

11 October 2017

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Dear Kirsten

Tasmanian Irrigation Submission to Irrigation Energy Tariffs

Tasmanian Irrigation & Electricity Overview

The development of irrigation infrastructure has made, and continues to make a significant contribution to the Tasmanian economy. Large-scale irrigation schemes have existed in Tasmania for decades. However, since the establishment of Tasmanian Irrigation (TI) in 2011, the number has increased significantly. TI has been particularly efficient at getting infrastructure in the ground and expanding the irrigated agricultural land in Tasmania. This is generally considered by agriculturalists to be a good thing, but the flow-on effects with respect to energy tariffs require tighter controls and management. The increased irrigation, particularly at peak consumption times, can drastically increase the total load on the network. The timing, magnitude and effect of this load on TasNetworks infrastructure, and the associated impacts of Time of Use Tariffs (TOU) needs to be reviewed as currently they drive usage behaviours contradictory to what they were intended to achieve.

Energy Requirements and Industry Specific Impacts

Irrigation induced energy demand arises from the simultaneous use of irrigation assets, often driven by weather patterns outside of the energy consumers control, to ensure required operations are implemented and perishable assets are sustained. When irrigation is required, such as when crops are planted, the ability to have optimal water applied to the crops is essential particularly in times of dry, drought or low rainfall. Although significant experience, skill and planning goes into the timing of planting perishable assets, once the decision is made, and implemented, producing a financially viable crop is heavily reliant on favourable weather conditions. In times where the weather conditions impact crops, traditionally in the summer months, the current TOU tariffs are offered at a

lower-costs. This helps farmers cope with the increased need to irrigate. However, if dry periods occur in Winter (where peak energy prices apply) then the farmer is exposed to high energy costs through the need to increase consumption and the higher priced energy. They are also at risk of losing all or part of their investment in the crop. In these unfavourable conditions, the only industry that has the ability to financially capitalise on this situation, are Energy providers, such as TasNetworks.

Other options available to Irrigation customers, such as adding demand component, does not assist any irrigation customer to save money, as shown clearly on TasNetworks 'Pricing Outcomes: Irrigation Fact Sheet' and the 'TFGA August 2017 Presentation, that was provided to TI by Kirstan Wilding. In fact, both documents clearly show that tariffs with demand components are around double the cost of the Irrigation TOU tariff (TAS75), which if enforced, would cause irreparable financial damage to irrigation customers. Although TOU tariffs are not ideal, as using power in non-optimal tariff pricing periods is not solely in the customer control, the fact sheet, and previous tariff analysis demonstrates that Irrigation TOU (TAS75), it is the best option available to the irrigation customer segment.

Environmental Impacts and Infrastructure Demand

Where peak pricing tariff structures exist, behaviours are significantly altered, in most cases to the detriment of the irrigation sector, TasNetworks and the environment. TI propose a number of tariff reforms that will limit the impacts of TOU tariffs whilst proposing alternative tariffs structures that incentivise growth in the irrigated agriculture sector.

Currently irrigation TOU tariffs are available to all Irrigation customers, irrespective of location or feeder constraints. In some areas, where there are considerable constraints, TOU tariffs are encouraging energy use that further adversely impacts TasNetworks ability to deliver consistent electricity supply. TI believes that optimal solutions can be negotiated that would shift irrigation customers energy demand to meet crop requirements and lessen the strain on TasNetworks assets. TI does not support installing more expensive infrastructure that poses long and short term financial strain on end users and increases TasNetworks underutilised assets, that offer no economic benefit.

As agricultural irrigation increases in Tasmania, energy is essential for sustainable production. Recent severe rainfall deficiencies have dramatically increased water demand and associated energy consumption. The energy required to move large volumes of water has altered electrical load profiles across Tasmania. Understanding the relationship between this irrigation-induced electrical load and the impact of TOU tariffs and cost reflective pricing is essential for the long-term sustainability of the energy sector and the governments "agri vision" strategy.

Tasmanian Irrigation Electricity Tariff Concerns & Tariff Price Analysis

Whilst TI understand the need to manage network demand and cover operating costs we retain a number of fundamental concerns relating to the changes proposed over the current and future pricing determinations, including

- The current TOU tariff structure is not aligned with optimal crop irrigation timing and is counter intuitive with respect to peak periods and irrigation requirements
- A move to cost reflective pricing will overly burden the irrigated agriculture sector
- Environmental impacts will be increased as TOU cost avoidance behaviours increase
- TOU structures are limiting innovation at the farm gate

- When suboptimal weather conditions align with peak energy pricing, farmers are exposed to significant cost increases or significant losses in crop value. There does not appear to be a proposal or tariff option to date that addresses this significant risk to the irrigated agricultural industry.
- Current tariffs do not effectively provide end users with the right incentives to adopt optimal energy use behaviours.
- The financial impact to an irrigation customer consuming 86,486 units per annum (defined as large in the TasNetworks Irrigation Fact Sheet) on Irrigation TOU Tariff TAS75, is estimated to increase by *39% over a 6-year period, from 2017-18 to 2022-23. This represents an average of *5.70% each year, well in excess of the historical average Australian Inflation Rate of 1.6% from July 2014 to July 2017 (source: Australian Bureau of Statistics)

**Refer to chart 1 and 2 below*

- Each component of the TAS75 tariff increases each year, with the Off-peak component increasing the most by an average of almost 10%.

***Refer to chart 3*

Chart 1

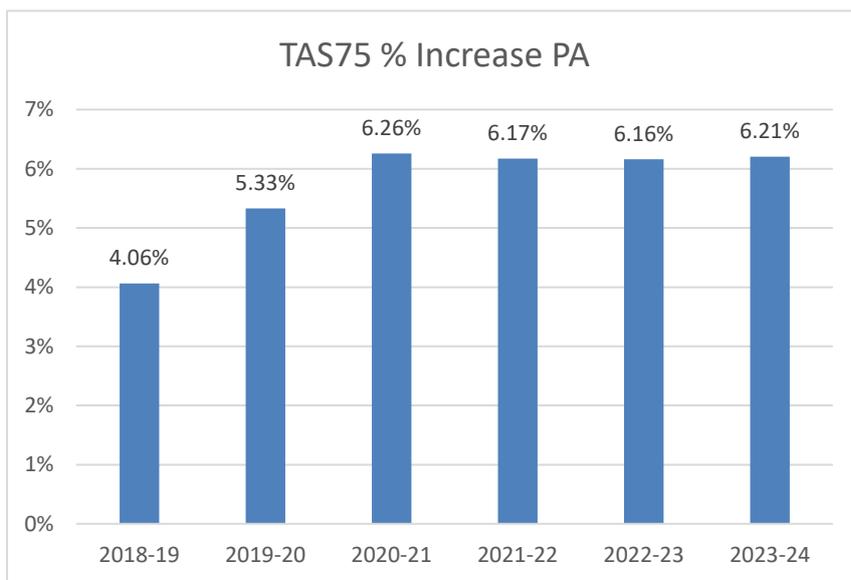


Chart 2

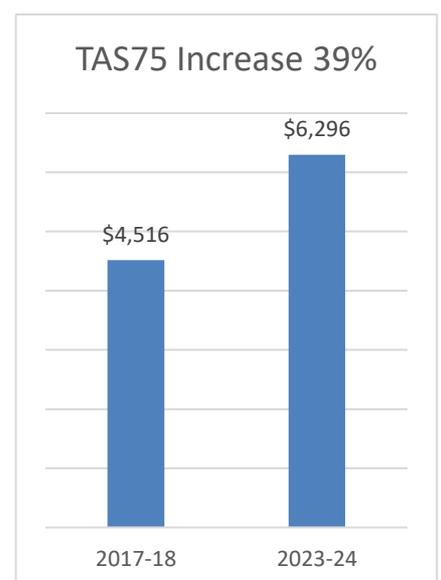
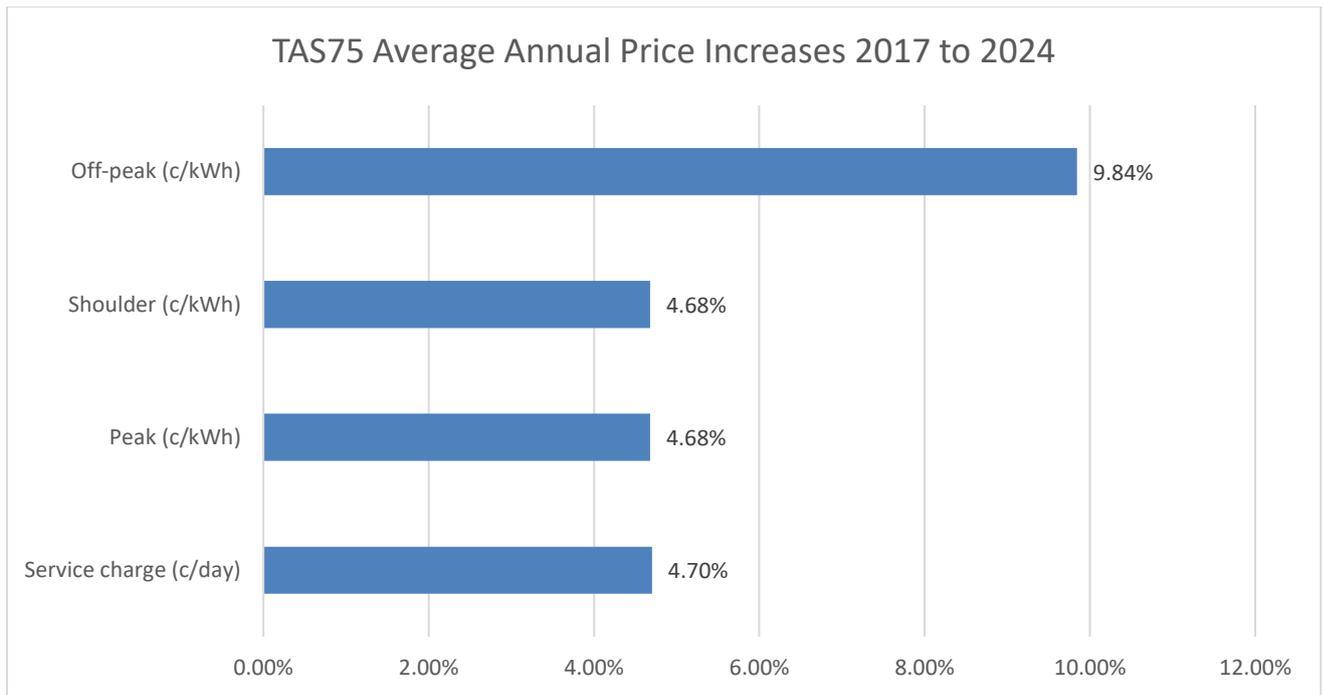


Chart 3



Tasmanian Irrigations Proposed Principles for Irrigation Tariffs

Given the emerging focus on limiting the irrigation sectors exposure to increasing energy costs TI believes the following principles should be applied to irrigation tariff structures in Tasmania

- Urgently introduce tariff relief for irrigation customers to minimise exposure to TOU high peak pricing.
- Introduce a flat tariff structure for irrigation customers at or below the equivalent overall cost structure of Tariff TAS75.
- Introduce incentives to irrigation customers that encourage optimal energy consumption behaviours.
- Only apply or enforce a TOU tariff structure where actual load constraints exist at a feeder
- Any future TOU structure option needs to align with both crop requirements and address load constraints
- To limit the significant economic and environmental impacts of further electricity price rises, irrigation tariffs should be capped and indexed at CPI
- Existing cross subsidies into irrigation tariffs are maintained to ensure continued expansion of the irrigated agriculture sector.

As price takers, irrigators operate on low margins, any small increase in input cost erodes profitability and competitiveness when they already operate in a tough international competitive environment. Irrigators are highly sensitive to energy costs and the impact of TOU on agricultural production.

There is a risk that some industries in the agricultural sector will be forced to respond to rising electricity prices by irrigating less to avoid high electricity demand charges, leading to a decline in the sector's productivity.

Summary

TI implores TasNetworks to fully consider the ramifications of increasing costs to the Irrigated Agriculture sector from an industry, economic and environmental perspective and to actively support areas of growth in Tasmania.

TI believes that TasNetworks, owned by the Tasmanian government, has an obligation to support key Tasmanian industries and ensure overall economic benefits to Tasmanian community. This winter season has clearly demonstrated the impracticality of a TOU tariffs supporting the Irrigated Agricultural industry. Irrigation customers were exposed to higher energy costs due to increased requirements to pump water, on top of the exposure to higher peak energy pricing. With this said, the current irrigation TOU tariff, TAS75, offers the most cost-effective option for irrigation customers, even though it exposes them to financial risk when they can least afford it.

Ideally irrigation customers would benefit from a flat low-price tariff with incentives to decrease or cease load to assist manage network supply constraints. This type of tariff also benefits TasNetworks and the Tasmanian economy reducing costly asset upgrades and ongoing maintenance.

The Irrigated Agricultural industry is unique in nature and essential to the makeup of the Tasmanian economy. TI firmly believes that with the right level of communication and engagement a good workable solution that benefits all can be implemented that continues to enhance and support the growth in this sector for the future prosperity of Tasmanians.

Given the financial impact on Irrigated Agricultural customers this year, TI asks that TasNetworks urgently consider this paper and its proposed tariff principles to ensure the industry growth continues and irrigation customers remain operational. TI also welcomes TasNetworks desire to minimise unnecessary asset upgrades and believes that working openly with key customers, such as TI, is key to getting optimal outcomes.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'M. O'Shea', written in a cursive style.

Mike O'Shea
Manager Water Assets & Energy