, the Petroleum Act (as amended by the Amendment Act), would then operate in the absence of supporting regulations. Other existing policies, legislation and regulations would still apply, but these documents would not account for the lapsing regulations without being amended themselves.

In the Base Case, the process for development of operation plans under the Act (as amended by the Amendment Act) is not established. Authority holders must attempt to develop suitable operation plans without the guidance and details currently provided in the Regulations. The department would need to frequently liaise with operators in developing guidance materials, to ensure these plans meet suitability requirements. Any guidance material would not be as enforceable, or subject to the same level of scrutiny or public consultation, as regulations or a Code of Practice made as a legislative instrument.

Under the Base Case, the regulatory requirement for appropriate ongoing consultation for the life of the operation would also lapse. The only consultation requirements would then be to consult with the person who owns, occupies or manages the land on which the operation is to be carried out.[xii]

There would likely be a gradual transition from the Regulations to no regulations, with both industry and government following processes they are familiar with in the short-term.

However, petroleum projects are complex, high-risk investments that require carefully drafted regulatory frameworks to protect the legitimate interests of businesses and the community and provide essential safeguards for safety, social, environmental, and competitive outcomes.

Additionally, while the Petroleum Act, as amended, provides the legislative framework to enable decisions to be made, it does not provide industry with the specific information to be contained in operation plans or the requirements they must comply with. Therefore, the Base Case is deemed to be infeasible for this RIS. However, consistent with best practice regulation guidelines, the Base Case will still be used as the reference case.

In the absence of regulations, there would be no fee units and the cost of petroleum authorities would not be cost-recoverable by industry. This would mean that other options for cost recovery would need to be considered, such as general taxpayer funding through consolidated revenue, commercial charges, fines, monetary penalties, royalties, excise and duties and other revenue-raising measures.

The Victorian Government has a long-standing policy of pursuing cost recovery: that is, that the operating costs of regulators should be funded by the entities they regulate rather than by taxpayers (that is, the wider community), except where there are legitimate policy interests to the contrary.[xiii]

This is consistent with the approach at the national level, with the Commonwealth Cost Recovery Guidelines stipulating that all user-pay fees and charges should be set to recover the full cost of the product or service from users, unless there are explicit policy or good public reasons for not doing so. Cost recovery can promote equity whereby the recipients of a government activity, rather than the general public, bear its costs. Therefore, Australian government entities should generally set charges to recover the full cost of providing specific activities.[xiv] The Australian Government's overarching cost recovery policy is that, where appropriate, non-government recipients of specific government activities should be charged some or all of the costs of those activities.[xv] This is similarly reflected in other Australian state and territory petroleum exploration and development regimes.

These cost recovery policies promote consistent, transparent and accountable charging for government activities and supports the proper use of public resources.

3.4.2 Status Quo

The Status Quo would consist of a remake of the Petroleum Regulations exactly as they currently stand for the long-term. In other words, the Petroleum Regulations 2011 would be made valid for a further 10 years, until October 2031. Amongst other things, this means:

- The regulations would not detail what a work program must contain and would continue to have relatively vague consultation requirements.
- The regulations would not include the submission process requirements under the Amendment Act which require 'sufficient information' to be provided to 'relevant persons' about the potential impacts of the operation
- The Minister must take into account any submissions when considering applications for petroleum authorities. However, the Minister's decisions only consider the commercial viability and not the social or environmental interests

The Status Quo is unviable as an option, due to the fact that there would be a disconnect between the Petroleum Act (as amended) and the Petroleum Regulations. As is set out in Chapter 4, the Status Quo is theoretically workable, however it is a poor and therefore unviable option.

As noted above, a very short extension is being made to the current version of the regulations to ensure coverage while the stakeholder engagement on the regulations and RIS is conducted – it is anticipated that the new regulations will be made in October 2021. The Status Quo would be a 10 year extension of the current regulations and is considered as an Option in this RIS. The temporary extension of the current regulations is a bridging mechanism only, therefore is not considered in detail in this RIS.

It is possible that the re-made regulations could be supplemented by guidelines or other guidance material which could go some way to clarifying the requirements and increasing the consistency with the Petroleum Act (will be amended by the Amendment Act). However, it is not appropriate to use non-regulatory options such as guidelines in place of the Petroleum Regulations, due to the high risk and complex activity being regulated. Using regulations in this context is consistent with the approach taken in other States and Territories and at the Commonwealth level. Therefore, in considering the Status Quo, we have not added theoretical guidelines as part of the detailed assessment, rather just considered the regulations as they currently stand.

The way the existing regulations currently relate to the problem statements under the Status Quo is summarised below.

Status Quo - Encouraging petroleum resource development

Prior to petroleum production, holders of a production licence are currently expected to provide both a work program that details the stages of expected work and associated expenditure, and a development plan that outlines how petroleum production will be undertaken. The current regulations contain details of what a development plan must contain, but not what a work program must contain. This is a problem as industry is only provided with the high-level requirements in the Act and may not know what to include in the work program and what the Minister will consider. This creates uncertainty and ambiguity relating to the requirements of a work program and could potentially deter petroleum resource development.

Part 4 of the Regulations detail the reporting requirements for petroleum operations which include:

- annual reports
- reports of survey, drilling and other activities
- monthly reporting from production licence holder
- incident reporting.

In certain circumstances, the inspector monitoring / investigation powers under the Act could be exercised to request information or data. However, there are no general data reporting requirements outside of this, as the Act relies on regulations to prescribe the information to be provided.[xvi]

Status Quo - Building social license to operate

Under the current regulations, the consultation requirements are somewhat vague and grant discretion to authority holders. An EMP must be produced by authority holders as part of the operation plan. The plan must provide for (among other things) appropriate consultation that is ongoing for the life of the operation. This consultation relates to the holder of the authority's environmental performance and is with relevant agencies of the Commonwealth and the State and, other relevant interested people and organisations. A report on these consultations must be included in the plan. Additional engagement may be undertaken at the authority holder's discretion.

The regulations currently specify requirements for the authority holder to develop a report on any consultation with relevant agencies, interested people and organisations in the course of developing the EMP and ongoing for the life of the operation. It does not prescribe a standard or amount of community engagement required or specify potential interested people for authority holders to consult. There is limited scrutiny and expectation of managing social impacts in the Regulations.

Recent surveys conducted as part of the VGP suggest that greater community engagement and consultation is critical for ongoing support of investment in the sector. With growing community expectations, understanding and concerns, effective governance and strong regulations are important to establish a social license.

Before carrying out a petroleum operation, the authority holder must submit an operation plan to the Minister. When preparing an operation plan, the authority holder must identify and mitigate risks to members of the public which are in the vicinity of the operation. The regulations provide for this by requiring the authority holder to issue a notice with sufficient information to relevant persons / organisations, allowing them to make an informed assessment of any impacts that the operation may have on them. The authority holder must also invite submissions within a reasonable period of receiving notice and provide evidence to the Minister that submissions have been considered.

Although some established incumbent firms may not require ongoing instructions to develop a report on appropriate consultation, the current Regulations provide a consistent form and structure for firms to follow. There is a potential risk that this lack of prescription may not assist in establishing industry's required social license, which is not positive for community or industry.

Status Quo - Protecting social (public safety and amenity) and environmental interests

When there is an application for an exploration permit, the community has input to tender documents. The Minister must consider any submissions when deciding whether to invite applications. This is a new requirement under the Amendment Act.

When developing an operation plan, the high-level requirements in s.161 of the Act (relating to identifying and mitigating risks to the environment) apply. As discussed above, relevant persons / organisations must be provided sufficient information to assess the potential impacts of the operations, including to land or property. Submissions can be provided in this process, and the authority holder must prove to the Minister that these submissions have been considered. The Regulations provide detailed requirements for the contents of an operation plan.

As mentioned above, the current regulations outline the requirements for incident reporting in the event that an incident causes, or could have caused, substantial damage to the environment. In the absence of the Regulations, there would be no requirement for this. The requirement to avoid substantial environmental damage would be limited to the obligation under s. 161 of the Act and the general environmental duty in the *Environment Protection Act 2017* (Vic) for businesses to manage environmental risks.

However, as the regulations stand, they would not provide industry with any detail regarding the prescribed social, environmental and economic factors[10] to be taken into account in the making of certain decisions, meaning the regime would be uncertain and difficult to comply with. The lack of specificity of information required would also not serve to increase community trust in the industry.

3.4.3 Option 1 – Outcomes focussed regulations

Option 1 would involve establishing regulations that are somewhat more outcomes focussed than the current regulations. Option 1 would be similar to the Status Quo except there would be some modernisation of the regulations.

They would contain broad outcomes-based application and licensing requirements for areas that are directly called upon by the Act (as amended by the Amendment Act). There would be minimal fettering of the Minister's decisions and Ministerial decision-making criteria would be limited to:

- considerations of issues raised in public submissions and consultation with relevant public sector bodies
- core evidence for public interest matters (economic, social and environmental) that would come from public submissions and Ministerial consultations.

The level of detail required from authority holders would be higher than the Status Quo, with some requirements and submission processes detailed. Under Option 1, authority holders would be required to specify and commit to undertaking ongoing community consultation over the life of the authority as a core component of the work program.

The operation plan would have to meet general criteria and objectives and industry would hold the primary responsibility for monitoring progress against milestones. This is similar to the Status Quo but involves an update to better meet the overall objectives of the operation plan as per the Act (as amended by the Amendment Act). The regulations would be supported by guidelines from the department to ensure the industry is supported. However, these guidelines would not be enforceable.

The broad requirements for data, samples and cores would be included in the Regulations. There would be administrative flexibility allowing the Minister and authority holder to agree on timeframes for submitting information. The way in which Option 1 relates to the problem statements is detailed below.

Option 1 - Encouraging petroleum resource development

The regulations would prescribe broad requirements for the types of physical data, samples, and cores to be provided to the Minister, and the timeframes for industry to submit this. Reporting requirements would also be strengthened.

Option 1 - Building social license to operate

The Minister's decision-making would be limited to a certain extent by the content of submissions and consultations. Under Option 1, ongoing community consultation over the life of the authority would be a core component of the work program. The outcomes of this engagement must be reported to ERR through the renewal process (where relevant) and/or conditions on authority.

There would be a stronger level of prescription in relation to the prescribed submission processes under the Act, relative to the Base Case. The purpose of this would be to establish expectations and assist industry to focus on relevant matters.

Option 1 - Protecting social (public safety and amenity) and environmental interests

Some factors, such as data reporting requirements and addressing matters raised in submissions, will be prescribed under Option 1. These factors are limited to requiring the Minister to consider issues raised in public submission and to consult with relevant public sector bodies or responsible authorities. Public submissions and Ministerial consultation would form the basis of evidence for public interest matters.

---

[10] One of the main purposes of the Amendment Act is to amend the Petroleum Act to enable prescribed social, environmental and economic factors to be taken into account in the making of certain decisions under the Act

Issues raised in submissions and consultations would need to be directly addressed in applications. The Minister's decision-making process must take into account certain information raised in submissions and consultations.

3.4.4 Option 2 – Standards focussed regulations

Option 2 would involve more detailed and prescriptive regulations. This would provide greater certainty and therefore a time saving for all stakeholders in the industry (including government, industry and the community), but also increase the burden would be used by Government for future investment attraction functions after the authority is relinquished. The regulations would also prescribe requirements for work programs including timing and expenditure data and industry will be required to adhere to and report against progress. This will ensure that authority holders are actively working their tenure to maximise the likelihood or discovery and development.

Option 2 - Building social license to operate

Option 2 would require an authority holder to detail proposed engagement with the community (including traditional owners) over the life of the authority; these commitments will need to be adhered to. Option 2 would also establish prescriptive requirements in relation to the community submissions process.

For consultation in relation to preparation of an operation plan, the Minister would have more information related to the consultation process and greater scrutiny of the consultation process. Stronger evidence that adequate community consultation has been undertaken would be required. A distinct community engagement plan would need to be produced as a component of the environment plan. This is compared to the general requirement for ongoing consultation over the life of the operation and a consultation report as part of the EMP under the current Regulations. Industry has the least flexibility on its engagement processes under Option 2 and could be held accountable to its commitments by punitive measures such as penalties, where applicable.

Under Option 2, the engagement requirements would target the stages in the petroleum lifecycle at which consultation is deemed necessary and most effective and would be clear and unambiguous for enforcement purposes.

Option 2 - Protecting social (public safety and amenity) and environmental interests

The regulations under Option 2 would specify that when making a decision, certain social, environmental, and economic factors must be taken into account by the Minister. Applications for petroleum authorities would require detailed and specific information allowing the Minister to consider all the relevant factors above.

Under Option 2, documents such as operation plans, including EMPs, WOMPs and rehabilitation plans would need to contain certain prescribed information and will need to follow a standard risk assessment methodology. There will be new measures for monitoring and reporting against hydrocarbon emissions and groundwater impacts. There will also be a stronger focus on different petroleum lifecycle stages that differentiate risk and mitigation requirements. There will be stronger incident notification and operational reporting requirements to ensure transparency, support regulation and compliance and continuous improvement in risk management.

Regulations would also be supported by a Code of Practice made under the Petroleum Act that will provide increased clarity around what is expected for compliance with the Act and Regulations.

The decision-making process would also include an analysis of the benefits and costs under the criteria. A triple bottom line assessment would be informed by several sources, including information provided by authority holders, public submissions and government data.

Status Quo - Fees and charges

The existing regulations contain requirements in relation to the payment of certain fees and charges. These are set out below. (Note that the Petroleum Act itself sets out requirements in relation to royalties).

Table 3.1: Fee units payable under the Regulations and FY21 dollar amounts (linked to CPI)

	Fee units	Dollar amount (FY21, $14.81/fee unit)
Application fees		
Exploration permit	700	$10,367
Retention lease	500	$7,405
Production licence	500	$7,405
Special access authorisation	250	$3,702
Renewal fees		
Renewal of exploration permit	250	$3,702
Annual fees		
Exploration permit	500	$7,405
Retention lease	700	$10,367
Production licence	700	$10,367
Transfer fee (partial or full)		
Exploration permit	250	$3,702
Retention lease	150	$2,222
Production licence	250	$3,702
Suspension or variation of conditions		
Exploration permit	150	$2,222
Retention lease	150	$2,222
Production licence	150	$2,222

Fees were set when the Regulations were made in 2011 to reflect full cost recovery at the time. Because fees are set in fee units, they have been indexed to reflect the increasing cost recovery requirements for government, reflecting the growth in cost to government in regulating the industry. The fees rate was not indexed by the Victorian Treasurer for FY 2020-21, due to the COVID-19 pandemic, therefore fees remained at the same level as for FY2019-20.

At a later point in time, a broader review of the existing fees and charges will be completed to consider their appropriateness and whether any changes need to be made (such as the introduction or removal of any fees / charges). It is therefore proposed that the existing fees and charges will remain unchanged under the proposed regulations.

4 Options analysis

4.1 Method of assessment

The options in this RIS have been assessed using Multi-Criteria Analysis (MCA). This approach has been chosen because it provides a robust way of evaluating the disparate and qualitative data that is available. The MCA provides a structured and transparent approach that can balance the different impacts, for example safety versus amenity/environment.

MCA requires judgement of how the proposed options will contribute to a series of criteria that are chosen to reflect the benefits and costs associated with each option. Each criterion is assigned a weight reflecting its importance to the policy decision, and a weighted score is then derived for each option. The option with the highest weighted score is the preferred option.

What is an MCA approach?

MCA refers to a range of techniques to assess policy options against decision criteria. MCA enables options to be compared in a way that utilises quantitative and qualitative evidence fully. The approach enables the inclusion of a wider range of criteria — including social and environmental considerations for example — than those used in a typical financial analysis. In addition, the approach is transparent — necessary subjective judgements and assumptions made to determine options and criteria, and to assign scores and weights are made explicitly. The preferences of the decision maker reflected in these judgements and assumptions can be readily changed in a sensitivity analysis or to incorporate alternative indicators of community preference.

MCA involves:

- specifying several assessment criteria informed by policy strategy and objectives
- assigning a weighting to each criterion
- assigning scores for each option in relation to each criterion
- calculating a weighted score for each option.

The preferred option is then chosen as the option with the highest weighted score.

To avoid bias, the total weight for cost and benefit criteria is 50% each. The specific weights for each criterion are chosen based on the relative importance of the criteria.

The criterion rating scale has a range of −10 to +10, where a score of zero represents no change from the reference case.

Table 4.1: MCA Scale

Score	Description
-10	Much worse than the reference case
-5	Somewhat worse than the reference case
0	No change from the reference case
+5	Somewhat better than the reference case
+10	Much better than the reference case

Costs and benefits captured in this chapter include the items that are directly relevant and attributable to the Petroleum Regulations.

This RIS identifies costs and benefits that are difficult to quantify. In such circumstances, survey data, stakeholder consultations and relevant literature are used to inform a qualitative discussion of the cost or benefit.

4.2 Criteria

The options have been assessed based on a framework that considers the following criteria:

Table 4.2: MCA criteria and weights

Benefit criteria	**Primarily relates to problem(s)**	**Weighting**
Encourage onshore conventional petroleum resource exploration and development in Victoria.	1, 3	16.67%
Build community social license in the onshore conventional petroleum resource sector.	2, 3	16.67%
Minimise risk to improve outcomes for the environment, public safety and amenity as they relate to petroleum development in Victoria	2, 3	16.67%
Cost criteria	**-**	-
Cost to industry. This primarily reflects the compliance costs of the proposed options on petroleum firms. This includes costs of preparing materials to gain approval of plans prior to commencement of operations, and similar costs incurred during operations.	**-**	25%
Cost to government. This primarily reflects the resourcing requirements of government administering the different options. This includes costs incurred in assessing approval plans, and administering inspections.	**-**	25%

4.3 MCA Scoring

Table 4.3 presents the results of the MCA. As per the Better Regulation Victorians Guidance Note,[11] an option that is more costly than the base case should receive a negative score. As the Base Case in this assessment is considered to be the most expensive option to industry and government, all other costs receive a positive score. As such, a higher score for costs indicates a lower cost to industry or the Government (relative to the Base Case).

Additionally, as the Base Case is used as the reference case, it receives a score of zero for each criterion, and therefore a weighted score of zero. The scoring for the other options will be relative to the Base Case.

As shown in Table 4.3, Option 2 has the highest weighted score, and is therefore the preferred option.

[11] Better Regulation Victoria, *Guidance Note – Multi-Criteria Analysis* (2014).

Table 4.3: MCA results

Criteria	Base Case	Status Quo	Option 1	Option 2
Encourage onshore conventional petroleum resource exploration and development in Victoria. (16.67% weighting)	0	2	4	5
Build community social license in the onshore conventional petroleum resource sector. (16.67% weighting)	0	1	4	7
Minimise risk to improve outcomes for the environment, public safety, and amenity as they relate to petroleum development in Victoria. (16.67% weighting)	0	3	4	7
Cost to industry (positive score is lower cost than Base Case) (25% weighting)	0	2	5	3
Cost to government (positive score is lower cost than Base Case) (25% weighting)	0	2	3	4
Weighted score	**0.00**	**2.00**	**4.00**	**4.92**

4.4 Detailed assessment of the costs and benefits of the Options – mapped to the key amendments

The following section discusses the major benefits associated with the proposed options as they relate to the three benefit criteria outlined in the MCA framework.

The assessment below follows the same structure, looking at each benefit criteria in turn, assessing the Status Quo, Option 1 and Option 2. This is then broken into the key amendments to the regulations as follows:

- Benefit criteria 1
  - Status Quo
    - Authority, applications and grants
    - Conduct of operations
    - Information and reporting
  - Option 1
    - Authority, applications and grants
    - Conduct of operations
    - Information and reporting
  - Option 2
    - Authority, applications and grants
    - Conduct of operations
    - Information and reporting
  - Conclusion

This assessment is then repeated for each of the remaining two benefit criteria.

4.5 Criteria mapped to Status Quo, Options 1 and 2

4.5.1 Encouraging the petroleum industry

Criteria	Base Case	Status Quo	Option 1	Option 2
Encourage onshore conventional petroleum resource exploration and development in Victoria.	0	2	4	5

4.5.1.1 Status Quo

The Status Quo receives a score of **2** for encouraging the petroleum industry, as it is marginally better than the Base Case. This is due to the fact that it provides more certainty to the regulatory environment, which is important in the context of the re-start of the industry.

Authority, applications and grants

Under the Status Quo, at the authority application and grant stages, prospective authority holders would apply for an authority under the current Petroleum Act, and the current version of the regulations.

There may be some benefits to the Status Quo compared to the Base Case, as current authority holders, will be familiar with the regulations in their current form. Further, the degree of detail required from authority holders will be low, meaning the Status Quo has a relatively low administrative burden.

However, these benefits will be minor, due to the time that has lapsed under the moratoria, and the fact that the inherent inconsistency between the Act and existing Regulations may mitigate the potential efficiency of having the same Regulations when the Act has been amended. This inconsistency will lead to uncertainty for authority holders on how their applications would be assessed without supporting regulations.

Conduct of operations

There may be some benefits to the Status Quo because as explained above, current authority holders, will be familiar with the regulations as is.

The inconsistencies between the current Regulations and the Petroleum Act may create confusion and uncertainty for authority holders, and could act as a deterrent for future investment in the petroleum industry. This was supported by the feedback from authority holders through the stakeholder consultation.

Information and reporting

In the Base Case, the Petroleum Act requires information and data to be provided to the Minister in a manner that is either specified by the Minister or prescribed in the regulations. In general, the Act indicates the types of information and data that the Minister can require or that the regulations can prescribe but much of the detail is set out in the Petroleum Regulations. The Status Quo will be marginally better for industry than the Base Case here, as at least there will be some detail around what types of information are required and when. This may be undermined by the fact that the Regulations would still be inconsistent with the Petroleum Act, therefore causing uncertainty to industry in how to fulfil their obligations.

Therefore the Status Quo is slightly better than the Base Case in relation to information and reporting requirements, in considering how it may encourage petroleum resource development.

4.5.1.2 Option 1

Option 1 receives a score of **4** for encouraging the petroleum industry, as it is moderately better than the Base Case and the Status Quo. In broad terms, this Option is flexible and can adapt to the scale of risks presented, which would help to encourage resource development.

Authority, applications and grants

Under Option 1, the regulations would contain broad outcomes-based application and licensing requirements which are modernised to be in line with the recently amended Petroleum Act.

While one of the benefits under Option 1 is that the Regulations would now be consistent with the new requirements called upon by the Petroleum Act, the main benefit is that authority holders must only meet broad requirements as opposed to a prescriptive list. The approach is scalable to the size and risk of the relevant activity.

One authority holder strongly supported Option 1 as its preferred approach due to the nature of the exploration industry where there are both small and straightforward operations and large-scale, complex operations.

Option 1 provides authority holders with greater flexibility on the volume of information they provide, and means the information provided in the application process can be more easily tailored to the scale or the risk of the project.

Under Option 1, the effort required for the applications and grants process matches the scale of the activity, minimising red tape for authority holders. This tailored application process could therefore incentivise and encourage investment into the petroleum industry in Victoria.

For the authority, applications and grants process, Option 1 would perform more strongly than the Base Case, where the detail for the authority, application and grants process would not be present in the Regulations.

Conduct of operations

In Option 1, there is an outcomes-based approach to operations plans, where the plan must meet general criteria and industry is responsible for monitoring progress against these criteria.

This is likely to be desirable for operators that have been operational in Victoria or other jurisdictions for some time and have established processes and systems for meeting such requirements. Several authority holders indicated that this would be the case for them, and there would be minimal additional resourcing needed to meet these requirements.

Option 1 has a higher benefit score compared to the Base Case for encouraging petroleum resource development. There would be a moderate degree of detail specified in the Regulations, as compared to no detail at all in the Base Case (which would make it very difficult for operators to provide and comply with their Operational Plan).

Information and reporting

The moderate, objectives-based information and reporting requirements in Option 1 perform more strongly as compared to the Base Case in encouraging petroleum resource development. Again, this is because there would be a moderate degree of detail specified in the Regulations, as compared to no detail at all in the Base Case (which would make it very difficult for operators to provide and comply with their information and reporting obligations under the Petroleum Act).

4.5.1.3 Option 2

Option 2 receives a score of **5** for encouraging the petroleum industry, as it is better than the Base Case, Status Quo and Option 1 on this benefit criteria. This is because it provides the most certainty for industry in re-commencing their operations. This is considered to be more beneficial than the flexibility provided under Option 1.

Authority, applications and grants

Under Option 2, the Petroleum regulations would explicitly prescribe licensing and application requirements and there would also be strong prescription around the Minister's decision-making criteria.

While one of the benefits is that the Regulations would now be in line with the requirements called upon by the Petroleum Act, the main benefit is the clarity and certainty provided to industry on the applications process.

Clarity is achieved as authority holders are explicitly aware of what they must provide and the requirements in the applications and grants process. In the RIS stakeholder consultation, one authority holder outlined that they preferred Option 2 as more specification on the detail required actually reduced the administrative burden and risk, as compared to the objectives based approach where there may be more subjectivity in interpreting the requirements. For some authority holders, the specific guidance could save them time in preparing the submission and limit the time spent providing potentially unnecessary information (which would not be considered by the Minister or ERR).

APPEA highlighted that the prescription provided to authority holders on how decisions will be made could provide industry with reasonable certainty regarding the approval of their application. There is less subjectivity in the process and authority holders would know exactly what is required, as opposed to submitting documentation which they consider to be acceptable but ultimately is not.

Under the applications and grants process, Option 2 could provide industry with greater clarity and assurance that they need to invest in petroleum exploration and development in Victoria, as compared to the Base Case, Status Quo and Option 1.

Conduct of operations

The main benefit of the standards-based approach in Option 2 is the additional certainty and assurance that it provided to operators. In Option 2, operators would be confident that if they meet all the requirements detailed in the regulations then their proposed approaches and plans would be accepted. This would reduce unnecessary time spent determining how to obtain approval, therefore encouraging development of the industry. Several authority holders were of this view, mentioning that increased certainty is important if operations were to expand.

In addition, some stakeholders mentioned that the way in which operations plans are reviewed and accepted has been changing, so a more structured approach may be beneficial for regulators and operators.

An example of the way the reforms under consideration in this RIS will help to encourage the development of the onshore conventional petroleum industry in Victoria, may be seen in the Code of Practice, which is being modelled on relevant Codes of Practice under the Queensland, Northern Territory and New South Wales petroleum legislative frameworks. This also means that there will be some familiarity with the new Victorian Code of Practice for those authority holders who operate in those other jurisdictions as well.

Information and reporting

The flexibility and broader requirements in Option 1 may provide a slight benefit for the criterion of encouraging the petroleum industry as compared to Option 2 which is more prescriptive. This is evident in the administrative flexibility to allow the Minister and authority holder to agree timeframes for submission of information in Option 1, whereas Option 2 will specify the timeframes more precisely. The geological data and additional information provided in this option may also improve the Victorian Government's ability to encourage future investment in these regions.

4.5.1.4 Conclusion – Encouraging resource development

On balance, we consider that Option 2 performs more strongly in encouraging resource development, as compared to the Base Case, Status Quo and Option 1, as the specificity in the requirements will assist industry in meeting their new obligations, which is important in the context of the industry re-start as well as ongoing investment in the sector.

4.5.2 Building Social license

Criteria	Base Case	Status Quo	Option 1	Option 2
Build community social license in the onshore conventional petroleum resource sector.	0	1	4	7

4.5.2.1 Status Quo

The Status Quo receives a score of **1** for building social license. It is only slightly better than the Base Case which would involve no clear consultation requirements.

Authority, applications and grants

The new legislative provisions for advertising, public comment and prescribing the decision making criteria under the Amendment Act will take effect from 1 July 2021. The regulations in the Status Quo, however, do not support the new requirements introduced by the Amendment Act, which were key reforms introduced as a result of the feedback from the VGP.

For example, currently, when deciding whether to grant or refuse to grant an exploration permit, or when deciding between competing offers, the Minister must take into account:

a) the merits of the work program proposed by the applicant; and
b) the likelihood that the work program will be carried out*; and
c) any prescribed factor*. (*these requirements were inserted via the Amendment Act so will take effect 1 July 2021).

However, those prescribed factors would not be present in the Status Quo, which may serve to undermine social licence as it will be difficult for the community to understand if a prospective permit holder is complying with their obligations or not.

Therefore, in comparison to the Base Case, we consider that the Status Quo helps to build social license in this phase, albeit to a limited extent.

Conduct of operations

The Status Quo would involve a situation where the key findings of the VGP are not implemented in the regulations in respect to community engagement, regular reporting and risk management.

In the Status Quo, the EMP, which is a requirement of the operation plan and requires approval before an authority holder can undertake any petroleum operation, will not be updated to insert new requirements in relation to hydrocarbon emissions and groundwater monitoring. The need for these new requirements were clear outcomes from the VGP consultation. However, those prescribed factors would not be present in the regulations under the Status Quo, which may serve to undermine social license as it will be difficult for the community to understand if a prospective permit holder is complying with their obligations or not. It would still be a stronger case than the Base Case, as at least there would be some detail regarding the conduct of operations phase.

Information and reporting

We consider that the Status Quo provides some benefit as compared to the Base Case for this criterion, as more information would be provided to the Minister, including whether the authority holder is meeting its commitments and information regarding Victoria's petroleum geology.

4.5.2.2 Option 1

Option 1 receives a score of **4** for building social license. It provides community with more assurance than the Base Case and Status Quo, but the threshold requirements could be viewed as being somewhat subjective by those stakeholders.

Authority, applications and grants

Authority holders would be required to specify and commit to undertaking ongoing community consultation over the life of the authority as a core component of the work program.

The main benefit of Option 1 over the Base Case is that the regulations would require authority holders to undertake ongoing community consultation regardless of whether an operation is commencing. This would provide information early in the authority about what lies ahead, when uncertainty and curiosity is high. This would help to provide community with the confidence that any risks identified will be considered and dealt with when authorities are granted, assisting to build the industry's social license.

Additionally, the regulations would be consistent with the requirements of the Amendment Act, which is more positive than the Status Quo. The recent amendments to the Petroleum Act require that an authority holder must give notice of the proposed operation, and that this notice must contain sufficient information to allow people to make an informed assessment about the relevant risks and impacts. Option 1 would mean that some detail would be specified in the regulations as to what the operation plan would need to address, which is more positive than both the Status Quo and Base Case.

The flexibility of the regulations under Option 1 allow the level of community consultation to be commensurate with the stage of the project. As highlighted by an authority holder, previous community engagement has only occurred once an authority is in place. Authority holders noted the difficulty in extensively engaging with stakeholders prior to receipt of the permit, as it was a hypothetical right at that stage, and emphasised that the depth of understanding required for engagement is usually only obtained and developed over the course of the project's operations. Another authority holder raised that the level of stakeholder engagement needs to be carefully balanced to build sufficient social license without creating stakeholder fatigue. Option allows the authority holder to conduct the engagement linked to the activity (rather than a regular engagement timeframe, potentially in the absence of operational activity or a real need to consult).

Tailored engagement could increase the community's trust in the authority holder as consultation would be more meaningful and based on genuine engagements linked to a proposed decision-making process (e.g. grant of authority or operational activity).

This is consistent with social research undertaken by CSIRO as part of the VGP that found that community support would be enhanced through the provision of genuine engagement opportunities about industry activity and how the community's interests are being managed. Some authority holders raised that, as projects vary by scale and their circumstances, it is important that community consultation be adapted accordingly. This is especially important to adapt to regional differences e.g. open farmland vs close to towns.

There is a medium level of specification on the stakeholder engagement that must be carried out prior to the grant of an authority. These two factors help to build social license as it demonstrates that stakeholders will be engaged with as part of this process. Therefore, on balance, Option 1 performs more strongly than both the Base Case and Status Quo, as there is a medium level of prescription of additional detail and community views that may be considered by the Minister in the decision-making process.

Conduct of operations

In Option 1, industry is likely to build social license more effectively than the Base Case. This is because it involves a modernisation of the approach under the Status Quo to better meet the objectives of the operation plan, as well as updated and modernised incident reporting requirements. This is to reflect changes in technology and terminology since the last regulations were drafted, and to better address rehabilitation and well decommissioning. These updates provide communities with more confidence that environmental and community concerns are properly considered and dealt with. As such, Option 1 is more effective at building social license in the conduct of operations phase than the Status Quo, and therefore also the Base Case.

In addition, the regulations would be consistent with the Amendment Act requirements for increased prescription in relation to the community engagement and submissions processes. This would provide

community with more confidence that relevant matters have been considered, prior to that authority being granted.

Information and reporting

Option 1 would provide a greater benefit in building social license to operate as compared to the Status Quo, as there would be a higher level of requirements for data, samples, cores and reports to be provided to the Minister or ERR. Less information would be provided in either the Base Case or the Status Quo. The VGP found that communities would like to see more information and data provided to ERR, to increase transparency in the operations and their potential impacts.

4.5.2.3 Option 2

Option 2 receives a score of **7** for building social license. It provides community with more assurance than the other options, as the requirements can be more clearly complied with, and publicly demonstrated that the requirements are met. This may be compared with Option 1 which is objects-based and includes more flexibility and can be scaled to size or risk of an activity, but may be perceived as including more subjective standards.

Authority, applications and grants

Option 2 would have a more prescriptive approach to community consultation, whereby in addition to the work program, authority holders would be required to specify and commit to undertaking community consultation around the activities undertaken as part of the operation plan. Similar to Option 1, the main benefit of Option 2, as compared to Base Case, is that the regulations would now require authority holders to undertake ongoing community consultation and the regulations would be consistent with the requirements of the amended Petroleum Act.

The main difference in comparison to Option 1 is that authority holders would have to consult with the community as part of the operation plan. This consistent consultation from authority holders at certain phases of the project builds community trust in the industry as the consultation pathway is transparent. An authority holder outlined that more prescriptive requirements may help build community confidence in the sense that it ensures minimum standards are adhered to. This beneficially builds community confidence in the process building on the industry's social license.

Option 2 allows the public to review applications for authorities more easily against the prescribed requirements. More consistent information will be provided to community with the advertised notice. Several authority holders suggested that a more prescriptive approach with greater clarity on expectations from the government would be beneficial as they tend to overcommunicate with community to build their social license.

Further, there is a risk with Option 1 that community members would perceive that industry has the discretion to determine when, how and with whom in the community to consult. This may not help to build social license if community perceive that industry is making the decision regarding timing for consultation in self-interest, rather than with the community interest as front of mind (even if that is not necessarily the case). The additional prescription around timeframes for consultation may help to avoid any perception that industry is acting in self interest in setting the schedule for consultations.

Conduct of operations

Authority holders are cognisant of the importance of consulting with relevant community members to build social license. Some are highly experienced with consultation, and already go above what is required under the Status Quo, or would be required under Option 1 or 2, during the development and operations phases.

As Option 2 contains more detailed requirements for ongoing community engagement, communities would have greater confidence that their concerns and risks are being managed throughout the lifecycle of the petroleum operation. Further, there would be an additional level of government oversight of the consultation process and information provided, as the Minister would have a stronger obligation to take it into account (as compared to Option 1 which would provide more discretion to the Minister). Some

authority holders considered this to be an important part of building social license, as it would give a form of external overview to the process.

Under Option 2, the operation plan will include specific requirements for how the authority holder will consult with the community during the petroleum operation. These requirements are intended to form part of the EMP rather than a separate plan. The community consultation requirement will set out how the authority holder will:

- identify the community likely to be affected,
- receive feedback from the community,
- manage complaints and other communications from members of the community
- ensure that an appropriately qualified and/or experienced person will be responsible for ensuring measures relating to community consultation under the operation plan are implemented

In the case of an operation plan for a production licence, the community consultation requirement will set out how the authority holder will:

- identify community attitudes and expectations; and
- analyse community feedback, taking into account community concerns or expectations; and
- register, document and respond to complaints and other communications from members of the community in relation to the petroleum operation

Having these requirements mandated, as compared to being optional, may help to build community confidence in the industry, further increasing social license and associated benefits. This applies equally to the additional risk mitigation requirements, reporting against additional activities and well decommissioning and rehabilitation, as these will demonstrate to the community that the government is well-informed and therefore equipped to more effectively regulate of the risk of the activity.

Information and reporting

Option 2 would provide the strongest benefit for the social license to operate criteria, on the basis that the additional information gathered, analysed and reported to Government, compared to Option 1 or the Base Case will help to increase trust in the industry and government in regulating the risk of the activity.

4.5.2.4 Conclusion – Building social license

Option 2 performs strongest in building social license through all phases, as it provides community with more confidence than the Base Case and Status Quo, in the public submission process. Further, there is an increased level of detail that authority holders would need to gather and provide to ERR, and the ability to clearly cross reference the requirements against the information provided may provide additional reassurance to community that industry is meeting its obligations. This is evident compared to the more subjective threshold tests in Option 1, the lack of detail in the Base Case and the low level of requirements in the Status Quo.

4.5.3 Risk Mitigation

Criteria	Base Case	Status Quo	Option 1	Option 2
Minimise risk to improve outcomes for the environment, public safety and amenity as they relate to petroleum development in Victoria.	0	3	4	7

4.5.3.1 Status Quo

The Status Quo receives a score of **3** for the risk mitigation criteria. This is because it provides some guidance for environmental risk management and information requirements, and would be slightly more beneficial to the community, industry and government as compared to the Base Case.

Authority, applications and grants

The Petroleum Regulations as they currently stand would not reflect the new consultation or information provision requirements of the Petroleum Act which in-turn reflect the findings of the VGP.

Conduct of operations

At the conduct of operations phase, there would be less detail provided in operations plans in the Status Quo. This is more positive than the Base Case, where there would be no specification as to the information that would need to be provided through the conduct of operations phase. ERR would therefore have less information about the ongoing risks of the activity and risk management mechanisms in the Base Case as compared to the Status Quo, and accordingly, would be less likely to mitigate any environment, community or safety risk via regulatory activity such as requiring additional reporting or conducting an inspection.

Information and reporting

There is a slightly higher chance that reporting a risk of the operation to government will occur in the Status Quo as there will is some detail specified in the current form of the Petroleum Regulations, as compared to the Base Case, where there would be no regulations in place. The act of reporting in itself can assist operators and government in uncovering or identifying and classifying risks of operations to amenity, the environment or adjacent communities.

The Status Quo for this criterion would therefore perform slightly better than the Base Case, but would again be inconsistent with the amendments to the Petroleum Act, which reflect the findings of the VGP.

4.5.3.2 Option 1

Option 1 receives a score of **4** for the risk mitigation criteria. Option 1 provides increased benefits in risk mitigation as compared to the Status Quo and Base Case, as a medium level of evidence will be required to demonstrate how risks will or are being mitigated through the application and conduct of operations phases. This may be contrasted to the Status Quo which would have a low level of evidence and the Base Case which would have no specification due to the sunsetting of the regulations.

Authority, applications and grants

Under Option 1, some factors related to risk mitigation are prescribed to a higher extent than the Status Quo and Base Case. For example, under Option 1 the Minister must have regard to economic, social and environmental issues raised in public submissions – this is not a requirement under the Status Quo or Base Case. The factors include the Minister having the option to have regard to issues raised in public submissions.

Option 1 is similar to the approach taken in NSW where outcome-based conditions outline criteria that must be complied with to achieve an appropriate environmental outcome but do not dictate how these should be achieved. The rationale for this approach was to reduce the potential for constrained innovation in the resources sector and has been considered to assist in ensuring positive environmental outcomes.[xvii]

The main benefit of Option 1 is that in the applications and grants process, authority holders can target risks that are most relevant to their proposed work program. A standard, such as reducing risks to 'as low as reasonably practicable' or 'acceptable' levels would allow authority holders to allocate more time to assessing relevant risks and providing information about these risks as compared to addressing a prescribed list of potential risks. This could assist the industry in mitigating social and environmental risks by ensuring that considerable time is dedicated by authority holders considering how best to mitigate the risks that may have the biggest impact and the risks that are more likely to eventuate.

Conduct of operations

The outcomes-based approach with general criteria and objectives would allow operators to focus the EMP and WOMP on the issues that are most important for that particular authority. Similar to above, it would allow authority holders to focus the time and resources required to develop and report on these obligations in a way that is linked to the highest and most likely risks of the operation.

This benefit is accentuated due to the nature of the industry. Every onshore petroleum well and title are different, and subject to different environmental and safety risks. Option 1 allows the authority holder to tailor the risk mitigation and management strategy to best focus the resources of the company on the highest and most likely risks.

The updated and modernised incident reporting requirements in Option 1 would reduce the risk of environmental and safety incidents and improve the way they are dealt with relative to the Status Quo and the Base Case.

Information and reporting

As with the above criteria, Option 1 would provide a greater benefit to risk mitigation for the environment, amenity or community, as compared to the Base Case and Status Quo. This is because the requirements in Option 1 will be more specific than in the Base Case or Status Quo, including for example in relation to reporting on rehabilitation progress or changes in liability. This provides a stronger benefit to mitigate the risks of the operation, as compared to the Base Case or Status Quo.

4.5.3.3 Option 2

Option 2 receives a score of **7** for the risk mitigation criteria. This is because the prescriptive nature of the regulations is likely to minimise risk most effectively, particularly in the context of the industry restarting after the moratorium.

Authority, applications and grants

Under Option 2, the regulations would explicitly prescribe requirements for authority holders in developing the resource. These requirements would include risk and impact assessment information and it would be mandatory, rather than discretionary for the Minister or delegated decision maker to take into consideration, specific matters including social, environmental and safety risks.

One authority holder expressed a preference for an approach such as that taken by South Australia in terms of risk mitigation. The request was to include differing levels of prescription depending on the level of experience of the operator. This could be viewed as providing a model similar to Option 1 for more experienced operators and Option 2 for less experienced operators.

This approach has not been included in the analysis as it would present a major shift in the structure of the regulatory framework that would need to be set up under the Act i.e. a heads of power would be required for the differential application of the regulations across two defined tiers of authority holder. It is noted that option 2 presents a standards based approach and if this suggested proposal were to be further developed in the future, then rationale would need to be provided as to why all authority holders were not being held to the same risk management standards.

The benefit of the approach in Option 2 is that due to its prescriptive nature, it is more likely that all risks would be identified and addressed in the application process. This would help to mitigate the social and environmental risks as all scenarios would be considered by authority holders, regardless of how likely they are to occur. This is a comprehensive approach and as outlined by an authority holder, a more structured and detailed approach may be helpful for both the regulator and operators, especially as the industry is re-starting, following a period of paused operation.

Conduct of operations

Option 2 would contain the highest level of prescription in the Operation Plans, including EMPs and WOMPs. This would provide greater clarity around the types of risks that must be identified and mitigated during operations by authority holders, therefore reducing the likelihood of an incident occurring.

The Code of Practice in Option 2 would support industry in meeting these requirements.[12] It would provide guidance on technical standards, specifications and processes for requirements under the

[12] Note the Code of Practice is considered as a component of Option 2 but not Option 1.

Petroleum Act and Petroleum Regulations, to cover the full petroleum-well life cycle including well-design, construction and operation through to decommissioning.

However, this benefit may be marginal for some operators, who believe that their existing plan templates would already contain this level of specific information.

Information and reporting

Option 2 would provide the strongest benefit for the risk mitigation criteria. This is on the basis that the additional information gathered, analysed and reported to Government, compared to Option 1 the Base Case or the Status Quo, may help to uncover risks through the operation, drilling or decommissioning phase. The additional well completion and well decommissioning reports would also provide a long-term log of the standards and way in which wells were decommissioned. This would allow Government to better manage well sites over the long term after the title holder has relinquished the title. There is therefore a higher likelihood these risks would be effectively mitigated by authority holders through the operation phase as compared to the other options.

4.5.3.4 Conclusion – risk mitigation

The assessment indicates that Option 2 will best ensure that risks are identified and mitigated through the authority application and grant, operations and reporting phases. Option 2 has a higher benefit ratio as compared to Option 1, the Base Case and Status Quo, in relation to risk mitigation, due to the high degree of specified information that authority holders will need to gather, analyse and consider in how risks are proposed to be managed or mitigated, prior to and throughout the operation. This is evident compared to the more subjective threshold tests in Option 1, the lack of detail in the Base Case and the low level of requirements in the Status Quo.

4.6 Costs

Costs are considered across responsible persons, government and community. This section considers the relative costs of the Base Case, Status Quo, Option 1 and Option 2 to both government and industry. Costs to industry are typically in the form of imposition of compliance costs. Costs to government include administration and enforcement costs, and the cost of reviewing applications.

Authority holders noted in stakeholder feedback that in order to provide a quantitative view on the relative costs, they will require to see more detail via the draft regulations. Therefore, we anticipate that more evidence may be provided on industry costs once the RIS is released for public comment. The analysis below is therefore relatively high-level.

Criteria	Base Case	Status Quo	Option 1	Option 2
Cost to industry (positive score is lower cost than Base Case)	0	2	5	3
Cost to government (positive score is lower cost than Base Case)	0	2	3	4

4.6.1 Base Case

Under the Base Case, industry and government would face high costs when attempting to meet the requirements of the Petroleum Act. In the absence of regulations, businesses face significant regulatory uncertainty and Government faces significant cost impacts due to increased inefficiencies in attempting to regulate where there is an absence of regulation. The regulatory uncertainty is likely to be substantial, given the lead in times, capital investment and regulatory burden associated with the sector.

Any delays to operations as a result of increased Government administrative requirements can have significant costs due to the scale of the industry and associated mothballing costs.

4.6.2 Status Quo

Under the Status Quo, costs are relatively lower than the Base Case. In particular, the initial costs will be lower in the Status Quo as industry and government are mostly familiar with the regulatory landscape. While costs are still lower than the Base Case, they are likely to increase as firms and government grapple with misalignment of the Petroleum Act as amended by the Amendment Act and the current form of the Petroleum Regulations which pre-date the relevant Act amendments. Therefore, the status quo receives a score of **2** for cost to industry and cost to government, as costs are relatively lower than the Base Case.

4.6.3 Option 1 costs

4.6.3.1 Costs to industry

Under Option 1, the costs to industry are expected to be lower than the Base Case and Status Quo. Therefore, Option 1 receives a score of **5** for the cost to industry.

The approach taken under Option 1 is considered to be similar to the objects-based approach taken by NSW and the Commonwealth (see Appendix C). The NSW outcome-based conditions outline criteria that must be complied with to achieve an environmental outcome, but are less prescriptive in terms of how an authority holder should achieve these outcomes.

This is generally considered to be leading practice for reducing administrative costs to industry. The risk-based approach taken by these jurisdictions is aimed at ensuring that the effort and focus of risk investigation and management is commensurate to the significance or complexity of the activity and the risk. Under a risk-based approach, operators are then able to focus time and resources on issues that are likely to present the most risk and avoids unnecessary time spent on immaterial risks.

Option 1 will assist to simplify regulatory burden and avoids the 'one-size fits all' approach to regulation. Guidance from the NSW Department of Finance[xviii] suggests that a potential benefit associated with implementing this framework is reduced regulatory cost burden where regulatory requirements are more proportionate to the risk of the regulated activity.

4.6.3.2 Costs to government

Under Option 1, the costs to government are expected to be somewhat lower than the Base Case and Status Quo. Therefore, Option 1 receives a score of **3** for the cost to government.

Governments incur costs in designing, implementing, enforcing, reviewing and updating regulation. The Victorian Government has and will incur costs in facilitating the orderly restart of the onshore conventional gas industry. Funding has been allocated in the 2020-21 budget for ERR to develop, implement and enforce the new regulatory regime. A total of $3 million has been budgeted in 2020-21 and $2.1 million in 2021-22, totalling $5.1 million.

Option 1 allows regulators to focus time and resources on issues that are likely to present the most risk.

4.6.4 Option 2 costs

4.6.4.1 Costs to industry

Costs to industry are likely to be substantially higher under Option 2 than Option 1, but less than the Base Case and Status Quo. Therefore, Option 1 receives a score of **3** for the cost to industry.

Under Option 2, there are likely to be relatively higher administration and compliance costs than Option 1. Whilst Option 2 does provide more certainty for industry, in many cases there would be additional costs to industry for additional information provision and operational requirements. Additionally, other jurisdictions have acknowledged that this approach can lead to a higher regulatory burden on industry. However, there may be a time / cost saving in some circumstances as the requirements will be more explicit from the outset. This may save time as it is less likely the ERR would need to request additional information through the authority and operation plan application process.

The industry cost of consultation would also be higher under Option 2 due to the increased level of mandated community consultation, and therefore the associated time and resource cost.

However, the additional detail in the legislative Code of Practice which will accompany the regulations in Option 2 is broadly similar to arrangements that are in place in other Australian jurisdictions. This means

that Victorian authority holders who operate across multiple jurisdictions will be generally familiar with these requirements, and the incremental cost of this regulatory component is therefore likely to be minimal.

While there are a variety of approaches taken to petroleum regulations across Australia, in general, an outcomes-based approach is considered to impose the lowest cost on industry (under Option 1). Prescriptive requirements are generally more costly but provide a higher level of assurance to industry and to the Victorian community.

4.6.4.2 Costs to government

Under Option 2, the costs to government are expected to be lower than Base Case, Status Quo and Option 1. Therefore, Option 2 receives a score of **4** for the cost to government.

To the extent that the prescriptive elements of Option 2 are straightforward for ERR or the Minister to assess, the resources required to administer Option 2 would be lower than Option 1, where more discretion and discussion with industry may be required. As outlined by the OECD,[xix] there are costs associated with outcomes-based regulations. They can be difficult to develop, as they require measurement or specification of desired outcomes or criteria, which are not always apparent. The fact that they allow for a range of different compliance strategies suggests that the verification of compliance may be more difficult, and that administrative and monitoring costs may be increased as a result. This risk is amplified by the fact that the industry is re-commencing after the moratorium, and the regulator will also be ramping up regulatory oversight to meet the increased industry activity. There may also be additional 'back and forth' between applicants and the ERR, increasing the risk of time delay that could be costly to both industry and government.

Therefore, we consider that the cost to the Victorian government may be lower under Option 2 than the Base Case, Status Quo and Option 1. This is due to the need to consider multiple and varying compliance strategies (rather than compliance with the specific Code of Practice) under Option 1 as compared to Option 2. Further, ERR will be re-building capacity and regulatory oversight, and in bringing in new staff and expertise, it may be less resource intensive (and hence costly), if the regulatory requirements are more detailed rather than objectives based.

5 Impact on competition and small business

This chapter discusses some of the considerations for competition and small business.

5.1 Competition

As Victoria is a party to the Competition Principles Agreement, regulation in Victoria is required to include a competition assessment[13]. The Competition Principles Agreement sets out that any new primary or subordinate regulation should not restrict competition except where:

- restriction of competition is required to meet the government's objectives; and
- the benefits of the restriction outweigh the costs.

Restrictions on competition can be identified where there will be changes to the way a market functions due to the implementation of the proposed regulation. Specifically, restriction can occur where:

- the number or range of suppliers is limited
- the ability of supplies to compete is limited
- the incentive of suppliers to compete vigorously is reduced.

Any affirmative answers to the following questions indicate that the regulation is considered to restrict competition:

Table 5.1: Competition assessment questions

Test question	Answer	Explanation
Is the proposed measure likely to limit the numbers of producers or suppliers to: • only one producer? • only one buyer? • less than four producers?	No.	There are more than four petroleum producers in Victoria, and the preferred option does place any restrictions on the number of producers or suppliers.
Would the proposed measure restrict the ability of businesses to choose their output, price or service quality?	No.	The petroleum industry is sufficiently competitive, and the preferred option is unlikely to change this. There are no provisions in the preferred option that restrict the ability to choose output, price or service quality.
Would the proposed measure discourage entry into the industry by new firms/individuals or encourage exit from existing providers? Would the proposed measure impose higher costs on a particular class or	Yes.	The preferred option may present a small barrier to new entrants and small business due to its prescriptiveness. Our assessment suggests that it is easier for larger, more established businesses to meet the requirements of the new regulations, but this is unlikely to have a

[13] Better Regulation Victoria, 'Victorian Guide to Regulation' (November 2016)

Test question	Answer	Explanation
business or type of service (e.g. small business)?		significant impact on the level of competition in the industry because there are several established players.
Is the proposed measure likely to make it more difficult for consumers to move between or leave service providers?	No.	Consumers purchase from retailers, not producers, and the retailer industry is unlikely to be affected by these regulations.
Would the proposed measure affect the ability of businesses to innovate, adopt new technology or respond to the changing demands of consumers?	Yes.	Some of the prescriptive elements of the regulations may limit the ability of producers to meet the requirements in an innovative way that is more efficient. However, our assessment is that this is unlikely to reduce competition in the sector, and consumers will not be impacted because the end product is homogenous.

It is necessary to articulate the objective that is achieved through restriction of competition in the regulation and assess other reasonable means of achieving the objectives without competition restriction. Demonstration of a specific link is required to sufficiently meet the competition assessment requirements.

As shown in Table 5.1, there will be some impacts to competition and innovation as a result of the new regulations, but these impacts are likely to be minimal based on the current state of the industry and feedback from stakeholders. Other options, including a non-regulatory approach, are unlikely to achieve the objectives of the regulation with a smaller impact on competition.

The ACCC has for some time noted[14] that more competition is needed to secure fairer retail gas prices. According to the ACCC's 'Overcoming Gas Affordability Issues' inquiry, allocating new domestic sources of supply and infrastructure are some of the factors that need to be addressed in order to avoid the projected east coast shortfall and bring down prices. A lack of competition at the producer level has also been identified as contributing to high prices for industrial and commercial users.

As Option 2 receives the highest score for *encouraging petroleum development* in the MCA, it is most likely to increase competition and reduce prices in the Victorian petroleum market. If the regulations encourage new sources of productions, gas retailers will have more producers to buy from, increasing competition at the wholesale level. Lower wholesale prices will then flow through to lower retail prices for consumers.

5.2 Small business impacts

To ensure the impacts of regulation on small business are examined appropriately, an assessment of the effects on small business is highly desirable in a RIS. This small business impact assessment fulfils the purpose to ensure that regulation does not impact business growth and productivity unreasonably, especially that of small businesses.

Small businesses can experience disproportionate impacts from regulation due to limited resources for interpretation of updates in compliance requirements, and the cumulation of different requirements. The lack of economies of scale may affect these businesses' ability to comply with different options.

[14] See for example the ACCC Gas Price Inquiry 2017-2025

The nature of the petroleum sector hinders small business participation because of the high capital costs of entry and significant operating. Many companies that operate in the sector are vertically integrated, where exploration is treated as an expense completed at cost without immediate profit. The inability for small business to achieve vertical integration, economies of scale and participate in joint ventures contributes to the domination by major gas companies. Despite these difficulties, small business does play a role in the sector through supply and maintenance of equipment and services of a technical or scientific nature.

The ACCC has been concerned in the past with regard to the degree of competition in the supply of gas in the East Coast Gas Market[15]. LNG producers in the final quarter of 2019 and early 2020 sold 18 LNG spot cargoes into international markets at prices substantially below domestic gas price offers[15].

For example, the ACCC was concerned about the lessening of competition between BHP and Esso due to their Gippsland Basin Joint Venture (GBJV), the largest producer of gas in the Southern states. From 2019, BHP Billiton Petroleum (Bass Strait) Pty Ltd (BHP) and Esso Australia Resources Pty Ltd (Esso) have marketed their share of gas produced under the GBJV separately[16]. As a result, the competitive landscape for gas buyers on the east coast should improve.

The three dominant retailers of AGL, Origin and Energy Australia continue to have large market shares, but there has been a shift in the last few years to a wider market structure. In several network regions, there is now a "Big 5" rather than a "Big 3"[15]. In 2018, there was a competitive response to the release of five new Victorian offshore gas acreage areas in the Otway basin[17].

Small businesses will be impacted by the options discussed in this RIS largely because:

- they provide services to gas businesses, or
- they are consumers of gas. Small businesses that consume large amounts of gas can include those that use natural gas to heat buildings and water, operate refrigeration and cooling equipment, cook, dry clothes, and provide outdoor lighting.

While large industrial users of gas may be able to purchase gas either on a delivered basis from retailers or acquire gas at the wholesale level and arrange their own transportation, small business users of gas generally do not have this option. Producers will not usually supply gas direct to customers with low annual usage, and these users typically cannot acquire the pipeline capacity necessary to have gas delivered to their location (either because of their small capacity requirements or because they do not have the internal capacity to manage the complexity of gas transportation arrangements).[18]

Small gas users typically pay higher prices than large users, and research by the ACCC suggests that the retail margin for gas supplied to mass market consumers including small businesses, is much larger (on a $/GJ basis) than for large users.[19]

Both options are expected to result in similar levels of gas production in Victoria, so the impact on pricing and availability for small businesses will not be material.

Overall, the restart of the industry and remade regulations will have differing indirect impacts on petroleum firms depending on the business size. Both options provide sufficient guidance for, and do not excessively burden, small petroleum businesses relative to large. Option 1 provides less certainty than Option 2, but this is more likely to impact new entrants rather than established businesses.

The main small business concern with regards to the proposed option is that they may experience disproportionate regulatory burden to larger businesses when meeting the requirements. This can be for a range of reasons, including limited in-house capability, knowledge and administrative economies of scale. Most operators in the Victorian petroleum industry tend to be medium-large sized due to the large capital requirements and specialist knowledge required. Disproportionate regulatory burden is more likely to be a

[15] ACCC, Gas Inquiry 2017-2020, Interim Report July 2020, p. 6.
[16] See https://www.accc.gov.au/media-release/bhp-and-esso-to-separately-market-gippsland-basin-gas
[17] See https://earthresources.vic.gov.au/projects/victorian-gas-program/offshore-gas
[18] ACCC, Gas Inquiry 2017-2020, Interim Report January 2020, p. 119.
[19] ACCC, Gas Inquiry 2017-2020, Interim Report July 2019, p. 96.

problem for new entrants, but the code of practice to be provided under the preferred option is likely to mitigate this. Some stakeholders indicated that they already collect some of the information that might be required under the preferred option, but there is no indication that this is correlated with business size. The additional reporting required under the preferred option is also more relevant for impacts on new entrants than small business.

As such, the preferred option is unlikely to disproportionately affect small business relative to large.

6 Implementation and evaluation

6.1 Implementation

The results of the MCA show that the preferred option is Option 2. This conclusion is made on the basis that it is significantly better at achieving the objectives of the Act but does not impose excessive cost burden on industry or government.

The actions in Table 6.1 will need to take place leading up to that date to implement the preferred option.

Table 6.1: Implementation and evaluation actions

Action	Responsible party	Timeframe
Finish drafting new regulations	The Department (legislative arm)	June 2021
Prepare guidance material explaining transition and new regulatory arrangements	The Department	June 2021
Develop code of practice	The Department	June 2021
Recruit and train staff to administer the new requirements of the regulations	The Department (ERR)	June-July 2021
Establish processes for management of new data required under the regulations	The Department (ERR)	June 2021
RIS release	The Department	August 2021
Consultation period	The Department	August - September 2021
Submissions considered	Minister	September 2021
Recommend and make Regulations	Governor in Council	October 2021
Proposed regulations come into effect	Governor in Council	October 2021

6.2 Evaluation

This section outlines how to evaluate the success of the implemented option.

The success of the chosen option can be evaluated by assessing to what extent it has addressed the problem statement in this RIS and government's objectives, namely:

- onshore conventional petroleum is insufficiently encouraged in Victoria;
- the petroleum industry lacks social license to operate; and
- Victoria's social and environmental interests are insufficiently protected.

Given these problems, the following indicators could be used to evaluate the success of the chosen option.

The level of investment and exploration in the Victorian onshore conventional petroleum sector.

Increasing levels of investment and exploration in the petroleum sector indicate that this activity is being further encouraged by the regulations, while decreasing levels indicate the opposite. This could be evaluated by examining entries and exits into the sector, the number of applications, and feedback from industry with regards to their commercial viability.

The extent of conflict and dispute between industry and community.

Community protests and disputes relating to the petroleum sector are a sign that the sector does not have social license. A decreasing presence of conflict and disputes would indicate that the regulations have helped build social license in the sector, while an increasing presence indicates the opposite. This could be evaluated by analysing the extent of disputes between industry and community following the passing of the regulations and comparing this to historical levels.

The quantity and extent of incidents occurring in the petroleum sector.

This indicator shows the extent to which Victoria's environmental interests are protected. A reduction in the quantity and extent of non-compliance indicates that the regulations are offering additional protection to Victoria's environmental and social interests, while an increase indicates the opposite. This could be evaluated by analysing the change in incident numbers and severity following the passing of the regulations.

This could also be evaluated through consideration of:

- Ease of assessment for licences, permits, leases and plans
    - If the Petroleum Regulations are explicit and clear, and adhered to by applicants, then the assessment burden should be reduced for both industry and government
- Overall level of industry compliance
    - This could be measured through the number of compliance actions, such as notices issued to authority holders.

Naturally, any analysis of incident numbers will need to reflect the impact of the moratorium on incidents in recent years.

Some of the questions that the regulator should consider when evaluating the regulations include:

- How many entries and exits have there been in the industry since the last review?
    - What are the nature of these entries and exits (small/large business, subsidiary of experienced operator etc.)?
- What is the level of petroleum production in Victoria (compare to pre-moratorium levels or stakeholder expectations)?
- What is the volume and type of community engagement by authority holders, is this in accordance with the approved plan, and in turn what is the community response to that engagement?
- What is the number of rehabilitations underway and completed, i.e. the number of wells successfully decommissioned and surface rehabilitated?
- What is the level and number of rehabilitation bonds that the industry is currently required to provide under the Petroleum Regulations?
- What is the level and number of incident reports that industry is providing?
- Is the resourcing requirement from the regulator or the Department currently adequate? What are the future resourcing needs of the ERR – e.g. staying the same, or trending up or down? Is the allocated resourcing matching that budgeted including via fees?
- Does industry think that the processes and systems in the new regulations are effective and efficient?

- What other data is available to help evaluate the effectiveness of the regulations?

Timing of evaluation

As the industry will be experiencing a restart following extended inactivity, it will be important to continually monitor these indicators. A mid-term full independent review of the regulations should take place after five years, around mid-2026. The review will determine if the regulations are still appropriate, and if any changes need to be made prior to the regulations sunsetting in 2031. This is important given the significance of the regulations, and the need for them to align with the Amendment Act.

6.3 Enforcement

Enforcement of the Petroleum Act and the Petroleum Regulations is undertaken by ERR on behalf of the Minister.

Provisions for enforcement of the Petroleum Act and the Petroleum Regulations are set out in Part 13 of the Petroleum Act and are unaffected by the Amendment Act.

The Petroleum Act provides that a maximum penalty of 20 penalty units may be applied to a breach of a requirement under the Regulations and several provisions in the existing Regulations apply this penalty. For example, a failure to advise the Minister as soon as is practicable of a reportable incident attracts 20 penalty units.

The proposed regulations do not change any of the existing penalties for breaches of the Regulations, a new penalty has been added for breach of new regulation 49, relating to requirements to retain core samples. Penalties have been removed from two provisions; time of payment of royalties, and duty of disclosure of pecuniary interest, for which penalties or contravening the regulations are contained under the relevant sections of the Act.

Appendix A Detailed Options analysis

Area of Act	Status Quo (2011 Petroleum Regulations)	Option 1 – Limited prescription/outcomes-based	Option 2 – Standards based

Authority applications / grant
• work program and other application requirements for permits, leases, licenses, tenders
• public input processes to tender/grant decision
• decision-making criteria
• licence conditions
• administrative processes following grant decision
• special access authorisations / special drilling authorisations
	• No additional prescribed requirements in relation to these matters (the Act requirements apply)
	• Note: New legislative provisions for advertising, public comment, and prescribing decision-making criteria will take effect 1 July 2021
		• Regulations to contain broad outcomes-based application and licensing requirements for areas directly called up by the Amendment Act.
		• Minimal fettering of Minister's decisions; Minister's decision-making is only constrained to a limited extent by the content of the submissions and consultations
		  ○ Prescribed decision-making criteria would be limited to requiring the Minister to consider issues raised in public submissions (in relation to, but not limited to, economic, social and environmental factors)
		  ○ Core evidence for Ministers decision on public interest matters (economic, social and environmental) comes from public submissions and Ministerial consultations
		  ○ Applications need to directly address issues raised in submissions
		• Authority holders would be required to specify and commit to undertaking ongoing community consultation over the life of the authority as a core component of the work program.
			• Regulations to explicitly prescribe licensing and application requirements, including risk/impact assessment information
			• Application/notice requirements under the regulations would be detailed and specific and directly linked to the decision-making criteria
			• Strong prescription around Minister's decisions; Minister's decision-making power fettered by needing to take into account certain matters (including but not limited to specific social, environmental, economic factors, submissions etc.)
			  ○ Decision-making criteria involves a balancing test of benefits and impacts
			  ○ Evidence of triple-bottom-line factors influenced by various sources, including public submissions, authority applicant/holder and existing govt data/assessment
			• A more prescriptive approach to community consultation, whereby in addition to the work program, authority holders would be required to specify and commit to undertaking community consultation around specified requirements under operation plan (see below).

OFFICIAL

Area of Act	Status Quo (2011 Petroleum Regulations)	Option 1 – Limited prescription/outcomes-based	Option 2 – Standards based
Conduct of operations • operation plan (including notice, consultation) • consent/notice requirements • compensation • rehabilitation/ bond • Code of Practice • incident reporting	• Operation plan - outcomes-based approach focused on identifying, mitigating and monitoring environmental and safety/ integrity risks. Operation plan must include description of operation, EMP, WOMP, and undertake regular reviews. • Report on incident that causes, or could have caused, substantial damage (environment, integrity of operation or the immediate area; or is indicative of a possible future incident; report must be given as soon as is practicable; written follow up report	• Outcomes-based approach, whereby operation plan has to meet general criteria / objectives • Industry has primary responsibility for monitoring progress against milestones • This approach is similar to Status Quo, with some modernisation and updating to better meet the overall objectives of operation plan (in context of the amended Act) • Regulations would be supported by guidelines from the department to ensure industry is supported, but guidelines will not be enforceable • There would be a moderate level of prescription in relation to submissions processes under the Act, to focus industry on relevant matters (e.g. identify who may be considered relevant community/person), and establish fundamental expectations (e.g. in relation to content of a notice for operation plan) • Updated and modernised incident reporting requirements	• Prescriptive elements as requirements for operation plan, including EMP, WOMP (management of underground component) • General rehabilitation requirements would be prescribed (above ground component) as part of a rehabilitation plan that sits under the operation plan. • Prescribe requirements for liability assessment information to be provided with the operation plan. • Competency standards to be applied for well construction and decommissioning. • Prescribed requirement to specify and commit to community engagement during activities under the operation plan. • Prescribed requirement for industry to baseline, monitor and report against aquifer impacts. • Prescribe requirement for EMP to provide an estimate of hydrocarbon emissions from the operation and how these will be minimized. • Stronger prescription for consultation processes in relation to preparation of an operation plan (e.g. requirements to make operations plans or other information available in support of the notice requirements). • Regulations would be supported by a Code of Practice for well operations management, which will also be a legislative instrument and used for enforcement • Prescriptive incident reporting requirements to align with comparable regulatory regimes (e.g. under offshore petroleum framework).

OFFICIAL

Area of Act	Status Quo (2011 Petroleum Regulations)	Option 1 – Limited prescription/outcomes-based	Option 2 – Standards based
Information • reporting / submission of samples • release of information • petroleum register	• annual report, including petroleum operation activities (if any); conclusions derived from petroleum exploration activities and reports and studies relating to those activities. • Reports of surveys, drilling and other activities • monthly report by holder of production licence • No additional prescribed requirements for register or release of information (Act requirements apply)	• Regulations to contain broad requirements of types of physical data, samples and cores to be provided (not just reports of such data) • Regulations to require reporting of information on geological data that was provided in the previous year • Administrative flexibility to allow Minister and authority holder to agree on timeframes for submitting information • Note: no proposed option(s) in relation to release of information/ petroleum register as these covered by Act requirements (no regulations required).	• Regulations to explicitly prescribe all geological survey and well data, samples and cores to be provided by industry to government • Regulations will prescribe information to be provided within specified timeframes, including a requirement for information requirements to be fulfilled prior to surrender of title • Strengthened/new reporting requirements in the regulations (for example, reporting against rehabilitation progress/ changes in liability, and well construction and closure reporting)

Appendix B Stakeholder Engagement

B.1. Who was consulted?

The following stakeholders have been engaged with by either Deloitte or DJPR as part of this RIS process.

B.1.1. Authority holders

- Vintage Energy
- Lochard Energy
- Icon Energy
- Bridgeport Energy
- Cooper Energy
- Beach Energy
- Exxon Mobil
- Petro Tech
- Mirboo Ridge
- Lakes Oil
- Apologies - Co2CRC

B.1.2. Government departments and agencies

- Department of Environment, Land, Water and Planning
- Environment Protection Authority Victoria
- Southern Rural Water
- ESV/Worksafe
- Local Government area councils (Moyne Shire, Mirboo North, Wellington Shire, Glenelg Shire, Corangamite Shire)
- Gas Commission Queensland

B.1.3. Industry Associations

- Australian Petroleum Production and Exploration Australia
- Victorian Farmers Federation
- Environment Victoria
- West Vic Dairy

B.1.4. Affected Communities

- Communities in close proximity to operations
- Traditional owner groups

Additionally, extensive stakeholder consultation was conducted as part of the Victorian Gas Program. This, as well as preliminary consultation findings from Earth Resources Regulation was taken into consideration in this RIS process and has been incorporated into the summarized stakeholder feedback. There will also be further opportunity for public comment once this RIS has been released.

B.2. How were they consulted?

Targeted external stakeholders were consulted through either:

- virtual roundtable workshops
- individual meetings
- internal workshops run by DJPR, or
- targeted consultation questions sent via email.

Some industry associations or representative community groups were sent a letter explaining the timing of the Petroleum Regulations, the RIS public consultation period, the process to engage or make a formal

submission through Engage Victoria and how to make contact prior to the public release date if they had any questions.

B.3. What information was collected?

During consultation, stakeholders were asked for feedback about each of the proposed options and how they would address the objectives of the Petroleum Act (as amended in 2020). Targeted questions were asked about the impact, costs, benefits and effectiveness of the proposed options. Stakeholders were asked to identify which option they preferred, taking into consideration the matters for assessment in the RIS including authority applications /grants, conduct of operations and information.

Authority holders were asked how each option would impact their operations and their intention to invest in petroleum exploration and development in Victoria.

B.4. How information collected has been incorporated into the RIS?

The information collected has been incorporated into the RIS primarily to inform the analysis of the direct and indirect costs and benefits and any other stakeholder impacts associated with the proposed regulations under each of the Options.

B.5. Key themes by topic

A number of key themes emerged from the stakeholder consultations conducted by Deloitte and DJPR for this RIS and as part of the VGP process. These are summarised below.

Table B.1 Consultation themes

Theme	Key discussion points
Encouraging petroleum resource development	Industry bodies and authority holders raised the importance of considering the approach taken in other jurisdictions, and their desirable aspects and ability to harmonise or transfer those approaches.
Building social license to operate	Authority holders were supportive of independent oversight from ERR as a way to help build social license (as communities would see the independent review / input to the operations).
Protecting social and environmental interests	Under the VGP, the findings from the independent Stakeholder Advisory Panel indicated that the petroleum regulatory framework is robust for managing environmental and safety risks.
Authority applications / grant	A stakeholder commented that they can see the strengths and conveniences for the Department and Minister in decision-making under both options. However, they can also see restrictions, particularly under the Standards based approach. Some councils were interested in the role of local government in the sector and how this can be streamlined to encourage development. Some respondents noted that timeframes for regulator responses need to be clear and defined to provide increased certainty around development. Increased regulatory certainty and flexibility was cited as important for expanding operations. For the additional information required for a benefit and impact assessment, an authority holder raised concerns and noted that they were reluctant to spend capital prior to exploration when there is a high level of uncertainty with the benefits generated (e.g. jobs, regional income). The burden placed on industry must be commensurate with the capital. At a minimum, some level of prescription about what is deemed to be appropriate would assist in avoiding industry uncertainty. Another stakeholder commented that the VGP should have provided good insights for the Minister and that it

Theme	Key discussion points
	would be difficult for a company to go through economic benefit analysis from scratch at the exploration permit stage. This was emphasised by another authority holder who referenced the difficulty in providing information about a rehabilitation plan at a point too soon (when plans are unknown). A stakeholder highlighted that there are already methodologies established for capturing the economic and social benefits of the sector. QRC and SACOME have standardised methodologies down to the state electorate level which can be utilised for this purpose. An authority holder commented that they preferred a more prescriptive approach as they found that more guidance on what to provide is better than trying to figure this out. This would be based on the proviso that the prescriptive approach was reasonable, focused and not too onerous on industry with a level of prescription that is commensurate to the risk. The same stakeholder also stated that the current regulations allow the Minister to make-decisions / respond in a 28-day timeframe or in a time they deem fit. However, this limits certainty around timing and the ability to plan. Stakeholders also believed that there should be clear regulator response times prescribed, with avenues made available for seeking extensions. One authority holder supported a standalone rehabilitation plan. A different authority holder's preferred approach was to have clearly listed outcomes, with guidelines and/or templates to streamline the processes to get those outcomes (as per Option 1). This is as given the nature of exploration activities, there is often unexpected results and outcomes. The Regulator should firstly consider what the best outcome for the State would be and then consider how this can be achieved. This is in comparison to the Regulator considering the law and the prescriptive regulations with no leeway to enable a better project outcome. Stakeholders commented that there was benefit in delegating the decision making and approvals to the head of an independent regulator. This is as the decisions relate purely to the implementation of the regulations. It would be useful during an election period (where the government is in care-taker mode) and removes the Minister making decisions if matters become politicised. Decisions made and how they relate to the legislation should be published. It was also noted that there should be a merits review process or the ability to escalate matters for Ministerial consideration (without having to go through the administrative appeals process).
Community consultation	An authority holder emphasised the importance of consulting with relevant community members who have the authority or capacity to provide relevant feedback (e.g. science-based community, engineering based). As oil and gas projects are highly technical, often stakeholders do not have a fundamental understanding of the industry making their capacity to absorb or comment on information limited. Relevant stakeholders include landholders, neighbours, Mayors or local community members for example. Additionally, the authority holder commented that the industry is already highly experienced with community consultation. Community consultation is already occurring at all levels, in all forms and in every jurisdiction. The respondent believe that it is important to maintain relationships with Victorian communities in a way that is not too onerous on the industry. An authority holder has only engaged with the community once they have the authority of the permit. They noted the difficulty in extensively engaging with stakeholders when

Theme	Key discussion points
	you haven't got the permit. This is as engagement requires a depth of understanding which is usually only obtained / developed over the course of the operations. An authority holder commented that the government should be involved in the community consultation process. Several respondents agreed that ongoing community consultation is a good initiative. An authority holder mentioned that they already have a stakeholder engagement plan built into their processes, which is likely to include what is required under Option 2. Therefore, there would be minimal impact with regards to this aspect of the Option. Under the VGP, the findings from the independent Stakeholder Advisory Panel indicated that the regulatory framework could be improved in its provisions for community engagement and transparency. While social research undertaken by the CSIRO found that 80 per cent of the South-West and Gippsland communities would embrace, support of tolerate onshore conventional gas development, community support would be enhanced by providing genuine engagement opportunities and more information about industry activity and how the communities interests are being managed. A council noted that people's fears about the industry have not been realised and their community does not see conventional gas development as dangerous. Various councils and industry bodies discussed what could be done to improve the sector's social license with regards to community engagement. A council suggested that projects need to deliver ongoing benefits and not just benefits of a boom bust nature. Another council is supportive of consultation with local council in advance of site closure as per amendment act. Several authority holders tend to overcommunicate with community engagement, as they think this is the right thing to do and it will help build social license. Others have interest in a more pro forma approach, with greater clarity on the expectations from government. However, some acknowledged that the approach may vary from case to case with differing circumstances and scale. Authority holders think it is important for government to help build the narrative around why more gas is needed. This could include economic benefits such as jobs and income, as well as gas' role in the energy transition. Members of the farming community requested that agricultural landholders are given different provisions for stakeholder engagement so that their specific needs can be better understood and addressed. An authority holder mentioned that the level of stakeholder engagement needs to be carefully balanced, so as to build sufficient social license without creating stakeholder fatigue. An authority holder thought that prescriptive operation plan requirements might help build community confidence in the sense that it ensures a minimum standard is adhered to.
Conduct of operations	A stakeholder also questioned whether there would be further guidance provided on groundwater monitoring or if the Department was planning to differentiate between exploration and production. In terms of **emissions** management, it was noted by an authority holder that at times, emissions are created in order for emissions to be reduced. They provided an example of

Theme	Key discussion points
	reducing overall emissions by relying on gas emissions opposed to coal emissions. Another example is sending LNG to China increased Australia's emissions but reduces total global emissions. Therefore, they recommended the consideration of the entire value chain and the offset of coal resources in the measurement of emissions. An authority holder would like the Department to consider alternative methods for establishing rehabilitation bonds. The requirement for smaller exploration companies to provide a bond for the full facilities of every project would lock up a significant portion of their funds. They indicated that it would be preferable to require an 'insurance' amount for each project to be paid to the Regulator to establish a rehabilitation fund and the project insurance should be considered on a risk basis. An insurance-based rehabilitation fund should adequately cover the small number of eventualities. An authority holder expects minimal impact to preparation of their operations plans under Option 1, pending details. However, they also note that the way in which plans are reviewed and accepted has been changing, and a more structured approach may be helpful for operators and the regulator. The general criteria and objectives framework in Option 1 would likely have a minimal impact on their ability to manage risks to the environment, amenity and safety. These risks must be identified and managed regardless of the regulations. An authority holder already has existing well management standards, so non-enforceable well integrity management guidelines under Option 1 would likely have minimal impact on these entities. However, these guidelines may help identify areas for improvement. An authority holder noted that the general criteria and objectives framework in Option 1 is unlikely to build social license, as most operating companies will have different approaches to consultation. This may lead to confusion for impacted stakeholders. An authority holder mentioned that their operation plans already include provisions for rehabilitation, so there would be minimal impact to them as a result of the lack of supporting regulations in Option 1. An authority holder noted that they have existing operation plan, WOMP and EMP templates in place, so the extent of the impact of the prescriptive requirements in Option 2 would depend on how those requirements differ from their current plans. In relation to managing risks to water quality, noted the findings from the VGP which show that there is minimal/no risk to artesian water from the industry. They noted that there may not be a case for mandatory observation bores as the contamination risk is low. A council noted that there is some interest in farmers to repurpose dis-used gas wells for water supply following rehabilitation. There may be some significant costs, risks and technical feasibility considerations associated, however. Some farms in affected areas have also raised concerns of being disrupted by future pipelines.
Code of practice	A stakeholder questioned the purpose or problem that the Code of Practice is trying to address. They understood the desire to implement a code similar to NT and QLD but questioned the major issue or problem that the Code was seeking to address in Victoria, the parties to the Code and how duplication will be avoided (with the new requirements around rehabilitation and well decommissioning). An authority holder recognised the QLD and NT Codes of Practice but suggested using the approach South Australia does. This approach has lower and higher levels of supervision. Option 1 is similar to lower supervision levels and is for companies that are well set-up

Theme	Key discussion points
	and have a proven track record, whereas Option 2 is similar to the higher supervision levels and would be for new projects that do not have a proven track record. Although there was an authority holder that preferred an outcomes-based approach, they were still supportive of a Code of Practice for managing well integrity. A code of practice that is similar to QLD and NT Codes of Practice would be helpful to industry as it enables consistency across jurisdictions. An authority holder noted that they would continue manage environmental and safety risks as they have previously, and the cost impact of Option 2 would depend on what the prescriptive requirements entail. If they include baseline monitoring of aquifers as a requirement, this would have a significant cost. An authority holder noted that a code of practice focussed on supporting well integrity (as proposed in Option 2) would need to be based on common standards but tailored to Victoria's requirements. Established authority holders are likely to already have existing well management standards in place, which could already be in line with a Code of Practice. However, a Code of Practice could limit innovation if it is too prescriptive. APPEA mentioned that guidance material / code of conduct for the industry would need to be detailed and specific enough so that industry has reasonable certainty that following the guidance / code would result in approval. The EPA mentioned that guidance material may be required to assist industry with meeting their General Environmental Duty (GED) under the amended Environment Protection Act.
Information	A stakeholder commented that information provided which is related to the quantum of liability is highly contingent on how much of the well is included. An authority holder questioned the definition of someone who is "clearly qualified" signing off on a WOMP. They were concerned that this person would have to be an independent expert. The Department clarified that this would not necessarily need to be an independent person as long as they were appropriately qualified. An authority holder commented that formalising community notification within a specified boundary under the EMP would be good. An authority holder was supportive of the Regulatory collecting raw data, supports and samples as it is important for petroleum exploration in the future. Flexible timeframes for submitting information under Option 1 would not significantly impact operations, according to an authority holder. The broad information requirements under Option 1 would also not significantly impact this authority holder's operation, as it is similar to the Status Quo. These information and reporting requirements seem similar to other jurisdictions. An authority holder mentioned that if the information and reporting requirements under Option 2 were too onerous, this could create excessive burden and operational risk. The extent would depend on what is required. DELWP and the EPA made comments around the interaction between and roles of different bodies. They mentioned the allocation of duties between the various bodies, and the implications of the new GED under the amended Environment Protection Act. A stakeholder mentioned that regulatory bodies should coordinate to use existing data to assess groundwater impacts.

Theme	Key discussion points
	Some authority holders already hold, or would be able to easily obtain, additional data to meet reporting requirements. Some of this data is already reported to AEMO or in annual reports. DELWP and EPA also discussed how important it is that fugitive emissions be monitored and minimised, and who should have oversight of this. The provision of this data could help authorities to collaborate and ensure compliance against legislation. Some authority holders already report this in their annual reports, so providing this to government would not require any additional data collection.

Appendix C Cross-jurisdictional analysis

The Victorian petroleum sector has been operating in a limited capacity in recent years, so with the impending restart of onshore conventional gas it is appropriate to consider carefully what types or level of regulation are appropriate. Regulatory approaches in other jurisdictions are an important source of information to help identify best practice.

The sections below summarise how other Australian jurisdictions approach the following issues:

- How does the state encourage onshore resource exploration and development?
- How is community social license built in the resources sector?
- How does the state minimise risk to improve outcomes from the environment, public safety and amenity as they relate to petroleum development?

This analysis was used in developing the Options for the RIS.

C.1. Queensland

C.1.1. How does the state encourage onshore resource exploration and development?

The Queensland Government has encouraged gas exploration through various initiatives such as the Queensland Gas Scheme in 2005, or the Queensland exploration program (this has been run 3 times previously since 2016). The latter was commenced to explore potential locations for petroleum and gas activity, supported by the argument that gas was a vital transitional fuel on the path to renewable energy.[xx] Underpinning the State's gas industry are two pieces of legislation; the *Petroleum Act 1923* (QLD) and the *Petroleum and Gas (Production and Safety) Act 2004* (QLD) (the P&G Act). The former regulates tenures granted prior to 1993, while the latter is the primary legislative document regulating onshore operations (the onshore gas industry grew rapidly in QLD from the mid-1990s). Section 18 of the P&G Act lists the types of authority that may be granted by the relevant Minister. This Act comes into effect after an environmental authority has been granted under the *Environmental Protection Act 1994* (QLD).

The *Land Access Code*, administered by the Department of Natural Resources and Mines, sets out best practice guidelines for resource companies to communicate and negotiate with landholders. To facilitate the development of effective working relationships from the outset, the holder should make early contact with the landholder in person, notifying them of exploration activity.

Reduced apprehension among landholders and an improved relationship with the gas industry subsequently allows for greater exploration and prospecting to take place. In 2011, Queensland implemented supply condition regulations that required suppliers to only export gas on associated tenders to the Australian market. Producers are also required to maintain a record of details of gas supply for at least seven years and present it to the Minister upon request. If sufficient gas is produced from tenures to effectively supply the Australian market and further production is not commercially viable, the relevant entity may receive an exemption from meeting obligations.

C.1.2. How is community social license built in the resources sector?

From a legislative viewpoint, the P&G Act provides basic opportunities for community participation; in the form of submissions made about the initial application for a project or, by request for review or appeal of the initial decision made by the Land Court. Additionally, the Land Access Ombudsman resolves breaches committed by parties, providing landholders with security when negotiating agreements with resource companies. This strong legal and regulatory foundation was built to rectify the damage caused by the initial explosive expansion of the gas industry. This expansion caused considerable opposition in the community due to a lack of legislation and effective process.[xxi]

The Queensland exploration program is expecting to build on the positive response received from early engagement with stakeholders during previous exploration programs. The information is supported by an analysis of the Queensland gas sector, which found that community acceptance of the coal seam gas industry depended on the quality of information disclosure and stakeholder engagement. Improving social and environmental performance was also found to be an important factor in maintaining a social license. If community support begins to diminish, government licenses and regulations will be insufficient to keep the industry afloat.[xxii]

In recent years, the relationship between the gas industry and stakeholders has been more constructive. This has been achieved by the revision of the landholder payments model whereby payments are made on an annual basis commencing at the exploration phase, rather than once extraction has commenced.[xxiii] The industry and development composition presents greater challenges for developing a social license in South-East Queensland as the impacts of gas operations are perceived as having far-reaching consequences. The recommended solution is to gain an effective understanding of the community and form partnerships with communities from early stages of resource development.[xxiv]

C.1.3. How does the state minimise risk to improve outcomes from the environment, public safety and amenity as they relate to petroleum development?

Before any environmentally relevant activity (ERA) can be undertaken, the *Environmental Protection Act 1994* (QLD) (EP Act) requires an application for an environmental authority (EA). In relation to petroleum or geothermal operations, if there is a possibility of significant disruption to the environment, the EA holder may have to pay financial assurance to cover any costs incurred by the government.

The P&G Act contains provisions which oversee the technical and operational components of gas production, distribution, use and licensing. The second key instrument is the *Petroleum and Gas (Safety) Regulation 2018* (QLD), which contains multiple clauses specifically targeted at minimising the operational risks of mining, gas and petroleum production. The Regulation also prescribes several codes of practice used across the industry in relation to polyethylene gathering lines, construction of petroleum wells, gas well drilling, gas well servicing and leak management in petroleum operating plants.[xxv]

The Resource Safety and Health's performance accountability framework enables public performance reporting and improved accountability and transparency. The framework's 2018-19 self-assessment found that there was a high degree of collaboration between industry and regulatory bodies. It also found sufficient evidence that supported the existing approach to compliance and enforcement, that was built upon a risk-based regulatory approach.[xxvi]

C.2. Western Australia

C.2.1. How does the state encourage onshore resource exploration and development?

The *Petroleum and Geothermal Energy Resources Act 1967* (WA) (PGE Act) contains provisions relating to the issuing of permits and reservations for exploration and exploitation of petroleum. The Minister may invite applications for permits to explore and develop petroleum and onshore geothermal resources. Similarly, the *Petroleum Pipelines Act 1969* (WA) grants the Minister power to authorise a person applying for a license to construct a petroleum pipeline on a specified piece of land.

The Exploration Incentive Scheme (EIS), which began in 2009, is an initiative that aims to stimulate the onshore resource industry by encouraging exploration. The scheme supports five high-level programs – two of these being a co-funded Exploration Drilling Program and a co-funded Energy Analysis Program. These offer successful applicants up to a 50% refund for activities falling within the scope of the grant.[xxvii]

Under the WA Domestic Gas Reservation Policy, the state government can enter agreements with LNG producers which provide both certainty of work for the producer and a consistent supply of gas for the domestic market. There is also an option for a producer to offset their domestic commitment by supplying energy from an alternative energy source. This enables exports to external markets which are otherwise not allowed by the WA gas pipeline network.[xxviii] Additionally, the Resource Rent Royalty scheme uses its funds to improve state services and infrastructure, while also acting as a tax-deductible payment for producers.[xxix] In 2017, the government also enacted a plan to release further acreage for petroleum exploration, highlighting continued support for the expansion of the industry.[xxx]

The *WA Domestic Gas Policy – Reporting Framework* outlines expectations and requirements that LNG exporters are expected to uphold from a monitoring and transparency standpoint. The framework analyses a producer's export approvals, domestic gas supply contributions, domestic infrastructure maintenance and marketing activities. In aggregate, these statistics provide an annual statement of the gas industry's performance, including the size of gas reserves and contributions towards domestic commitments. This is used to inform further development in WA.[xxxi]

C.2.2. How is community social license built in the resources sector?

Social license of the mining industry in WA has been built via emphasising the economic legitimacy and impacts to the WA community, as well as via government encouragement of the industry.[xxxii] The presence of the mining and resources sector has led to the development of critical infrastructure in remote regions, with towns being built to support the local workforce. Despite these efforts, under the existing model, there is evidence that mining companies are not meeting the community standards to effectively build social license. The relevant WA Department of Mines, Industry, Regulation and Safety have adopted several initiatives to improve stakeholder consultation and engagement in the mining and resources sector. The department's strategic plan lists protection of the community and safe and responsible resource development as priorities.[xxxiii]

C.2.3. How does the state minimise risk to improve outcomes from the environment, public safety and amenity as they relate to petroleum development?

In total, WA has eleven legislative and regulatory instruments containing safety requirements for onshore and offshore petroleum and energy operations. All petroleum proposals are evaluated under the PGE Act, which require operators to submit Environment Plans, Safety Management Systems and Well Manage Plans to the public authority. These plans are required by the *Petroleum and Geothermal Energy Resources (Environment) Regulations 2012*, which also include provisions for public disclosure of chemicals in wells and the publication of an environmental plan summary on the DMIRS website. The environmental plans must; include a thorough assessment of a variety of factors, be conducted using an environmental risk assessment and project implementation strategy, and include extensive stakeholder consultation and reporting on meteorological, geographical, geological and chemical standards.

Furthermore, the PGE Act and *Petroleum (Submerged Lands) Act 1982* (WA) require auditing and evaluations of petroleum activities, in addition to self-assessments conducted by operators. If operations are being carried out within 500 metres of an 'environmentally sensitive area', the petroleum activity must be assessed under the *Environmental Protection Act 1986* (WA), and may be referred to the Commonwealth Department of Environment if the development has the potential to significantly impact a matter of national environmental significance. The *Petroleum Pipelines (Environment) Regulations 2012* similarly require an environment plan to be submitted, but additionally require the submission of an oil spill contingency plan that is approved by the Minister. Section 8 of the Regulations penalises the continued operation of petroleum pipeline activity after a significant environmental risk has been identified.

C.3. South Australia

C.3.1. How does the state encourage onshore resource exploration and development?

The *South Australian Mining Act 1971* and associated regulations detail the requirements for grants of exploration licenses. Under the *Petroleum and Geothermal Energy Regulations 2013*, applications for an exploration permit can be lodged at any time for areas that are not in a Competitive Tender Region but the Minister must call for tenders for an exploration license within a competitive tender region. At least 28 days before the Minister grants an exploration license, a notice must be published by the Minister in the Gazette.

The Plan for Accelerating Exploration (PACE) is an initiative to advance resource exploration and mining developments in South Australia.[xxxiv] An evaluation of PACE found that the $56 million invested by the state between 2004 and 2013 generated an additional $700 million in mineral exploration investment in South Australia.[xxxv] In 2017, additional grants totalling $24 million have also encouraged further development.[xxxvi] The market's view is that this has been very effective in unlocking marginal development activity within SA.

The Accelerated Discovery Initiative (ADI) has also provided co-funding opportunities to drive development and, stimulate growth and innovation in the State's resource sector. The funding commitment totalled $10 million over 2019-2020.[xxxvii]

C.3.2. How is community social license built in the resources sector?

In South Australia, the increasing proximity of resources and the rise in agricultural activity has magnified community concerns about resources activity. In South Australia, the *Petroleum and Geothermal Energy Act 2000* (SA) (PGE) and the *Petroleum and Geothermal Energy Regulations 2013* contains basic provisions for consultation.

On regulated activities, Part 12 of the PGE requires an environmental impact report to be provided by the licensee. The objectives of this are to ensure the adverse impact is properly managed and reduced as far as reasonably practicable. The Regulations specify that information about consultation that have occurred must be included in the report. However, it does not mandate this consultation. Interested persons are able to make submissions on the environmental impact report and the Minister must take these into account. The length of public consultation depends on the impact level classification. Low impact activity will entail consultation only between government agencies whereas higher impact activity will require a public consultation process.

Prior to entering land, notice of entry is required at least 21 days before. The PGE Act also contains provisions for disputed entry and compensation. Owners of land receive security through requirement for mediation and the ability to apply to the Warden's Court for dispute resolution.

South Australia has a dedicated 'Multiple Land Use Policy Framework'[xxxviii] to facilitate best-practice engagement for land use. This framework sets out guidance for engagement with all relevant stakeholders including landowners. Resource companies involved in land use projects are encouraged to use this framework and ensure their processes are consistent with the guiding principles and mechanisms.

A 2020 study undertaken by the Gas Industry Social and Environmental Research Alliance (GISERA) in the South-East region of South Australia investigated the potential community wellbeing impacts of onshore conventional gas development.[xxxix] The identified areas needed for a social license to operate were trust in the industry, procedural fairness and, quality of relationship with the company. The study showed that perceptions of government authorities to hold gas companies accountable were modest. Engagement through the frameworks provided, in addition to the regulations, is key to shaping trust in the conventional gas industry in South Australia.

C.3.3. How does the state minimise risk to improve outcomes from the environment, public safety and amenity as they relate to petroleum development?

The *Petroleum and Geothermal Energy Regulations 2013* cover operational components to minimise risk and detail operational issues with drilling and wells. They contain provisions for reporting on serious incidents related to public safety or environmental damage. Fitness-for-purpose assessments are prescribed by the Regulations[xl] with further guidance provided in the Fitness-for-purpose assessment reporting guidelines.

Under Part 12 of the PGE Act, guidelines for environmental impact classification are provided to establish the criteria for an environmental impact report.[xli] The provisions in these guidelines enable risk minimisation through the clarity of information provided to the Minister prior to approval of processes and commencement of operations. Frameworks related to well evaluation, completion and abandonment exist and annual reporting requirements also outline the expectations for resource companies to limit public safety risks.[xlii]

C.4. Northern Territory

C.4.1. How does the Territory encourage onshore resource exploration and development?

The *Northern Territory Petroleum Act 1984* details the process for the release of blocks and the application for exploration permits (Part 2, Division 2). The Minister must publish a notice about new blocks available that invites applications for the grant of an exploration permit. Applications for the block are reviewed by the Minister.

In order to encourage resource companies to produce applications for new blocks, the Northern Territory Government developed an initiative called "Resourcing the Territory" (2018-2022).[xliii] This initiative involves a range of pre-competitive geoscience, investment attraction and exploration stimulus programs designed to support resources exploration. It follows the $23.8 million Creating Opportunities for Resource Exploration (CORE) initiative (2014-2018) which allocated $2 million per annum to assess the potential for shale gas in the Northern Territory.[xliv]

C.4.2. How is community social license built in the resources sector?

In recent decades, the demand for assurances regarding appropriate regulation has increased in the Northern Territory. In order to address community concerns related to the onshore shale gas industry in the NT, at least one inquiry into the industry has been commissioned by the last three NT Governments. Submissions expressed a lack of confidence in the regulatory framework and its ability to ensure that industry development occurs in line with community expectations.[xlv] As a result, new regulations and frameworks have been developed in response to inquiry recommendations.

The *Petroleum (Environmental) Regulations 2016* implemented recommendations that require stakeholder engagement in the preparation of an EMP. Stakeholders are persons or bodies whose rights or activities may be directly affected by the environmental impacts or risks of the regulated activity.

Based on recent inquiries, stakeholder engagement, in particular across the environmental domain, is recognised as a critical element of a successful project prior to commencement. As a result, the *Petroleum Regulations 2020* require that an interest holder must not commence regulated operations except in accordance with an approved access agreement. An access agreement is not required to be entered into with a native title holder or registered native title claimant. There is a separate process in this case which is explored further in the section C.6. A 2018 inquiry into fracking in the NT recommended the development of social impact management plans.

Other measurers undertaken by the NT Government for establishing and retaining social license are the maintenance of pastoralists rights (*NT Pastoral Land Act 1992*) and support of local industry and workforce benefits (*Territory Benefits Policy*).

The NT Government's *'Building the Northern Territory Industry Participation Policy'* (now replaced by the *'Territory Benefits Policy')* requires the establishment of an industry participation plan. This has previously provided social and economic benefits to resource companies such as Jemena in their Northern Gas Pipeline Project.[xlvi] The policy required the establishment of a plan which supports local business participation in projects and an enhancement of Territory business and industry capacity. Feedback from local stakeholders suggested that Jemena's approach to social engagement is a model for successful community outcomes. The new Territory Benefits Policy does not apply to Government procurement but does apply to private sector projects under specific conditions.[xlvii] Frameworks for social impact assessments of shale gas development in the NT have also been developed.[xlviii]

In line with the recommendations of the '*Final report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory*', the Strategic Regional Environmental and Baseline Assessment (SREBA) framework was developed. A SREBA can create greater clarity and confidence in the community through the consideration of social, cultural and economic domains.

A key regulatory measure to support social license includes maintaining the rights of Aboriginal persons (*Land Rights (NT) Act 1976, Native Title Act 1993, NT Aboriginal Sacred Sights Act*). This measure is discussed in more detail below.

C.4.3. How does the state minimise risk to improve outcomes from the environment, public safety and amenity as they relate to petroleum development?

The *Petroleum Environment Regulations 2016* is the main regulatory framework that prescribes the requirements for environmental risk assessment. It requires that where interested holders propose to carry out a regulated activity, the following occurs:

- assessment of the environmental impact
- stakeholder engagement in preparation of an EMP.

The Minister must approve all activities that may have an impact on the environment. The EMP must demonstrate that the environmental risks and impacts of the activity will be reduced to a level that is as low as reasonably practicable and acceptable. The Minister must take into consideration any comments from interested parties within 28 days from release.

The regulation prescribes the *Code of Practice: Onshore Petroleum Activities in the NT,*[xlix] which provide minimum standards for surface activities, well operations, methane emissions and water management. In providing an EMP as required by the Regulations, the resource company must demonstrate how the requirements of this code will be met. The details of WOMPs are also set out in this code of practice.

The *Schedule of Petroleum Onshore requirements*[l] also specifies safety requirements including Safety Management Plans, approvals of well activities, and production operations. This Schedule includes many clauses which are targeted toward minimising risk to public safety.

C.5. New South Wales

C.5.1. How does the state encourage onshore resource exploration and development?

The *Mining Act 1992* (NSW) seeks to encourage discovery and ecologically sustainable development of mineral resources in NSW. The *NSW Minerals Strategy* also provides a roadmap to maximise NSW resources. The NSW Government also has significant geoscience programs in place for mineral exploration. However, the 2019 Fraser Institute's Annual Survey of Mining Companies found that NSW had the lowest investment attractiveness index score and the lowest policy perception index score of all Australia jurisdictions.[li]

The *Petroleum (Onshore) Act 1991* contains provisions for exploration and production activity in NSW. Together with the *Mining Act 1992*, this legislation details the requirements for land access agreements. Unlike other states, land access agreements must be negotiated prior to any exploration activity taking place, even if the activity is unlikely to impact the land. This may assist in encouraging landholders to engage in early communication with project proponents. However, it also increases the initial costs of exploration - therefore potentially reducing the level of investment.

While the State does run the successful 'New Frontiers Cooperative Drilling' program, these grants do not apply to the petroleum sector and are predominantly for copper and gold exploration.[lii]

C.5.2. How is community social license built in the resources sector?

Effective community engagement is crucial to obtaining social license to operate and avoiding lengthy and costly delays in operation. Community consultation can provide resource companies with an opportunity to take community concerns into account in their operation and inform communities of project benefits. While there is incentive for resource companies to build social license, regulations and guidelines can also assist. The NSW Government has guidance on social impact assessments and how to engage with communities.

In 2012, the NSW government the Strategic Regional Land Use Policy, with the purpose of better managing the potential conflicts arising from the proximity of mining and coal seam gas activity to high quality agricultural land. The adjacent initiatives include:

- introduction of the Gateway process which introduces an upfront, scientific assessment of State significant mining and coal seam gas proposals on the State's strategic agricultural land
- establishment of the independent Mining and Petroleum Gateway Panel, comprising experts in the fields of hydrogeology, mining and petroleum, and agricultural science, to oversee the Gateway process
- introduction of coal seam gas exclusion zones which prohibit coal seam gas activity in and within 2 kilometres of residential areas across the State, and the North West and South West Growth Centres of Sydney
- Strategic Regional Land Use Plans for the Upper Hunter and New England North West regions of the State have been released.[liii]

In addition, a code of practice[liv] regarding community consultation was published in 2016 that sets out mandatory community engagement requirements for exploration activities. Any prospective tenements

after the publication must meet the conditions of this Code of Practice. For applications prior to publication, requirements may exist through Landholder and Community Liaison Program requirements. Before commencing activity, authority holders must conduct a risk assessment which considers any threats and opportunities for community engagement.

There is requirement for a community consultation strategy that includes several factors, notably a description of the expected mechanism of engagement and mechanisms for review of the strategy. The title holder is required to report annually on the community consultation strategy and this report must include details of community feedback and how feedback raised has been responded to. Community consultative groups consisting of community members, project members and the local government can also be required for major projects.

The NSW Resources Regulator also publishes updates on rehabilitation progress, enforceable undertakings and outcomes of compliance priority programs. This has helped improve community confidence in the regulation of the sector.[lv]

C.5.3. How does the state minimise risk to improve outcomes from the environment, public safety and amenity as they relate to petroleum development?

The NSW Government takes a risk-based approach to environmental impact assessments to align the focus and effort of investigations with the associated risk level. Guidelines indicate that matters will be categorised as a 'key issue' (where detailed assessment will be required) or 'other issue' (where previous study has occurred, or limited assessment is expected). The outcome-based conditions outline criteria that must be complied with to achieve an appropriate environmental outcome, but do not dictate how a company should achieve these outcomes. This is in order to reduce the potential for constrained innovation in the resource sector. This approach is considered to be leading practice in reducing costs to industry and government, while also developing better environmental outcomes.

Any petroleum production is seen as a 'State significant development' and as such, development consent must occur under the *Environmental Planning and Assessment Act 1979* before producers are granted a petroleum production lease. As well as the environmental impact assessment, high intensity activities are subject to a Review of Environmental Factors. This review addresses all possible impacts of the project – including the environment and community.

Risk to public safety is minimised through requirements under the *Work Health and Safety (Mines and Petroleum Sites Act 2013)*. This Act specifies that all persons conducting a business or undertaking have a primary duty to ensure the health and safety of, workers they engage or activities they direct.

As a result of the 2014 *Independent Review of Goal Seam Gas Activities in NSW*, rehabilitation standards were introduced for exploration. Under the *Mining Act 1992*, the Regulator ensures that the title and associated rehabilitation security deposit are held until rehabilitation obligations are met. The NSW Regulator has a range of compliance and enforcement powers to ensure these requirements are upheld. [lvi]

C.6. Native title holders

One of the objectives of the Commonwealth *Native Title Act 1993* (Cth) (NTA) is to establish ways in which future dealings in land affecting native title ('future acts') may proceed and to set standards for those dealings. This includes a special right to negotiate (RTN) for holders and registered claimants of native title in relation to the grant of exploration leases. Some states including WA, NT and SA have also implemented alternative regimes to those prescribed by this Act.

Under the NTA, voluntary Indigenous Land Use Agreements (ILUAs) may be made between a native title group and others about the use of land and waters. In 2007, South Australia achieved the first conjunctive petroleum ILUA.

South Australia has specific land access agreements with native title holders and is considered to have a leading practice approach. The SA scheme differs from the *NTA* as low-impact exploration activity can be carried out as soon as notification occurs with no objection period. Where activity is expected to affect the rights and interests of native title groups, the project proponent, rather than the State, may initiate the negotiation. These reforms were pursued to provide more flexibility in the framework and encourage

exploration investment. This occurs under Part 9B of the *Mining Act 1971* (SA). Notices and land access agreement requirements are also specified in the *Native Title (South Australia) Act 1994*.

When agreements cannot be reached in SA, the Environment and Resources and Development Court is able to resolve this rather than the National Native Title Tribunal (NNTT). Through this, the SA Government's intention is to reduce negotiation time compared to other States and Territories.

However, the framework also involves self-assessment by resource companies. This carries significant risks and has the potential to hinder good relationships with stakeholders.

In the Northern Territory, the *Petroleum Act 1984* contains provisions for considering native title interests. These interests include way of life, culture and traditions of Aboriginal landowners and traditional custodians. The *Aboriginal Land Rights (Northern Territory) Act* 1976 gives traditional owners the right to prohibit exploration on their land. As a result, the cost of negotiating agreements can be significant which may present a barrier to resource development. In 2018, the NT Fracking Inquiry highlighted that Aboriginal people from communities almost universally expressed concern about the development of any onshore shale gas industry on their land. Damage to sacred sites or disruption to traditional practices may lead to feelings of disempowerment and loss of control – both which could have lasting impacts on future generations. As a result, native title holders are a significant stakeholder for consultation.

The NTA has three main processes for grants of tenement: expedited procedure, future act agreements and ILUAs. The expedited procedures enable low-impact activities that are unlikely to impact native title groups' activities to take place without negotiation. In WA, all exploration and prospecting licences in the State are covered by the expedited procedures in the Act even though some license applications will necessarily involve impacts to native title groups' activities or risk damage to native title land. This stance occurs as impact of activity on native title land is believed to be covered under WA's heritage laws. Despite the decrease in delays, the tendency in WA towards the expedited process for all exploration licenses can result in delays as objections from native title holders or claimants may go directly to the National Native Title Tribunal without the ordinary period of negotiation present under the Future act agreement process. A determination in the NNTT can potentially involve a significant delay before the hearing. However, as the expedited procedure can be the quickest option for resource companies, it may encourage petroleum development and investment in the State.

Due to variance in contexts and experiences between the States and Territories, there is no single common or clearly leading practice for approaches to native title.

C.7. Commonwealth

Part 6.9 of the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* establishes the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA). NOPSEMA has functions in relation to the occupational health and safety of persons engaged in offshore petroleum operations, offshore GHG storage operations, the structural integrity of facilities, wells, and well-related equipment, and environmental management. Importantly, NOPSEMA as the offshore legislative framework's sole regulator is independent of the administrative, policy, and decision-making arms of the framework.

NOPSEMA regulates all offshore areas in Commonwealth waters, which comprise those areas beyond the first three nautical miles of the territorial sea. This includes the Ashmore and Cartier offshore territories and offshore areas adjacent to all states and the Northern Territory.

NOPSEMA also regulates all offshore areas in coastal waters where a state or territory has conferred regulatory powers and functions. In 2013, Victoria conferred its functions for the regulation of health and safety and structural integrity on NOPSEMA. In jurisdictions where powers to regulate are not conferred, regulatory responsibilities remain with the relevant state or territory.

C.7.1. How does the Commonwealth encourage onshore resource exploration and development?

Each year, the Australian Government releases areas in Australian waters for oil and gas exploration and invites companies to bid for the opportunity to invest in oil and gas exploration. The annual offshore

petroleum exploration acreage release is part of the government's strategy to promote offshore oil and gas exploration. Oil and gas companies can participate in the acreage release process through either bidding or suggesting areas for future exploration in the nomination process, with nomination generally indicating a strong interest in exploring the area.

The government then undertakes a consultation process which involves seeking feedback from anyone who has an interest in the area or that can provide specific information relevant to exploration in that area. This consultation informs the Joint Authorities –consisting of the responsible Federal Minister and the relevant state or Northern Territory Minister – who will consider and endorse release areas.

Once an area is released, the Joint Authorities invite companies to bid on the release areas. National Offshore Petroleum Titles Administrator (NOPTA) then assesses the bids against:

- application criteria in the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (Cth)
- requirements of the Australian Government Gazette Notice invitations to bid
- the expectations set out in NOPTA's offshore petroleum and greenhouse gas storage guidelines.[lvii]

NOPTA provides advice to the Joint Authorities who then decide which bids are successful. Successful bidders are offered an offshore petroleum exploration permit. NOPTA grants these permits on behalf of the relevant Joint Authority for a period of 6-years. During this time, primary and secondary work programs and a condition of the title, require the titleholder to commence and complete key activities agreed.

Following the granting of the exploration permit, there are three potential pathways for the titleholder. The titleholder can apply to renew their exploration permit for up to 50% of the initial title area. The remaining 50% of the permit area is relinquished and the renewal of the permit is for five years with a maximum of two renewals. Alternatively, the permit may be discontinued due to surrender, cancellation, or expiry.

In addition to offering oil and gas explorers an annual release of petroleum acreage for bidding, the Commonwealth offers oil and gas explorers open access to the Petroleum Data Repository. This is precompetitive geological and geophysical data and analysis provided by Geoscience Australia.

The government also ensures environmental approvals are conducted by a single regulatory authority, NOPSEMA, to reduce layers of red tape for businesses trying to develop offshore projects.

C.7.2. How is social license built in the resources sector by the Commonwealth?

CSIRO is Australia's national science agency that works with industries, governments and communities that are engaged with, or impacted by gas development. CSIRO is responsible for undertaking research on the mineral industry's social license in Australia and the socio-economic and environmental impacts of the natural gas industry. Through collaboration with industry partners, CSIRO has developed benchmarks for the social performance of the minerals industry that allow stakeholders to engage with each other on issues that matter and develop genuine trust-based relationships.

In 2011, the Gas Industry Social and Environmental Research Alliance (GISERA) was established by CSIRO to undertake independent quality assured research. GISERA is a collaboration between the Commonwealth Government, State Governments, the gas industry and CSIRO. Their research focuses on social and environmental topics that are of concern to the community including topics such as groundwater and surface water, biodiversity, land management, the marine environment, human health and socio-economic impacts.

GISERA aims to achieve credibility, trust and respect from all stakeholders through open and transparent communication of its research and related activities. Since GISERA began in 2011, over 1,200 engagements with a wide range of stakeholders have been conducted across mainland Australia through forums such as workshops, seminars, conferences and technical briefings. The research is published on their website to allow the community to investigate, inspect, criticise, question and understand the work that they do.

GISERO's work encourages a better understanding and perspective of the effects of the natural gas industry on Australia's society, economy and environment. This benefits all Australian communities in onshore gas regions and informs governments and policy makers to enable better decision making.

C.7.3. How does the Commonwealth minimise risk to improve outcomes from the environment, public safety and amenity as they relate to petroleum development matters in the Commonwealth jurisdiction?

NOPSEMA administers three permissioning documents through the application of an objectives-based offshore legislative framework: the Well Operations Management Plan (WOMP), the Environment Plan (EP), and the Safety Case.

Before the commencement of offshore activities, responsible parties are required to obtain a range of 'permissions' from NOPSEMA, which may include OHS, well integrity, and environment permissions. The permissions are obtained by developing and submitting a document to the regulator outlining the hazards and risks associated with the work and the approach the responsible party will take to reduce the hazards and risks to "As Low As Reasonably Practicable" (ALARP) from a safety and well integrity perspective, and "Acceptable" from an environment perspective. It is also important to recognise that all permissioning documents are not the same. For example, one WOMP does not necessarily equate to one well – a WOMP could apply to multiple wells.

NOPSEMA's Inspection Policy states that "inspections are part of NOPSEMA's function under the OPGGS Act to develop and implement effective monitoring and enforcement strategies to secure compliance by persons with their obligations under the OPGGS Act and supporting regulations".

NOPSEMA's processes recognise the need for adoption of a risk-based inspection regime. Inspections appear to be risk-based centred on the knowledge and research of the inspector, with a sampling approach to risk control measures and management system elements adopted, taking into account other relevant risk factors (such as, previous performance and compliance history of titleholders informed by inspections, investigations, incident history and other safety and environmental performance factors, industry incident trends and responses to recommendations from previous inspections). The philosophy of "find one, fix many" is a key tenet of the inspection regime.

Table C.1: The three types of permissioning documents

Type	Description
Safety case	A safety case is a permissioning document developed by an operator of a facility, in consultation with its workers, which identifies the hazards and risks, describes how the risks are controlled, and describes the Safety Management System (SMS) in place to ensure the controls are effectively and consistently applied In the safety case regime, it is the operators' responsibility to assess its own processes, procedures, and systems to identify and evaluate risks and implement the appropriate controls – ensuring risk is reduced to ALARP The key focus of a safety case is on the critical aspects of the facility that can cause a major accident. An operator's safety case must consider both technical and managerial risk factors that could increase the risk of harm Once the risks have been understood, the operator must define appropriate performance standards for safe operation in relation to its MAEs NOPSEMA assesses safety cases and 'accepts' the document if it is satisfied the arrangements demonstrate the risks will be reduced to ALARP Once 'accepted', NOPSEMA monitors compliance through inspections with the permissioning documents and listed NOPSEMA laws.

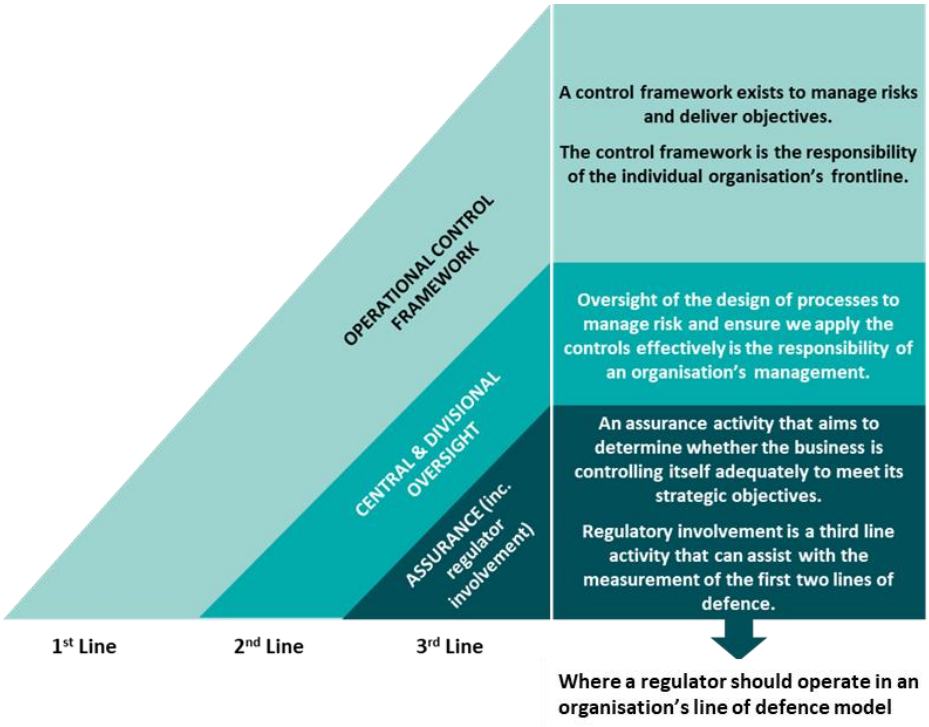
Well Operations Management Plan (WOMP)	The WOMP defines the titleholder's commitment of compliance to Part 5 of the *Offshore Petroleum and Greenhouse Gas Storage (Resource Management and Administration) Regulations 2011* (Cth) (the RMA Regulations) The WOMP sets out to describe the technical and managerial aspects of managing the risks to integrity of the well, and can be applicable to all or any part of the lifecycle of a well At any stage of the well's lifecycle a WOMP must be in force and active up until the accepted permanent abandonment of the well The WOMP also describes barrier management throughout the lifecycle of the well, the application and adherence to the Well Operations Management Plan defined Standards, an overview of the well activities throughout the lifecycle including construction, testing, monitoring, suspending and abandoning and the relevant performance outcomes. It includes a well specific source control plan and blow out modelling and discussion around worst case discharge NOPSEMA assesses WOMPs and 'accepts' the document if it is satisfied the arrangements demonstrate the risks will be reduced to ALARP Once 'accepted', NOPSEMA monitors compliance through inspections with the permissioning documents and listed NOPSEMA laws.
Environment Plan (EP)	The scope of an EP is determined with regard to the nature and scale of the proposed activity and the identified impacts on and risks to the receiving environment. The *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009* (the **Environment Regulations**) also detail required content for an EP and includes (for example): A description of the activity, including location and proposed timetable A description of the environment that may be affected by the activity Details and an evaluation of the environmental impacts and risks Details of the control measures that will be in place to reduce the environmental impacts and risks of the activity to a level that is acceptable and ALARP Environmental performance standards and outcomes (and associated measurement criteria) An implementation strategy describing the titleholder's environmental management system, roles and responsibilities for implementing the EP and the monitoring, recording and auditing that will be undertaken to review environmental performance. The titleholder is also required to provide an Oil Pollution Emergency Plan that provides adequate arrangements for responding to and monitoring oil pollution, including financial assurance of funds to respond to the emergency NOPSEMA assesses EPs and 'accepts' the document if it is satisfied with the contents of the EP (e.g. the arrangements demonstrate the risks will be reduced to ALARP and are acceptable) Once 'accepted', NOPSEMA monitors compliance through inspections with the permissioning documents and listed NOPSEMA laws.

C.8. Conclusion and Best Practice

The diagram below outlines the three lines of defence (3LOD) model that is commonly used in risk management and assurance activities. The model articulates 3LOD that prevent a risk event occurring as well as providing an organisation's decision-makers with information to enable robust and well-considered action. The figure shows, through the size of the 'wedge', where the majority of effort should be applied by an organisation – with the third line being the smallest.

Conceptually, in a 3LOD model, regulator involvement, whether it is audits, supports education, or conducts inspections or investigations sit in the third line and help inform the first two lines.

Figure 1 - Three lines of defence model



Source: Deloitte

It is primarily the responsibility of industry – and specifically those charged with the 1LOD of front-line operations responsibility to implement measures that reduce risk and the propensity for harm within its business. The 1LOD has a strategic control framework to promote safe systems of work and safe workplaces. NOPSEMA / Regulators can provide guidance, influence decision-makers, enforce specific actions to be undertaken or prosecute those that they have reasonable cause to believe have failed to live up to their legislative duty and community expectations, but it can only be a third line of defence. Primary responsibility remains with organisational management.

C.9. Conclusion

There are a variety of approaches taken to petroleum regulation across Australia, ranging from prescriptive to objectives based. In general, an objectives-based approach is considered to impose the lowest cost on industry, while more prescriptive requirements are more costly but provide more assurance. In addition, a risk-based approach to the inspection regime allows operators and regulators to focus time and resources on the issues that are likely to present the most risk, and avoids unnecessary time spent on immaterial risks. Other jurisdictions have also acknowledged that an objectives-based approach generally reduces the risk of constrained innovation.

Appendix D Endnotes

[i] Parliament of Victoria, *Inquiry into onshore unconventional gas in Victoria* (2015).

[ii] *Petroleum Act 1998* (Vic) s 13.

[iii] *Petroleum Act 1998* (Vic) s 129.

[iv] Australian Energy Regulator, *Victorian gas market average daily weighted prices by quarter* (September 2020).

[v] Australian Energy Market Operator, *Victorian Gas Planning Report* (March 2021).

[vi] Australian Energy Market Operator, *Victorian Gas Planning Report* (March 2020).

[vii] Department of Industry, Science, Energy and Resources, *Australian Energy Statistics* (October 2020).

[viii] Grattan Institute, *Flame out: the future of natural gas* (November 2020).

[ix] Australian Energy Market Operator, *Victorian Gas Planning Report* (March 2020).

[x] Australian Energy Market Operator, *Victorian Gas Planning Report* (March 2020).

[xi] Bloomberg, *The Cleanest Fossil Fuel is Set for a Post-Pandemic Rebound* (2020) <https://www.bloomberg.com/news/articles/2020-12-31/lng-is-back-on-path-to-global-dominance-after-pandemic-pause>.

[xii] *Petroleum Act 1998* (Vic) s161(3).

[xiii] Commissioner for Better Regulation, *Getting the Groundwork Right* (2017).

[xiv] Department of Finance, *Australian Government Cost Recovery Guidelines* (2014).

[xv] Department of Finance, *Australian Government Cost Recovery Guidelines* (2014).

[xvi] *Petroleum Act 1998* (Vic) s.179.

[xvi] Queensland Government, *2020 Queensland exploration program* (2020).

[xvi] D, Gagliardi, *Mediation in the coal-seam gas industry: Improvements made for local stakeholders to grant a social licence* (2016) 27 *Australian Dispute Resolution Journal* 94.

[xvi] University of Queensland Centre for Natural Gas, *Natural gas social licence: how Queensland stacks up* (2020).

[xvi] Australian Petroleum Production & Exploration Association, *Submission to the Review of Commonwealth Petroleum Resource Taxes* (2017).

[xvi] R, Williams and A, Walton, *The Social Licence to Operate and Coal Seam Gas Development* (2013).

[xvi] Business Queensland, *Legislative obligations and safety requirements for petroleum and gas*, Queensland Government (2020) <https://www.business.qld.gov.au/industries/mining-energy-water/resources/safety-health/petroleum-gas/regulation/standards-codes>.

[xvi] Resources Safety and Health - Department of Natural Resources, Mines and Energy, *Performance Accountability Framework 2019-19 Self-Assessment Report* (2019).

[xvii] Department of Finance, Services and Innovation NSW, *Guidance for regulators to implement outcomes and risk-based regulation* (2016).

[xviii] Department of Finance, Services and Innovation NSW, *Guidance for regulators to implement outcomes and risk-based regulation* (2016).

[xix] OECD, *Reviews of Regulatory Reform: Regulatory Policies in OECD Countries* (2002).

[xx] Queensland Government, *2020 Queensland exploration program* (2020).

[xxi] D, Gagliardi, *Mediation in the coal-seam gas industry: Improvements made for local stakeholders to grant a social licence* (2016) 27 *Australian Dispute Resolution Journal* 94.

[xxii] University of Queensland Centre for Natural Gas, *Natural gas social licence: how Queensland stacks up* (2020).

[xxiii] Australian Petroleum Production & Exploration Association, *Submission to the Review of Commonwealth Petroleum Resource Taxes* (2017).

[xxiv] R, Williams and A, Walton, *The Social Licence to Operate and Coal Seam Gas Development* (2013).

[xxv] Business Queensland, *Legislative obligations and safety requirements for petroleum and gas*, Queensland Government (2020) <https://www.business.qld.gov.au/industries/mining-energy-water/resources/safety-health/petroleum-gas/regulation/standards-codes>.

[xxvi] Resources Safety and Health - Department of Natural Resources, Mines and Energy, *Performance Accountability Framework 2019-19 Self-Assessment Report* (2019).

[xxvii] Department of Mines, Industry Regulation and Safety, *Exploration Incentive Scheme (EIS)* (2021) <http://www.dmp.wa.gov.au/Geological-Survey/Exploration-Incentive-Scheme-1428.aspx>.

[xxviii] Department of Jobs, Tourism, Science and Innovation, *WA Domestic Gas Policy* (2020) <https://www.wa.gov.au/government/publications/wa-domestic-gas-policy>.

[xxix] DMIRS, *Petroleum Royalties* (Webpage, 2021) <https://www.dmp.wa.gov.au/Petroleum/Royalties-1578.aspx>.

[xxx] R, Bruce, *Five year petroleum acreage release strategy* (2017).

[xxxi] WA Government, *WA Domestic Gas Policy* (2021) < https://www.wa.gov.au/government/publications/wa-domestic-gas-policy>.

[xxxii] Brueckner et al, *The civic virtue of developmentalism: on the mining industry's political licence to develop Western Australia* (2014) 32(4) *Impact Assessment and Project Appraisal* 315.

[xxxiii] DMIRS, *Strategic Plan Towards 2024* (2020) <https://www.commerce.wa.gov.au/sites/default/files/atoms/files/towards2024_0.pdf>.

[xxxiv] Australian Energy Council, *Review of South Australia's Energy Plans* (2018) < https://www.energycouncil.com.au/media/11669/20180206-sa-energy-plan-review-final.pdf >.

[xxxv] Economics Consulting Services, *The Evaluation of the Plan for Accelerating Exploration (PACE)* (2014).

[xxxvi] Department of Energy and Mining, *Applications now open for $24 million in gas extraction grants* (Webpage, 2021) < https://www.energymining.sa.gov.au/minerals/latest_updates/applications_now_open_for_$24_million_in_gas_extraction_grants >

[xxxvii] Department of Industry, Science, Energy and Resources, *Resources Sector Regulation Draft Report* (2020) < https://www.pc.gov.au/inquiries/completed/resources/draft/resources-draft-overview.pdf >.

[xxxviii] Government of South Australia, *South Australian Multiple Land Use Framework* (2017) < http://assets.yoursay.sa.gov.au.s3.amazonaws.com/production/2017/02/14/02/04/54/0b18f662-4c27-42fc-9b35-37500e09a5f7/South%20Australian%20Multiple%20Land%20Use%20Framework.pdf >.

[xxxix] CSIRO Gas Industry Social and Environmental Research Alliance, *Community wellbeing and local attitudes to conventional gas development in the South-East of South Australia* (2020), < https://gisera.csiro.au/wp-content/uploads/2020/05/GISERA-Community-attitudes-south-east-SA_final-6.pdf >.

[xl] Petroleum and Geothermal Energy Regulations 2013, s86A.

[xli] Department for Energy and Mining, *Criteria for classifying the level of environmental impact of regulated activities (*2019) < https://sarigbasis.pir.sa.gov.au/WebtopEw/ws/samref/sarig1/image/DDD/PGRG004.pdf >.

[xlii] Department for Energy and Mining, *Guidelines* (2020) < https://www.petroleum.sa.gov.au/regulation/policies-and-guidelines/guidelines >.

[xliii] Northern Territory Government, *About Resourcing the Territory* (September 2020) < https://resourcingtheterritory.nt.gov.au/about >.

[xliv] Northern Territory Government, *Previous Initiatives* (2019) < https://resourcingtheterritory.nt.gov.au/about/previous-initiatives >.

[xlv] Pepper et al., *The Scientific Inquiry into Hydraulic Fracking in the Northern Territory* (2018) < https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286 >.

[xlvi] Department of Business, *Building Northern Territory Industry Participation Policy* (2020) < https://industry.nt.gov.au/__data/assets/pdf_file/0007/663586/BNTIP_policy.pdf >.

[xlvii] Department of Trade, Business and Innovation, *Territory Benefit Policy* (2019) < https://industry.nt.gov.au/__data/assets/pdf_file/0008/664127/territory-benefit-policy.pdf >.

[xlviii] University of Queensland Centre for Social Responsibility in Mining, *A framework for Social Impact Assessment of shale gas development in the Northern Territory* (2018) < https://frackinginquiry.nt.gov.au/inquiry-reports?a=476740 >.

[xlix] Northern Territory Government, *Code of Practice: Onshore Petroleum Activities in the Northern Territory* (2019) < https://depws.nt.gov.au/__data/assets/pdf_file/0011/705890/code-of-practice-onshore-petroleum-activity-nt.pdf >.

[l] Northern Territory Government Department of Primary Industry and Resources, *Schedule of Onshore Petroleum Exploration and Production Requirements* (2019) < https://nt.gov.au/__data/assets/pdf_file/0004/295906/schedule-of-petroleum-onshore-requirements.pdf >.

[li] Fraser Institute, *Annual Survey of Mining Companies 2019* (2020) < https://www.fraserinstitute.org/sites/default/files/annual-survey-of-mining-companies-2019.pdf >.

[lii] New South Wales Government Mining, Exploration and Geoscience, *New Frontiers Cooperative Drilling* (2020) < https://www.resourcesandgeoscience.nsw.gov.au/miners-and-explorers/programs-and-initiatives/new-frontiers-cooperative-drilling >.

[liii] Strategic regional land use policy, NSW Government, 2012, at <https://www.resourcesandgeoscience.nsw.gov.au/landholders-and-community/coal-seam-gas/codes-and-policies/strategic-regional-land-use-policy>

[liv] New South Wales Government Department of Industry, Resources & Energy, *Exploration code of practice: Community consultation* (2016) < https://www.resourcesandgeoscience.nsw.gov.au/miners-and-explorers/enforcement/community-consultation-guidelines >.

[lv] Australian Government Productivity Commission, *Resources Sector Regulation – Study Report* (2020) < https://www.pc.gov.au/inquiries/completed/resources/report/resources.pdf >.

[lvi] NSW Government, *Final Implementation of the NSW Gas plan* (2016) < http://www.resourcesandenergy.nsw.gov.au/__data/assets/pdf_file/0020/581600/FINAL-Implementation-of-the-NSW-Gas-Plan.pdf >.

[lvii] National Offshore Petroleum Titles Administrator, *Offshore petroleum and greenhouse gas storage guidelines* (2020) < https://www.nopta.gov.au/guidelines-and-factsheets/offshore-petroleum-guidelines.html >.