



National Farmers' Federation

**Submission to the
Australian Government Energy White Paper**

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National Farmers'
FEDERATION

Member Organisations



CANEGROWERS



COTTON
AUSTRALIA



GrainCorp



Victorian Farmers
Federation

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The National Farmers' Federation

The National Farmers' Federation (NFF) is the peak national body representing farmers and, more broadly, agriculture across Australia. It is one of Australia's foremost and respected lobbying and advocacy organisations.

Since its inception in 1979, the NFF has earned a formidable reputation as a leader in the identification, development and achievement of policy outcomes - championing issues affecting farmers and dedicated to the advancement of agriculture.

The NFF is dedicated to proactively generating greater understanding and better-informed awareness of farming's modern role, contribution and value to the entire community.

One of the keys to the NFF's success has been its commitment to presenting innovative and forward-looking solutions to the issues affecting agriculture, striving to meet current and emerging challenges, and advancing Australia's vital agricultural production base.

The NFF's membership comprises of 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 collectively form the NFF.

The 2009 re-structure of the NFF has enabled a broader cross section of the agricultural sector, including the breadth and the length of the supply chain, to become members through an associate member category.

Each of the state farm organisations and commodity council's deal with state-based 'grass roots' issues or commodity specific issues, respectively, while the NFF represents the agreed imperatives of all at the national and international level.

Introduction

The NFF welcomes the opportunity to make a submission to the Australian Government Energy White Paper (the "White Paper"). The NFF notes that this Inquiry is broad ranging and covers policy issues across the economy. In this context, NFF's submission will deal with only those issues pertinent to agriculture.

Like many sectors of the Australian economy, agriculture has leveraged off Australia's abundant access to relatively low cost energy in order to bolster our 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 machinery or electricity to power food processing facilities.

However the last decade has seen higher fuel prices having a significant and negative effect on Australian farmers. According to ABARES, the direct costs of fuel and lubricant comprise approximately 8-9 per cent of total farm cash costs¹, the vast majority of which is diesel.

¹ ABARES 2012

Australian farmers' fuel costs increased by 12 per cent in 2010-11 compared to year earlier levels.² Since the extremes of July 2008, when the international diesel cost rose by approximately 40 per cent to US\$143.98/bbl,³ the price of crude oil has dropped in the last 12 months and now lies around US\$105/bbl.⁴

These sustained high prices have also had a slowing impact on the Australian and global economies, resulting in significant inflationary pressures that have placed upward pressure on interest rates, as well as slowing global and domestic demand.

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. Irrigators and other farmers that rely on pumps to pump water also have high energy bills. There are also peaks in demand for energy through sowing, harvesting, shearing seasons. There are now signs that this energy cost is escalating.

A recent study by the Energy Users Association of Australia showed that Australian electricity prices are now considered to be some of the highest in the world, with average Australian household electricity prices now higher than those in Japan, the European Union, the United States of America and Canada. Furthermore, the study showed that household electricity prices in Australia have risen by more than 40 per cent since 2007 and are expected to increase by a further 30 per cent by 2013/14.⁵

There is concern within the farm sector about factors such as the Carbon Tax and privatisation of state stationary energy sectors. These factors have the potential to lift electricity prices much further and bear significantly on the margins of farmers. Governments must ensure that decisions in this sector being made now have demonstrated long term benefits beyond increasing revenue from sale of assets or carbon credits and/or maintaining excessive government expenditure.

The NFF has highlighted a number of policy 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 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.

Energy & food security

The NFF maintains a keen interest in ensuring that the Australian Government focus on the sustainable development of non-fossil fuel based energy. While we recognise that following the global financial crisis, much of the emphasis on this area of policy has been less prominent due to reduced fuel prices in particular, this area remains a key priority for the NFF.

² ABARE, Australian Commodities 2011

³ Australian Department of Resource, Energy and Tourism, *Diesel – Frequently Asked Questions 2010*. Sourced on 29th March 2012. www.ret.gov.au

⁴ Australian Institute of Petroleum 2012, <http://www.aip.com.au>, Sourced 29 March 2012

⁵ Carbon + Energy Markets 2012, *Electricity Prices in Australia: An International Comparison*, A report to the Energy Users Association of Australia, March 2012

As seen in Table 1, energy and energy dependant activities comprise a considerable percentage of input costs to agriculture. Maintaining our agricultural production base is of primary importance to Australia in terms of economic as well as food and fibre needs, and an increase in fuel and energy costs such as that being experienced in recent times has already altered this balance.

Table 1: Energy and energy dependent farm input costs as a proportion of total farm input costs. Averages for 3 years ending 2011⁶

	Energy		Energy dependant				
	Electricity	Fuel and oil	Crop contracts	Chemicals	Fertiliser	Freight	
Wheat and cropping	Average costs (\$)	3597	51741	26705	78362	88622	28535
	(%)	0.63	9.13	4.71	13.82	15.63	5.03
	Subtotal (%)	9.76		39.20			
Mixed crops and livestock	Average costs (\$)	2627	24410	12219	24403	35893	10382
	(%)	0.92	8.59	4.30	8.59	12.64	3.65
	Subtotal (%)	9.52		29.18			
Sheep	Average costs (\$)	2235	12296	5510	7200	15188	5588
	(%)	1.22	6.74	3.02	3.94	8.32	3.06
	Subtotal (%)	7.96		18.34			
Beef	Average costs (\$)	2360	13361	3438	2930	7091	9824
	(%)	1.03	5.81	1.49	1.27	3.08	4.27
	Subtotal (%)	6.83		10.12			
Sheep - Beef	Average costs (\$)	3167	13816	5021	5624	14718	8310
	(%)	1.33	5.81	2.11	2.37	6.19	3.50
	Subtotal (%)	7.14		14.16			
All Broadacre industries	Average costs (\$)	2703	22820	10222	22581	30689	12510
	(%)	0.91	7.68	3.44	7.60	10.33	4.21
	Subtotal (%)	8.59		25.59			

Energy and energy dependant activities comprise a considerable share of Australian farmers' input costs. Maintaining our agricultural production base is of primary importance to Australia in terms of economic as well as food and fibre needs, and the risk of further increases in fuel and energy costs may alter this balance.

Esteemed futurist, Julian Cribb highlights the future challenge of feeding an ever increasing global population. He states: *“Barring wars or major accidents, there will be about 9.2 billion people in the world of 2050 – but they will eat as much food as 13 billion at today’s nutritional levels. Overall demand for food is expected to more than double*

⁶ ABARES 2012

by the mid-century. The main issue confronting humanity in the next 50 years is not climate change – it is whether humanity can achieve and sustain such a harvest.”

This puts the future food needs for the globe in perspective and reinforces that Australia’s efficient agricultural production systems, so dependent on energy to drive productivity gains, will depend on access to affordable and reliable energy sources for it to continue to make a contribution. It is both unrealistic and irresponsible to consider a future Australian agricultural system that returns to a more subsistence form of production that relies more heavily on man power than mechanical “horse” power. Doing so would see our proudly achieved productivity record (averaging more than 2.8 per cent over the last 30 years⁷) plummet, and with this, our ability to compete on world markets for which we depend.

Utility level renewable energy development

There is a natural synergy between renewable energy and farming. The NFF believes that there is a pressing need for detailed 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.

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 byproduct 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.

From this perspective the NFF has been astounded by the inexplicable exclusion of biomass from native forest wood waste for eligibility for Renewable Energy Credits (RECS) under the Clean Energy Future package. There are huge benefits in utilising woody biomass technology to produce a cost-competitive source of renewable energy. Furthermore, this inconsistent policy treatment of biomass wood waste is an unwarranted regulatory intervention in sector where no market failure has been demonstrated. Similarly, regulatory constraints exist for the uptake and production of renewable such as biofuels and solar that must also be addressed.

The notion of peak oil has been well reported and the global oil price spike of 2007 has sent nervous shockwaves through the global economy. Australia and the world needs to stay ahead of the game by being mindful of and pursuing alternative energy sources to ensure that we are not overly exposed to the Organisation of Petrol Exporting Countries (OPEC) oil barons. Julian Cribb⁸ speculates the future risk that we face stating: *“By the 2040s it is very unlikely we will be using fossil fuels in agriculture. Just what we will use is*

⁷ Australian Government Productivity Commission, Trends in Australian Agriculture 2005

⁸ Julian Cribb, *The Coming Famine*, CSIRO PUBLISHING, 2010

not yet clear – but our present advanced farming systems cannot be sustained without very large inputs of energy.”

To facilitate this dialogue about exploring renewable energy sources, the NFF has requested 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.

Alternative transport fuel development

The NFF recognizes that alternative fuels to petroleum and diesel such as biodiesel, ethanol, liquefied petroleum gas (LPG), and compressed natural gas (CNG) will play an increasing role in providing consumers with efficient and economic alternatives to petroleum and diesel fuels. The NFF supports the development of such alternatives, and encourages the government to continue to invest in research and development in key areas to make these alternatives a viable reality for rural and regional consumers.

It is important to have analysis and investment into transport fuel alternatives including hydrogen, gas and biofuels that can provide consumers with genuine fuel alternatives. Lignocellulosic conversion to biofuels is just one example of potential alternatives that warrants further research and development. The Australian advanced biofuels industry is gathering momentum, with the Australian Government’s announcement of a \$5 million grant to James Cook University to develop a macro-algae to biofuels project and opening of applications under a new \$15 million Advanced Biofuels Investment Readiness (ABIR) Program.

The NFF realises that commercial progress is being made toward biofuel from lignocellulosics both by the Australian and international research community, and this effort must continue if we are to be serious about making a change to our current oil dependence. While there is a lack of alternatives, rural Australians remain vulnerable to the whims of the Organisation of Petrol Exporting Countries (OPEC), whose members will continue to profit at Australian consumers’ expense as a result of a lack of genuine transport fuel alternatives.

Apart from the alternatives to petroleum based products listed above, the NFF also encourages further research into technologies such as the large scale extraction of liquid fuel from coal. For many years, technology has existed to extract liquid fuel from coal and advances in technology have improved this process making it cleaner and more efficient than

in the past. As stated by the US Department of Energy “*One major benefit of coal-to-liquids fuels is their compatibility with currently existing vehicle technologies and fuel distribution systems. Coal-derived gasoline and diesel could be transported through existing pipelines, dispensed at existing fueling stations, and used to fuel today's gasoline- and diesel-powered vehicles.*”⁹

The NFF notes that Australia has very substantial reserves of coal. If local industry was to substantially enlarge this extraction, Australia could enjoy the twin advantages of more abundant supply and of a high level of Australian fuel self sufficiency and security.

Research and Development

The NFF recognises that the fuel and 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.*”¹⁰ This has undoubtedly hampered investment in R&D in this area.

Extensive R&D is needed to enable farmers to insulate themselves from the escalating cost of diesel, petrol and energy. 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).

The NFF welcomes the work 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. Remembering that many fertilizers are also fuel based, this also includes research into alternative fertilizers that are not linked to the price of fuel, and increased investment in biotechnology research for Genetically Modified (GM) crops that are less reliant on fertilizer use.

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.

Energy and competition for agricultural inputs

Energy source considerations are increasingly seen to intersect with agricultural production. This is drawing out interactions between energy, water, land management, biodiversity management and carbon pricing policy agendas and associated tensions are emerging.

⁹ US Department of Energy. *Alternative Fuels and Advanced Vehicles Data Center Retrieved August 20, 2008, from http://www.eere.energy.gov/afdc/fuels/emerging_coal_liquids_what_is.html*

¹⁰ Clean Energy Council. 2008, *Australian Bioenergy Roadmap*.

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 gas 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 the CSG experience 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.

Energy and water

The NFF acknowledges that hydro-electricity generation is a very small but high value user of water. Hydro-electricity generators usually have a water entitlement that allows them to use the water, which is then reallocated for downstream consumptive use. In other words, hydro-electricity generation does not generally consume water but uses the water that is then made available for other uses downstream of the generation site. Subsequently, the type of

entitlement issued by State Governments reflects this and incorporates these characteristics in the entitlement.

It should be noted that the high value of hydro-electricity's water use can be in many cases derived from their use as an insurance product should coal fired power stations suffer reduced capacity. Hydro-electricity has the ability to start up and feed into the national electricity grid in a very short time frame thus alleviating the consequences of power shortages for consumers. This is a fundamental aspect of organisations like Snowy Hydro.

The matters raised in the Draft Energy White Paper regarding hydro-power are also matters of concern to any water access entitlement holder, i.e.

- Access to adequate and secure water supplies;
- Uncertainty about future access affecting financing; and
- The risk of new energy sources such as geothermal reducing availability to existing users.

Australian governments have initiated a water reform process since 1994 that has focused on delivery of property rights, water efficiency, tradeable water entitlements and the use of the market to reallocate water between competing users.

The NFF supports the use of the water market to allow hydro-electricity generators to achieve the best mix of water products to suit their business needs. In saying that, the major issue then becomes that this water cannot be re-regulated for use downstream by other consumptive users. This may be a perverse outcome and NFF suggests that jurisdictions be required to investigate options to resolve this dilemma and that such work ought to include both water entitlements and annual allocations.

The Australian Government's list of future arrangements for all water users is largely support and NFF would further reiterate that these must be National Water Initiative compliant. However, in some cases, the NFF has a slightly different perspective and these are outlined below:

- The NFF does not support any proposal that seeks the change the current characteristics of any water entitlement – to do so will have a third party impact on all water users, and is the reason why the agriculture sector strongly supports “tagged” entitlements;
- The NFF supports that all use of water must be bought into the water-planning framework; this includes co-produced water from coal seam gas extraction. In systems approaching or at full development, companies must be required to purchase an existing water entitlement to offset the use and avoid third party impacts. In systems that are not at full development, there is capacity for state governments to implement other arrangements such as issuing new entitlements for sale.
- Water planning processes must consider all uses of water (environment, towns, industry, recreation etc) and tradeoff decisions between competing uses must be transparent. Water planning may consider but must not be subservient to energy supply reliability requirements.
- While water markets ought to be unrestricted to new entrants, there are a number of riders. Participants must hold a water access entitlement and water traded either permanently or annually must comply with the relevant water plan and relevant State or Territory or Australian Government legislation, including those relating to water trade

and water market rules. This means that there will be legitimate restrictions on trade so that trade can only occur between connected water sources.

The above must resolve perverse outcomes and third party impacts that might be incurred by other consumptive users.

Fuel taxation arrangements

The NFF strongly supports the current fuel tax arrangements, particularly those relating to the Fuel Tax Credit scheme. The NFF has been deeply concerned at recent suggestions that the Fuel Tax Credit scheme may 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 expand the Carbon Tax to cover agricultural fuel use 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.

Competition issues

The NFF recognizes that the fuel industry is self regulating, with prices set by market conditions. This poses particular difficulties for rural communities where a lack of competition can result in significantly higher prices.¹¹ There is reduced competition to supply fuel and the premiums charged tend to exceed any added delivery costs, as noted in the ACCC inquiry into the price of unleaded petrol.¹²

¹¹ ACCC 2007, *Petrol prices and Australian consumers*, December 2007

¹² ACCC 2007, *Petrol prices and Australian consumers*, December 2007

During the 2007 ACCC inquiry into the price of unleaded fuel, the ACCC went to some length to explain how natural market forces have largely been held attributable to the disparity between city and country petrol prices. The findings of the report found that the five year city-country differential average in Australia was five cents per litre using a five-city average. These factors, the ACCC explains, include:

- The lag between movements in international prices and country retail prices; and
- Local specific factors such as smaller populations, greater distance from terminals, less competition and lower volumes.

The NFF does not dispute these findings however feels it is necessary to highlight that the cost issues faced by metropolitan petrol customers are exacerbated in country areas. Farmers are continually seeing their comparative purchasing power weakness being taken advantage of. For instance, some farmers have seen their bulk delivered diesel purchase price move to levels higher than those seen at retail outlets. It is therefore imperative that competition in the fuel sector remains as robust and vigorous as possible. This is particularly important considering that there appears to be an increasing disparity between the price of petrol and diesel in the Australian market for which there is no clear explanation.

Competition policy also emerges in the context of new discoveries of natural gas reserves owned by the State and the forward contracting of this supply. It has been noted with some concern that current plans are to export a large portion of the new discoveries of energy (gas) that we harvest here without the domestic economy having the opportunity to utilise significant amounts of the supplies domestically for cheaper energy production.

The \$50 billion Gorgon Gas Project off Barrow Island is the largest resources development undertaken in Australia, and is an example of the sensitivities emerging in this area. The NFF notes that there is a current requirement to reserve five per cent of the project's total output for domestic supply under the terms of its State Agreement. It has been suggested that despite this requirement, WA users were paying four to five times more for gas than those in the eastern states, and wholesale prices had risen a similar level in the past two years.¹³

Far from support any constraint of commercial trade, the NFF questions what opportunities should be present in the access to resources for which the Australian public has an interest.

Conclusion

The ongoing access to cost effective energy is of vital importance to the future of Australian farmers. This issue has broader implications from both food security and competitiveness perspectives. In the face of the carbon tax and privatisation of the stationary energy industry, the Australian farm sector is exposed to increasing energy prices and efforts must be escalated to ensure this major element of our cost base is reduced.

The NFF recognises that in some of the areas addressed above that private industry can play a role in generating the required investment in finding solutions in these areas. However, the Australian Government must also make a major contribution by the provision of seed funding

¹³ <http://www.watoday.com.au/wa-news/plea-to-reserve-gorgon-gas-20090610-c3dq.html>, accessed on 4/4/12

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.