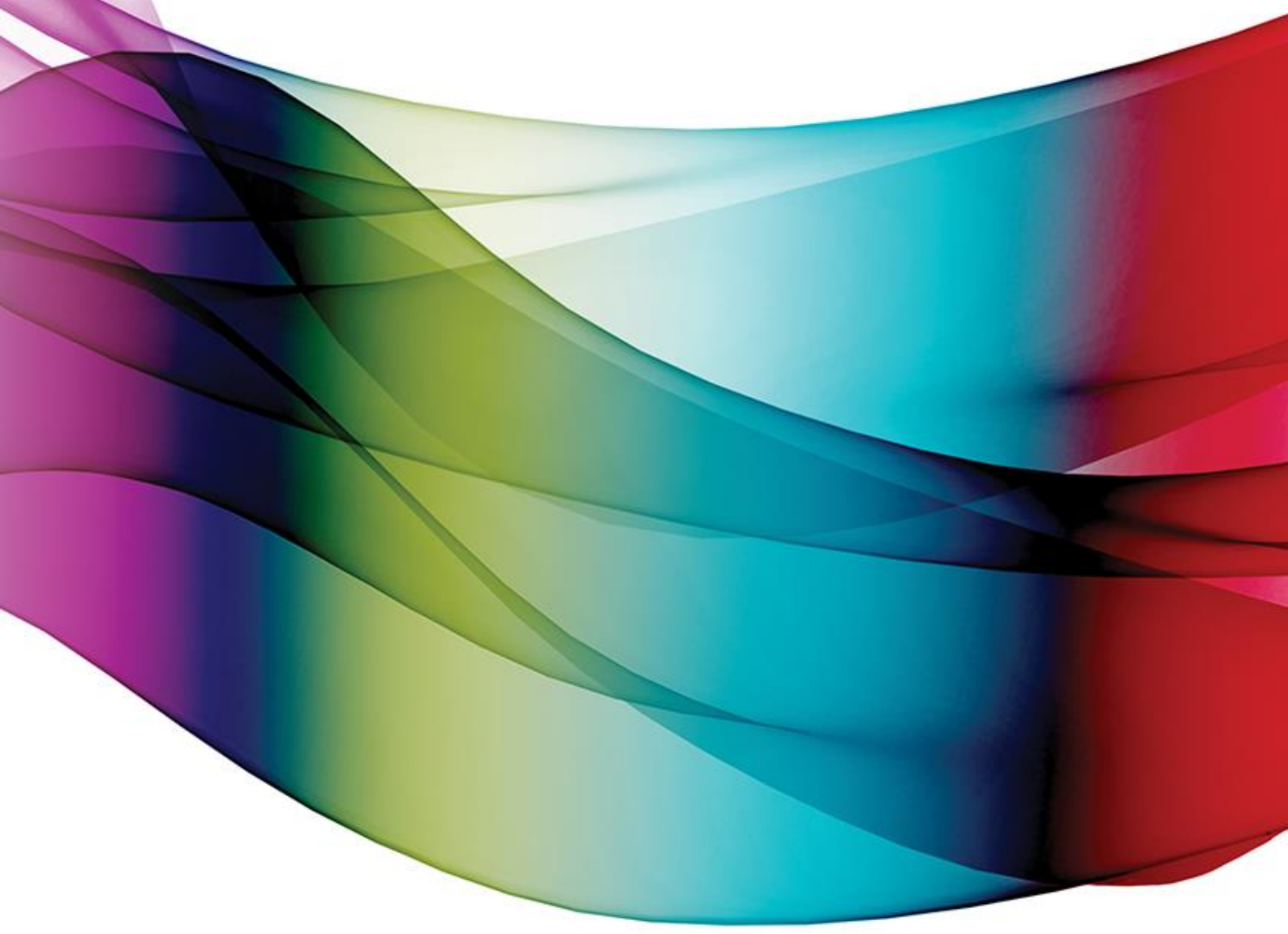
TasNetworks
Delivering your power

Policy and Regulatory Working Group

Additional Information

October 2020



Contents

Glossary and commonly used phrases

AEMO	Australian Energy Market Operator – *The National Energy Market Operator and planner.*
AER	Australian Energy Regulator – *The economic regulator and enforcer of the energy rules.*
Cost reflective tariff	Cost reflective tariff – *A tariff that charges the user based on underlying drivers of future investment.*
DER	Distributed Energy Resources – *refers to smaller generation or storage units such as solar panels, batteries or electric vehicles.*
Default assignment	Default assignment – *refers to customers being automatically assigned to a specific tariff when either connecting to the network or when their characteristics change (please note: default assignment may occur at different times depending on the distribution network service provider's tariff strategy).*
EVs	Electric Vehicles – *A vehicle that derives all or part of their power from electricity supplied by the electric grid.*
Flat rate tariff	Flat rate tariff – *A single fixed price for the use of the network, which does not vary with time of use.*
LV	Low Voltage – *The National Electric Code considers voltages <1000 volts to be low voltage. For the purpose of this document, low voltage commonly refers to electricity usage of small business or residential customers.*
Mandatory assignment	Mandatory assignment – *refers to a type of prescribed tariff assignment where customers must remain on the default network tariff the distributor assigns to them.*
Opt in	Opt in – *a type of tariff assignment that occurs when a customer notifies their retailer of their desire to opt into a particular tariff.*
Opt out	Opt out – *a type of tariff assignment that occurs when a customer notifies their retailer of their desire to opt out of a particular tariff.*
Time of use	Time of use – *A type of cost reflective tariff that applies different prices for electricity at different times of the day, week or year.*

1. Introduction

1.1. Purpose of this document

The purpose of this report is to provide additional information to the members of the Policy and Regulatory Working Group (**PRWG**).

1.2. Purpose of the meeting

The purpose of our meeting is to reflect on our 2019-24 Pricing Strategy and to show how TasNetworks is measuring its performance against that strategy. Not only will it provide us with insights on where we see potential benefits for the future, but also highlight where refinements and adjustments to the strategy will be required.

This meeting has a particular focus on the tariff assignment policy and the network tariffs for customers with Distributed Energy Resources (**DER**). We will be seeking your input on drivers of change and the challenges associated with changing network pricing while ensuring we continue to adhere to our pricing principles.

1.3. The Policy and Regulatory Working Group

Policy and Regulatory Working Group will support the development and submission of the 2024-29 regulatory and revenue proposal by providing advice on key regulatory decisions and pricing strategy development.

Forums will continue on a quarterly basis, and we will monitor and review the frequency and length of the workshops during the later stages of engagement.

The October 2020 forum is trialling a new meeting format. A number of PRWG members also participate in TasNetworks' Customer Council. To ensure we are using member's time efficiently, we have partly combined these forums so that they take place on the same day. Topics relevant to both groups will be presented together, before breaking into separate groups.

Below is the agenda for the PRWG stream.

Time	Topic	Facilitator	Time
11.10am	Customer Engagement and Participation	Chantal Hopwood	5 min
11.15am	Distribution pricing principles confirmation • What did we hear? • What have we changed?	Chantal Hopwood	5 min
11.20am	Pulse check of the - 2019-24 Pricing Strategy Tariff Assignment • What was agreed? • How are we going?	Julie Morrison	10 min
11.30am	Engagement Activity 1	Shannon Culic	20 min
11.50am	2024-29 Pricing Strategy – The Future of the Network • Network Utilisation and Distributed Energy Resources (DER)	Julie Morrison	10 min
12.00pm	Engagement Activity 2 • Feedback on the Focus Areas for the 2024-29 Strategy	Shannon Culic	20 min
12.20pm	Next Steps and Questions	Chantal Hopwood	10 min
12.30pm	Close		

2. Pricing principles

Pricing principles guide the development of our network tariffs and products, and help us test and refine our service offerings to ensure they meet the needs and expectations of our customers.

At our June 2020 forum, we asked members of the PRWG to help develop the pricing principles. We then received feedback from other internal and external stakeholders. These pricing principles have now been finalised and will guide the direction of our pricing strategy into the next regulatory period (2024-29). Thank you to all members who provided input.

Affordable

We offer an essential service and recognise that customers want affordability in the delivered cost of electricity. To support this we will ensure sustainable network investment and that particularly vulnerable customers will not be exposed to hardship as a result of our pricing or network tariff reforms.

Fair

We will provide transparent and cost reflective pricing signals so that all customers contribute to their portion of total network costs.

Simple

Our network pricing will be both cost reflective and easy for our customers, retailers and stakeholders to understand.

Consistent

We will avoid creating price shocks for customers and minimise upward pressure on the delivered cost of electricity.

Innovative

We will investigate innovative solutions that meet the changing needs of our customers and changes in technology.

Choice

We will not stand as a barrier for customers who invest in distributed energy resources, such as solar generation and battery storage. Our pricing will provide choice to our customers to best meet their energy needs, while not imposing on the needs of others or the network.

Images courtesy of Icongeek26, Kiranshastry, ultimatearm, itim2101, and srip via www.flaticon.com

3. Pricing strategy re-cap

3.1. Pricing reform across the National Energy Market

In summary
Pricing reform is happening across the country with the pace of reform differing between jurisdictions. TasNetworks has been progressing network tariff reform since its inception in 2014.

All Distribution Network Service Providers (**DNSPs**) across Australia are moving to cost reflective pricing and offer a number of time of use and/or demand based tariffs.

All of these network service providers had different starting points and strategies on the road to network tariff reform.

TasNetworks is not alone amongst Australian distribution network operators in planning network tariff reforms that span multiple regulatory control periods.

The Australian Energy Regulator (**AER**) has been seeking to align the reform of network tariffs in Tasmania with the reforms occurring in other jurisdictions. The AER previously supported a phased approach to network tariff reform in Tasmania, involving an initial customer led transition to cost reflective network tariffs followed by the introduction of tariff assignment principles (such as opt out tariff assignment) which would support a faster pace of reform.

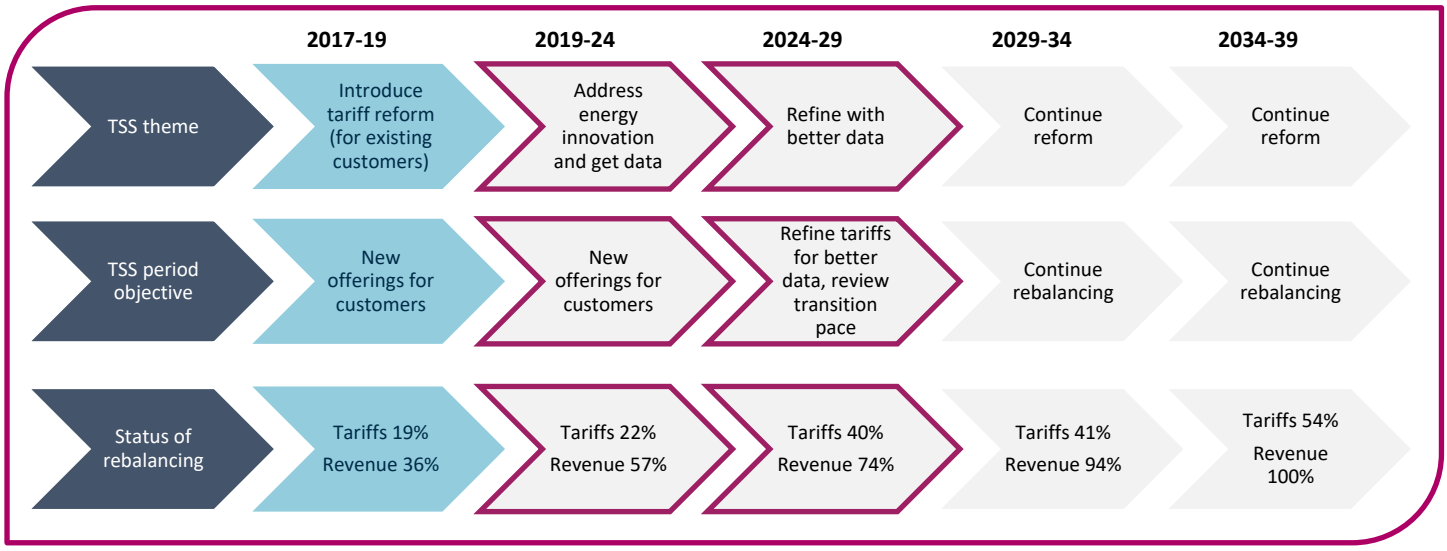
For the current regulatory period, TasNetworks originally proposed continuing a customer led opt in approach to the take-up of cost reflective tariffs for residential and small business customers. The AER, concerned about the pace of reform achieved in other parts of the National Electricity Market (**NEM**) using an opt in approach, preferred an opt out approach.

As a result, since 1 July 2019, TasNetworks has been applying time of use consumption based tariffs as the default option for new residential and low voltage (**LV**) small business customers, and for customers who receive an advanced meter. At this stage of tariff reform, the cost reflective tariffs are assigned on an opt out basis.

There is a wide range of views within the community about the pace of network tariff reform and what constitutes cost reflective network pricing. Retailers interstate have recently advised the AER that they prefer cost reflective network tariffs with consumption based time of use price signals to those with a demand charge.

Across the NEM, demand based tariffs have been introduced as the default for new customers connecting to the network. Whereas in Tasmania, Victoria and some areas of New South Wales, a time of use consumption based tariff is commonly found as the default network tariff for new customers or customers who change their connection characteristics (e.g. install solar PV or upgrade to three-phase power supply).

3.2. Pricing strategy recap



Technological and customer driven changes in the electricity market mean that the flat, consumption based network tariffs are no longer fit for purpose. As a result, we have been changing the way we price our services to better reflect the demands that our customers' use of electricity place on the network and to give customers more control over their energy costs.

To that end, we have been incrementally adjusting and realigning the prices of some network tariffs that have been in use for decades (typically flat, consumption based tariffs).

- This has included the rebalancing of the service and variable charging parameters of many of our existing network tariffs.
- In 2017 we made new demand based time of use network tariffs available for residential and small business customers.
- In the current regulatory period we have introduced two new demand based time of use network tariffs for customers with DER like solar panels and batteries.
- And from 1 July 2019, under certain scenarios LV residential and small business customers have been assigned to time of use, consumption based network tariffs by default, on an opt out basis.

In this context, we hope that time of use network charges will be part of everybody's future at some point. We can expect our pricing strategy and the regulatory requirement to increase the number of residential and LV business customers assigned to time of use tariffs to continue in the 2024-29 regulatory period, and possibly gather further momentum.

3.3. Downward pressure on network tariffs

TasNetworks has been focused on reducing prices for our customers since commencing operations in 2014-15. In real terms, the average network charge for both residential and small business customers has declined for both cost reflective and flat rate tariffs (Figures 1 and 2).

Figure 1 – Average Annual Network Charge for Residential Customers ($ real 2020/21)

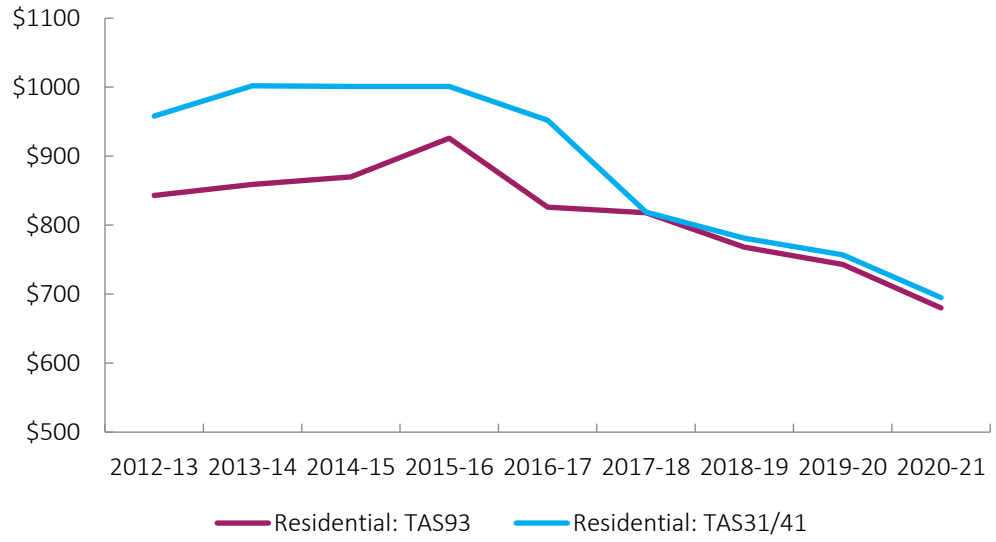
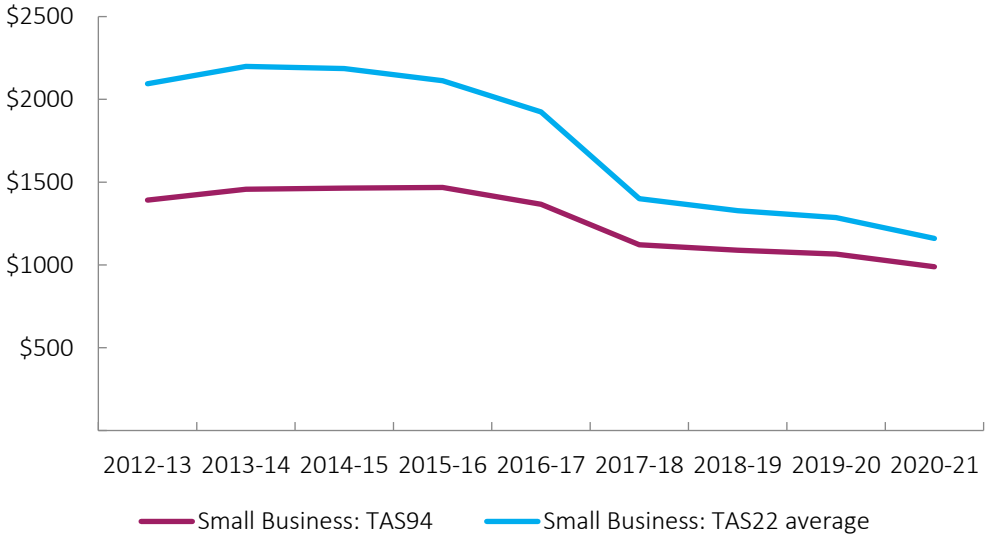


Figure 2 – Average Annual Network Charge for Small Business Customers ($ real 2020/21)



4. Current distribution network connections

In summary
The pace of the advanced meter rollout is exceeding TasNetworks' expectations, however there appears to be a lag in the up-take of cost reflective tariffs.

At the end of September 2020, 24.3 per cent of meters in Tasmania were advanced meters. Figure 3 shows that the advanced meter rollout is progressing well for residential and irrigation customers. The rollout for LV business customers is lagging when compared to the other customer groups, however we are only 14 months into TasNetworks' 2019-24 regulatory period.

By comparison, only 12.6 per cent of all customers are on cost reflective tariffs. A large proportion of the residential customers were formerly assigned to the *Pay As You Go* (TAS101) network tariff (Figure 4).

Figure 3 – Progress of advanced meter rollout measured against TasNetworks' expectations of the 2019-24 Tariff Structure Statement as at 30 September 2020

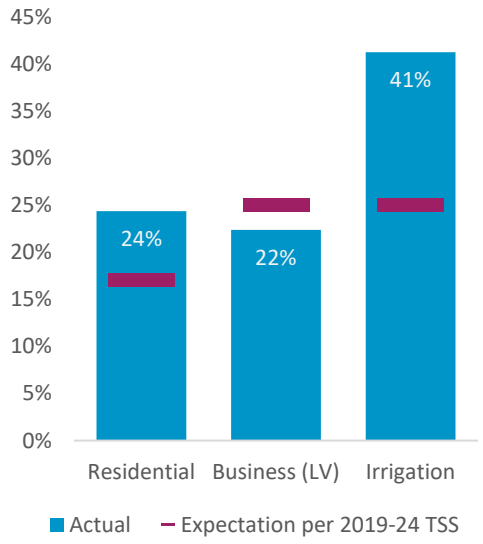
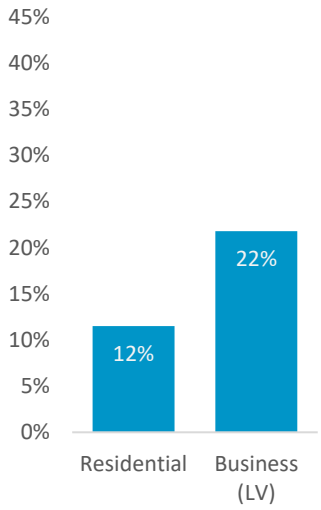


Figure 4 – Proportion of residential and Low Voltage business customers on cost reflective tariffs as at 30 September 2020



5. Advanced meter rollouts and cost reflective tariff update

5.1. Overview on the progress of the advanced meter rollout

In summary
Although the implementation of advanced meters is increasing, it is still too early to utilise this data to highlight trends in customer behaviour.

The delivery (and success) of network tariff reform is heavily reliant and in fact to a degree underpinned by the widespread availability of advanced meters.

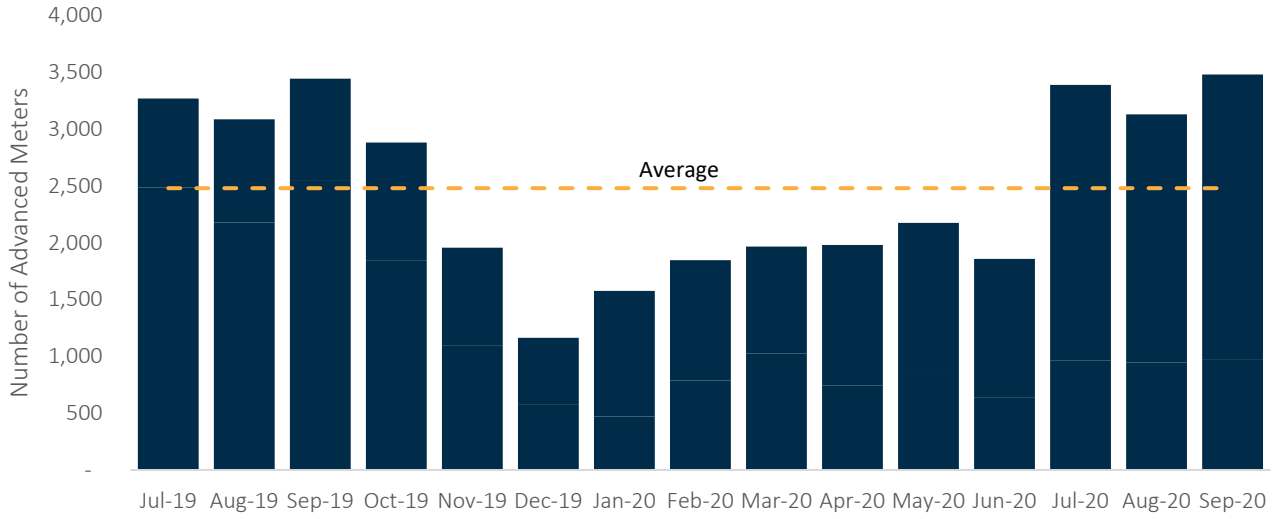
- The installation rate for advanced meters in Tasmania – at least amongst residential customers and irrigators[1] – has already exceeded the levels TasNetworks expected in the 2019-24 Tariff Structure Statement.
- This presents greater scope for the take-up of cost reflective pricing, as well as the potential to gather more interval data on which to base our analysis of customers' use of electricity and responsiveness to pricing signals, helping us refine our network tariff strategy and pricing.
- It's still too early to draw reliable conclusions from the interval metering data that is now available from advanced meters. This is partly because of the lack of sufficient (i.e. at least 12 months) historical interval data for many of the customers that now have advanced meters, and partly because of the growing but still relatively small number of customers who have switched to cost reflective time of use pricing. It's also likely that the behaviour of customers who have taken up cost reflective tariffs will change over time, as they discover more ways to control their use of electricity without reducing their amenity or comfort.

At the end of September 2020 there were 71,270 advanced meters rolled out in the community (of those approximately 20,000 were supplied as replacements for *Pay As You Go* prepayment meters). Of these former *Pay As You Go* customers, our data shows that approximately 80 per cent have moved onto a cost reflective tariff, with the remaining customers reverting to a flat rate tariff – predominately general light and power (TAS31) with another tariff combination.

Since the beginning of the regulatory period, approximately 2,500 advanced meters have on average been rolled out per month (including the meters for the former *Pay As You Go* customers), Figure 5.

[1] There are around 3,500 customers who rely on electricity to pump water into storages and to irrigate their land.

Figure 5 - Number of meters changed to advanced meters (including customers who were on Pay As You Go network tariffs) as at 30 September 2020



5.2. Advanced meter rollout and cost reflective tariff update

**Analysis excludes the customers who were previously on the *Pay As You Go* network tariff.

TasNetworks currently has a number of cost reflective tariffs available.

The objective of cost reflective tariffs is to signal the delivered cost of supplying energy, as well as the value of that service to customers.

We continue to reform our network tariffs in the best interests of our customers and in the pursuit of greater cost reflectivity. Each year we aim to transition the pricing of each network tariff's component charge closer towards cost reflectivity.

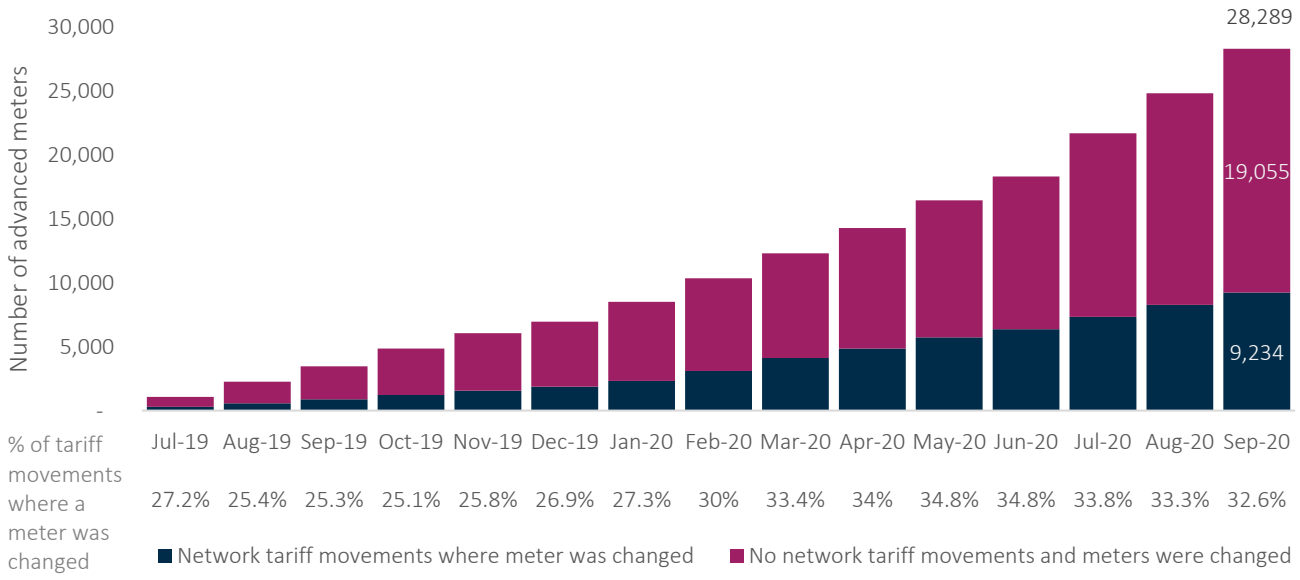
In addition to gaining a better understanding of our customers' consumption and demand patterns through advanced meters, we also need to continually assess and understand the impacts of price adjustments. This includes using the obtained interval metering data to understand network utilisation of the different network tariff classes, which will enable us to refine our network tariffs as required.

Since the beginning of this regulatory period (July 2019), and excluding meter changes that occurred for customers who were previously on *Pay As You Go* network tariffs, 28,289 meters were changed. 33 per cent of those customers who received an advanced meter moved to a cost reflective network tariff (Figure 6).

The majority of customers who have received an advanced meter since 1 July 2019 are residential customers either just on the general light and power tariff (TAS31), or the general light and power with heating and hot water (TAS31/41).

Those customers whose meters had changed in July 2019 have just completed the first 14 months of the tariff assignment period for the 2019-24 regulatory period (refer to section 5.4 for further information on the network tariff assignment policy).

Figure 6 – Cumulative total of meters changed and associated network tariff movement as at 30 September 2020



5.3. Advanced meter rollout and customers who have moved network tariffs

**Analysis excludes the former *Pay As You Go network tariff* customers.

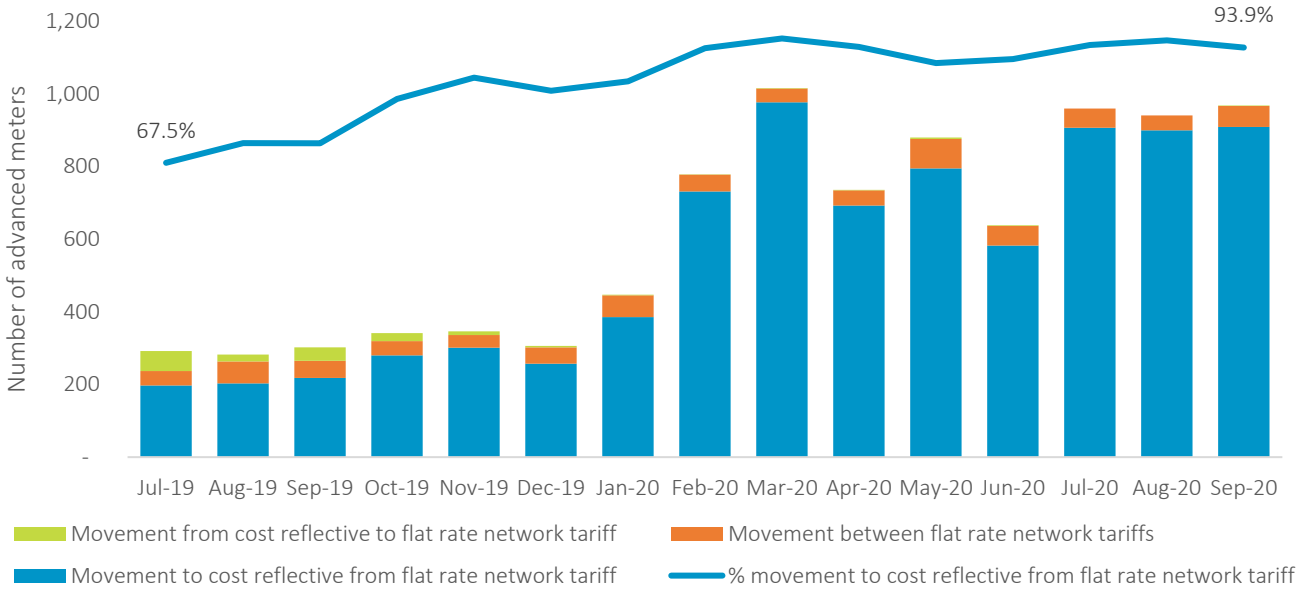
Out of those 9,234 customers – referred to in Figure 6 – who changed network tariffs, 90 per cent moved from a flat rate tariff to a cost reflective tariff.

The proportion of customers that have changed their network tariff has increased over the 14 months.

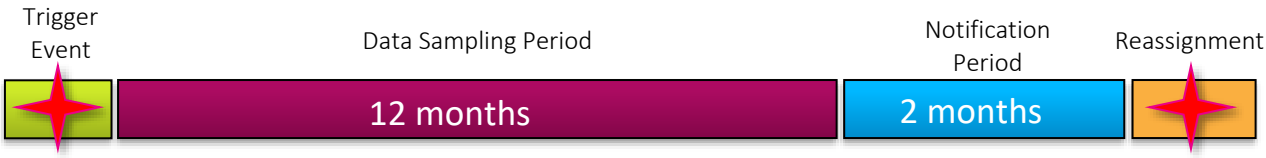
- 68 per cent of the customers who received an advanced meter in July 2019 moved from a flat rate network tariff to a cost reflective network tariff. This has increased to 94 per cent in September 2020 (Figure 7).

The customers who move between flat rate tariffs either add or remove the dedicated home heating and hot water network tariff (TAS41).

Figure 7 – The network tariff types that customers moved between after new meters were rolled-out as at 30 September 2020



5.4. Network tariff assignment policy



There are several trigger events that will initiate the assignment policy process for customers – new connections for LV small businesses and residential customers, replacement meters, and meter upgrades.

TasNetworks' current assignment policy is:

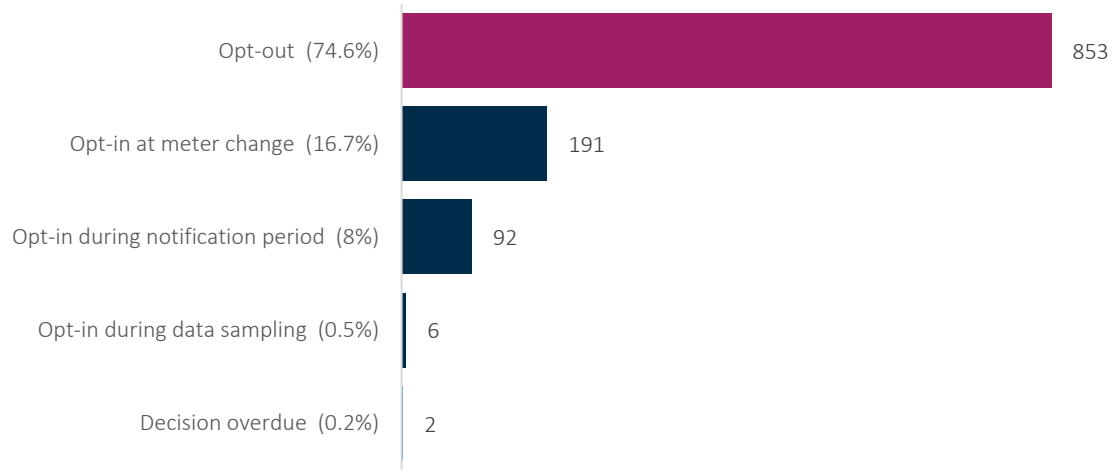
- From 1 July 2019 consumption based time of use network tariffs will become the default network tariffs for all new small business and residential connections.
- The AER's final decision includes a 12 month delay to be applied to each customer for the 2019-24 regulatory period. This is known as the 'data sampling period'.
- Following the 12 month data sampling period, retailers are given two months to inform TasNetworks of a customer's decision to opt out of a time of use consumption based tariff. This is known as the 'notification period'.
- At the conclusion of the notification period, TasNetworks will begin billing the customer's retailer on a time of use basis, unless the customer elects, through their retailer, to opt out of the default time of use network tariff.

5.5. Progress against the network tariff assignment policy

The information below includes commentary about the July 2019 meter change customers and the decisions that have been made with regard to moving towards cost reflective tariffs.

Figure 8 shows that the 75 per cent of customers opted-out of time of use tariffs either during or after their meters were either changed or installed in July 2019. Of the 25 per cent of customers who opted-in, the majority (17 per cent) opted-in at the time of meter exchange. This may be an indication of customer initiated meter changes for the purpose of adopting time of use tariffs.

Figure 8 - Network Tariff Assignment Policy Summary – July 2019



What are your thoughts?
We want to hear from you. You can provide your feedback on the questions below to regulation@tasnetworks.com.au

Question 1. What are the barriers to TasNetworks achieving the current pricing strategy?

Question 2. What is needed to facilitate effective electricity network tariff reform? What are we currently missing?

6. Future networks and distributed energy resources

In summary
TasNetworks must prepare for the emergence of new technologies and their impact on the network.

Networks are built to supply peaks in the demand for electricity. Most of our current network expenditure is not driven by the volume of electricity conveyed over time (consumption) but by the need to cater for peak demand during relatively short periods of time.

If a network does not have the capacity to cater for the maximum demand when it arrives, then it will become necessary to shed load in order to avoid power quality issues.

Our cost reflective tariffs are designed to provide customers with price signals that reflect the value of utilising the network during particular periods of time and therefore encourage efficient electricity use. In response to the cost reflective price signals, customers may choose to invest in DER. This investment may enable customers to reduce their peak loads, or shift their loads to off peak periods. This allows customers to control their electricity bills and take advantage of their investments in DER technologies – e.g. solar panels and batteries.

However, DER investment can create adverse outcomes for the network. For example, peaks could shift into different time periods and be higher than previously experience or minimum demand may reduce to levels that may create instability in the network.

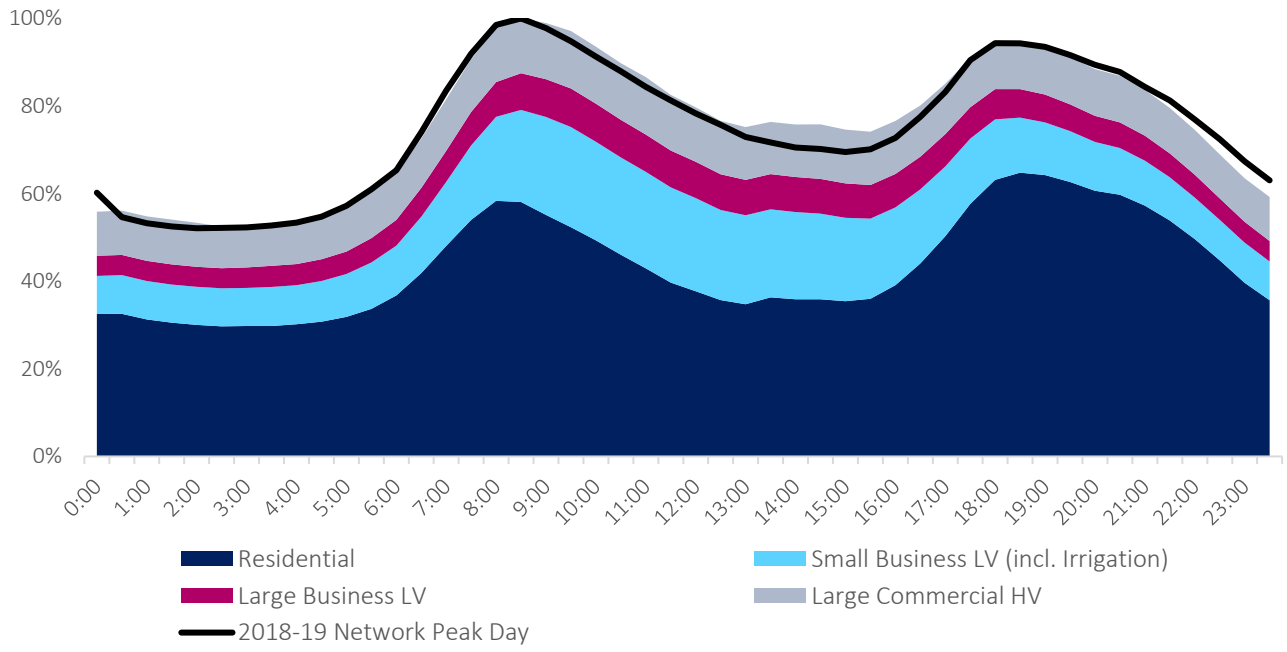
6.1. Network usage

Cost reflective and time of use tariffs are primarily driven by understanding network utilisation patterns. Figure 9 shows the network demand for the 2019-20 network peak day over a 24-hour period. It has the classic 'double-hump' which has long been a feature of Tasmania's load profile. In a daily sense, the collective demand for electricity in Tasmania peaks in the morning, although the demand from residential customers peak in the evening.

Unlike most other markets within the NEM, Tasmania is a winter peaking market. The maximum demand for electricity each year typically occurs on a cold winter morning due to heating loads. In other parts of Australia maximum demand tends to occur on hot days – often after a succession of hot days – driven by air-conditioning load.

For our cost reflective tariffs, we determine the different time of use periods based on our network demand profiles, which indicate when in the day, week or year our system typically experiences peak loads or capacity constraints. This ensures that our time of use pricing signals to customers that using the network at certain points in time is associated with certain costs.

Figure 9 – 2019-20 Network Peak Day (compared to 2018-19 Network Peak Day)



Figures 10 and 11 show an interesting insight into how behaviour may be changing within our residential customer base, in terms of their use of electricity.

While there is still limited interval data from advanced meters to compare consumption over a 2 year time-frame. Early indications show that those customers who remained on the residential low voltage general tariff combined with the home heating and hot water tariff (TAS31/41) have a year-on-year consumption increase on network peak days, including during peak periods (Figure 10). In contrast, those residential customers who have moved from TAS31/41 to the residential low voltage time of use network tariff (TAS93) are showing a downward shift in the evening peak consumption (Figure 11).

It isn't yet clear if this is in response to pricing signals, COVID-19 or whether it is early adopters who are more easily able to adjust their consumption.

While this downward pattern in the evenings seems small, only a small amount of movement in our peak demand is required to generate a positive impact on the network. This will provide opportunities for innovative, sustainable and strategic network investment in our future network.

Figure 10 – Comparison of Network Peak Day for 2019 and 2020 for Customers who remained on Flat Rate Tariffs (TAS31/41)

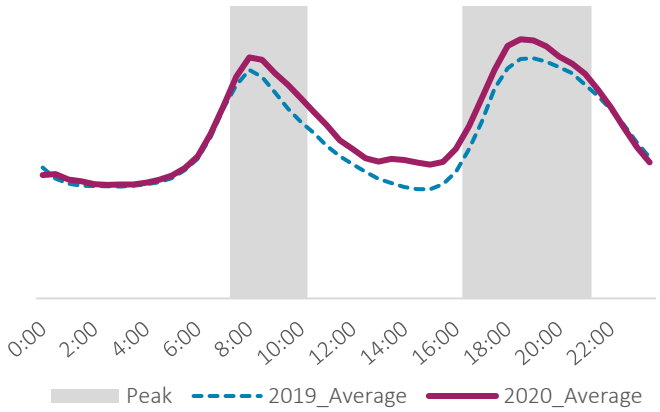
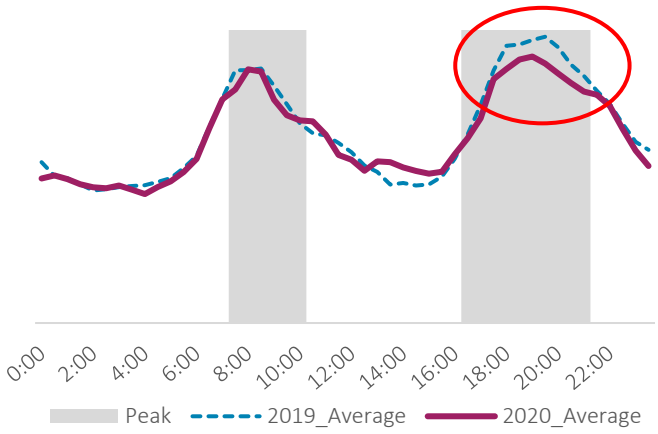


Figure 11 – Comparison of Network Peak Day for 2019 and 2020 for Customers who moved from a Flat Rate Tariff (TAS31/41) to a Cost Reflective Tariff (TAS93)



6.2. Distributed Energy Resources – solar panels, batteries, electric vehicles.

DER, such as solar panels, batteries and electric vehicles, will provide unique opportunities for future generations.

TasNetworks has to understand how current customers are using the network and how future technologies will change their use of the network. Both the present and future will influence TasNetworks' investment and pricing strategies.

Advances in technology have diversified electricity generation into the grid. This has led to some unique challenges, especially in hosting the renewable energy systems located at residential properties and businesses, i.e. Solar PVs.

Networks were originally designed with one-way flows of energy in mind, from a small number of large generators to a large number of small end users. Now networks are being asked to cater for two-way flows of energy, with a large (and growing) number of small customers producing their own electricity into the power system.

Other networks in the NEM are experiencing higher levels of DER than Tasmania. These networks are reaching the limits of their capacity to host DER without augmentation. Under the current rules, the cost of augmenting networks to accommodate more DER is borne by the entire customer base, most of whom don't have DER.

Variability of solar PV is giving rise to localised power quality issues (often high voltages), but having little to no impact on demand on the network at peak times of the day (first thing in the morning and in the evening). Some networks are imposing limits on the amount of energy that customers with DER can export.

DER (particularly batteries) may offer the capacity to provide services to networks (e.g. demand reduction on critical peak days). But markets for those services are not yet in place or barriers to market entry prevent participation by customers with DER, and valuation of those services to determine prices is a potentially complex undertaking.

6.3. Minimum demand

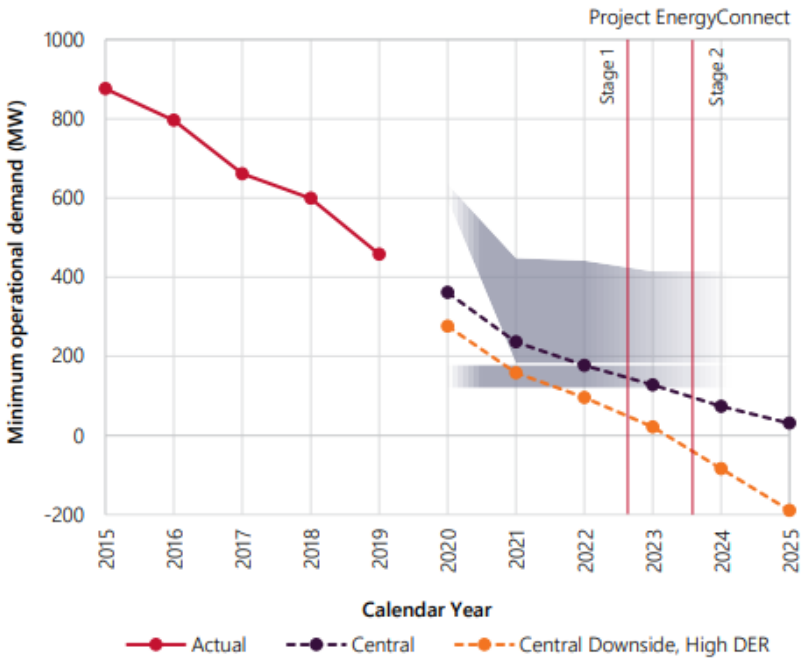
Maximum (or peak) demand creates one set of considerations for networks in terms of network investment and network pricing. Minimum demand is also now an emerging issue elsewhere in the NEM. For example, in some markets (notably South Australia) the amount of electricity being produced by customers with solar panels is now so great that there isn't enough demand for electricity left-over to keep the baseload generators running. Which, in addition to producing electricity, also stabilise the frequency and voltage of the network (something that variable renewable generation doesn't do).

The Australian Energy Market Operator (**AEMO**) has undertaken an extensive consultative process to understand how to forecast for minimum demand (Figure 12).

In South Australia there are issues that are actively being managed by the local network service provider, South Australia Power Networks (**SAPN**), and similarly, there are emerging issues in Queensland and Victoria.

- These issues have arisen primarily due to the rapid growth of rooftop solar PV. A third of residential customers in South Australia now have rooftop solar PV – compared to 13 per cent in Tasmania.
- Solar PV is now the largest single source of generation in South Australia and AEMO has forecast that by 2023 there will be enough rooftop solar in SA to supply the entire energy needs of South Australia during low demand periods.
- The grey boxes in Figure 13 indicate thresholds that are passed to maintain the required level of operational demand.
- SAPN has imposed export limits (5kW) on solar PV*. TasNetworks is one of only a few DNSPs to allow exports of > 5 kW.
- While the risk to Tasmania's minimum demand is low during the current revenue period, the need to look at mechanisms to mitigate falling minimum demand include the management of DER (and potentially network pricing).

Figure 12 - Minimum operational demand thresholds in South Australia[2]



[2] Source: AEMO 2020 | 2020 Electricity Statement of Opportunities

6.4. Rooftop solar PV installation and generation in Tasmania

Australia's take-up of solar PV has come about through a combination of factors:

- policy support from federal and state governments (incl. subsidies);
- a large proportion of houses are stand-alone dwellings with relatively large roof areas suitable for PV systems;
- most of Australia has an excellent climate for PV systems;
- relatively high rates of home ownership allow the benefits of PV systems to be captured by the person(s) who pays the electricity bill; and
- increases in the delivered cost of electricity have encouraged homeowners to invest in solar PV as a means of reducing their electricity bill.

The percentage of solar PV take-up is lower in Tasmania than in other states, especially when compared to South Australia and Queensland. The experience in these jurisdictions demonstrate the need for networks to plan to accommodate for the increase in reverse flows to address arising voltage issues.

Tasmania is yet to experience some of the issues facing some other distribution networks – especially in terms of capacity as illustrated by AEMO's forecasts (Figure 14).

However, TasNetworks will need to be prepared to integrate more solar PV (and other forms of DER) in the future. In doing so, we need to avoid passing on the cost of doing so to customers who don't have access to, can't afford or choose not to install their own DER.

Figure 13 – Number of Solar PV Installations in Tasmania as at 31/08/2020[3]

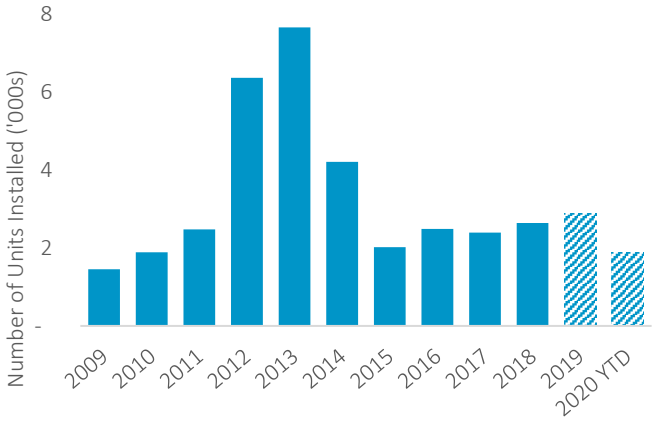
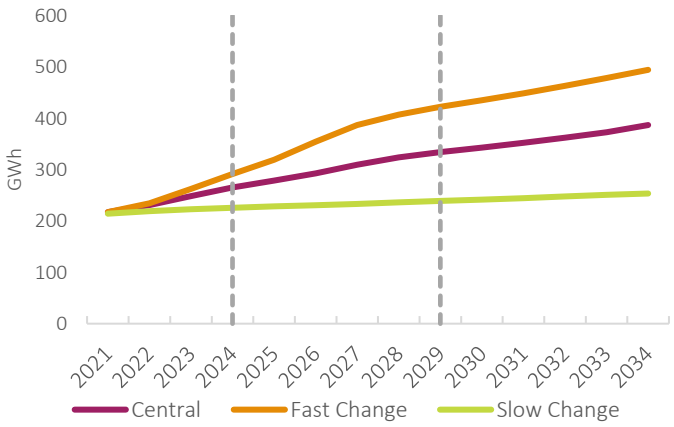


Figure 14 – AEMO's Generation Forecasts for Rooftop Solar PV[4]



[3] Clean Energy Regulator. NOTE: There is a 12 month window to submit data, therefore 2019 and 2020 data will change.

[4] AEMO | 2020 Statement of Opportunities (ESOO)

6.5. Rooftop solar PV and battery storage installation in Tasmania

With the reduction in the feed-in-tariff rates, some consumers are now seeking to generate their own electricity and store it for future use.

This has seen an increase in the PV with battery installations in the state (Figure 15).

The proportion of PV with battery installations to just PV installations has been higher in Tasmania than in the rest of the NEM – this is especially so in 2017 and 2018 (Figure 16).

More recently, the proportion of customers in Tasmania who install solar panels that also install batteries has been more aligned to the rest of the NEM – although this data is still subject to change.

Figure 15 – Number of Solar PV and Battery Installations in Tasmania as at 31/08/2020[5]

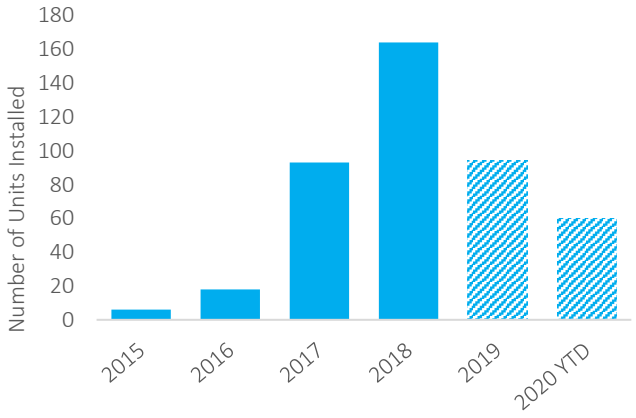
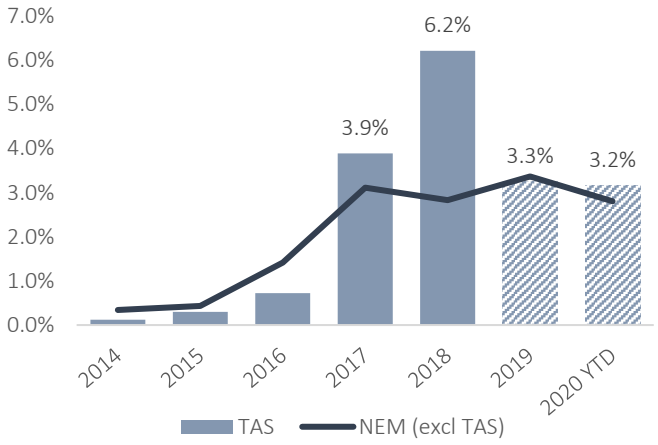


Figure 16 – Solar PV and Battery Installations as a percentage of Solar PV Installations as at 31/08/2020[6]



[5] Clean Energy Regulator. NOTE: There is a 12 month window to submit data, therefore 2019 and 2020 data will change.

[6] Clean Energy Regulator. NOTE: There is a 12 month window to submit data, therefore 2019 and 2020 data will change.

6.6. Electric Vehicles

Electric Vehicles (**EVs**) take-up varies significantly between countries and the take-up of EVs in Australia trails many international markets, particularly those where governments subsidise EV purchases. Globally, EV sales in 2019 represented only 2.5 per cent of new vehicle sales (light vehicle market).

The uptake for EVs is dependent on the initial capital outlay for the vehicle, consumer choice (reflected in the number of EVs on the market) and the public's education/awareness of EVs, as well as government policy and investment.

As technology improves, and the cost to purchase EVs approaches parity with equivalent vehicles fitted with internal combustion engines, the Tasmanian community may start to transition to EVs more quickly than it has to date. This will require more charging stations – both private charging and public – and, potentially, uprated network infrastructure to cope with the increased demand for electricity.

There are essentially two types of EV charging, each with its own challenges: private charging (predominantly at home) and public (fast) charging, typically involving multiple charging stations at the one site.

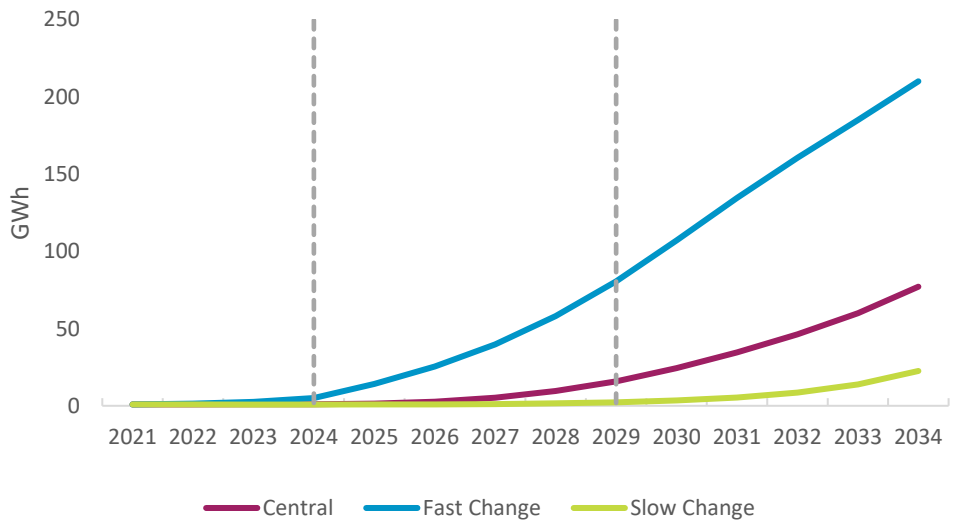
However, widespread electrification of transportation will require additional generation. There is a concern that if EV charging is left unmanaged, it could lead to increased electricity costs for all customers as networks invest to accommodate increases in peak demand. This could lead to inequities as EV take-up by private buyers is likely to be higher in certain suburbs, and that impacts from EV charging on networks are, initially, likely to be localised.

There is a wide range of forecasts for the take-up of EVs in Australia.

These forecasts have been inconsistent and inaccurate in the past – and identifying the number of EVs on Australian roads has been made difficult primarily due to the fragmentation of data around EV uptake.

Given these caveats, AEMO's EV consumption forecasts for Tasmania remain low until the end of the current regulatory period (Figure 17). Depending on the speed of EV take-up in the state, Tasmania could see 16GWh of consumption (central change) to 81GWh of additional consumption by 2029 due to the charging of EVs.

Figure 17 – Tasmanian consumption forecasts for Electric Vehicles



What are your thoughts?
We want to hear from you. You can provide your feedback on the questions below to regulation@tasnetworks.com.au

Question 3. What are the key network challenges associated with the emergence of these new technologies (solar PV, batteries, electric vehicles)?

Question 4. How does TasNetworks work with stakeholders to develop a pricing structure that is relevant for the future?