



# Attachment 11.07

Tariff structure statement overview

31 January 2023

PowerWater

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# Abbreviations

The following table provides a list of abbreviations and acronyms used throughout this document. Defined terms are identified in this document by capitals.

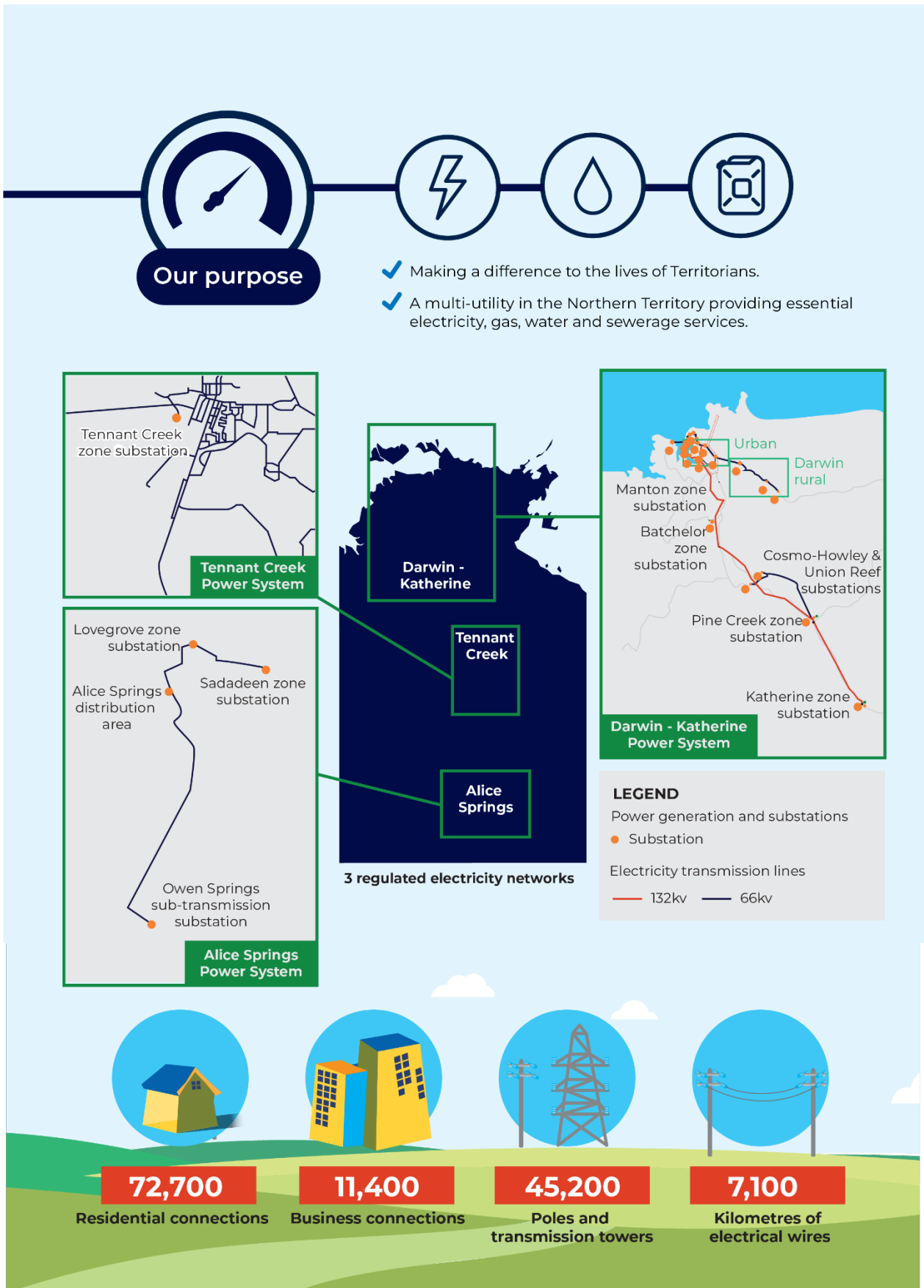
| Term | Definition                  |
|------|-----------------------------|
| AER  | Australian Energy Regulator |
| EPO  | Electricity Pricing Order   |
| HV   | High Voltage                |
| NT   | Northern Territory          |
| PV   | Photovoltaic                |
| SAC  | System Availability Charge  |
| TOU  | Time of Use                 |
| TSS  | Tariff Structure Statement  |

# 1. About Power and Water

Power and Water Corporation is the essential service provider in the Northern Territory (NT) providing electricity, gas, water and sewerage services. Our business connects our communities to reliable and affordable electricity and provides a foundation for economic growth.

We service three separate regulated networks, as can be seen below in Figure 1.1 which provide electricity services to more than 90 communities in the NT over a landmass of 1.3 million square kilometres. Our regulated networks in Darwin-Katherine, Alice Springs, and Tennant Creek transport electricity to 73,000 residential customers and 11,000 businesses. Each of our networks are unique, operating under different designs and environment.

Figure 1.1: Our electricity networks



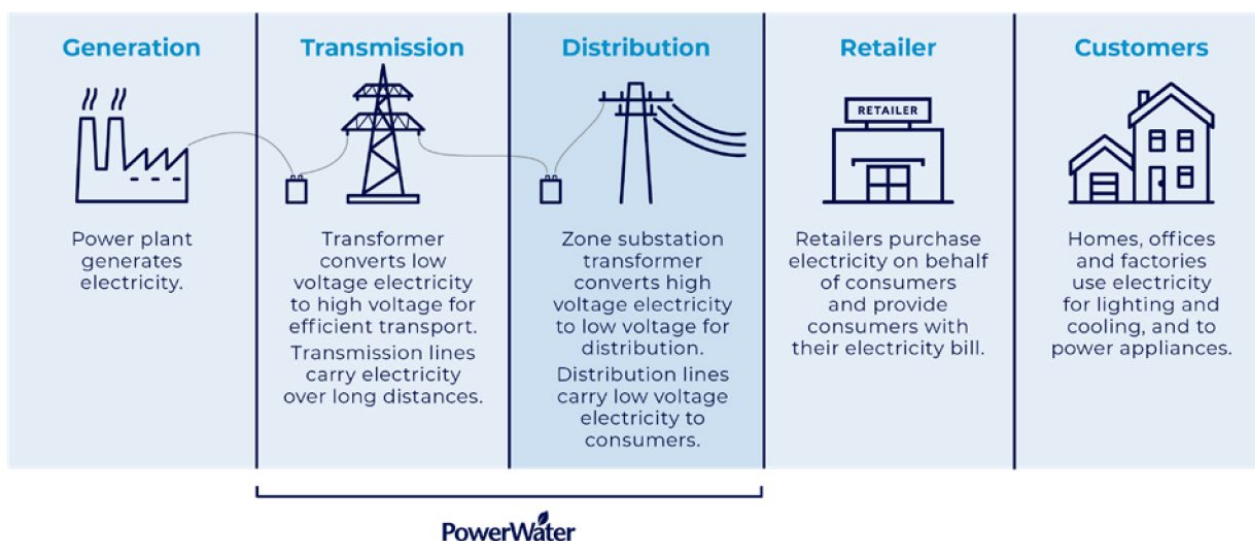
Despite having the smallest population of any of the Australian states and territories, the NT is a large landmass with a widely dispersed population. This results in a diseconomy of scale and relative disadvantage compared to other networks in Australia, exacerbated by resourcing constraints. In addition, We operate in difficult environments subject to extreme heat and weather events that place further pressure on service delivery. Our small networks are facing disruptive and fast paced change driven by global and local factors including climate change, electrification of transport, ageing network assets and a growing economy.



## 2. How we recover our costs

We are responsible for the transmission and distribution networks in the NT as seen in Figure 2.1. We facilitate the physical connection and have obligations to provide safe and secure electricity services, which means we only make up part of your energy bill.

Figure 2.1: Our role in the NT electricity system



The retailer has the primary relationship with our customers, managing the electricity bill and organising connection. Decisions made by us can directly impact on this relationship, particularly in terms of costs. Among those decisions are network tariff assignment policies, procedures and development of network tariffs.

Similar to other states and territories in Australia, a customer's electricity bill is issued by their retailer. The bill reflects the customer's share of the total cost of supplying energy including generation of electricity, the use of our networks, the retailer margin, and the costs of managing the power system and market operating costs.

Each year, we publish an annual pricing proposal, which sets out our network tariffs for the year. Before we set network tariffs, we must determine how to structure our tariffs. How we structure our tariffs, as well as the policies and procedures for assigning customers to tariffs, the charging parameters for each tariff, and a description of the approach we take in setting tariffs in the annual pricing proposals is set out in our Tariff Structure Statement (**TSS**). Our TSS applies to our tariffs for the next regulatory period commencing 1 July 2024.

Our network tariffs can be made up of different tariff components such as fixed charges, energy charges or demand charges. These tariff components, the charging parameters and the applicable network tariffs for the period 1 July 2024-2029 are outlined in our TSS, which accompanies this document and has been submitted to the Australian Energy Regulator (**AER**) for approval.

Our tariffs recover the costs of building and maintaining the poles and wires, and the support staff needed to keep the energy network operating. This includes restoring power when faults and emergencies happen, as a result of severe weather events and other causes beyond our control.

Our network tariffs do not affect the retail tariffs faced by most Territorians. In the Northern Territory, the Government provides a subsidy for smaller customers through the Pricing Order. This means that the tariffs in a customer's bill do not relate to the relative costs of each sector, making it complex to specify the relative contribution of our costs.



**1. Customers who use less than 750 MWh per year** – These comprise approximately 83,800 of our customers who are residential and small to medium businesses. These customer groups are currently subject to retail pricing protection through the Pricing Order and as such our tariffs will not directly affect these customer's retail electricity bills.



**2. Customers who use more than 750 MWh per year** – These are our 200 or so largest energy users. They also see our network tariffs as a separate charge on their retail bill and the impact of our pricing strategies set out in our TSS will directly affect this customer group.

In our conversations with customers, we have noted that in Australia, network costs account for approximately 40 per cent of the electricity bill. An increase in our network revenue in the 2024-29 period would increase the total cost of electricity in the Northern Territory. The extent to which this is passed on to customers depends on how the Pricing Order will be implemented in the 2024-29 period.



### 3. Purpose and Scope

This overview outlines our proposed network tariffs for the 5-year period commencing 1 July 2024.

We need to ensure that our network tariffs reflect our efficient costs of providing distribution services to our customers. This means that we must transition to cost reflective tariffs and in doing so take into consideration the impacts on our customers.

Our proposed TSS aims to provide our customers and retailers with certainty and transparency in relation to how and when network tariffs will change and allows our customers to make more informed decisions about their energy production and use. Our TSS is also important as it informs customer choices by:

- Providing better price signals through tariffs to retailers which reflect what it costs to use electricity at different times.
- Transitioning tariffs to greater cost reflectivity so our customers pay a fair amount that is reflective of how they impact our costs.
- Providing guidance for retailers, customers and suppliers of services such as local generation, batteries and demand management about how customers and their energy service providers can manage energy costs through decisions on how and when they produce and use energy.

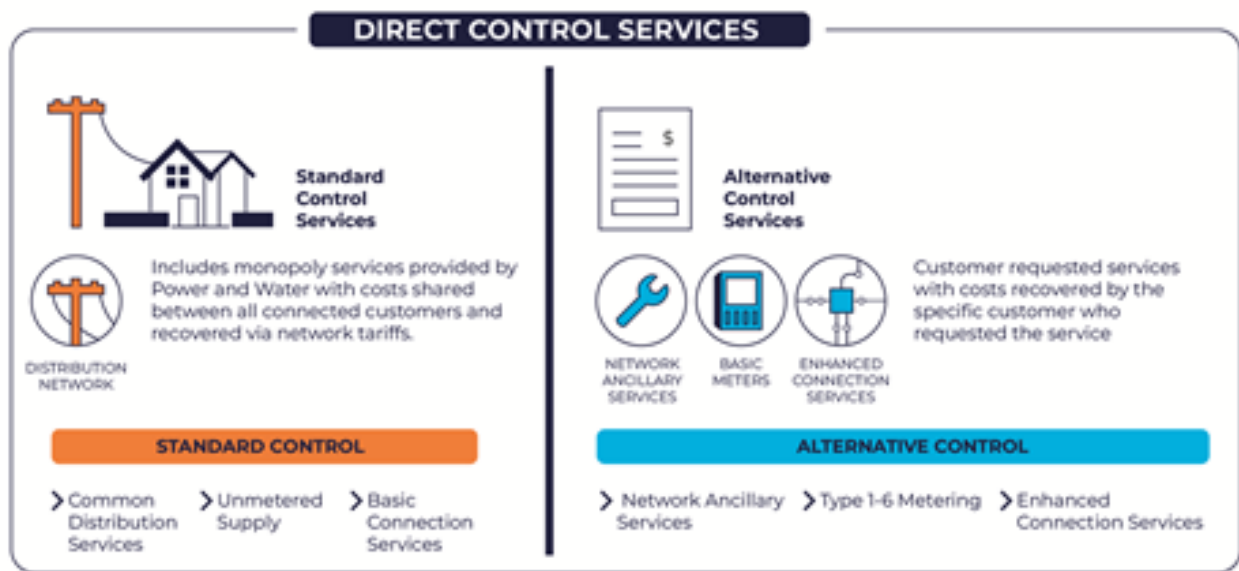
This summary document explains:

- Our proposed network tariffs including our export tariff transition strategy and the interrelationship between our proposed TSS and relevant elements of the regulatory proposal.
- The key risks and benefits for customers of our proposed TSS and export tariff transition strategy.
- How we engaged with relevant stakeholders, in developing our proposed TSS and export tariff transition strategy, the relevant support and concerns identified through that engagement and how we have sought to address these.

## 4. Services we provide

The standard control services (SCS) and alternative control services (ACS) covered in the TSS have been classified by the AER in its Final Framework and Approach (F&A) Decision for Power and Water Corporation<sup>1</sup>. Service classifications determine which distribution services will be regulated by the AER, and where and how they will be regulated. We have adopted the AER's proposed service classification. The Figure 4.1 summarises the AER's decision on the classification of direct control services.

Figure 4.1: AER service classification



<sup>1</sup> <https://www.aer.gov.au/system/files/AER%20-%20Final%20framework%20and%20approach%20for%20Power%20and%20Water%20Corporation%20-%20for%20the%202024-29%20regulatory%20control%20period%20-%20July%202022.pdf>

## 5. Our approach for setting network tariffs

Figure 5.1 describes the key steps we take to setting network tariffs for standard control services.

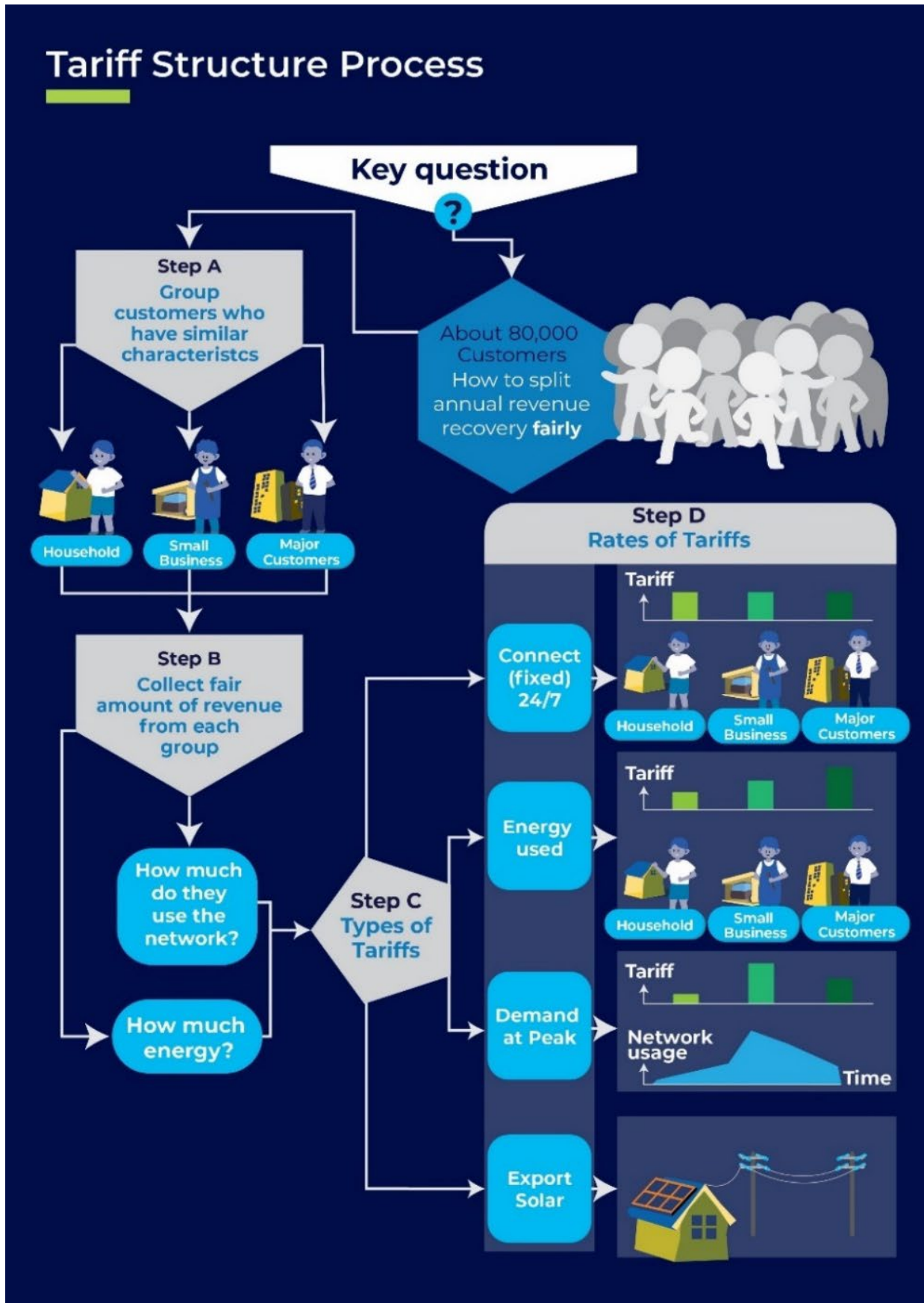
The first step is developing tariff classes based on grouping customers into segments based on whether the customer is residential or non-residential, the annual energy consumption, the type of meter, and whether they are connected to the high or low voltage network. This recognises that it would be administratively difficult to establish a price for each individual customer. The process instead seeks to group customers based on similar characteristics, usage of the network, and meters. For example, we group our customers based on whether they are residential, non-residential or a major energy user. We also develop our groupings based on consumption, and whether the customer connects to our high or low voltage network.

The second step is to collect revenue from these customer groupings in a way that reflects the fair share of their use of the network. This is based on factors such as where customers connect to our network, and how much energy and peak demand is dedicated to the customer group.

The third step is to identify the tariff structures and parameters that should be used to set tariffs. The process is based on developing a mix of efficient price signals that result in customers paying a fair share based on how they use the network. This includes fixed charges, energy consumption, and peak demand charges that may vary based on the time of day or season.

Finally, the fourth step is to develop rates for each of these tariff components that result in Power and Water being able to collect our annual revenue, based on the optimal allocation of revenue among each of the tariff components.

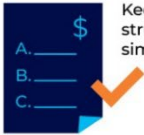




Figure 5.1: Process for setting network tariffs



## 6. Tariff reform journey

In developing our pricing strategy, we have focused on tariff reform that responds to the impacts to our networks of rising peak demand in the afternoon/evening periods in summer and solar in the middle of the day. In transitioning to more cost reflective tariffs and eventually two-way pricing, our proposed strategic direction is to place greater emphasis on time of use demand and energy charges. Our pricing strategy for tariff reform and engagement with stakeholders has been influenced by five key pricing objectives as outlined in Table 6.1.

Table 6.1: Our pricing objectives

| Pricing Objective  | Description  | Alignment with NT NER   |
|--|--|---|
|  <p>Keep our structures simple</p>                                  | <p>Our pricing signals need to be clear and understandable. Customers, retailers and stakeholders should readily understand our network prices in order to make decisions about usage.</p> <p>The structures must be capable of being incorporated by retailers or market small generator aggregators into contract terms.</p> | <p>Clause 6.18.5(i) – customers, retailers and stakeholders must be reasonably capable of understanding the tariff structures and tariffs must be capable of being incorporated into retail offers.</p>                       |
|  <p>Reduce unmanageable bill impacts and maintain affordability</p> | <p>Access to network services should be affordable, including for vulnerable customers, having regard to the retail pricing protections afforded to Territorians under the Pricing Order</p>   | <p>Clause 6.18.5(h) requires us to consider the impact on customers of changes in tariffs.</p>  |
|  <p>Equity</p>  | <p>Each customer should pay their fair share of network costs, noting that there should not be a wide gap between customers with similar usage patterns.</p>   | <p>Clause 6.18.5(h) and(i) require us to consider customer impact.</p> <p>Clause 6.18.3 requires us to set tariff classes together on an efficient basis, but also with regard to avoiding unnecessary transaction costs.</p> |
|  <p>Economic Efficiency</p>                                       | <p>Where possible, ensure customers face the cost reflective price signals so that their decisions reduce network costs</p>  | <p>Clause 6.18.5(a) - The network pricing objective.</p> <p>Clause 6.18.5(e)-(g) – compliance with these pricing principles is consistent with providing efficient price signals.</p>   |
|  <p>Deliverability and Implementation</p>                         | <p>We should consider practical constraints such as billing systems, time to communicate new tariffs to customers and retailers and how the Pricing Order affects retailers' ability to reflect our network tariff structures in retail tariff offerings</p>   | <p>Clause 6.18.5(j)(2)</p>  |

In the 2019-24 regulatory control period, we started a journey to improve the fairness of our tariffs to better reflect each customer's share of network costs. We recognise that the transition to cost reflective pricing needs to:

- Be supported by the roll-out of smart metering and updated back-end billing system.
- Acknowledge that the Pricing Order means most of our customers (all those consuming less than 750 MWh pa) will face no bill impact until thresholds are reviewed or changed.
- Incorporate better education to bring our key stakeholders and customer along the journey, including through developing innovative tariff trials during the 2024-29 period.

## 7. Network tariff classes and tariffs

All customers who take supply from us for direct control services are a member of at least one tariff class. We have established our tariff classes for SCS by considering the annual consumption thresholds set by the Pricing Order, as well as taking into consideration:

- Historical practices.
- Existing metering capability and the transition to smart metering.
- The connected voltage level of customers.
- The cost-benefit of providing further disaggregation into additional customer classes.

We propose to retain the simple approach to classifying customers with relatively few tariff classes, in order to avoid unnecessary transaction costs. In addition, customers have been efficiently grouped together, recognising the material differences between customers arising from:

- The pattern and level of network usage between smaller customers and larger customers, which have different usage patterns and average consumption.
- The pattern and level of network usage between residential customers and business customers, which have different usage patterns and average consumption.
- Whether or not they will be impacted by changes to network prices due to the Pricing Order, i.e. whether they use above or below 750 MWh per annum.
- The nature of the plant or equipment required to provide the network access service, in the case of the high voltage (**HV**) tariff class, as these customers do not make use of the low voltage (**LV**) network or distribution substations.

Power and Water is proposing to retain its legacy flat tariffs (Tariff 1 and 2) for small customers with an accumulation meter connected to the LV network. These are required because not all customers will receive a smart meter replacement by 2029 in the Northern Territory.<sup>2</sup>

One important change we are proposing for small to medium customers, is a segmentation of the existing tariff 3 to include new tariffs. In our Draft Plan we proposed a 100 MW threshold for the segmentation, but in response to feedback from retailers we are proposing a 160 MW threshold, and also further segmentation into residential and non-residential. We believe that these changes will help to support retail competition and future Pricing Order change.

For our major users connected to the high voltage network, we are proposing to combine our HV Minors (0-750 MWh) and HV Majors (750-10,000 MWhs) tariffs into one HV Smart Meters tariff (0-10,000 MWhs). With a small amount of customers in the HV category (38 in total), combining the below 10 GWh customers places downward pressure on pricing for this customer class, by spreading cost across more NMIs. Furthermore, we are proposing to introduce a 'Super User' tariff for the very few customers who consume greater than 10 GWh per annum. The proposed tariff classes and description of eligible customers is outlined in Table 7.1.

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<sup>2</sup> Note that outcomes of the AEMC's 2022 metering review will not apply in the Northern Territory.

Table 7.1: Proposed tariff classes and eligibility

| Tariff classes                       | Tariffs                               | Eligible customers  |
|--------------------------------------|---------------------------------------|---|
| <b>LV less than 750MWh per annum</b> | 1: Residential Accumulation Meter     | Residential customers consuming less than 750 MWh per annum per NMI with standard accumulation meters   |
|                                      | 2: Non-Residential Accumulation Meter | Non-residential customers connected to the low voltage network consuming less than 750 MWh per annum per NMI with standard accumulation meters  |
|                                      | 3a: LV Smart Meter Residential        | Residential customers connected to the low voltage network with a smart meter consuming less than 160 MWh per annum per NMI   |
|                                      | 3b: LV Smart Meter Non-Residential    | Non-residential customers connected to the low voltage network with a smart meter consuming less than 160 MWh per annum per NMI   |
|                                      | 3c: LV Smart Meter                    | Residential and non-residential customers connected to the low voltage network with a smart meter consuming above 160 MWh and less than 750 MWh per annum per NMI   |
|                                      | 4: Unmetered                          | Unmetered supply (for street lighting, traffic lights and other unmetered devices) consuming less than 750 MWh per annum<br>This tariff applies to streetlights, traffic lights, NBN nodes and security cameras which are connected directly to our network and do not have meters attached to record their usage |
| <b>LV above 750MWh</b>               | 5: LV Majors                          | Customers connected to the low voltage network consuming above 750 MWh per annum per NMI  |
| <b>HV</b>                            | 6: HV Smart Meters                    | Customers connected to the high voltage network consuming less than 10 GWh per annum  |
|                                      | 7: HV Super User                      | Customers connected to the high voltage network consuming more than 10 GWh per annum  |

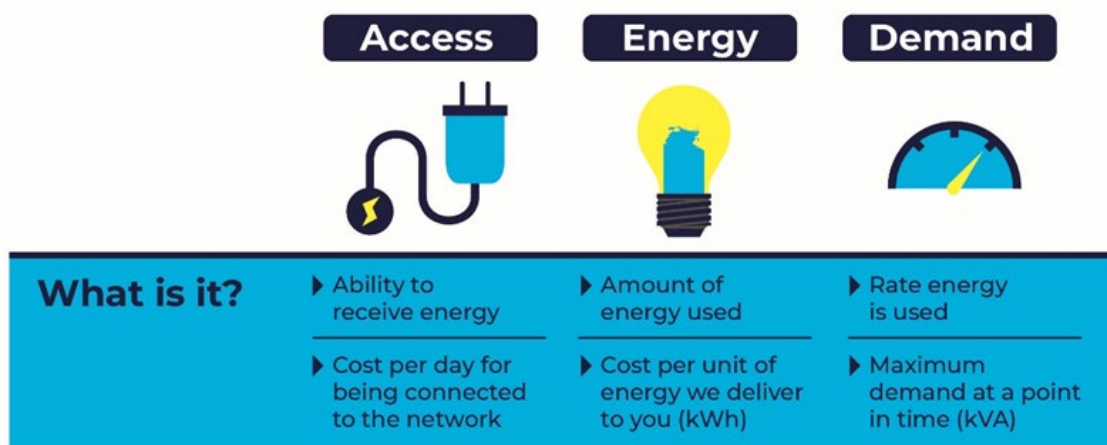


## 8. Tariff structures and charging parameters for Standard Control Services

The 'tariff structure' includes the tariff, components of that tariff and charging parameters, which all together provide the necessary information for our customers and their retailers to know how we propose to bill them. When developing our network tariff structures, we are aiming to provide retailers with better price signals about the costs associated with provision of electricity network services. This will ensure that retailers make more informed decisions about how best to manage the financial risks under more cost reflective network pricing.

Customers in each tariff class are subject to a range of different components to which a charge is applied. Not all tariffs have a peak or off-peak demand charge, but all metered tariffs do have a system availability charge (**SAC**), and all have a volume charge. Unmetered supply consists of a volume (energy) only charge. Our proposed tariff structures for the next regulatory period may involve the charging parameters reflected in Figure 8.1.

Figure 8.1: Tariff charging parameters



The main changes we propose in the 2024-29 TSS compared to the 2019-24 TSS include:

- Reducing the peak charging window by 15 hours per week and introducing a low and medium energy period for energy consumption.
- Introducing 'on' and 'off' maximum demand seasons, in conjunction with a reduction in the peak charging window by 15 hours per week.
- Removing the seasonal demand (kVA) charge for smart metered customers consuming less than 750 MWh per annum.
- Introducing three time of use (**TOU**) energy periods and maintaining an anytime energy charge for accumulation, major customers (greater than 750 MWh) and unmetered.

## 8.1 Time of Use – energy consumption charge

In the current 2019-24 period, we have applied a single 'anytime' charging parameter for the energy consumption component of our tariffs, even if the customer has a smart meter. While single-rate tariff structures incentivise customers to decrease total usage, they do not specifically encourage customers to decrease usage at peak times.

Our network costs are driven by meeting peak demand, but the majority of customers are currently on single-rate tariff structures. Therefore, customers with higher usage during peak times will be cross subsidised by other customers with flatter usage profiles, creating inequities and inefficiencies.

We are proposing for the 2024-29 period, to apply an energy charge based on the period and time of day when energy is consumed. This would only apply to customers with smart meters as accumulation meters do not provide this level of data. We consider that the change is required to signal to customers when the network is experiencing peak demand in the evening, and when there is ample capacity to meet demand in the middle of the day. The high price period for energy replaces the maximum demand charge for most customers.

Figure 8.2 conceptualises the key change we are proposing to implement for TOU pricing.

Figure 8.2: Time of day pricing for consumption



## 8.2 Demand charge parameters

We currently apply a demand charge to all customers with a smart meter. For the new segment of customers with a smart meter consuming less than 750 MWh per annum, from 1 July 2024 we are proposing not applying a demand charge and only applying energy consumption charges.

During our engagement with retailers, the feedback received was that they didn't want seasonal charges. However, this view was contradicted by our major customers who said they just wanted certainty in the structure and were happy to have seasonal charges if it helped to reduce costs overall.

For our major customers, those consuming above 750 MWh pa or connected to the HV network, Power and Water will continue to apply an annual peak demand charge. However, this charge will be applied as an 'on' season, from 1 October to 31 March, and an 'off' season from 1 April to 30 September each year. For both seasonal periods, the demand charge will apply from 3pm to 9pm Monday to Friday.

The introduction of the two seasons allows us to better manage customer impacts, smoothing the 'on' season rate, by recovering during the 'off' season. This is important for customers who are not covered by the Pricing Order.

In addition to the feedback on seasonality, we are proposing to move away from the rolling average demand and will return to peak maximum demand. Retailers felt that demand charges are already a hard concept to explain without the added complexity of a rolling peak average. This position was also confirmed as our billing system vendor informed us that to introduce the rolling average demand concept would be extremely expensive and difficult to build into our billing systems.

### 8.3 Why we chose 3-9pm peak period charging window

In the 2019-24 period, we applied a peak demand window of 12pm to 9pm on weekdays. For our larger customers (consuming above 750 MWh pa) this window applied all year round, while for our smaller customers it only applied seasonally, between 1 October and 31 March each year. For the 2024-29 period, we are narrowing the peak period window. This window reflects our analysis that shows that our peak demand is shifting to the evening when the network cannot rely on solar to help meet underlying demand.

We have decided not to overly narrow the time period due to the variability of when the peak demand occurs at different locations of our network. As part of this change, we also plan to include a greater distinction between off-peak periods. It is hoped that the 3-9pm peak window will provide solar photovoltaic (**PV**) and battery customers improved incentives to:

- Install west facing solar panels.
- Charge batteries before 3pm and discharge after 3pm.

Table 8.1: Proposed network tariffs by charging parameters from 1 July 2024

| Tariff | Tariff class description     | Eligibility  | Connection voltage (HV/LV) | System availability charge (SAC) (\$/NMI/day) | Energy (kWh)*  |            |            | Peak demand (kVA)* |           |            |
|--------|------------------------------|--|----------------------------|---|----------------|------------|------------|--------------------|-----------|------------|
|        |                              |  |                            |   | Anytime (24/7) | Low period | Mid period | High period        | On season | Off season |
| 1      | Residential Accumulation     | All residential customers with accumulation metering       | LV                         | ✓   | ✓              |            |            |                    |           |            |
| 2      | Non-Residential Accumulation | All non-residential customers with accumulation metering   | LV                         | ✓   | ✓              |            |            |                    |           |            |
| 3a     | LV Smart Meter               | Residential with smart metering consuming 0-160 MWh pa     | LV                         | ✓   |                | ✓          | ✓          | ✓                  |           |            |
| 3b     | LV Smart Meter               | Non-Residential with smart metering consuming 0-160 MWh pa | LV                         | ✓   |                | ✓          | ✓          | ✓                  |           |            |
| 3c     | LV Smart Meter               | All customers with smart metering consuming 160-750 MWh pa | LV                         | ✓   |                | ✓          | ✓          | ✓                  |           |            |
| 4      | Unmetered                    | All Unmetered  | LV                         |   | ✓              |            |            |                    |           |            |

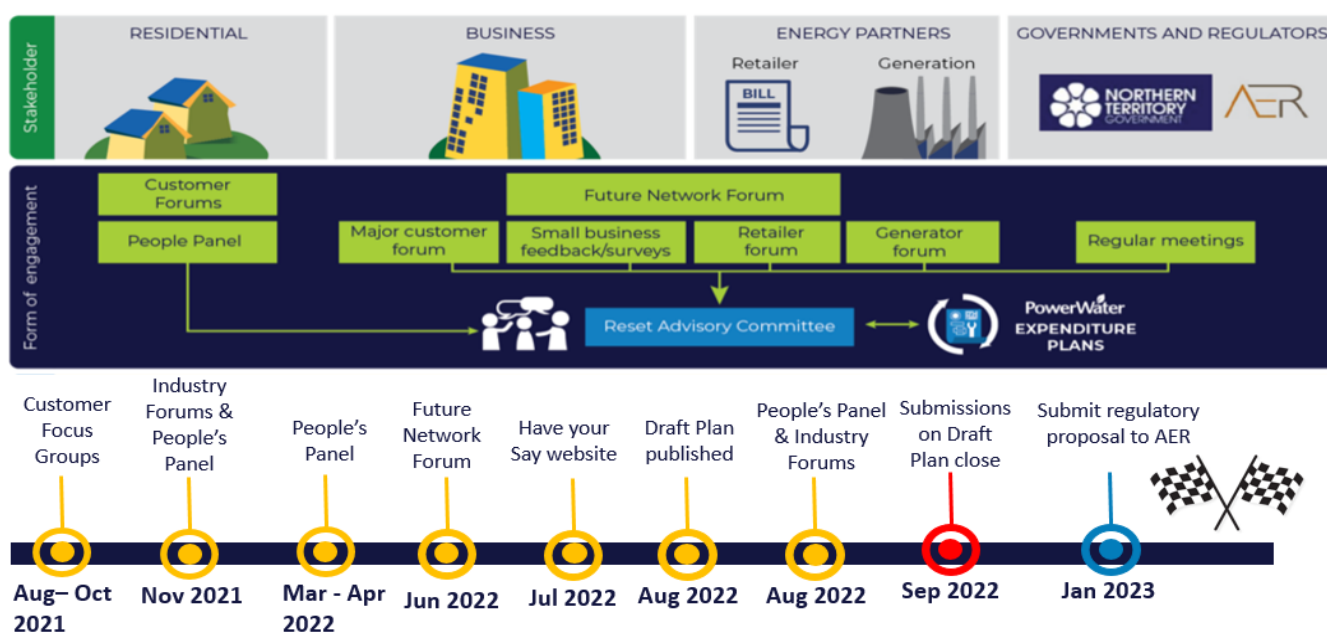
| Tariff | Tariff class description | Eligibility   | Connection voltage (HV/LV) | System availability charge (SAC) (\$/NMI/day) | Anytime (24/7) | Energy (kWh)* |            |             | Peak demand (kVA)* |            |
|--------|--------------------------|---|----------------------------|---|----------------|---------------|------------|-------------|--------------------|------------|
|        |                          |   |                            |   |                | Low period    | Mid period | High period | On season          | Off season |
| 5      | LV Majors                | All customers connected to the LV network consuming above 750MWh pa | LV                         | ✓   | ✓              |               |            |             | ✓                  | ✓          |
| 6      | HV Smart Meters          | Customers connected to HV network consuming 0-10,000 MWh pa         | HV                         | ✓   | ✓              |               |            |             | ✓                  | ✓          |
| 7      | Super Users              | Customers connected to the HV network consuming above 10,000 MWh pa | HV                         | ✓   | ✓              |               |            |             |                    |            |

## 9. Customer and stakeholder engagement

In developing our TSS, we embarked on a consultation process with a wide range of stakeholders who had an interest in or might be impacted by network pricing reform in the Northern Territory. Business customers were a focus of our engagement as we have approximately 200 major customers (those consuming greater than 750 MWh pa), and approximately 10,000 small and 1,000 medium business customers (those consuming less than 750 MWh pa).

We recognise that successful reform depends on effective engagement with our customers and stakeholders and as such, our engagement approach ensured that we involved all our customer segments, customer advocates, retailers, generators, the NT Government and the AER in our pricing forums and discussions. In this way, Power and Water was focused on bringing people together that would lead to tariff outcomes that provided a balanced view and a successful tariff reform pathway. Figure 9.1 provides an overview of our stakeholder journey on tariff reform to date.

Figure 9.1: Stakeholder journey on tariff reform



Our starting point for tariff reform was to consider changes to our existing network tariffs where there was a clear need to change. This recognises that wholesale change is difficult to communicate to our stakeholders and may not be compatible with existing billing systems.

Our People's Panel in Darwin noted the limitations of pricing reform due to the operation of the Pricing Order. However, the panel members wanted Power and Water to develop network prices that made it easier for retailers (and government) to pass on better price signals in the future. Most panel members preferred the development of tariff options that provide customers with choice, recognising that there was a need for efficient price signals to be seen by all customers.

There was a difference in perspectives in Darwin and Alice Springs People's Panels on the proposed concept of charging higher rates during the evening peak period to disincentive network use when demand is higher

and lower rates during the day to incentivise network use when there is greater supply. Panellists suggested we needed to:

- Provide sufficient information and education for consumers to change their behaviours and be able to make informed decisions.
- Consider safety nets for those who are disadvantaged or who cannot fully utilise the lower prices during the day.
- Undertake a gradual transition to implement the pricing changes, as well as only apply a marginal difference in price.
- Assume a role beyond applying the time of use pricing to assist a change in behaviour (e.g., providing fridge magnets to encourage network use during specific periods of the day).
- Plan for the future without disadvantaging those using the network today.

Our engagement with retailers provided feedback that demand charges are already a complex concept and adding further complexity with rolling peak demand would only add further complexity. Retailers were generally supportive of the direction of our new tariff structures and highlighted that continued network tariff reform needs to be supported by reform of the Pricing Order thresholds. Indeed, our largest NT retailer desired we adopt more simplistic network tariff structures that more closely mirrored the Pricing Order for the next period.

Engagement with the Northern Territory's newest retailer, Territory Generation, was also held to better understand the unique customers that they will be retailing to in future regulatory periods. These customers will be some of the largest energy users to connect to our electricity networks. Several issues discussed included:

- **How we are charging retailers** – An overview of the evolution of Power and Water's network tariffs from pre-structural separation compared to the proposed network tariffs in the 2024-29 TSS.
- **How we are charging generators** – Covering the proposal to charge all generators an SCS tariff for consumption imported from the grid and given the various profiles it is anticipated generators will likely be charged at Tariff 6 (HV greater than 10 GWh's).
- **Generation and network pricing alignment** – Discussed the potential to align generation pricing structures to our proposed network structures.

Territory Generation were supportive of the proposed network tariff structures, especially Tariff 7 Super Users as their customers are likely to fall into this category. They also told us:

- They understood our proposal to charge generators for consumption imported from the grid, however suggested a threshold be introduced before charges apply.
- Ongoing metering and system stability issues would require further engagement.
- While they agree that generation tariff reform is needed, further discussion and analysis would be required, which they are looking into.



# 10. Export tariff transition strategy

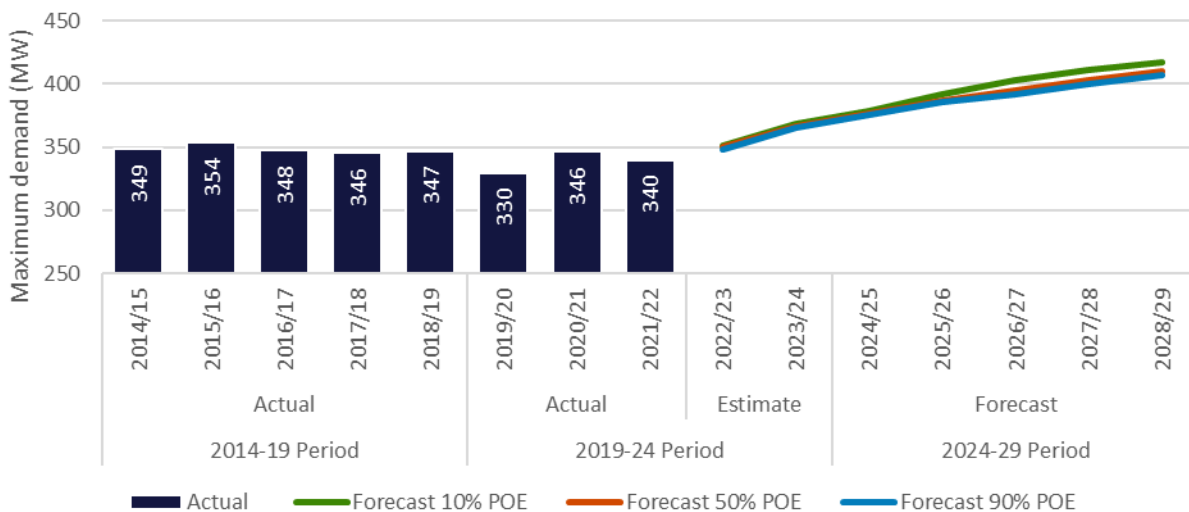
We must include an export tariff transition strategy as part of our TSS. Even though we are not proposing to introduce two-way pricing for the upcoming regulatory control period, we are still required to provide an export tariff transition strategy to signal our future intentions.

Peak demand growth across our network has been relatively flat over the last decade. Due to the extreme heat experienced in the Northern Territory, demand for electricity is highest in the middle of the day in the October to April period. Over the last five years, we have seen less demand for electricity on our networks in these peak periods, largely due to customers using their own solar PV to energise their homes and businesses. Demand for electricity from our networks has shifted to the early evening period when the sun is no longer shining.

Setting cost reflective tariff structures and tariffs firstly requires an understanding of our forecast network usage and congestion patterns, which in turn requires an understanding of growth in peak and minimum demand.

Figure 8 shows the underlying energy demand compared to demand delivered by the network on the maximum day in the Darwin-Katherine electricity system in 2020-21. Increasing solar will not help curb peak demand over the next 20 years now that peak demand has shifted to the evening.

Figure 10.1: Maximum demand forecasts across our three networks



We are expecting demand to significantly increase over the next 20 years. The NT Government predicts our population will increase by more than 30 per cent by 2040. In addition, we will need to provide electricity to major industrial customers locating to the Territory.

Electric vehicles will also heavily impact demand for energy with each electric car adding approximately 30 per cent more consumption for a typical household. This provides our network with an opportunity to increase our scale and pass on lower costs to our customers through better utilisation of the network.

Our strategic priority is to provide customers with the right information and incentives to shift energy consumption to off-peak periods. Our five-year plan includes initiatives to improve our network tariff structures so they provide customers with price signals that reflect our future costs. This includes lower

prices in off-peak periods during the day when low cost solar is available and when there is significant load capacity on our network.

## 10.1 Export tariff trial

Whilst we are not proposing to introduce an export tariff, we are still required by the NT NER to provide an export tariff transition strategy to signal future intentions. We are proposing to introduce an export tariff trial in the next regulatory period.

Our existing tariffs only signal the costs of additional load during peak demand through peak charges. Offering cost-reflective tariffs and rewards for two-way energy flows is an important step to transform our approach to network tariffs, by offering our customers tariffs that empower both choice and control over their energy use and technology choices.

However, we appreciate the need to carefully manage our tariff reform process so changes in how we design network charges are fair and can be understood by customers and stakeholders. Trials are an important part of innovating how we design our network charges. However, trials alone will not be enough to deliver pricing innovation that is in the interests of our customers and our network. We will also consider other tools available, such as behavioural economics, to understand how customers may respond to price signals and will draw on lessons from other jurisdictions about what works and what does not. Ongoing education and customer engagement are also important for pricing innovation and we will work with our trial partners to deliver this.

The timing of these trials would be after our investment in DOE capabilities are operational and following further engagement with retailers on trial tariff co-design.

In relation to feedback received on our proposed export tariffs and trials, we have reassessed our unique regulatory environment under the Pricing Order. This means that we cannot assume any behavioural response from tariff designs for most customers. We have taken the feedback received on board and propose to collaborate with Territory retailers and the NT Government to design targeted trials that can:

- Inform our future network tariff design.
- Provide evidence to support the NT Government considering reform to the Pricing Order for either customer thresholds or tariff structures.
- Test specific pricing innovations.

More information regarding our proposed export tariff trial and the current as well as future stakeholder engagement related to two-way pricing is discussed in our Explanatory Statement provided at Attachment 11.02.

# 11. Customer impacts

Table 3.1 demonstrates the typical impact customers across the NT will experience in the upcoming regulatory period. Most customers (99.7 per cent) will continue to receive protection through the Pricing Order. Meaning any increases in network tariffs will not affect their retail bill they receive.

Table 3.1: Estimated customer impact by network tariff (\$ nominal)

| Tariff    | Description                  | 2024/25  | 2028/29  | Consumption | Demand | Network bill (\$) |         | Network bill impact |      | Network component of residential bill <sup>1</sup> | Increase in total retail invoice <sup>2</sup> |
|-----------|------------------------------|----------|----------|-------------|--------|-------------------|---------|---------------------|------|--|---|
|           |                              | (Year 1) | (Year 5) |             |        | 2023/24           | 2024/25 | \$                  | %    |  |   |
|           |                              | NMIs     | NMIs     |             |        |                   |         |                     |      |  |   |
| <b>1</b>  | Residential accumulation     | 43,811   | 35,589   | 8,500       | 0      | 1,079             | 1,347   | 267                 | 25%  | 57%  | EPO <sup>3</sup>                              |
| <b>2</b>  | Non-residential accumulation | 2,193    | 0        | 30,000      | 0      | 2,606             | 3,179   | 574                 | 22%  | 34%  | EPO <sup>3</sup>                              |
| <b>3a</b> | Residential 0-160MWh         | 29,224   | 38,333   | 8,500       | 20     | 1,258             | 1,340   | 82                  | 6%   | 57%  | EPO <sup>3</sup>                              |
| <b>3b</b> | Non-residential 0-160MWh     | 8,305    | 10,618   | 30,000      | 150    | 4,257             | 3,175   | -1,082              | -25% | 34%  | EPO <sup>3</sup>                              |
| <b>3c</b> | Smart meter 160-750MWh       | 754      | 857      | 250,000     | 500    | 14,357            | 17,733  | 3,376               | 24%  | 24%  | EPO <sup>3</sup>                              |
| <b>5</b>  | LV >750MWh                   | 158      | 168      | 3,200,000   | 6,675  | 164,055           | 142,741 | -21,314             | -13% | 24%  | -3%   |
| <b>6</b>  | HV <10,000MWh                | 38       | 52       | 1,600,000   | 6,850  | 131,711           | 129,970 | -1,741              | -1%  | 24%  | 0%  |
| <b>7</b>  | Super users                  | 14       | 19       | 25,000,000  | 53,000 | 1,035,906         | 847,695 | -188,211            | -18% | 14%  | -3%   |

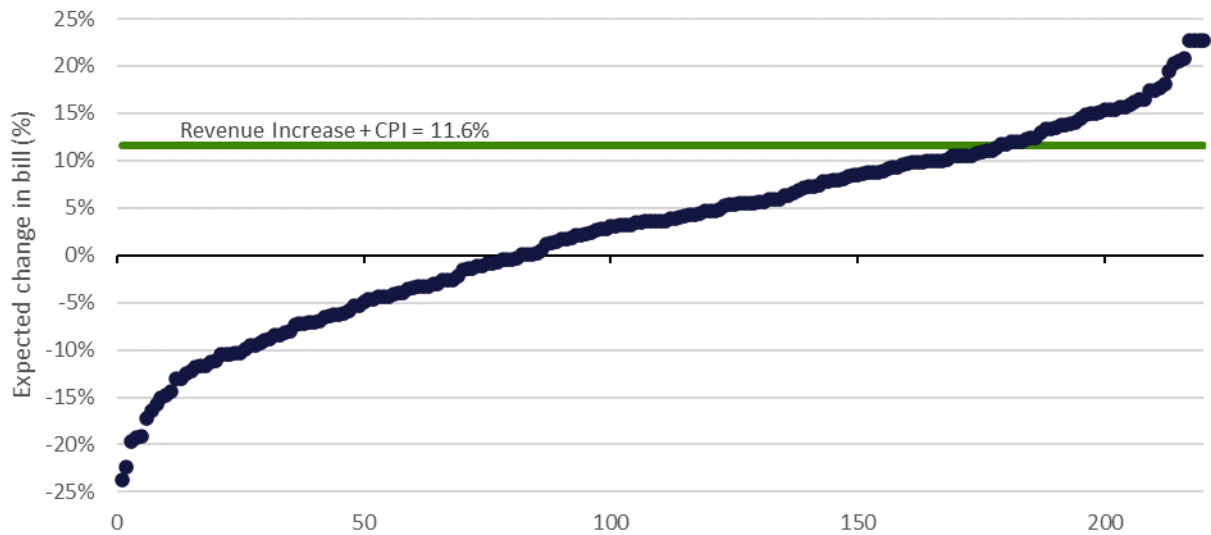
Notes:

- (1) Based on the network component of retail invoices issued in October 2022.
- (2) Electricity Pricing Order (EPO) increase in the total retail bill will be determined by adjustments made to the EPO by the NT Government. Previously the NT Government have capped prices at no more than CPI. Last year the increase was set at 2.7 per cent despite CPI being 6.1 per cent.
- (3) Major customer impact has been assessed by using retail invoices issued in October 2022 with forecast CPI increases of 6 per cent per annum on the non-network rates.

Figure 11.1 demonstrates the impact to our major customers. These customers encompass anyone connected to the high voltage network as well as all low voltage customers consuming greater than 750 MWh per annum. Approximately 47 per cent of our major customer will experience an impact greater than 10 per cent, with the majority experiencing an impact below 10 per cent.

A few customers, predominately on the newly structured Super Users tariff will receive large reductions due to the structural changes we are proposing.

Figure 11.1: Major customer impact



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