Executive Summary

The Clean Energy Council (CEC) welcomes the opportunity to provide feedback on the issues paper for the Network Tariffs 2020-25 customer consultation.

The CEC is the peak body for the clean energy industry in Australia. We represent and work with hundreds of leading businesses operating in solar, wind, hydro, bioenergy, marine and geothermal energy, energy storage and energy efficiency along with more than 5,000 solar installers. We are committed to accelerating the transformation of Australia’s energy system to one that is smarter and cleaner.

The CEC supports the principle of moving toward demand based tariffs. Cost-reflective pricing will be more successful if the implementation is based on automation technology for electricity demand management rather than solely behaviour change by consumers.

Electricity retailers will play a key role in the successful implementation of cost-reflective tariffs. It should not be assumed that all electricity retailers will simply pass through demand tariffs to customers and they should not be directed to do so. Electricity retailers are in the business of managing electricity market risks on behalf of their customers. Demand-based tariffs are a new business risk for electricity retailers and they will need to decide whether to respond to the new tariff structures by investing in energy storage, virtual power plants and demand management, absorbing the costs or passing the demand tariff through to their customers.

The Issues Paper should consider the possibility of demand tariffs being passed from the distribution business to the electricity retailer and not from the electricity retailer to the customer. The electricity retailing branch of Ergon Energy is in the ideal position to trial this approach. One option that should be seriously considered is for Ergon Energy to agree to opt-in to demand tariffs from the Ergon Energy distribution business and not passing the demand tariffs through to customers, except on an opt-in basis.

We would be very happy to discuss these issues in further detail with Energy Queensland. We look forward to contributing further to this important area for policy development.
Responses to questions raised in the consultation paper

1. Ergon Energy and Energex are interested in customers’ views on the issues listed above for the current demand tariffs, and whether there are any other issues that customers wish to raise about demand tariffs more broadly. Specifically are you open to moving to more demand based tariffs and if so what structures or features would facilitate take-up or adoption?

The CEC supports the principle of moving toward more cost-reflective distribution network tariffs. Reducing peak demand and spreading the electricity load more evenly will improve network utilisation and reduce network spending. We understand that electricity pricing is crucial to influencing demand on the network. We also know that recent behavioural economics research (eg. from the CSIRO\(^1\)) shows that price signals alone are not enough. Cost-reflective pricing will be more successful the less it relies on consumers, themselves, responding to changing price signals. Automation technology for electricity demand management will play a key role in the success and acceptance of implementation of cost-reflective tariffs.

Electricity retailers will play a crucial role in responding to the demand tariffs from distribution businesses. Ultimately, it will be a business decision for electricity retailers as to whether they manage the financial risk of demand tariffs by investing in technology, absorbing the cost or passing the tariff through to their customers.

The paper also notes that “enabling the value of dispatchable Distributed Energy Resources (DER), eg. PV and batteries, to support the distribution network where it is either capacity or operationally constrained are key components of this consultation”. However there is very little detail in the paper around the initiatives that are and will be undertaken to support this. Rooftop solar and storage have the potential to respond to network price signals without the need for a complex change to tariff structures for all customers. This is particularly the case with the existing network where short run marginal cost is low and a large proportion of the revenues to be recovered from the networks are sunk.

Energex and Ergon should therefore look at dynamic incentives as part of the next tariff structure statement and work with the CEC members for trials for these dynamic incentives which represent a layer above broad-based tariffs.

2. Ergon Energy and Energex are interested in customers’ views on improvements that could be made to the current anytime demand and time of use demand tariffs for large customers. What improvements do you think can be made?

With the revenue for most networks recovery mostly sunk investment, any long run marginal cost (LRMC) signal based on average incremental costs (AIC) is likely to be notional at best. Energex and Ergon should look at options for incentives on solar and storage to respond to

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dynamic signals in the areas where investment is most likely to occur. A sharper, clearer “dynamic layer” with incentives for distributed generation makes provides a balance to more complex forms of broad-based tariff design.

3. What is your view on the case for fairer tariffs?

The CEC supports the principle of moving toward more cost-reflective distribution network tariffs. There is a sound rationale for distribution businesses to pass through demand based charges to electricity retailers.

The Issues Paper seems to assume that electricity retailers should pass through the demand based charges to consumers. However, it is unclear why this is assumed. Electricity retailers should be able to draw upon a range of strategies to manage the risks of demand based tariffs. If their customers are keen to embrace demand based tariffs then it is reasonable to assume pass through of demand tariffs from the retailer to the consumer. However, some electricity retailer might wish to pursue a customer retention / acquisition strategy based on offering simpler tariff structures. In that case the electricity retailer might choose to either absorb the cost of demand based tariffs or manage that risk through investment in technology, such as establishing virtual power plants, purchasing batteries or contracting services from a third party. Electricity retailers should be free to pursue the risk management strategy that best suits their business model. It would be an error to expect or force all electricity retailers to respond by passing through demand tariffs to their customers.

4. What are the other drivers for change that should be considered in addition to or instead of those discussed here?

Electric vehicles (EVs) could represent a significant new load in future. The adoption rate for EVs should increase significantly in the 2020-25 period once range anxiety is addressed and the price differential with conventional hydrocarbon vehicles reduces. Tariff reform could be part of the response to managing electric vehicle uptake. However there are many complexities to be resolved. It is unclear, for example, how demand based charges would be allocated when EVs are charged at different places in the network to their residence. Pricing will not be the complete answer for the challenges posed by electric vehicle uptake. There will also be a need for new infrastructure, such as high capacity charging stations located where vehicles are parked during the middle of the day when solar generation as at its peak.

5. What is your view on cross subsidies between customers or customer groups?

There are many cross subsidies between customers and customer groups. Eliminating all cross subsidies would be economically efficient but there might be policy reasons for retaining cross subsidisation. The cross subsidies between rural and city customers are possibly the strongest example. Eliminating cross subsidies to rural users of the electricity network would almost certainly result in economic efficiency improvements, but at the expense of social policy objectives. The CEC does not oppose distribution network cross subsidisation of rural
customers. However, we do advocate for the cross subsidised service to be delivered most cost effectively. For example, in many situations it would be more cost effective to deliver cross-subsidised electricity supply to rural and fringe-of-grid customers using distributed energy resources and microgrids, rather than expanding or continuing to maintain distribution networks.

6. **What is your views on these principles and welcome views on whether there are other principles that we should be considering in developing our network tariffs?**

The principles seem to assume that demand based tariffs will be passed through from distribution business to electricity retailer to customer. No rationale for this assumption is provided in the Issues Paper.

It seems likely that technology to manage the risk of demand tariffs would be more affordable and accessible for electricity retailers than it would for customers.

It would be instructive to consider a hypothetical scenario whereby demand based tariffs are passed on to electricity retailers and electricity retailers do not pass them through to customers, whether they choose not to or are prevented from doing so without the consent of their customer. It is likely to be more economically efficient for electricity retailers to decide where to invest in new technology on the grid to manage demand, rather than assuming that these investment decisions should be left to consumers.

7. **What is your view on the range of tariff structure options that Ergon Energy and Energex should be considering for the 2020-25 TSS?**

Discrimination between customers should be on the basis of their load profile, not on the basis of which appliances they own. The CEC strongly opposes any discrimination against customers simply because they own solar PV, other forms of micro-generation, storage, an electric vehicle or a smart meter. We support the principle that distribution businesses should not treat customers with micro-generation facilities less favourably than customers without such facilities but with a similar load profile.

8. **What is your view on the issues and benefits associated with demand tariffs and time of use tariffs that vary depending on the time energy is used?**

The key principles guiding CEC's approach to network tariff reform are:

- We support the principle of moving toward demand based tariffs as a means of reducing network spending,
- Cost-reflective pricing will be more successful the less it relies on consumers, themselves, responding to changing price signals,
- Automation technology for electricity demand management, digitalisation and artificial intelligence will play a key role in the success of cost-reflective tariffs,
- It should not be assumed that all electricity retailers will simply pass through demand tariffs to customers,
• Electricity retailers are in a better position than customers to make efficient investment decisions regarding whether and where to invest in automation technology,
• Electricity retailers should not be directed to pass through demand tariffs and should be free to determine the risk management strategy that most effectively balances their exposure to demand tariffs versus the business risks of investing in new technology, absorbing costs or passing through demand tariffs to their customers, and
• The Issues Paper should consider the possibility of demand tariffs being passed from the distribution business to the electricity retailer and not from the electricity retailer to the customer, and
• The electricity retailing branch of Ergon Energy is in the ideal position to trial the use of demand tariffs and the investment incentives they create by agreeing to accept (or opt in to) demand tariffs from the Ergon Energy distribution business and not passing the demand tariffs through to customers, except on an opt-in basis.

9. Customers are encouraged to comment on the hybrid options

As already noted in this submission, the CEC strongly opposes discrimination between customers on the basis of which appliances they own. We support the principle that distribution businesses should not treat customers with micro-generation facilities less favourably than customers without such facilities but with a similar load profile.

We are interested in further exploring the proposal for “Telco” style tariffs and would welcome additional information on what specifically is being proposed.

10. Ergon Energy and Energex are interested in the attributes that customers consider relevant to appraising different tariff structure options

Key attributes should include:
• Compliance with the National Energy Rules,
• Consistent with lower future cost outcomes,
• Aligned with practical and workable retailer tariffs for customers,
• Aligned with changes arising from the National Energy Guarantee, and
• Enables opportunities for innovation.

These attributes could all be met by passing the demand tariff from the Ergon Energy distribution business to the Ergon Energy electricity retail business with Ergon Energy customers able to opt in to demand tariffs. The resulting investment signals for the Ergon Energy retailing business would drive investment in demand management and the investment decisions would very likely be more efficient if they are made by the Ergon Energy retailing business rather than being left to Ergon Energy’s customers.
11. What are the indicative pros and cons of the different tariff structure options as set out in the matrix?

The matrix is useful, however it is incomplete. It assumes that demand tariffs will simply be passed through from the electricity retailer to their customers. It should also allow for the option of electricity retailers addressing the costs and risks of demand tariffs through their own investments while continuing to offer their customers simple tariffs (or more complex tariffs on an opt-in basis).

12. In reviewing the tariff structure options available under the 2020-25 TSS customers are encouraged to submit views on:

- Implications or possible impacts on customers of tariff options under consideration,
- What has Ergon Energy and Energex missed in considering the tariff options,
- Implementation timing considerations and transitional requirements,
- How customer choice can be enabled,
- Assistance required by customers to be able to respond effectively to new tariff structures, and
- Additional network tariff options or features valued by customers.

The experience of demand-based tariffs to date is that customers prefer simplicity to complexity. ‘Set and forget’ options that rely on technology are preferable to strategies that rely on families and businesses changing their behaviour in line with changes to electricity prices.

Smart demand response technology and energy storage systems can play a key role in the implementation of demand tariffs. These technologies and incentives for uptake should be tested at the household level during the 2020-25 period. Even if they are, they are unlikely to be available and affordable for all customers.

Introduction of smart home energy automation systems could therefore take longer than anticipated, depending on the life cycle of appliances and consumers’ willingness to replace incompatible or ‘dumb’ appliances. This is because the best load integration features rely on ‘smart’ appliances (air-con, water heater, space heating, dishwasher, washing machine, dryer, etc) as well as a central ‘smart’ energy management system.

There should also be incentive for electricity retailers, rather than their customers, to invest in larger scale energy storage and demand response measures that can help to take some of the complexity out of their customers’ lives. These issues seem to have been overlooked by the Issues Paper.

In any case the implementation could commence by passing through demand tariffs from the Ergon Energy distribution business to the Ergon Energy electricity retailing business. This approach could also be adopted by Energex, with demand charges being passed through to all of the electricity retailers in the areas served by Energex.
This means that customer choice is enabled by continuing with an ‘opt in’ approach for customers and is likely to bring through more innovative retail products and competition within the retail sector. The assistance required by customers will be access to affordable demand response technology and energy storage. Even if the technology is available and affordable by 2020, there will be customers who will not have access due to institutional barriers (eg. renters).

Another key issue lacking in the paper is an explanation of the different categories of tariffs and a strategy for understanding how customers would be better or worse off under different types of tariffs. We understand that this is largely attributable to a lack of customer load information. We see the lack of individual customer data as a significant barrier to customer take up and acceptance of new tariffs.

Additional features valued by customers would include an independent web site that assesses the likely cost impact for customers considering opting in to a demand based tariff. The web site should be operated by a government agency to ensure consumer confidence in its advice. If would ideally be based on analysis of a customer’s consumption profile, using an approach similar to the Victorian Energy Compare web site (see https://compare.switchon.vic.gov.au/)

13. What do you think of the concept of TEDI?

‘TEDI’ is an acronym for Tariff (charges and plans), Education, Dynamic Incentives and Information. As a strategy for implementation of demand based tariffs it is incomplete. It is missing consideration of investment in technology and the role for electricity retailers.

14. What are your views on the role that Ergon Energy and Energex have to play in implementing the TEDI approach, and whether some of the roles should be played by other participants in the electricity market?

The Issues Paper focuses on Ergon Energy and Energex in their role as distribution businesses. Ergon Energy’s electricity retailing business can also play an important role in the tariff reform process. The potential role for Ergon Energy’s retailing business appears to have been overlooked.

Privacy and security of data will be an important consideration and distribution businesses and electricity retailers will have an important role in ensuring the integrity of the systems to protect the data they hold on their customers.

15. What, if any, customer impact management tools do customers think should be developed to support tariff transition?

Smart energy management systems, automated demand management and energy storage will play a key role in assisting customers with managing the impacts of demand tariffs. It would be helpful and instructive for Energy Queensland to develop a guide to the energy management technology that is currently available and that would assist with demand response and minimising the cost impacts of demand tariffs. The guide should consider the
tools that are available to electricity retailers as well as their customers. Ideally, the guide would assess the cost effectiveness of the technology or at least provide guidance on how to go about assessing their cost effectiveness.

16. To contemplate a policy option whereby legacy tariffs are grandfathered from 1 July 2010, what support mechanisms or enablers do customers feel would be required for customers?

Customers will look for guidance on what technology is available to minimise the cost impacts of demand tariffs and whether those technologies are worthwhile investments. Electricity retailers are also likely to make similar calculations.