# Metering expenditure

## Updated negotiating position for the Customer Forum

## 14 May 2019

**NOTE: This is an updated version to correctly reflect an accounting standard change from 2019 which impacted capital expenditure.**

### 1. Overview

AusNet Services' metering expenditure proposal relates to the regulated metering services provided to residential and commercial customers (using <160MWh per annum) via advanced metering infrastructure (AMI) or smart meters. The metering proposal is one of the matters that AusNet Services and the Customer Forum have agreed to negotiate, although it is not within the original scope of the negotiations agreed with the AER staff. In this context, AusNet Services is seeking the Customer Forum's view on:

- the reasonableness of metering charges and whether they represent value for customers, having regard to the benefits offered by AMI; and

- the customer experience initiatives that we are targeting to deliver through smart meters.

### 2. Draft proposal and feedback

In its Draft Proposal, AusNet Services proposed an average metering charge of $78 per customer over the 2021 to 2025 period in nominal dollar terms, which is an average charge of $72 per customer in $2020. In real dollar terms, this was a 24% reduction on the average charge in 2016 to 2020.

#### 2.1 Comments in the Interim Engagement Report

The Customer Forum's Interim Engagement Report noted that:

> *Given the annual average metering charge is decreasing and customer benefits are increasing, the Customer Forum believes AusNet Services proposal represents value for money and will be enhanced through improved communication of metering benefits to customers.*

However, the Customer Forum also noted that:

- Benefits of smart metering are valuable but need to be better explained before customers will value them. The Customer Forum commented that AusNet Services has done a poor job in communicating the benefits of smart meters to customers and needs to improve; and

- They are yet to be satisfied the timing of the 4G upgrade expenditure is appropriate. Specifically, the Customer Forum believes AusNet Services customers deserve a more robust interrogation of Telstra and to forecast a changeover date before agreeing to the timing of the funding.

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## 2.2 AER Guidance

The AER in its Staff Guidance Note 9[1] (AusNet Services draft proposal and the Customer Forum's Interim Engagement Report) seeks further information on the cost of the customer experience initiatives delivered via smart meters and whether these are adding to the 2021-25 expenditure forecasts. AER staff also commented that the Victorian Auditor-General's report "Realising the Benefits of Smart Meters" may be a useful reference in regard to the benefits that Smart Meters can deliver.

## 2.3 Customer Feedback

The Consumer Challenge Panel (CCP) has provided important feedback on behalf of customers in relation to our metering service proposal. In particular, the CCP has offered the following comments on the Customer Forum's Interim Engagement Report and the Draft Proposal:

- The CCP questions how much of the reduction in metering charges is due to cost reductions that provide better value for customers versus being a function of the greater sharing of costs with the Distribution business;

- There are few customer experience improvements that have not already been delivered by the commencement of the 2021-25 regulatory period; and

- The CCP expect to see explicit reference in the capex and opex proposals to savings that have been made through the benefits that have been achieved from installation of smart metering.

## 3. AMI Mesh Network 4G Transition

AusNet Services' AMI mesh-based communications network utilises the Telstra 3G network to provide reliable communications across our distribution area that enable us to meet our Meter Data Provider (MDP) and Metering Provider (MP) obligations. This includes the daily collection of meters reads and remote connection/disconnection services to over 370,000 customers operating on our mesh network. Our existing mesh infrastructure will be upgraded to 4G capability through the replacement of '*Mesh Access Points'* across our distribution network.

Addressing the request from the Customer Forum for better information on the timing of the required transition to 4G, AusNet Services has sought further information from Telstra. In addition, AusNet Services has met with the other Victorian distribution business to share information on our understanding of the transition timing and the associated costs.

We have been unable to obtain any additional information from Telstra regarding its earlier statement on the intended closure of the 3G network, which is set out below.

> "*Telstra intends that the 3G network will remain in service until at least 2020. Closure activities may commence from 2020 although initially this is more likely to be simple re-purposing of part of the 3G spectrum (as 3G capacity becomes freed from migration to 4G) with no material impacts on our 3G customer base. Full or partial geographic closure may occur any time after 2020, but would be unlikely before 2022".* **Telstra public statement July 2018**

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[1]     https://www.aer.gov.au/system/files/AER%20Ausnet%20Services%20trial%20-%20Guidance%20note%209%20-%20draft%20proposal%20and%20interim%20engagement%20report%20-%20March%202019.pdf

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Given our regulatory obligations to maintain reliable communications for data collection and remote services for our customers, we must plan on the basis of Telstra's current statement. Whilst Telstra is unable to provide a firm commitment on the precise timing of the changeover, it is clear that:

- AusNet Services must continue to meet our regulatory obligations to the market once 3G is shutdown;
- The 3G network is expected to remain operational until the end of 2022; and
- We require at least 12 months to transition to 4G, as the implementation lead-times must allow for design and procurement of equipment for the 4G upgrade.

In light of this information, AusNet Services has developed an indicative timeline that shows the process and lead-times involved in transitioning to 4G.

### Figure 1: Indicative 3G to 4G transition timetable



Given the currently available information, the above timeline indicates that the required work must commence no later than Q1 2021 to enable completion during 2022. AusNet Services can also confirm that the above timeframe is aligned with the other Victorian distribution businesses.

The Customer Forum has also asked whether it is possible to transition to 5G rather than to 4G in order to avoid further transition costs. Given the reach of our network and the limited coverage of the 5G network for the foreseeable future, 5G is not a practical solution. Whilst some carriers have commenced a limited rollout of 5G in metropolitan areas, the 4G communication spectrum will provide full coverage across our network area.

## 4. Updated expenditure proposal

In real dollar terms, AusNet Services is proposing an average metering charge of $66 per customer over the 2021-25 period, down from an average charge of $95 per customer in the 2016 to 2020 period.

We consider the expenditure case put forward to be largely business-as-usual (BAU), consistent with other distributors' charges. The only instances of investment beyond BAU are driven by external drivers, such as the need to transition to 4G when the 3G network is due to be switched off.

Figure 2 shows the changes in each building block from the Draft Proposal to the updated proposal. This shows significant operating cost savings.

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**Figure 2: Comparison of 2021-25 building blocks revenue real $2020 million**
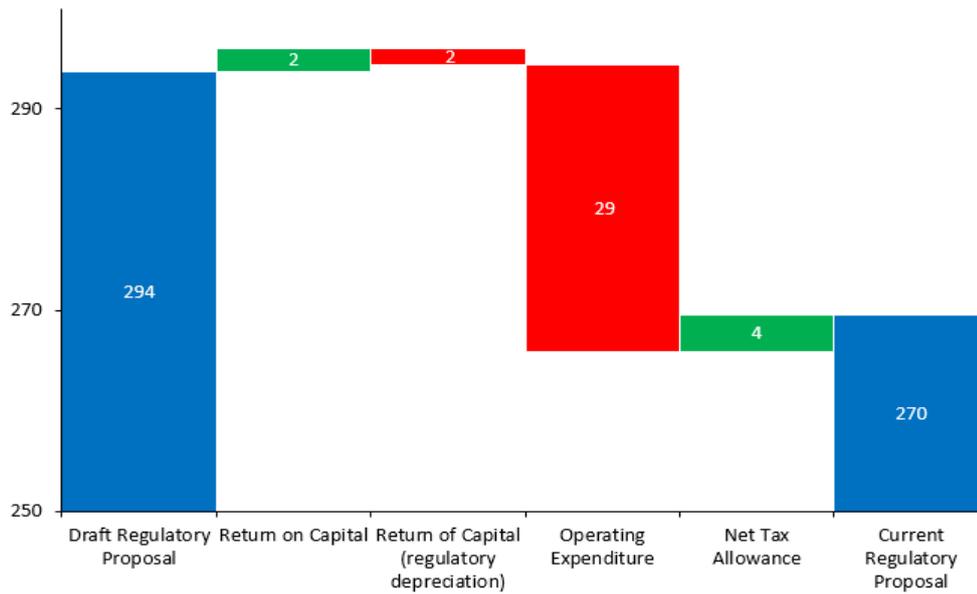


Total forecast revenue, split into the building block elements for the current regulatory period (2016-20) and the 2021-25 regulatory period is shown in Figure 3. Revenue over the 2021-25 period will be around $29 per customer less (or $93 million less) than in 2016-20. All of the key building blocks are lower than in the 2016-20 period.

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**Figure 3: Total revenue and building blocks real $2020**
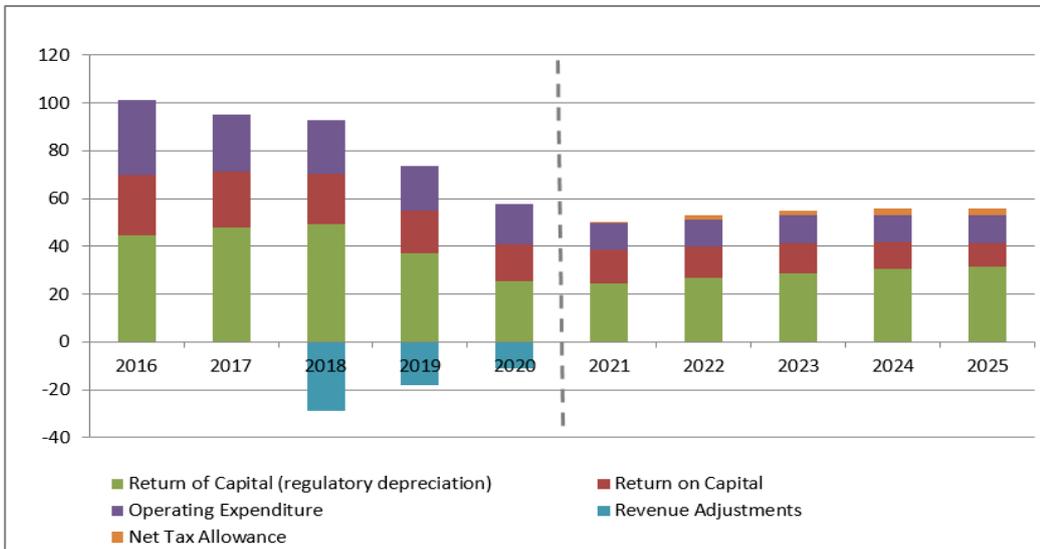


Note: The revenue adjustments in 2018-20 are due the return to customers of over-recovered revenue from the 2014-15 period. As AusNet Services is in a tax loss position until 2020, there is no tax allowance in the 2016-20 regulatory period.

The reduced revenue is a result of the smart meter service reaching a more mature stage and operating at more efficient, business-as-usual cost levels. Capital expenditure (shown in Figure 4) is forecast to be $3 million or 4% less than in the 2016-20 period and operating expenditure (shown in Figure 5) is forecast to be $60 million or 52% less than allowed in the 2016-20 period.

The metering business incurs a higher level of capex in the early years of the 2021-25 period as a result of the requirement to transition the meter communication systems from 3G to 4G (in line with the expected timetable controlled by Telstra). Opex costs steps down due to more efficient costs and more meaningful sharing of systems costs between the metering and distribution business as both business are key users of the metering and communication systems.

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## Figure 4: Capital expenditure real $2020
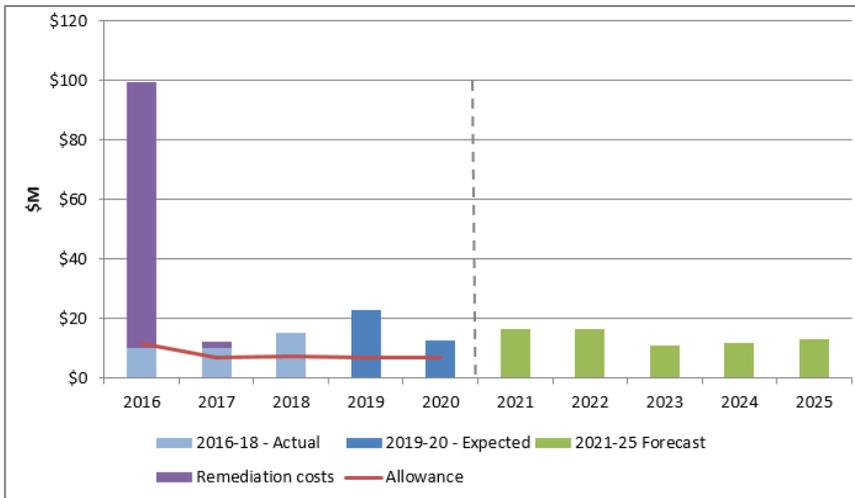


- The remediation costs shown in purple are not being recovered from customers – as reflected in our allowance for the 2016-20 period.
- The increase in 2019 is due to metering costs associated with the Global Settlements rule change. As a result of the rule change meters will need to be installed at previously unmetered premises.
- A change in accounting standard has also resulted in leases being capitalised from 2019.
- The Global Settlements rule change also results in higher capex in 2020.
- First 2 years of the forecast period also has costs associated with the transition from 3G

*Note: The capital expenditure shown above has reduced since the Draft Proposal due to a downwards revision in costs following further review of the AMI Mesh Network 4G transition and revised forecast for meter replacements based on updated fault rate data.*

## Figure 5: Operating expenditure real $2020
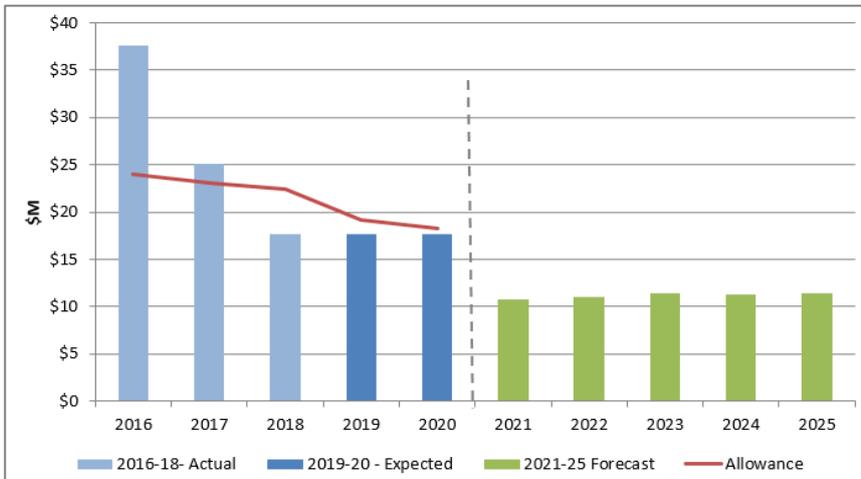


- Actual opex is high in 2016 as AusNet Services experienced delays in its transition from manual to remote reading of meters.
- Efficiencies gained in 2018 are expected to continue.
- Step down in opex costs from 2020 to 2021 is due to:
    1. Operating efficiencies achieved in 2018 that are expected to continue; and
    2. The efficient allocation of system costs between the metering and distribution businesses.
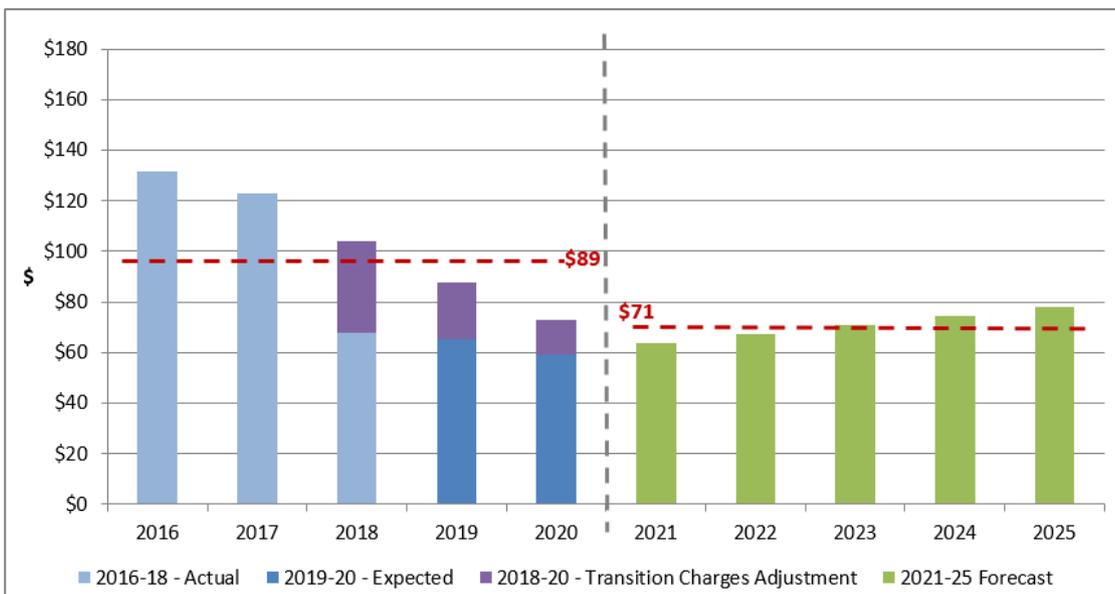
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## 5. Customer bill impact

Average revenue per customer, shown in Figure 6, is expected to fall from $95 per customer (excluding the transition charge adjustment) to $66 per customer or a 31% reduction (in real $2020). This reduction has been delivered through efficiency gains achieved in metering operations with a small amount achieved through a more meaningful sharing of system costs between metering and distribution. The reallocation of smart metering ICT costs to the distribution business resulted in only $7 (real $2020) of the total reduction in revenue per customer.

**Figure 6: Revenue per customer real $2020**
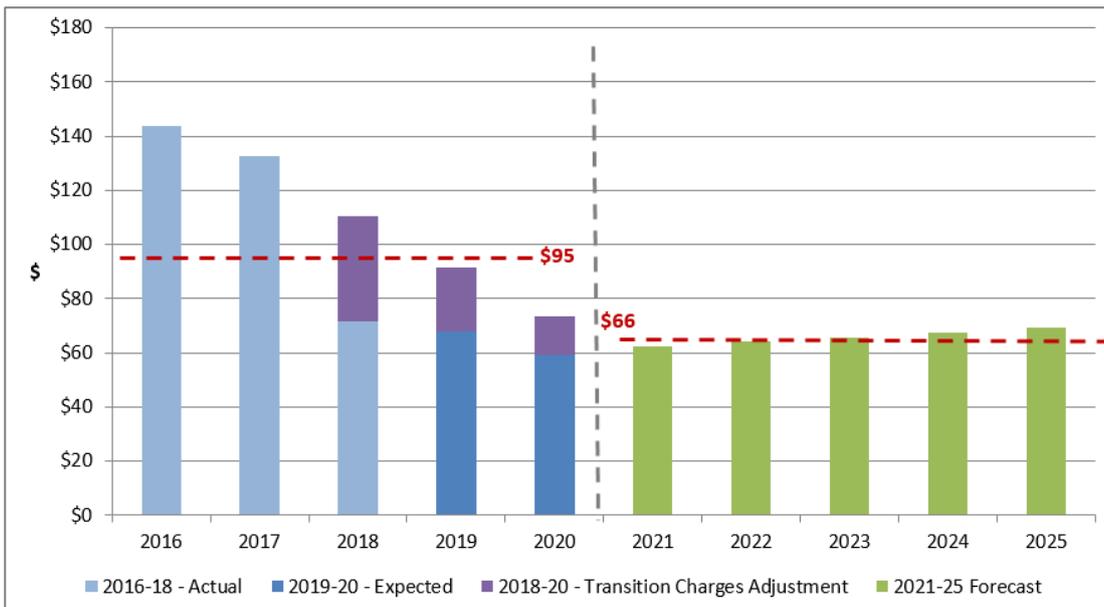


Shown in nominal terms in Figure 7, or dollars of the day, the average revenue per customer is $71 over the 2021-25 period, compared to $89 per customer in the 2016-20 period.

**Figure 7: Revenue per customer nominal $**

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When compared to the other Victorian distribution businesses (see Figure 8), AusNet Services' metering revenue per customer is on par with the Victorian businesses, at $63 in 2021. Jemena has the highest revenue per customer in 2021 at $65 and United Energy the lowest at $43.

**Figure 8: Revenue per customer real $2020 - AusNet Services and other Victorian Distributors**
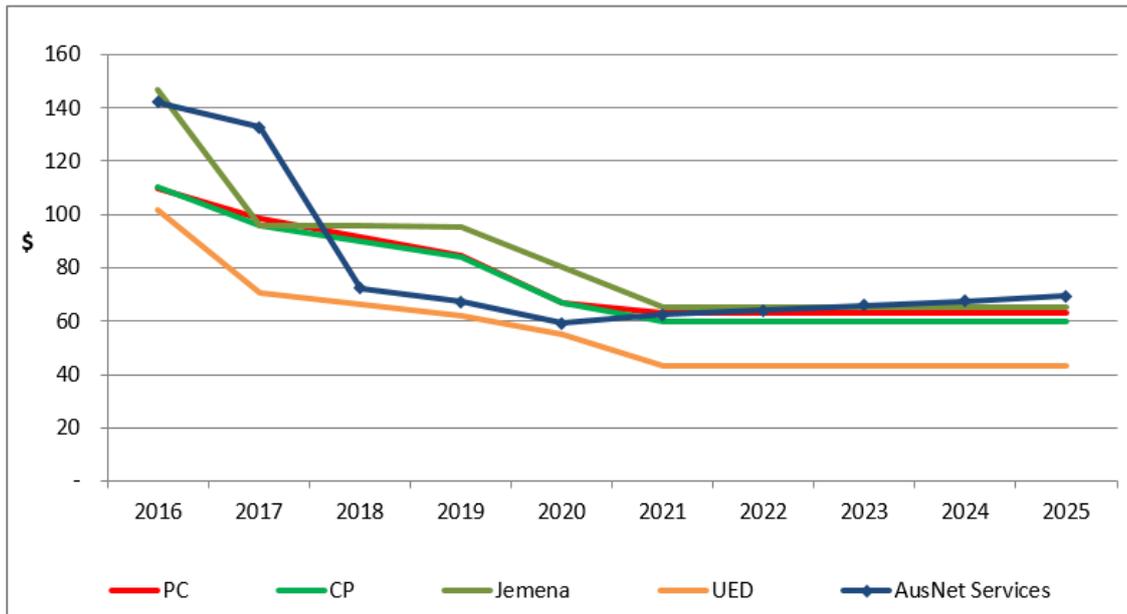


Source: AusNet Services, AER 2016-20 EDPR Final Decision and Victorian businesses' 2021-25 Draft Proposals.

## 6. Smart meter customer initiatives

This note sets out AusNet Services' updated roadmap of customer experience initiatives that utilise smart meter data, as requested by the Customer Forum at the 8 October 2018 meeting. It includes:

- A number of initiatives that have recently been operationalised and discussed with the Forum;
- Several initiatives that are currently in the development stage and planned for implementation over the short- to medium-term (i.e. present – December 2020); and
- Longer-term initiatives, the implementation of which is subject to technical complexity, cost, resourcing and customer experience considerations.

Each of these initiatives has been categorized against a specific customer benefit that our research indicates is important to our customers.

As noted earlier, the AER staff commented that the Victorian Auditor-General's 2015 report "Realising the Benefits of Smart Meters" may be a useful reference in regard to the benefits that Smart Meters can deliver. AusNet Services can confirm that the types of benefits we have identified are consistent with the Auditor-General's report. The initiatives listed below are more detailed and specific, which reflects the benefit of further operational experience and customer feedback.

All of the initiatives included in the Draft Proposal remain in the list below. Three initiatives identified as longer term project in the Draft Proposal have been delivered. These are:

- Prioritising life support customers in an outage
- Enabling our call centre staff to view meter supply status

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- More accurate and timely approvals for solar and battery applications.

**Table 1: Benefits delivered by smart meters – Operational Today**

| Benefit type | Initiative | Description | Timing | Metrics |
|---|---|---|---|---|
| **Keeping your energy prices down** | Alerts for when your solar stops working | We send customers an SMS when their solar system has stopped working so that they get their system reviewed and quickly resolve the issue. This means they are able to continue generating electricity to receive the benefits of their feed in tariff and/or offset their own consumption.<br><br>We send them another message to notify them that solar generation has re-started so they are aware that they are back on. | Operational today | Over 800 alerts issued since 2017 |
| | Reducing energy theft | We are able to monitor electricity use to determine if energy is being stolen. Detecting and shutting down these illegal and unsafe premises allows us to prevent further losses which would otherwise be paid by all customers. | Operational today | In excess of $2million of stolen electricity has been detected and shut down since 2015 |
| | An online webpage to allow you to see your energy use | Our meter data portal enables customers to understand when they are using energy and therefore how to manage their consumption.<br><br>This was integrated into the Victorian Government Energy Compare website so that customers could use their energy data to get the best deal from their energy retailer. | Operational today | 750 daily visits during July 2018. $223 saving per switching customer |
| **Keeping you and your community safe** | Identifying and fixing faults before they become safety issues | We can pro-actively identify faults on the network (low voltage service neutral faults) that can lead to electrocution, so we are able to fix them before any customers are harmed. | Operational today | Approximately 300 electric shocks prevented since 2013 |
| | Prioritising life support customers in an outage | In the event of an unplanned outage, we can specifically detect when life-support customers are off supply so that we can rapidly respond and prioritise restoring supply to their property and provide advice to follow their emergency plan in the event of any delays. | Operational from Q1 2019 | TBD |
| **Ensure you are kept accurately informed in the event of an electricity outage** | Correct mapping of the network to understand who is on and off supply | We are working to ensure that our data is constantly updated and accurate so that we are able to identify which customers will be off supply when we have a planned outage. This ensures accurate notification of outages so customers can plan accordingly. | Operational today | More accurate outage notifications for approximately 20,000 customers |
| | Enabling our call centre staff to answer customer | When customers call the contact centre to report an issue this tool enables the team to look up more | Operational today | TBD |

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| Benefit type | Initiative | Description | Timing | Metrics |
|---|---|---|---|---|
| | queries accurately | information about the customer's property with real-time data that will enable them to answer customer questions and queries in a more timely and accurate manner. | | |
| | Enabling our call centre staff to view meter supply status | When customers call we are able to use the smart network to check real time if a customer's meter is on supply and therefore if the supply issue is caused by an AusNet Services network outage, or caused within the house. This means our call centre staff can provide timely, accurate information to customers about whether we will restore supply or if the customer needs to contact an electrician. This reduces the likelihood of wasted truck visits that are paid for by customers. | Operational from Q4 2018 | TBD |
| **Responding to your solar or battery application quickly** | More accurate and timely approvals for solar and battery applications | Our relaunched online tool pre-approval tool reduces wait times and now provides the maximum amount the customer is able to export as well as the inverter capacity allowed for the system. The tool combines business rules with AMI data to provide an accurate assessment for each customer in real-time. | Operational from Q1 2019 | TBD |

## Table 2: Potential future expansion of benefits and services delivered

| Benefit type | Initiative | Description | Timing | Metrics |
|---|---|---|---|---|
| **Keeping your energy prices down** | Notifying you when your energy use is unusual | A notification will be sent to the customer when their usage is significantly higher than normal, so that they are aware that their usage has changed and will likely impact their bill. This gives customers an opportunity to manage their consumption ahead of any bill-shock. | Longer-term (delivery timeframes tbd) | TBD |
| | Solar Express | We will fast track our processing of requests to setup a customer's meter for solar once paperwork has been submitted by a retailer (current regulatory timeframe is over 10 business days). | Short to Medium-term (target delivery July 2019 – Dec 2020) | TBD |
| **Keeping you and your community safe** | Identifying and fixing faults before they become safety issues | In addition to regular maintenance and inspection programs, we will be able to detect if certain areas in the network are at a higher risk of safety issues such as fires. This allows us to pro-actively investigate and fix before issues occur. | Short to Medium-term (target delivery July 2019 – Dec 2020) | TBD |
| | Keeping critical customers on supply in an outage | In periods where there is high demand on the network, we are able to selectively reduce energy going to non-critical infrastructure and therefore keep critical community infrastructure and customers e.g. life support customers, traffic lights, police stations, nursing homes running. | Longer-term (delivery timeframes tbd) | TBD |

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| Benefit type | Initiative | Description | Timing | Metrics |
|---|---|---|---|---|
| **Ensure you are kept accurately informed in the event of an electricity outage** | Detailed view of customers in outages | This allows us to detect, down to the level of individual households, which customers are off supply and which customers are on supply. This can be used after a planned outage to ensure all customers supply has been restored, and if not which individual customers require assistance. | Longer-term (delivery timeframes tbd) | TBD |
| | Enhance outage notifications and alerts utilising AMI data | We will embed AMI data throughout our unplanned outage processes to improve notifications, monitoring and accuracy of reporting regarding outage timeframes. | Longer-term (delivery timeframes tbd) | TBD |
| **Reducing the interruption to your day to day by reducing the duration of an electricity outage** | Accurate and quick response to wire faults | We are able to detect real-time when and where a wire has hit the ground on our network. This allows us to give specific location information to our trucks on where the fault has occurred, rather than waiting for customer's to call, and improve restoration. | Longer-term (delivery timeframes tbd) | Reduce time to respond by 15 minutes |
| **Responding to your solar or battery application quickly** | More accurate information for customers on how much they can generate into the network | This capability will expand our existing solar approval process to provide customers the ability to obtain a real-time accurate assessment of the amount of solar and battery storage that can be approved at their property.  This will be integrated with our online DER connection approval process and will be rolled out across the entire network for all customers. | Short to Medium-term (target delivery July 2019 – Dec 2020) | TBD |