

## **Submission**

# **Select Committee on Electricity Prices**

120921

**Stefanie Schulte**  
Economic Policy Analyst

## Introduction

NSW Irrigators' Council (NSWIC) represents more than 12,000 irrigation farmers across NSW. These irrigators access regulated, unregulated and groundwater systems. Our Members include valley water user association, food and fibre groups, irrigation corporations and community groups from the rice, cotton, dairy and horticulture industries. Many of these Members have been - and will be - affected by the progressive increase in electricity price across NSW.

This submission represents the views of the Members of NSWIC. However each Member reserves the right to independent policy on issues that directly relate to their areas of operation, or expertise or any other issues that they may deem relevant.

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## Executive Summary

Irrigators are greatly concerned about the substantial electricity price increases in NSW in recent years. Wide scale conservational policy advocated and implemented by both the State and Federal government have forced irrigators to 'make do with less' and pay more for the privilege. In the context of overall input costs, electricity has become a dominant input factor and the recent explosion of electricity prices have caused the operation of irrigation equipment to become prohibitively expensive.

As a result of growing competitive pressure for water resources between the environment and productive water users, many agricultural producers have adopted more water saving equipment on farm to remain financially viable. While considerable success has been achieved in relation to the water input and agricultural output ratio, the irrigation industry as a whole has become more energy intensive in the process.

Irrigators currently find themselves at a crossroad between two federal policy objectives – to preserve more water for the environment and emit less carbon - which are two objectives that irrigators find difficult to align. While substantial water savings have been achieved in recent years, it needs to be remembered that electricity has become an increasingly important input factor for our food and fibre producers. To remain a competitive and financially viable industry as a whole, NSWIC urges this Inquiry to immediately address the regulatory complexity and transparency issues related to electricity price setting.

## General Comments

Energy, in the form of electricity or otherwise, has been an increasingly important input factor for irrigated agricultural production. Recent structural changes in the form of greater utilization of water saving and energy intensive infrastructure equipment, has caused many Members of NSWIC to express their great concerns over escalating electricity prices.

Across NSW, average regulated electricity prices have increased by 10% and 17% in 2010/11 and 2011/12 respectively and will further rise by an average of 18% in 2012/13<sup>1</sup>. While these average price increases should only be regarded as indicative cost increases for irrigators, it is evident that the price rises have caused severe financial constraints for irrigators in NSW<sup>2</sup>.

The great diversity of irrigation systems used on farm make accurate estimations of individual cost increases difficult, however it is undeniable that irrigators have been exposed to the upwards electricity price adjustments due to the location of their operations, the increasing use of energy intensive equipment and the varying demand patterns.

Firstly, the regional nature of irrigated agricultural production and the heavy reliance on *Country Energy* as an electricity provider, show the exposure of irrigators to electricity price increases. In contrast to *Energy Australia* and *Integral Energy*, *Country Energy* has been subject to larger average price increases over the last two years as a result of greater network and distribution costs. The extensive service area and the constant upgrades in distribution network have caused significant price rises that have been passed on to customers, many of which are irrigators.

Secondly, the policy focus of providing water for the environment has caused fundamental changes in the irrigation industry. Partly due to necessity and partly due to competing pressure for sustainable profit margins, irrigators have increasingly adopted water saving infrastructure equipment. The adoption of water saving infrastructure equipment has come at the price of higher energy intensity – including electricity - as a substitute input to water. The associated higher energy cost has become a major constraining factor for the irrigation industry and has made individual irrigators more vulnerable to price fluctuations.

Thirdly, irrigators do not rely on a constant demand for electricity across the course of a day. This irregular demand for electricity is closely correlated to climate variability, irrigation water supply and equipment used on farm. While the demand for electricity in some instances coincides with demand for other electricity users, NSWIC considers there to be potential opportunities for spreading demand between the irrigation sector and other sectors of the economy with potentially mutually beneficial outcomes for both the energy providers and customers by decreasing peak demand.

Overall, NSWIC considers the recent electricity price increases to be a considerable obstacle to the efficient operation of irrigated agricultural production in NSW. The effect has not only been visible through bottom line profits, but the pricing structure for electricity has not allowed for an efficient use of capital equipment on farm. Such an outcome is clearly suboptimal and needs to be addressed urgently.

<sup>1</sup> IPART, Changes in regulated electricity retail prices from 1 July 2012 - Final Report, June 2012

<sup>2</sup> These price increases have been determined by IPART for *Energy Australia*, *Integral Energy* and *Country Energy*. The high interconnectedness between regulated and unregulated electricity provider, changes in the regulated section has often stipulated changes in the unregulated section.

## Specific Comments

### Part 1: Causes

*Identification of key causes of electricity price increases over recent years and those likely in the future.*

NSWIC would like to reiterate in this context that the recent electricity price increases have been extensive. Over the last six years, average regulated retail electricity prices in NSW have been over 60% and according to the last IPART determination, electricity prices will increase between 11.8% and 20.6% in 2012-13 across the different supply areas in NSW<sup>3</sup>.

As far as NSWIC can assess, the main drivers for the recent electricity price increases have been the rising network costs (transmission and distribution networks) and increasing 'carbon emission scheme' costs (Commonwealth and State programs). According to IPART's review from June 2012, both these components contribute approximately equally to the price increase.

What is particularly noteworthy is the fact, that in the case of NSW, both of these cost components are driven by state and federal legislation and are hence outside the control of the NSW electricity price regulator IPART. To be more specific, the network costs are set by the *Australian Energy Regulator* and the 'carbon emission scheme' costs are governed by federal and state legislation. This means that IPART is not able to assess the efficiency or cost effectiveness of the price increases and is merely forced to pass these costs on to customers. NSWIC considers this to be a substantial shortcoming as potential upwards biased in the price setting cannot be assessed by the state regulator.

Furthermore, these cost push factors are not equally distributed across NSW, in that different electricity supply areas face different increases in network costs. For irrigators, whose operations are generally in rural NSW and who rely on *Country Energy* as their main electricity supplier, the network cost increases have been significantly larger than for *Integral Energy* and *Energy Australia*. This again highlights how irrigators are disproportionately burdened by increasing electricity costs.

Additionally, calculations for the costs of financing generation and retailing businesses have also contributed to the price increases. IPART as a regulator for regulated retail electricity prices has determined that given 'unusual market conditions' a higher weighted average costs of capital (WACC) was necessary to compensate electricity providers for the increased market risk. Such assessment has also led to direct adjustments in customer electricity bills.

NSWIC would like to reiterate at this point that regardless of the driver of higher electricity prices, the fact remains that the irrigation industry has become more energy intensive in recent years due to the adoption of more water saving infrastructure equipment. Hence, higher demand for energy - regardless of the magnitude of the price change - has constrained irrigators and this trend is unlikely to reverse in the future.

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<sup>3</sup> IPART, Changes in regulated electricity retail prices from 1 July 2012 - Final Report, June 2012

## Part 2: Legislative and Regulatory Arrangements

*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.*

The regulatory complexity associated with electricity price setting and the often overlapping responsibilities of different state and federal departments are of great concern for NSWIC.

As mentioned in Part 1, the main causes for recent electricity price increases in NSW were regulated outside the control of the state based regulator IPART. As long as IPART is unable to assess the cost effectiveness and efficiency of these significant cost components, a potential upwards bias price setting cannot be excluded. NSWIC considers it essential that the process is simplified and improved so that state based regulators have direct access to information and are able to provide input into all components that are relevant for final electricity prices.

Furthermore, for optimal price setting it is crucial that the reliability standards, carbon reduction schemes and subsidies are effective, efficient and well-targeted. The principle aim should be to ensure that electricity prices accurately reflect the underlying cost base and are not unnecessarily adjusted upwards. The current process and the multitude of regulators do not allow such a process to occur.

Additionally, in the opinion of NSWIC, the continuous rise in network costs are driven by major capital investment that are supposed to target rising peak demand, changing electricity use patterns and compliance obligations imposed on electricity providers in improving network security and reliability. While IPART currently allows each standard retailer to pass through the actual network prices, NSWIC shares IPART's concerns that network costs are higher than necessary due to the current regulatory framework, including the economic regulation of networks under the *National Electricity Rules* (NER) and the standards for network reliability and security.

### Part 3: Peak Demand & Productivity

#### *Options to reduce peak demand and improve the productivity of the national electricity system*

NSWIC considers the provision of information to customer as a necessary first step in reducing the peak demand for electricity. Information about peak demand and associated costs, could assist in changing customer's behaviour for electricity use. Such information should be readily accessible, easy to understand and consolidated at one central online platform. NSWIC would like to point this Inquiry to the Bureau of Meteorology website in as it provides general as well as business specific climate information that is widely used by the irrigation industry for their operational decisions.

Furthermore, NSWIC would like to refer the Inquiry to IPART's final report on changes in regulated electricity retail prices<sup>4</sup>. The report has recommended the following changes to increase the productivity of the electricity system and mitigate future price increases;

- The *National Electricity Rules* should be changed to remove any potential bias towards higher network costs and inefficient investment decisions.
- The *National Electricity Law* should be changed to require the review body to consider decisions in the context of the whole determination, and not be confined to the specific items contested by the business or interveners in order to make the process fairer for customers.
- The *reliability standards* should be set with reference to the costs and benefits, and determined with reference to customers' preferences. Further, reliability standards should be set on an output basis to allow least-cost delivery of those standards.
- The *green schemes* should be reviewed to ensure that they are efficient and cost effective. If there are components that are not complementary to the carbon pricing mechanism then they should be terminated.

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<sup>4</sup> IPART, Changes in regulated electricity retail prices from 1 July 2012 - Final Report, June 2012

## Part 4: Reduction in Energy Cost

*Investigation of mechanisms that could assist households and business to reduce their energy costs including;*

- *the identification of practical low cost energy efficiency opportunities to assist low income earners reduce their electricity costs,*

NSWIC would strongly support that any cost effective energy saving opportunities are highlighted to all electricity consumer, regardless of their income level. A uniform approach will be the only sensible way to achieve an efficient use of energy.

- *the opportunities for improved customer advocacy and representation arrangements bringing together current diffuse consumer representation around the country,*

Given the diverse use of electricity within the irrigation community, NSWIC considers it difficult to recommend an ideal framework to improve customer advocacy or representation arrangements for electricity price developments. In this context, the establishment of customer service committees for each electricity provider could be useful in order to bring together diverse views and provide customers and industry representatives with the opportunity to voice their concerns.

However, independent of these customer service committees, NSWIC considers it more important that customers are given access to adequate, transparent and easy to understand information so that they are able to make informed decisions and act on the price signals provided. Without easily accessible information and a solid understanding of the reason behind the price increases, NSWIC doubts that large scale changes in usage will materialise.

It will be of primary importance to centralise the information gathering and distribution of information to customers in a coherent and useable format. The current multi-layered responsibilities of various state and federal regulators unnecessarily complicate customer's understanding and consequently their engagement.

- *the opportunities and possible mechanisms for the wider adoption of technologies to provide consumers with greater information to assist in managing their energy use,*

NSWIC is confident that appropriate technology and necessary information is already available which would assist consumers in better managing their electricity use, however NSWIC believes there is a lack of willingness to provide customers with easy to understand information. Consolidation of information - both general and stakeholder specific - would certainly assist in this matter and would allow electricity users to make more informed decisions. The current information available is widely dispersed and not user friendly to assist customer in managing their electricity usage.



## Part 5: Customer Information

- *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,*

As outlined previously, the current available information is widely dispersed and far from useful for a individual consumer to better manage his electricity usage.

With respect to a uniform *National Energy Customer Framework*, NSWIC would like to highlight that such a framework has not yet been adopted by NSW, Victoria, Queensland or South Australia. As such, an evaluation on the effectiveness of this framework is difficult.

However, NSWIC would like to express its concern regarding a certain aspects of the *National Energy Customer Framework (NECF)*. The framework proposes that 'most regulatory functions (should be transferred) to the NECF', but that 'retail energy price regulation (is) to remain the responsibility of state and territories.' If the regulation of electricity prices remains with different entities, NSWIC would like to reiterate that the regulatory complexity will remain.

- *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,*

In the context of electricity pricing, irrigators could be regarded as 'vulnerable' customers. The recent adoption of water saving infrastructure investment on-farm has caused many irrigation operations to be more energy intensive and hence has led to greater exposure to electricity price fluctuations.

As outlined in the general comments, NSWIC feels that current federal policy objectives are not closely aligned. The aims to provide more water for the environment while at the same time reduce energy usage are difficult to reconcile for irrigators. While irrigators have progressively moved towards more water saving infrastructure investment, and hence have become less 'water intensive' in their input mix, these same irrigators have become more 'energy intensive' in the process. This higher energy usage is necessary to operate the water saving infrastructure equipment on farm effectively.

If the Australian Government encourages the use of water saving energy equipment which is by definition more energy intensive, energy prices should allow for an optimal usage of this equipment. With the current electricity price development, this is not the case as irrigators can find it financially unviable to use the equipment. Furthermore, the pricing structure that is imposed on irrigators also does not allow for an efficient use of the water saving equipment on farm as the following example highlights;

Murrumbidgee Irrigation has progressively modified old concrete and earthen channels with pressure pipelines servicing horticultural farms – the Integrated Horticulture Supply program (IHS). In the absence of the IHS program, the conversion of farms to drip irrigation may have still taken place but without capturing the improved system operations and water efficiency that comes with decommissioning channels.

Whilst substantial water savings have been achieved through the modification, the IHS program faces questions of financial viability due to high energy costs. The reason relates to the high contestable tariff rates. Eight of the nine pump stations are currently on contestable tariff rates due to their energy usage (greater than 160 MWh / per annum) whilst the remaining one is on a franchise tariff rate. This effectively means that operations are being penalised for being more water efficient even if there is no greater demand for electricity. To avoid higher electricity costs, one of the systems has been converted and more meters installed to reflect individual usage and move back to a franchise tariff rate. The energy costs have decreased as a result of this, even though there is *more* infrastructure needed and their energy usage has stayed the same.

Murrumbidgee Irrigation has found the following issues;

1. In the absence of collective IHS schemes and the aggregation of energy demand (and a shift to the contestable tariff structure), customers would have invested in their own on farm infrastructure works and remained in the franchise tariff regime - with lower network charges. Whilst this would have increased the energy use component of the bill, it would have avoided the kVA “peak load charge” which is having the biggest impact on pricing;
2. The total energy costs for customers on the contestable sites are significantly higher than on franchise sites and similarly higher than individual farm pump stations. Peak rates are as high as \$2500/ML water for contestable sites versus peak rates of \$56/ML of water for franchise sites;

The results have been that higher electricity prices have offset many of the achieved water saving initiatives raising questions of viability. The changes to less infrastructure investment has had the undesirable effect of moving many of the operations to a contestable tariff rate, thereby compounding the effect of higher energy prices.

As this example has highlighted, the infrastructure that was adopted could not be used efficiently due to the cost of running the equipment<sup>5</sup>.

- *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*

NSWIC proposes a combination of increased information provision and greater cooperation between retailers and customers in order to reach a mutually beneficial outcome.

As the example from Murrumbidgee Irrigation indicated, equipment used on farm was not able to be used efficiently due to the pricing structure. If retailers and customers could arrange for a review of this pricing structure, then the current conditions could potentially be improved and peak loading demands could perhaps be mitigated.

- *the improved reporting by electricity businesses of their performance in assisting customers to save energy and reduce bills; and*

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<sup>5</sup> Some Murrumbidgee Irrigation customers are currently considering pulling out their high-tech watering systems and reverting back to flood irrigation as a result of the perverse energy pricing impacts.

Greater transparency and more detailed information will certainly be beneficial for the understanding of customers so that informed decisions can be made.

For example, detailed charts and explanation of cost for electricity bills as well as hypothetical price changes associated with modified use would provide customers with better information that might encourage changes in electricity use behaviour.

## **Part 6: New Technologies**

*investigation of opportunities and barriers to the wider deployment of new and innovative technologies including:*

- *direct load control and pricing incentives,*

If load management appliances are able to save costs for both a utility and its customers by reducing the need for generation capacity and thereby minimising the amount of energy the utility must purchase in the open market at peak demand periods, then they would be a valuable addition to customers.

Access to real time data on current usage and associated prices, might also allow 'variable users' like irrigators to adjust their electricity usage to times where demand is lower – an outcome that would impact on overall generation capacity and hence benefits electricity provider also. What will be of crucial importance is whether the real time data is easily accessible and simple enough for consumers to understand.

- *storage technology,*

NSWIC would support the development of storage technology that allowed for loading during off-peak demand times that resulted in a cost effective energy use solution.

- *energy efficiency, and*

It should be recognised that for irrigators the trade off has been between 'energy intensive' and 'water intensive. While many irrigators have adopted more water saving equipment, they now face higher energy demand, often in the form of electricity.

It seems contradictory to incentivise irrigators to implement water saving infrastructure equipment that is by nature more energy intensive and then to make it prohibitively expensive for irrigators to use the implemented equipment. This creates perverse outcomes and is not efficient.

- *distributed clean and renewable energy generation.*

While this might be an option for the future, NSWIC doubts that a critical mass has yet been reached that would allow for a cost effective adoption of clean and renewable energy generation. As outlined previously in this submission, the increasing electricity costs are already constraining irrigators and any further price rises associated with the adoption of clean and renewable energy generation would cause further concerns.

**ENDS.**