

# Cost Pass Through Applications

Roundtable One - 9 June 2021

Facilitator - [REDACTED]



# Our Vision, Purpose and Values

## Our Vision

### What we want to be

Empowering communities to share and use energy for a better tomorrow.

## Our Purpose

### What we stand for

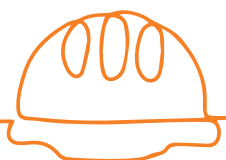
To enable energy solutions that improve life.

## Business Objectives

- Continuous improvements in safety culture and performance
- Operate at industry best practice for efficiency, delivering best value for customers
- Deliver real reductions in customers' distribution network charges
- Deliver a satisfactory Return on Capital Employed
- Reduce the environmental impact of Essential Energy where it is efficient to do so

## Our Values

### What we care about



Make safety your own



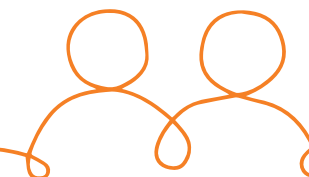
Be easy to do business with



Make every dollar count



Be courageous, Shape the future



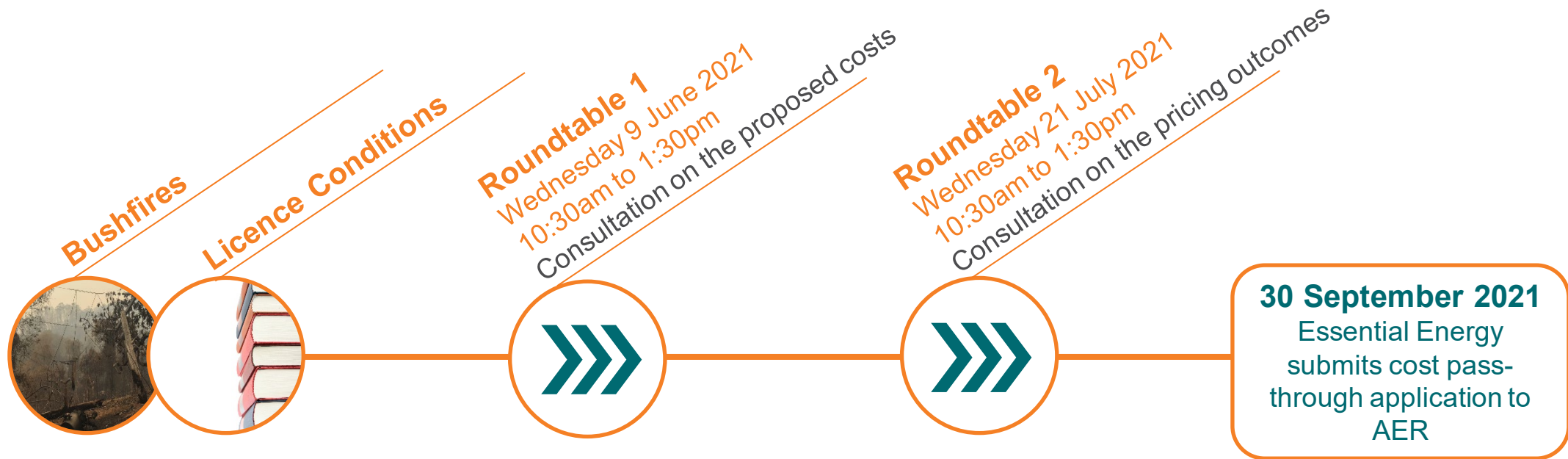
Be inclusive, supportive and honest

# Agenda

- > Introductions and housekeeping
- > What is this about?
- > Regulatory framework
- > 2019-20 Bushfires
- > Break (10 minutes)
- > Critical Infrastructure Licence Conditions
- > Next steps



# What is this about?



# Regulatory Framework

Every 5 years Essential Energy provides a proposal to the Australian Energy Regulator

This proposal includes forecast costs

Forecast costs are translated into allowed revenue

Allowed revenue is recovered in network charges for customers

When there are significant changes in costs, caused by specific events which are outside of our control, the regulatory rules allow for adjustments



The aim of a cost pass through application is to highlight and recover the shortfall in our allowed revenue for the extra costs of these significant events. The shortfall is just until the next 5 year plan begins – this is July 2024 for Essential Energy.

# 2019-20 Bushfire Cost Pass Through Application



# 2019-20 bushfires had a significant impact

Essential Energy's network and operations were severely impacted by unprecedented multiple bushfires across the Coast of NSW in 2019-20

September 2019

February 2020



Bushfires affected our network from September 2019 through to February 2020, with devastating consequences for life and property. The multiple unprecedented fires left a devastating trail throughout our network across vast areas of NSW.

The extensive damage to the electricity infrastructure and loss of assets due to the 2019-20 bushfires set new records for volumes of assets damaged or destroyed in a single fire season.

A significant amount of damage was also caused to the underground network, which meant restoration was more complex and lengthier.

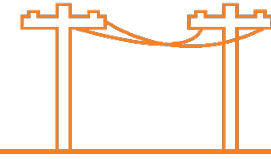


More than 3.4 million hectares was burnt in Essential Energy's network area

Over 10 million hectares of land was burnt across Australia



Assets damaged or destroyed were mainly timber poles



# Mobilisation of crews from across the State

Essential Energy established five operational hubs in depots central to the fire areas



Crews came from all over NSW to assist in the response which allowed peak resourcing but also ensured a presence remained in regional depots to deal with other local issues

Essential Energy's emergency response model draws upon our skilled workforce spread across regional NSW

Multiskilled

Strong fleet capability

Highly efficient

Large network of regional depots

Over 1/3 of our field facing workforce and heavy plant from across the state were mobilised throughout the extreme bushfire season.

The remaining 2/3 of our field workforce stepped up and continued to deal with regular fault and emergency work, which continued unabated





# Recovery efforts

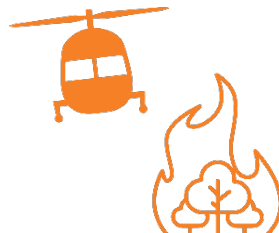
Essential Energy worked closely with the RFS to gain safe access to patrol the network.



We also worked with the RFS and Telstra to provide generation for communications towers to help restore phone and internet coverage where possible.



Drone Specialists and Asset Inspectors also moved into the area to patrol lines alongside local teams.



Where conditions allowed, extensive helicopter patrols were undertaken to assist in assessing damage to the network.

Crews assisted with ongoing efforts to clear roads of fallen powerlines, so that roads could be reopened as soon as possible.



We supported communities with generators

# 2019-20 Fire Response Video

## Essential Energy Fire Response Video



The safety of Essential Energy staff, customers and the general public was always paramount

# Largest event in network history



**0**

injuries throughout response



**3.400m ha**

affected by fire



**104,000+**

customers affected by power outages



**4,700**

life support customers affected by outages



**540+**

peak employees involved in the response



**470+**

peak crew on the ground



**Multiple**

air and ground patrols



**3,200+**

power poles damaged



**4,500**

cross arms damaged



**430,000+**

materials used to complete repairs



**90+**

peak EWP fleet



**425+**

peak light fleet



**150+**

peak heavy fleet



**22,500+**

hazardous trees made safe



# Extensive reliability impact

## 'Excluded Events'

Prior to 2019-20 on average, a SAIDI impact outage duration of **8 minutes**

40 times higher than the average

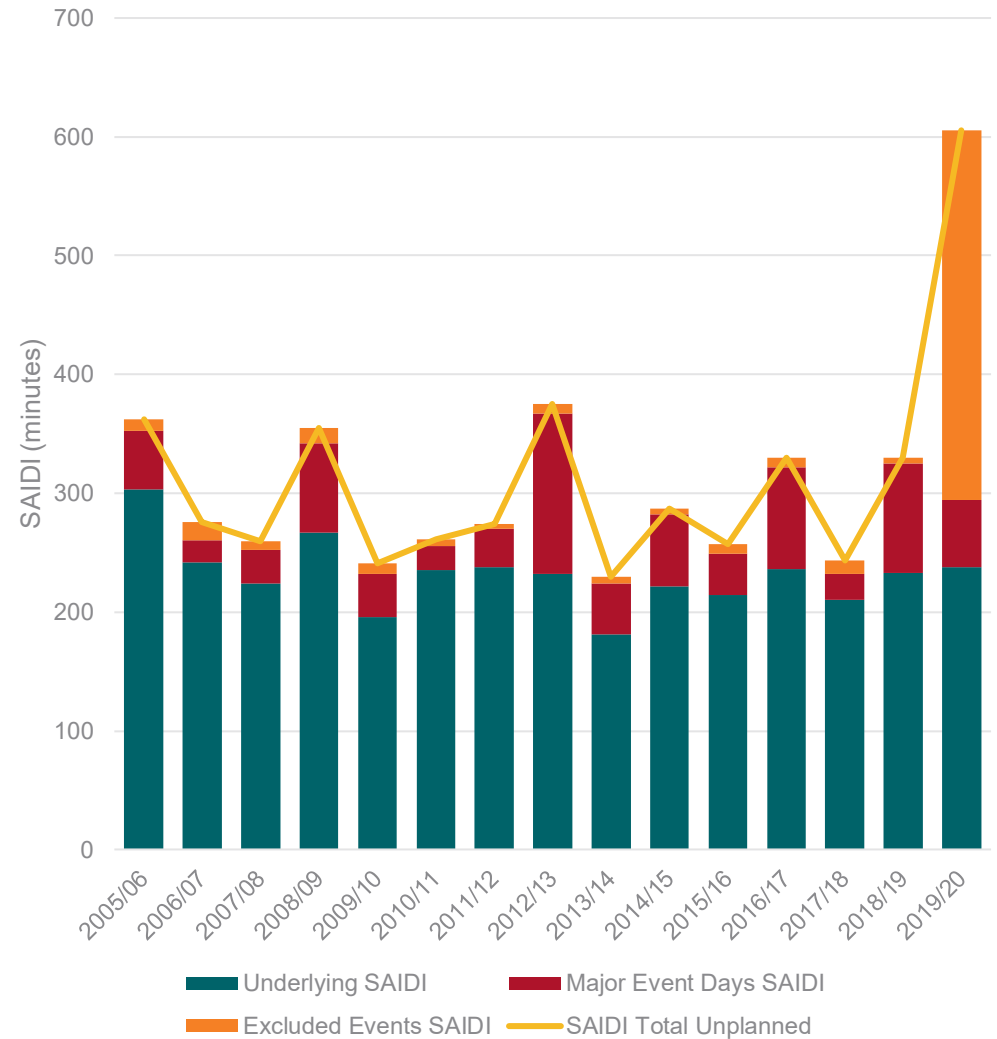
The SAIDI impact outage duration in 2019-20 was **311 minutes**

No level of additional resources would have provided for faster restoration of supply



Despite many of the outages being excluded, Essential Energy's 2019-20 STPIS penalty was **\$19M.**

Duration of Unplanned Outages - SAIDI



# Response capabilities delivered through transformation

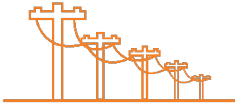
## Recent transformation improvements have enhanced Essential Energy's fault and emergency capability



**Standard toolbox talks** collaborative & consistent communication in all depots



**ServiceNow** complaints management assisted in managing the customer feedback received



**Field Portal** used to confirm work locations (good for out of area staff. Rapid build for generators



**IMSAFE program** drove an improvement in the culture and willingness to address safety risks



**Automated messaging** for outages increased the number of customers using self-service information



**Drones** to fly inaccessible areas and identify damaged assets



**Fleet support** provide overnight support increases productivity and safety of field crews



**Network bandwidth** all depots had WiFi installed and upgraded to provide access to electronic tools



**iPad / iPhone fleet** consistent standard supporting a range of tools and applications



**Fleet Inspection & Audit App** for logging fleet defects and confirming inspections completed

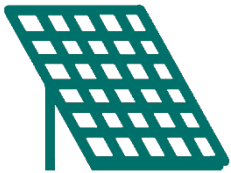


**Stores upgrade** making it easier to supply and replenish the bushfire hubs



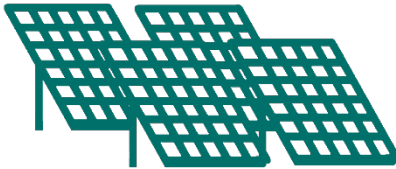
**PowerlinesPro** using LIDAR data to understand topology and support network rebuild

# New technologies deployed to reduce outage times



10

residential customers provided with Stand Alone Power Systems (SAPS)



2

large SAPS systems are serving telecommunication towers which supports 5 commercial customers



2

spare SAPS for future fault and emergency events



All deployed SAPS were on loan from Tesla/5B and PowerCo in New Zealand

# Response required additional expenditure

The costs of undertaking the bushfire response, plus the recovery work to date and in the future, are outlined in the following table. We have included only incremental costs for activities that were incurred solely because of the 2019-20 bushfire event.



## Costs related to the 2019-20 bushfires

\$M FY21	2019-20	2020-21	2021-22	2022-23	2023-24	2019-24
<b>Operating expenditure</b>	\$10.8	\$9.7	\$5.3	\$5.0	-	<b>\$30.8</b>
<b>Capital expenditure</b>	\$43.2	\$3.3	\$9.2	-	-	<b>\$55.7</b>
<b>Total</b>	<b>\$54.0</b>	<b>\$13.1</b>	<b>\$14.5</b>	<b>\$5.0</b>	-	<b>\$86.5</b>

Operating expenditure amounts were driven by a range of emergency response activities, with tree clearing and removal activities being the most significant contributor.



Capital expenditure mainly relates to the replacement of poles, cross arms and other overhead network infrastructure damaged by the bushfires.

# Vegetation management



## Operating expenditure related to the 2019-20 bushfires

\$M FY21	2019-20	2020-21	2021-22	2022-23	2023-24	2019-24
Hazardous trees removal	\$10.8	\$3.9	-	-	-	\$14.7
Vegetation removal, disposal and regrowth mgt	-	\$5.8	\$5.3	\$5.0	-	\$16.1
<b>Total</b>	<b>\$10.8</b>	<b>\$9.7</b>	<b>\$5.3</b>	<b>\$5.0</b>	<b>-</b>	<b>\$30.8</b>

Hazardous trees removal, relates to clearing trees which were damaged in the fires, and which haven't shown any sign of growing again. As these represent a risk to the network they need to be removed.

Vegetation removal, disposal and regrowth management, relates to clearing damaged vegetation and getting rid of undesirable, fast growing and tall growing species of vegetation, whilst keeping low growing shrubs.

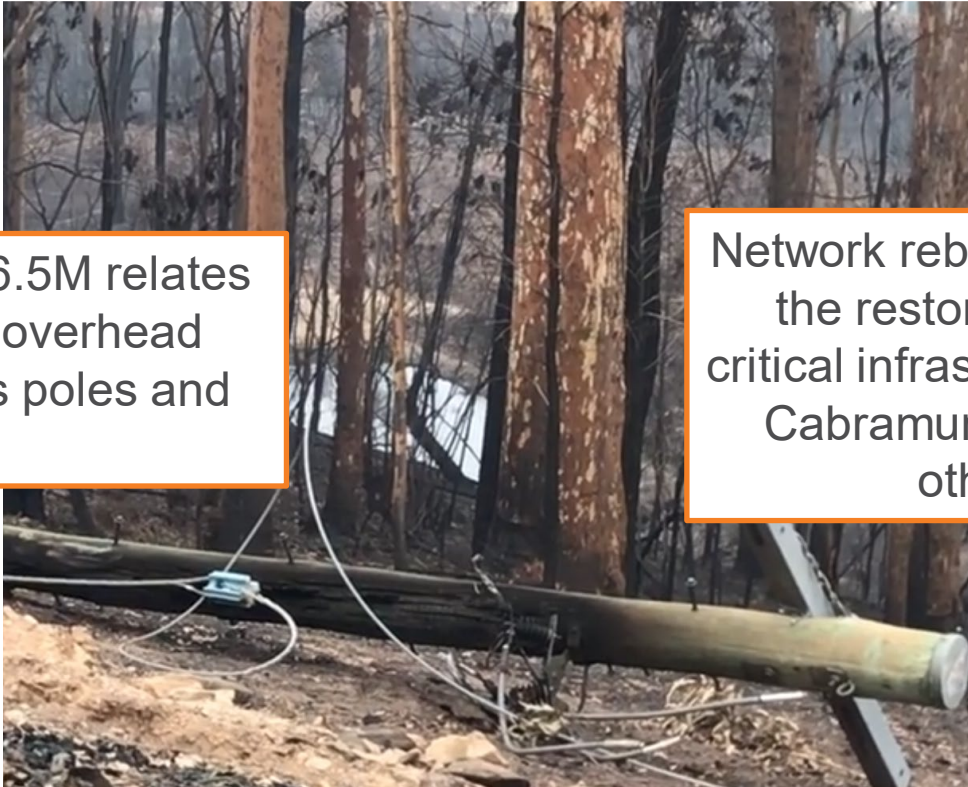




# Asset rectification

## Capital expenditure related to the 2019-20 bushfires

\$M FY21	2019-20	2020-21	2021-22	2022-23	2023-24	2019-24
Asset rectification	\$43.2	\$3.3	-	-	-	\$46.5
Network rebuild – incl. Peak Alone, Cabramurra	-	-	\$9.2	-	-	\$9.2
<b>Total</b>	<b>\$43.2</b>	<b>\$3.3</b>	<b>\$9.2</b>	<b>-</b>	<b>-</b>	<b>\$55.7</b>



Asset rectification of \$46.5M relates to the replacement of overhead network assets such as poles and cross arms.

Network rebuild costs in 2021-22 relate to the restoration of the network to the critical infrastructure site of Peak Alone, to Cabramurra and Mount Selwyn, plus other smaller projects.

# Your feedback on 2019-20 bushfires

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> Questions

# Critical Infrastructure Licence Conditions Cost Pass Through Application



# Background to Licence Conditions



During 2018, the NSW Minister for Energy and Utilities requested that IPART review Essential Energy's licence conditions to streamline and align with Ausgrid and Endeavour Energy



In February 2019, Essential Energy's distributor's licence conditions were changed by the Minister for Energy & Utilities, with immediate effect



The changes came about because of IPART's review of Licence Conditions and Essential Energy's distribution network being classified as "Critical Infrastructure" by the Commonwealth Government



Similar conditions apply to other entities that own or operate Critical Infrastructure



Essential Energy has until 30 June 2024 to be fully compliant with the critical infrastructure licence conditions



Compliance is monitored by IPART

# Licence condition implementation guiding principles

*Essential Energy will work towards compliance with the varied licence conditions and ensure adherence to the IPART approved plan at the **lowest cost possible***

Make the change once – compliance gaps in the first instance should be addressed through Transformation where appropriate

Make good decisions reflecting our corporate values and objectives

Use best endeavours to meet or exceed our commitments made to IPART

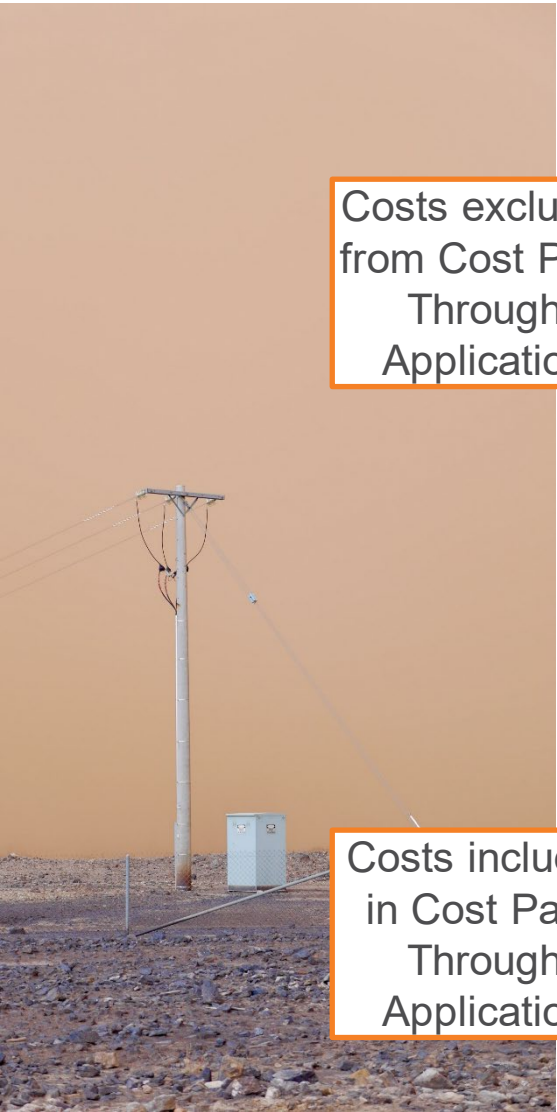
Listen to and respond to our customer's preferences

Compellingly substantiate our costs to comply - prudent and efficient costs will inform a cost pass through proposal



# What licence conditions changed?

Obsolete licence conditions have been removed and some new conditions have been added:



Costs excluded from Cost Pass Through Application

- **1 – Operate within Distribution District.** Obligations on expanding Essential Energy's network in the distribution districts of Ausgrid and Endeavour Energy
- **5A – Reliability provided to individual customers.** Reliability standards for individual customers (HV customers) includes updated feeder definition
- **12 - Maintenance of Certified Management Systems – Asset Management and Environmental Management certification** required within 3 years
- **19A – Compliance with Public Lighting Code.** Mandates compliance with the NSW Public Lighting code from 1 July 2019

Costs included in Cost Pass Through Application

- **9, 10 & 11 Critical Infrastructure conditions.** Must have a substantial presence in Australia, Data Security and Compliance

# Overview of critical infrastructure conditions

Substantial presence in Australia

Data security

A plan was approved by IPART in June 2019

Delivery of the “**Approved Plan**” is a condition of Essential Energy’s Distributor’s Licence. Must be fully complied with by 30 June 2024.

Compliance horizon 2-3 years

Compliance

By 30 September each year, report annually to IPART on compliance, audited and certified by the Board

First report Sept 2019

# The Approved Plan



Provided Essential Energy has a plan approved by IPART and is undertaking the steps outlined in the Approved Plan, Essential Energy remains compliant with the Licence Conditions

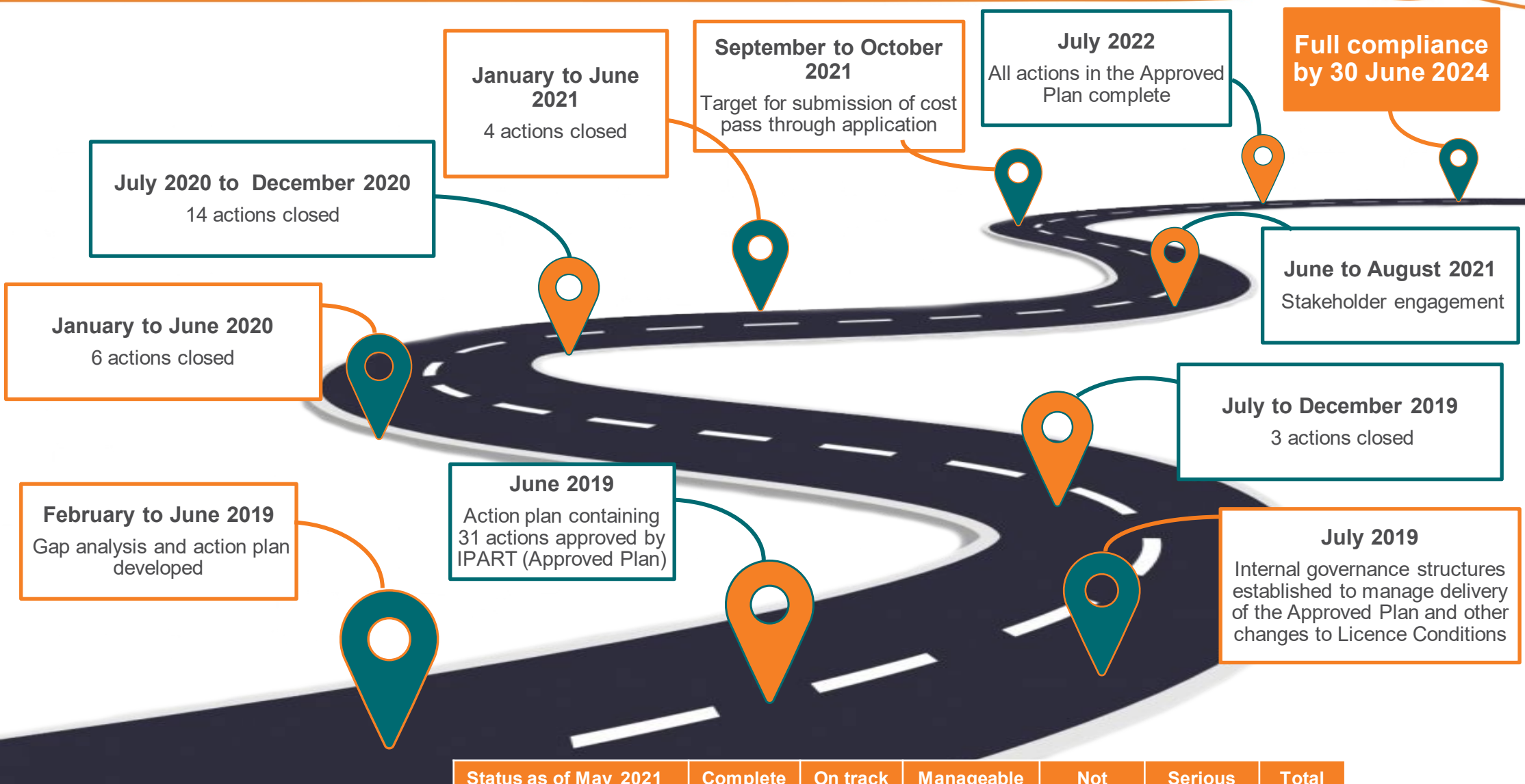
31 actions are required to be implemented by June 2024

The actions mainly cover the areas of Cyber Security, Data Management, Physical Security and Procurement

The costs of delivering the Approved Plan were not included in the 2019-24 Regulatory Determination as the conditions were changed after the Determination was made



# Our Licence Condition compliance journey



Status as of May 2021	Complete	On track	Manageable issues	Not started	Serious Issues	Total
Actions in Approved Plan	28	3	-	-	-	31
Implementation Actions	-	11	1	5	-	17

# Cyber incidents in Australia



Cyber incidents have increased in Australia in both volume and complexity. Organisations need to consider embedding cyber controls in all aspects of the business with a significant focus on education and awareness.

**ACSC** Australian  
**Cyber Security**  
Centre

According to the Australian Cyber Security Centre (ACSC), "An average of 164 cybercrime reports are made by Australians every day... Ransomware has become the biggest threat, used by criminals to lock up people's systems and data and then demand a ransom in return for their release".

There have seen significant cyber incidents in 2021, specifically:

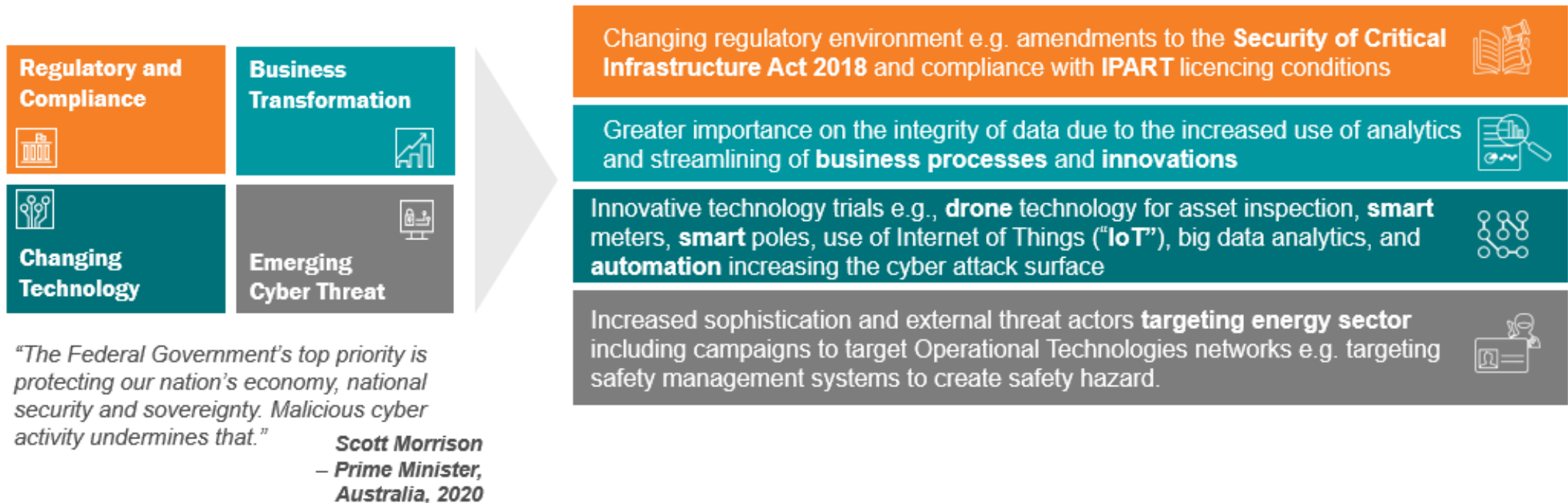
- > Uniting Care Australia
- > Channel 9
- > Anglicare
- > Colonial Pipeline
- > JBS
- > Florida Water Treatment Facility
- > Walmart

# Cyber Security in today's Energy Sector

Cyber Security is defined as the actions required to **prevent, detect and manage** the unauthorised access and control of technology assets and services, and is managed based on risk.

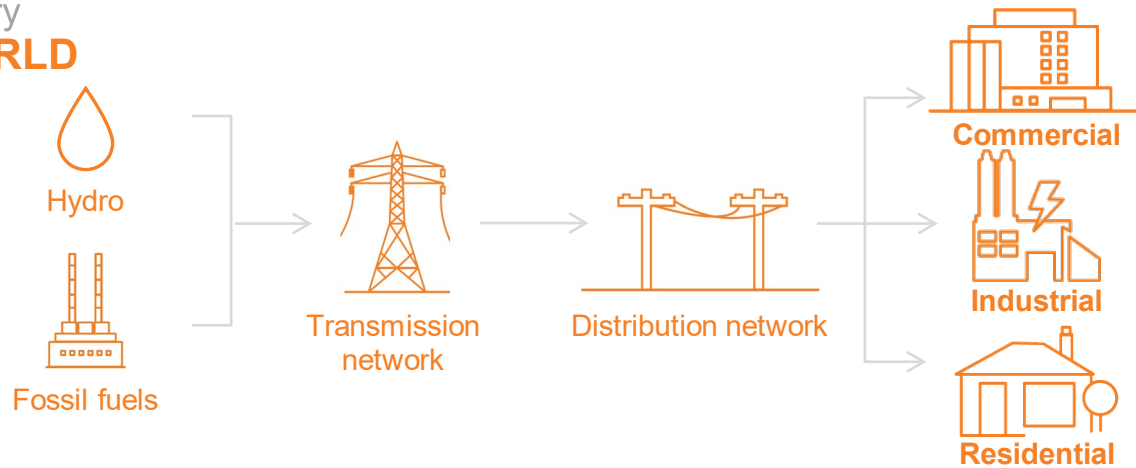
Advanced cyber activity against Australian national interests is increasing in frequency, scale, sophistication and severity. The capability to protect and respond to these activities requires ongoing effort, investment and focus.

Below is an outline of some of the pressures and adversaries faced by the energy sector.



# What are we trying to protect as we evolve

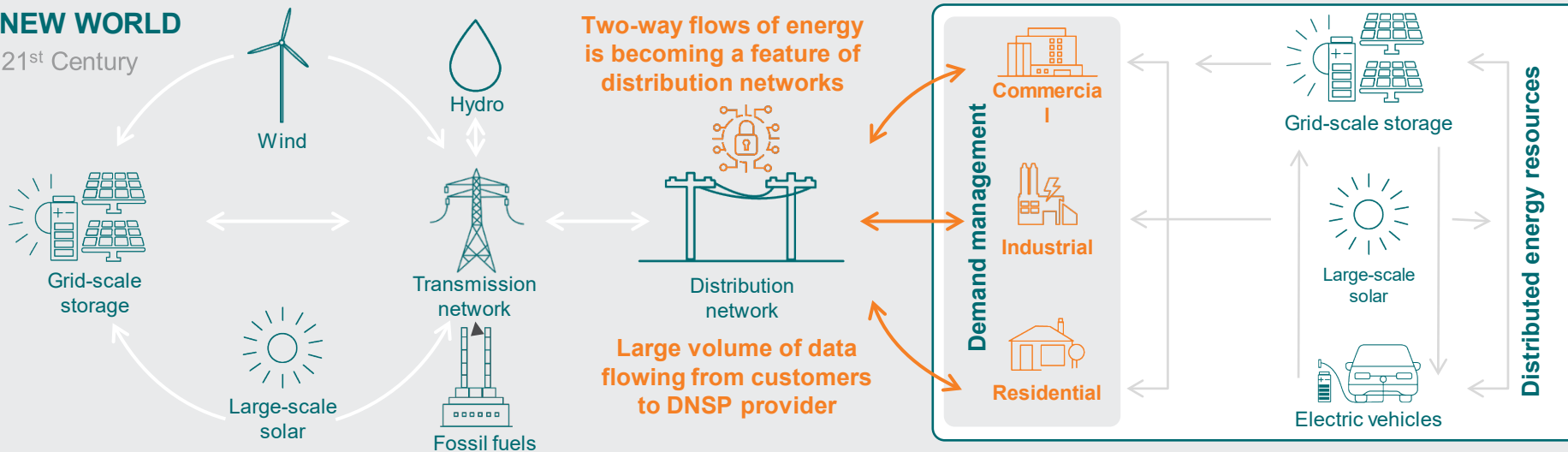
## 20<sup>th</sup> Century OLD WORLD



Critical business processes are increasingly dependant on data. Incidents impact interactions between energy market participants and internal availability of critical systems.

It is essential that these internal and external information flows occur in a safe and secure manner

## 21<sup>st</sup> Century NEW WORLD



### Cyber Risks:

- Increase in digitisation resulting in broader attack surface
- Exploit systems and exfiltrate sensitive asset data
- Physical security breaches
- Control of third-party devices connected to our network

# A Whole of Business approach to Cyber

Some of the high-level outcomes include, but are not limited to embracing:

## Cyber resilience

requires an all-of-organisation approach.

Some of the key teams and domains in Essential Energy's approach include:

- **People**
- **Property (physical security)**
- **OT and building internal cyber security capability.**
- **Processes (including data)**

## People

A cyber aware culture is Essential Energy's main defence, creating a human firewall. This includes our field-based teams and our corporate employees.



## Processes

Governance, risk management practices, policies, data management, procurement and a cyber security framework. Enabling teams to manage and share their own data securely.



## Property

Physical and cyber security work hand in hand, as we seek to ensure that our entire business is safe and secure.

This includes the depots, controls rooms and corporate offices. The physical security framework includes access control, security passes, keying, fence lines and CCTV across all OT and IT assets

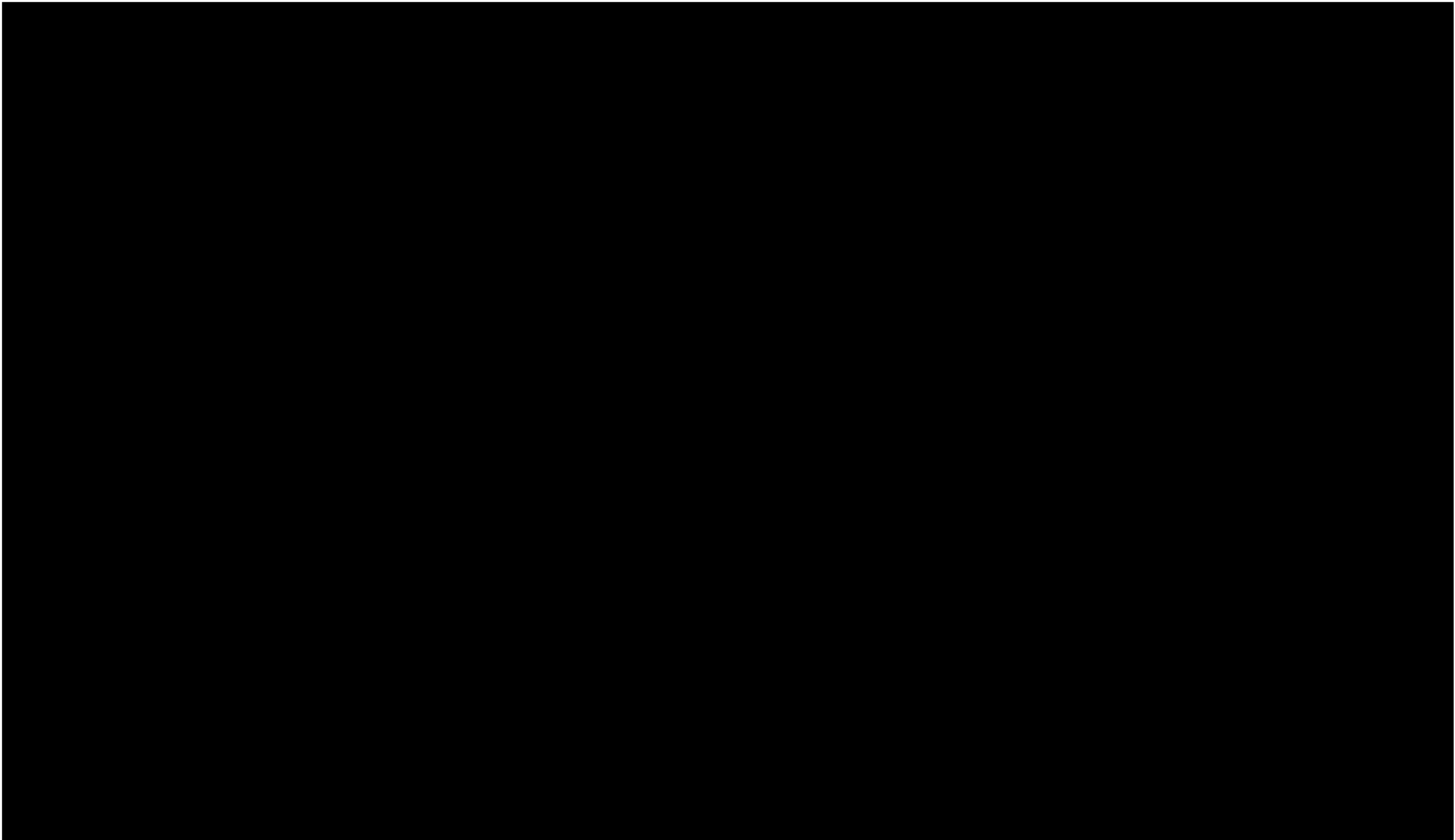


## Operational and Information Technology

Security through design, tools, technology and response processes. Including asset visibility and vulnerability management.



# How long is the proposed Cyber roadmap?



# Cyber options considered

**Using a risk based approach, several options were considered to achieve compliance with our critical infrastructure licence conditions:**

## **Option 1: Base Case – Maintain existing cyber security arrangements**

Based on the existing 2019-24 regulatory allowance for cyclic server and infrastructure renewal, and a small allocation for reactive cyber threat mitigation. This option would not address the risks identified in the cyber security audit and gap analysis and would result in Essential Energy continuing to be non-compliant with its critical infrastructure licence conditions.

## **Option 2: Recommended Option- Achieve compliance at the lowest possible cost**

Total project expenditure of \$33.1M, comprising \$17.3M capex plus \$12.0M opex. \$1.8M opex recurring. (See next section for detail of what is being proposed)

## **Option 3: Maturity Uplift Option - Compliance, Cyber Security Maturity Improvement and Sustainability**

This option would result in a higher level of cyber security which is aligned to the recommendations outlined by the Australian Energy Sector Cyber Security Framework (AESCSF). Essential Energy would achieve compliance with its licence condition but at a higher cost than the recommended Option 2. Total project expenditure of \$38.3M, comprising \$17.8M capex plus \$16.4M opex. \$4.2M opex recurring.

# Cyber - what are we proposing

Option 2 is recommended for the purposes of the cost pass through application.

We will progressively implement cyber security improvements consistent with the IPART-approved compliance plan, including:

IPART Actions	IPART Action Detail
<b>Network and Remote Access Controls</b>	Establish and implement controls and procedures to restrict distribution system access to authorised persons located within Australia, except in accordance with approved emergency access protocols agreed with the Australian Critical Infrastructure Centre. This also includes uplifting access security as well as a focus on eliminating potential for unauthorised remote access.
<b>Vulnerability Management</b>	Upgrade processes and capability to mitigate the potential for exploitation of systems and network vulnerabilities. Suitable vulnerability scanning, assessment, patching and configuration management tools will be deployed as required within the OT and IT environments.
<b>Incident Detection and Management</b>	Implementing Security Information and Event Management processes and capability for detecting and responding to overseas threats and incidents. This will allow forensic analysis of events to continually improve identification and responses
<b>Change Control</b>	Improving controls and procedures to assess and manage the impact of changes to Operational Technology (OT) and Information Technology (IT) environments to prevent overseas access or control of the distribution system.
<b>Device and Environment Hardening</b>	Implementing the use of cryptographic and key management standards for data network and device security to improve resilience.
<b>Data Security</b>	Identification and repatriation of sensitive data potentially accessible outside of Australia. We need to ensure that we protect sensitive data and this may include repatriation or migration of information repositories to Australia

This investment will occur over 5 years from FY20 to FY24 with total costs as follows:

Expenditure	\$M (FY21 Real)
Project Capital Expenditure	\$17.3
Project Operating Expenditure	\$12.0
<b>Total Project Expenditure</b>	<b>\$29.3</b>
Ongoing Operating Expenditure (p.a.)	\$1.8
<b>Total Expenditure FY20-FY24</b>	<b>\$33.1</b>

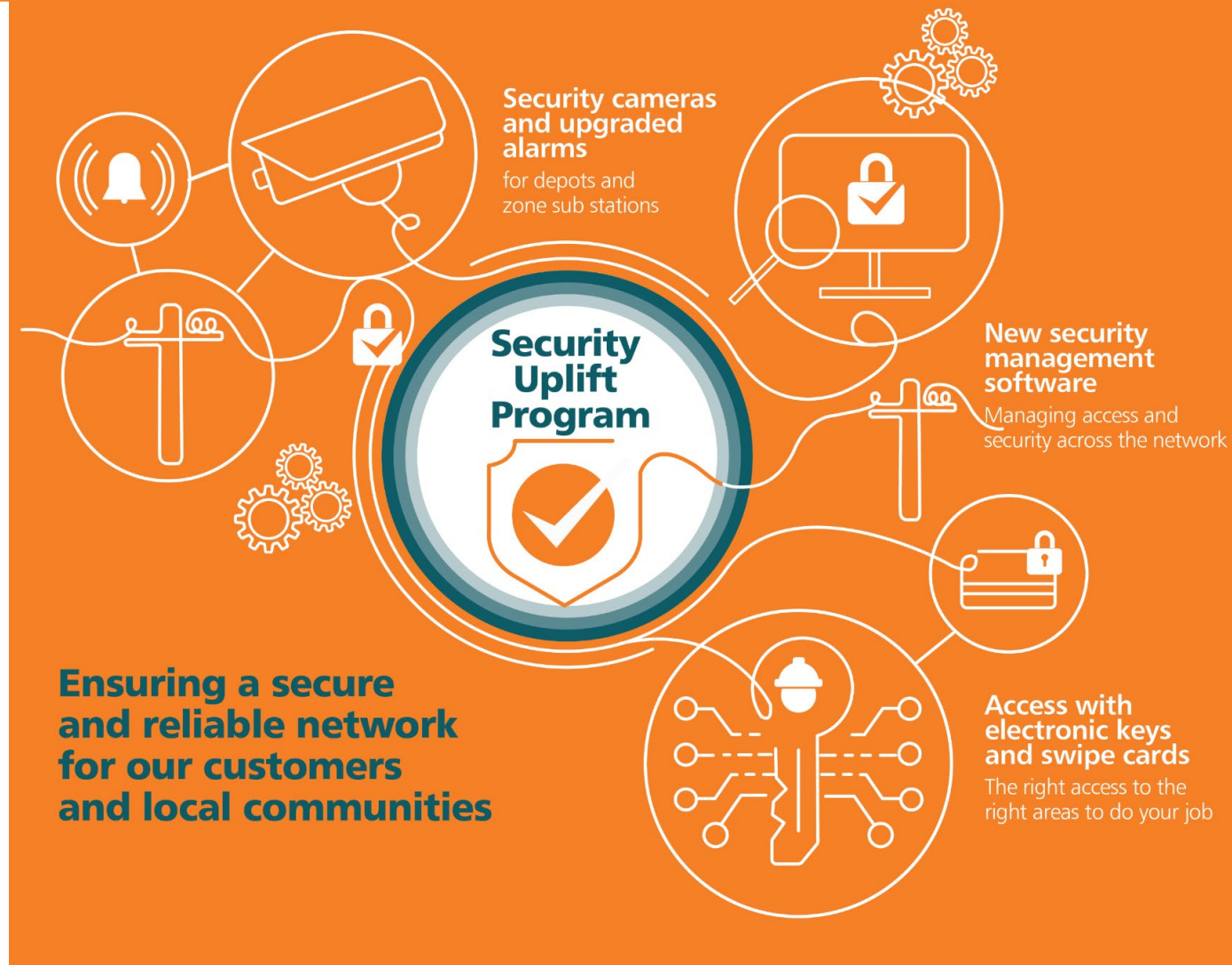


# Physical Security: vision and approach

Ensuring a **secure and reliable network** for our **customers and local communities**

Assess **emerging security risks**, customer and government expectations

Security policies and procedures refreshed in FY21 to update the **Security Strategy and Physical Security Framework** to align to the Licence Conditions



# Physical Security: strategic delivery roadmap

# Physical security options considered



## Option 1: Base Case: Maintain existing physical security arrangements

This option would not address the risks identified in the physical security audit and gap analysis and would result in Essential Energy continuing to be non-compliant with its critical infrastructure licence conditions. Capex of \$0.35M, plus recurring opex of \$0.2M per annum.

## Option 2: Proposed Option – Achieve compliance and risk based security at cost-efficient pricing

Total project expenditure of \$8.9M, comprising \$6.0M capex plus \$2.8M opex. \$0.2M opex recurring.

## Option 3: Best practice physical security arrangements at all Essential Energy sites

This option would result in a higher specification [REDACTED] access control and management system being installed and common physical security standards across all sites. Essential Energy would achieve compliance with its licence conditions, but at far greater cost than Option 2. Total project expenditure of Option 3 is \$14.9M, comprising \$12.1M (capex) and \$2.8M (opex). Ongoing opex is \$0.2M per annum.

# Property Expenditure Summary

Compliance Plan Item 13 - Physical Security		FY20	FY21	FY22	FY23	FY24	Total \$M (FY21)
<b>CAPEX</b>	Access Management and Control - Electronic Hybrid Keying		2.16				<b>2.16</b>
	Electronic Security Protective Controls - Security Systems		1.47				<b>1.47</b>
	Physical Security Protective Controls - Fencing		1.40				<b>1.40</b>
	Physical Security Barriers – High Risk		1.00				<b>1.00</b>
<b>OPEX</b>	Physical Security Gap Analysis and Report		0.72				<b>0.72</b>
	Access Management and Control – Electronic Hybrid Keying		0.21				<b>0.21</b>
	Electronic Security Protective Controls – Security Systems		0.23				<b>0.23</b>
	Unauthorised Access Mitigation Management			0.69	0.78		<b>1.47</b>
	Consultancy and Project Management		0.18				<b>0.18</b>
<b>Totals</b>			<b>7.37</b>	<b>0.69</b>	<b>0.78</b>		<b>8.84</b>

# Licence Conditions Expenditure Summary – Proposed Options

Opex (FY21\$m)	FY20	FY21	FY22	FY23	FY24	FY20-24 Total
Cyber	0.7	2.0	4.1	5.0	3.9	15.8
Property	-	0.6	0.8	1.2	0.2	2.8
Total	0.7	2.6	4.9	6.2	4.1	18.6

Capex (FY21\$m)	FY20	FY21	FY22	FY23	FY24	FY20-24 Total
Cyber	2.0	1.5	5.9	5.4	2.5	17.3
Property	-	6.0	-	-	-	6.0
Total	2.0	7.5	5.9	5.4	2.5	23.3

Totex (FY21\$m)	FY20	FY21	FY22	FY23	FY24	FY20-24 Total
Cyber	2.7	3.5	10.0	10.4	6.4	33.1
Property	-	6.7	0.8	1.2	0.2	8.9
Total	2.7	10.2	10.8	11.6	6.6	42.0

# Feedback on licence conditions

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> Questions

# Trajectory of unfunded events

## Unfunded Licence Condition costs

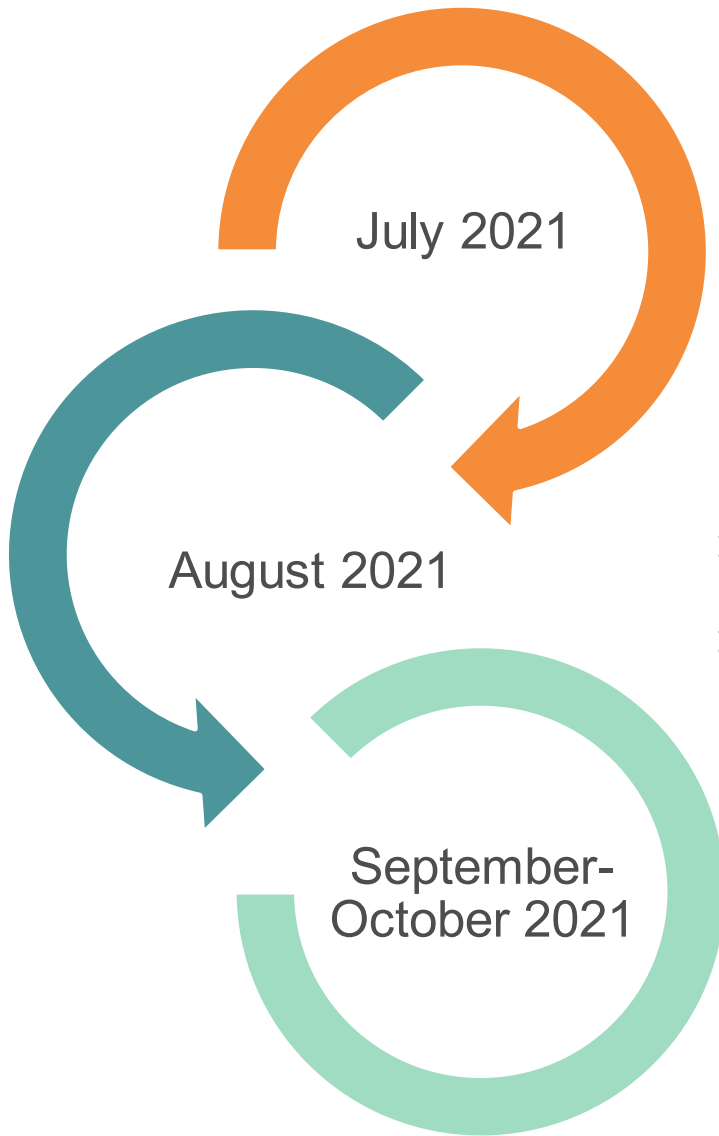
FY20	\$3
FY21	\$10
FY22	\$11
FY23	\$12
FY24	\$7
<b>Total</b>	<b>\$42M</b>

## Unfunded Bushfire costs

FY20	\$54
FY21	\$13
FY22	\$15
FY23	\$5
<b>Total</b>	<b>\$87M</b>

\* Values are in \$FY21 M

# Next steps



- > Respond to unanswered questions from roundtable 1
- > Present finalised costs
- > Provide draft Cost Pass Through documents incorporating feedback from roundtable 1
- > Did we capture the feedback correctly?
- > Seek customer preferences on how customer prices should be adjusted for cost recovery, if approved by the AER

- > Update the Cost Pass Through documents to incorporate feedback from roundtables
- > Seek internal approval of the Cost Pass Through Application

- > Submission of the Cost Pass Through Application to the AER



# Essential Energy

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**EssentialEnergyAU**



**essentialenergy**



**essentialenergytv**



**engage.essentialenergy.com.au**

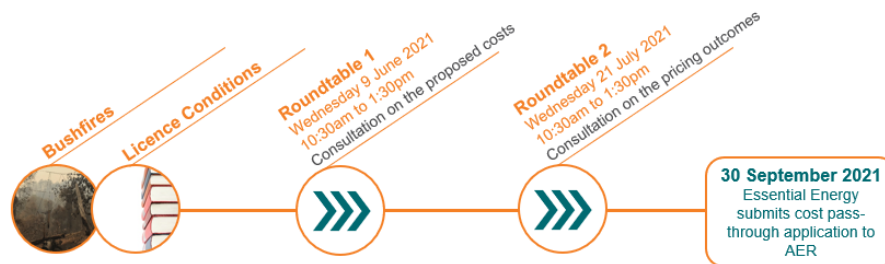
# Roundtable 1: Essential Energy's Cost Pass Through Applications

9 June 2021

## Recap of session held 9 June 2021

Thank you to everyone for your participation in the first session and for providing tangible feedback which we can use to shape and adjust Essential Energy's application to the Australian Energy Regulator (AER).

All feedback is welcome and encouraged. Please get in touch if you would like to share additional thoughts, concerns or insights prior to the next session.



**This roundtable** focussed on the costs of events – Bushfires and Licence Conditions:

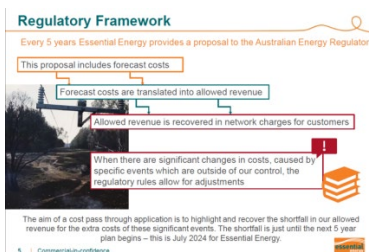
- We shared how these unexpected and unplanned costs have impacted Essential Energy.
- We discussed what you think about the costs, how we spent the money, and what still needs to be done over the next few years.
- This Roundtable provided views on the costs before we start talking about recovery.

**The 2nd roundtable in July will:**

- Show you how we've listened to the feedback you gave us in June.
- Outline some alternative ways that we can recover these costs via network charges.
- Seek your preferences on the different recovery patterns.

## What we shared. What we heard.

### Regulatory Framework



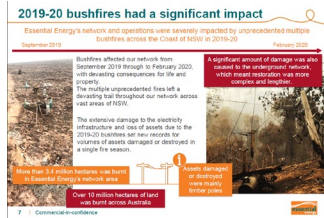
Every 5 years Essential Energy provides a plan to the AER, outlining the work Essential Energy needs to do, to continue to provide a safe and reliable electricity supply to customers. The plan includes forecast costs. In general, Essential Energy absorbs the risk that costs are different to the plan. The planned costs are translated into allowed revenue for each of the years, and this revenue is recovered in network charges for customers.

When there are significant changes in costs, caused by specific events which are outside of Essential Energy's control, the regulatory rules allow for adjustments. If the AER agrees that the extra costs are material, should be covered, and that what we propose is justified, the network charges already set for the 5 years may be adjusted to recover the extra costs.

There are specific events that are automatically included in the National Electricity Rules as being potential cost pass through events, such as regulatory changes, and those which may be nominated by Essential Energy and accepted by the AER in the 5-year determination, such as natural disasters.

The aim of these cost pass through applications are to highlight and recover the shortfall in allowed revenue (for the 5-year period to June 2024), for the extra costs of these significant events.

2019-24 Bushfire Cost Pass Through Application



Between September 2019 and February 2020, Essential Energy's network and operations were severely impacted by unprecedented multiple bushfires across the North and South Coast of NSW, having a devastating impact on customers and extensive damage to electricity infrastructure and loss of assets (mainly timber poles), and significant damage to the underground network.

Every team across the business was involved in some way; crews attended from all over the state, and for 6 months, an equivalent of 25 percent of staff worked on rebuilding the network. Essential Energy worked with community organisations and agencies to restore power to critical infrastructure such as roads, communications, water and sewage supplies and provided customer and community support such as generators and fuel cards to people that could not be without power.

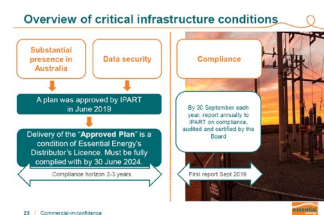
Stand-alone power systems (SAPS) were a temporary and significant innovation and critical to the response as SAPS gave Essential Energy the time to redesign and rebuild the network in a much more resilient way.

Essential Energy's finance team worked very closely with all areas of the business including fleet, logistics and field teams in order to accurately capture the costs of the event. Costs are outlined on page 15, 16,17 of the presentation (*attached – CPT Roundtable 1*).

Discussion included:

- Tree removal costs have not been alleviated in future years, as the trees burnt were healthy trees and would have lived for many years in the corridor, without the need to be removed. As a result of the bushfires they have died, haven't regenerated, and any dead, dying or diseased trees that have a chance of falling over our network assets pose a threat, and have to be removed.
- Essential Energy does not have SAPS included in Essential Energy's asset base. SAPS were deployed due to the bushfires and STPIS was not avoided. There is a SAPS recovery cost as the SAPS were specifically installed for bushfire response and although the SAPS were loaned, there was a cost for installation and operation.
- From adversity there comes opportunity and there were many valuable learnings which provide value to consumers in the future.
- SAPS have been highlighted as a great fault and emergency tool that can be deployed quite quickly and allow time to restore power to other customers more quickly.
- Financial forecasting analysis includes recognising areas of the network that would have incurred maintenance in this regulatory period. For example, 3200 poles were replaced, and this area of the network was already in good shape as there were very minimal defect poles. Essential Energy calculates the risk that has been avoided by doing work on the network and in this case this work didn't avoid any future risk as a good network was replaced with another good network.
- Distinguishing between these costs and business-as-usual costs was straightforward as crews and materials were dedicated to the bushfire task; timesheets, job numbers, etc. for labour and materials. We captured the values separately from business-as-usual, from the start very beginning of the significant bushfire impacts. Essential Energy is confident that there are no business-as-usual costs included in the amount sought.

Critical Infrastructure Licence Conditions Cost Pass Through Application



Essential Energy is working to an IPART approved plan to meet compliance with critical infrastructure licence conditions. The current regulatory proposal only had a small allowance for cyber security, as the conditions were changed after the Determination was made. 17 of the 31 actions in the plan required further gap analysis and the delivery of an implementation plan, to be completed by 30 June 2024. The actions mainly cover the areas of Cyber Security, Data Management, Physical Security and Procurement.

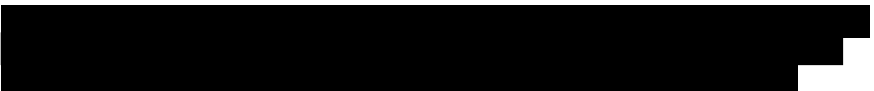
Globally there are significant cyber incidents impacting the operations of businesses and it is critical for Essential Energy to mitigate against these incidents. Essential Energy has developed a cyber strategy and part of developing that strategy was to understand the external landscape; what is changing and how does Essential Energy respond to these issues. Key areas of focus in the strategy are outlined on page 27 - 30 of the presentation (*attached - CPT Roundtable 1*).

Discussion included:

- Given that licence conditions are driven by Government should Government also be responsible for some costs? In terms of bushfire costs Essential Energy did engage

actively with the NSW Government to seek funding. It is suggested to include this in the narrative.

- Cyber security is embedded by design into Essential Energy's Cyber Security Strategy. Instead of digitising first and then thinking about how to secure it from a cyber security perspective, potentially putting Essential Energy at risk, Essential Energy's strategy is to understand the design concepts upfront. The Strategy outlines that a risk assessment is to be undertaken before digitising parts of the network.
- There are some components Essential Energy will digitise very differently to other businesses. For example, the critical infrastructure components of operational technology. Operational technology are those components that control and define Essential Energy's energy distribution network versus how Essential Energy might treat a corporate network application i.e., email or word documentation.
- Collaboration certainly happens within the industry. An example is Essential Energy's participation in the [Critical Infrastructure Centre Energy Sector Group](#), a forum to discuss cyber security related activities. A key element of discussion is amendments to the Security of Critical Infrastructure Act 2018, working through sector specific standards, including the Australian Energy Cyber Security Framework as the Standard, which is the Standard Essential Energy has built Essential Energy's Cyber Security Strategy on.
- Consider analysing 'going digital' compared to analogue. The value of human interaction could be one factor lost by digitisation.
- In terms of operating the network, from an operational technology perspective, the industry is experiencing rapid investment in renewables, batteries, embedded solar on people's houses, EV's, EV charging, etc. The business needs to invest in digitisation so that the network can react in real time and adjust itself, or the business will need to invest billions in bigger underground cables, bigger infrastructure, to support that extra demand. Build this into the narrative – 'this is one of the reasons why digitisation is so important; the old way is going to be more costly than the new way'.
- Essential Energy has a mantra "by the field for the field". Operational employees, working in the field, are involved in the ideation and testing of digital solutions, and Essential Energy has experienced an almost 100% uptake of the new tools. Essential Energy has used User Experience and Design in the development of the tools, and they have been built in such a way to keep the human interaction.
- Given that Essential Energy is a State-Owned Corporation, investment in essence has been paid for by consumers. Consider the ownership and value of the intellectual property. Is there a return on investment for consumers for the digital products created?
- Essential Energy is launching a digital safety and risk assessment tool, which has removed twelve different paper processes whilst keeping the human interaction of meaningful safety conversations. An open invitation is extended to walk through this tool.
- If looking at commercialising products, consider having principles around this. It is noted that commercialisation incurs costs of obtaining intellectual protection through the cost of patents and licencing etc, versus the benefit.
- The cyber industry and cyber security vendors are creating products that meet a specific need, and hence are arguably, at times, expensive. The Energy industry could get together to understand what products are being developed and which are the most cost effective. A challenge experienced by the energy industry is resourcing and the cost of experienced, security focused, technical labour.
- The guidelines of the licence conditions require Essential Energy to always operate at best practice which is challenging for DNSPs to define what best practice is and keep up with the rapidly evolving enterprises.
- Due to the nature of a rapidly evolving e-tech/cyber environment, and regulatory proposals being a moment in time, is there a need for the cost pass through application to be revisited fairly frequently, and again during this regulatory period?

- 
- Essential Energy have been part of the working groups on the Security Legislation Amendment (Critical Infrastructure) Bill 2020 (Cth), which calls for positive

- security obligations. It is not proposed that there would be another cost pass through request in the current period.
- Additionally, Essential Energy's Board has approved \$35.6M of cyber investment on top of the previous 18-month investment of \$15.6M, so the total approved investment in cyber security is circa \$51M.
  - The key point of differentiation for Essential Energy is that we will invest in cyber security over and above what is being requested as a cost pass through for the Licence Conditions.
- Globally there have been some significant cyber incidents in 2021, such as the Colonial Pipeline cyber-attack in May 2021, and the cyber-attack on a major meat business in June 2021. These incidents have changed the landscape and the cyber environment significantly; so, it is expected that Essential Energy's cyber security Roadmap will need to pivot, based on what is happening in the industry and in the threat landscape.
  - It is unlikely that the cost pass through application (because it relates only to the licence conditions) will change as Essential Energy's implementation plan is based on changing conditions and is largely about sovereignty and data protection.
  - Bushfire insurance premiums are escalating rapidly due to the bushfires in California and Australia. In the cyber insurance industry, there is an ethical debate about paying ransomware verses not, noting that if the payment is aiding and abetting a terrorist group then it is considered illegal. Insurance premiums for cyber security are going up approximately 30 percent year on year and there is a movement in some parts of the globe, like France, to request that insurers don't pay ransomware as it is generating an industry full of hackers.
  - Are you outlining potential additional cyber security costs that might go into the cost pass through application due to the changing landscape?
    - The cost pass through is about the costs that are associated with the changing licence conditions only.
    - More broadly Essential Energy is investing \$51M on cyber security. Essential Energy is requesting a cost pass through on a subset of the \$51M which is for the specific licence conditions that are a new requirement in this current regulatory period and were not planned for.
    - Specifically, data sovereignty licence conditions impact Essential Energy, ensuring that the maintenance of Essential Energy's distribution management system is performed in Australia, and that vendors maintaining our critical systems are not based overseas. Secondly how we treat data and associated systems.
    - If anything above what is required there, we not prosing to pass these through.

Cyber options considered – proposing recommending option two (*page 31 & 32 CTP Roundtable 1 – attached*) which is to achieve our compliance with the licence conditions at the lowest possible cost for our consumers. Today this is around \$33.1M.

A recently conducted benchmark activity estimated that most DNSPs were spending around \$30M over a three-year period on their cyber security uplift. This highlights that Essential Energy is now in line with this benchmark, but historically it has underinvested in Cyber Security.

Essential Energy's investment includes an uplift in people, process and technology to maintain data security.

Discussion included:

- Understanding the security implications or requirements on customers as the users of some of digital initiatives, particularly in the DER space.
- From an Essential Energy perspective, any interactions with customers must be delivered safely and securely. The Standards relating to smart devices/appliances is an area that requires further exploration to understand the characteristics of these customers.
- Narrative - given all the changes that are happening in the industry, build this into the conversations and broader messaging for the community. i.e., the value of implementing this investment, as the ultimate value proposition for customers is better. People want to talk about the bigger picture. They don't care about the individual pots of money and what it is, they want to know where it is all going, how they can be a part of this, how it all fits.
- The DSO narrative talks about the future, that customers can use more appliances in the most efficient way, so that people can drive their electric vehicles where they need to, and that customers can be part of this new future. This talks to the value proposition, social

licence, people's visions and where customers want to be. Therefore, you don't get bogged down into the numbers say \$32M – people look to the future.

- In terms of investment and networks required to make investment, is the key factor in terms of what costs are required dependent on what systems and processes are in place, or do other factors come into play such as customer numbers and the size of the network? i.e., a small DNSP versus a larger DNSP.
  - It is both. Essential Energy's cyber uplift is related to people, processes, tools, technologies, platforms etc and expenditure also depends on the culture of the organisation, legacy systems, volume of data, service providers, who the vendors are, and using industry benchmarks to define programs.
- Is ongoing OPEX over and above business-as-usual?
  - There are two accelerants for the ongoing OPEX: 1. maintenance and support – the investment in tools and technologies; 2. resourcing.
  - Ongoing OPEX is measured as an increment in the existing regulatory allowance on cyber security.

To comply with the critical infrastructure conditions contained in its Distributor's Licence, Essential Energy is required to ensure that only authorised personnel have access to the Operational Technology (OT) and IT systems that are used to control the electricity network.

In FY21, Essential Energy conducted a physical security audit and gap analysis at all sites. This resulted in 369 physical security risks being identified, 281 of which relate directly to the new licence conditions. The proposed investment will address these 281 risks in a prudent and cost-efficient manner. The costs of this investment are not included in the current allowance for the FY 2019-24 Regulatory Period.

The remaining 88 corrective actions are being addressed through business-as-usual practices. The cost to rectify the Physical Security corrective actions is \$14.9M over FY2021-23. Essential Energy is aware of and has considered the impact to the end consumer of a cost pass through. As such, of the \$14.9M, Essential Energy is seeking cost pass through for \$8.9M. The remaining \$6M is not directly related to licencing conditions but rather ongoing investment in network resilience and robustness. This \$6M has been allocated from other internal funding options. Essential Energy has a phased approach to implementing the appropriate and effective physical security measures to respond and mitigate risk.

Essential Energy is working closely with the NSW Police [redacted] Local Area Command and has seen a decrease in crime on property and unauthorised access at sites compared to previous years (copper thefts, etc.), partly due to CCV camera installation.

Discussion included:

- [redacted] landowners can work across very diverse and challenging terrain and may have energy access and connectivity challenges. There is a strong message being heard, for everyone to go digital. It is necessary to have protections or backups in case the digital tool does not work.
- An example is the e-key. Some Essential Energy sites don't have internet access, and this is managed by remote access and ensuring the mechanical analogue aspects are still in play with digital supporting management and monitoring.
- Digital security is primarily about improving security for Essential Energy property assets and there is no private property access.

Further information will be provided at Roundtable 2 (July 21), on additional benefits of the property security uplift.

Costs are outlined on page 36, 37 of the presentation (*attached – CPT Roundtable 1*).

Discussion included:

- Identification of savings. Essential Energy has started to track the potential savings due to increased security.

## Physical Security



General

Roundtable 2 will discuss cost allocations and propose pricing path options. Essential Energy is indifferent to what the price paths look like and are keen to receive feedback on preferences. Essential Energy has spoken to the AER about multiperiod smoothing.

Discussion included:

- Consideration for flexibility in allocations i.e., everyone benefits from cyber security so should this be captured as a fixed cost to be shared by everyone or be considered a variable cost as there may be some customers who receive the most benefit for example, solar.
- Should the profile follow the same profile as the Tariff Structure Statement Direction in terms of moving components as the AER has set this in a certain way for the current regulatory period. This requires further discussion; given that all customers don't benefit equally, a different structure may be more appropriate.
- As a retailer there are cost pass through condition provisions and to be conscious that consumers aren't disproportionately impacted in a negative way.
- Climate mapping for bushfires. Look to future proof it as it might not be the most cost-effective sensible approach now, but is the terrain and network likely to burn again, and then the costs added again?
  - Essential Energy has rebuilt part of the network with composite poles and is investing to 'build back better'. If a fire goes through the same area in future there will be much less damage to the network. Essential Energy planning looks at where the poles can be placed to maximise the resilience of the network.
- The Regulatory Risk Framework associated with climate change is a necessary broader discussion. A key component is resilience, and what this means for network investment, what are community expectations on Essential Energy as a first responder, e.g., use of SAPS by a network as an emergency response.
- This thinking is a shift from the way Essential Energy has planned the network. Historically the network has been designed to prevent Essential Energy assets from starting the fire. The next regulatory proposal will have a focus on climate change as a risk to the network.
- As part of bushfire recovery, Essential Energy has applied for Regional NSW funding to expand spending on SAPS for emergency response, composite poles and elements that would help Essential Energy identify outages more efficiently.

Essential Energy will be submitting the two Cost Pass Through applications individually, but at the same time, so that the events and costs to customers can be assessed specifically.

**Feedback informs Essential Energy's Cost Pass Through Application**

Theme	Essential Energy Action
Avoided costs	Essential Energy will ensure that any avoided future costs are reflected in the Cost Pass Through Application.
Funding alternatives (bushfire)	Provide detail of the avenues taken to seek alternative funding.
Value	Essential Energy will provide more explanation around the value that customers are receiving as a result of the increased expenditure.
Benefits	Essential Energy will ensure that details of reduced costs as a benefit of investing in physical security are reflected in the business cases
Technology	Describe how Essential Energy is utilising technology, articulate the risk-based approach to cyber security.
Leadership	Explain how Essential Energy is taking an industry leadership approach to cyber security.
Commercialisation	Outline whether any of this expenditure can be leveraged to earn a return on investment for customers.

Fixed vs Variable	Essential Energy will review and explain whether the recovery of the costs can be made more equitable - potentially applying more to the fixed charge rather than variable usage charge.
<b>Broader consumer communications:</b>	
Narrative	Tell the whole story so that consumers are aware of the pathway to the future, what this future looks like, and how they can be part of it.
SAPS	Explain the reasons SAPS were installed, and the identified outcomes. Share learnings.

The pre-reading material shared with the invitation provides more information.

If you have any questions or views on the information shared during the session, or in the information sheets provided, please reach out to let us know your thoughts, points of difference, share your concerns or feedback.

We look forward to our next discussion at Roundtable 2 on Wednesday 21 July 2021.

## Your participation



# Cost Pass Through Applications

## Recap and feedback from Roundtable 1

The table below provides a snapshot of the topics and issues discussed at the first roundtable on 9 June 2021, and which we committed to responding to.

Theme	Essential Energy action	Response
<b>Avoided costs</b>	Essential Energy will ensure that any avoided future costs are reflected in the Cost Pass Through Application	We have investigated more closely at what work would not be needed in the next few years in the areas that had repairs done, as a result of the bushfires. We have included \$215k in savings for these cancelled tasks (460) and a small number of pole replacements (4).
<b>Funding alternatives (bushfire)</b>	Provide detail of the avenues taken to seek alternative funding.	Passing the costs of the bushfires through to customers was a last resort for us. We had investigated funding sources at the Federal and State government levels. It was indicated that there would be capacity within the NSW Government's Bushfire Recovery Fund to assist to some extent. However, we have been advised that the financial impacts of COVID-19 mean that funding is no longer available to assist.
<b>Value</b>	Essential Energy will provide more explanation around the value that customers are receiving as a result of the increased expenditure on cyber security.	<p>The investment in cyber security is to provide the Government and the community, with assurance that Essential Energy is not only better positioned to protect itself from cyber-attacks but also able to recover rapidly in the event of a cyber incident. This includes cyber incidents and the flow-on impact to other essential services such as health care, law enforcement, telecommunications, food services and logistics.</p> <p>Essential Energy is ensuring it can securely enable current and emerging technologies which our communities will increasingly rely on, e.g. smart devices, electric vehicles and customer focused energy trading markets. This includes the protection of data supporting these current and emerging technologies.</p> <p>As well as a more resilient network that is less likely to be subject to impacts from cybercrime than previously, it is an enabler of future technologies, which leads to greater efficiencies and assists in climate risk reductions.</p>

Theme	Essential Energy action	Response
<b>Benefits</b>	Essential Energy will ensure that details of reduced costs as a benefit of investing in physical security are reflected in the business cases	We have made assumptions on the reduced levels of break-ins and related property damage through to June 2024, and how property costs may lower. Assuming fewer reactive patrols (25 fewer security guard call-outs each month) and reduced fencing repairs (3 events per month), we believe that a savings of \$387k is feasible over the next few years. We have reflected this \$387k in savings for these forecast avoided costs.
<b>Technology</b>	Describe how Essential Energy is utilising technology, articulate the risk-based approach to cyber security.	Our risk based approach establishes the criticality of our assets and services from the pole outside a customer’s house, all the way up to our network management systems. This criticality level is then addressed by implementing mitigating controls aligned to the acceptable level of acceptable risk – our focus and expenditure is about protecting the core business functions and ensuring security controls surround these to reduce the risk of compromise of sensitive data or critical services. Our assets are not just our poles and wires, but also our staff and our systems. When considering the systems we employ to operate our network, we use layered physical and cyber controls to ensure these systems are secured and available.
<b>Network Resilience</b>	Essential Energy will provide more information about how we intend to improve resilience	<p>The resilience of our network is a key focus of our 2024-29 regulatory proposal. We need to look at how we value climate change risk and how we can use technology to enhance grid stability. We are aiming to future-proof our network and this means doing things differently, e.g. bushfire preparedness had focussed on preventing network firestarts, whereas going forward this may also need to reflect community expectations that our business should supply generators as emergency response.</p> <p>We are keen to incorporate valuing risks of climate change, and identify where non-traditional solutions such as composite poles and SAPS might best be placed across our network to improve resilience and lower costs overall.</p>

Theme	Essential Energy action	Response
<b>Leadership</b>	Explain how Essential Energy is taking an industry leadership approach to cyber security.	<p>As a large operator within the power distribution industry, Essential Energy is well positioned to consult with other entities and Governments. We are engaged with all forums relating to the energy industry and the considerations of operating industrial control systems at a scale, such as is required for our network.</p> <p>With one of the largest electrical networks in the world, we also have unique business problems. These challenges require representation before our regulatory and legislative bodies to ensure our customers are represented fairly and concisely. When considering cyber security and the implementation of standards, our organisation has embraced the opportunity to uplift our maturity. We acknowledge this uplift must be in alignment with our other energy market participants. It is in this way we can provide the Australian people with the greatest assurances that electricity as an essential service will be available.</p>
<b>Commercialisation</b>	Outline whether any of this expenditure can be leveraged to earn a return on investment for customers.	<p>Opportunities to commercialise our digital assets, such as in-house developed applications like the field portal, continue to be reviewed, and would be subject to regulatory frameworks, and relevant AER guidelines such as for ring-fencing and shared assets.</p> <p>Digitisation will see advancements in the way customers interact and engage with Essential Energy, however, this does introduce additional cyber risks, and controls are required to ensure this takes place in a safe and secure manner. The function of cyber security within a distribution network service provider is to support the safe operation of our electrical network - to reduce the risk of damage or loss, to people, assets and services and isn't something we could commercialise.</p>
<b>Fixed vs Variable</b>	Essential Energy will review and explain whether the recovery of the costs can be made more equitable - potentially applying more to the fixed charge rather than variable usage charge.	<p>We have been in touch with the AER on this, and a change in the fixed vs variable proportion for this cost recovery would be a departure from our approved Tariff Structure Statement (TSS), however, we want customer views to be taken into account, even though any decision would be decided as part of our annual pricing submission.</p> <p>For the purposes of these Cost Pass Through Applications, we will continue with the status quo of pricing adjustments being applied as per the current application to tariffs, which includes a \$5 p.a. increase to fixed charges. We have provided some indicative scenarios though, in the Cost Recovery section, and seek customer preferences of whether they would like us to pursue this option.</p>

Broader consumer communications		
<b>Narrative</b>	Tell the whole story so that consumers are aware of the pathway to the future, what this future looks like, and how they can be part of it.	When we are engaging with customers, such as for the upcoming 2024-29 regulatory period, or when assessing sites for potential SAPS installations, we will look to provide better information on the long term impact. This means describing what the proposed change will mean for communities in the longer term – a more overarching look at what the future could look like.
<b>SAPS</b>	Explain the reasons SAPS were installed, and the identified outcomes. Share learnings.	<p>The SAPS installed as part of the emergency bushfire response, allowed customers to continue to receive a safe and reliable source of power while not connected to the network. They were used for rural farming connections and to supply critical infrastructure like telecommunication assets at the end of long spurs supplying single substations. The SAPS deployed provided an opportunity to restore power faster than rebuilding the powerlines to remote or difficult to access areas, and provided a unique opportunity to test the performance and customer satisfaction of being supplied off grid.</p> <p>The outcomes from this experience have been invaluable in researching customer behaviour and acceptance of SAPS, as well as testing the products and installation methods. Importantly, supply was restored to telecommunications sites faster than the network could be rebuilt, ensuring mobile phone coverage was restored and maintained during the response efforts.</p> <p>A major benefit of using SAPS for emergency response activities has been the additional time provided to planning and design departments, to review and redesign the most economical way to restore permanent power. At Mt Selwyn this resulted in a long section of distribution line, which was destroyed through a national park, being made redundant.</p> <p>The lessons learnt throughout this process will be integrated into the design of emergency response SAPS, as well as permanent SAPS which Essential Energy are looking to install. We will provide more information on our SAPS experiences in our application and share our lessons learned with industry, government and in broader public communications.</p>

# Cost Pass Through Applications

Roundtable Two – 21 July 2021

Facilitator - [REDACTED]



# Our Vision, Purpose and Values

## Our Vision

### What we want to be

Empowering communities to share and use energy for a better tomorrow.

## Our Purpose

### What we stand for

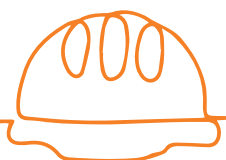
To enable energy solutions that improve life.

## Business Objectives

- Continuous improvements in safety culture and performance
- Operate at industry best practice for efficiency, delivering best value for customers
- Deliver real reductions in customers' distribution network charges
- Deliver a satisfactory Return on Capital Employed
- Reduce the environmental impact of Essential Energy where it is efficient to do so

## Our Values

### What we care about



Make safety your own



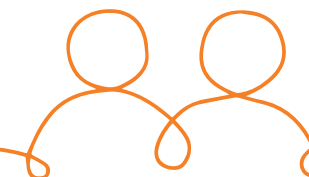
Be easy to do business with



Make every dollar count



Be courageous, Shape the future



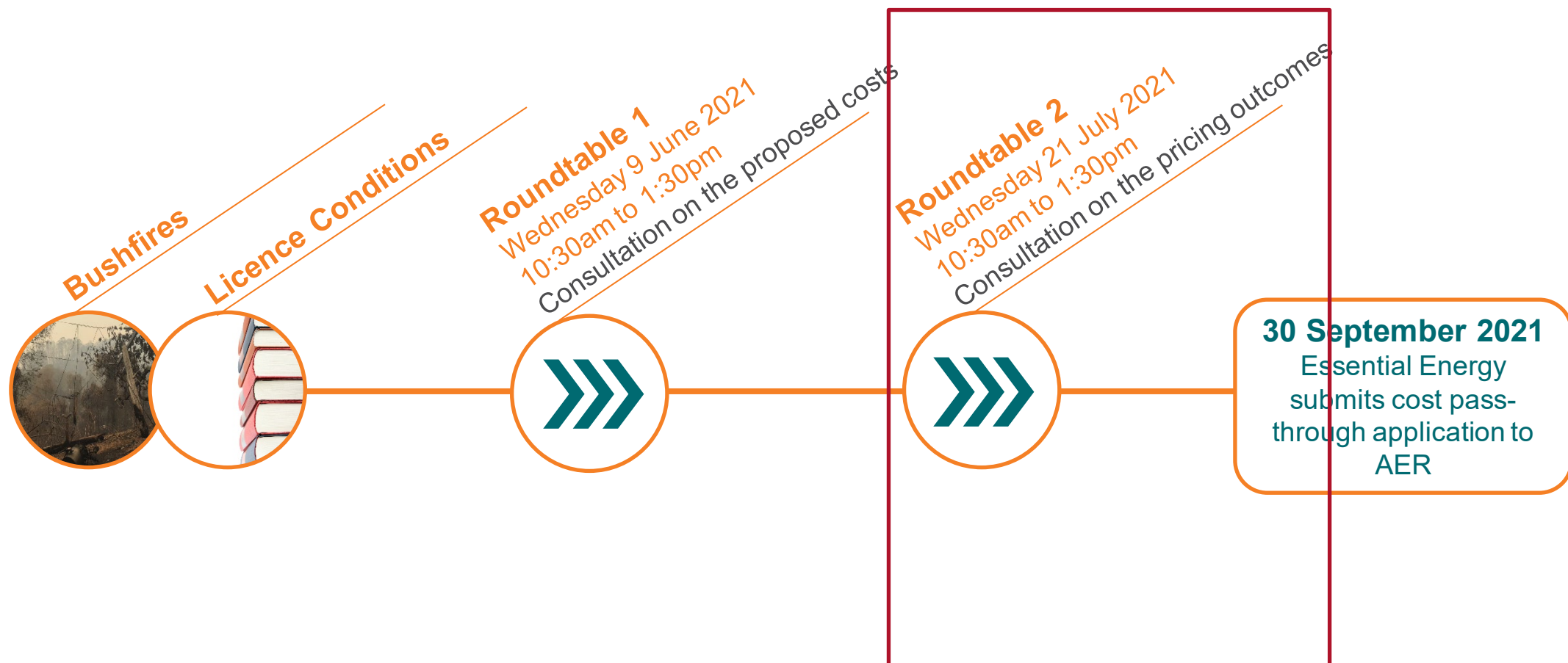
Be inclusive, supportive and honest

# Agenda

- > Introductions and housekeeping
- > What is this session about?
- > Recap and Feedback from Roundtable 1
- > Cost recovery options
- > Preferences
- > Next steps



# What is this session about?





# Recap and Feedback from Roundtable 1

Please refer to the additional document provided for further detail

## > Main topics that we needed to respond to:

- Avoided costs
- Funding alternatives
- Value
- Benefits
- Technology
- Network resilience
- Leadership
- Commercialisation
- Fixed vs. variable cost recovery

## > Broader consumer communications

- Narrative
- SAPS

# 2019-20 bushfire costs

> As shared in Roundtable 1

\$M FY21	2019-20	2020-21	2021-22	2022-23	2023-24	2019-24
Operating expenditure	\$10.8	\$9.7	\$5.3	\$5.0	-	\$30.8
Capital expenditure	\$43.2	\$3.3	\$9.2	-	-	\$55.7
<b>Total</b>	<b>\$54.0</b>	<b>\$13.1</b>	<b>\$14.5</b>	<b>\$5.0</b>	<b>-</b>	<b>\$86.5</b>

> Now

\$M FY21	2019-20	2020-21	2021-22	2022-23	2023-24	2019-24
Operating expenditure	\$11.0	\$4.4	\$5.0	-	-	\$20.4
Capital expenditure	\$44.0	\$2.2	\$12.0	\$0.1	-	\$58.4
<b>Total</b>	<b>\$55.0</b>	<b>\$6.5</b>	<b>\$17.0</b>	<b>\$0.1</b>	<b>-</b>	<b>\$78.7</b>

# 2019-20 bushfire costs – updates made

## > Difference

\$M FY21	2019-20	2020-21	2021-22	2022-23	2023-24	2019-24
Operating expenditure	\$0.2	(\$5.3)	(\$0.3)	(\$5.0)	-	(\$10.4)
Capital expenditure	\$0.8	(\$1.1)	\$2.8	\$0.1	-	\$2.7
<b>Total</b>	<b>\$1.0</b>	<b>(\$6.5)</b>	<b>\$2.5</b>	<b>(\$4.9)</b>	<b>-</b>	<b>(\$7.8)</b>

## > Changes made (\$M FY21)

<b>Previous total bushfire costs</b>		<b>\$86.5</b>
Adjust to \$FY21 for 2019-20 only	\$1.0	
Lower actuals than forecasts for FY21	(\$6.5)	
Reduced vegetation management forecasts in FY22 and FY23	(\$6.0)	
Reduced asset rectification forecasts in FY22 and FY23	(\$1.9)	
Aerial Patrol flights of firegrounds - further asset defects forecast to be identified and fixed	\$5.8	
Avoided/cancelled tasks	(\$0.2)	
<b>Refined total bushfire costs</b>	<b>(\$7.8)</b>	<b>\$78.7</b>

# Licence conditions costs

> As shared in Roundtable 1

\$M FY21	2019-20	2020-21	2021-22	2022-23	2023-24	2019-24
<b>Operating expenditure</b>	\$0.7	\$2.6	\$4.9	\$6.2	\$4.1	\$18.6
<b>Capital expenditure</b>	\$2.0	\$7.5	\$5.9	\$5.4	\$2.5	\$23.3
<b>Total</b>	<b>\$2.7</b>	<b>\$10.2</b>	<b>\$10.8</b>	<b>\$11.6</b>	<b>\$6.6</b>	<b>\$42.0</b>

> Now

\$M FY21	2019-20	2020-21	2021-22	2022-23	2023-24	2019-24
<b>Operating expenditure</b>	\$0.7	\$2.6	\$5.4	\$10.6	\$4.1	\$23.4
<b>Capital expenditure</b>	\$2.0	\$7.7	\$3.2	\$2.7	\$0.4	\$15.9
<b>Total</b>	<b>\$2.7</b>	<b>\$10.3</b>	<b>\$8.6</b>	<b>\$13.3</b>	<b>\$4.5</b>	<b>\$39.4</b>

# Licence conditions costs – updates made

## > Difference

\$M FY21	2019-20	2020-21	2021-22	2022-23	2023-24	2019-24
<b>Operating expenditure</b>	-	-	\$0.5	\$4.4	-	\$2.6
<b>Capital expenditure</b>	-	\$0.1	(\$2.7)	(\$2.7)	(\$2.1)	(\$5.1)
<b>Total</b>	-	\$0.1	(\$2.2)	\$1.7	(\$2.1)	(\$2.6)

Rounding means totals may not sum directly as displayed

## > Changes made (\$M FY21)

<b>Previous total licence condition costs</b>		\$42.0
Property - e-keying additional sites in FY21	\$0.2	
Property – electronic security costs lower in FY21	(\$0.1)	
Property – avoided security and fencing costs	(\$0.4)	
Cyber (Data) removed forecast costs for replacing systems with compliant services	(\$2.5)	
Cyber (Data) additional ongoing costs of Australian on-shoring of service	\$0.3	
<b>Refined total licence condition costs</b>	<b>(\$2.6)</b>	<b>\$39.4</b>

# Cost Recovery options - bushfires

	\$M FY21
Opex	\$20.4
Capex	\$58.4
<b>Total Costs</b>	<b>\$78.7</b>
<b>Shortfall in revenue for 2019-24 (nominal)</b>	<b>\$33.4</b>

- > The customer bill impact has been estimated using the current pricing path, the distribution proportion of customers bills, and AER model assumptions on WACC and inflation.

Nominal – illustrative examples		2 year recovery (FY23-FY24)	7 year recovery (FY23-FY27)
Revenue recovered (includes WACC)		\$34.3M	\$39.1M
Change to distribution component of typical customer bill each year		1.7%	0.5%
If increase added to fixed rate only	For a customer with lower usage than typical	2.1%	0.6%
	For a customer with higher usage than typical	1.0%	0.3%
Typical residential bill increase per year (avg)		\$10.84 (0.6%)	\$3.36 (0.2%)
Typical small business bill increase per year (avg)		\$44.20 (0.6%)	\$13.69 (0.2%)

# Cost Recovery options – licence conditions

	\$M FY21
Opex	\$23.4
Capex	\$15.9
<b>Total Costs</b>	<b>\$39.4</b>
<b>Shortfall in revenue for 2019-24 (nominal)</b>	<b>\$32.5</b>

- > The customer bill impact has been estimated using the current pricing path, the distribution proportion of customers bills, and AER model assumptions on WACC and inflation.

Nominal – illustrative examples		2 year recovery (FY23-FY24)	7 year recovery (FY23-FY27)
Revenue recovered (includes WACC)		\$33.5M	\$38.1M
Change to distribution component of typical customer bill each year		1.6%	0.5%
If increase added to fixed rate only	For a customer with lower usage than typical	2.0%	0.6%
	For a customer with higher usage than typical	1.0%	0.3%
Typical residential bill increase per year (avg)		\$10.56 (0.6%)	\$3.27 (0.2%)
Typical small business bill increase per year (avg)		\$43.06 (0.6%)	\$13.34 (0.2%)

# Cost Recovery options – combined impact

	\$M FY21
Opex	\$43.8
Capex	\$74.3
<b>Total Costs</b>	<b>\$118.1</b>
<b>Shortfall in revenue for 2019-24 (nominal)</b>	<b>\$65.9</b>

- > The customer bill impact has been estimated using the current pricing path, the distribution proportion of customers bills, and AER model assumptions on WACC and inflation.

Nominal – illustrative examples		2 year recovery (FY23-FY24)	7 year recovery (FY23-FY27)
Revenue recovered (includes WACC)		\$67.8M	\$77.3M
Change to distribution component of typical customer bill each year		3.3%	1.0%
If increase added to fixed rate only	For a customer with lower usage than typical	4.1%	1.3%
	For a customer with higher usage than typical	2.0%	0.6%
Typical residential bill increase per year (avg)		\$21.57 (1.2%)	\$6.73 (0.4%)
Typical small business bill increase per year (avg)		\$87.99 (1.2%)	\$27.45 (0.4%)



# Seeking cost recovery preferences

- > What are your preferences for cost recovery?

## 2 years

### Advantages

- Standard recovery process understood and used widely
- Ensures recovery is completed quickly
- Overall costs recovered are lower

### Disadvantages

- Higher price impact for customers

## 7 years

### Advantages

- Minimises price increase for customers

### Disadvantages

- Additional costs are paid to cover the longer recovery
- Potential for other unknown costs to impact over the longer period
- Non-standard recovery period – administrative and compliance complexities

- > Should more of the cost recovery be applied to the fixed portion of a customers bill?

### Advantages

- Ensures that customers who have a lower than typical usage pay the same cost recovery – this is relevant to ensure customers who are able to reduce their consumption (via solar PV), also pay for the cost recovery

### Disadvantages

- The increase is relatively more for customers with a lower usage, and this can have a greater impact on pensioner or small households.
- There is no benefit for customers to reduce their consumption to minimise this price impact

- > Are there the same cost recovery preferences for bushfires and licence conditions?

# Final thoughts

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- > Is there support for these cost pass through applications?
- > Are there any final comments or feedback for us?

# Next steps



August 2021

- > The Cost Pass Through documents will be updated to incorporate your feedback from both roundtables
- > Independent quality assurance and compliance checks will be undertaken on costs, modelling and the application

September-  
October 2021

- > Seek internal approval of the Cost Pass Through Application
- > Submission of the Cost Pass Through Application to the AER

# Essential Energy

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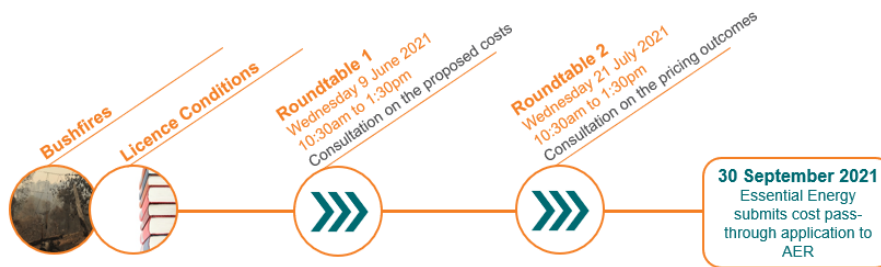
**engage.essentialenergy.com.au**

# Roundtable 2: Essential Energy’s Cost Pass Through Applications

21 July 2021

## Recap of session held 21 July 2021

Thank you to everyone for your participation in the first and second Roundtable sessions. Your contribution provided important feedback to reflect the views of our customers and stakeholders in Essential Energy’s Cost Pass Through applications to the Australian Energy Regulator (AER).



**Roundtable 1** focussed on the costs of events – Bushfires and Licence Conditions:

- We shared how these unexpected and unplanned costs have impacted Essential Energy.
- We discussed what you think about the costs, how we spent the money, and what still needs to be done over the next few years.
- This Roundtable provided views on the costs before we start talking about recovery.

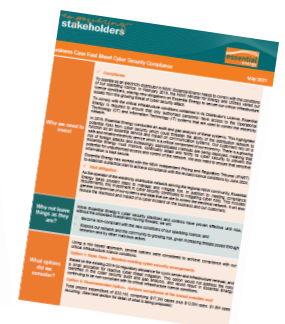
**Roundtable 2** explained how we listened to your feedback, responded to your recommendations from Roundtable 1 and sought your feedback on cost pass through preferences for customers. Discussion included identification of other possible scenarios that Essential Energy hadn’t thought of.

## Supporting documentation:

❖ *Documentation has been shared with participants who have signed a Confidentiality Deed and this documentation is not to be forwarded by participants. Thank you.*



- > Recap Roundtable 1
- > Presentation Roundtable 1
- > Recap and feedback from Roundtable 1
- > Presentation Roundtable 2
- > Fact sheets
- > Alternative cost recovery and scenarios



**What we shared. What we heard.**

<p><b>Funding alternatives (bushfire)</b></p>	<ul style="list-style-type: none"> <li>We tried hard to source other funding, but this is no longer an option. The NSW Government is aware that we are seeking to recover these bushfire costs from customers.</li> </ul>
<p><b>Value of cyber security</b></p>	<ul style="list-style-type: none"> <li>Realising a dollar value for the avoidance of adverse impacts and mitigations is challenging. Investing in cyber security enables protection of the network and the service Essential Energy provides customers currently, making sure that the impacts of a cyber incident are responded to appropriately and with minimal impact on customers.</li> <li>We will look to highlight what is actually being protected by the investment in cyber security to increase customer understanding of the importance of these measures. For example, customer privacy, data protection and continuity of electricity supply.</li> </ul>
<p><b>Benefits of investment in physical security</b></p>	<ul style="list-style-type: none"> <li>The intent of the licence condition changes for physical security, is to reduce the risk of orchestrated and malicious threats to our technology, by limiting physical access to our premises. An indirect benefit of the physical security improvements are the reduced opportunistic break-ins and thefts, and we have now included assumptions on these forecast savings.</li> </ul>
<p><b>Technology</b></p>	<ul style="list-style-type: none"> <li>Essential Energy needs to keep up to date to mitigate against cyber threats as just like we embrace technology, so do our adversaries who pose a threat to Essential Energy.</li> </ul>
<p><b>Network resilience</b></p>	<ul style="list-style-type: none"> <li>We will include this issue in our application. This is also an important focus for Essential Energy's 2024-29 Regulatory Proposal, and we will be seeking feedback from customers on how this should be done..</li> </ul>
<p><b>Industry leadership (cyber)</b></p>	<ul style="list-style-type: none"> <li>Essential Energy is represented on a number of sector specific working groups which meet on a regular basis including workshops and feedback forums coordinated by Department of Home Affairs to make changes to the Security of Critical Infrastructure Act.</li> <li>Essential Energy has adopted the Australian Energy Sector Cyber Security Framework as the foundation for our approach to cyber security.</li> </ul>
<p><b>Commercialisation of investments in cyber and digital assets</b></p>	<ul style="list-style-type: none"> <li>Investment in cyber security is organisation specific and the regulatory framework means there is minimal opportunity for commercialisation.</li> <li>However, there may be opportunities to commercialise some of the digital assets created. For example, the bespoke digital platform we have created in-house to enable our front-line workforce to communicate more effectively with the community and stay safer.</li> </ul>
<p><b>Pricing - Fixed vs Variable cost recovery</b></p>	<ul style="list-style-type: none"> <li>See 'Seeking cost recovery preferences' discussion below.</li> </ul>

**SAPS**

- Our experience of SAPS installations as part of emergency response, have highlighted issues of trauma needing to be a consideration. If deeper discussion on this is required by attendees please contact us. We will also need to work through this as part of our SAPS journey with stakeholders

<p><b>Bushfire cost changes</b></p>	<ul style="list-style-type: none"> <li>• The cost values shared at the 1<sup>st</sup> Roundtable on 9 June 2021 were based on costs identified and reviewed by Essential Energy's Board in April 2021. Since then, we have continued to refine these values. The changes are:             <ul style="list-style-type: none"> <li>- Financial analysis of FY21 complete.</li> <li>- Vegetation management actual spend for FY21 lower than forecast.</li> <li>- Vegetation management costs for the next two financial years not expected to be as high as we previously calculated.</li> <li>- Reduced costs relating to network damage and fewer outstanding tasks anticipated to be needed.</li> <li>- Costs associated with additional aerial patrols to assess damage from the 2019-20 bushfires.</li> <li>- Planned tasks that were cancelled as a result of being completed early under emergency conditions.</li> </ul> </li> </ul>
<p><b>Licence conditions cost changes</b></p>	<ul style="list-style-type: none"> <li>• The cost values shared at the 1<sup>st</sup> Roundtable on 9 June 2021 were based on costs identified and reviewed by Essential Energy's Board in April 2021. Since then we have continued to refine these values. The changes are:</li> <li>• Impact to property cost changes:             <ul style="list-style-type: none"> <li>- Increase in costs due to implementing electronic security across more offices and sites.</li> <li>- Decrease in costs due to electronic security costing less than the physical security options that had been forecast. Some offices/sites didn't require fencing that had been forecast.</li> <li>- Assumptions made about reduced reactive security patrols and less damage to fencing.</li> <li>- Reduced costs due to Essential Energy staff being able to do some of the work, which had previously been completed by contractors.</li> </ul> </li> <li>• Impact to cyber (data) cost changes:             <ul style="list-style-type: none"> <li>- A reduction in forecast costs to meet onshore compliance conditions. Essential Energy worked with a current provider who was able to update their business to meet this requirement.</li> <li>- Essential Energy is seeking exemptions on any systems unable to make the change and if not approved Essential Energy will absorb the costs through to June 2024.</li> <li>- Cost analysis includes one system that was offshore that can be on-shored from FY23 resulting in an increase to opex</li> <li>- Recent changes to accounting standards for 'software as a service' (SAAS) means that some capex for cloud computing must now be allocated as opex. This moves \$3.3M from capex to opex.</li> <li>- The cost for cloud computing has to be expensed upfront, rather than capitalised over the life of the asset, which could be five to ten years. A disclosure must be made to ASIC otherwise. Essential Energy has made the accounting adjustments and this has now been reflected in the change between capex and opex. This rule change is for any organisation that complies with the International Reporting Financial Standards, not just our organisation or industry.</li> </ul> </li> </ul> <p>Discussion included:</p> <ul style="list-style-type: none"> <li>• IPART Licence Conditions Data Sovereignty is to provide extra protection and security of our systems and data. An exemption must be requested if this condition cannot be met. Essential Energy is working through this with vendors, to move to onshore where possible or transition to other service providers.</li> <li>• Essential Energy is not expecting any more material changes to costs realised.</li> </ul>

**Cost recovery options – combined**  
(Slides 10-12)

- Usually cost recovery is undertaken over the balance of the current regulatory period, however, given the extent of the costs being sought, and that there are only 2 complete years left of this 2019-24 regulatory period, Essential Energy has discussed with the AER the possibility of extending the cost recovery into the next regulatory period, 2024-29.
- Approved cost pass through amounts are added as a revenue adjustment in the relevant years – bundled in with prices and allocated to the relevant tariffs based on the existing Tariff Structure Statement (TSS).
- Essential Energy has looked at a number of models, which can be quite complex. For example looking at customers who have less usage (e.g., solar PV) sharing the cost recovery compared to high energy users which results in a high-level difference in distribution cost.
- Essential Energy is seeking preferences on how customer prices should be adjusted for cost recovery, subject to AER approval. The slides illustrate the customer bill impact for different scenarios.

Discussion included:

- Consideration for future wholesale electricity costs and retail total bill and minimising the impact to customers, so a 7-year recovery for a typical customer bill at 1% may be a preferential option to minimise the impact on consumers?
- This led to further discussion, as outlined in the following section.
- The advantages and disadvantages of recovery periods were discussed (slide 13).
- Analysis shows a greater recovery through the fixed charge would result in lower consumption users having a higher average rate applied than those customers who are large users. Further engagement will be required with the AER if this outcome is preferred as it impacts the predetermined TSS for the current 2019-24 regulatory period.
- A two-year cost recovery is a far simpler process as there are not as many complex calculations and future unknowns but there is a higher bill impact to customers. It may also provide more certainty and align with future increases in wholesale electricity prices and other costs.
- A 7-year approach minimises the cost increase for customers each year but there is also the potential for other unknown costs over the seven years. I.e. the unforeseen costs of the implementation of the NSW Government Roadmap and potential unforeseen costs associated with other disaster events.

Discussion included:

**Seeking cost recovery preferences**

- Being clear on the AER policy objective and then building the pricing principles, such as minimising bill shock.
- Consider when there may be dips and rises from external impacts i.e., COVID recovery, NSW Government Roadmap, wholesale electricity market prices, infrastructure costs. Consider aligning with the wholesale market and identifying opportunities to load the bill. If there is a period when bill impact is less, look to increase the cost pass through value as customers won't notice it. The AER determines the flexibility, which is another reason to understand the policy intent to achieve, or mitigate, for consumers.
- People are still recovering from bushfires, and there are other financial pressures due to COVID etc. There is a possibility of another major bushfire event in the next 5 to 7 years, which could cause additional unforecasted costs. It is unknown what could happen in the future. The longer the time window the greater the potential for natural disasters.
- Essential Energy to explore locational based pricing in the next regulatory period.
- The AER has placed importance on cost reflectivity and the impact of solar customers.
- Technology provides the opportunity for a variable price structure as when the overall consumption falls, the unit cost goes up. There is more certainty on demand forecasts. In 7 years there could be additional impacts such as electric vehicles.
- The suggestion to have the cost recovery price path linked to a wholesale price will be investigated and the alternative cost recovery pathway circulated for consideration. Also



seek to understand when the NSW Government Roadmap may impact and if there is opportunity to front end the cost recovery.

- Wholesale market variability is not the only driver of retail costs. Even network charges can vary year on year and can look quite different to the tariff pathways proposed by networks. Variation can be driven by unders and overs, revenue under recovery in terms of target for example, which can drive price impacts for customers. The other element that can change year to year are transmission costs that get passed through to the distribution network.
- These cost changes could provide scope to accelerate price recovery without bill shock to customers. Alternatively, they could exacerbate negative pricing impacts for customers on a year-to-year basis. Having flexibility around the pace of cost recovery could be quite sensible.

<p><b>Your participation</b></p>	<ul style="list-style-type: none"> <li>• Alternative cost recovery scenarios will be circulated by COB Wednesday 4 August 2021, for review.</li> <li>• Please consider all scenarios and provide feedback by COB Monday 9 August 2021.</li> <li>• Essential Energy will consider all feedback for the Cost Pass Through applications and recirculate a summary of the final applications to this group.</li> <li>• As suggested, when there is more visibility of the costs associated with the NSW Government Electricity Infrastructure Roadmap, Essential Energy will work on a communications plan to explain what the costs are.</li> <li>• Input into Essential Energy's 2024-29 Regulatory Proposal will expand on the topics discussed. An invitation will be extended to participate in engagement on topics of interest.</li> </ul>
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# Cost Pass Through Applications

Summary of feedback on preferences:  
alternative cost recovery and scenarios

Tuesday 10 August 2021



# Scenario analysis undertaken

- > Further to the Roundtable 2 on 21 July 2021, we committed to providing some further pricing alternatives that took account of external impacts, such as:
  - changes in wholesale electricity prices, and/or
  - extra costs stemming from the NSW Electricity Infrastructure Roadmap
- > The scenarios presented are high-level representations of changes in **distribution charges** to recover the combined revenue shortfall of \$65.9M. This is different to the slidepack used at the Roundtable which was based on recovering this amount and the impact on estimated **retail bills**. This change has allowed us to represent a more accurate view of the relative impacts.
- > Wholesale **electricity price forecasts** that were publicly available, did not extend past FY25 – and FY23-FY25 did not show any particular trends different from FY22 forecasts, that we could use to adjust weightings.
- > The timeline for NSW Government recovery of costs associated with from the **Electricity Infrastructure Roadmap** is expected to start from 2023 and be reflected in the FY24 Pricing Proposal. The information available was used in the ‘weighted’ scenarios that follow. 2/3 revenue recovery was applied in FY23 for a 2 year cost recovery, and for a 7 year cost recovery - 1/3 was recovered in FY23, with the 2/3 remainder shared across the following 6 years to FY29.
- > The scenarios modelled are based on our current fixed/variable tariffs. If there is a requirement to adjust the fixed component of the bill to fully recover the cost pass throughs, it just means that all customers will have the same cost recovery amount applied (as per typical customer). This results in customers with lower (higher) usage than typical, such as a pensioner or someone with solar PV panels, paying a higher (lower) percentage change in their network charges.

# Feedback we are requesting from stakeholders

Please review the analysis and provide your feedback on the following:

1. Do the increases in network charges warrant a 7 year cost recovery period or would recovery over 2 years be more sensible?
2. Does weighting the increase in relation to potential timing of NSW Roadmap costs lead to better outcomes?
3. Do you wish us to progress with applying the cost recovery only to the fixed portion of network charges? [If required, this will be included in discussions with the AER as part of our annual pricing proposal]

Some issues to consider in your review:

- **Quantum and timing of NSW Roadmap costs:** It is not yet clear how much will be passed through to consumers or when that will occur through to 2030 and beyond.
- **Pricing outcome of Essential Energy's 2024-2029 Regulatory Proposal:** While our corporate objectives are to reduce network charges, it is not yet known what the revenue requirement, and hence network charge level, will be for the 2024-2029 period.
- **Potential for other unforeseen events on the network:** The frequency and severity of weather-related events is increasing.

# Scenario 1A: Typical residential customer

## Incremental revenue recovery

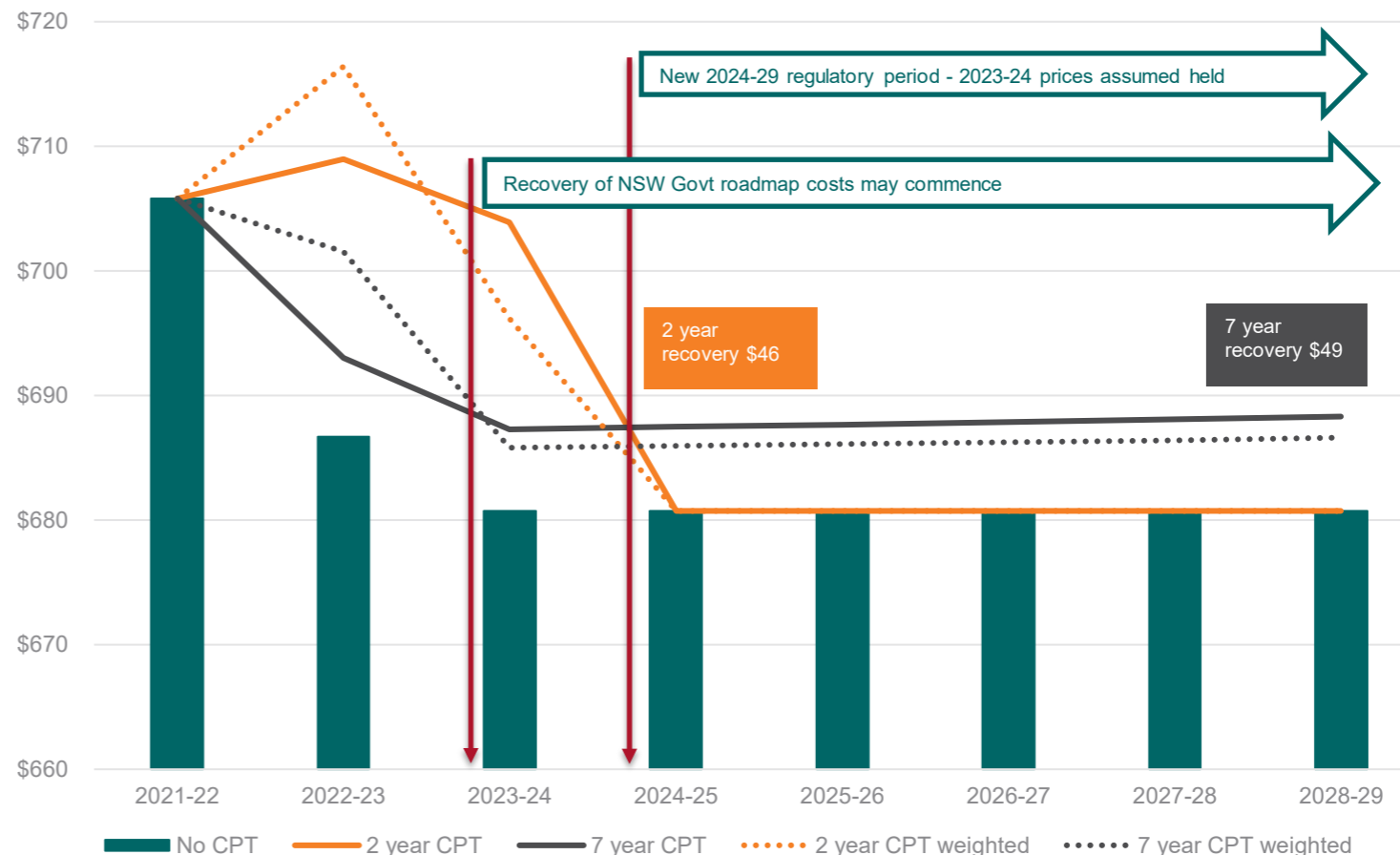
	2 year CPT	7 year CPT	2 year CPT weighted	7 year CPT weighted
2021-22	\$ -	\$ -	\$ -	\$ -
2022-23	\$ 22.30	\$ 6.37	\$ 29.73	\$ 14.86
2023-24	\$ 23.22	\$ 6.60	\$ 15.48	\$ 5.14
2024-25	\$ -	\$ 6.79	\$ -	\$ 5.28
2025-26	\$ -	\$ 6.98	\$ -	\$ 5.43
2026-27	\$ -	\$ 7.17	\$ -	\$ 5.58
2027-28	\$ -	\$ 7.37	\$ -	\$ 5.73
2028-29	\$ -	\$ 7.58	\$ -	\$ 5.89
Extra paid	\$ 45.52	\$ 48.85	\$ 45.21	\$ 47.90

We have analysed two recovery periods:

- A longer cost recovery provides for a smaller impact to network charges
- However, overall costs are higher because of the time value of money; and,
- There is a greater risk of other factors impacting over that longer period

Based on 4.6MWh customer usage and DUoS impact  
 Weighted for 2 years is 2/3 in FY23 and 1/3 in FY24  
 Weighted for 7 years is 1/3 in FY23 and then spread evenly over remaining 6 years

## Typical residential customer distribution charge



# Scenario 1B: Higher use residential customer

## Incremental larger residential revenue recovery

	2 year CPT	7 year CPT	2 year CPT weighted	7 year CPT weighted
Large				
2021-22	\$ -	\$ -	\$ -	\$ -
2022-23	\$ 36.47	\$ 10.42	\$ 48.63	\$ 24.32
2023-24	\$ 37.88	\$ 10.77	\$ 25.25	\$ 8.38
2024-25	\$ -	\$ 11.07	\$ -	\$ 8.61
2025-26	\$ -	\$ 11.38	\$ -	\$ 8.85
2026-27	\$ -	\$ 11.70	\$ -	\$ 9.10
2027-28	\$ -	\$ 12.02	\$ -	\$ 9.35
2028-29	\$ -	\$ 12.36	\$ -	\$ 9.61
Extra paid	\$ 74.36	\$ 79.72	\$ 73.89	\$ 78.21

## Larger residential customer – 10MWh



Based on 10MWh residential customer usage and DUoS impact  
 Weighted for 2 years is 2/3 in FY23 and 1/3 in FY24  
 Weighted for 7 years is 1/3 in FY23 and then spread evenly over remaining 6 years

# Scenario 2A: Typical small business customer

## Incremental revenue recovery

	2 year CPT	7 year CPT	2 year CPT weighted	7 year CPT weighted
2021-22	\$ -	\$ -	\$ -	\$ -
2022-23	\$ 85.88	\$ 24.54	\$ 114.51	\$ 57.26
2023-24	\$ 88.97	\$ 25.29	\$ 59.31	\$ 19.67
2024-25	\$ -	\$ 26.00	\$ -	\$ 20.22
2025-26	\$ -	\$ 26.72	\$ -	\$ 20.79
2026-27	\$ -	\$ 27.47	\$ -	\$ 21.37
2027-28	\$ -	\$ 28.24	\$ -	\$ 21.96
2028-29	\$ -	\$ 29.02	\$ -	\$ 22.57
Extra paid	\$ 174.85	\$ 187.28	\$ 173.82	\$ 183.84

Based on 20MWh customer usage and DUoS impact  
 Weighted for 2 years is 2/3 in FY23 and 1/3 in FY24  
 Weighted for 7 years is 1/3 in FY23 and then spread evenly over remaining 6 years

## Typical small business customer distribution charge



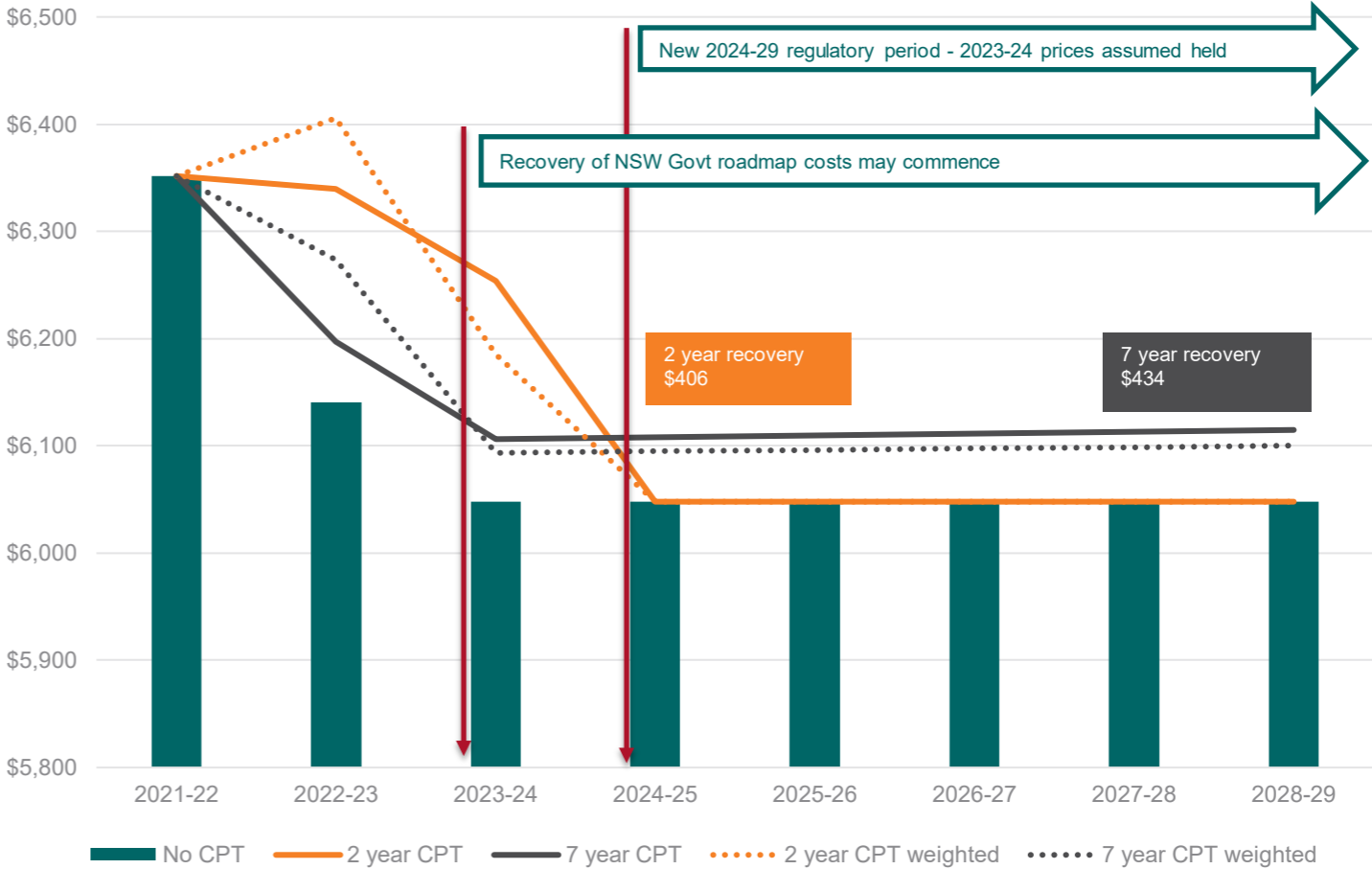
# Scenario 2B: High use small business customer

## Incremental larger small business revenue recovery

	2 year CPT	7 year CPT	2 year CPT weighted	7 year CPT weighted
Large				
2021-22	\$ -	\$ -	\$ -	\$ -
2022-23	\$ 199.38	\$ 56.97	\$ 265.84	\$ 132.92
2023-24	\$ 206.32	\$ 58.66	\$ 137.55	\$ 45.62
2024-25	\$ -	\$ 60.29	\$ -	\$ 46.90
2025-26	\$ -	\$ 61.98	\$ -	\$ 48.20
2026-27	\$ -	\$ 63.70	\$ -	\$ 49.55
2027-28	\$ -	\$ 65.48	\$ -	\$ 50.93
2028-29	\$ -	\$ 67.30	\$ -	\$ 52.35
Extra paid	\$ 405.70	\$ 434.38	\$ 403.39	\$ 426.47

Based on 50MWh small business customer usage and DUoS impact  
 Weighted for 2 years is 2/3 in FY23 and 1/3 in FY24  
 Weighted for 7 years is 1/3 in FY23 and then spread evenly over remaining 6 years

## Larger small business customer – 50MWh





# Outcome – detailed responses on following pages

- > Following feedback from our consumer advocates and stakeholders, we will be proposing that cost recovery is undertaken as follows:
  - over a two year period (2022-23 and 2023-24)
  - no weighting applied for external impacts
  - applied only to the fixed component of the distribution charge (AER discussion needed with annual pricing proposal for 2022-23)

	2 years	Weighted for external impacts	Fixed
[Redacted]	✓	—	✓
[Redacted]	✓	—	✓
[Redacted]	✓	—	✓
[Redacted]	✓	✗	✓
[Redacted]	✓	—	✓
[Redacted]	✗	✓	✗
<b>Overall Preference</b>	✓	—	✓

# Responses

Participant	Do the increases in network charges warrant a 7 year cost recovery period or would recovery over 2 years be more sensible?	Does weighting the increase in relation to potential timing of NSW Roadmap costs lead to better outcomes?	Do you wish us to progress with applying the cost recovery only to the fixed portion of network charges? [If required, this will be included in discussions with the AER as part of our annual pricing proposal]	Comments
[REDACTED]	2 years – more certainty on bill impact		Fixed	<ul style="list-style-type: none"> <li>• Retailer and wholesale market uncertainty in the longer term.</li> <li>• 2 years will be it a little higher year on year but lower overall.</li> <li>• Note that QLD outages and other impacts on the wholesale price since June; Callide plant seem to be out for a year - shifted from 30- 40 MW to 60 ish theoretically; retailers will have caps and swaps and a fixed price for consumers so those price increases wont wash though now but later, so go early.</li> </ul>
[REDACTED]	If revenue is expected to increase, then 2 years. If revenue is expected to decrease, then 7 years.		Fixed	<ul style="list-style-type: none"> <li>• The issue has been raised before, that there's likely to be more natural disasters before 7 years is up and I'm concerned that there will be accumulating cost pass throughs. However, in terms of bill smoothing we also need to consider revenue. If it is expected to go up, then recovering over 2 years would be better but if it is expected to go down then it would be better to smear the cost recovery over 7 years.</li> <li>• Although the fixed charges are already pretty high and this limits a consumer's ability to control their costs through usage, we would argue that the benefits people receive from the elements in this cost pass through aren't linked to their energy volume so would support recovery through fixed charges.</li> </ul>
[REDACTED]	2 years	Unclear what the impact will be. On the currently available information, I do not support the 'weighted' 2 year models in the slide deck, but if we get greater clarity about Roadmap costs in 23-24 then I would be willing to reconsider.	Fixed	<p>On the variables we discussed last week, my ranking of preferences would be:</p> <ol style="list-style-type: none"> <li>1. 2 year recovery, fixed portion of bill</li> <li>2. 7 year recovery, fixed portion of bill</li> <li>3. 7 year recovery, variable portion of bill</li> <li>4. 2 year recovery, variable portion of bill</li> </ol> <ul style="list-style-type: none"> <li>• Regarding the NSW Infrastructure Roadmap costs, is it going to be possible to have a clear enough sight of what those costs will be and when they will be incurred to manage this decision? I was under the impression Essential Energy would have to make its application regarding this cost recovery application before key elements of the Roadmap are clear, and the slide deck says the same.</li> <li>• Assuming Roadmap costs are coming down the track without knowing exactly how much is one reason for preferring the 2 year fixed portion option (the other main reason being the risk of more disaster costs the longer you wait).</li> <li>• On the currently available information, I do not support the 'weighted' 2 year models in the slide deck, but if we get greater clarity about Roadmap costs in 23-24 then I would be willing to reconsider.</li> </ul>
[REDACTED]	2 year		Fixed	<p>Considering the various factors and the points others have noted a 2 year cost recovery applied to the fixed portion of network charges seems the most sensible.</p>

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[REDACTED]	2 years		Fixed	<ul style="list-style-type: none"> <li>• Most consumers will understand and accept pricing decisions as long as there is early, clear and genuine communication and engagement.</li> <li>• Yes a 2 year time frame will result in higher costs in the short term; but if there is a real potential for price reductions over the longer 7 year horizon and the smoothing strategy is not showing any reduction, that is a significant risk that this will not be seen in the end user billing.</li> <li>• I think there is a reasonable argument to apply this to the fixed charge – but as I was not able to attend the discussion I don't know if there was any modelling discussion.</li> <li>• I would go 2 years rather than 7 and I would support the application to the fixed charges portion of network charges. Of course, all this would also depend on what safety-net is able to be put in place.</li> </ul>
[REDACTED]	7 years	We have no objections to Essential Energy investigating the prospect of linking any cost recovery price path to a wholesale price in order to reduce the financial impact on consumers. While acknowledging the complexity of achieving this goal, consumers would clearly benefit from it.	[REDACTED] would not support the progress of a cost pass through if costs were only recovered through fixed charges.	<ul style="list-style-type: none"> <li>• In general, we support Essential Energy's application to recover the costs of the bushfires in 2019-20 and the developments related to changes to its license obligations in NSW. DNSPs have the right to pass through certain specific unforeseen costs outside of their control under the National Electricity Rules (NER). We nevertheless have some definitive views on the manner in which the increase in these costs for the pass throughs should be recovered. As a retailer, we have placed consumers at the front and centre of these views.</li> <li>• We would like to thank Essential Energy for the opportunity to comment on their proposed cost pass through application to the AER. We genuinely appreciate the opportunity to provide our views to Essential Energy regarding these matters as part of their own consultation process.</li> </ul> <p><b>Prefer 7 year cost recovery</b></p> <ul style="list-style-type: none"> <li>• [REDACTED] prefer that any cost pass through amounts be recovered over a 7 year period.</li> <li>• In short, where pass through events are significant we prefer that costs are recovered over a longer period to minimise the impact on consumers. Modelling undertaken by Essential Energy shows that the recovery of costs for the bushfires and changes in the license conditions over a 2 year period would have a much greater financial impact on consumers compared with that over 7 years. As a result, we do not support cost recovery over a two year period.</li> <li>• In addition, we have no objections to Essential Energy investigating the prospect of linking any cost recovery price path to a wholesale price in order to reduce the financial impact on consumers. While acknowledging the complexity of achieving this goal, consumers would clearly benefit from it.</li> <li>• Finally, while accepting the argument that there is the potential for other unforeseen costs to arise over a seven year cost recovery period potentially creating unnecessary complications, there is no guarantee this will happen. We therefore suggest that this scenario should not deter cost recovery over seven years.</li> </ul> <p><b>Application for a cost pass through in which costs are only recovered through fixed charges not supported</b></p> <ul style="list-style-type: none"> <li>• [REDACTED] would not support the progress of a cost pass through if costs were only recovered through fixed charges.</li> <li>• In general, we do not support cost recovery for pass-throughs through only fixed charge because it has the potential to disproportionately impact customers with low usage like pensioners or customers from lower socio-economic backgrounds that use less electricity. Modelling undertaken by Essential Energy proves this for customers with lower usage than typical under both the two year and seven year cost recovery scenarios. As a retailer that values its relationship with our customers, we would have concerns if we were to progress with a cost recovery mechanism that impacts vulnerable customers disproportionately.</li> </ul> <p><b>Timing of pass through</b></p> <ul style="list-style-type: none"> <li>• [REDACTED] prefer that any increase in costs from the pass-through amounts associated with an increase in costs due to the 2019-20 bushfires and changes to critical infrastructure licencing conditions should not be recovered immediately.</li> <li>• Essential Energy should be required to consider the pass through as part of their next annual pricing proposal and vary their tariffs accordingly. As a result, this will allow the AER to account for the pass through in the Default Market Offer (DMO).</li> <li>• It is currently unclear how the AER will manage an intra-period pass through event that it approves. The AER must ensure that any new network charges as a result of a cost pass through event are included in the DMO. Therefore, it is appropriate that Essential Energy's pass through occurs at the same time as their standard network cost reset.</li> </ul>

# Essential Energy

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