



National Farmers'
FEDERATION

National Farmers' Federation

Submission to the
Australian Government Energy White Paper

February 2014

NFF Member Organisations





The National Farmers Federation (NFF) was established in 1979 and is the peak national body representing farmers, and more broadly, agriculture across Australia. The NFF's membership comprises all Australia's major agricultural commodities. Operating under a federated structure, individual farmers join their respective state farm organisation and/or national commodity council. These organisations form the NFF. Following a restructure of the organisation in 2009 a broader cross section of the agricultural sector has been enabled to become members of the NFF, including the breadth and the length of the supply chain.

NFF has for almost 35 years consistently engaged in policy interaction with government regarding a range of issues of importance to the sector including trade, education, environment, innovation to name a few. The NFF seeks to represent the agriculture industry and provide high-level advice and guidance on issues of critical importance to the future of the Australian farm and agribusiness sector. The National Commission of Audit process presents a valuable opportunity to communicate the farm sectors views on government roles and responsibilities and the need for measures that improve overall efficiency and effectiveness of government services and policy delivery.

The NFF would welcome an opportunity to expand on the issues raised in this submission. Contact in the first instance should be to:

Tony Mahar

General Manager Policy

Email: tmahar@nff.org.au

Phone: 62695653

Introduction

The National Farmers Federation (NFF) welcomes the opportunity to make a submission to the Australian Government Energy White Paper (the “White Paper”). The NFF notes that this White Paper process is broad ranging and covers policy issues across the economy. In addition it is also important to note that this Energy White Paper process is being undertaken in parallel with a number of other key policy initiatives by the government including the Agriculture Competitiveness White Paper and the Northern Australia White Paper for example. In this context, NFF’s submission will deal with only those issues pertinent to agriculture but it is critical that the respective policy development processes align and take into consideration the large synergies between the issues of agriculture, energy and northern Australia. The NFF seeks a whole of government approach to the respective policy development processes.

NFF acknowledges that the White Paper will review the supply and use of energy, security of supply, increases in new energy sources to ease demand/supply constraints and the appropriate role for government including opportunities to drive the more productive and efficient use of energy¹. It is crucial in this regard that associated sectors directly influenced by the energy sector, including agriculture and the significant impact energy has on the competitiveness of the sector be examined. Agriculture is a key pillar of the Australia economy², however continuous expansion of the energy sector and escalating energy price pressures have had a severe impact on individual farmers and agriculture more broadly contributing to significant financial hardship in some areas. Like many sectors of the Australian economy, agriculture has become increasingly energy intensive to sustain its international competitiveness. Australian farmers and their supply chain members are highly dependent on energy for their production of food and fibre, whether it be for fuelling tractors and farm machinery or electricity to power food processing facilities.

Energy use is variable across agriculture depending on industry, intensification of operations, location and structure of the business. Intensive agriculture uses large amounts of energy for heating and cooling or distributing water on irrigated properties. There are also key periods in agriculture (e.g. sowing or harvesting season) that require large quantities of energy. There are clear signs the cost of energy on farm is escalating and there is not enough transparency or equity in the discussion to date.

The NFF has completed this submission with input from members including those with specific interests including NSW Irrigators Council, Australian Dairy Farmers and Cotton Australia among others. The submission highlights a number of key messages the government needs to understand in terms of agriculture and energy policy and flags a number of initiatives that it believes will assist in meeting the future energy needs of Australian farmers as well as opportunities for the farm sector to make a further contribution to energy security. This submission also highlights the need to be mindful of ongoing food security needs in the consideration of any new energy source that leads to a competition for natural

¹ Energy White Paper, p. i

² <http://www.nationals.org.au/News/tabid/60/articleType/ArticleView/articleId/8532/Profitability-the-key-to-the-Coalitions-Policy-for-a-Competitive-Agriculture-Policy.aspx>

resources. The current Coal Seam Gas (CSG) debate has brought issues such as these to the fore and the learnings from this experience must not be ignored in the event of future energy source development and exploration.

Electricity Market Reform and Transparency

Key message: The profitability and competitiveness of farming businesses has been jeopardized by increases in electricity (up to 300% in the past 5 years). Transparency in pricing and competitive market reform is critical.

Australian farmers are highly dependent on energy for the production of food and fibre. Electricity, in particular, is a key input to the agricultural sector and even small cost increases have a large impact on farm business income.

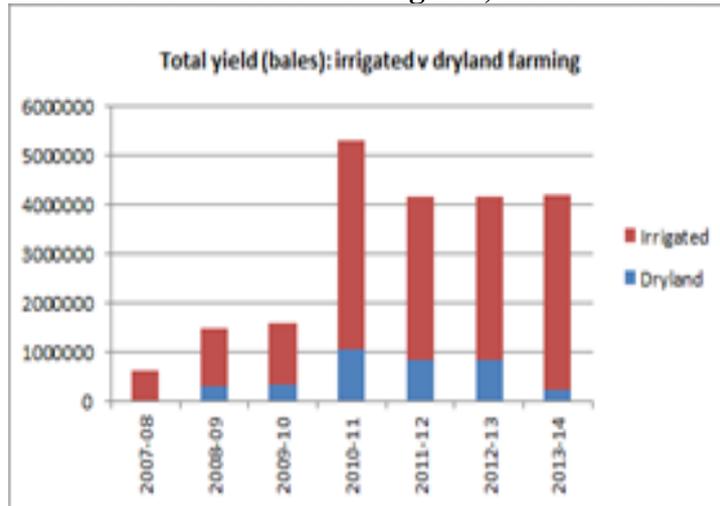
NFF is of the view that there is minimal consultation between the network service providers/retailers and customers, many farmers and irrigators are unaware of their current tariff structure or the level of the associated charges. In many cases, the only interaction individual farmers have with network service providers is through their monthly electricity bills that show the dollar value of their network costs.

In addition, many farmers have recently been moved to a demand driven network tariff without any consultation and explanation as to why such a change was necessary. The changes have often been detected after the receipt of an electricity bill. The lack of consultation together with the complexity of the current electricity pricing structure, has made it nearly impossible for business owners to choose a suitable tariff. The issue of transparency, communication and consultation across the energy supply chain including with farmers is a major concern which should be addressed by government in this process.

The NFF would like to register its concern about the impact of increasing electricity prices on farm profitability. To illustrate the point, over 80% of Australian cotton is irrigated, with the remainder dry land grown (Figure 1). As such, most cotton growers are highly exposed to electricity price fluctuation. Even a small cost increase has a large impact on farm business income and productivity. There is already some evidence to suggest that the rapid escalation in electricity price has forced some growers to abandon drip irrigation systems in favour of lower energy use methods.

If the irrigated cotton growers were to switch entirely to dry land farming methods, there would be a significant fall in Australian cotton production. The yield per hectare for irrigated cotton is nearly double that of dry land (9.7 bales per hectare, compared to 4.8 bales per hectare). It is worth noting that Australia's cotton growers are world's best in terms of yield of cotton per hectare and per mega litre, producing two and a half times the global average yield.

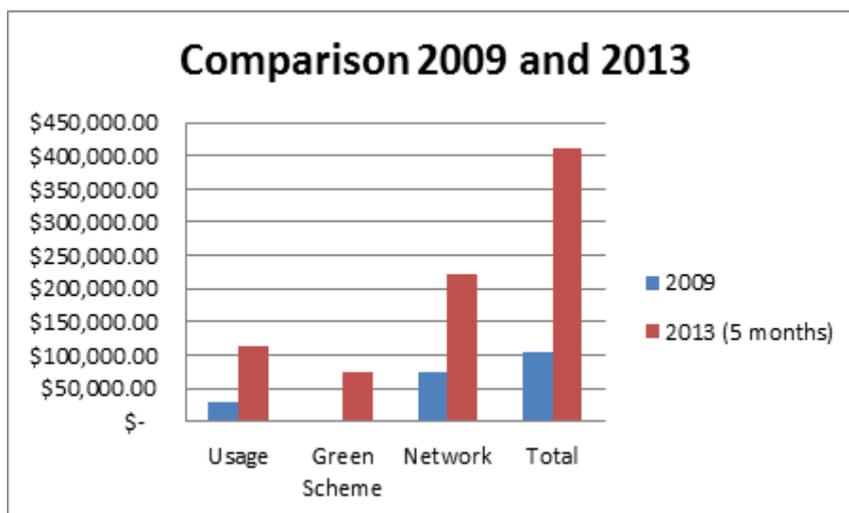
Figure 1: Over 80% of Australian cotton is irrigated, Cotton Australia 2013



Further, cotton farmers have minimal scope for adjusting energy use patterns to minimize costs and take advantage of off-peak pricing. As seen in Figure 5, despite the significant price hikes over the past five years, there has been little change in the usage patterns of irrigators as on-farm electricity demand is driven by the need of the crop, weather patterns and water licence conditions. Regardless, there is often insufficient difference between peak and shoulder charging structures to provide incentive to change irrigation patterns.

Even with constant electricity demand, cotton growers for example have seen their electricity bills triple since 2008 in some instances (Figure 2). The increase is largely driven by increases in network costs, which comprise 55–65 per cent of a cotton grower’s electricity bill and in some cases these costs can be well over \$100,000.

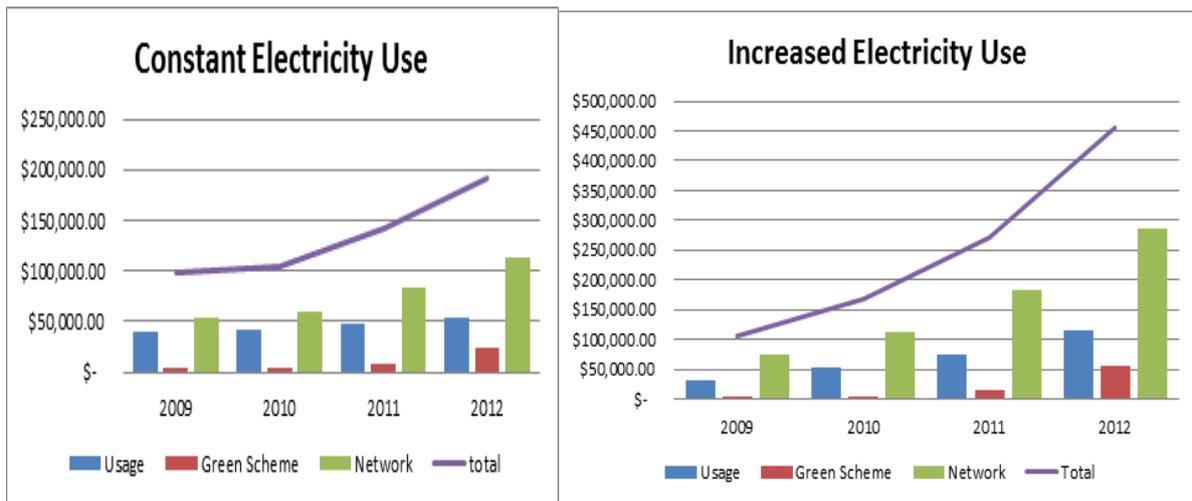
Figure 2: Electricity charges have increased nearly 300% over 5 years, NSWIC and Cotton Australia 2013



Trial data gathered by NSWIC and Cotton Australia has shown that the network costs have been the most significant cost driver of recent electricity price increase. In one instance the

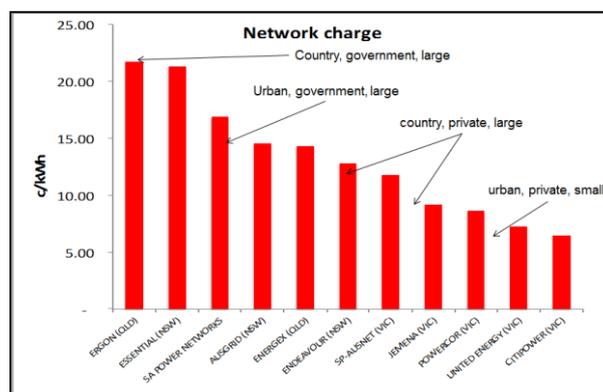
network component of the electricity bill has increased 110% even when the irrigator’s electricity use has remained stable. Another trial participants experienced an increase in electricity use, saw a tripling of network costs since 2009. (Figure 3).

Figure 3: Electricity bill increases 2008 to 2012: constant electricity use and increased electricity use, NSWIC and Cotton Australia 2013.



NFF is also concerned that modelling by Carbon and Energy Markets shows a clear imbalance in network charges between the regions and urban areas. The network charge for regional Queensland and NSW is around 30% more than the network charge for urban areas of those states (Figure 4).

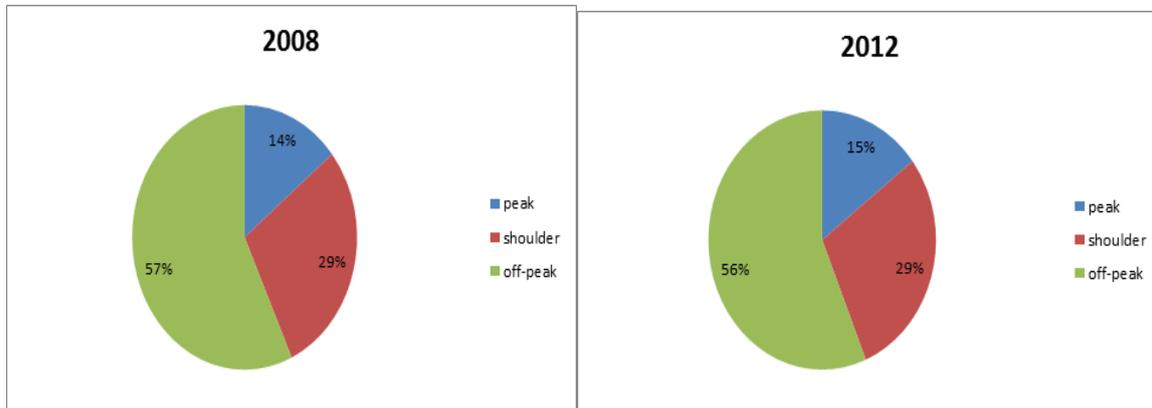
Figure 4: Network Charges: by provider, Carbon and Energy Markets 2013



In recent times, for example the cotton industry has made structural adjustments, which have seen significant improvements in water efficiency. However these new irrigation systems also require greater quantities of electricity - often in excess of 160,000 kWh. The timing of irrigation is largely driven by the need of the crop and weather patterns. More broadly across agriculture, including sectors such as dairy, horticulture and intensive farming, there is

limited scope for adjusting energy use patterns to minimize costs as on-farm electricity demand is (Figure 5).

Figure 5: Change in peak, shoulder and off-peak use 2008 and 2012, NSWIC and Cotton Australia 2013



In addition, the total dollar impact of the carbon charge has been immense. In trial data gathered by NSWIC and Cotton Australia, the dollar impact of the carbon charge was above \$200,000 for all six trial participants (2012 and 2013). As a proportion of total electricity costs, the carbon charge made up between 5.1% and 11.78% of an individual irrigators electricity bill in 2012 and between 4.62% and 11.1% in 2013.

What farmers want:

Farm businesses need lower energy costs, transparency in the energy market and consideration of tariffs that are tailored to suit the needs of agricultural industries.

Farmers should have access to electricity tariffs that are designed to suit the energy demand of their industry. Ideally a farm business tariff would be volume based (not network demand driven), and would include an option for a weekend tariff rate. NSWIC have identified the following principles for consideration in the design of tariff structures to suit the needs of farmers and irrigators, which could potentially be applied to across the sector:

- Tariffs and the associated charges must be positively correlated to the usage patterned of an individual farmer. If there is a decrease in use or a modification in the usage pattern towards 'shoulder' and 'off-peak' this must trigger a decrease in overall prices for electricity.
- The tariff and the associated charges must be at levels that do not discourage farmers from participating in national and state water efficiency and land care programs and/or utilising technologies and infrastructure that contribute to the national goal of increased food and fibre production.
- The tariffs must allow for an efficient use of energy related equipment. This includes wires, poles and meters.
- The tariffs must allow for optimal water application that best assists plant growth.

- The tariffs must avoid perverse pricing outcomes, especially in the context of demand charges. Such demand charges must be tailored to the specific farm operation and the equipment used on farm.

What farmers want:

To ensure the long term competitiveness of the agricultural sector, the Government should provide support for on-farm energy efficiency measures.

NFF seeks support for an energy efficiency program aimed at farmers including education and extension services. The program should include rebates for on farm energy efficiency audits and online farm energy use calculators. Encouraging active demand side participation by farmers would have the dual benefit of increasing farm profitability and competitiveness by offsetting rising electricity costs and reducing emissions.

NFF would like to see the entire agriculture sector provided with measures that facilitate and assist with energy audits and drive on farm investment in improvements to energy efficiency. Identifying energy improvements, such as upgrades to pumps or the installation of power factor correcting capacitors has the potential to make significant savings in electricity costs for farmers, as well as decreasing greenhouse gas emissions. This will assist with on farm competitiveness, contribute to growing food and fibre exports and provide much needed support for farmers facing declines in their terms of trade.

NFF is concerned that the agriculture sector will be squeezed out of participating in the Emissions Reduction Fund, as the lowest cost abatement opportunities exist in the industrial and energy intensive sectors. As such, we are particularly keen to see the Government encourage farmers to take direct action to reduce their on farm emissions through energy efficiency audits and upgrades to farming equipment.

Energy & food security for a growing and productive population.

Key message: Australian farmers export over two thirds of the food and fibre produced to the world, contributing over \$30 billion to the economy. Food security is an ongoing challenge which requires Australian farmers to have a reliable and secure source of affordable energy.

While Australia exports more food than it imports, and is seen as a reliable supplier of food and fibre in a region with rapidly growing demand - production in Australia is challenging because our soils are largely ancient and infertile, and our climate is variable and frequently harsh. In addition to this production costs are high with energy prices a key factor.

Australia currently produces enough food to contribute to the diets of about 60 million people, mostly via beef, wheat and dairy products. We earn over \$30 billion annually from food exports. While much of this value comes from post-farm processing, it is critical that the

entire supply chain has access to reliable and affordable energy inputs. Farmers are price takers and largely unable to pass costs on through the supply chain.

Food security is an increasingly critical issue, with food prices that are both high and volatile. In October 2012, the Food and Agriculture Organization's cereal price index was over 2.5 times the value of its 2002-2004 baseline. By 2050, the value of the global food market is projected to increase by over 70 per cent.

Increases in food production will need to be managed carefully to avoid environmental and social disruption. For example, Australia currently produces wheat on around 13 million hectares of land with an average yield of only 1.5 tonnes per hectare. Analysis of the production potential has suggested that about 47 million hectares could be used for wheat production and average yields could grow to 4.4 tonnes per hectare. This suggests Australia could lift wheat production from just under 20 million tonnes to over 200 million tonnes³. However, such an increase would come at a great cost. It would involve massive land clearing, additional energy and input costs and directing resources towards wheat production which would reduce our production and export of other types of food. This is unlikely to be an effective way of contributing to food security.

In this context, Australian farmers continue to consider how best to make use of our agricultural expertise to strengthen our farming sector while contributing to regional and global food security. NFF is of the view that the Australian Government must focus on the sustainable development of non-fossil fuel based energy and secure a reliable and affordable energy source for the agricultural sector.

Renewable Energy Targets

As outlined throughout this submission, energy and fuel are among the largest costs for Australian farmers, and have a significant impact on our competitiveness. The ongoing increase in electricity prices, combined with the major increase in fuel prices over the last decade, continue to hit the agricultural sector hard, with irrigation, dairy and grain farmers among the most affected. NFF is of the view that any policy that simply adds additional costs back into farm businesses should be removed - and the renewable energy targets have clearly driven costs up on farm. The Productivity Commission has made it very clear that the introduction of the carbon tax means that a significant number of existing Government programs aimed at reducing greenhouse gas emissions or improving efficiency, including renewable energy targets, imposed costs while providing little or no benefit. Renewable energy sources should be investigated and pursued, however the impact of these policies and programs need to be examined to ensure there are not significant negative impacts on sectors that have little or no capacity to pass on costs in what is a globally competitive market.

There is a natural synergy between renewable energy and farming. The NFF believes that there is a pressing need for ongoing national dialogue about the potential for utility scale renewable energy as a new business sector in regional Australia. While regional and remote towns are less efficient to supply with grid supplied electricity (because of transmission line costs and losses), they are also the easiest to supply with renewable energy. This is due to the availability of land for solar and wind generation facilities, as well as access to abundant natural fuel sources for bioenergy creation.

³ Fischer R (2009). *Farming systems in Australia: Exploiting the synergy between genetic improvement and agronomy*. In V Sadras and D Calderini (eds), *Crop Physiology*, Chapter 2, pp 23-53.

The NFF believes that it is strongly in the national interest to provide policy incentives for utility scale renewable power generation based in regional centres. These facilities could be associated with manufacturing facilities for renewable technology, further increasing local employment, and co-location with intensive agriculture and processing that would also benefit from cheap renewable power, steam and desalinated water (a by-product of solar thermal plants). Smaller scale renewables (e.g. methane conversion, solar industrial steam, cogeneration, biochar, organic recycling in fertiliser) can also help to radically reduce the emissions profile of regional Australia.

To facilitate this dialogue about exploring renewable energy sources, the NFF requests that the federal government commission modelling of Australia's transmission line network and energy demand in regional centres so as to develop a robust integrated least-cost planning model for Australia's transition to bioenergy, solar, wind and other renewable energy supply.

Regional renewable power stations may be able to generate power for regional requirements with any excess fed into the national grid. Early roll out of bulk renewable energy in regional Australia could enable a smooth and more rapid transition from coal power to renewable power for urban Australia. It could also facilitate electrification of regional rail networks and, potentially, a transition to electric road transport and farm vehicles.

Policy measures that government should consider in this field include loan guarantees for the builders of utility scale renewable power stations and the strategy for investment in new transmission line infrastructure, targeted R&D for support partnership and synergies between farming, regional communities and the renewable sector.

What farmers want:

Ongoing national dialogue about the potential for utility scale renewable energy as a new business sector in regional Australia.

Modelling of Australia's transmission line network and energy demand in regional centres so as to develop a robust integrated least-cost planning model for Australia's transition to bioenergy, solar, wind and other renewable energy supply.

The Commonwealth government drive productive and secure energy supply arrangements that recognise the importance of on farm energy use and continue to contribute to exports of food and fibre products.

The Commonwealth to commit to investment in energy related distribution infrastructure to deliver efficient national markets.

The removal of renewable energy targets due to the increased pressure on Australian farms from rising energy prices.

Growth and Investment: Coal Seam Gas

Key message: Ongoing energy security is critical to Australian agriculture however the need to develop new energy sources should not undermine Australia's agricultural sector.

The energy sector is increasingly impacting food and fibre producers in Australia. This is drawing out interactions between energy, water, land management, biodiversity management and carbon pricing policy agendas and associated tensions are emerging. Traditionally, multiple land use has been commonplace in Australia: agriculture and mining have coexisted for generations. However, the development of new energy sources in regions that have had little involvement with the resources sector can present a challenging new paradigm for people and businesses operating in those locations.

More recently, the emergence of new sources of energy and the development of new energy technologies have generated fresh challenges and sometimes passionate debate over their social acceptance and multiple resource use. For example, competing land or resource use issues associated with CSG development, groundwater and agriculture. This has been particularly evident in the proposed development of coal seam gas and coal mining operations in, or near, agricultural and residential areas of New South Wales and Queensland.

While energy resource developments impact less than 1 per cent of Australia's total landmass, the continued expansion of mining, agricultural and residential land use is causing tensions between sometimes overlapping or adjoining activities and their communities.

The NFF is mindful that the current CSG debate is drawing issues to the surface that have led to conflict and mixed outcomes for many farmers. The NFF has been keen to emphasise that in order for the two sectors to coexist, solid assurances need to be provided that the natural resource will not be adversely affected and that agricultural sites will be appropriately rehabilitated by mining and CSG companies. The NFF has been keen to emphasize the need for upfront planning and impact assessments to be undertaken on new energy developments to ensure considered decisions on altering land use.

While in many cases managing these issues are the responsibility of state and territory governments, there is a need to promote nationally consistent and mutually beneficial outcomes that provide for responsible and sensible development and coexistence (where appropriate) based on transparent approaches that safely manage risk and are informed by the best available science. It is important that these issues are worked through in an integrated and balanced way to ensure efficient and effective development of our natural resources and to meet our social and environmental goals.

Unfortunately some parts of the CSG debate and experience to date has demonstrated how poor outcomes can exist when an industry is allowed to expand without appropriate regulation and oversight. There is still some way to go before all Australian farmers will be in a position to accept the CSG industry and its future production goals. Such an example is important in the context of considering future energy capacity and options for the Australian economy. Governments, both State and Federal, cannot make the same mistakes should an industry like shale oil and gas begin to expand, where the industry is competing for land use from sectors such as agriculture.

What farmers want:

The Commonwealth to retain environmental approval of CSG projects under the Environment Protection and Biodiversity Conservation Act 1999 (Cth) water trigger so that the impacts of CSG and large mining proposals are systematically assessed at the national level.

Approvals process must maintain water assessment at Commonwealth level and the ‘water trigger’ under the EPBC Act continues to operate without any amendment.

A national and publicly available environmental monitoring system of mining operations should be established to build a comprehensive understanding of the impact of CSG and mining projects on existing farms and farming areas.

The Australian agriculture sector need to understand the impact of CSG operations on the quality and quantity of ground and surface water sources. We recommend a national repository of environmental monitoring data for mining and gas projects be established and administered by the Independent Expert Scientific Committee.

Consistent application of the Standing Council of Energy and Resource’s Multiple Land Use Framework.

We would like to see the consistent application of the guiding principles of the Standing Council’s Multiple Land Use Framework Land (agreed in December 2013). The principles are designed to resolve apparent or real conflicts of land use.

Farmers should have the right to say no to mining development on their farms

Research Development and Extension

The NFF seeks to reiterate the importance of research, development and extension in new technology and processes that can drive on farm competitiveness. Government and industry collaboration on research to drive efficiencies and importantly the extension and uptake of that technology, is critical to the future of the farming sector. Energy issues facing the nation affect a broad range of sectors, e.g. water, food, economic and environmental. As such, investment in the development of alternatives will be hugely beneficial to the long term sustainability (and in turn competitiveness) of Australian industry.

Historically, Australians have experienced plentiful inexpensive supplies of electricity due to our abundant supply of high quality coal. As stated by the Australian Bioenergy Roadmap “there has been little commercial incentive to date to look seriously at alternatives such as bioenergy.”⁴ This has undoubtedly hampered investment in R&D in this area.

⁴ Clean Energy Council. 2008, *Australian Bioenergy Roadmap*.

Extensive R&D is needed to enable farmers to adapt to more efficient technology and energy sources in the longer terms and insulate them from the immediate and escalating cost of on farm and value chain energy use. This may include new technologies that help improve the efficiency of fuel use, (e.g. new engine design, new types of fuels, and new technologies that enhance greater efficiency in public transport). More than ever though, farmers need to be able to be as efficient as possible. Farmers recognise that efficiency in the management of inputs and resources (water, fuel, and nutrients) are top priorities. The government can play an important coordination role with industry to develop and implement policies, programs and continued industry RD&E for managing carbon, water and energy in farming systems are a core part of this and must be supported.

The NFF notes the range of activities conducted on alternative energy from hydrogen, wind, solar and biofuels, but notes that more is needed if these fuels are to become a retail reality. The NFF recognises that in some of these areas, private industry can play a major role in generating the required investment in finding solutions in these areas. However, in some circumstances the Australian Government can also make a major contribution by the provision of seed funding and ensuring that the regulatory environment is conducive to drawing further private investment. More work is needed, particularly in providing information on the economics around changing practices, to help growers and industry decide on the potential for incorporating carbon farming into their systems.

What farmers want:

Government commitment to RD&E to assist farmers adaptation to more efficient technology and energy sources to reduce the impact of escalating cost of on farm and value chain energy use.

Fuel taxation arrangements

The NFF strongly supports the current fuel tax arrangements, particularly those relating to the Fuel Tax Credit scheme. The Australian agricultural sector would be deeply concerned at any suggestions that the Fuel Tax Credit scheme could be scaled back in the interests of raising revenue. The NFF adamantly opposes any such suggestion and reiterates the following points in relation to the scheme.

- Fuel excise is in fact a tax on doing business that would undermine Australia's ability to compete on international markets.
- Taxes on business inputs are demonstrated to be especially inefficient.
- Changes to the current Fuel Tax Credit system would result in lost output by the agricultural sector, to the detriment of the Australian economy.
- The NFF rejects any suggestion that the Fuel Tax Credit is a subsidy for the agricultural sector. This has been acknowledged by the OECD in their calculation of Australia's agricultural Producer Support Estimate (PSE).

- The primary function of Fuel Excise is to fund the upkeep and maintenance of the road network. This is reflected by the fact that Australian farmers only received the excise rebate for fuel used off-road.
- Removing the Fuel Tax Credit would exacerbate the inequity in cost for those living and working in regional Australia.

Along similar lines, the NFF would strongly reject any moves to include agricultural fuel use in any future energy or emission cost arrangements or for it to be applied to on-road heavy vehicle transport. Australian farmers are already disappointed by the application of the carbon tax to aviation fuel and shipping fuel that will have a direct impact on the cost base for many farmers.

The NFF also supports the Government's decision to leave ethanol, biodiesel and methanol excise free indefinitely and that the current incentives for using biofuels will not be phased out as was initially planned. This decision is consistent with NFF biofuels policy that calls for "biofuels to be free from government fuel taxes and excise now and in the future" and will assist in the establishment of a sustainable and profitable domestic biofuels industry.

What farmers want:

Government commitment to the Fuel Tax Credit scheme for the farm sector.

Conclusion

The ongoing access to cost effective energy is of vital importance to the future of Australian farmers. This issue has broader implications for both food security and competitiveness perspectives. The Australian farm sector is severely exposed to increasing energy prices and efforts must be escalated to ensure this major element of our cost base is reduced.

While the NFF acknowledges that in certain instances private sector investment will address issues outlined above, we consider it of crucial importance that, the Australian Government must also make a major contribution via the development of a whole of government approach to energy supply and distribution. This must be followed by effective implementation of such policy including the provision of seed funding and ensuring that the regulatory environment is conducive to drawing further private investment in securing Australian farmers energy future.

The NFF urges Government to continue to focus on the important issue of fuel and energy security which is so important to the long term competitiveness of the agricultural sector. Australian farmers can benefit greatly by gains in this area, while at the same time can make a significant contribution to developing solutions.