



Submission to

Parliament of Victoria's

Standing Committee on Environment and Planning

Inquiry into Unconventional Gas in Victoria

July 2015

The Victorian Farmers Federation

The Victorian Farmers Federation (VFF) is Australia's largest state farmer organisation and only recognised consistent voice on issues affecting rural Victoria. The VFF welcomes the opportunity to submit to the Standing Committee on Environment and Planning's Inquiry into Onshore Unconventional Gas in Victoria.

Victoria is home to 25 per cent of the nation's farms. They attract neither government export subsidies nor tariff support. Despite farming on only three per cent of Australia's available agricultural land, Victorians produce around 30 per cent of the nation's agricultural product. The VFF represents the interests of our State's dairy, livestock, grains, horticulture, flowers, chicken meat, pigs and egg producers.

The VFF consists of a nine person Board of Directors, with seven elected members and two appointed directors, a member representative General Council to set policy and eight commodity groups.

Farmers are elected by their peers to direct each of the commodity groups and are supported by Melbourne-based staff.

Each VFF member is represented locally by one of the 230 VFF branches across the state and through their commodity representatives at local, district, state and national levels. The VFF also represents farmers' views on hundreds of industry and government forums.



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1 Background

Given lack of knowledge, moratorium should continue until 2020

The VFF's Mining and Petroleum Policy calls on the State Government to extend the present moratorium on exploration and extraction of onshore gas until 2020.

At present there is a considerable lack of knowledge of the risks associated with unconventional gas mining, particularly on Victoria's water resources. Given the uncertainty, the VFF believes a moratorium should remain in place until scientific evidence proves it's safe.

VFF members have identified their top environmental concern with an unconventional gas industry as the potential for cross aquifer water contamination. Therefore, robust regulatory provisions need to be in place before an unconventional gas industry could be supported by farmers.

Knowledge requirements

There is a lack of Victorian specific scientific information demonstrating that an unconventional gas industry could be safely managed.

The knowledge requirements for the agricultural sector should cover any environmental, public health and water impacts associated with unconventional gas activities. State water science research and observational bore monitoring programs should be supported and continued with ongoing funding. It's important that the State Government establishes water and environmental baseline data from which to measure any risks.

In 2010, VAGO found that State Governments have progressively failed to adequately fund the observation bore network – as it's seen as discretionary funding¹.

The previous Coalition Government commissioned a study in June 2014 to examine the potential impacts of onshore gas developments – CSG, tight & shale - on the state's groundwater resources. These water science studies were due to be completed in May this year (2015). However, given the breadth of the project and lack of knowledge on groundwater the VFF doubts it will deliver any definitive answers and certainty on the groundwater impacts of onshore gas developments.

This submission calls on the State Government retain the present moratorium until the knowledge gaps have been filled. The Government should provide time for the agricultural

¹ Victorian Auditor-General Report into Sustainable Management of Victoria's Groundwater Resources, October 2010

sector to consider and respond to water science studies being prepared at the Commonwealth and State levels on both the Otway and Gippsland Basins.

Given the lack of information around the risks to environment, land and water, the current regulatory system does not encompass the necessary tools and safeguards for an unconventional gas industry.

Farmers' Rights

There are opportunities to strengthen agricultural landholders' rights and build awareness of these rights when negotiating with mining companies. Landholder rights are often not well understood by the agricultural sector as a recent VFF survey has found. Also, farmers often feel compromised in the negotiation processes with mining companies as existing legislation does not provide a level playing field in negotiating access agreements for the use of agricultural land.

The VFF's Mining and Petroleum Policy asks for agricultural producers to be given the right of veto and to receive commercial payments for their time and use of their assets.

The lack of knowledge in the agricultural sector of existing landholder rights means that there is an opportunity to better educate the community on legislative provisions for negotiation and compensation agreements. It also demonstrates there is a lack of understanding of what farmers can ask to be included in written agreements with mining companies.

As unconventional gas may impact groundwater quality and quantity for neighbouring properties, farmers believe that there should be increased adjoining landholder rights where offsite impacts are likely.

VFF members believe that neighbouring agricultural producers are often left out of the negotiation process with a mining operation however unconventional gas activities may result in regional environmental, water and landscape impacts.

Regulatory needs

The VFF believes that there are opportunities to improve the understanding of landholder rights and regulatory processes. Currently the regulation of unconventional gas activities is under two pieces of legislation, the Mineral Resources (Sustainable Development) Act 1990 (MRSDA) and Petroleum Act 1998, and this can create confusion.

As part of strengthening the regulatory framework the VFF sees an important role for the Mining Warden to play in arbitrating between mining companies and landholders for disputes over land access, compensation, and rehabilitation for exploration activities. As an impartial decision maker, the Mining Warden can offer an out of court means to resolve disputes, and provide independent advice to the Minister regarding mineral development issues.

Independent monitoring of water, land, and air must be undertaken by an adequately resourced authority before, during and after development of an unconventional gas mine.

Rehabilitation and long term legacy issues

There is considerable concern among VFF members about the potential legacy issues surrounding unconventional gas activities. In particular, any issues caused by abandoned or decommissioned wells and pipelines should be the responsibility of State Government to manage particularly where impacts are long term and unforeseen. Ongoing aquifer monitoring will be crucial in monitoring potential impacts on water quality from abandoned wells.

For onsite issues, it's important for landholders to have the right to sign off rehabilitation plans and also have the guarantee from Government that the farmer will not be detrimentally impacted in the longer term. The State Government should have ultimate responsibility for funding rehabilitation where the mining company no longer exists or damage is realised after the bond period expires.

1.1 VFF Policy Formation and VFF Member Views

This submission is based on VFF policy, member contributions and survey results of a sample of VFF membership.

The VFF Policy Principles on Mining and Petroleum have been developed through the VFF Policy Committee structure and annual conference process.

The VFF's Land Management Committee and Gippsland Mining and Gas Taskforce contribute to the development of the VFF Mining and Petroleum Policy, assist in the development of guidance material for VFF members and provide an avenue for members to report on issues they may be experiencing in their region with mining activities.

The VFF holds events across Victoria to engage locally with members. This has assisted the VFF in understanding consistent themes and regional differences within its membership.

The VFF has recently undertaken a survey of VFF members and results of this survey have been used in this submission. The survey is a reflection of individual member views rather than formulated and endorsed VFF policy.

1.2 The VFF's Mining and Petroleum Policy Principles

- Farmers should hold the power of veto over all mining, quarrying, oil and gas extraction on their agricultural land.
- There must be no long-term adverse off-site impacts from mining and petroleum developments. For example on water supply or quality.
- Landholders must receive appropriate commercial payments for all mining and petroleum activities on their land.
- The State Government should extend the present moratorium on issuing new onshore gas exploration licences and fracking, to include all types of onshore unconventional gas exploration and mining until 2020.
- Any water of suitable quality obtained from exploration of gas on farmland be made available for agricultural use subject to stringent regulatory requirements.
- Farmland must be rehabilitated to its previous productive use at the end of the life of a mining or petroleum development.
- Information on mining and petroleum issues must be made available to VFF members.
- The rights of landholders must be protected in minerals and petroleum legislation.
- Baseline information must be collected prior to the development of mineral or petroleum resources and independent monitoring must be undertaken during the development.
- In the case of land, air, or water contamination the onus should be on the mining or gas company to prove their activities are not causing the impacts.

2 Response to Terms of Reference

2.1 The prospectivity of onshore unconventional gas

TOR 1 the prospectivity of Victoria's geology for commercial sources of onshore unconventional gas

The VFF is not in a position to comment on whether there is coal seam gas, tight or shale gas and whether it's commercially viable to extract it.

2.2 Environmental Issues

TOR 2 the environmental, land productivity and public health risks, risk mitigations and residual risks of onshore unconventional gas activities

There is a significant lack of scientific information on the risks of onshore unconventional gas activities to the Victorian environment. This contributes to anxiety in the farming community regarding security of water quality and quantity, land productivity and viability of Victorian agriculture.

There is a large body of information that has been developed in other jurisdictions regarding the risks of unconventional gas extraction, including hydraulic fracturing, to water supplies.

There is concern that potential environmental risks are significant and there are no guarantees from the Victorian Government or the gas industry that these risks can be managed.

VFF members have responded to these uncertainties on the impacts of unconventional gas activities by calling for a moratorium on issuing licences for all types of unconventional gas exploration and mining until 2020.

There are concerns that an unconventional gas industry in Victoria will affect agricultural production, particularly in relation to its potential to cause land or water contamination from the chemical use in hydraulic fracturing and extraction processes.

Some VFF members are concerned that unconventional gas extraction presents unforeseeable longer term risks to the environment, land and water resources. Where unforeseen impacts do occur, the State Government should take responsibility for rehabilitation where the rehabilitation bond expires or the bond amount is inadequate.

A recent VFF survey showed the top environmental or health issue for members was the potential for aquifer cross contamination. This was followed by chemical use, no concern and then land contamination (see Table 1 on Page 7).

Table 1: Survey Result

Please identify your key concern in regard to the environmental and health impacts of onshore gas extraction (Choose one only).	Percentage
Aquifer cross contamination (leakage from a saline to fresh aquifer, via a gas well)	47%
Chemical use (fracking chemicals)	16%
Food safety	5%
Land contamination	9%
Land rehabilitation	4%
No concerns	13%
Public health	4%
Waste disposal	1%

The VFF recommends the State Government:

- 1. Extend the present moratorium on issuing new onshore gas exploration licences and fracking, to include all types of onshore unconventional gas exploration and mining until 2020.**
- 2. Adopt a precautionary principle approach to regulating unconventional gas activities until proven environmental safeguards are in place.**
- 3. Ensure the approval processes is transparent and accountable in relation to water and environmental impacts.**
- 4. Develop a best practice regulatory framework in consultation with industry and the community. A regulatory framework should include ongoing independent monitoring and respond to the level of risk.**
- 5. Invest in the development of Victorian baseline data to measure the potential impacts on an unconventional gas industry. Baseline assessments should include but not be limited to:**
 - a. aquifer and groundwater data such as location and extent, depth, pressure, composition (current chemical content);**
 - b. geophysical and topography information to monitor impacts (e.g. subsidence);**
 - c. air quality;**
 - d. surface water to monitor composition; and**
 - e. state of local and regional services and infrastructure.**

2.2.1 Water

There are significant concerns among VFF membership about the impact an unconventional gas industry would have on the quality and quantity of water available for agricultural production.

The recent survey of VFF members showed that the potential for aquifer cross contamination was the biggest area of concern (see Table 1 on Page 7).

In Victoria, water resources are fully committed in many regions and there are already conflicting demands for water licences.

Given competition for water there needs to be an improved knowledge of existing supply and demand.

The VFF lacks confidence in the ability of the State Government to adequately monitor Victoria's groundwater systems. In 2010 the Victorian Auditor General found²:

"The State Observation Bore Network (SOBN) is the main source of groundwater information, comprising around 2 500 groundwater bores. However, it cannot, by design, provide DSE or water corporations adequate information about groundwater stocks, extraction and recharge rates, or the interconnection between ground and surface water. Data gaps and the uncertainty about groundwater quality mean that DSE and water corporations cannot effectively monitor, plan and manage Victoria's groundwater resources."

And

"Over half the monitoring bores in groundwater management units provide DSE with adequate coverage to inform itself about groundwater levels, and the impact that extractions have on them. However, around 43 per cent of groundwater management units have inadequate or limited SOBN coverage. While this represents a nearly 10 per cent improvement since 2009, the lack of coverage continues to limit DSE's understanding of groundwater systems."

"In addition to SOBN coverage, the condition of bores is also problematic. Around 55 per cent of groundwater management units have key bores that are at risk of failure, in part due to their age. Consequently, understanding Victoria's groundwater system will improve with the staged upgrade and refurbishment of SOBN."

² Victorian Auditor-General Report into Sustainable Management of Victoria's Groundwater Resources, October 2010

The VFF has seen little evidence that the situation has improved since 2010, given progressive state governments have failed to adequately fund the observation bore network - it's seen as discretionary funding.

The previous Coalition Government commissioned a study in June 2014 to examine the potential impacts of onshore gas developments – CSG, tight & shale - on the state's groundwater resources.

These water science studies were due to be completed in May this year (2015). However given the breadth of the project and lack of knowledge on groundwater the VFF doubts it will deliver any definitive answers and certainty on the groundwater impacts of onshore gas developments.

Some VFF members have articulated concerns that there is no solution for the safe treatment, disposal or reuse of brine, the by-product of treated coal seam gas produced water. The VFF calls for the present State Government's water science study to be given a broader scope to consider the risks and waste management issues resulting from co-produced water.

The VFF has long advocated the importance of collecting baseline data that must be collected prior to the development of mineral or petroleum operations. Further, that independent monitoring must be undertaken during the development measures and ensure that the authority with responsibility is adequately resourced to undertake its activities.

The VFF recommends the State Government:

- 1. Invests in further water science studies to consider the risk of water contamination, dropping aquifers and subsidence.**
- 2. Undertake research into the risks of co-produced water to agriculture.**
- 3. Investigate the impacts of chemical use on water quality.**
- 4. Invest in independent and transparent monitoring of water quality during and after mining operation.**
- 5. Provide ongoing investment for the monitoring, collection and analysis of data from the State Observation Bore Network.**
- 6. Guarantee that water storage design and treatment processes could be regulated in a way that secures water quality and quantity for agriculture.**
- 7. Ensure mining activities must comply with the Victorian Water Act. Licences should only be issued where there will be no impacts on other users.**
- 8. Have regard to demands on existing water resources when considering any new licencing requirement or proposals to amend existing licences.**

2.2.2 Landscape damage and rehabilitation

Some VFF members are concerned that damage resulting from unconventional gas activities may cause financial or environmental detriment to landholders and their land. For example, decommissioning of mining wells and pipeline infrastructure may temporarily impact landscapes and require rehabilitation.

The VFF recommends the State Government:

- 1. Takes responsibility for unforeseen legacy issues that may arise after the rehabilitation bond period expires.**

2.2.3 Legacy issues abandoned wells

VFF members have articulated concerns with the longer term contamination risks associated with abandoned wells. There may be issues in terms of maintaining the integrity of the well structure after the extraction activities cease.

The VFF Recommends the State Government:

- 1. Establishes a monitoring framework for abandoned wells.**
- 2. Takes responsibility for rehabilitation of abandoned wells.**

2.2.4 Biosecurity risks

Some VFF members have highlighted the need to improve standard procedures for managing biosecurity risks. Biosecurity risk management should cover animal and plant disease as well as invasive species control.

As mining and exploration activities often involve the movement of visitors on private land, from contractors to protestors and government agencies, there are biodiversity risks that need to be managed appropriately.

Biosecurity protocols can be covered in land access and compensation agreements. A farmer's time should also be compensated, in relation to managing biosecurity risks e.g. supervision and record keeping of vehicle movements.

The VFF recommends the State Government:

- 1. Ensure landholders have the right to insist that biosecurity risk management can be covered in compensation agreements.**

2.2.5 Increased fire risk

There is concern amongst VFF membership that fire risk could be better managed by mine operators. In light of the Hazelwood Fires, there is significant concern that there is the potential for mismanagement of fire risk if responsibilities and resourcing is heavily reliant on CFA resources.

The VFF recommends the State Government:

- 1. Legislate to ensure mining companies are responsibility for fuel load reduction and fire suppression to reduce reliance on public or volunteer CFA resourcing and risk to the community.**
- 2. Ensure mining operators require CFA permission for gas flare offs.**

2.2.6 Offsite and regional impacts

VFF members are concerned that unconventional gas activities, such as hydraulic fracturing, can be allowed to take place in Victoria without giving due consideration of offsite impacts.

Neighbouring landholders are not subject to the same compensation or negotiation rights as the affected landholder, but may experience similar environmental or water impacts.

The regional impacts of particular concern are water resources, particularly how hydraulic fracturing may impact the water quality and quantity.

The potential for contamination of aquifers and their connectivity is a significant regional issue that requires more information and assessment of risk.

On a broader regional scale there may be the potential of land subsidence and contamination being caused by gas extraction industries.

In addition to the issues listed above, public health, food safety, landscape impacts may apply to both affected landholders and regions similarly.

The VFF recommends the State Government:

- 1. Improve the consultation and engagement processes for adjoining farming landholders in relation to regional environmental impacts.**
- 2. Levy infrastructure contributions for mining activities where there are increased demands on local or regional infrastructure.**

2.3 Coexistence

TOR 3 the coexistence of onshore unconventional gas activities with existing land and water uses, including —

- (a) agricultural production and domestic and export market requirements;*
- (b) the legal rights of property owners and the impact on property values; and*
- (c) any implications for local and regional development, investment and jobs;*

2.3.1 Agricultural production requirements

Despite farming on around three per cent of Australia’s available agricultural land, Victorians produce close to 30 per cent of the nation’s agricultural exports.

What’s important to our members is the long term viability of their agricultural businesses. This can relate to improving their productivity or expanding production.

The agricultural sector is a significant contributor to the Victorian economy, employing over 191,700 people, that is, one in six regional Victorians. In 2013-14, agriculture accounted for 48 per cent of the State’s total goods exports, valued at \$11.8 billion³.

Growth in agricultural production is set to grow in response to strong growth opportunities in global markets. Victoria’s future success is dependent on remaining competitive in global and domestic markets by boosting productivity.

The major political parties in Victoria have acknowledged the importance of increasing food and fibre production – the previous Coalition Government set a target of doubling food and fibre production across the State by 2030 and the current Victorian Government has released a Food and Fibre Discussion Paper in July 2015.

The Victorian Government has acknowledged the opportunities for the State’s agricultural sector to grow in its Future Industries Food and Fibre Discussion Paper. The Government states:

By 2030, the middle class population in Asia is predicted to grow six-fold to number 3.2 billion people. This presents a huge opportunity for Victoria, but it will take strategic investment and effort to truly realise the opportunities, given the fierce international competition and barriers to entry in some key markets.⁴

³ Page 4 Victorian Government Discussion Paper *Victoria’s Future Industries Food and Fibre* July 2015

⁴ Page 17 Victorian Government Discussion Paper *Victoria’s Future Industries Food and Fibre* July 2015

The Government recognises that one of Victoria's competitive advantages in the international stage is:

- *A strong international reputation based on robust food safety and internationally-recognised biosecurity systems and strong environmental protection.*⁵

Victorian agricultural produce has a clean image internationally and VFF members share concerns that an unconventional gas industry could impact this reputation if not subjected to further developed Victorian regulations and safeguards.

The VFF recommends the State Government:

- 1. Enhance public awareness of risks associated with an unconventional gas industry to better inform community of its position on whether such an industry is desirable and can co-exist in Victoria.**
- 2. Improve the approval process to ensure early notice and consultation is undertaken with affected landholders. More time should be given to allow agricultural landholders to consider the impacts on their farming operations and respond to mining proposals.**

2.3.2 Landholders' legal rights

VFF members often report that they feel compromised in the negotiation process for exploration and mining activities. That is, if a landholder disagrees with aspects of the activities proposed, they lose the power to negotiate on outcomes once a matter progresses to the dispute resolutions stage over compensation agreements.

The VFF policy is based on ensuring support and certainty for landholders is built into the negotiation process. The power of veto as well as improving commercial return will improve landholders' legal rights and create a more equal playing field with mining companies in the negotiation process.

VFF members would hope that these changes would lead to written agreements being entered into before having to go through a dispute resolution process in the Courts or at Victorian Civil and Administrative Tribunal (VCAT).

Agricultural producers should have the right to determine what their land is used for, and this right should be enshrined in legislation. While the Crown undoubtedly owns the minerals, the land (including the top 15 metres of soil) is often privately owned. In most cases modern mining requires the removal of this soil to access minerals or petroleum resources, which landholders should have the power to stop.

⁵ Page 17 Victorian Government Discussion Paper *Victoria's Future Industries Food and Fibre* July 2015

2.3.2.1 VFF members' understanding of landholder rights and compensation

Some VFF members report that they do not have a good understanding of their rights if approached by a mining company for exploration or extraction activities.

The recent VFF survey showed that more than half of the VFF members surveyed were not aware of what their compensation arrangements or rights are if approached by a mining or onshore unconventional gas company. Consistent themes reflected a sense that negotiation powers were limited as compensation agreements can be determined at VCAT if the farmer does not agree.

Table 2: Survey Results

Do you believe the current compensation arrangements are sufficient for an unconventional onshore gas industry in Victoria?	Percentage
No	36%
Yes	3%
Don't know	61%

Table 3: Survey Results

As a landowner, do you know what your rights are if you are approached by a company seeking to undertake mining or onshore gas exploration on your property?	Percentage
No	62%
Yes	38%

Specific comments from VFF members in response to survey questions on knowledge of landholder and compensation rights were as follows:

- "We have already been informed that a licence has been issued in our area which our farm is included for exploratory drilling for coal, I believe this is just a cover for the gas, because why would they want to dig a coal mine in the hills when there is plenty of coal in other areas with easier access, and I certainly would not know how to stop them"
- "I have some knowledge but not sufficient to allow them onto our property"
- "Yes. My rights are minimal. I can agree to enter into an access and compensation agreement, which may or may not be resolved to my satisfaction. If I choose to say no to the gas company, but they are insistent that they want to explore or extract gas from my farm, the determination will likely go to VCAT, who will determine if, when and how the compensation agreement is struck, which will quite likely be not to my satisfaction. In this case, I feel I would have been done in!!"

- “In my personal experience you can refuse entry for a certain period of time but if they have mining rights over the area you have to eventually allow them on to your property. This may have changed.”
- “I support payment for use of asset, farmers time on top of compensation for loss of income, rehabilitation”
- “You can only claim topsoil damage!!”
- “I was led to believe that once the government issued a licence there was nothing that could be done to get compensation, the licence gives them the right to go on your land and you cannot stop them”
- “Having had this happen to me some 20 years ago the compensation was minimal and the made good very poor. The compensation was paid basically on the use of the small area they required based on an agricultural rental per acre. In the United States the land owner owns below the surface and owns the rights to the oil, gas etc as I understand it.”

2.3.2.2 VFF members’ support for commercial payments and power of veto

Key to the VFF Mining and Petroleum Policy is the need for a strengthening of landholders’ rights in the negotiation process for mining and exploration activities. VFF members are strong supporters of VFF policy in relation to providing commercial payments to farmers for use of their land and power of veto.

VFF policy includes:

- *Farmers should hold the power of veto over all mining, quarrying, oil and gas extraction on their agricultural land.*
- *Landholders must receive appropriate commercial payments for all mining and petroleum activities on their land.*

The recent survey showed that the 82 per cent of the sample of members surveyed support farmers having the power of veto over all mining, quarrying, oil and gas extraction on their land and 85 per cent support commercial payments.

Table 4: Survey Results

Do you support the VFF’s existing policy that farmers should be given the power of veto over all mining, quarrying, oil and gas extraction on their agricultural land?	Percentage
No	18%
Yes	82%

Table 5: Survey Results

Do you agree with farmers receiving commercial payments for any mining or petroleum activity taking place on their land?	Percentage
No	15%
Yes	85%

Comments from the survey in relation to commercial payments and power of veto included:

- “Based on case studies, proper negotiations can result in far greater benefits for the farmers in terms of infrastructure, but there should also be commercial payments for access and any loss of amenity”
- “Simply because the issues for agriculture, the environment and human health do not stop at one farmer's boundary. The power of veto not only gives farmers the right to say no, but also the right to say yes. It is a non-sensical policy, because it flies in the face of the other good policy associated with doing the research first, in order to then gain confidence that an unconventional onshore gas mining industry did not impose any negative impacts on agriculture, the environment and human health.”
- “Part of this research should include adequate compensation along the US model of royalties/co ownership of soil below the surface.”

The VFF recommends the State Government:

- 1. Review State legislation provisions to provide for the power of veto for the farming sector and give landholders the right to receive commercial payments for their time and use of their assets.**
- 2. Promote awareness of the range of matters that can be included in land access and compensation agreements.**
- 3. Review mining, petroleum, land access, compensation and property legislation to explore an avenue to provide the landholder greater rights to activities on their own land. Legislation should be reviewed to:**
 - a. Give landholders a right of veto over mining activities on their land**

We consider landholders have a right to determine what their land is used for, and this right should be enshrined in legislation. While the Crown undoubtedly owns the minerals, the land (including the top 15 metres of soil) is often privately owned. In most cases modern mining requires the removal of this soil to access minerals, which landholders should have the power to stop.

b. Give landholders the right to sign off on rehabilitation plans

Despite being the major stakeholder in the rehabilitation of land, mining companies do not need to seek agreement from landholders to plans for the rehabilitation of their land. Currently, rehabilitation plans only have to be developed ‘in consultation’ with landholders. The VFF believes landholders should have the right to sign off on rehabilitation plans. This

would ensure genuine input from farmers, and ensure that rehabilitation will suit the landholder's preferences for future land use.

c. Introduce appropriate commercial payments for landholders for mining and petroleum activities on their agricultural land.

VFF members often feel that compensation will not provide a reasonable return to a farmer for use of their land and their time. The VFF believes there are opportunities to provide commercial payment arrangements to account for the full impact of a mining activity on a farming enterprise.

d. Remove the 10 per cent cap on solatium payments – compensation for intangible values of land or assets (e.g. personal values associated with land)

If commercial arrangements for the farmer are not considered, the 10 per cent cap on solatium payments should be lifted.

The 10 per cent cap on solatium fails to recognise different land ownership circumstances. For farmers that have been on the same land for multiple generations, this cap on solatium belittles the strong connection they have to their land.

Furthermore, a 10 percent cap may prevent adequate compensation for the inconvenience and stress a farmer experiences when faced by minerals exploration or development on their land.

e. Increase the period of time in which claims can be made following rehabilitation, from three years to five years

When land is rehabilitated following a mining development there can be on-going issues that need to be addressed. The VFF is concerned that a three year limit on claims creates a potential liability for landholders for whom rehabilitation works prove insufficient. For example, land subsidence, lost productivity, abandoned wells and mineral leachates may take more than three years to become evident and longer still to fully address.

Long term responsibility should sit with Government if there are impacts that are realised after the bond period.

f. Renew the role and powers of the Mining Warden.

Over time the role of the Mining Warden has become unclear, and its powers have been diluted. However, the VFF sees an important role for the Mining Warden to play in arbitrating between mining companies and landholders when there are disputes over land access, compensation, and rehabilitation for exploration activities. As an impartial decision maker, the Mining Warden can offer an out of court means to resolve disputes, and provide independent advice to the Minister regarding mineral development issues.

2.3.3 Loss of land value

There is the perception amongst the VFF membership that unconventional gas activities would undermine the value of a farm. VFF members feel that land values would be impacted because of the unknown risks.

Table 6: Survey Results

Do you believe onshore gas exploration on your farm would:	Percentage
Undermine its value?	73%
Make no change?	16%
Increase its value?	11%

Table 7: Survey Results

Do you believe onshore gas exploration on neighbouring farms would undermine the value of your farm?	Percentage
No	24%
Yes	76%

2.3.4 Business disruption

It is likely that a farming business will be disrupted if it is affected by a proposed mining or exploration activity.

The creation of access tracks, impacts on water supply and use of a farmer's assets will affect the operation of the farm.

The VFF encourages farmers to ensure payments for their time are included in written agreements. However, there are further opportunities to improve farmers understanding of what other business considerations need to be discussed during the negotiation process to ensure farming and mining operations can co-exist.

The VFF Recommends the State Government:

- 1. Improves resources and guidance material specific to farmers in understanding their legal rights.**
- 2. Develops protocols for mining companies and landholders to manage coexistence of mining operations and farming.**

2.3.5 Professional and Legal costs

Legal costs are a burden on landholders when seeking advice and negotiating land access and compensation.

There is no legislative requirement that mining or gas companies cover the legal and professional costs of landholders during access negotiations.

There is however an expectation those companies will pay for 'reasonable legal costs' and other professional costs. Time limits on legal disputes could also be reviewed to make the negotiation process fairer for the farmer.

The VFF recommends the State Government:

- 1. Ensure that legal costs not be borne by a farmer when the company's access request and associated negotiations are imposed on them.**

2.4 Victoria's energy needs

TOR 4 the ability of potential onshore unconventional gas resources contributing to the State's overall energy sources including —

- (a) an ability to provide a competitive source of energy and non-energy inputs for Victorian industries;*
- (b) an affordable energy source for domestic consumers; and*
- (c) carbon dioxide emissions from these sources;*

Some VFF members are concerned about the future of energy in Victoria – including whether electricity generation capacity will be sufficient for future needs and the increasing costs of electricity.

Energy prices are a major concern for many primary producers. In particular dairy, horticulture, and other intensive industries are large users of energy.

Further research and State strategic work should be undertaken to look at Victoria's overall energy requirements and sources. Research on costs to business needs to be made publicly available and energy objectives for the State should be consulted on publicly.

The VFF recommends the State Government:

- 1. Prepare a Victorian Energy Strategy, in consultation with the community, to measure energy supply and demand requirements for Victoria and establish strategies to provide for the energy infrastructure needs of Victorian industries.**

2.5 Victoria’s knowledge requirements and regulation needs

TOR 5 the resource knowledge requirements and policy and regulatory safeguards that would be necessary to enable exploration and development of onshore unconventional gas resources, including —

(a) further scientific work to inform the effective regulation of an onshore unconventional gas industry, including the role of industry and government, particularly in relation to rigorous monitoring and enforcement, and the effectiveness of impact mitigation responses; and

(b) performance standards for managing environmental and health risks, including water quality, air quality, chemical use, waste disposal, land contamination and geotechnical stability

The VFF calls on the State Government to extend the present moratorium on issuing new onshore gas exploration licences and fracking, to include all types of onshore unconventional gas exploration and mining until 2020.

The survey of a sample of VFF members showed that 74 percent of VFF membership was supportive of this policy.

When asked about the lifting of the moratorium, 44 per cent of that sample agreed that the moratorium should be in place until peer-reviewed research shows onshore gas extraction can co-exist with agriculture and 37 per cent supported a total ban (see Table 8).

Comments from VFF members in response to these questions reflected sentiment that risks to water supplies were unacceptable. Further that best practice regulations and baseline data is required to build confidence on this issue in Victoria that risks can be managed.

The remaining supported the moratorium being lifted immediately or on the recommendation of this Parliamentary Committee Inquiry’s final report.

Table 8: Survey Results

Do you:	Percentage
Support a moratorium until such time as peer-reviewed research shows onshore gas extraction can co-exist with agriculture?	44%
Support a total ban on onshore gas exploration and extraction?	37%
Support lifting the current moratorium immediately?	12%
Support the lifting the current moratorium if the Parliamentary Committee’s report makes that recommendation?	6%

2.5.1 Scientific Information

Victoria has a significant shortfall of scientific and engineering evidence to inform public understanding of the risks associated with an onshore unconventional gas industry.

However, there is evidence from other jurisdictions of negative impacts on agriculture and water supplies from unconventional onshore gas activities.

There is a need for Victorian specific information on risks an unconventional gas industry would have on the State's environment and water resources. For example, the connectivity between groundwater aquifers to surface water is also an important consideration as well as other matters raised throughout this submission.

VFF members feel that activities such as hydraulic fracturing should not commence until sufficient scientific information has been provided. The timeframes in the dissemination of this information is crucial.

2.5.2 Performance Standards

VFF members need to be satisfied that adequate safeguards are in place to protect the long term viability of agriculture in Victoria. The VFF has received feedback that members feel the regulatory framework for an onshore unconventional gas industry is almost non-existent or that the stringency of regulation needs to be increased.

The Victorian Government and the unconventional gas mining industry need to satisfy the community that the industry can be managed in a way that protects landholders' rights and agricultural production.

When asked about the current regulatory framework, 78 per cent of the VFF member sample felt that current regulations are inadequate.

Table 9: Survey Results

Do you believe the current regulatory framework administered by Government and its agencies, such as water authorities, is adequate?	Percentage
No	78%
Yes	22%

The VFF recommends the State Government:

- 1. Base its State policy position for unconventional gas mining activities in light of Victorian produced research into potential impacts on the environment and water supplies. Communities should be informed of the risks to be able to contribute to the development of State policy.**

2.6 Other Inquiries into Management of Risk

TOR 6 relevant domestic and international reviews and inquiries covering the management of risks for similar industries including, but not limited to, the Victorian Auditor-General Office's report Unconventional Gas: Managing Risks and Impacts (contingent upon this report being presented to Parliament) and other reports generated by the Victorian community and stakeholder engagement programs.

The following reports included findings and recommendations that are consistent with VFF members' views.

- Gas Market Taskforce: Final Report and Recommendations (Peter Reith), 1 November 2013
- Parliamentary Inquiry into Greenfields Mineral Exploration and Project Development in Victoria, 27 May 2013
- Community Engagement Final Report Prepared by the Independent Facilitator: The Primary Agency, 20 April 2015

The reports highlighted the need for further developed regulations to safeguard agriculture in the event of a developed onshore unconventional gas industry in Victoria. These reports also show there is the need for improved community consultation, as well as compensation and negotiation processes.

Gas Market Taskforce: Final Report and Recommendations (Peter Reith), 1 November 2013

The Peter Reith's Gas Market Taskforce report included recommendations for the regulation of the industry, developing baseline information, and water licensing.

The report also recommended the adoption of the Royalties for the Regions program and a royalty holiday for gas companies.

With the release of the report the Victorian Government also extended the moratorium on fracking until at least 2015 – allowing more time to develop comprehensive baseline information on groundwater systems.

Parliamentary Inquiry into Greenfields Mineral Exploration and Project Development in Victoria, 27 May 2013

In August 2011, the VFF made a submission to the Victorian Parliamentary Inquiry into Greenfields Mineral Exploration and Project Development in Victoria.

The VFF agreed with a number of the Inquiry's recommendations including:

- a review of compensation agreements under the MRSDA Act to encourage fair outcomes (Recommendation 14);
- a review rehabilitation bond system taking into account the end-of-mine-life environmental legacies (Recommendation 15);
- the provision of a clear policy on the role of the Mining Warden (Recommendation 17),
- that the Victorian Government improves transparency and efficiency of the Environmental Effects Statement process (Recommendation 20);
- that local infrastructure needs are considered (Recommendation 25); and
- a whole of government approach is adopted to regulating the mining industry (Recommendation 3).

The VFF did not support the recommendation to move away from prescriptive conditions (Recommendation 19), particularly where this has the potential to erode an individual landholder's rights or increases the risk to the environment or water supply.

Further, the VFF did not support amendments to MRSDA legislation for the low impact exploration that were made by Government following the Inquiry. In November 2012, before the new low impact exploration definition came into effect, the VFF wrote to Minister Michael O'Brien recommending the following legislative provisions for low impact exploration activities:

- Ensure a written access agreement is required for any exploration activities beyond the current definition of low impact exploration (essentially the use of non-mechanical hand tools).
- Ensure the removal of work plan requirements for exploration do not result in a reduction in publicly available information on proposed exploration activities or rigour for exploration approval and monitoring processes.
- Explicitly exclude drilling from the planned definition of low impact exploration.

Unfortunately, VFF's recommendations were not considered in the legislative amendments which came into effect on 1 November 2014.

Community Engagement Final Report Prepared by the Independent Facilitator: The Primary Agency, 20 April 2015

The Victorian Government's report on community and stakeholder attitudes was released in April this year. Its findings are largely consistent with views shared amongst the VFF membership. Like the VFF's recent survey, the State Government's consultation report highlights that there is significant uncertainty and a lack of information about the impact an unconventional gas industry could have in Victoria.

Victorian Water science studies to examine the impacts of potential onshore gas developments

The VFF believe that the outcomes of the Commonwealth Bioregional Assessment of the Gippsland Basin as well as the Victorian Government's groundwater studies will be crucial reviews in developing policy around an onshore unconventional gas industry in Victoria. Unfortunately this information has not been made publicly available however the dissemination of this research is crucial to allowing for an informed debate on an onshore unconventional gas industry in Victoria.

The Victorian Government should release the water science study findings publicly and invest in the broadening of the scope of the program to look at risks associated with co-produced water.

3 Conclusion

There is uncertainty around the impact an onshore unconventional gas industry could have on the environment and our State's valued water resources.

A large number of VFF members feel that the potential environmental risks are too great to accept without guarantees from the Victorian Government that these risks can be managed.

VFF members have relayed concerns in relation to unpreparedness of Victoria specific scientific evidence and Victorian regulations by calling for an extension to the present moratorium.

Accordingly, the VFF calls on the State Government to extend the present moratorium on exploration and extraction of onshore gas until 2020.

The rights of agricultural landholders need to be strengthened in relation to negotiating land access and entering into agreements with mining proponents.

The power of veto and providing commercial payments create a more level playing field between the landholder and mining companies in the negotiation process.