REPORT

Prepared for:

Queensland Council of Social Service (QCOSS)

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West End, Queensland 4101

Energy Queensland: Revised Tariff Structure Statements (TSS) 2020-25

Prepared by:

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The views expressed in this document do not necessarily reflect the views of Energy Consumers Australia.

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QCOSS is the state-wide peak body in Queensland representing the interests of individuals experiencing or at risk of experiencing poverty and disadvantage, and organisations working in the social and community services sector. QCOSS therefore focuses on the interests of residential customers, and examines the impacts of regulatory processes and decisions on those experiencing or at risk of experiencing poverty and disadvantage in particular.

On the same basis, this report only considers the Revised TSS proposed to apply to residential customers. It does not consider business customers or other customer classes.

In our previous report,[1] we highlighted key issues identified with the rationale and process of consultation and development that EQ had followed in developing its proposed TSS.

The process undertaken by EQ in the lead-up to its initial submissions had engendered lack of trust in EQ's initial tariff structure proposals, and we stated that this needed to be addressed before the TSS could be deemed to be capable of acceptance.

The clear finding emerging from issues with the process was that the TSS were not capable of being accepted, on the basis that:

- The TSS were incomplete.
- EQ's decision-making had not reflected consultation feedback.
- EQ had not provided any comparison of its proposed tariff structures against other options.
- There had been inconsistent rationale for proposed tariffs.
- There had been limited identification of customer impacts, no trials or modelling.

1 See *Energy Queensland: Tariff Structure Statements (TSS) 2020-25*, Etrog Consulting, 31 May 2019

In its draft decisions in October 2019, the AER also found that the initial TSS proposed by EQ were not compliant with the National Electricity Rules (the NER). The AER provided guidance to EQ on how to make its Revised TSS compliant with the NER. Despite the guidance provided by the AER, we find that the Revised TSS remain non-compliant with the NER, in areas that include the following:

- While EQ goes some way towards explaining in its Revised TSS the problem that tariff reform is trying to address, it is focused on problem-solving rather than opportunity creation, and does not set out the problem as clearly as we would expect, as shown by comparison with SAPN's TSS.
- We remain of the view that it is difficult to have any confidence in any proposal from EQ unless and until it is backed by sufficient evidence, a clear plan and pathway, and able to be dynamically informed by trials with real customers. Trials must be an integral component in any tariff reform, and the analysis undertaken must be accurate, transparent and comprehensive.
- We are still lacking clear statements as to why tariff reform to implement the new tariff structures that it is now proposing (as against other options) is in the long-term interests of consumers, noting also the omission by EQ of evaluating complementary tariff and non-tariff options.
- UNSW's modelling shows that some households will have higher bills as a result of tariff reform, and we do not know the characteristics of these households.
- While customers who remain on flat tariffs in 2020-21 will face lower network bills than they faced in 2019-20, the extent to which their bills are higher as a result of tariff reform erodes the benefit that those customers ought to be receiving from such changes as the lowering of cost of capital. Those benefits will erode further in later years of the period as flat tariffs become less attractive as compared to more complex tariffs.
- There has been no analysis of the effects of tariff reform on vulnerable customers. This lack of analysis extends to the direct impacts on vulnerable customers facing a new tariff structure, and the secondary effects arising from behavioural changes by other customers in response to tariff reform. It is possible that some vulnerable customers may find themselves significantly worse off as a result of tariff reform. No arrangements have been proposed to mitigate these effects.

Consequently, we recommend that the AER include the following positions in its final decisions:

- The AER's final decisions should direct EQ to provide all customers with a twelve-month data sampling period to help them better engage with their electricity charges and usage patterns. This should apply whatever the reason for their acquisition of a digital meter.

  To make the grace period workable, EQ would need to have appropriate monitoring and an assessment framework in place.

The AER should decide that during the grace period EQ should assess what are the most appropriate network tariffs for households in the *Energy Savvy* families[2] and *Sunny Savers* programs,[3] and card operated meters, and if necessary make special arrangements for them.

- The AER should decide that the default tariff for customers with a digital meter should be a Time of Use (TOU) Energy tariff with the option to move to a Transitional Demand tariff.

  If, as we recommend, the TOU Energy tariff becomes the default tariff for residential customers with digital meters, then the AER must make sure that the structure and rates of the TOU Energy tariff are set so it is the best tariff option for most customers (including comparison with the basic meter tariff option).

- To assist stakeholders in understanding the effects of tariff reform on customers who stay on flat tariffs, we recommend that the AER should ask EQ to publish what tariffs residential customers would have faced had there been no tariff reform implemented over the five-year period 2020-25.

- The impact of increasing flat tariffs on vulnerable customers must be understood. Prior to the AER's final decisions, EQ should model customer impacts in the upcoming regulatory period for vulnerable customers. The AER should not allow the increase to flat tariff rates within the 2020-25 regulatory period prior to EQ undertaking adequate impacts analysis, and providing effective and sufficient solutions to protect vulnerable customers as needed.

- The AER should request from EQ analysis of how non-tariff solutions might integrate with network pricing and network planning. Traditional demand response (DR) needs to be fully integrated, and new DR proposals should be made, in line with the new ways in which the networks are being used, and where DR will be most effective.

- A **Transition working group** should provide oversight and advice on the customer analysis, monitoring and actions required after the AER's final decisions, to manage implementation of tariff reform, and to monitor how tariff reform is progressing and what are the ongoing issues from a consumer perspective.

2 *Energy Savvy* families was a program with partners including the Queensland Government, Ergon Retail, QCOSS and CitySmart, which operated in regional Queensland between 2016 and 2019. About 10,000 low income households were given digital meters, monthly bills, and education and support from community energy champions.

3 *Sunny Savers* was a program with partners including the Queensland Government, Ergon Retail and QCOSS, where up to 800 public housing buildings were provided with solar PV and tenants were provided with home visits which included energy literacy

1. INTRODUCTION

This report has been prepared by Etrog Consulting Pty Ltd for Queensland Council of Social Service (QCOSS). It comments on the Revised Tariff Structure Statements (TSS) for network pricing that Energy Queensland (EQ) has proposed to the Australian Energy Regulator (AER) to apply in Queensland from 1 July 2020 to 30 June 2025.[4] The scope of this report does not extend to any other aspect of EQ's regulatory proposals besides the Revised TSS.

QCOSS is the state-wide peak body in Queensland representing the interests of individuals experiencing or at risk of experiencing poverty and disadvantage, and organisations working in the social and community services sector. QCOSS therefore focuses on the interests of residential customers, and examines the impacts of regulatory processes and decisions on those experiencing or at risk of experiencing poverty and disadvantage in particular.

On the same basis, this report only considers the Revised TSS proposed to apply to residential customers. It does not consider business customers or other customer classes.

Etrog Consulting previously provided a report commenting on the original TSS that EQ proposed to the AER.[5] The Revised TSS follow the AER's draft decisions on EQ's original regulatory proposals, which included the original TSS.

While the author of this report is a member of the AER's Consumer Challenge Panel (CCP),[6] the author is not a member of the sub-panel of the CCP that is engaged with EQ's regulatory proposals.[7] This report is being written independently of CCP. It is not a CCP document, and it is not being funded by the AER or CCP.

This report builds on its author's expertise and experience, and considers the opinions of other experts, as well as wider relevant reports and other documentation that are available on the AER and EQ[8] and other websites, and discussions with QCOSS and other interested consumer organisations.

4 Documentation related to the Revised TSS and other aspects of the regulatory determinations for 2020-25 for Energex and Ergon Energy can be found on the AER website at https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/energex-determination-2020-25 and https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/ergon-energy-determination-2020-25 respectively. This documentation includes EQ's regulatory proposals and revised regulatory proposals, as well as submissions from stakeholders to EQ's regulatory proposals, the AER's draft decisions, and presentations at AER public forums.

5 See *Energy Queensland: Tariff Structure Statements (TSS) 2020-25*, Etrog Consulting, 31 May 2019

6 Further information on the CCP is available at https://www.aer.gov.au/about-us/consumer-challenge-panel

7 See https://www.aer.gov.au/about-us/consumer-challenge-panel/statements-and-advice#subpanel-14

8 Documentation on EQ consultation on the TSS and Revised TSS for Energex and Ergon Energy for 2020-25 can be found at https://www.talkingenergy.com.au/future-network-tariffs

Since 1 March 2019, on behalf of QCOSS, Etrog Consulting has attended forums and workshops and deep dives organised by EQ, and has initiated one-to-one discussion with EQ, to obtain better understanding of EQ's proposals, its compliance with the Rules, and in particular its potential effects on vulnerable consumers.

The AER has requested that submissions to EQ's Revised TSS proposals should be received by 15 January 2020. This report has been developed in consultation with QCOSS with the understanding that QCOSS is intending to submit this report to the AER as a Companion Report to its own submission in response to the AER's draft decisions and EQ Revised TSS.

Etrog Consulting also thanks EQ for its assistance in providing technical detail to help us ensure that we have correct facts in writing this report. In particular, we submitted 33 detailed questions in writing on 6 January 2020 and received back written responses on 13 January 2020. EQ staff also took the time to speak with us on the telephone on 14 January 2020 to discuss further matters that we raised after receiving the initial written responses on 13 January 2020.

The remainder of this report is structured as follows:

- **Section 2** contains our key findings and recommendations.
- **Section 3** sets out the background and context to this report.
- **Section 4** discusses the compliance of the Revised TSS with the requirements of the National Electricity Rules (the NER).
- **Section 5** sets out key issues to be addressed in the AER's final decisions on the Revised TSS.
- **Section 6** covers ongoing monitoring and other actions that we believe are required from 1 July 2020 onwards.

2. KEY FINDINGS AND RECOMMENDATIONS OF THIS REPORT

In our previous report,[9] we highlighted key issues identified with the rationale and process of consultation and development that EQ had followed in developing its proposed TSS.

The process undertaken by EQ in the lead-up to its initial submissions had engendered lack of trust in EQ's initial tariff structure proposals, and we stated that this needed to be addressed before the TSS could be deemed to be capable of acceptance.

The clear finding emerging from issues with the process was that the TSS were not capable of being accepted, on the basis that:

- The TSS were incomplete.
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In its draft decisions in October 2019, the AER also found that the initial TSS proposed by EQ were not compliant with the National Electricity Rules (the NER). The AER provided guidance to EQ on how to make its Revised TSS compliant with the NER. Despite the guidance provided by the AER, we find that the Revised TSS remain non-compliant with the NER, in areas that include the following:

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- UNSW's modelling shows that some households will have higher bills as a result of tariff reform, and we do not know the characteristics of these households.

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- A **Transition working group** should provide oversight and advice on the customer analysis, monitoring and actions required after the AER's final decisions, to manage implementation of tariff reform, and to monitor how tariff reform is progressing and what are the ongoing issues from a consumer perspective.

3. BACKGROUND AND CONTEXT FOR THIS REPORT

This report section 3 briefly sets out the background and context for this report, by referencing:

- The requirements for TSS in the National Electricity Rules (the NER);
- Our previous position on EQ's initial TSS submissions; and
- The AER's position in its draft decisions on EQ's initial TSS submissions.

The next report section 4 considers in more detail whether EQ's Revised TSS comply with the requirements of the NER.

3.1. REQUIREMENTS FOR TSS IN THE NATIONAL ELECTRICITY RULES (THE NER)

As with other aspects of regulatory proposals, the Revised TSS must comply with the National Electricity Objective to be in the long-term interests of consumers.

The National Electricity Rules (the NER) also set out requirements for network tariffs in the Distribution Pricing Rules (Part I) of Chapter 6: Economic Regulation of Distribution Service. Among the requirements in the NER, clause 6.18.5 sets out the network pricing objective that the tariffs that a network charges in respect of its provision of direct control services to a retail customer should reflect the network's efficient costs of providing those services to the retail customer.

Other requirements set out in the pricing principles in clause 6.18.5 of the NER include that:

- Each tariff must be based on the long run marginal cost of providing the service to which it relates to the retail customers assigned to that tariff.
- The network must consider the impact on retail customers of changes in tariffs from the previous regulatory year.
- The structure of each tariff must be reasonably capable of being understood by retail customers that are assigned to that tariff.

Network businesses also have to comply with clause 6.1.4 of the NER which prohibits a distribution network from charging distribution use of system charges for the export of electricity generated by a user into the distribution network.

The requirements in the NER still leave considerable freedom in the hands of the network businesses as to how they structure network tariffs.

In assessing the Revised TSS, the AER must consider whether they comply with the NER.

3.2. OUR PREVIOUS POSITION ON EQ'S INITIAL TSS SUBMISSIONS

In our previous report,[12] we highlighted key issues identified with the rationale and process of consultation and development that EQ had followed in developing its proposed TSS.

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3.3. THE AER'S POSITION IN ITS DRAFT DECISIONS ON EQ'S INITIAL TSS SUBMISSIONS

In its draft decisions in October 2019, the AER also found that the initial TSS proposed by EQ were not compliant with the NER. The AER provided guidance to EQ on how to make its Revised TSS compliant with the NER.

12 See *Energy Queensland: Tariff Structure Statements (TSS) 2020-25*, Etrog Consulting, 31 May 2019

4. COMPLIANCE OF THE REVISED TSS WITH THE NATIONAL ELECTRICITY RULES (THE NER)

This report section discusses the compliance of the Revised TSS with the requirements of the National Electricity Rules (the NER). Here we consider whether and to what extent the Revised TSS are now complete, and whether they comply with the distribution pricing rules in the NER.

In our previous report,[13] we highlighted key issues identified with the rationale and process of consultation and development that EQ had followed in developing its proposed TSS.

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4.1. COMPLETENESS OF THE TSS

4.1.1. EQ's initial TSS were incomplete

EQ provided further information to the AER after consultation on EQ's initial TSS (and other aspects of the regulatory proposals for Energex and Ergon Energy) closed on 31 May 2019. Notes on the AER website state:[14]

> Tariff Structure Statement proposals submitted to us in January 2019 did not include important detail. The latest update, provided on June 14, 2019, consolidates the additional information provided on May 2 and May 17 with that provided in the initial TSS proposal of 31 January, 2019.
>
> In the final update before the draft decisions, Energy Queensland (Energex and Ergon Energy) provided rates for Connection Asset Customers on 28 June 2019. These updates to the TSS proposal documents reflect ongoing engagement between Energy Queensland and its stakeholders to address their concerns and refine the proposed strategy. However, it is important to note that the updated TSS proposal documents do not reflect feedback provided in stakeholder submissions published in this section, which were due on 31 May 2019. We expect Energy Queensland to address this stakeholder feedback in the revised proposal, to be submitted subsequent to our draft decisions.

14 See https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/energex-determination-2020-25/proposal#step-63381 and https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/ergon-energy-determination-2020-25/proposal#step-64162

4.1.2. The AER's draft decisions regarding completeness of the TSS

The AER's draft decisions in October 2019[15] found that the TSS were not complete, and encouraged Energex and Ergon Energy to improve their TSS from a compliance perspective by more clearly describing the proposed tariff setting approach during the 2020-25 regulatory control period by including the following information in the Revised TSS:

- A clear statement of the problem that tariff reform is trying to address, noting the context of these reforms in regard to the on-going transformation of the energy sector due to the uptake of Distributed Energy Resources (DER).
- A clear explanation of how the proposed tariff reforms are intended to address this problem.
- More robust and evidence based discussion on the customer impact of the proposed tariff reforms and the extent that customers are able to mitigate these impacts by switch to other primary tariffs or taking up controlled load tariffs, or even by responding to these price signals by changing their network usage behaviour.
- More robust and evidence based discussion on the extent that the proposed tariff reforms comply with the efficiency principles in the Rules, including the requirement to recover residual costs in a least distortionary manner to efficient usage of the electricity network.
- A clear description of the basis of the annual prices shown in the indicative pricing schedule, particularly in regard to demonstrating that the indicative prices have been developed on the basis of the proposed price-setting methodologies set out in the tariff structure statement.
- A clear description on how they will vary tariffs from the indicative pricing schedule if the inputs to the price-setting process during the 2020-25 regulatory control period vary from the assumptions underpinning the indicative prices set out in the indicative pricing schedule accompanying the Revised TSS.

The remainder of this section 4 considers several of these points in turn, as well as other aspects of the compliance of the Revised TSS with the requirements of the NER and the requirements of the AER's draft decisions.

4.2. A CLEAR STATEMENT OF THE PROBLEM THAT TARIFF REFORM IS TRYING TO ADDRESS

The AER's draft decisions encouraged EQ to include a clear statement of the problem that tariff reform is trying to address, noting the context of these reforms in regard to the on-going transformation of the energy sector due to the uptake of DER.

15 AER draft decisions, Attachment 18 – Tariff structure statement, section 18.5.1 – Statement structure and completeness

In EQ's Revised TSS Explanatory Notes:

- Section 2 is titled 'Overarching tariff strategy'. Within section 2:
    - Section 2.2 titled 'Our current position (2020-25 TSS)' states the businesses' proposals, with no other options set out, and no rationale.
    - Section 2.3 titled "*Future State – Capacity Based Tariffs (2025 and beyond)' states: "The drivers of network investment are changing and expanding. This expansion includes the challenge to integrate large amounts of distributed energy resources (DER) into the network, investment to maintain network voltage and power quality performance as well as declining levels of traditional augmentation where network capacity is exceeded. Our tariffs need to develop in line with these changes and remain relevant as the electricity supply market continues to evolve. Under this scenario there would be a bias towards the network charging on the basis of providing adequate capacity rather than charging on the basis of signalling network peak demand constraints*."
    - There is no explanation as to why these changes mean that there should be a "*bias towards the network charging on the basis of providing adequate capacity*".
- Section 3 is titled 'Drivers of tariff reform'. The drivers are outlined, and include growth in solar PV, battery storage and electric vehicles, as well as the potential for a new aggregation market. The section then sets out what effects these changes will have on the EQ networks. It does not address how these changes lead EQ to its proposed tariffs for residential customers or how EQ will make residential consumers part of the solution, rather than seeing consumers' behaviour as "the cause of the problem".

  In this context we referred in our previous report to the Energex Distribution Annual Planning Report 2018-19 to 2022-23,[16] which recognised the potential of Battery Energy Storage Systems (BESS) to provide network benefits, addressing peak demand and / or power quality issues. EQ must consider how and to what extent in the overall interests of efficiency and long-term interests of consumers it will facilitate the uptake of DER, energy management systems, and peer on peer trading, with an emphasis on including customers experiencing vulnerability in the transition. This and other ways that consumers can be part of the solution has not come through the TSS processes.

In contrast, brief review of documentation provided by SA Power Networks (SAPN) suggests that SAPN has provided much more focused coherent information to support its TSS. For example Attachment 17 of SAPN's TSS proposal in January 2019 a comprehensive fifteen-page section 17.3 '*Characteristics of our network – what influences pricing and our forecasts*', and section 17.4 '*The key challenges we are trying to address'*.

16 Available at https://www.energex.com.au/about-us/company-information/company-policies-And-reports/distribution-annual-planning-report

We understand that SAPN has spent time setting the scene and outlining the network issues and customer challenges against which the new SAPN tariffs were aligned. From there, their tariff discussion had context. This has been missing from EQ workshops.[17]

We have not had time to examine the SAPN documentation to the same degree as the EQ documentation, but we note the AER's words in its draft decision on the SAPN TSS are quite different from those that the AER used in its EQ TSS draft decisions.

In the SAPN TSS draft decision, the AER writes:

> *Our draft decision is to accept SA Power Networks' tariff structure statement as we consider it complies with the distribution pricing principles and contributes to the achievement of the network pricing objective.*
>
> *We consider the SA Power Networks' proposal provides a strategy to advance the development of cost reflective pricing of distribution services, refined to reflect stakeholder feedback received through its consumer engagement.*
>
> *…*
>
> *We commend SA Power Networks for the consultation it undertook to help develop its tariff structure statement. We also commend the inclusion in its proposal of a table outlining key customer feedback and how it was incorporated into SA Power Networks' proposed tariff structure statement. We consider SA Power Networks used consumer input to shape the manner in which it developed its strategy while maintaining responsibility for its proposal. Additionally, SA Power Networks' proposal included a clear strategy with analysis of the network costs to be reflected in network prices, as well as targeted measures intended to increase cost reflectivity and improve price signals.*

While EQ goes some way towards explaining in its Revised TSS the problem that tariff reform is trying to address, it is focused on problem-solving rather than opportunity creation, and does not set out the problem as clearly as we would expect, as shown by comparison with SAPN's TSS.

4.3. A CLEAR EXPLANATION OF HOW THE PROPOSED TARIFF REFORMS ARE INTENDED TO ADDRESS THIS PROBLEM

The AER's draft decisions encouraged EQ to include a clear explanation of how the proposed tariff reforms are intended to address this problem.

17 Documentation related to the regulatory determination for 2020-25 for SAPN can be found on the AER website at https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/sa-power-networks-determination-2020-25. The timeframes for the 2020-25 regulatory processes for SAPN are exactly the same as for Energex and Ergon Energy, so the processes are comparable in the sense that they reflect information that is available chronologically at the same time for each determination process.

4.3.1. Evolution of the drivers for network tariff reform

The main driver of network investment used to be peak demand. The congestion and constraints on the network arising from this coincident demand peaking effect drove investment in augmentation capital expenditure (augex) to add new physical infrastructure in the form of poles, wires, substations, transformers, etc., and to upgrade existing infrastructure components to meet new and ever growing peak demand. This used to be illustrated through diagrams of load duration curves that showed that the new and upgraded infrastructure was only going to be used for a few hours each year.

If customers are not given signals (tariff or non-tariff) about when electricity is more costly to distribute, they cannot have the opportunity to decide whether they are willing to pay the higher cost, and hence network investment cannot be sufficiently determined as being in the long-term interests of customers.

To the extent that customers have viable options to respond to such signals, putting additional charges on energy usage that contributed to growing system peak and hence on the need for augex expenditure would allow customers to have the opportunity to decide whether they are willing to pay the extra cost. Equally, non-tariff solutions such as load control and other demand side management participation could also provide signals to customers who might be able to respond.

It was in this context that the AEMC made its final determination on the rule change that implemented cost-reflective network pricing in November 2014.[18]

Various tariff design proposals were proposed to address this, and included “critical peak pricing” (sometimes called “dynamic peak pricing”) where the network could “call a critical peak event” hours in advance of an envisaged peak, or the day before an anticipated peak. Users would have time to change usage behaviour to avoid usage at the time of system peak. Extensive trials were undertaken, in Australia and internationally, using a variety of different mechanisms for notifying when a system peak event was going to be called. Dynamic peak pricing (c/kWh or $/kWh) might be up to ten times regular pricing.[19]

Direct load control is also part of the package: it can be used to move energy usage away from critical peaks and therefore also play its part in reducing peak demand and hence deferring augex.

18 Rule Determination, National Electricity Amendment (Distribution Network Pricing Arrangements) Rule 2014, AEMC, 27 November 2014

19 The Brattle Group has compiled and continues to update the ‘Arcturus’ database, which includes information from pricing pilots and deployments from around the globe. See for example *A Meta Analysis of Time-Varying Rates*, presented by Ahmad Faruqui and Cecile Bourbonnais, 12 June 2019, and *Advancing the Practice of Rate Design*, presented by Ahmad Faruqui, 6 November 2019. These and other presentations and reports are available for download from Dr Faruqui’s web page on the Brattle Group’s web site at https://www.brattle.com/experts/ahmad-faruqui#publications

Because networks only called critical peak events on days with highest peak usage in the year, with each event lasting only for the hours when peak load might be expected on those days, critical peak pricing was sharply targeted where it was needed, and the rationale for the tariffs was clearly understandable by customers. While such tariffs were not appropriate for all customers, trials showed that many customers did respond by shifting load from these peak times and thereby lowered system peak usage and showed potential for deferring augex expenditure.

However, these tariffs were never really implemented in production settings in Australia, because within a short time the key cost driver changed from peak demand driving augex to rapid uptake of DER driving different network investments. The diagrams now used to explain the usage issues of networks are duck curves rather than load duration curves. DER is driving the requirement for networks to invest in maintaining network voltage and frequency, and in enabling the network to handle two-way flows and multiple distribution-level market participants.

While critical peak pricing was an obvious targeted way to respond to the peak demand augex driver, the correct pricing structures that will best meet the new challenges are not so obvious. Customers now increasingly have their own solar PV, and in some cases batteries, so their reactions to tariffs encompass investments in DER, and smart deployment of DER, rather than just avoiding peak usage times. Home Energy Management Systems, automated demand response systems, embedded networks, microgrids, and other network and 'behind-the-meter' innovations are adding and will continue to add new interdependent and rapid-response dynamics to the demand-supply pattern. Electrification of the transport system is anticipated. Customers with sufficient capital also have more options to bypass the network, and the traditional expectations on network participation are evolving.

In summary, the situation now is that the key cost drivers are less obvious than they were in the past, the role of the network is changing, and crucially there is now also a growing divide between those with DER and those unable to install DER such as those experiencing financial hardship, renters, and others.

4.3.2. Lack of clarity regarding what tariff structures best address EQ's cost drivers now and in the future

As noted in section 4.2 above, we have difficulty with EQ's statement: "*Under this scenario there would be a bias towards the network charging on the basis of providing adequate capacity rather than charging on the basis of signalling network peak demand constraints.*"

In the same context, EQ states that it believes that capacity tariffs are the preferred network tariff structure that it intends at some time in the future to offer to individual residential and small business customers.

While an individual residential customer's maximum demand / capacity reflects the maximum capacity the customer needs from the network, it only represents one participant's maximum capacity on what is a shared network.

On its own, without other structural tariff and non-tariff elements, a capacity tariff does not account for the effect of coincident demand from other customers. Rather, the total coincident demand in any given location, arising from all network users and not just one individual user, determines the required capacity of a network.

If the goal of signalling capacity is to deliver a network that provides efficient overall capacity it is essential that signals that incorporate capacity for an individual must be part of a suite of signals and structures that achieve efficient collective network capacity utilisation outcomes in the long-term interests of customers.

We also agree with the AER that EQ's proposed capacity tariff is actually a maximum demand tariff. We said in our previous report:[20]

> … the so-called Residential Capacity tariff is not actually a capacity tariff … What EQ presents as a capacity tariff is actually a demand subscription service (DSS).

The AER similarly stated regarding EQ's proposed capacity tariff structure:[21]

> We consider this proposal to be a more complicated version of a demand tariff, rather than a capacity tariff given that it is based on the customer's maximum kW demand, rather than the customer's installed network capacity as measured at their metering or connection point.

Also as noted in our previous report, a tariff that is not flat may or may not have a more cost reflective structure than a flat tariff. If it is badly designed, a complex non-flat tariff may actually be counter-cost reflective. It should not be assumed that every possible complex tariff is more cost reflective than a flat tariff. There remains an onus on any proponent of a complex tariff to demonstrate that it really is more cost reflective than a flat tariff.[22]

It is unclear to us why each individual residential customer's maximum demand or capacity is the cost driver for EQ. Rather, with price-signals diversified for each residential customer's individual peak demand, sharp price signals may not reflect or efficiently inform the total amount of capacity that is efficient for each part of the network.

We have discussed these points with EQ, and not reached a conclusion. The best solution we have come up with is that the AER's draft decisions set out that more research and engagement is required on capacity tariffs before they can be considered for implementation. The need for a framework for further analysis, trials, and research and engagement more generally is set out in more detail in section 6 of this report.

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20 See *Energy Queensland: Tariff Structure Statements (TSS) 2020-25*, Etrog Consulting, 31 May 2019, section 3.3 – Residential capacity tariff

21 AER draft decisions, Attachment 18 – Tariff structure statement, section 18.5.3 – Proposed tariffs for residential and small business customers

22 See *Energy Queensland: Tariff Structure Statements (TSS) 2020-25*, Etrog Consulting, 31 May 2019, Appendix D – Requirements in the NER for network tariffs, and Appendix G – Cost reflectivity of distribution network tariffs.

> We remain of the view that it is difficult to have any confidence in any proposal from EQ unless and until it is backed by sufficient evidence, a clear plan and pathway, and able to be dynamically informed by trials with real customers. Trials must be an integral component in any tariff reform, and the analysis undertaken must be accurate, transparent and comprehensive.

We understand that at this stage in the regulatory process there is not now time to undertake full analysis, which should have been undertaken in 2018 before EQ submitted its initial TSS in January 2019. This does not make the proposed new tariff structures any more acceptable, but rather engenders a sense of having to make do with what we have before us, as a non-optimal solution.

4.3.3. Relevant analysis of EQ's Revised TSS

We would have expected EQ's Revised TSS Explanatory Notes to include clear explanations of how tariff reforms are intended to address key issues. Instead, our analysis of the relevant sections of the Explanatory Notes is as follows.

- Section 4 of EQ's Revised TSS Explanatory Notes is a short section titled 'Tariff and corporate strategy alignment'. Table 1 from that section is reproduced below:

Table 1: Customer principles

Customer Principle	Relationship to Tariff Strategy
Know our Customers	• We have consulted widely with customers on the proposed suite of tariffs in our 2020-25 TSS, and we will continue to seek customer feedback via tariff trials we will conduct in the lead-up to and post 2020.
Deliver Value	• Our goal is to provide customers with a selection of tariffs they can utilise to best optimise their relationship with electricity. As the industry, tariffs and customer behaviours develop, our strategy is to further develop our tariff suite to create further opportunities for customers to participate in the market as we progress towards cost-reflective network pricing. • We want to ensure network tariffs promote efficient use of the network that will deliver sustainable outcomes for customers.
Make it Easy	• Our goal is to develop tariffs that are easily understood by customers and retailers and can be responded to in maximising customer value.

Principles such as wanting "*to ensure network tariffs promote efficient use of the network that will deliver sustainable outcomes for customers*" and "*Our goal is to develop tariffs that are easily understood by customers and retailers and can be responded to in maximising customer value*" are appreciated and appropriate, but the analysis is lacking regarding whether the proposed tariffs really are easily understood and whether they really do maximise customer value and the metrics on which such assessments are based. The absence of nominated factors, measures or indicators against which EQ is defining and assessing attainment of these key principles is a crucial gap that must be closed. That analysis would also reasonably require comparison of proposed tariffs against other options, and that is absent. Section 5 of this report sets out our proposals for how the AER should address these deficiencies in its final decisions.

- Section 5 of EQ's Revised TSS Explanatory Notes titled 'network tariffs' explains the formalities of tariffs and tariff components. Tariffs recover the businesses' costs in various ways and have various components.
- Section 6 of EQ's Revised TSS Explanatory Notes is titled 'Rationale for The Standard Control Services (SCS) Tariff Classes, Tariff Implementation and Tariff Structures'. It provides information on new tariff structures and how they will be implemented, but does not provide rationale. Section 6.3 within section 6 is titled 'Rationale for the new 2020-25 tariff structures', but doesn't explain the rationale for any of the new main tariff structures being proposed.
- Section 7 covers compliance but not rationale.

We are still lacking clear statements as to why tariff reform to implement the new tariff structures that it is now proposing (as against other options) is in the long-term interests of consumers, noting also the omission by EQ of evaluating complementary tariff and non-tariff options.

4.4. CUSTOMER IMPACTS

4.4.1. Consideration of impacts on customers is a requirement under the NER

It is an explicit requirement of the distribution pricing principles that the network must consider the impact on retail customers of changes in tariffs from the previous regulatory year.

The AER's draft decisions encouraged EQ to include more robust and evidence-based discussion on the customer impact of the proposed tariff reforms and the extent that customers are able to mitigate these impacts by switching to other primary tariffs or taking up controlled load tariffs, or even by responding to these price signals by changing their network usage behaviour.

4.4.2. Modelling of customer impacts undertaken for EQ by UNSW

The Revised TSS Explanatory Notes state: "Following submittal of the June 2019 TSSs, EQL engaged UNSW and CSIRO to undertake detailed distributional bill impact analysis of our proposed network tariff reforms. The UNSW customer impact analysis report is presented in Attachment B of the Revised TSS."

We have reviewed the analysis report provided by the UNSW's Centre for Energy and Environmental Markets to undertake customer impact assessments. This analysis is a very good start, and we understand that there is further work required to complete UNSW's assessment report to cover five years rather than just one year.

We have not seen any outputs from CSIRO, and understand from EQ that CSIRO modelling was commissioned to give further support to the work undertaken by UNSW, rather than work that will lead to a separate publication.

4.4.3. Impacts of tariff reform on customers who remain on flat tariffs

The AER's draft decisions provided guidance to EQ that flat tariffs be positioned to increase over time, relative to the new more complex tariffs, thus facilitating the take-up of these new tariffs.

EQ has accordingly submitted Revised TSS where residential customers who remain on flat tariffs will pay more than they would have done had no tariff reform taken place. The effect will become progressively worse for customers who remain on flat tariffs, with the intent to make flat tariffs less attractive over time as compared to new more complex tariffs. These customers will include vulnerable customers.

We understand that in the coming regulatory period 2020-25, EQ's network tariffs will be lower across the board than they were in the current regulatory period 2015-20. This is due to various factors, including lower cost of capital. While customers who remain on flat tariffs in 2020-21 will face lower network bills than they faced in 2019-20, the extent to which their bills are higher as a result of tariff reform erodes the benefit that those customers ought to be receiving from such changes as the lowering of cost of capital. Those benefits will erode further in later years of the period as flat tariffs become less attractive as compared to more complex tariffs.

Because of the need to have a digital meter[23] in order to move to a tariff that is not flat, customers without a digital meter cannot move to a different tariff that might be more cost effective for them.

Assuming there is no meter replacement requirement (due to the existing meter being broken or a new connection or connection upgrade), the decision as to when to replace the meter rests with the retailer not the customer, and the customer's retailer may not make available a digital meter installation option.

The AER's draft decisions show that smart meter penetration was below 10% in both Energex and Ergon Energy areas in 2018, and is expected to rise steadily in the following years, while still remaining below 50% in both network areas in 2025.[24]

23 We use the term "digital meter" to refer to a remotely read half-hourly interval meter, as we did in our previous report, because that is the term used by EQ. Elsewhere these meters are often called smart meters, or Advanced Metering Infrastructure (AMI) meter.

24 AER draft decisions, Attachment 18 – Tariff structure statement, appendix A – Retail and network characteristics of relevance to tariff reform in Queensland, figure A.11

Most customers (including vulnerable customers) will not have a digital meter by the end of the 2020-25 regulatory period, and will therefore be forced to pay more for their electricity throughout the five-year period and beyond, while those who have a digital meter have the option to pay less.

Much of the new meter rollout is associated with uptake of DER. Thus those without digital meters and therefore required to remain on flat tariffs are likely to be biased towards those who have not installed DER, who may be renters and more vulnerable customers. Those are the customers who will be disadvantaged through the ratcheting up of flat tariff prices as against more complex tariff prices. This disadvantage will be in both absolute and relative terms: absolute where the tariffs will be higher than they would have been without tariff reform, and relative where those on new complex tariffs will not face the equivalent 'penalty' of remaining on flat tariffs, and may again enjoy a form of transitional 'cross-subsidy'.

4.4.4. Impact of the speed of rollout of digital meters in Queensland

Acceleration of the roll-out of digital meters in Queensland could more quickly reduce inequality between those with digital meters and those without digital meters. However, it would come at a cost to all consumers, as metering costs are socialised across all customers – with or without a digital meter.

As well as providing benefits to Queensland retailers, full roll-out would increase benefits to EQ, assisting the businesses with a range of operational and planning activities, including integration of DER and overall increasing the efficiency of the businesses through being able to use the half-hourly data to understand current network flows and to model future scenarios. We would expect these benefits to be evaluated by EQ and scrutinised by the AER and netted off future EQ allowed revenue.

In the absence of modelling, it is unclear to us whether acceleration of the rollout would be in the long-term interests of Queensland customers in general or vulnerable customers in particular. This is something that should be considered after the AER's final decisions, as discussed in section 6 below.

4.4.5. Impacts of customers being moved from flat tariffs to more complex tariffs

Our review of the UNSW analysis raises significant concerns regarding the impacts of customers being moved from flat tariffs to more complex tariffs.

Table 2 and Table 3 below appear as Table 6 and Table 14 respectively in the UNSW report *Customer Impact Analysis for Energy Queensland's Revised Tariff Structure Statement 2020-25*.

These tables set out the percentages of customers in the UNSW analysis who have higher or lower Distribution Use of System (DUOS) and Network Use of System (NUOS) bill components on a flat tariff as against a more complex tariff in 2020-21.[25]

25 Please note that these tables compare only within 2020-21. They do not compare bills in 2019-20 to bills in 2020-21.

Table 2: Customer impacts when moving from the flat tariff, South East residential, 2020-21

Tariff	DUOS		NUOS	
	Better Off	Worse Off	Better Off	Worse Off
TOU Energy	71%	29%	69%	31%
Transitional Demand	90%	10%	75%	25%
Demand	24%	76%	30%	70%

Table 3: Customer impacts when moving from the flat tariff, Ergon East residential, 2020-21

Tariff	DUOS		NUOS	
	Better Off	Worse Off	Better Off	Worse Off
TOU Energy	58%	42%	74%	26%
Transitional Demand	54%	46%	87%	13%
Demand	34%	66%	47%	53%

While a majority of customers in the UNSW analysis are shown to have lower distribution and network use of system bill components in 2020-21 when they move to a more complex tariff as against staying on a flat tariff, sizeable proportions are given higher bills when they move to a more complex tariff. However, there has been no analysis of the characteristics of those customers. It is unknown to what extent are these customers vulnerable customers. The amounts by which bills increase or decrease with change of tariff have also not been published, and EQ should make that data available for stakeholder scrutiny.

So far, we have only seen average annual bills compared over the full five years of the regulatory period. We are looking forward to seeing equivalents of the above tables for the remaining four years (2021-22, 2022-23, 2023-24 and 2024-25) in the regulatory period.

4.4.6. Lack of analysis of effects on vulnerable customers

There has been no analysis of the effects of tariff reform on vulnerable customers. This lack of analysis extends to the direct impacts on vulnerable customers facing a new tariff structure, and the secondary effects arising from behavioural changes by other customers in response to tariff reform. It is possible that some vulnerable customers may find themselves significantly worse off as a result of tariff reform. No arrangements have been proposed to mitigate these effects.

We understand from EQ that this is because they lack data on vulnerable customers in particular. We encourage EQ to work with QCOSS and other stakeholders who may be able to assist with more information on the characteristics of vulnerable customers' usage and with the provision of representative data from such customers. For example, QCOSS may be able to assist EQ to undertake modelling of effects of tariff reform on *Energy Savvy* families and *Sunny Savers* households as a data sample.[26]

We are aware that in Victoria in the absence of data specifically related to vulnerability, analysis of consumer impacts matched usage data with data from the Australian Bureau of Statistics (ABS) by postcode or other sub-divisions, to analyse customers' data in geographic areas that can be identified as being more likely to house larger proportions of vulnerable customers, using a variety of measures.[27] While this is a proxy for vulnerability, it can be better than no analysis of vulnerability at all.

4.4.7. Lack of sensitivity analysis

There is a lack of sensitivity analysis. Sensitivity analysis was not included in the scope of work that EQ gave to UNSW. There has been no indication of how sensitive the results might be to small changes in any of the assumptions. This is an important omission, (a) because assumptions are never exactly correct and therefore modelling of changed circumstances is vital; and (b) sensitivity analysis helps to cheese out what is driving results – what are the important factors that if they change then the results change.

4.4.8. Customer well-being

Customer wellbeing has not been addressed. UNSW has defined "better or worse off" in relation only to the size of the electricity bill, without regard to levels of household stress that may be adversely affected by more complex tariffs.

In our previous report, we already noted that EQ had defined "better or worse off" in relation only to the size of the electricity bill, without regard to levels of household stress that may be adversely affected by more complex tariffs. Customer wellbeing is important and needs to be assessed as part of EQ's future impact analysis of new proposed tariff structures. We noted that research had found that complex tariffs could risk customers' wellbeing by causing discomfort and anxiety.[28]

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26 EQ provided UNSW with interval data for 24 residential customers identified as Life Support, 11 of which had solar PV systems. UNSW was therefore able to analyse their data separately. Given the very small number of customers, UNSW states that "caution should be used when extrapolating these findings to other Life Support customers". See the draft *Customer Impact Analysis for Energy Queensland's Revised Tariff Structure Statement 2020-25*, UNSW, November 2019, section 2.1 – Load data, and section 3.2 – residential life support customers

27 See *Advanced metering infrastructure customer impacts study*, under 'Reports and consultations' at https://www.energy.vic.gov.au/electricity/smart-meters

28 See for example *Power Plans for Electricity, The impact of tariff structure changes on vulnerable customers*, BankWest Curtin Economics Centre (2018); *Feral O'Clock, Why Families Struggle to Shift their energy use*, RMIT(2016); *Wein, Paen, Ya Ang Gim: Victorian Aboriginal Experiences of Energy and Water*, CUAC, December 2011. These sources were discussed further in Appendix F to our previous report.

We have since become aware of quantitative research undertaken recently by Dr Lee White of ANU regarding how complex tariffs can have negative impacts on health.[29]

Dr White's research found that complex electricity tariffs may disproportionately impact the energy bills and health of vulnerable households, defined as those who face greater energy needs combined with greater social and financial pressures.

The research was undertaken during a summer period, and suggested that detrimental effects arose in part because vulnerable customers were already struggling to pay for electricity bills versus other necessities. They were less able to bear cost increases than their non-vulnerable counterparts, and therefore needed to shift usage away from higher priced peak periods when electricity was not charged at a standard rate at all times of day. As a result, they experienced greater levels of discomfort, due to their homes becoming too hot while they were trying to save money on electricity by not cooling their homes when electricity was higher priced.

The research results suggest that vulnerable groups should be considered separately in tariff design, and future pilots should seek to determine which designs most effectively avoid exacerbating existing energy injustices or creating new ones. The research also suggested that vulnerable groups in hot climates globally should be the focus of future research.

Section 6 of this report discusses the need for trials of new tariffs, including effects on the wellbeing of vulnerable customers.

4.4.9. Seasonality

Seasonality affects budgeting even if tariffs do not vary seasonally

The analysis to date had only included annual impacts and not taken into account bill variability due to seasonality which is significant in some parts of Queensland. Even if customers will pay a lower bill in total on an annual basis, in future their bills might vary more significantly than previously in different seasons. Those who have difficulty budgeting may be adversely affected if an individual monthly or quarterly bill is higher, even if their total bill annually is lower.

29 *Health and financial impacts of demand-side response measures differ across sociodemographic groups*, Lee V. White and Nicole D. Sintov, Nature Energy (2019) https://www.nature.com/articles/s41560-019-0507-y and *Varied health and financial impacts of time-of-use energy rates across sociodemographic groups raise equity concerns*, Lee V. White and Nicole D. Sintov, Nature Energy (2019) https://www.nature.com/articles/s41560-019-0515-y

Consideration of seasonally varying tariffs

The AER's draft decisions stated that EQ's new non-seasonal tariffs would be less cost reflective than existing seasonal tariffs and that retiring existing seasonal tariffs and replacing them with non-seasonal tariffs would not be consistent with the distribution pricing principles. EQ's response was: "We do not support the AER's decision on the basis of customer feedback. Seasonality is considered too complex." If the AER's final decisions are that seasonally varying TOU tariffs are required, how would that affect the UNSW modelling?[30]

4.4.10. Solar customers

The analysis commissioned by EQ from UNSW distinguishes customers with solar PV from those without solar PV. That is useful, but also within the solar PV category we would expect to see quite different behaviour between

- Those customers who are on the solar bonus scheme, who are incentivised to minimise usage while their solar PV is generating, because they are paid for their solar export at a higher price than that at which they can buy electricity from the grid; and
- Those customers who are not on the solar bonus scheme, who are incentivised to use (or store) more energy while their solar PV is generating, because their solar export would be paid for at a lower price than that at which they can buy electricity from the grid.

Analysis that distinguishes these sub-categories of customers with solar PV could be very insightful into the extent to which customers respond to price signals (in this case the solar PV export price) as well as how they would be affected by tariff reform.

4.4.11. Other issues with the completeness and robustness of the analysis commissioned by EQ from UNSW

Other issues with the completeness and robustness of the analysis commissioned by EQ from UNSW are as follows:

- The main report from UNSW is watermarked draft. We understand from EQ that this is because the main report currently covers only the first year 2020-21 of the coming regulatory period. It is to be updated to include the full 2020-25 period, at which point it will no longer be considered draft.

30 The robustness of the modelling to seasonality is questioned here. Our views on the appropriateness of seasonality in residential tariffs are in section 4.6.2 below.

- The current report contains scatter graphs that show effects on customer bills on the vertical y-axis against energy usage on the horizontal x-axis. The horizontal x-axis goes from 0 to 50,000 kWh energy usage on each graph, and the y-axis also covers a wide range of annual bill (network component only) up to $4,000. Most residential users are in the lower range of usage, and have bills that are at the lower end of the scale as well. Therefore, the bulk of data points are "squashed" into the lower left corner of each scatter graph. We have asked EQ to consider providing scatter graphs that show the data points in the lower left corner of each scatter graph more clearly, or preferably Microsoft Excel or Access or similar data files of underlying data.
- We understand that the entire model is large, but perhaps key elements of the model results could be released as a data file so that stakeholders can zoom in on whichever part of the results spectrum interests them the most. At the moment, only a PDF file of results has been provided, and no underlying data files. We also understand that all data provided would be de-identified so that there would be no privacy concerns with data release.
- Limited descriptive information has been provided on the dataset used in the analysis or key assumptions made in using the data, beyond the fact that it is "sample load data" which has been provided by EQ, which "is intended to be statistically representative of the wider population in Queensland". Further detailed descriptive information about the data set and how statistically representative it actually is would be appreciated.
- There is a lack of consideration of how this "transitional" five year regulatory period will transition into further tariff reforms beyond 2025.
- The tariffs used are only indicative. Actual tariffs may change the results. We would have expected sensitivity analysis to answer that question as well as others. The analysis would be further enhanced and connected to the rationale if EQ used some form of scenarios modelling for its future network outlook, against which assumption profiles could be developed.
- Rebalancing from year to year may not be undertaken exactly as modelled. There will also be year on year adjustments due to changes in demand and usage patterns, customer numbers, etc. It is currently unknown how those changes would impact results. This is again an area where sensitivity analysis would aid understanding.
- It is unclear what are the key drivers of what makes a customer get lower or higher bills. The results are a function of both the tariff structure and the actual $ and cent amounts of each tariff element. Customer impact analysis should explain the extent to which different customer characteristics correlate to tariff structures as against tariff levels. Given a tariff structure, it is always possible to make tariffs more or less attractive by adjusting the tariff levels, but that does not explain which tariff structure is most appropriate for a customer in the longer term. This is discussed further in section 5.4 below.

4.5. THE EXTENT THAT THE PROPOSED TARIFF REFORMS COMPLY WITH THE EFFICIENCY PRINCIPLES IN THE RULES

It is an explicit requirement of the distribution pricing principles that each tariff must be based on the long run marginal cost of providing the service to which it relates to the retail customers assigned to that tariff.

EQ has used a different methodology (based on an Ofgem approved method in UK which is based on hypothetical costs scenario) as compared to previous years to calculate the Long-Run Marginal Cost (LRMC). The AER has accepted this methodology, subject to a few comments.

The AER's draft decisions encouraged EQ to include more robust and evidence-based discussion on the extent that the proposed tariff reforms comply with the efficiency principles in the Rules, including the requirement to recover residual costs in a least distortionary manner to efficient usage of the electricity network.

Specifically, the AER accepted EQ's LRMC calculations for 2020-25, while also providing commentary on expectations for 2025-30. The AER caveated its acceptance around the need for EQ to use LRMC *"in the price-setting process as cost-reflectivity targets, rather than as binding figures that cost reflective charging parameters must equal. That is, tariff levels would trend towards the LRMC estimate over time, subject to the customer impact principle. While there is spare capacity in Ergon Energy's network at present, it is arguable LRMC estimates for the 2020-25 regulatory control period would be low – perhaps close to zero in large parts of the network – depending on the calculation method. On the other hand, there is uncertainty how long such a state would persist given rapid technological developments."*

As the LRMC calculation serves the purpose of calculating the cost-reflective component of network tariffs, the appropriateness of the LRMC calculation method is of great importance, and should genuinely indicate the actual costs driving LRMC for EQ.

These actual LRMC costs should reasonably be based on, or at least informed by, the actual EQ networks, not a hypothetical one.

This may not matter so much now, with low LRMC allocations expected across tariffs vis-a-vis Transitional Demand tariffs. But it is of central importance overall, and into the future.

We also note that the AER draft decisions required greater clarity over the proposed methodology for residual cost allocations. The AER encouraged the Queensland distributors to address this issue in their Revised TSS by adopting a more transparent approach.

We suggest that in its final decisions the AER should consider and address whether it is material that EQ is now using a different methodology in this regulatory period, and what are the implications for LRMC for next regulatory period? Should the AER recommend that EQ make an early start to modelling a LRMC based on alternative methodologies which align more with actual costs ahead of 2025-30? It is our understanding that it is in consumers' interests that the right investment signals are sent via LRMC, so there are long-term savings by facilitating a network that can accept DER and become genuinely two-way in nature.

4.6. WHETHER TARIFFS ARE REASONABLY CAPABLE OF BEING UNDERSTOOD BY CUSTOMERS

4.6.1. Lack of familiarity of customers with kW demand tariffs

It is an explicit requirement of the distribution pricing principles that the structure of each tariff must be reasonably capable of being understood by retail customers that are assigned to that tariff.

The Explanatory Notes to the Revised TSS state: "For some residential and small business customers, demand tariff structures may be unfamiliar and difficult to understand. Consequently, a ToU energy tariff will be made available as an alternative tariff option, which will include evening (peak), night (shoulder) and day (off peak) energy charges and a daily fixed charge. Our stakeholder engagement indicates that such a tariff is likely to be easier for some residential and small business customers to understand."[31]

The AER also stated in its draft decisions that "the majority of residential and small business customers in Queensland will not be familiar with kW demand concepts".[32] While the AER also claimed that time of use energy tariffs "are well understood by customers",[33] it acknowledged that residential and small business customers in Queensland "are only familiar with the flat tariff structure".[34]

The context of these considerations of energy literacy and residential customers' understanding is important. The 2018 Queensland Household Energy Survey (QHES)[35] showed that customers do not know what tariff they are on, and they think they have a smart meter when they do not. There is considerable research including QCOSS' customer insights survey of the *Energy Savvy* families in regional Queensland, which shows low levels of energy literacy.[36]

The Revised TSS contemplate customers being assigned by default to a demand tariff that they do not understand.

This being the case, the TOU Energy tariff should be the default tariff because otherwise customers are going to be assigned to the demand tariff that they do not understand, in breach of this pricing principle. See section 5.2 below regarding our proposals for a default tariff for customers with a digital meter.

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31 Revised TSS, section 2.6

32 AER draft decisions, Attachment 18 – Tariff structure statement, section 18.5.3 – Proposed tariffs for residential and small business customers

33 AER draft decisions, Attachment 18 – Tariff structure statement, appendix B – Tariff design and assignment policy principles

34 AER draft decision Ergon Energy distribution, Attachment 18 – Tariff structure statement, appendix A – Retail and network characteristics of relevance to tariff reform in Queensland

35 See https://www.talkingenergy.com.au/qhes

36 This insights survey has not been published, but may be made available to the AER on request.

4.6.2. Seasonality

The AER's draft decisions stated that EQ's new non-seasonal tariffs would be less cost reflective than existing seasonal tariffs and that retiring existing seasonal tariffs and replacing them with non-seasonal tariffs would not be consistent with the distribution pricing principles. EQ's response was: "We do not support the AER's decision on the basis of customer feedback. Seasonality is considered too complex."

We agree with EQ on this. Seasonality brings additional unnecessary complexity to customers who already are unfamiliar with their current tariff.[37] In order to endorse seasonally varying tariffs, we would need to see rigorous analysis explaining how the benefits would justify the additional complexity.

4.6.3. Naming of tariffs

Terminology is also important in any customer-facing interactions. EQ is portraying the tariff structures in its Revised TSS as being "transitional" to a yet-again different structure in the next regulatory period (2025-30). A dictionary definition of a transitional period is one in which things are changing from one state to another. As discussed elsewhere in this report, what exactly we are transitioning to is really not clear yet to distributors, retailers, regulators or consumer advocates, and is something that will be part of ongoing discussion or consideration. We suggest that residential consumers will also find the concept of a "Transitional Demand" tariff to be confusing, and we suggest that to enable customer comprehension this term is not used in customer-facing communications.

4.7. Tariff, Education, Dynamic incentives and Information (TEDI)

In its draft decisions in October 2019, the AER wrote in regard to customers being reassigned to new more complex tariffs:

> *It is also our understanding that these customers will also receive support under Energex's proposed Tariff Education Dynamic Incentive (TEDI) framework. We envisage that this will ensure that these customers have access to the information necessary for them to make informed tariff choices and decisions about upgrading their appliance mix, investing in solar PV and other DER, and how best to sustainably modify their electricity usage to fully benefit from the incentives under the more cost reflective demand tariff structure.*

A footnote at the end of that paragraph said: "This assumes that Retailers decide to pass through the cost reflective network tariff structure to end-customers."

We are concerned that the AER has put such an important assumption tucked away in a footnote, and without any explanation as to why that assumption might be justified, and what might be the consequences if the assumption turns out to be incorrect.

We include more discussion on the role of retailers in section 4.8 immediately below.

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37 As discussed in section 4.6.1 above, the 2018 Queensland Household Energy Survey (QHES) showed that customers do not know what tariff they are on, and they think they have a smart meter when they do not. There is considerable research including QCOSS' customer insights survey of the *Energy Savvy* families in regional Queensland, which shows low levels of energy literacy.

TEDI is, however, not apparently mentioned in any of EQ's Revised TSS materials. We asked EQ what was the role of TEDI now, and were informed that EQ no longer refers to TEDI in its early form. However, EQ still believes that the combination of tariffs, supported by education, information and incentives is important in gaining customer support for reform and assisting customers in making informed tariff choices. The concepts previously underpinning TEDI are also being discussed through the Energy Charter initiative focused on tariff reform, which is currently being outworked by signatories and consumer representatives.

We also noted in our previous report the launch of the Energy Charter, a joint initiative between networks and retailers, whose vision is that *together, we will deliver energy for a better Australia*.[38] That forum may provide an opportunity for networks and retailers to work together to give consistent messages to consumers.

> We are concerned that EQ did not address TEDI in its Revised TSS, given that the AER had expressed an understanding in its draft decisions that the customers being reassigned to new more complex tariffs would receive ongoing support under the TEDI framework. We are also particularly interested to understand what "incentives" EQ has in mind in the TEDI frameworks. Some examples would be appreciated.

We discuss tariff implementation further in section 6 below.

4.8. THE ROLE OF RETAILERS

In our previous report, we considered the consequences of the fact that end-use customers face retail tariffs rather than network tariffs, and retailers rather than customers choose to opt in or opt out of different network tariff options as the basis on which to supply their customers.

The role of retailers is important, and needs to be properly researched and factored into planning by EQ. It is unclear what tariffs each retailer will offer, or what will be the opt-out process envisaged in the TSS. The EQ TSS provide for customers opting out of network tariffs. Instead, in reality, the retailer chooses the network tariff.

More information is also required on how EQ will meet its objectives, given retailers' roles.

38 For more information on the Energy Charter, see https://www.theenergycharter.com.au

Distribution network tariff structures are not necessarily passed through to consumers by retailers. Much has been written about whether distribution networks should be focused on creating tariffs that are capable of acceptance by consumers or by retailers. Our view is that the focus of the question is incomplete, since it is focused solely on energy industry requirements. Rather, all stakeholders (regulators, governments, networks, retailers and consumers) should be putting more of the focus on the range of retail tariff structures that are reasonable for consumers to understand and to which they can respond. The retail tariffs should meet customer-facing acceptance criteria. This is true of the whole process more generally. While the balance is changing, processes in general (whether in regard to distributors, retailers, tariffs or other matters) should be more customer-focused than industry-focused.

Demand response programs that are distributor led and can be offered directly to customers by distributors may resolve issues that might otherwise arise due to customers not being exposed to the network's chosen tariff structures.

Not knowing what retailers will do adds risk for consumers. What matters to the customers is which retail tariff will cost them more or less, not which network tariff will cost them less. Customers do not choose network tariffs; retailers do.

In south east Queensland, it is not possible for EQ to know exactly how each retailer will package retail offers based on its proposed network tariff structures, but one would at least have expected some scenario analysis of possible outcomes.

In regional Queensland, the situation is different. In regional Queensland, retail tariffs for residential customers are set by the Queensland Competition Authority (QCA) under direction from the Minister for Energy (currently the Minister for Natural Resources, Mines and Energy). The QCA released an Interim Consultation Paper including the Minister's delegation to the QCA in December 2019, and we have provided a report to QCOSS for submission to the QCA in response.[39]

In a sense, in regional Queensland the primary target of network tariff structures is currently the Queensland Government, through the direction given by the Minister to the QCA regarding how to set regulated retail electricity prices in regional Queensland.[40]

39 The Minister's Delegation, the QCA's Interim Consultation Paper and other materials related to the QCA's determination of regional retail electricity prices for 2020-21 can be found on the QCA website at https://www.qca.org.au/project/customers/electricity-prices/regulated-electricity-prices-for-regional-qld-2020-21

40 This direction is given annually, and may change in future years, or may cease.

The AER's draft decisions state:

> We note that customers in Ergon Energy's network area are currently subject to regulated retail pricing. A key element of this framework is the Queensland Government's uniform tariff policy that results in customers in regional Queensland paying similar amounts for their retail electricity services as customers in Energex's network area. The key consideration in our assessment of Ergon Energy's tariff structure statement proposal is the extent that it is reasonable to believe that the proposed changes to structure of network tariffs will be reflected in regulated retail tariffs set by the Queensland Competition Authority. On the basis of past QCA electricity retail price determinations, the AER notes that the regulated retail tariff has generally reflected the underlying network tariff structures, except where customers are assigned to a transitional retail tariff.[41]

A footnote there adds: "It should be noted that the QCA has adopted Energex's flat structure for the regulated retail tariff for residential customers, rather than Ergon Energy's inclining block tariff structure at the network level", and refers to a document on the QCA website for more information.

We disagree with this position in the AER's draft decisions.

We acknowledge that the NER pricing principles refer to *retail customers*, but it was never the intention that this should mean that the AER should assess network tariffs based on how it believes that the network tariff structures would be reflected in retail tariffs, whether those retail tariffs are regulated or not. This was made clear in the AEMC's final determination on the rule change that implemented cost-reflective network pricing in November 2014.[42] Throughout the document, the references to requirements are in relation to network tariffs not retail tariffs. Section 3.7 of the AEMC's final determination relates to the relationship between retail prices and network prices, and states:

> The final rule does not regulate how network prices should be passed on to consumers by retailers. The Commission considers that:
>
> - retailers operate in a competitive market and outcomes for consumers will be improved if retailers are free to design their prices as they see fit, to meet consumer preferences and recover their costs of supplying electricity to consumers, including the cost of network services; and
> - it is important that DNSPs [Distribution Network Service Providers] retain ownership of their network prices so that they face an incentive and obligation to set network prices that reflect the efficient costs of providing network services to consumers.

41 AER draft decisions, Attachment 18 – Tariff structure statement, appendix B – Tariff design and assignment policy principles

42 Rule Determination, National Electricity Amendment (Distribution Network Pricing Arrangements) Rule 2014, AEMC, 27 November 2014

Footnote 10 in that determination confirms that the term 'retail customer' is used because that is an existing defined term in the NER (i.e. not because of a desire that network tariffs should be assessed on the basis of retail tariffs).

Further, the AER has no control over how and to what extent the QCA regulates retail electricity prices in regional Queensland. The QCA's jurisdiction over regulated retail prices could change or even be removed within the five year regulatory period. The AER has no basis on which to make any kind of assumption of how retail prices will be regulated (if at all) in regional Queensland up to 30 June 2025.

On that basis, the AER should not assess network tariffs in regional Queensland based on how it believes that the network tariff structures would be reflected in regulated retail tariffs. Rather it should assess the network tariffs on their own merit.

We noted in section 4.7 above the AER's assumption in a footnote that retailers will decide to pass through the cost reflective network tariff structure to end-customers.

In another footnote the AER also noted: "Retailers are not obliged to pass through network tariffs or network tariff structures to customers in their electricity bills."

The ACCC retail electricity pricing inquiry included as part of a recommendation:[43]

> Retailers should not be obligated to reflect the cost-reflective network tariff structure in their customers' retail tariffs, but should be free to innovate in the packaging of the network tariff as part of their retail offer.
>
> Given the potential for negative bill shock outcomes from any transition to cost-reflective network tariffs should retailers pass these network tariffs through to customers, governments should legislate to ensure transitional assistance is provided for residential and small business customers. This assistance should focus on maximising the benefits, and reducing the transitional risks, of the move to cost-reflective pricing structures. This includes:
>
> - a compulsory 'data sampling period' for consumers following installation of a smart meter
> - a requirement for retailers to provide a retail offer using a flat rate structure
> - additional targeted assistance for vulnerable consumers.

We commend these points to the AER and to the Queensland Government and other stakeholders.

Further, the marketing of new tariffs and consumer education regarding new tariffs will be more complex and more difficult while digital metering has not yet been fully rolled out. Mass-market media campaigns will not easily target those with digital meters eligible for more complex tariffs, and given the evidence that customers don't know whether they have a digital meter it is likely to sow confusion and not engender good outcomes. On that basis, we would understand if retailers wait to market new tariffs until after a higher proportion of customers have a digital meter.

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43 Australian Competition and Consumer Commission, *Restoring electricity affordability and Australia's competitive advantage, Retail Electricity Pricing Inquiry Final Report*, June 2018, p. xix

This all points to a need for wider communication and discussion between the parties (retailers, distributors, governments, and regulators, as well as consumers and consumer advocates), to work out optimal implementation strategies for tariff reform.

Section 6 of this report includes retailers in ongoing monitoring and other actions that we believe are required from 1 July 2020 onwards

4.9. STAKEHOLDER CONSULTATION UNDERTAKEN BY EQ ON THE TSS AND REVISED TSS

4.9.1. Consultation leading up to the original regulatory proposal submission

We previously identified inconsistent rationale for proposed tariffs, as EQ's proposals had changed several times between initial consultation in 2018 and submission of the TSS in January 2019. We highlighted various contradictions in assertions made by EQ over the consultation period before the original TSS were published.[44] We concluded: "The ease with which EQ makes such positive assertions makes it difficult to discern any objective attempt to measure the tariff proposal against consumers' acceptance criteria. It is difficult to have any confidence in any proposal from EQ unless and until it is backed by evidence, based on trials with real customers, and accurate analysis."

4.9.2. Consultation since January 2019

The Revised TSS Explanatory Notes state: "In preparing our Revised TSS submission, we have incorporated received feedback through consultation we have undertaken since January 2019 and responded to the AER's Draft Determination released in October 2019."

Certainly the AER's draft decisions have influenced the Revised TSS quite considerably. And obviously the AER's draft decisions took into account and were influenced by stakeholders' submissions. However, there is little indication in the Revised TSS of changes having been made to the proposals for residential tariff structures since January 2019 based on stakeholders' feedback, besides those that came through in the AER's draft decisions.

With its initial regulatory proposal and TSS in January 2019, EQ provided a *Tariff Structure Statement (TSS) 2020-25 Engagement Summary* document which set out: "Our thinking has been guided by the many insights received through the various channels and multiple forums that have targeted all segments of our customer base and have extended to every corner of the State."

44 See *Energy Queensland: Tariff Structure Statements (TSS) 2020-25*, Etrog Consulting, 31 May 2019, section 2.4 – Inconsistent rationale for proposed tariffs.

However, section 7.4 ‘Stakeholder Engagement’ of the Revised TSS Explanatory Notes in December 2019 states: “Please refer to *Tariff Structure Statement 2020-25 Engagement Summary* for a summary of the outcomes from our detailed customer and stakeholder engagement undertaken as we developed our TSS documents. A summary of a selection of responses of a technical nature are included in Appendix A of these Explanatory Notes.” That is the original January 2019 document, which has not been updated.

Appendix A to the Revised TSS Explanatory Notes, dated December 2019, entitled ‘Selected Stakeholder Responses’ seems to comprise only a light edit to what was Appendix B to EQ’s original TSS Explanatory Notes dated January 2019. There were many interactions between stakeholders and EQ between January and December 2019, including in stakeholders’ presentations at the stakeholder forums held by the AER on 9 April and 24 October 2019, in stakeholders’ formal submissions to the AER draft decisions, and in forums and deep dives organised by EQ since the AER’s draft decisions were published.

In summary, there is no update on EQ’s customer and stakeholder engagement since EQ finalised its original TSS proposal and the AER’s draft decisions.

EQ has missed an opportunity in its December 2019 Revised TSS package to update stakeholders formally on how it has responded to stakeholder input since January 2019, and as a result has not helped regain trust, or confidence that EQ really has been listening and responding to stakeholder concerns.

EQ has held more workshop and deep dives, and consumer advocates are thankful for the opportunity to engage with EQ. Opportunities have been made available to consumer advocates to provide consumer feedback to EQ, but time has been limited. While some stakeholder feedback was provided to EQ, these sessions largely served as a means for EQ to provide information to stakeholders rather than to receive feedback. Responses from EQ were largely clarification of facts rather than providing the impression that stakeholders were influencing the Revised TSS at this stage.

5. KEY ISSUES TO BE ADDRESSED IN THE AER'S FINAL DECISIONS

In the previous section 4 of this report, we discussed issues with the compliance of the Revised TSS with the requirements of the NER.

This section follows on from that previous section, and summarises our views on what are the key issues that the AER should be addressing in regard to the Revised TSS in its final decisions for 2020-25. The issues arise now largely because they were not addressed by EQ earlier in its consultation processes on the TSS and Revised TSS. They relate either to new matters that arose in the Revised TSS that were not in the original TSS, or to omissions by EQ that we believe should be addressed in the lead up to the AER's final decisions.

The key issues that we believe the AER should be addressing in its final decisions, which are discussed further in this section, are as follows:

- The AER's final decisions should direct EQ to provide all customers with a twelve-month data sampling period to help them better engage with their electricity charges and usage patterns. This should apply whatever the reason for their acquisition of a digital meter.

  To make the grace period workable, EQ would need to have appropriate monitoring and an assessment framework in place.

  The AER should decide that during the grace period EQ should assess what are the most appropriate network tariffs for households in the *Energy Savvy* families[45] and *Sunny Savers* programs,[46] and card operated meters, and if necessary make special arrangements for them.

- The AER should decide that the default tariff for customers with a digital meter should be a Time of Use (TOU) Energy tariff with the option to move to a Transitional Demand tariff.

  If, as we recommend, the TOU Energy tariff becomes the default tariff for residential customers with digital meters, then the AER must make sure that the structure and rates of the TOU Energy tariff are set so it is the best tariff option for most customers (including comparison with the basic meter tariff option).

- To assist stakeholders in understanding the effects of tariff reform on customers who stay on flat tariffs, we recommend that the AER should ask EQ to publish what tariffs residential customers would have faced had there been no tariff reform implemented over the five-year period 2020-25.

45 *Energy Savvy* families was a program with partners including the Queensland Government, Ergon Retail, QCOSS and CitySmart, which operated in regional Queensland between 2016 and 2019. About 10,000 low income households were given digital meters, monthly bills, and education and support from community energy champions.

46 *Sunny Savers* was a program with partners including the Queensland Government, Ergon Retail and QCOSS, where up to 800 public housing buildings were provided with solar PV and tenants were provided with home visits which included energy literacy

- The impact of increasing flat tariffs on vulnerable customers must be understood. Prior to the AER's final decisions, EQ should model customer impacts in the upcoming regulatory period for vulnerable customers. The AER should not allow the increase to flat tariff rates within the 2020-25 regulatory period prior to EQ undertaking adequate impacts analysis, and providing effective and sufficient solutions to protect vulnerable customers as needed.
- The AER should request from EQ analysis of how non-tariff solutions might integrate with network pricing and network planning. Traditional demand response (DR) needs to be fully integrated, and new DR proposals should be made, in line with the new ways in which the networks are being used, and where DR will be most effective.

We also believe that work on the network tariffs for the next five years should not be deemed to be complete with the release of the AER's final decisions ahead of the five-year period. This is particularly true in this case for Queensland, where consultation processes in regard to tariffs in advance of EQ's regulatory proposals in 2019 were not adequate. However, on reflection, we believe that this is also true in other jurisdictions in the NEM. Our observation is that circumstances evolve during the five-year period, but there is no opportunity for consumer advocates to participate in a forum involving the AER and other stakeholders to learn lessons from the TSS implementations or to influence the network tariffs that are then approved each year in that regulatory period.

We therefore recommend that in its final decisions the AER should provide guidance to EQ, in conjunction with the Queensland Government, regulators, retailers and consumer / community stakeholders, to establish a **Transition working group** (with an independent chair) to provide oversight and advice to EQ during the next five years and in preparation for the 2025-2030 regulatory period. Further information on what we believe to be the purpose and role of such a working group are provided in the next section of this report.

We commend such a working group to be implemented in every NEM jurisdiction; not just in Queensland, especially now as tariffs are being transitioned to reflect new market realities in the Australian electricity supply industry.

Transition working groups are being proposed as a concept to ensure oversight, and to include consumer representation to ensure that they remain focused on consumer-centric outcomes. In the event that such Transition working groups (or similar forums) are not created, the activities that they would have undertaken as suggested in the next section of this report should not just fall away and be forgotten. Rather they should be taken on board by appropriate individual organisations (such as the AER, state governments, network businesses and retailers), with consumer input in each case.

5.1. THE GRACE PERIOD

EQ is proposing that existing customers who have a digital meter installed before 1 July 2020 can remain on their existing flat (or inclining block) network tariff for one year before they are assigned to a new complex tariff – i.e. till 30 June 2021. This is to enable customers to obtain half-hourly usage data to ascertain which tariff is most suitable for them before they are assigned to a tariff that is not flat (or inclining block).

However, customers who first get a digital meter on or after 1 July 2020 would not have the opportunity to remain on a flat (or inclining block) tariff.

The AER's draft decisions distinguished between customers whose basic accumulation meter is replaced with a digital meter because their old meter was faulty, as against customers with new connections or upgraded connections. The AER stated:

> Existing customers that receive a new smart meter on account of their basic accumulation meter being faulty are not actively engaging with their electricity supply. Circumstances beyond their control are impacting their metering circumstances. We do not consider the immediate reassignment of these customers to a fully cost reflective tariff to be appropriate in these circumstances given that these customers may not have had adequate time to understand the cost reflective tariff and to explore opportunities to mitigate the impact of a change in tariff structure. Therefore, we believe that the distributor should implement appropriate safeguard measures when reassigning these customers to a cost reflective tariff, such as reassigning these customers after expiration of a twelve-month sampling period. This delay will assist these customers to better understand their load characteristics by gathering sufficient information to make an informed decision when selecting a retail pricing offer.
>
> The twelve-month period is to help customers to understand a full year of their consumption and demand profile (i.e. so they understand their demand characteristics in all seasons). This will help them adjust to the reassignment to a new cost reflective tariff following the grace period.[47]

In contrast, the AER stated in regard to new and upgraded connections:

> We consider that customers with new connections or upgraded connections are better placed to understand the impact of cost reflective network tariffs on their retail bills. This is because these customers are:
>
> - actively engaged either by investing in upgrading their connections or through considering electricity efficiency when preparing for a new connection, and
> - expecting to see a change in their retail electricity bills due to the changing or upgrading network connection.
>
> Even so, we consider that these customers will also benefit from a twelve-month data-sampling period. We would like to hear from the Queensland distributors and other stakeholders, on whether distributors should provide all customers with a twelve-month data-sampling period to help them better engage with their electricity charges and usage patterns.[48]

47 AER draft decisions, Attachment 18 – Tariff structure statement, appendix B – Tariff design and assignment policy principles

48 AER draft decisions, Attachment 18 – Tariff structure statement, appendix B – Tariff design and assignment policy principles

In response to the AER's consultation question, we comment that while customers with new connections or upgraded connections are more actively engaging than other customers that does not necessarily mean that they are in a better position than other customers to understand their usage patterns and to make an informed choice as to which tariff will give them a lower bill. We believe that the contrary could equally be the case. Customers with unchanged circumstances could potentially have better understanding of their usage over a period of time, while those with new connections or new circumstances will not have that history of usage on which to base an informed choice of tariff.

There are other reasons why non-faulty meters are replaced. For example there are households on the *Energy Savvy* families and *Sunny Savers* programs. These households are potentially some of the most vulnerable in Queensland. They participated in these programs without any knowledge that their decision may result in them being required to go on more complex network tariffs. We propose that special arrangements should be put in place for these households. EQ should undertake an assessment of which tariff would best suit these households, based on bill size and wellbeing, and provide these customers with the option to remain on flat tariffs beyond a twelve-month grace period if necessary.

Similarly, there are about 4,000 households on card operated meters in remote Aboriginal and Torres Strait Islander Communities where EQ recently installed digital meters and provided a successful energy literacy community engagement. At the AER Public Forum in Brisbane on 24 October 2019, QCOSS asked for information on the tariff assignment policy for these households, and EQ has not responded. We also recommend special arrangements with these households as indicated above for households on the *Energy Savvy* families and *Sunny Savers* programs.

There may also be other vulnerable customers at risk of getting bill shock for whom opt-out of complex tariffs or further customer protections may be required for a longer period. Further research is required in this area. We also question arrangements on change of occupancy of properties. A lot of vulnerable customers are in short-term rental properties. They may move to a property with a digital meter which has been installed more than a year earlier, but have no experience at all or knowledge of digital meter data or complex tariffs. Significant change of circumstance may also mean that there is not adequate data on which to base informed tariff decision. These customers also need protection and guidance on choice of tariff, and potentially an option to stay on a flat tariff for a period of time.

Whatever grace period is implemented, it must be worthwhile and not just a delay for the sake of it. There should not simply be a delay of a year and then it is over and nothing has happened. There must be engagement with these customers when they get their digital meter, and their retailer and/or distributor must work with them to engage with their usage patterns to enable the customers to make an informed choice of tariff by the time their flat tariff twelve-month grace period expires. To make the grace period workable, EQ would need to have appropriate monitoring and an assessment framework in place (see section 6 below for more details). This framework must methodically assess and address the impacts of tariff options against a set of relevant criteria. Examples of these criteria might include reassignment to a more appropriate network tariff; customer communication and education; and specific assistance to ensure that vulnerable households do not face higher energy bills than necessary.

It is recommended that the AER's final decisions should direct EQ to provide all customers with a twelve-month data sampling period to help them better engage with their electricity charges and usage patterns. This should apply whatever the reason for their acquisition of a digital meter.

To make the grace period workable, EQ would need to have appropriate monitoring and an assessment framework in place.

It is further recommended that the AER decide that during the grace period EQ should assess what are the most appropriate network tariffs for households in the *Energy Savvy* families and *Sunny Savers* programs, and card operated meters, and if necessary make special arrangements for them.

5.2. THE DEFAULT TARIFF FOR CUSTOMERS WITH A DIGITAL METER

EQ is proposing a Transitional Demand tariff as the default tariff for customers with a digital meter, with the option to move instead to a Time of Use (TOU) Energy tariff.

This approach in the Revised TSS is in accord with the AER's draft decisions, which stated:

> Customers have the opportunity to opt-in to an alternative cost reflective tariff e.g. time of use energy tariff, if they find that the demand tariff is too complex."[49]

Given that both a demand tariff and a TOU tariff can be cost reflective, a TOU tariff will be more in accord with the pricing principles in the NER because it is more understandable by customers. A demand tariff as a default tariff introduces more complexity for no corresponding benefit as against a TOU tariff as a default tariff.

We recommend that the AER should decide that the default tariff for customers with a digital meter should be a Time of Use (TOU) Energy tariff with the option to move to a Transitional Demand tariff.

49 AER draft decisions, Attachment 18 – Tariff structure statement, section 18.5.3 – Proposed tariffs for residential and small business customers

This is for various reasons, including the following:

- A TOU Energy tariff is much easier for a customer to understand and respond to than a demand tariff. This was discussed in section 4.6 above.
- EQ has not provided sufficient evidence that capacity-based tariffs are the best approach, so demand tariffs are not necessarily a better transition than TOU Energy. Even if the capacity-based tariffs are the best approach, we would recommend that a staged transition to demand / capacity tariffs happens later. This was discussed in section 4.3.2 above.
- Customer wellbeing was discussed above in section 4.4.8. Research suggests that more complex tariffs may increase stress.

If it is implemented in a cost effective manner, in a way that customers can understand, a TOU Energy tariff is in accord with the distribution pricing principles. In contrast, the Revised TSS contemplate customers being assigned by default to a demand tariff that they do not understand. This being the case, the TOU Energy tariff should be the default tariff. Otherwise, customers are going to be assigned to the demand tariff that they do not understand, which would be in breach of this pricing principle.

We understand from EQ that the structure and rates of the Transitional Demand tariff have been set so it is the best tariff option for most customers (including comparison with the basic meter tariff option).

> If, as we recommend, the TOU Energy tariff becomes the default tariff for residential customers with digital meters, then the AER must make sure that the structure and rates of the TOU Energy tariff are set so it is the best tariff option for most customers (including comparison with the basic meter tariff option).

5.3. MODELLING OF CUSTOMER IMPACTS – PARTICULARLY FOR VULNERABLE CUSTOMERS

Section 4.4.3 above discussed impacts of tariff reform on customers who remain on flat tariffs.

We understand that in the coming regulatory period 2020-25, EQ's network tariffs will be lower across the board than they were in the current regulatory period 2015-20. This is due to various factors, including lower cost of capital. While customers who remain on flat tariffs in 2020-21 will face lower network bills than they faced in 2019-20, the extent to which their bills are higher as a result of tariff reform erodes the benefit that those customers ought to be receiving from such changes as the lowering of cost of capital. Those benefits will erode further in later years of the period as flat tariffs become less attractive as compared to more complex tariffs.

> To assist stakeholders in understanding the effects of tariff reform on customers who stay on flat tariffs, we recommend that the AER should ask EQ to publish what tariffs residential customers would have faced had there been no tariff reform implemented over the five-year period 2020-25.

Because of the need to have a digital meter in order to move to a tariff that is not flat, customers without a digital meter cannot move to a different tariff that might be more cost effective for them.

> The impact of increasing flat tariffs on vulnerable customers must be understood. Prior to the AER's final decisions, EQ should model customer impacts in the upcoming regulatory period for vulnerable customers. The AER should not allow the increase to flat tariff rates within the 2020-25 regulatory period prior to EQ undertaking adequate impacts analysis, and providing effective and sufficient solutions to protect vulnerable customers as needed.

5.4. TARIFF BALANCING

Tariff balancing involves both balancing cost recovery between tariffs and balancing components within tariffs.

There is a risk that network tariffs (as well as the balance between their components) will become more volatile over the regulatory period. Hence is it prudent to track and monitor movements in revenue recovered in tariffs.

Such volatility may arise from greater uncertainly in peak demand and maximum demand with large-scale uptake of DER, and potentially electric vehicle charging, which will likely impact on network tariffs during the 2020-25 regulatory period.

Energex is envisaging approximately 50% take-up of digital meters by the end of 2020-25 regulatory period. If the Transitional Demand tariff is adopted as the default tariff, most of these households are likely to be on that default network tariff (based on a low LRMC). This will have implications for movements in other components (fixed charges), as well as changes to the flat tariff. Our understanding is that a lot of the uptake of digital meters is being driven by DER (as opposed to a standard replacement program), and this makes it more difficult to forecast.

The uptake of tariffs and behavioural shifts resulting from them are unknown. Hence revenue generation expected from each tariff structure and pricing element may or may not diverge significantly from actual revenue earned.

A further issue that concerns us is whether and to what extent, the tariff on which a customer will get a lower bill will fluctuate during the regulatory period, even if their usage remains unchanged (and this also applies to the next regulatory period).

Whether someone gets a higher or lower bill on a new tariff structure is only partly dependent on what the tariff structure is. It also largely depends on the rates. A customer may be shifted, for example, to the TOU Energy tariff because they get a lower bill on the TOU Energy tariff, but then the rates change – the differential between peak and off-peak rates change, etc. and they get higher bills. It is not appropriate to advise people to change tariff structure based on a single calculation at a point in time, based on what the comparative rates happen to be at that point in time.

There needs to be better understanding of what characteristics of usage are suited to different tariff structures in the short, medium and longer term. Customers (and retailers) need actionable messaging in language they understand that is relevant to them – to explain the changes that are happening, where tariffs are heading, what the implications are for them in the short, medium and longer term, and how they can change their usage behaviour and maybe make investments to get the most benefits from tariff reform.

The balance between different components of tariffs has been discussed at length in previous regulatory process. See for example, QCOSS' submission to Energex in 2015 for the 2017-2020 regulatory period.[50]

Going forward, these issues should be addressed by EQ.

Effects of year-on-year changes to tariffs, including changes due to balancing between tariffs and between different components within tariffs, should be modelled by EQ, discussed and consulted on in the proposed Transition working group, and published for transparency with each year's annual pricing proposals.[51]

5.5. NON-TARIFF SOLUTIONS

In our previous report, we said that EQ has not given sufficient consideration to non-tariff solutions for the challenges identified, and we retain this view.[52]

The AER has stated that it has been encouraging all distributors to put forward more holistic proposals that integrate their network pricing, network planning, and demand management strategies.

A large proportion of EQ's residential customers in both the Energex and Ergon Energy areas make use of existing load control retail tariffs 31 and 33. EQ thus has a substantial amount of load under load control. EQ's PeakSmart scheme has also engaged customers in load control, for mutual benefit of both network and customer.

However, the Revised TSS lack analysis of how non-tariff solutions might integrate with network pricing and network planning. Traditional demand response (DR) needs to be fully integrated, and new DR proposals should be made, in line with the new ways in which the networks are being used, and where DR will be most effective, which is not necessarily through reducing peak daytime load as was previously the case.

50 The submission is available at https://www.qcoss.org.au/wp-content/uploads/2015/10/20150912_Final_QCOSS_Submission_to_Energex_on_Tariff_Reform.pdf. See page 13 onwards.

51 The electricity distribution businesses are required to submit an annual pricing proposal to the AER outlining proposed prices to take effect from the commencement of the next regulatory year. The structure of the tariffs set out in each distributor's annual pricing proposal must match those approved by the AER in the distributor's tariff structure statement. This obligation commenced in 2017 as network tariff reform began to take effect. See https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/pricing-proposals-tariffs

52 See *Energy Queensland: Tariff Structure Statements (TSS) 2020-25*, Etrog Consulting, 31 May 2019, section 2.3 – Lack of comparison of proposed tariff structures against other options

DER needs much bigger consideration, in the context of how it fits with the vision for the businesses. This is difficult in the absence of a vision. Existing sunk customer investments in DER need careful consideration, as well as the incentives for new investment. How can DER owners be given the right incentives so that DER is operated to give community benefit rather than only give owner benefit that may cause costs on others?

In general, we consider that EQ should consider the use of more incentives ("carrots") rather than tariff based "sticks".

> The AER should request from EQ details of its load control policies, and analysis of how non-tariff solutions might integrate with network pricing and network planning. Traditional demand response (DR) needs to be fully integrated, and new DR proposals should be made, in line with the new ways in which the networks are being used, and where DR will be most effective.

6. MONITORING AND OTHER ACTIONS THAT WE BELIEVE ARE REQUIRED FROM 1 JULY 2020 ONWARDS

We would have more confidence in EQ's proposed approach if appropriate arrangements were put in place to ensure that there is greater understanding and transparency of impacts, and adequate mechanisms to address any adverse impacts during the forthcoming 2020-25 regulatory period.

Therefore, in analysing the Revised TSS, we have come to the view that there is a lot more that needs to be done after the AER's final decisions on the Revised TSS and other aspects of the EQ Regulatory Proposals for 2020-25.

In our recent report to QCOSS for submission to the QCA in regard to the QCA's Interim Consultation paper on regulated retail electricity prices in regional Queensland in 2020-21, we wrote: "The QCA should take on a longer-term monitoring role of the implementation of new retail tariffs, and the resulting customer impacts and customer benefits, alongside the QCA's existing monitoring of the operation of the retail electricity market in Queensland."[53]

We believe that there is also a specific role for the AER to monitor customer outcomes. We recommend that the AER should undertake:

- Ongoing monitoring by the AER retail branch of what options customers are being offered by retailers, what support there is for customers being on the best tariff, and to what extent retail tariff structures match network tariff structures.
- Ongoing monitoring by AER network branch through Regulatory Information Notices (RIN) submissions of how many customers are on each network, whether customers are on the best tariff etc.

> We recommend that the AER should provide guidance to EQ, in conjunction with the Queensland Government, regulators, retailers and consumer / community stakeholders, to establish a **Transition working group** (with an independent chair) to provide oversight and advice to EQ during the next five years and in preparation for the 2025-2030 regulatory period.
>
> We recommend that the AER should consider the outcomes and arrangements set out below in its guidance to EQ.

Stakeholders would have more confidence in EQ's proposed approach if appropriate arrangements were put in place to ensure that there is greater understanding and transparency of impacts, and adequate mechanisms to address any adverse impacts. In addition, EQ must build trust to develop a deeper knowledge and understanding of the challenges and solutions in the upcoming regulatory period, and further into the future. This includes considering the role of tariff reform in addressing these challenges, and other options that might be available.

53 This report, dated 13 January 2020, is available on the QCA website, under cover of the QCOSS submission, at https://www.qca.org.au/project/customers/electricity-prices/regulated-electricity-prices-for-regional-qld-2020-21

A Transition working group would enable EQ to consider these matters in partnership with key stakeholders. To achieve these outcomes, EQ in conjunction with this working group must:

- Put in place **monitoring arrangements**
  - To understand better the likely impacts of different tariffs each year (taking account of seasonal impacts) including for customer on flat tariffs, including establishing a **framework** to methodically assess and address these impacts against a set of relevant criteria;[54]
  - To monitor year-on-year rebalancing between different tariffs and the components within tariffs, including providing customer impact analysis with each year's rebalancing; and
  - To inform capacity and other tariff trials as well as being utilised by the AER to support Annual Pricing Proposal reviews and other relevant matters.
- **Undertake better customer impact analysis including trials**: EQ's lack of detailed customer impact analysis, modelling or trials means that consumers' concerns, especially about bill shock, are still not allayed. Trials must be conducted with a diverse spread of consumers, including consumers experiencing vulnerability such as those on card operated meters, households participating in retailer hardship programs and other consumer cohorts, taking into account income, disability or health needs, load profile, solar and non-solar, regional locations, building type, household condition and housing tenure. This will help identify how to support customers who are worse off due to tariff reform. This must also include the wider impacts on health and comfort levels too and not just affordability. The AER should direct EQ to undertake trials and modelling to identify customer impacts, especially for customers experiencing vulnerability, to establish who will be better off or worse off under the various new tariff options.
- **Develop clearer customer-centric rationale for tariff reform for this and future regulatory periods:** To ensure a just transition, EQ must take great responsibility in ensuring distribution network-level innovations that favour those with capital or those who are active participants in the system also create benefits for all customers with an emphasis on inclusion of customers experiencing vulnerability in the transition.

  As consumers continue to adopt solar PV, batteries and electric vehicles, and participate through home energy management systems and other demand-side response opportunities, EQ must respond proactively to what consumers want by **enabling** customer participation in the energy system as part of an exciting transition to an improved energy future. Customers must be seen as part of the solution and not the problem. The Transition working group can provide support in providing representative input into EQ's vision for this and the next regulatory period, potentially

54 Examples of these criteria might include reassignment to a more appropriate network tariff, customer communication and education, and specific assistance to ensure vulnerable households are not faced with higher energy bills.

including lived experience case studies, to develop stronger justifications of what the network tariff structures should be.

- **Contextualise tariff reform within the overall transformation of the electricity grid:** The rationale for tariff reform must sit more clearly within the context of the overall transformation of the electricity grid and the wider energy environment. For EQ this should include the re-imagining of the distribution network as a bi-directional network that harnesses and optimises the suite of **tariff and non-tariff solutions,** and allows traditional and new participants to successfully participate in the network to shape a future network that improves equity, reduces vulnerabilities, increases energy affordability, and increases resiliency to climate risks.

  It would have been preferable that this would have been done in the revised TSS. However, it is vital that EQ undertakes this because the 2020-25 revised TSS incorporates "transitional" tariff structures, and transitional tariff structures require customers to know what they are transitioning to. This must be a key priority for EQ and the Transition working group, so that this is done well in advance of the next regulatory TSS processes start.

- **Progress with digital meter rollout**: is the pace of digital meter rollout appropriate? Should rollout be accelerated? What benefits are networks, retailers and customers gaining from digital meters? How should the benefits of digital meters to network businesses be taken into account in network revenue requirements in future regulatory periods?

- **Progress with its Tariff Education Dynamic Incentives and Information (TEDI) strategy:** In its April 2018 Issues Paper, EQ stated that its "*tariff strategy should be developed within the ecosystem of TEDI*". This strategy was proposed to roll out prior to 1 July 2020, as a way of developing the tools needed to support customers and introducing network tariff trials, which was an approach that was supported by consumer groups including QCOSS in consultation. However, no further work was done by EQ to progress this, and EQ appears to have framed the TEDI strategy as a way to help transition customers to the new tariffs after they have been agreed with the AER. It would now be more appropriate that the development of TEDI be also included in the remit of the Transition working group given its strong links to the monitoring and customer analysis/trials work.

- **Demonstrate engagement with retailers** to ensure public facing retail tariffs maintain beneficial consumer outcomes of network tariffs, especially for consumers experiencing vulnerability.

An ongoing role for consumer involvement was previously recommended by QCOSS in its May submission to the AER:[55]

55 QLD electricity distribution determinations – Energex and Ergon 2020 to 2025, QCOSS Submission: AER Issues Paper, May 2019, page 22

> QCOSS considers that resources should be provided to enable consumers to have an ongoing role in engaging with Energy Queensland on revenue and tariff structure issues throughout the regulatory control period. Consumer advocates put a considerable amount of time and energy into participating in revenue and tariff structure determination processes and should be supported to do so. These processes are very technical and require a significant amount of expertise, so the financial support provided must be commensurate with the time and resources required to provide informed advice and input. It is not adequate to just provide consumer advocates with sitting fees.

Examples of what EQ should track and monitor and publish in its Distribution Annual Planning Reports include the following:

- How much revenue is recovered in the LRMC over the 5 year regulatory period?
- How much revenue is recovered in residual charges over the 5 year regulatory period?
- How much of the Maximum Allowed Revenue (MAR) gets recovered between the different tariffs for the SAC class?[56]
- What is the uptake of the various offered tariffs?
- What is the uptake of digital meters? What proportions of customers are getting digital meters, what are the characteristics of those customers, and how are the network tariffs on which those customers are being served changing (after initial grace periods)?
- How are tariffs changing over the regulatory period, given changes in demand as well as uptake of digital meters, and how does this compare to the business' forecast tariffs?

Monitoring should try and understand the impact of different network tariffs. Some customers will be paying more due to tariff reform. As noted in section 4.4 above:

- All customers who remain on flat tariffs will pay more than they otherwise would have done in the absence of tariff reform.
- As illustrated in Table 2 and Table 3 in section 4.4.5 above, some customers will be paying even more through moving to a complex tariff than they would pay if they remain on a flat tariff (which itself would be more than they would have paid in the absence of tariff reform).

56 The Revised TSS have many references to MAR, but do not define MAR. We have confirmed with EQ that each reference to MAR in the Revised TSS is an abbreviation for Maximum Allowed Revenue.

The characteristics of these customers should be evaluated on an ongoing basis, the extent to which they are vulnerable customers should be analysed, and appropriate remedies should be considered and implemented where appropriate. In accord with the pricing principles, this analysis should consider the extent to which retail customers can choose the tariff to which they are assigned (which will depend on what tariff options are being offered through retailers), and the extent to which customers are able to mitigate the impact of changes in tariffs through their usage decisions.

Monitoring is required in regard to what mitigation measures are in place for vulnerable customers,[57] how effective they are, and what they are achieving.

One of the reasons that the AER draft decisions contemplate a grace period that delays reassigning existing customers with a smart meter to a demand tariff by 12 months is to provide these customers (and their retailer) with adequate time to:

- Understand the more complex cost reflective tariff structure; and
- Investigate how to mitigate the bill impact under the demand tariff, including the extent that they may can change their behaviour in response to demand charges, or invest in more energy appliances and energy technology such as solar PV systems and batteries.

As stated further in the AER's draft decisions:

> It will also be important for the Queensland distributors to work with retailers and other relevant parties to educate their customers on cost reflective tariffs, particularly where the customer impact analysis has identified particular customer cohorts that are likely to be adversely impacted by the introduction cost reflective pricing, particularly where these customers are vulnerable.

These actions of understanding and investigation will not happen on their own. They will require time and effort and strong management and oversight in order to be achieved.

57 The AER's draft decisions refer in various places to customers on a retail hardship program. In reality, many customers who are vulnerable or are experiencing hardship are not actually formally enrolled in a retail hardship program, or are enrolled only for a short period of time and not for the full duration of the time during which they are experiencing hardship.