COTTON AUSTRALIA

Advancing Australian Cotton

Ms Sophie Dunstone
Committee Secretary
Select Committee on Electricity Prices
GPO Box 854
CANBERRA ACT 2601

September 14 2012

Dear Ms Dunstone

Re: Select Committee on Electricity Prices

Thank you for the opportunity to make a submission for the above-mentioned Inquiry. Cotton Australia's submission outlines the key issues in regards to the Inquiry's Terms of Reference, from the perspective of the cotton industry.

About Cotton Australia

Cotton Australia is the key representative body for the Australian cotton growing industry. It helps the industry to work together to be world competitive and sustainable, and also tell the good news about the industry's achievements. Cotton Australia determines and drives the industry's strategic direction, retaining its strong focus on R&D, promoting the value of the industry, reporting on its environmental credibility, and implementing policy objectives in consultation with its stakeholders.

Cotton Australia works to ensure an environment conducive to efficient and sustainable cotton production. It has a key role in Best Management Practices (myBMP), an environmental management program for growers. This work has seen a significant improvement in the environmental performance of the industry, with huge improvements in water use efficiency, significant reductions in pesticide use, and millions of dollars invested into R&D.

The Australian cotton industry directly employs thousands of Australian's, supports over 50 local communities and this year will contribute over $2.5b to the Australian economy.

Cotton Australia is a member of the National Farmers Federation (NFF), the National Irrigator's Council, Queensland Farmers Federation and the New South Wales Irrigators Council. Many of these organisations will also be making submissions to the Inquiry, and while Cotton Australia is confident that these submissions will reflect the views of Cotton Australia, if there is any divergence of views expressed then Cotton Australia's position is the one outlined in this paper.

Introduction

Cotton farmers and the supply chain they depend on is highly reliant on energy, e.g. electricity is used on farm in irrigation and the ginning (processing, which is undertaken in cotton growing regions in Australia) is heavily reliant on electricity to operate.

Rising cost of production is a critical issue for Australia's cotton growers at present, with high energy and fuel prices a contributing factor. Rising operating costs are similarly being felt by processors. This is in the context of increasing environmental and economical pressures.

Whilst cotton growers are innovative and resilient, the industry is under significant pressure to remain globally competitive and are increasingly 'energy exposed'. The challenge for the sector is to become more energy efficient at a farm and value chain level.

a) identification of the key causes of electricity price increases over recent years and those likely in the future

Cotton Australia notes the causes of electricity prices as outlined in the submission made by the National Farmers' Federation (NFF), primarily those associated with transmission (poles and wires) upgrades, CPI and RETs to pay for costs of alternative energy subsidies, and noting that the cost of embedding alternative energy into the system is adding to network delivery costs.

These costs are compounded by those associated with the recent introduction of the carbon tax, making for additional cost impacts that agricultural industries will find difficult to manage.

Analysis undertaken by the Australian Farm Institute has shown that the carbon tax alone will cost the average cotton farmer (400ha irrigated farm) almost an additional $10,000 per year in the first year of the tax.

Costs arise from an increase in the price of energy passed on by businesses directly impacted by the carbon price. This will increase the cost of energy-reliant farm and processing inputs including electricity used on-farm (e.g. irrigation pumping) and for ginning (processing).

Farmers are price-takers, so are in a limited position to pass on such costs down the value chain. Additional costs therefore constrain famers' ability to innovate and re-invest in their farming systems e.g. to upgrade practices and capital to what are typically more energy efficient operations.

As stated in the report by the Australian Farm Institute (2011) *The Impact of a Carbon Price on Australian Farm Businesses: Cotton Farming:*

"Faced with additional costs, farm business managers would respond in a variety of different ways that are not foreseeable or predictable, and technologies may emerge over time that enable adaptation to occur and the negative impacts of a carbon price on farm businesses to be reduced. However, in the short to medium term it is difficult to envisage major technological changes occurring, especially given the extent to which Australian cotton farms have already adopted practices and technologies that minimise energy inputs over the past two decades."

b) legislative and regulatory arrangements and drivers in relation to network transmission and distribution investment decision making and

the consequent impacts on electricity bills, and on the long term interests of consumers;

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. Cotton Australia and our affiliates have previously raised concerns with the Queensland Competition Authority regarding the implications of determinations which will place significant pressure on electricity bills due to carbon tax and network charges.

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, that will not be providing him with a service or the asset owner with an income.

Further while some price movement with Tariffs must be expected, significant changes to the structure of Tariffs is akin to "changing the planning requirements

after a housing project has been approved and built, and requiring the proponent to tear it down and start again."

Irrigators and other electricity users require investment certainty when they install infrastructure, and should not be subject to changes to the structure of Tariffs.

As a minimum, electricity users should be able to maintain a Tariff for the life of a piece of infrastructure.

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

In general there are three distinct usage patterns for electricity use by irrigators:

1. Episodic use of electric pumps to lift volumes of waters when flows are legally available from rivers and flood events. Timing is hard to predict as it often depends on natural events, and continuous pumping may last from a couple of hours to a couple of weeks. In some cases periods between pumping opportunities could be many months. In general the pumps are relatively large capacity, and therefore electricity infrastructure needs to be able to deliver relatively large flows of electricity.
2. Relatively constant pumping of spring and summer, to meet immediate irrigation demands. A typical example maybe the pumping of water from an underground aquifer. Requires a steady use of electricity over 4-6 months. Usage may not necessarily be 24/7, but would often be 24hrs per day, continuous for a number of days, followed by a break of a number of days. Other uses could be for direct irrigation through a lateral move or centre pivot, where the infrastructure capacity requires 24hr operation.
3. Similar to the above, but where the infrastructure is of a size, that it primarily only needs to be operated during off-peak periods.

Specific irrigation Tariffs need to be available to industry so that cost effective electricity can be accessed under the above three scenarios.

It is clear that some of the current issues identified with tariff structures make for reduced incentives and present a barrier to reaching water use efficiency/energy reduction goals for business, industry and government, and realising the benefits of investment already made on farm and through industry funded R&D.

Submissions and media releases by the Queensland Farmers Federation have previously highlighted the implications of QCA determinations and resulting significant increases in the costs of electricity in off peak periods for time-of-use tariffs. They have also noted:

- That the implementation of recommendations by the Queensland Government will also substantially increase electricity costs for irrigators and for irrigation water providers like SunWater and Pioneer Valley Water with a subsequent impact on irrigation water prices. QCA will allow two tariffs (Tariff 37 and Tariff 66) to continue for a further 12 months in recognition of the significant adjustments farmers on theses tariffs will need to make. However in both cases charges will increase by 20 percent for the transition period as a step to the higher recommended tariff.
- Tariff changes in QLD came in when irrigation bills were lowest and farmers are only now realising the consequence, e.g. farmers in are QLD now receiving their bills or other forms of advice on their electricity prices for this financial year. In some cases, no transitional arrangements are in place resulting in an immediate and significant increase in off-peak charges.

c) **options to reduce peak demand and improve the productivity of the national electricity system;**
d) **investigation of mechanisms that could assist households and business to reduce their energy costs, including:**
    a. **the identification of practical low cost energy efficiency opportunities to assist low income earners reduce their electricity costs,**
    b. **the opportunities for improved customer advocacy and representation arrangements bringing together current diffuse consumer representation around the country,**
    c. **the opportunities and possible mechanisms for the wider adoption of technologies to provide consumers with greater information to assist in managing their energy use,**
    d. **the adequacy of current consumer information, choice, and protection measures, including the benefits to consumers and industry of uniform adoption of the National Energy Customer Framework,**
    e. **the arrangements to support and assist low income and vulnerable consumers with electricity pricing, in particular relating to the role and extent of dividend redistribution from electricity infrastructure,**
    f. **the arrangements for network businesses to assist their customers to save energy and reduce peak demand as a more cost effective alternative to network infrastructure spending, and**
    g. **the improved reporting by electricity businesses of their performance in assisting customers to save energy and reduce bills;**

Cotton Australia wishes to reiterate, and in some cases expand on, points made in the submission by NFF regarding **mechanisms that that could assist households and business to reduce their energy costs.**

Measures to support understanding and managing energy use

Measures that support/increase the capacity to understand and manage energy use on-farm (and cost/benefit associated with changes) are particularly beneficial. Ensuring businesses have access to information that can assist in identifying efficiency gains and activities will assist businesses in reducing their energy use, e.g. audits of electricity usage on farm, case studies and examples.

In irrigated cotton farming systems, pumping constitutes the major component of whole farm energy use. Energy costs associated with pumping can often be the biggest ticket item on an irrigation farmer's energy bill, including diesel fuel and electricity. 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. Similar R&D in water use efficiency in the cotton industry has resulted in major achievements (40% improvement in cotton water productivity).

Current work shows that there is significant potential for improvements through undertaking irrigation energy efficiency measurements and using benchmarks to help realise cost savings by optimising the performance of existing pumping facilities via modifications. Energy savings of 20-30% have been achieved through relatively simple and inexpensive changes and sometimes more efficient pumping systems have paid for themselves in just a couple of years, through reduced operating costs (including labour).

Past evaluations have identified that these industry outcomes have been more effectively achieved when implemented with relevant government programs (e.g. when incentive funds from government are linked to industry extension efforts to foster adoption).

Energy reduction initiatives

Provisions of the existing government funding (eg Clean Energy Future Package) could potentially be expanded or better linked to programs that support energy reduction R&D and implementation in agricultural businesses. Many industries and businesses are considering carbon and energy programs holistically. The CEF Package and Carbon Farming Initiative support activities that mitigate GHG emissions and sequester carbon, the outcomes of which could be enhanced by supporting programs that also integrate energy reduction efforts (e.g. new upgraded equipment that lowers energy costs on farm).

At present, industries in agriculture need to drive and invest in energy reduction/efficiency R,D&E programs and there appears to be scope for government to programs in this area to further drive and enhance this work.

The importance of research, development and extension

Cotton Australia seeks to reiterate the importance of research, development and extension in new technology and processes that 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. More than ever farmers need to be able to be as efficient as possible, and cotton growers recognise that efficiency in the management of inputs and resources (water, fuel, and nutrients) as top priorities.

The government can play an important coordination role with industry to develop and implement policies, programs and continued RD&E for managing carbon, water and energy in farming systems are a core part of this. Future government and RD&E strategies will need to ensure there is adequate focus on equipping the industry to respond to escalating energy costs due to world fuel prices, the changing environment of climate change and a carbon economy.

The Australian Government can 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, the government must ensure that the regulatory environment is conducive to drawing further private investment in securing Australian farmers energy future.

Improved reporting by electricity businesses of their performance in assisting customers to save energy and reduce bills

Cotton Australia believes that electricity companies could be a lot more proactive in reporting and liaising with customers to assist them in better understanding energy use, charges and structures.

In QLD, tariff changes came in when irrigation bills were lowest and farmers are only now realising the consequence as bills come through for this financial year.

Clear and consistent reporting is important, e.g. in reporting units such as dollars and cents (Cotton Australia is aware that the ‘daily supply charge’ is quoted in cents, whereas other figures are in dollars).

e) investigation of opportunities and barriers to the wider deployment of new and innovative technologies.

Cotton Australia feels that a number of the points made in the above sections apply here, both regarding barriers (tariff structures and significant additional costs constraining further efficiency gains and innovation) and opportunities (ensuring government programs support/help drive industry and private efforts to foster innovations and adoption).

Thank you for the opportunity to make a submission to the Select Committee on Electricity Prices. Please contact me should you require any clarification on this submission.

Yours faithfully,

Angela Bradburn
Policy Officer, Cotton Australia