National Farmers' Federation

Submission to Senate Select Committee on Electricity Prices
September 2012

NFF Member Organisations

AGFORCE

Australian Dairy Farmers

Australian Livestock Exporters' Council ALEC

ALPA

AUSTRALIAN Pork

AUSTRALIAN VETERINARY ASSOCIATION

PURE BEECHWORTH HONEY

CANEGROWERS

CATTLE COUNCIL OF AUSTRALIA

CORPORATE AGRICULTURAL GROUP

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dried fruits australia

GrainCorp

Grain Growers
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RGA

RIDLEY

Ruralco HOLDINGS LIMITED

SHEEPMEAT COUNCIL OF AUSTRALIA

Agriculture's Future ++ Your Future ++ Our Future ++ TFGA

The Pastoralists' Association of West Darling

Victorian Farmers Federation

WAFARMERS
THE WESTERN AUSTRALIAN FARMERS FEDERATION

WOOLPRODUCERS AUSTRALIA

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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 Select Committee on Electricity Prices.

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 is for direct energy for farm machinery or upstream for electricity to power food processing facilities.

Australian farmers and the surrounding communities are resilient, but they have struggled in recent times against a rising cost base and increasing environmental and economical pressure. High electricity and fuel prices have been having an impact on farm businesses for some time as the input costs increase for many businesses reliant on electricity for on farm uses including irrigation, refrigeration and heating. Farming systems are under severe pressure to remain globally competitive and are increasingly 'energy exposed'. While the average cost of electricity for broad acre operations is between 2-3% of operating costs, the cost for dairying and intensive irrigation, such as irrigated horticulture and irrigated sugarcane cropping is between 5% and 10% (excluding the cost of water).

NFF is of the view that the Federal Government must ensure that decisions relating to consolidation in the electricity sector being made now demonstrate long term benefits;

beyond increasing revenue for the states from sale of assets or carbon credits and/or maintaining excessive government expenditure in the sector to extract higher rates of return.

Key causes of electricity price increases over recent years

Broadly speaking over the past three years, electricity prices have increased by an average of 15% a year. These increases can be attributed to the following: 65% to transmission (poles and wire) upgrades, 15% CPI and the remaining 20% Renewable Energy Target (RET's) to pay for the cost of alternative energy subsidies (mainly domestic solar panels). The Australian Energy Regulator has not had enough authority to clamp down on these increases.

Increased use of alternative energy has a perverse effect on poles and wire capital investment. Renewable energy, such as the domestic uptake of PV solar uses the energy distribution and transmission networks as 'storage' throughout the day, while drawing on base load power during peak demand times. This inflates the cost of the network to other users (such as irrigators in the farm sector).Although not changing the capital investment needed to address peak demand, use of traditional coal based energy is declining while the cost of "embedding" alternative energy into the system is adding to network delivery cost. This means that the charge rate /unit of power is increasing (due to lower overall power consumption). In addition, there is a further subsidy for alternative energy generation below 10kWh/ day, which encourages small-scale generation that doesn't fully utilise the network and artificially decreases the competitiveness of base-load power.

The impact of the carbon tax comes on top of this activity. In NSW since the start of the carbon tax, in the current year (2012/13) the average increase in charge is about 18%, of which 9% is carbon tax, 7% is network and 2%RET. The story is very similar in Queensland, following the Queensland Competition Authority's latest price determination. There is a view that suggests energy regulators in each state have allowed "gold-plating" in network and distribution provision by encouraging over-investment to increase the regulated rate of return. This phenomenon is more common in states where the transmission system is still state owned. This has been one means of State governments to recoup the cost of the carbon tax on their energy networks, but the end result is higher prices for energy users and a higher, less competitive cost base for primary producers.

The increased productivity of the current system will be best delivered by enabling market-orientated competition though both the generation and retail stages of the energy market. Considering the high capital cost of entry, the network and distribution stages should be operated on a cost reflective basis. Appropriate regulation of this through the National Energy Regulator has failed to ensure costs are on a recovery basis only. Subsidies to delivery alternate sources of energy should be targeted towards the generation sector for the least inefficient outcome on the network and distribution stages of the electricity market.

The key requirement for an energy efficiency and nationally consistent electricity market is transparency in pricing and competition in retail and generation. Developing a single electricity provision model across Australia would be a desired policy outcome.

It is apparent that some states have sought to generate income from the electricity market. The RET facilitates the selling of 'green' power (earning an REC) and the purchase of cheaper coal-fired power. This is in addition to the over-investment currently occurring throughout the network and distribution channels. Considering that states are increasing their revenue through upward pressure on prices, the AER needs more capacity to ensure the electricity delivery system should not be used as a state revenue collector.

Tariff Structures Threaten Irrigation Viability

Tariff structures that seek to put a much greater emphasis on the "Poles and Wires" component of electricity costs are threatening the viability of irrigation developments, and if not amended will lead to "stranded" electricity assets.

In many cases irrigators have an opportunity to utilise either diesel/gas power sources or electricity to provide energy to lift water or pressurise irrigation system.

In making this choice, irrigators will take careful note of relative costs, and these costs will play a major part in the ultimate decision. Should tariff structures change post decision, there can be a very significant turn-around in the viability of the chosen energy source, and it is highly likely that the irrigator will have no choice but to make additional investment and change the energy source, leaving the infrastructure associated with the original power source as a "stranded" asset.

The Queensland Competition Authority's Determination of Regulated Retail Electricity Prices 2012-2013 not only recommended increased prices, but also recommended a new tariff structure, which will have a fundamental effect on the viability of electricity as an irrigation energy source for many farmers.

In general, the new tariff structures have dramatically reduced the difference between peak and off-peak power. For example Tariff 62, a now obsolete time of use irrigation tariff used to offer off-peak electricity at approximately 10c/kwh and peak at approximately 30c/kwh, the recommended replacement tariff is Tariff 22, where off-peak is approximately 18c/kwh and peak approximately 20c/kwh.

In many cases irrigators have invested in pumping and pressurisation infrastructure to take advantage of off-peak rates, such as buying a higher capacity lateral move irrigator allowing irrigations to be only carried out at night (with the added advantage of evaporation savings) with the extra capital cost offset by energy savings. These savings have now evaporated.

Further, the move to higher demand charges, will also negatively impact on irrigators.

For example, one St George irrigator, faces the prospect of his electricity bill leaping almost 400% if his annual usage moves above 100Mw, which it will do if he install additional electric pumping capacity, as he had planned.

At one site, if he could remain on his current obsolete tariff 62 his annual average electricity bill would be $2200, but if forced to Tariff 44 with its large demand charge component, the same electricity usage would increase his bill to approximately $74,000.

The irrigator has made it clear that if forced to move to Tariff 44, he would have no choice but to convert his pumps to diesel, which would result is a significant "stranded" electricity asset, which will not be providing him with a service or the asset owner with an income.

Irrigators must have access to suitable and affordable tariffs that reflect their usage patterns and encourage the use of off-peak supplies.

Mechanisms that could assist households and business to reduce their energy costs

There are a number of ways to reduce the cost of energy. Simple measures that provide a more informed understanding of energy use on farm would be of value. Initiatives that assisted audits of electricity usage on farm would be supported (especially targeting both farms that are value-adding and that are relatively high users, such as dairying and intensive irrigation).. In addition, measures that encourage investment in skills and training to conduct in house energy audits and develop real life case studies to find out and demonstrate what is going on would seem justified.

While the average cost of electricity for broad acre operations is between 2-3% of operating costs, the cost for dairying and intensive irrigation, such as irrigated horticulture and irrigated sugarcane cropping is between 5% and 10% (excluding the cost of water). The NFF is of the view that there is a strong case to expand provisions of the existing government funding (eg Clean Energy Future) to specifically include agricultural businesses which would be of significant benefit to the sector. Currently the view is that while measures including CO2 mitigation and sequestration might be available as part of the Clean Energy Future measures or the Carbon Farming Initiative are commendable, more specific and useful adaptation provisions and resources would help farmers adopt and invest in new upgraded equipment that lowers energy costs on farm and also reduces emissions.

Practical opportunities to drive reductions in electricity costs

The NFF is of the view that there are opportunities to improve customer advocacy and representation arrangements throughout existing policy mechanisms. NFF supports further investigation of measures that provide for more transparency across the energy supply chain, including both state and federal regulators and retailers. It is important that business and consumers have access to information that can assist in identification of efficiency gains and activities that will reduce energy cost to consumers and further assist in increasing the efficiency of energy delivery.

Benchmarking for whole of farm business operations is extremely useful in identifying opportunities for efficiencies and provide a platform for informed decision making. More specifically funding for on farm or business electricity use audits and the development of sector wide benchmarking tools would be of value to help transition to low emissions and low cost technology. Irrigated agriculture is a useful example of highlighting significant costs of electricity on farm. In many irrigated farming systems, pumping constitutes the major component of whole farm energy use.

There is significant potential for improvements through undertaking irrigation energy efficiency measurements and using benchmarks to help realise cost and labour savings – in the same way the industry has done so in achieving water use efficiency gains. The efficiency of any pumping system is dictated by the performance of both the pump and its drive system and it is not uncommon for pumps to be operating below their potential efficiency accumulated wear and tear or inappropriate impellers. Significant savings can be achieved by optimising the performance of existing pumping facilities via modifications (even on new systems) or when necessary replacing them. Energy savings of 20-30% have been achieved

through relatively simple and inexpensive changes and sometimes more efficient pumping systems have payed for themselves in just a couple of years, through reduced operating costs (including labour). As an example NFF is aware of one farm saving approximately $65,000 following investment in a pump efficiency upgrade of $50,000. Adjustments can include changing the revs on a motor to ensure it's operating at the optimum efficiency range, which can sometimes provide significant fuel economies. There can also be a mismatch between the pump's drive unit and the pump itself. Energy efficiency evaluations are a valuable first step which can help growers compare against a benchmark then identify problems and steps to improve the system.

Opportunities and mechanisms that promote wider adoption of innovative and low cost technologies should be supported and promoted by government. Consumers in the farming sector would benefit from greater information to assist in managing their energy use. Cooperative programs that can demonstrate and facilitate adoption of more energy efficient energy sources would be a valuable addition to assist in business efficiency. Underpinning these programs, measures should be incentivised via collaborative investment in R&D to examine new energy distribution and use systems.

The NFF calls on the Australian government to tighten the regulatory capacity of the AER to clamp down on escalating energy costs. Agricultural users of electricity are able to reduce their energy use, but attention must also be paid to the supply side of the market. At the present time, the AER does not have capacity to enforce efficiency through the state-operated network and distribution agencies or to stop the current "gold plating". This needs to change. Further, the AER needs the capacity to conduct further research into the economically efficient price structures in relation to the agricultural sector. Electricity costs are spiralling to the point where it can be cheaper to convert the primary source of energy from network electricity to on-farm diesel generation (especially for irrigation). This will have a negative effect on the efficiency of the network and will result in higher costs for all energy users. Further, the AER needs to have a greater demand management role throughout the network, to encourage off-peak electricity use.

On farm flexibility

In some farming situations grid electricity provides a ready reserve to power numerous daily start up and surge loads from pressure pumps, refrigeration and air conditioning, as well as a reserve capacity when random workshop loads occur. Solar provisions can be installed to provide only a portion of the daily power demand at approximately 9cents to 12cents a KwH, (excluding finance costs) versus buying that power from the grid at between 21cents to 30cents Kwh depending on the daily tariff. Nightly and weekend tariffs are similar to the cost of solar further if solar is not used feed-in tariffs range from 6cents KwH to 44cents KwH.

In the absence of grid, these same type of surge load requirements have to come from batteries, as (back up) diesel generators are unable (due to start up times) to accommodate the surge and start up loads required. Batteries represent between 20 to 30% of the cost of a hybrid installations and have to be replaced every 8 to 12 years. Thus the capital cost of an off-grid solar system is 3 to 4 time dearer than an on-grid, putting it on par (due to capital costs) with efficient diesel now the REC multipliers are diminishing.

The key issue for farming operations are providing a secure supply of electricity but also one that is flexible and capable of providing for the varying requirements at a (capital) cost that is not prohibitive.

Research Development and Extension

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*."[1] This has undoubtedly hampered investment in R&D in this area.

The NFF seeks to reiterate the importance of research, development and extension in new technology and processes that can drive on farm productivity that increases international competitiveness. Government and industry collaboration on research that drives efficiencies (and importantly the extension to ensure 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 alternative and more efficient sources and uses will be hugely beneficial to the long term sustainability (and in turn competitiveness) of Australian agricultural industries.

Extensive R&D is needed to enable farmers to adapt to more efficient technology in the short term and more efficient energy delivery structures in the longer term to insulate the sector from the immediate and escalating cost of on farm and value chain energy. This may include new technologies that help improve the efficiency of electricity use. Farmers recognise that efficiency in the management of inputs and resources (water, fuel, electricity and nutrients) is a top priority. 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 electricity in farming systems. This must be supported.

The NFF notes the range of activities conducted on alternative energy from hydrogen, wind and solar but notes that more is needed if these energy sources are to become a retail reality that doesn't negatively impact on current investment in the network. 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.

Energy and competition for agricultural inputs

Energy source considerations are increasingly seen to intersect with agricultural production. Interactions between energy, water, land management, biodiversity management and carbon pricing policy agendas are encouraging tensions to emerge. 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.

[1] Clean Energy Council. 2008, *Australian Bioenergy Roadmap*.

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. 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 it 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.

Regulatory Impost

The Council of Australian Government's (COAG) has prioritised a review of Government climate change programs to consider whether they are complementary to a carbon price, are effective and efficient and do not impose duplicative reporting requirements. NFF supports this review.

Furthermore, the Productivity Commission has recently released a report on COAG's Regulatory and Competition Reform Agenda: A high-level assessment of the gains[2]. The Productivity Commission has made it very clear that the introduction of the carbon price on 1 July 2012 means that a significant number of existing Government programs aimed at reducing greenhouse gas emissions and/or improve energy efficiency impose material costs to the community with little or no benefit.

[2] http://pc.gov.au/research/commission/regulatory-competition-reform

The Productivity Commission suggests that around 230 policies can be broadly divided into three groups:

- Those that deliver abatement in addition to the carbon price but at a higher cost;
- Those that deliver no additional abatement, but change the mix of abatement and impose considerable costs; and
- Those that are complementary to the carbon price.

The Productivity Commission advises that the most significant COAG Regulatory and Competition reforms would be gained by terminating schemes such as:

- Renewable energy targets;
- Feed in tariffs;
- Support for low emissions technology demonstration plants;
- Mandating minimum energy performance standards for products;
- Subsidies, incentives or mandates for investment in energy efficiency;
- Energy efficiency reporting schemes;
- Requirements for reporting energy use and energy efficiency opportunities.

The Productivity Commission notes that nine policies increase electricity prices by 1-2%, whereas NSW IPART estimated that the impact was of the order of 7%.

The NFF requests the supports the termination or immediate phase out of those policies that lead to increased costs with little benefits as identified by the Productivity Commission, as this will reduce the cost price pressures on electricity supply.

Conclusion

The NFF recognises, that in some of the areas addressed above, that private industry can play a major role in generating the required investment required to find solutions in the areas of on farm or value chain electricity use. However, the Australian Government can also make a major contribution by the provision of seed funding and collaborative approaches to energy use particularly in the research, development and extension of new technology and innovation. In addition to this the government must ensure that the regulatory environment is conducive to ensuring efficiency of the electricity distribution and network operation.

The NFF urges Government to continue to focus on the important issue of low cost energy security which is so important to the long term competitiveness of the agricultural sector. Australian farmers can benefit greatly by gains in efficiency in this area, while at the same time can make a significant contribution to developing solutions to peak demand management to contain outrageous increases in energy investment.