

# TasNetworks Pricing Reform Working Group

27 April 2017

Kirstan Wilding, Leader Regulation

Chantal Hopwood, Team Leader Revenue and Price Regulation

## Today's Agenda

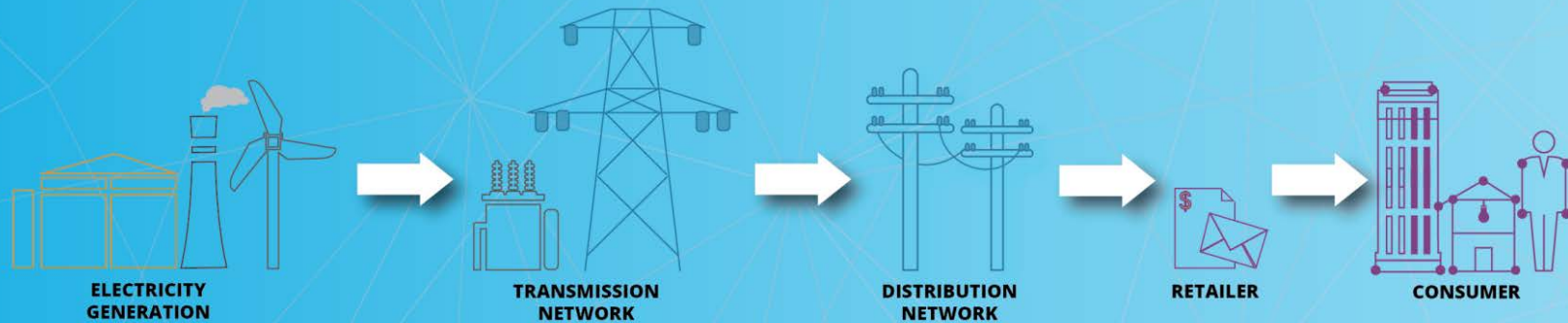
1. Welcome	Standing agenda items, welcome and safety
2. Strategic context	Update on National and Tasmanian context and industry transformation   <i>Inform</i>
3. Update	Update on AER draft decision on our 2017-19 TSS   <i>Inform</i>
4. Outline	Outline our current trials and plans for data acquisition   <i>Inform</i>
5. Explain	Explain our reform progress and prioritisation for our 2019-24 TSS planning   <i>Consult</i>
6. Break	Morning Tea
7. Test	Test options for targeting tariffs to new technologies and encouraging tariff reform   <i>Engage</i>
8. Looking ahead	Planned engagement activities / <i>Inform</i>
9. Lunch	

## 2. Strategic context for network tariff reform

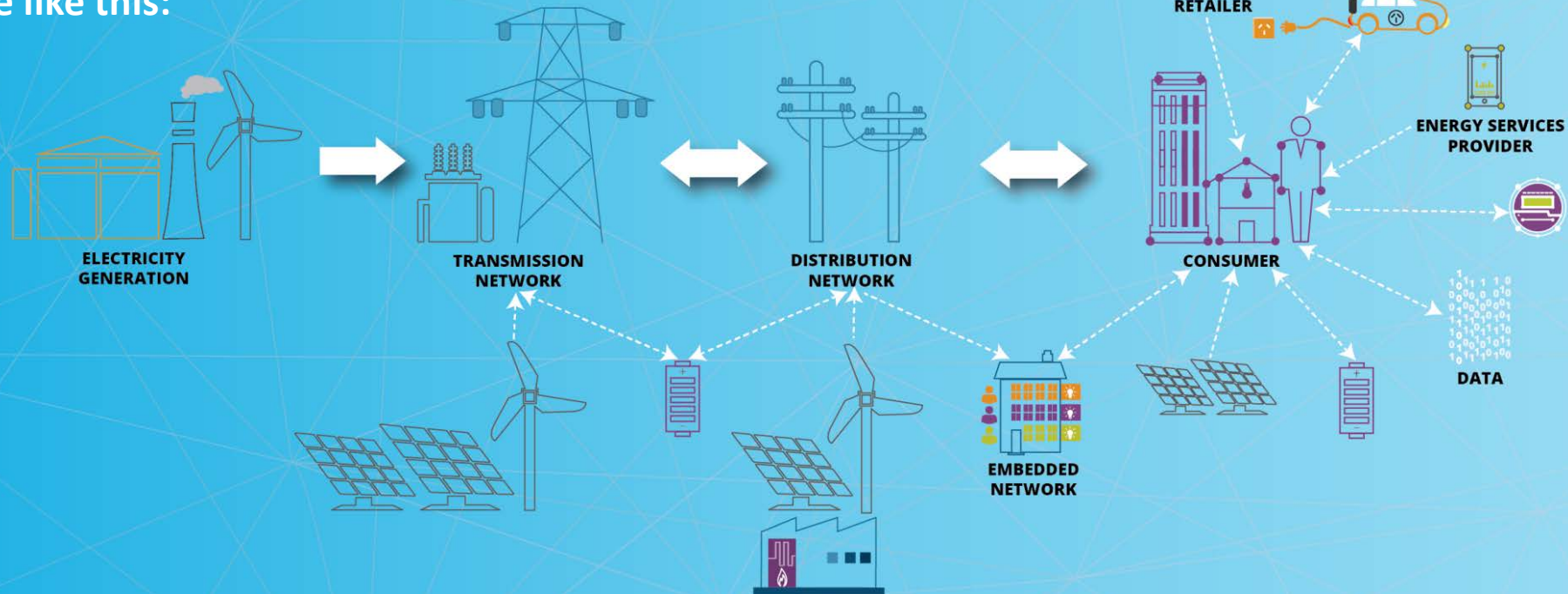


## 2. Transformation of the electricity market

Our regulatory and pricing arrangements were originally designed for an industry like this:

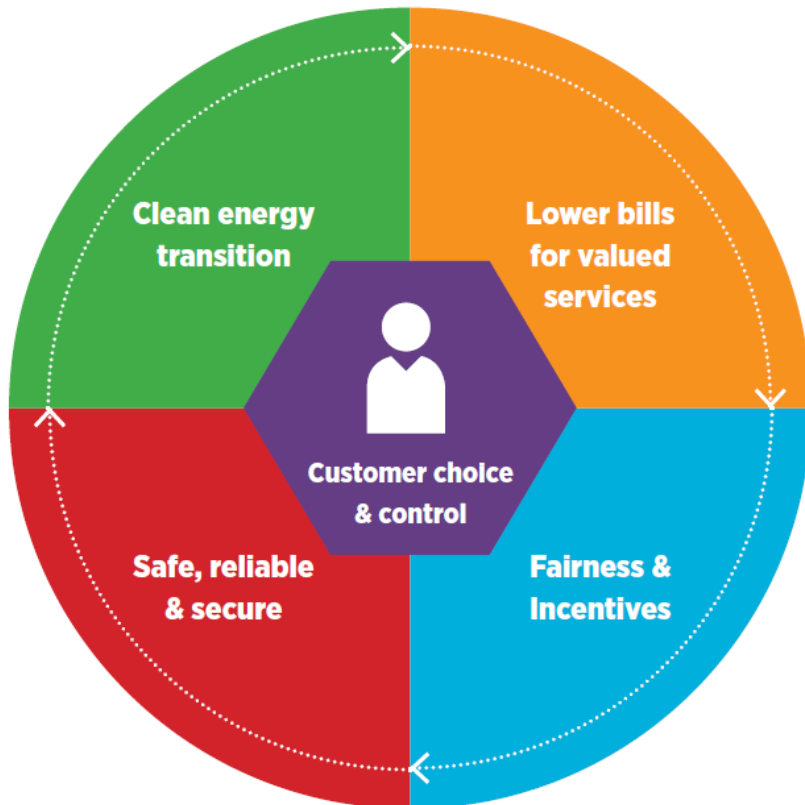


Our arrangements are evolving to regulate and price an industry more like this:



## 2. National context

### ELECTRICITY NETWORK TRANSFORMATION ROADMAP:

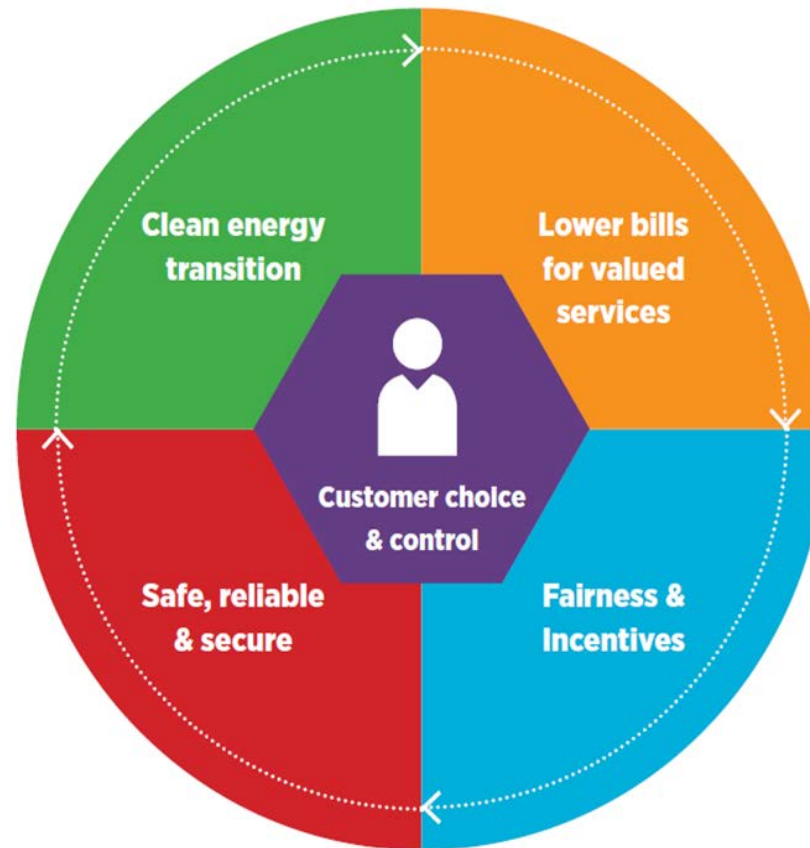


#### Network Transformation Road Map Key Concepts:

- Customer Orientated Electricity
- Power System Security
- Carbon abatement
- Incentive and network regulation
- Intelligent networks and markets

## 2. Network transformation roadmap - 2050

2/3 customers have distributed energy resources (**DER**)



Zero net emissions

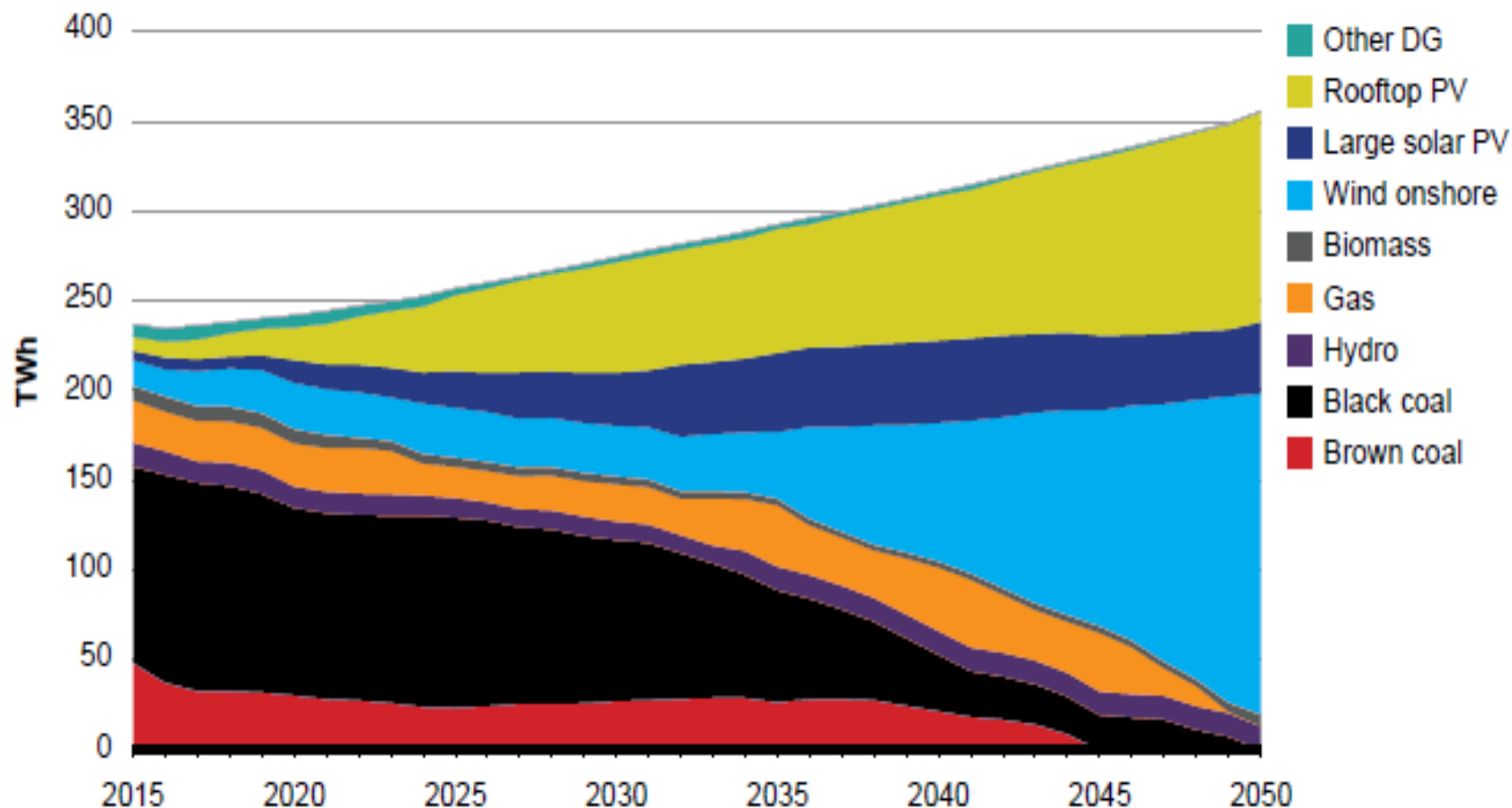
More technology for balancing load and demand and keeping system secure

Households save \$414 and 30% lower network charges

Fairer charges and pricing, including paying customers for their DER services

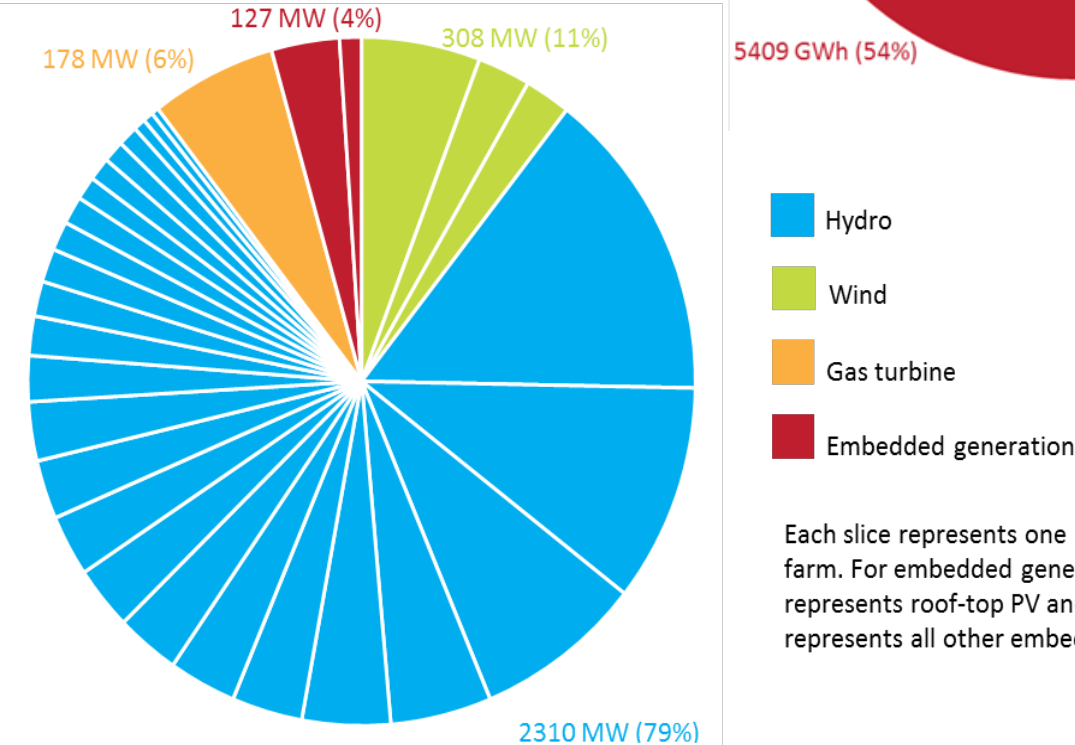
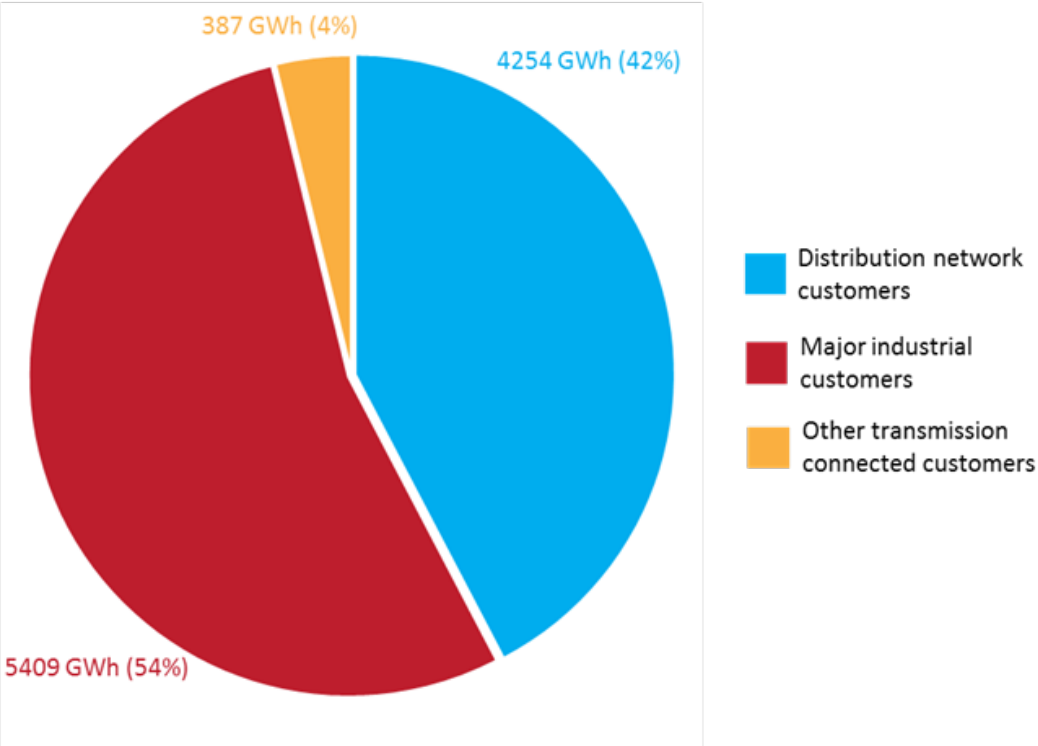


## 2. From 2025 beyond... the future energy mix



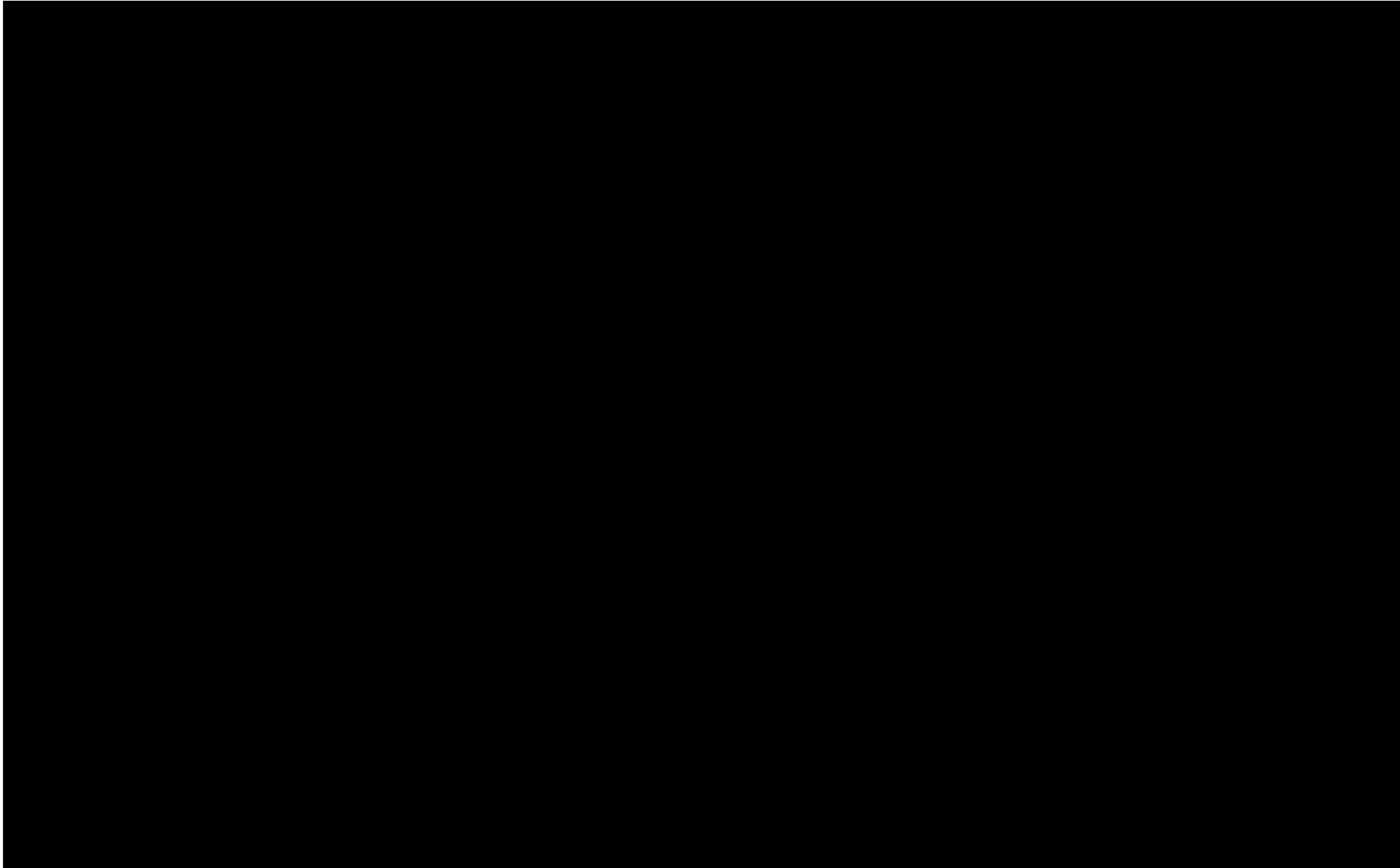
# Tasmanian load and generation customers

- Small load
- Major industry (4 cust = 54%)
- Hydro dominated generation
- Relatively large interconnector





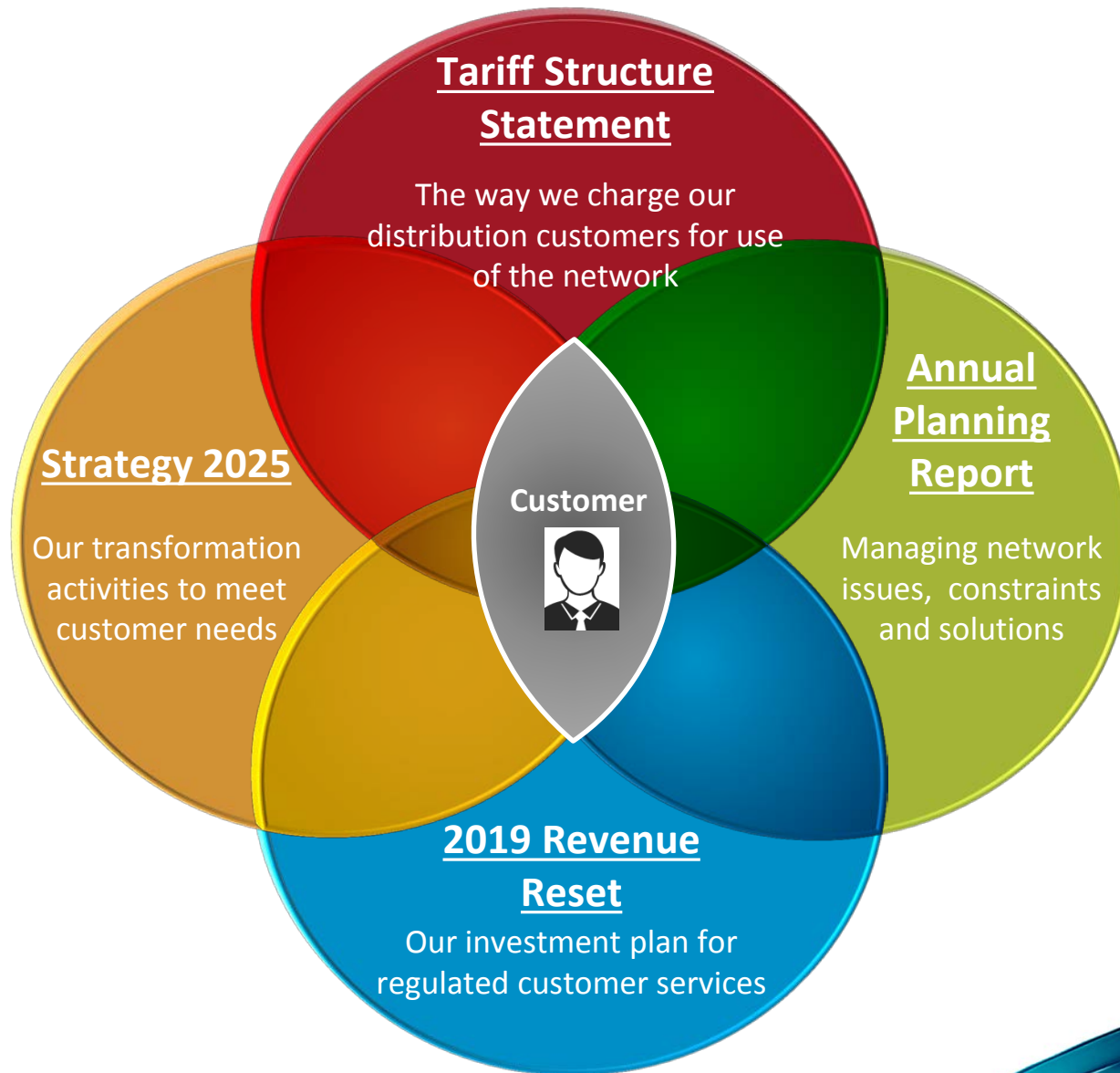
Things need to change – copy AGL video



## 2. Industry in the spotlight

- Energy security challenges in the spotlight
  - Basslink outage and record dry in Tasmania
  - SA system black, heatwaves, record maximum demand in eastern states, load-shedding, retirement of coal, gas market challenges, intermittent non-synchronous generation
- Some particular Tasmanian energy market characteristics: dominance of large industrials, poor socio-economic base, little load growth, hydro-generation fleet, DC interconnector, winter peaking, lack of cost reflective pricing for small customers

## 2. TasNetworks key consultation activities



## 2. Driving Innovation to 2025

Connection standards for a secure network

Tariff trial (**emPOWERing you trial**)

Bruny Island battery trial

Electric Vehicle program



### 3. Recap: AER draft decision on 2017-19 TSS

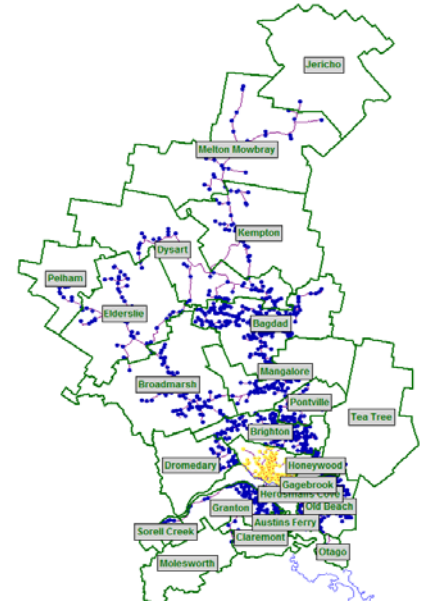
- In its draft decision the AER largely approved our TSS
- Final Decision due end of April 2017



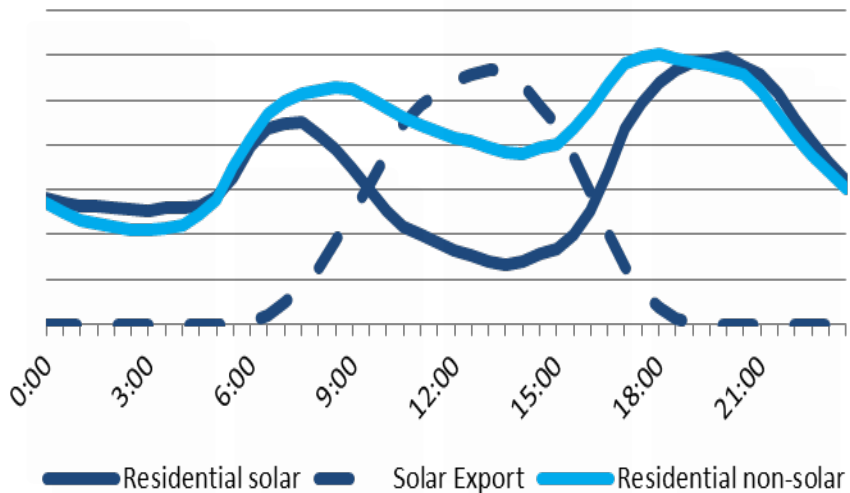
- This means next year we will introduce the following new tariffs on an opt-in basis:
  - Residential time of use demand tariff (**TAS87**)
  - Low Voltage commercial time of use demand tariff (**TAS88**)
  - Large Low Voltage commercial time of use demand tariff (**TAS89**)
- The AER made the following comments in its decision:
  1. Our stakeholder engagement was good
  2. It accepted our gradual approach to tariff reform
  3. Noted that due to limitations in data, customer impact analysis based on sample data was an appropriate approach
  4. AER expects businesses to continue to progress tariff reform, by progressing to opt-out or mandatory tariff reassignment arrangements

## 4. emPOWERing you trial

- As part of our Tariff Reform Strategy we are trialling advanced meters in 600 selected homes from Otago/Claremont to Jericho
- Customer research to collect valuable data and information from mid-2016 to 2018 to help shape our Tariff Reform Strategy



## Residential Solar Profile



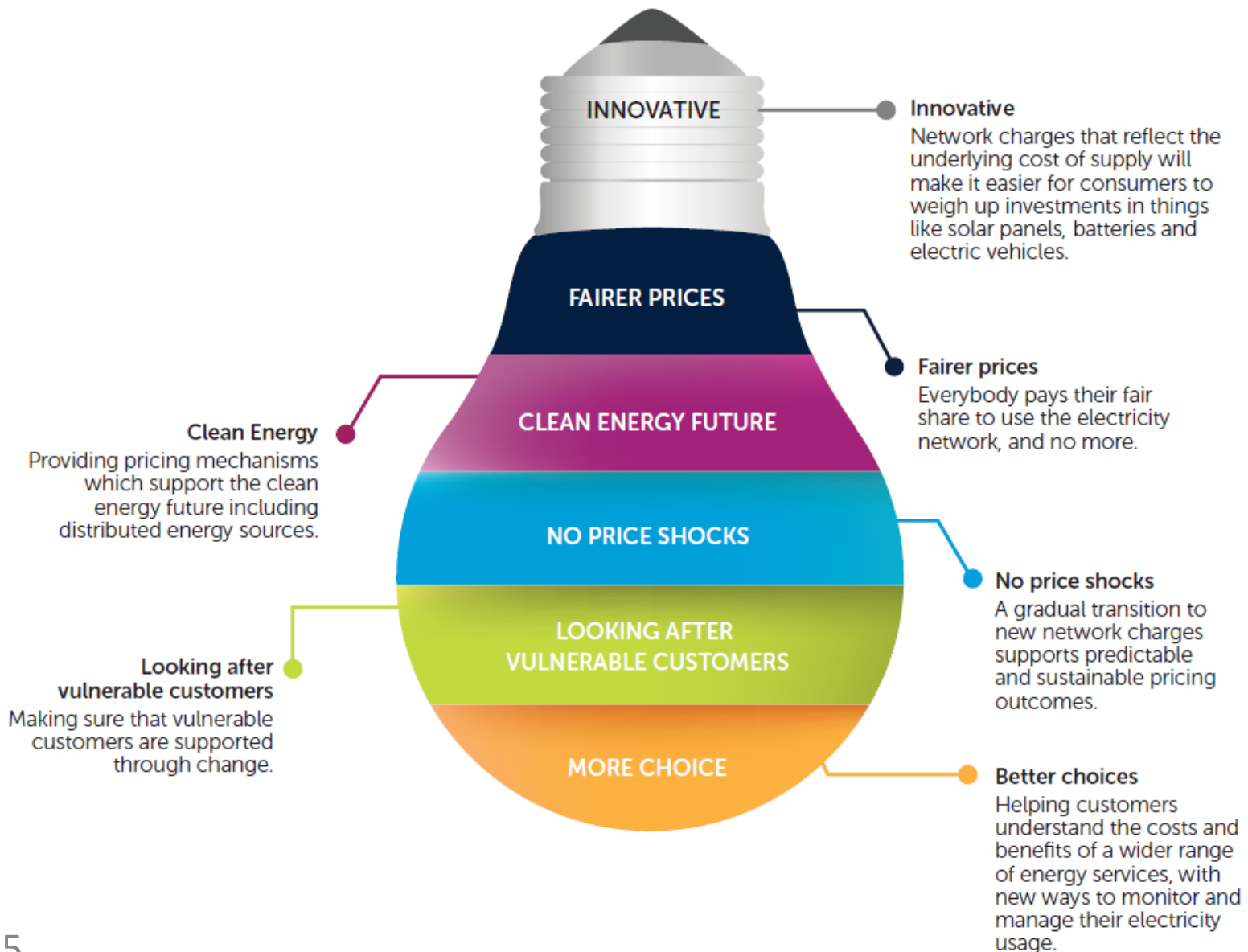
Data from the Trial will assist in :

- Better understanding household usage
- Understanding customer impacts under different tariff structures
- Testing customer communication and education processes
- Building community awareness of changing tariff offerings





# 5. Recap - why we are reforming our tariffs



# 5. Planning for 2019-24 TSS



- 2017-19 started our reforms by:
  - getting cost reflective tariffs for existing customer types on our books that our customers can choose to *opt-in* to
  - starting the gradual rebalancing of our tariffs and revenues

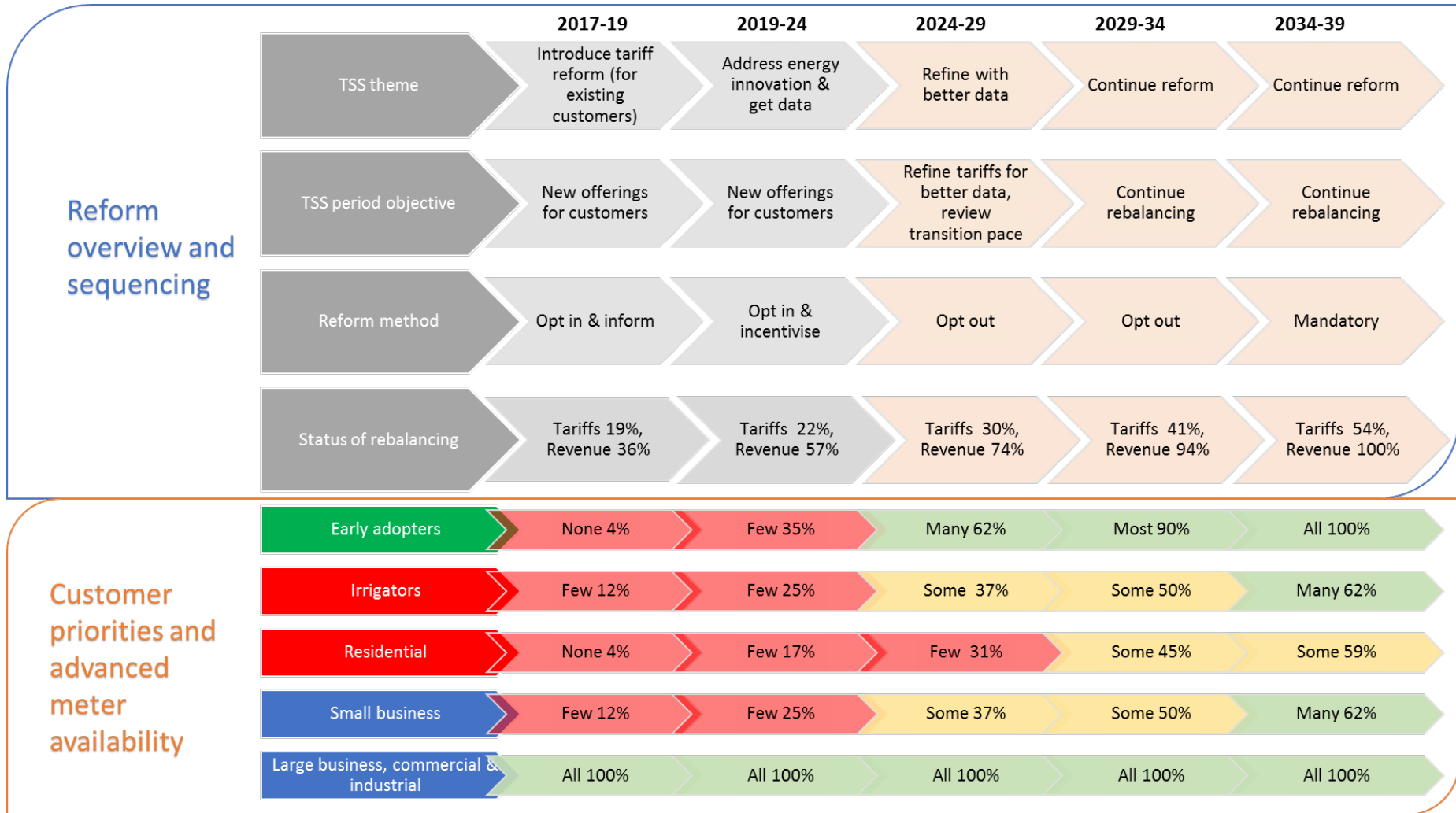


- 2019-24 TSS will:
  - Continue gradual reforms and agreed reform principles
  - Gather data to refine our tariffs / transition in later TSS periods
  - Introduce tariffs targeted to new customer types with emerging energy technologies, so all customers can benefit from lower costs
  - Progress the pace of tariff reform by encouraging all customers to consider demand based tariff options



- Today we seek your feedback on our priorities and options

# 5. 2019-24 TSS builds on our reform to date, fits our environment, and remains gradual



Note: Metering assumptions based on volumes consistent with TasNetworks new and replacement metering program

## 6. Morning tea



# 7. Benefits of technology – what our customers have told us

Invest in technology to get people thinking about their usage (eg. Apps, SMS, website, calculators and in home power display)

Innovative solutions to manage network resources (eg. batteries, micro grids, data logging to get the most out of existing assets)

An app would help us manage our usage and would help us understand the impact of investments we make in technology such as solar/wind/batteries

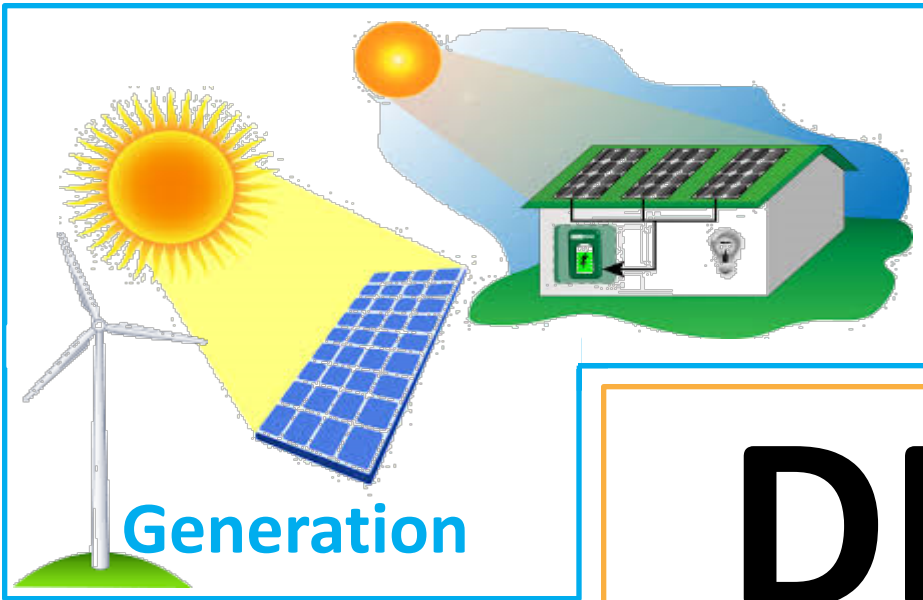
TasNetworks to take a lead role in trialling and testing new technology

TasNetworks to investigate ways to use technology to operate their business more efficiently

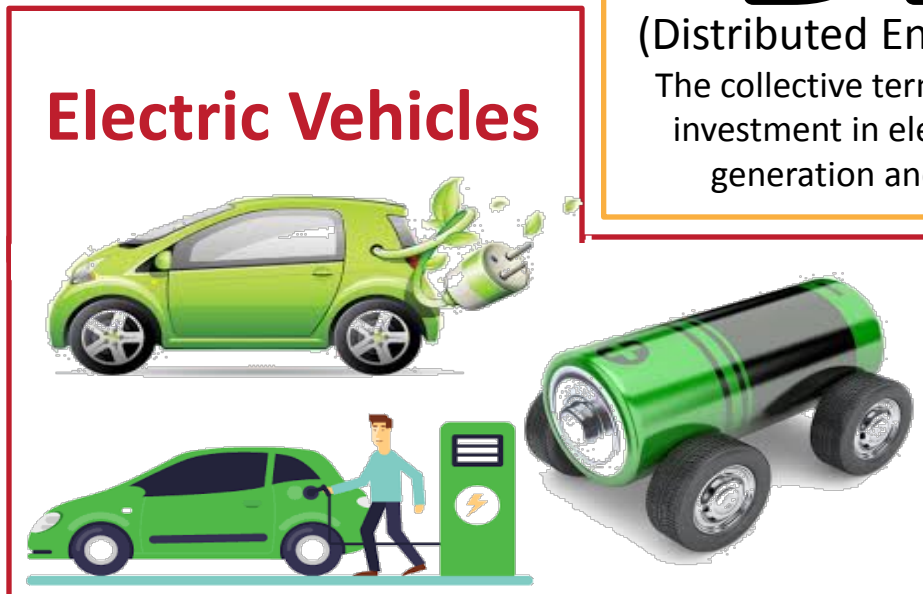
TasNetworks to explain changes as a result of technology. Most of all we want **SIMPLE** solutions to complicated issues

TasNetworks prices to provide incentives for customers to invest in technology that benefit both the customer and the efficient operation of the network

# 7. Who are our DER customers?



**DER**  
(Distributed Energy Resources)  
The collective term for customer side investment in electricity storage or generation and management)





# 7. Our network and our customer's future

Our 'early adopter' tariff is important because of the benefit it can provide to all customers by ensuring DER technology is implemented efficiently across the network.

## 2050

\$\$\$\$\$\$\$\$  
\$\$\$\$\$\$\$\$

No changes to network charging mechanisms and tariff design will lead to inefficient utilisation of networks and will drive prices higher for customers who could not make investments in DER technology.

**Do nothing scenario**

2016

**Roadmap scenario**

From 2020, customers will take up DER regardless of network incentives and investments

## 2050

\$\$\$  
\$\$\$

The ENA's roadmap scenario assumes network prices are reformed to maximise network and customer DER utilisation. Customers as a whole save between \$733-\$866 million between 2021-2050 (an average saving of \$100 per customer per year)

# 7. Designing tariff incentives for new energy

- Changes in how our customers source and use energy can either increase network costs for all customers or decrease them
- We want to introduce tariffs that will support efficient investment in and use of new energy technologies (distributed energy resources or DER), to lower costs for all customers
- We have options for this to test with you
- We want to design our DER tariffs to meet the following objectives:
  1. **Allow DER customers to benefit** from their investment
  2. **Ensure DER customers help lower network costs rather than increase networks costs** in future and supporting lower bills for all customers (**by making the tariff attractive**)
  3. The tariff is **simple** and capable of being understood by DER investors whom we seek to encourage to opt into the tariff
  4. The tariffs are **compliant** with the Rules
  5. We want to **transition the tariff offering** (over the 19-24 regulatory control period to be cost reflective), from the onset we will be clear about the transition period
  6. Provide an **attractive tariff option** to facilitate transition for customers currently eligible for the grandfathered FiT

## 7. Encouraging the take-up of cost reflective tariffs

- We want to facilitate a customer led transition to cost reflective tariffs
- We will do this through a simple approach by offering an attractive demand based time of use network tariff to all our residential and small business customers
- In providing our customers this option, we are:
  1. **Incentivising a customer led transition to cost reflective tariffs**
  2. We want to **transition the attractiveness in the tariff offering** (by reducing the incentive over the 2019-2024 regulatory control period to be cost reflective)
  3. From the start - we will be clear about the transition period and assignment rules

# 7. Incentive options to support our strategy

We are considering adopting:

Same structure as our existing demand based tariff, and discounting the off-peak demand change



- The discounted arrangement makes the new offer attractive and enables choice by providing an incentive to all customers (including DER) to choose to move to a cost reflective tariff and embrace a new way of thinking about energy use
- In line with our principles this approach – responds to an evolving market, balances the diversity in our customers' interests, supports clean energy future and creates more choice.

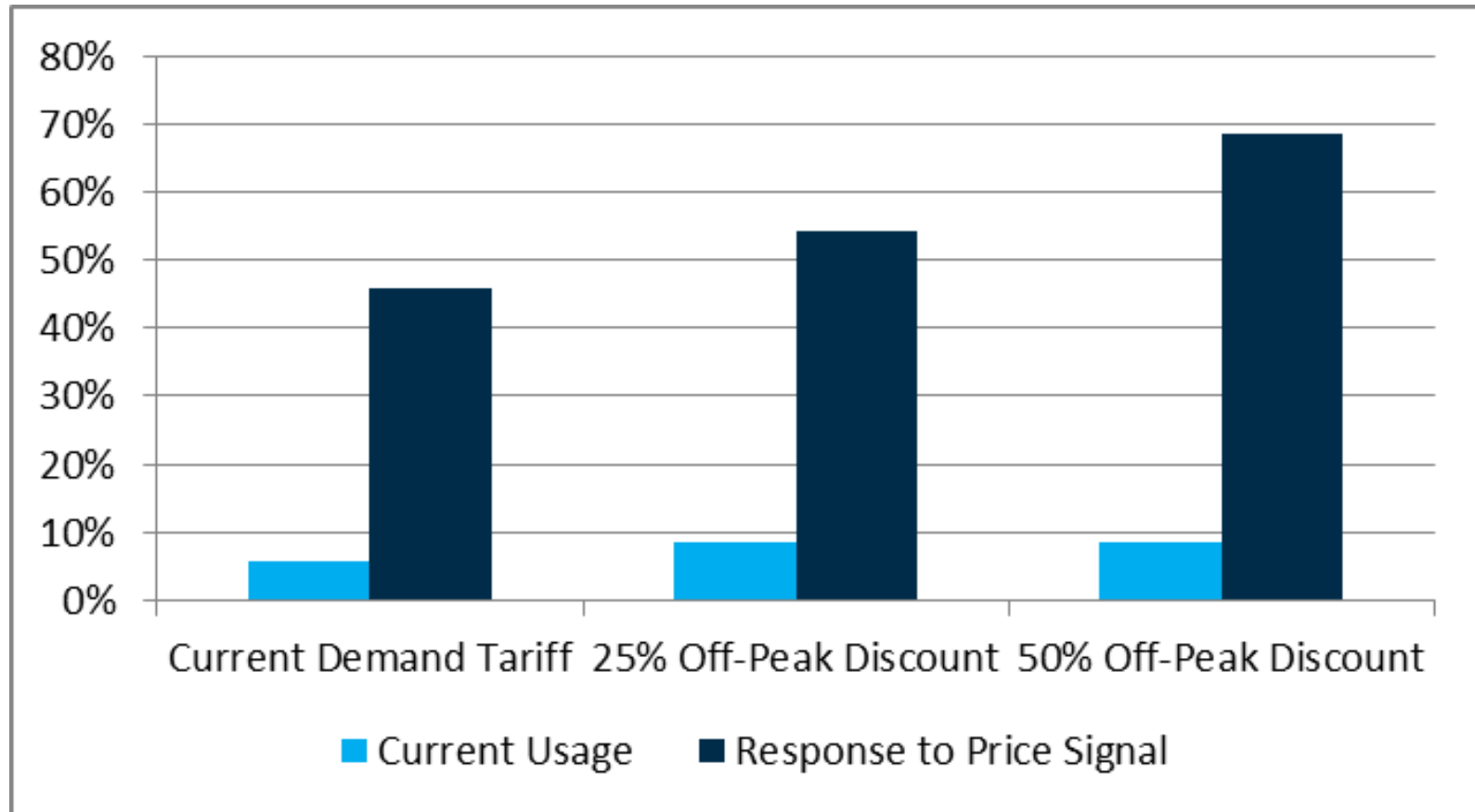
# 7. Incentive options to be tested through customer consultation

- Tariff options for Residential and Small Business customers include:
  - **Base Case: Current** demand based time of use tariffs
  - **Option 1: 25% discount** applied to the off-peak demand charge compared to the applicable demand based time of use tariff
  - **Option 2: 50% discount** applied to the off-peak demand charge compared to the applicable demand based time of use tariff

## 7. Incentive options to be tested through customer consultation

- Based on our tariff trial data, we determined the proportion of **residential solar customers** who may benefit from a shift to a demand based tariff under each scenario.

Proportion of residential solar customers who benefit from the new demand based tariff:

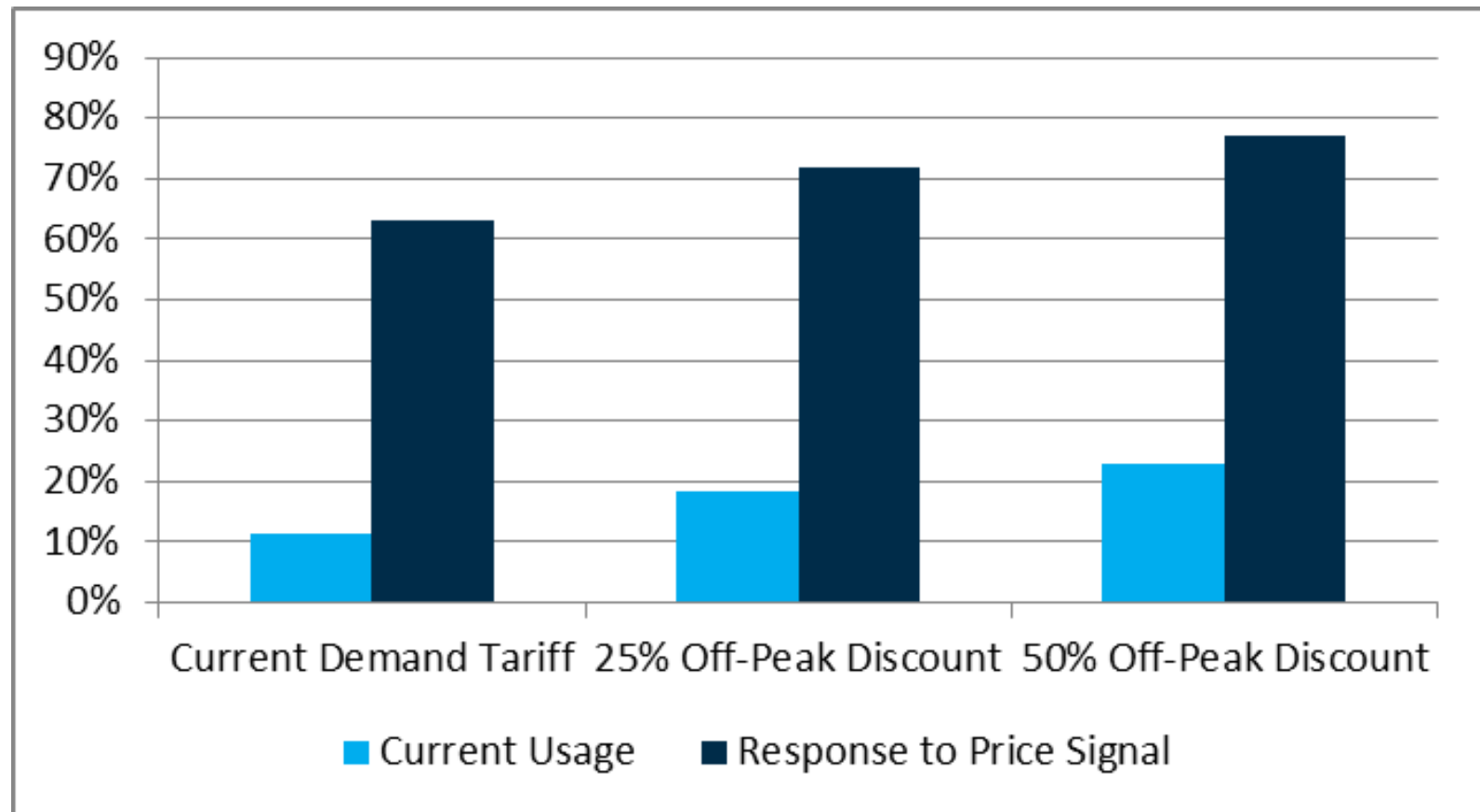




## 7. Incentive options to be tested through customer consultation

- Based on our tariff trial data, we determined the proportion of **residential non-solar customers** who may benefit from a shift to a demand based tariff under each option.

Proportion of residential non-solar customers who benefit from the new demand based tariff:

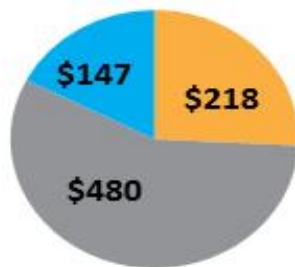


# 7. Incentive options - Residential

- To further understand the impact of the incentive options, we calculated typical Residential network charge impacts for each of the two options and the base case.
- The 50% off-peak charge discount represents a 9% reduction of the annual network charge when compared to the base case residential time of use demand tariff.

Typical annual network charges for Residential customers (\$2019/20):

**Current Demand  
Tariff**



**Annual Network  
Charge \$845**

**25% Off-Peak  
Discount**



**Annual Network  
Charge \$808**

**50% Off-Peak  
Discount**



**Annual Network  
Charge \$772**

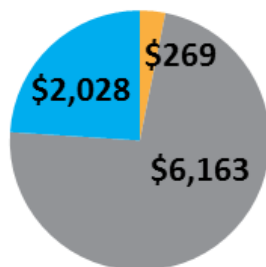


# 7. Incentive options – Small Business

- We also calculated typical Small Business network charge impacts for each of the two options and the base case.
- The 50% off-peak charge discount represents a 12% reduction of the annual network charge when compared to the small business time of use demand tariff.

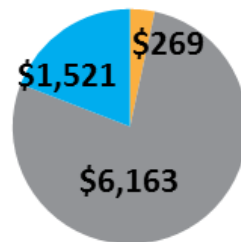
Typical annual network charges for Small Business customers (\$2019/20):

**Current Demand  
Tariff**



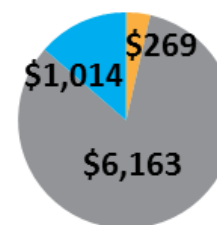
Annual Network  
Charge \$8,460

**25% Off-Peak  
Discount**



Annual Network  
Charge \$7,953

**50% Off-Peak  
Discount**



Annual Network  
Charge \$7,446

■ Daily Charge  
■ Peak Demand Charge  
■ Off-Peak Demand Charge

# 7. Incentive options

- The analysis of the typical network charges was used to quantify the total costs that would arise from offering the discounts to solar customers.
- Various scenarios were examined, with the assumed final uptake ranging from 5% to 100% of all Residential and Small Business solar customers.

**Total Costs from offering the Off-Peak Discounts (over the entire 2019-2024 regulatory period) (\$2019/20):**

<b>Final Uptake (% of Solar Customers)</b>	<b>25% Off-Peak Discount</b>		<b>50% Off-Peak Discount</b>	
5%	\$	113,844	\$	227,688
10%	\$	227,775	\$	455,549
25%	\$	580,308	\$	1,160,615
50%	\$	1,130,016	\$	2,260,032
75%	\$	1,705,098	\$	3,410,197
100%	\$	2,246,479	\$	4,492,959

# 7. Incentive options

- The same analysis was conducted in order to quantify the total costs that would arise from offering the discounts to non-solar customers.
- Two scenarios were examined, the assumed final uptake being 5% and 10% respectively.

**Total Costs from offering the Off-Peak Discounts (over the entire 2019-24 regulatory period) (\$2019/20):**

<b>Final Uptake (% of Non-Solar Customers)</b>	<b>25% Off-Peak Discount</b>		<b>50% Off-Peak Discount</b>	
5%	\$	2,010,191	\$	4,020,381
10%	\$	4,020,134	\$	8,040,269

## 7. Incentive options – what does it mean for the rest of the customer base?

- The impact on the rest of the customer base was analysed for a high uptake and discount option. That is, an uptake of 25% of current solar customers and 10% of non-solar customers combined with a 50% off-peak charge discount – **approx \$9.2m revenue over the 2019-24 period**
- The table below provides a summary of the resulting typical customer charge impact

Typical Annual Network Charge Impact for the rest of the customer base:

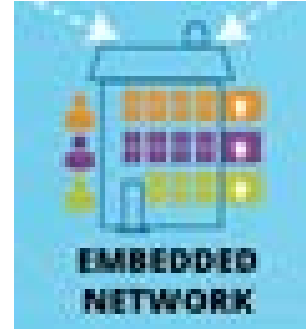
\$2019/20	Average Yearly Impact	
	Maximum Uptake Scenario	
	(\$)	(%)
Residential	5.81	0.73%
Small Business LV	12.38	0.28%
Large Business LV	141.04	0.79%



# **7. Incentive options to be tested through customer consultation – seeking your feedback...**

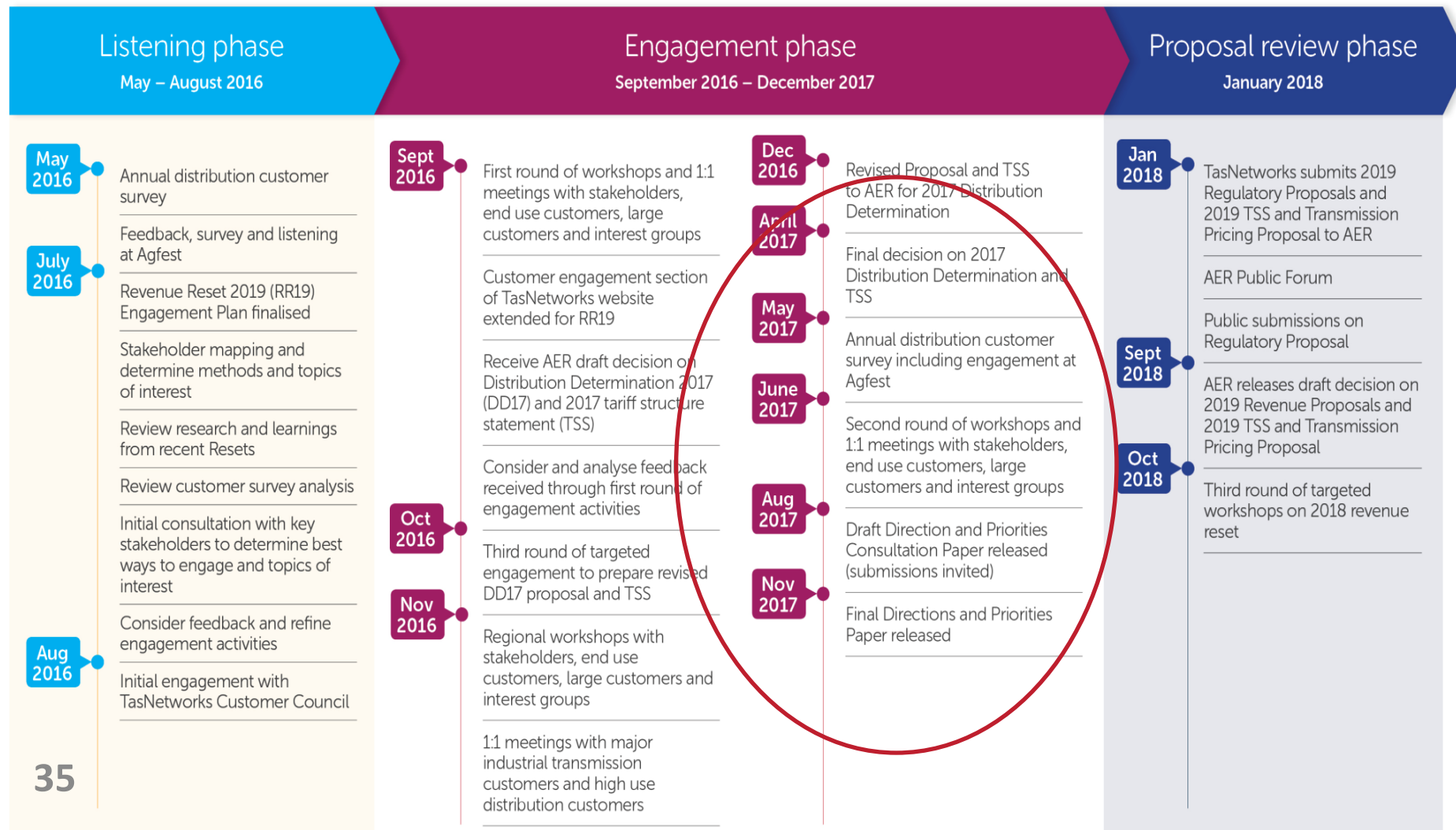
# 7. Embedded networks

- Are generally commercial ventures that seek to aggregate multiple customers downstream of a single grid connection
- Embedded networks are private networks which serve multiple premises and are located within, and connected to, a distribution or transmission system through a parent connection point.
- Common examples include: shopping centres, retirement villages and caravan parks
- We are considering tariff options for these customers – will be send out of factsheet with more information



# 8. What's next?

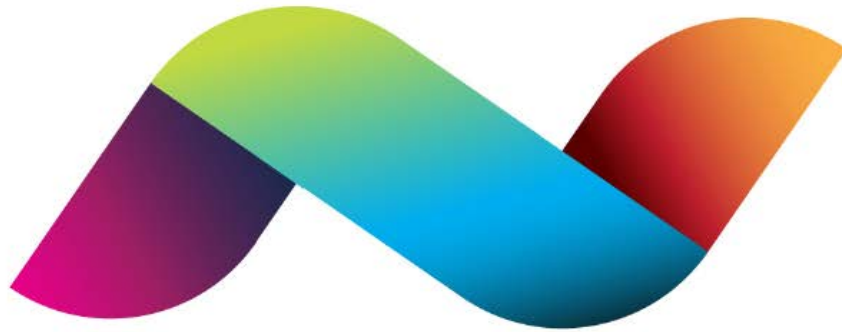
## 2019 Revenue Reset Engagement timeline



## 8. What's next?

- Next Pricing Reform Working Group meeting in 27 July 2017
  - Indicative price path and associated customer impacts
  - Tariff Structure Statement 2019-24, our initial thoughts around structure and making our plans accessible to customers
- Testing our draft plans with customers and stakeholders in June and July
- Direction and priorities consultation paper released in August

Thank you



# TasNetworks

Delivering your power

For further information:

Kirstan Wilding, Leader Regulation

[kirstan.wilding@tasnetworks.com.au](mailto:kirstan.wilding@tasnetworks.com.au)

0362716696