

# Evoenergy Energy Consumer Reference Council

Meeting 29, June 2019



# WELCOME

- Introductions
- Review and ratify minutes from meeting 28
- Member updates

# Solar panel feed-in tariff (FIT) Administration – Generation - Payment



# Evoenergy CIT Hydrogen Test Facility



# Hydrogen Test Facility Exit Survey

<https://www.surveymonkey.com/r/evorenew>

Please take 5 minutes to complete the survey now

*Seeking feedback on the site visit, and feedback on the survey itself.*

# Future Gas = Renewable Gas.

But what is it, really?

Bruce Hansen, Branch Manager Gas Networks

ECRC 19 June 2019

# Agenda

- Seeking ECRC feedback
- Natural gas recap
- ACT Region future energy challenge
- Renewable gas types
- How might renewable gas be introduced to the network

# Seeking ECRC feedback

- Helps Evoenergy target consumer engagement for Access Arrangement Project.
- What should be the focus of Evoenergy's discussion with consumers about Renewable Gas?



# Natural Gas - recap

- Natural Gas replaced previous manufactured gas
  - Town's gas – manufactured from coal
- Natural gas is mostly methane
- Naturally occurring fossil fuel
  - Dry gas wells
  - Associated with oil, coal or shale (also fossil deposits)
  - Some processing to remove:
    - Contaminants such as sulphur
    - Higher value products such as ethane, propane, condensate
- Adds carbon to the atmosphere
- Finite resource – not renewable

# ACT Government leading the Nation

- ACT legislation passed in 2010 (and amended)
- The Principal ACT Target
  - reduce greenhouse gas emissions ... to achieve
  - zero net emissions by 30 June 2045
- Evoenergy supports this target for both the electricity and gas systems

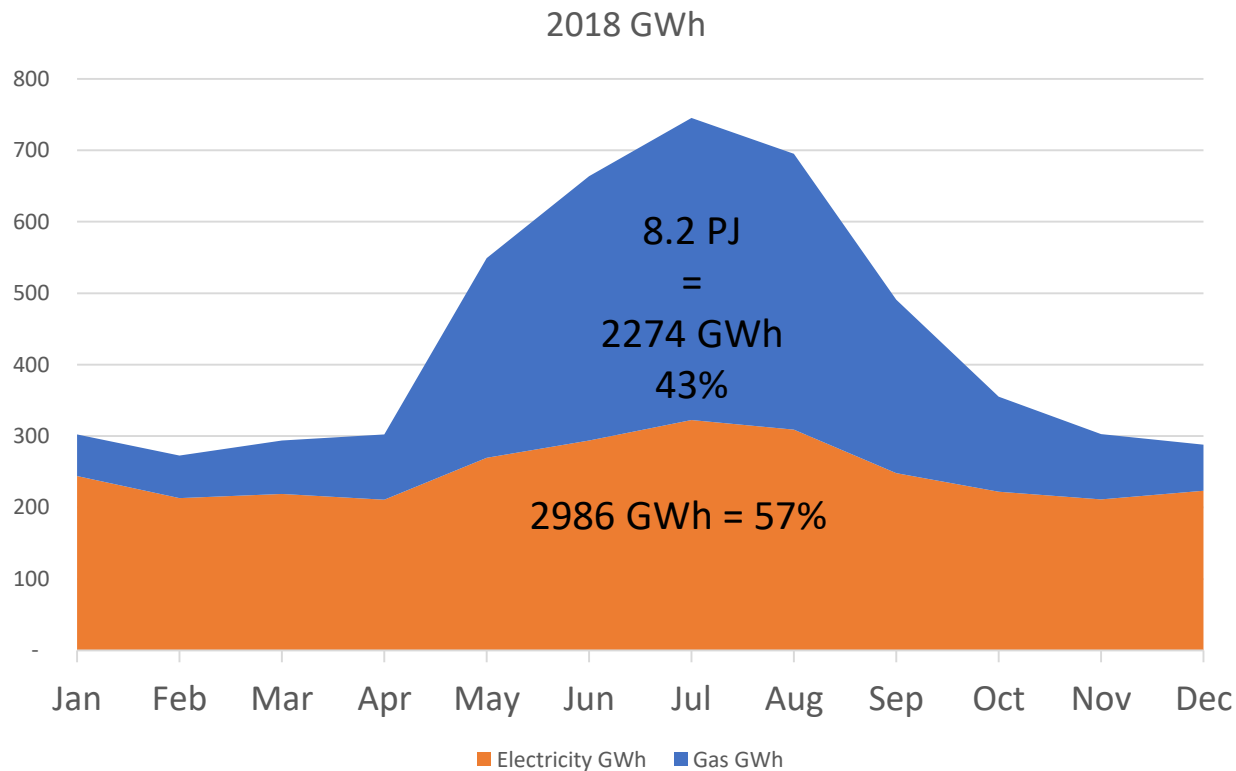
# ACT Region – Future Energy Challenge

Natural gas remains very popular with consumers

- Natural gas provides:
  - Energy to 150,000 customers, mostly residential
    - Growing by 3% per annum
    - 90% of homes in new subdivisions choose gas
    - +2% per annum consumption growth
  - 43% of ACT annual energy consumption (2018)
  - 60% of ACT winter energy consumption

# ACT Region – Future Energy Challenge

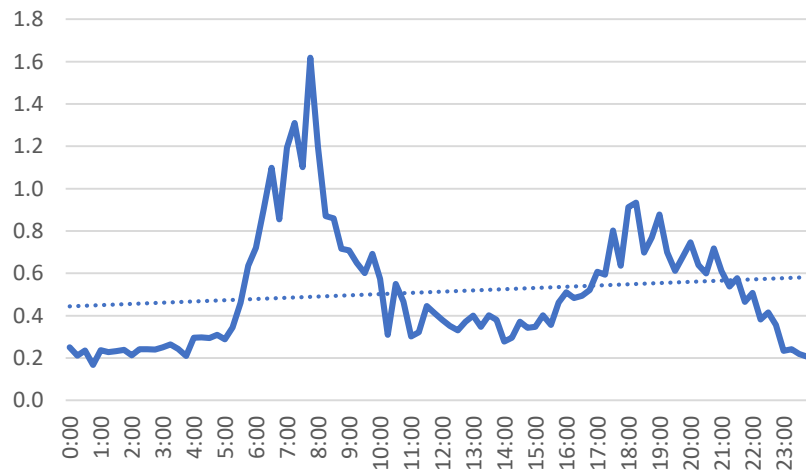
- Gas demand is mostly winter heating



# ACT Region – Future Energy Challenge

- Replacing peak gas demand with electricity capacity is difficult

31 July 2018 gas demand profile: TJ / 15 minutes



- Networks designed to cope with peaks
- Daily winter gas demand is very peaky
- Common morning gas peak in winter equivalent to 1,770 MW
- Electricity system record peak was 700 MW

# ACT Region – Future Energy Challenge

- Option 1 – decommission gas network by 2045
  - Exorbitant cost to upgrade electricity system
- Option 2 – no gas in new subdivisions
  - Very high cost of electricity in new subdivisions
  - Still need to convert 150,000 customers to renewable gas
  - Gas network conversion cost borne by smaller base
  - Ongoing maintenance borne by smaller base
- Option 3 – convert network to renewable gas

# Types of renewable gas

- Hydrogen
  - Renewable electricity to split water into hydrogen and oxygen via electrolysis
- Bio-methane
  - Process waste streams into methane and inject into network or pipeline
  - Could be included in offset mechanism
- Synthesised methane
  - Combine hydrogen and carbon dioxide to synthesise methane
- Blend of all three

# Renewable gas – introducing it into the network

This is not a technology challenge



# Renewable gas – introducing it into the network

## This is not a technology challenge

- Engineering challenge
  - Network redesign and construction
  - Hydrogen compatibility
- Commercial challenge
  - Commercialising Bio-methane
    - Government offsets policy?
    - Reverse auctions?
  - Commercialising hydrogen
  - Synthetic methane

# Renewable gas – introducing it into the network

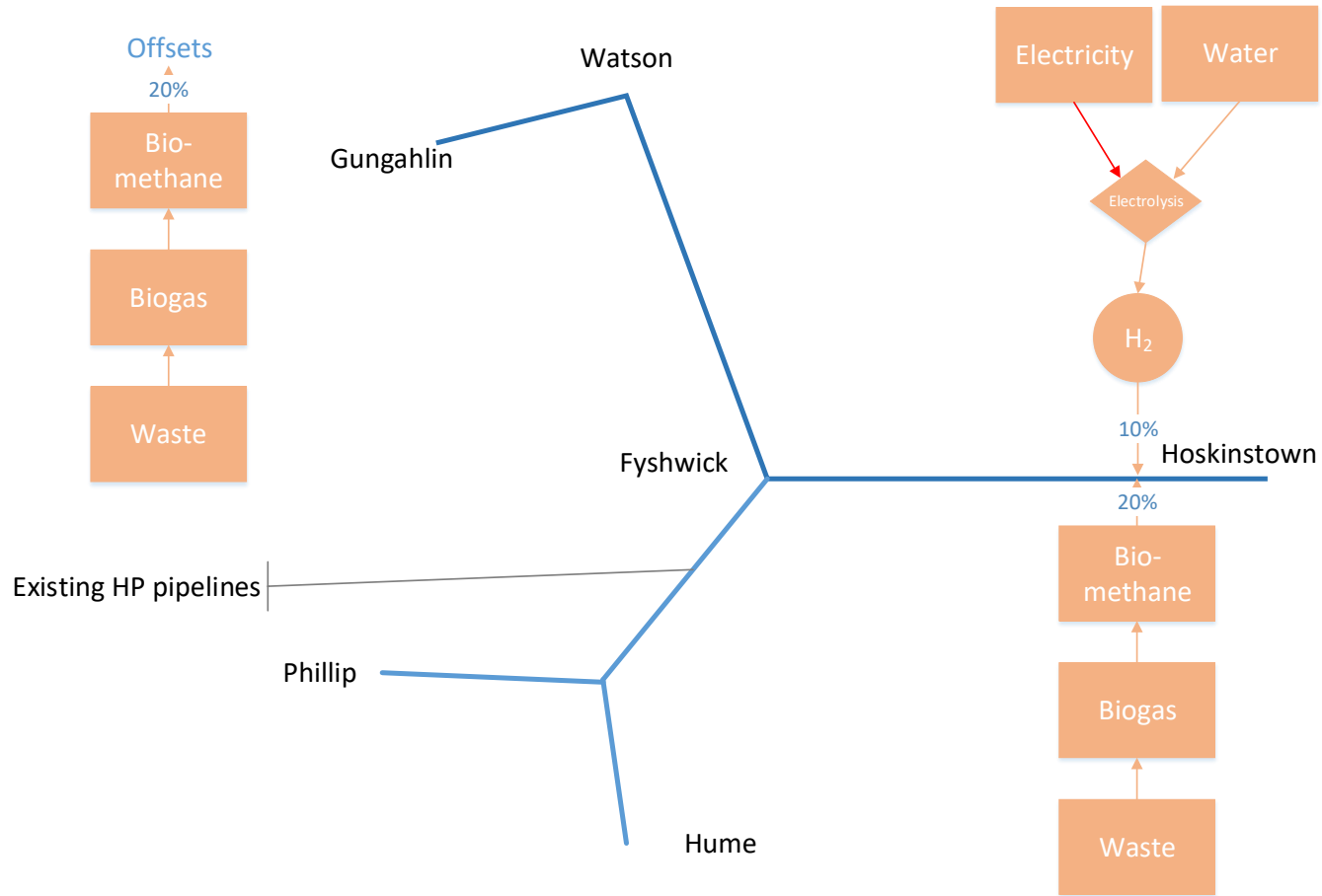
50% effective renewable gas could be a reality by 2030

# Renewable gas – introducing it into the network

50% effective renewable gas could be a reality by 2030

- Government policy
  - Purchasing offsets (Say 20%)
  - Injection targets on retailers
- Network action
  - UnAccounted for Gas purchased from renewable gas (1.5%)
  - Commercialise local bio-methane (10-20%)
  - Hydrogen injection (10%)

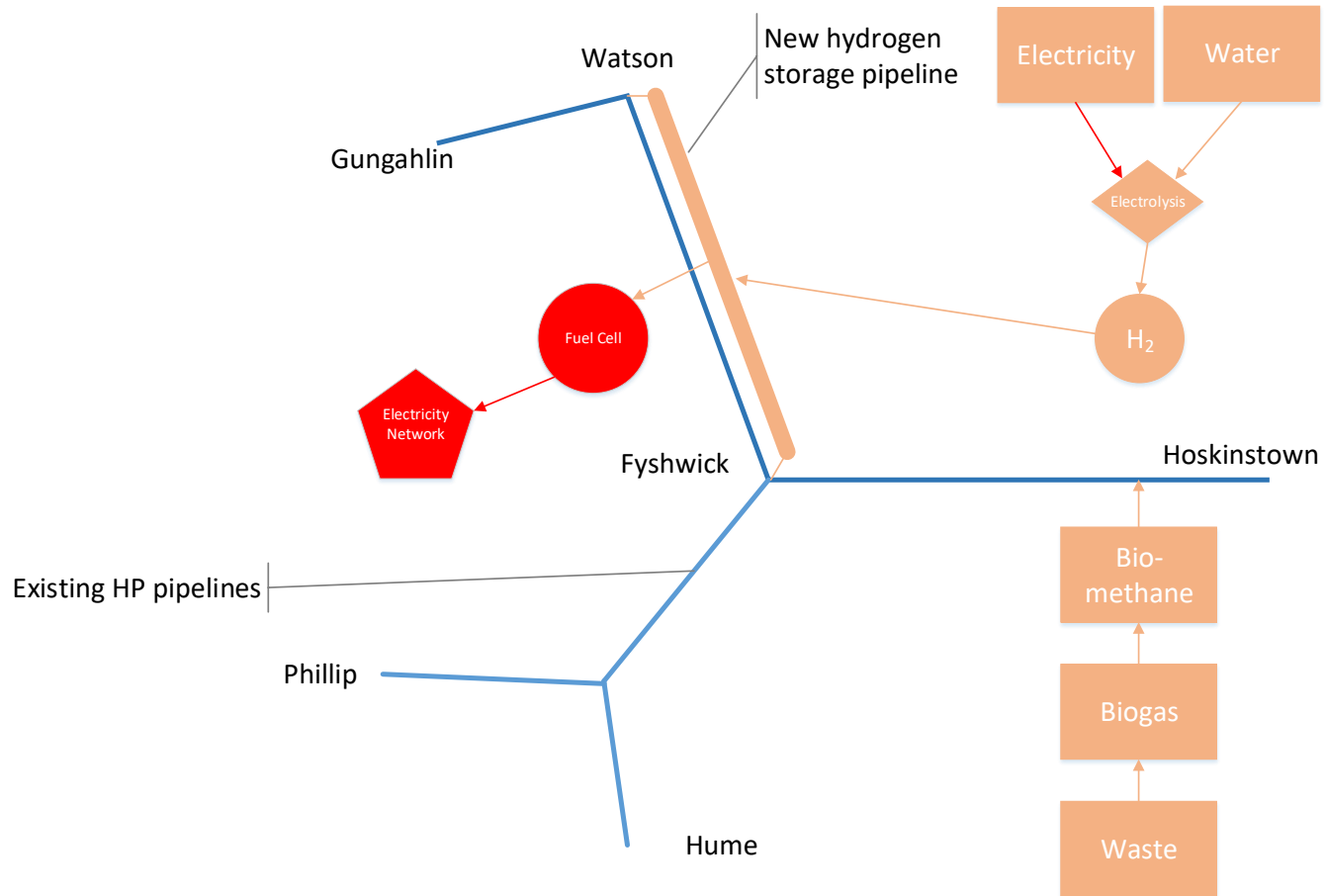
# Renewable gas 2030



# Renewable gas – introducing it into the network

- Renewable hydrogen or renewable methane
- A network providing predominately hydrogen
  - No new network technology, only scale
  - Network conversion
    - Hydrogen compatibility with steel
    - Hydrogen compatibility with other network devices
  - Hydrogen storage
  - Hydrogen linkage to electricity network
  - Appliance conversions

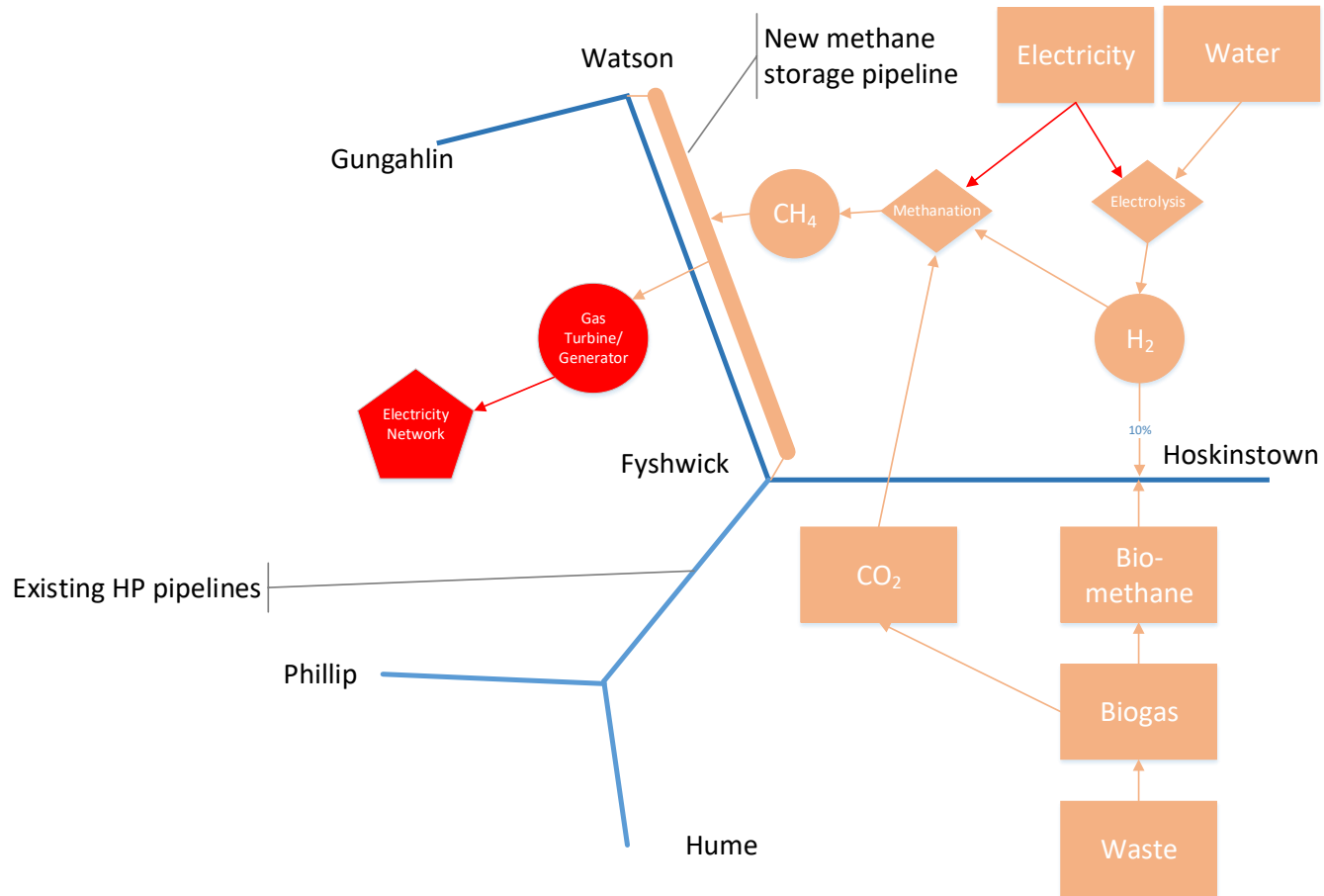
# Possible network design – predominately renewable hydrogen



# Renewable gas – introducing it into the network

- Renewable hydrogen or renewable methane
- A network providing predominately methane (say 90%)
  - Methanisers needed (emerging technology)
  - No network conversion
  - Methane storage
  - CO<sub>2</sub> supply
  - No appliance conversions

# Possible network design – predominately renewable methane





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Meeting 29, June 2019



# Gas network

## 2021-26 access arrangement review

### Progress update

*Phil Deamer*

*Manager, Regulatory Projects*

# High level plan



# Progress update on:

- Reference service proposal
- Consumer engagement
- Upcoming consultation topics

# Reference service proposal (RSP)

- Under recent changes to the National Gas Rules, the requirement to submit a RSP to the AER, which outlining the services to be offered under the access arrangement, has been moved forward 12 months to 30 June 2019
  - Provides additional time for the regulator to determine the appropriate reference services prior to the determination process for the other terms and conditions and provides for additional stakeholder consultation.
- We have not proposed any material changes to our reference services for the 2021-26 reference service agreement.
  - We will continue to monitor the market, with particular regard to gas metering contestability (nothing expected at this stage)
- We have spoken to retailers about our RSP

# Consumer engagement

- Consumer engagement activities will include:
  - ✓ ECRC
  - ✓ Proposal for a Citizen jury – NEW!
  - ✓ Consumer summary
  - ✓ Website
  - ✓ Targeted consultation (large customers, retailers)
  - ✓ Collaboration with ACTCOSS
  - ✓ Consumer forums

# Citizen jury

- Work in progress to set up a citizen jury.
- The citizen jury will contribute to our consumer engagement effort for GN21.
- Jurors will participate in a deliberative process towards a recommendations report for Evoenergy to take into account in its regulatory proposal.
- Through this process jurors will consider key issues relating to one overarching question on the future direction of Evoenergy's gas network

# Consultation topics

- In the coming months some of the issues we want to talk to you about include:
  - Proposed term of the access arrangement
    - Recent changes to the Rules require service providers to propose term, rather than have default 5 years
  - Medium-long term gas network strategy
    - Implications for proposed capital expenditure
    - Funding expectations for research into transition to renewable gas
  - Initial findings of ACTCOSS collaboration work
    - Options for supporting vulnerable customers
  - Tariff structure
    - Tariff plans and the mix of fixed and usage charges



# Proposed term of the access arrangement

- Previous rules set out a 5 year period as the default.
- New Rules offer the opportunity for shorter or longer terms provided the proposed term is consistent with the national gas objective and revenue and pricing principles.
- No compelling reason to move away from the existing 5 year term.
- Considerable regulatory precedent for a 5 year term, striking a balance between risk and cost.

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# Electricity Network Pricing

*Emily Brown, Regulatory Pricing Manager*

*Chris Bell, Manager, Price Review*

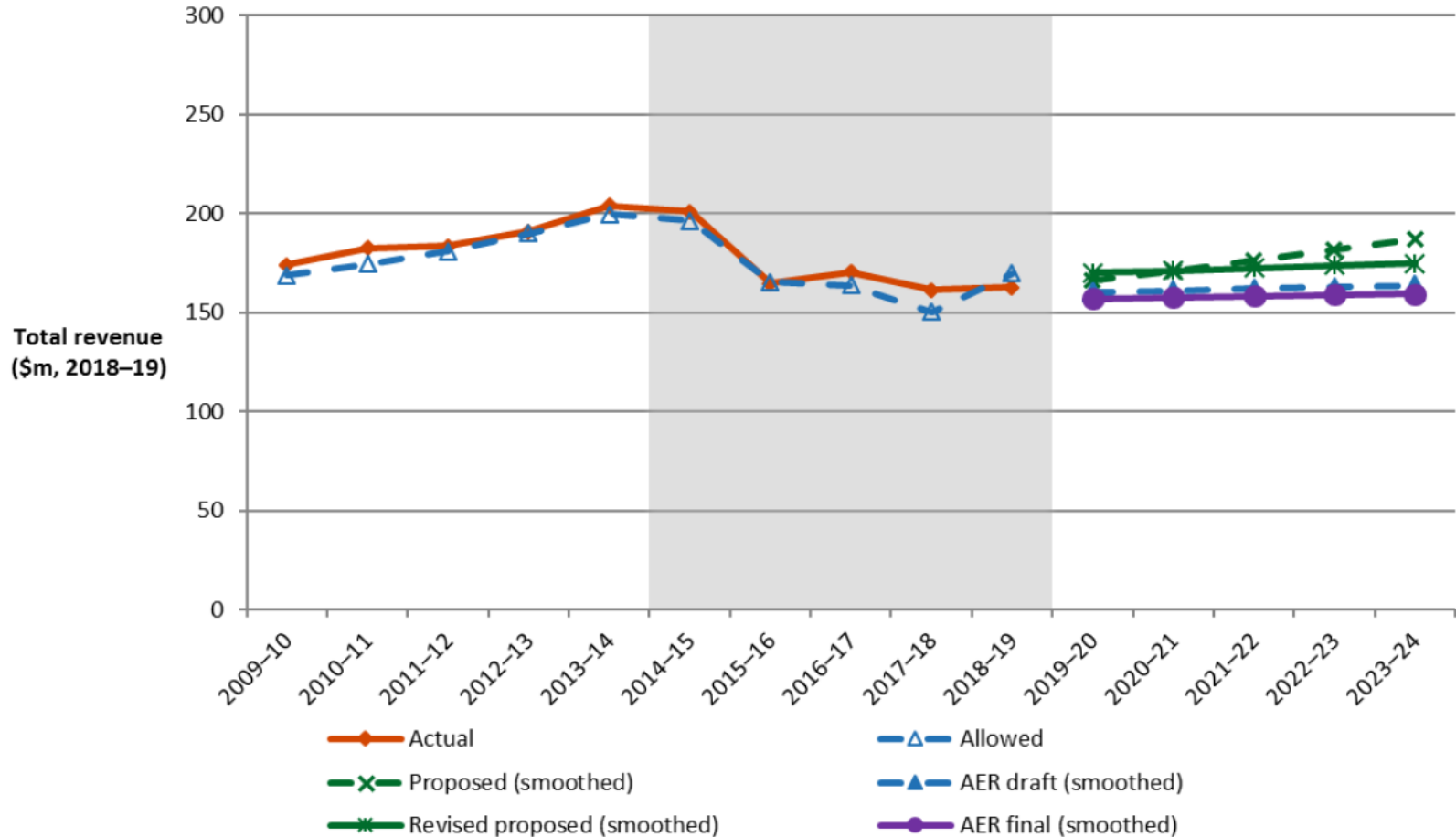
# Outline

- AER Final Decision update
- Network electricity prices for 2019/20

# Regulatory determination final decision

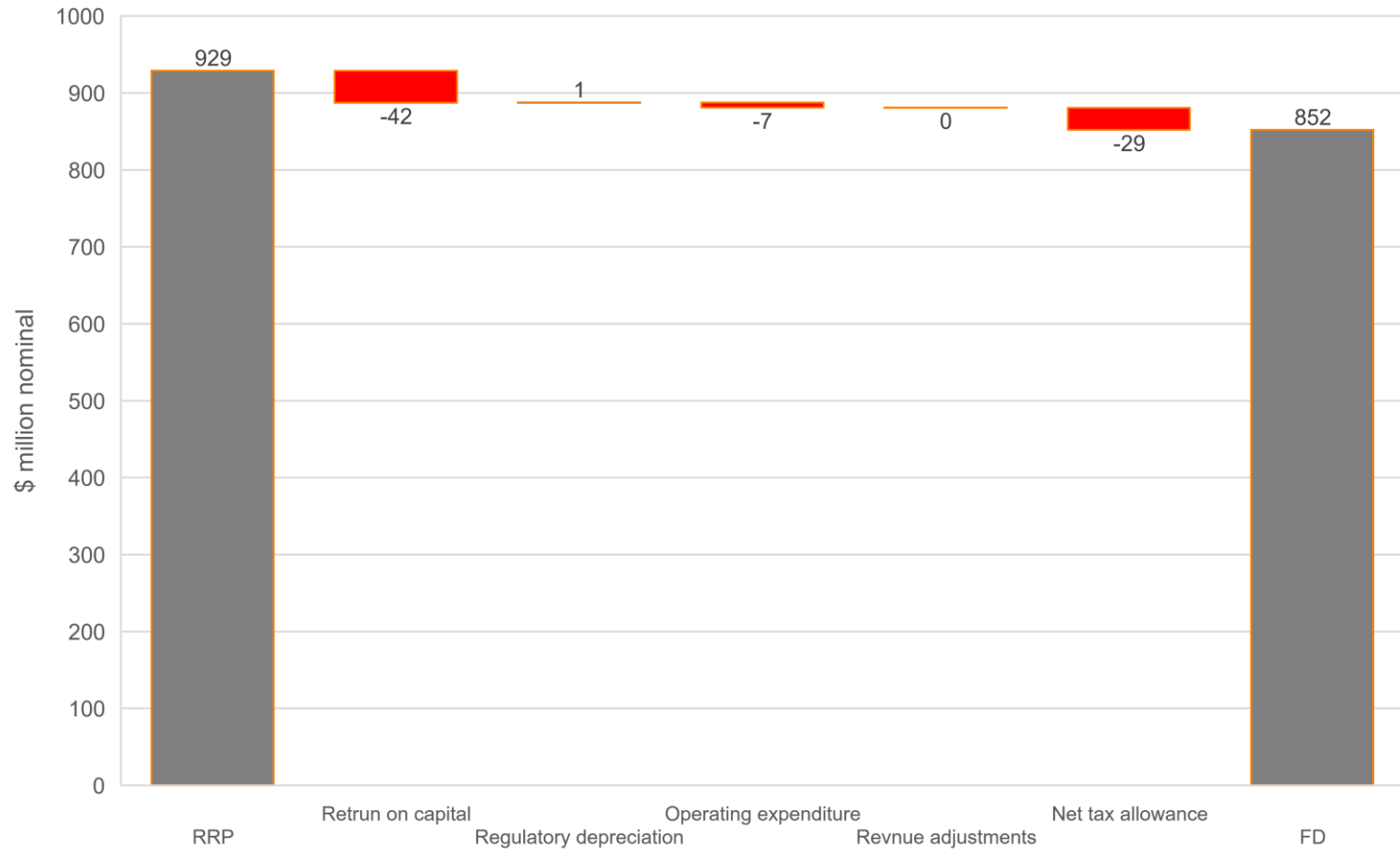
- The Australian Energy Regulator (AER) published on 30 Apr 2019 its final decision (FD) on the Evoenergy electricity distribution determination for 2019-24
- FD allows for a 6.3% real reduction in total revenue allowed from that in the current period (2014-19)
- FD revenue is \$20m (nominal) below AER draft decision and \$77m below Evoenergy's revised proposal (RRP)

**Figure 1 Revenue over time – distribution and transmission (\$ million, 2018–19)**

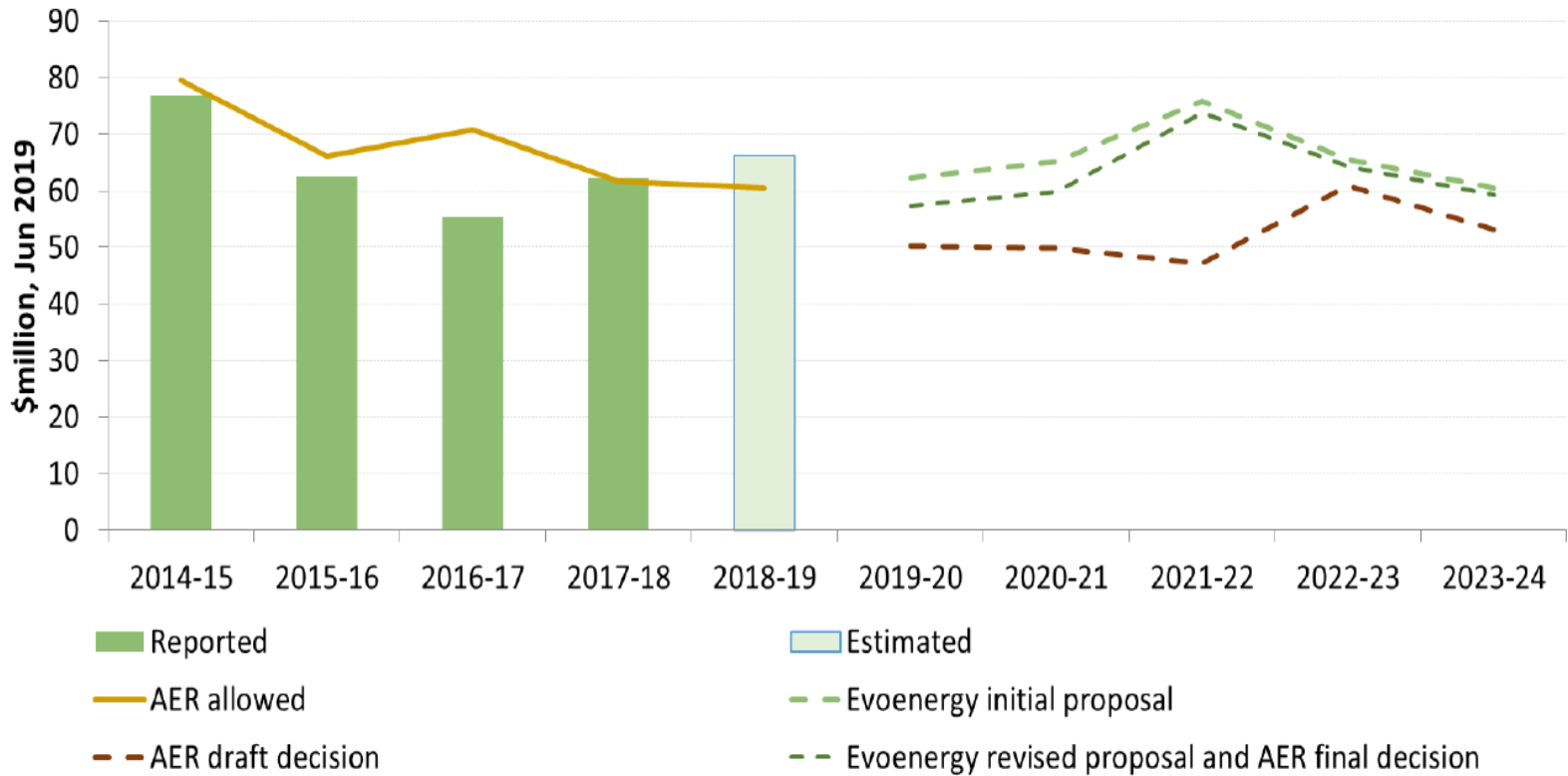


Source: AER analysis.

## Revised proposal and FD revenue requirements 2019-24



**Figure 6 Evoenergy's capex over time (\$ million, 2018-19)**

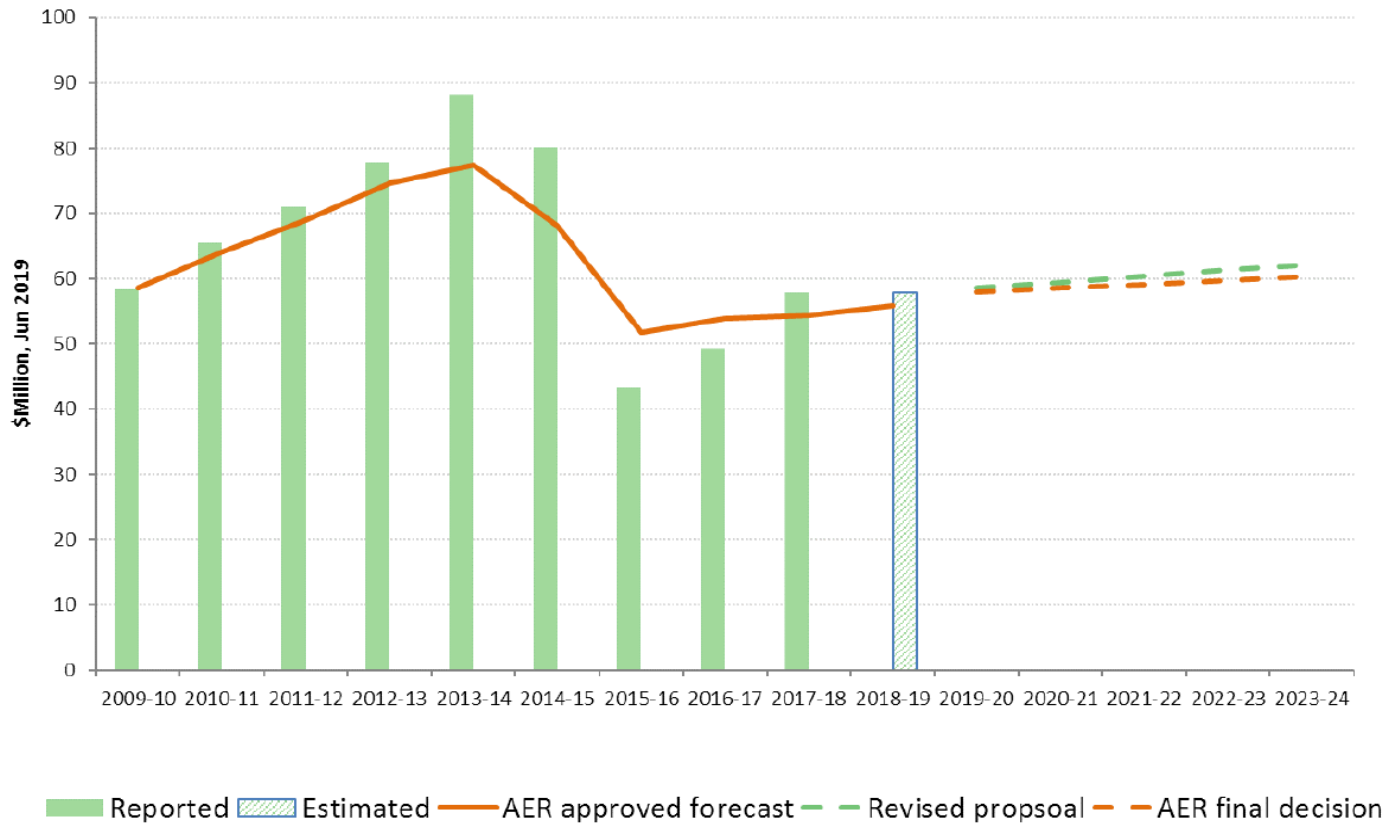


Source: AER analysis.

Note: Net capex.



Figure 7 AER final decision on total forecast opex (\$ million, 2018–19)



Source: Evoenergy, Annual reporting regulatory information notices; Evoenergy, Revenue proposal 2019-24, Workbook 1 Regulatory determination; AER analysis.

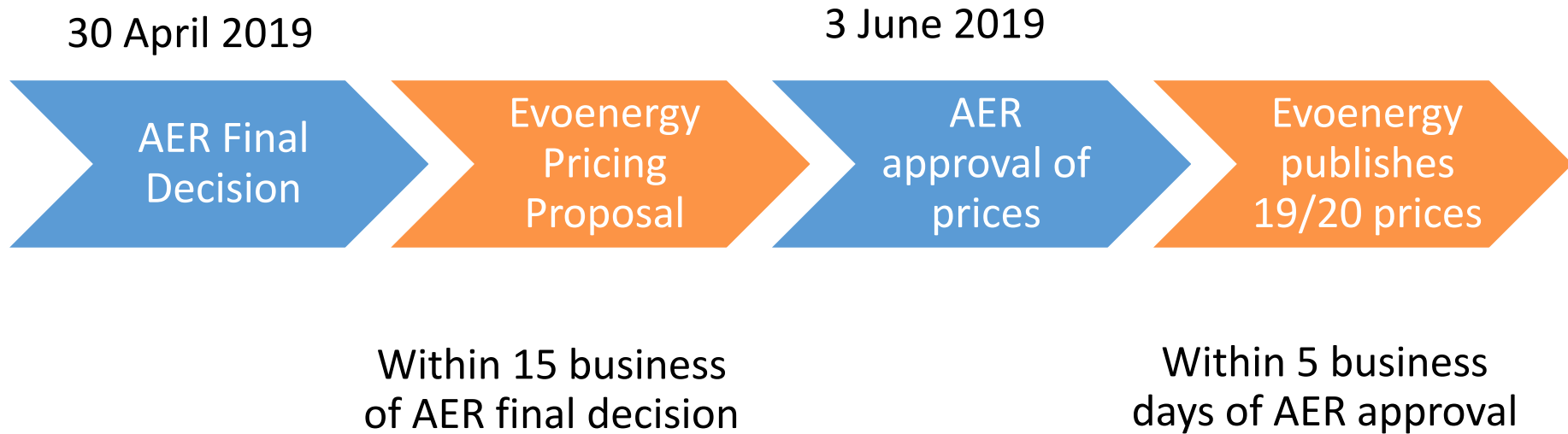
Note: Includes debt-raising costs.



# 2019/20 Network electricity prices

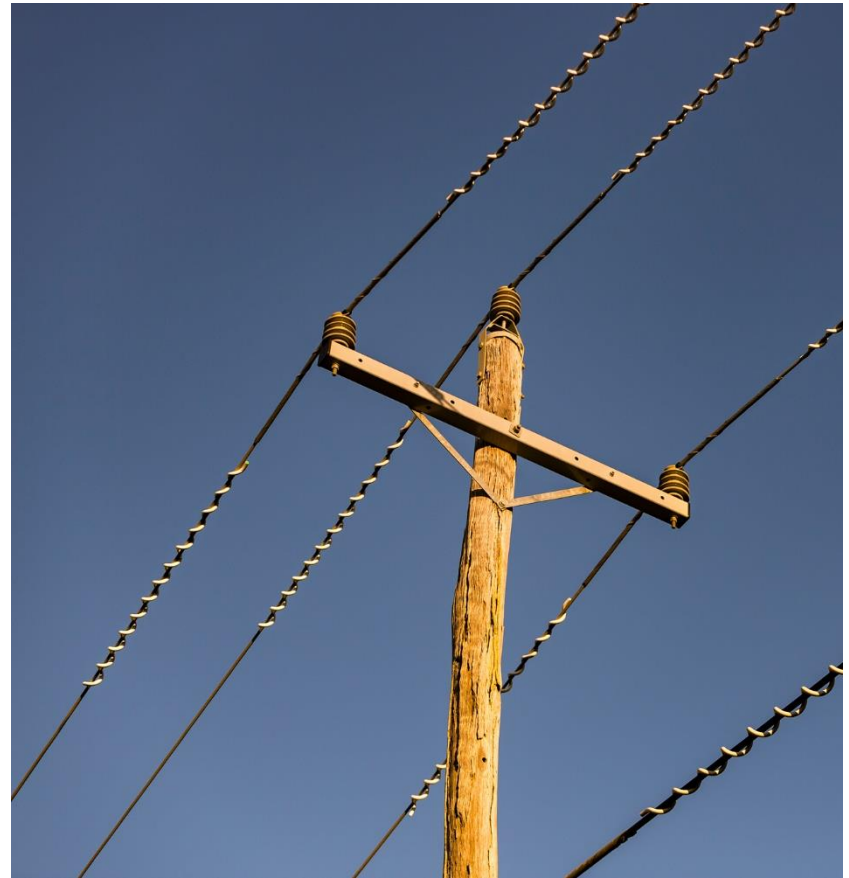
Slide 8  
June 2019

# Network price timeline



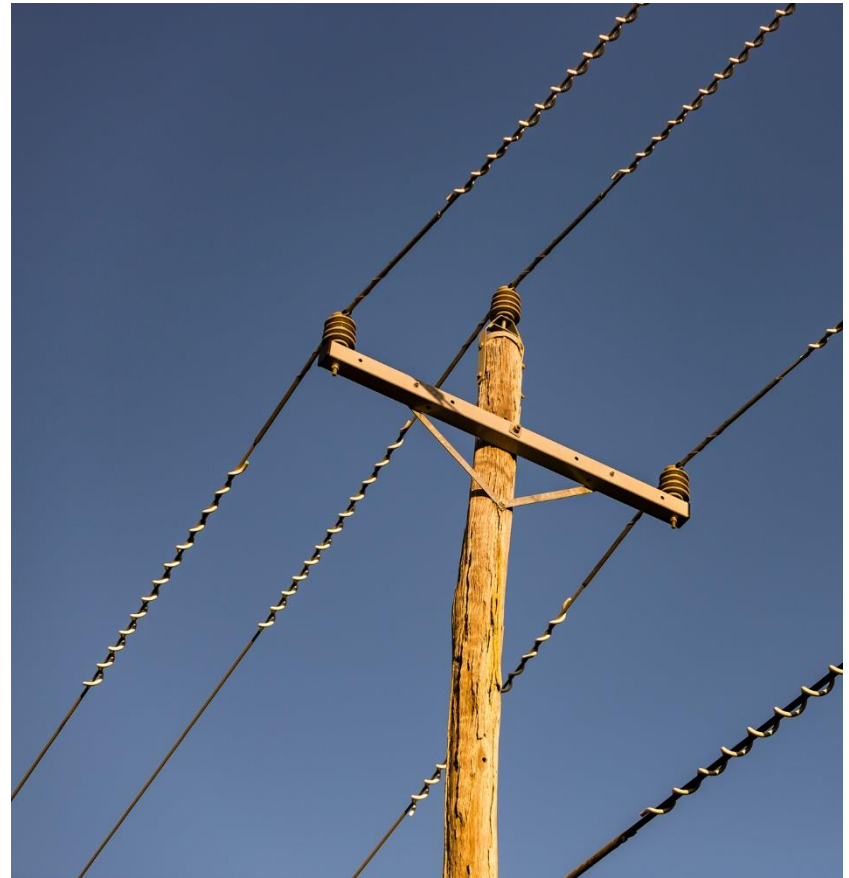
# Network tariff components

?

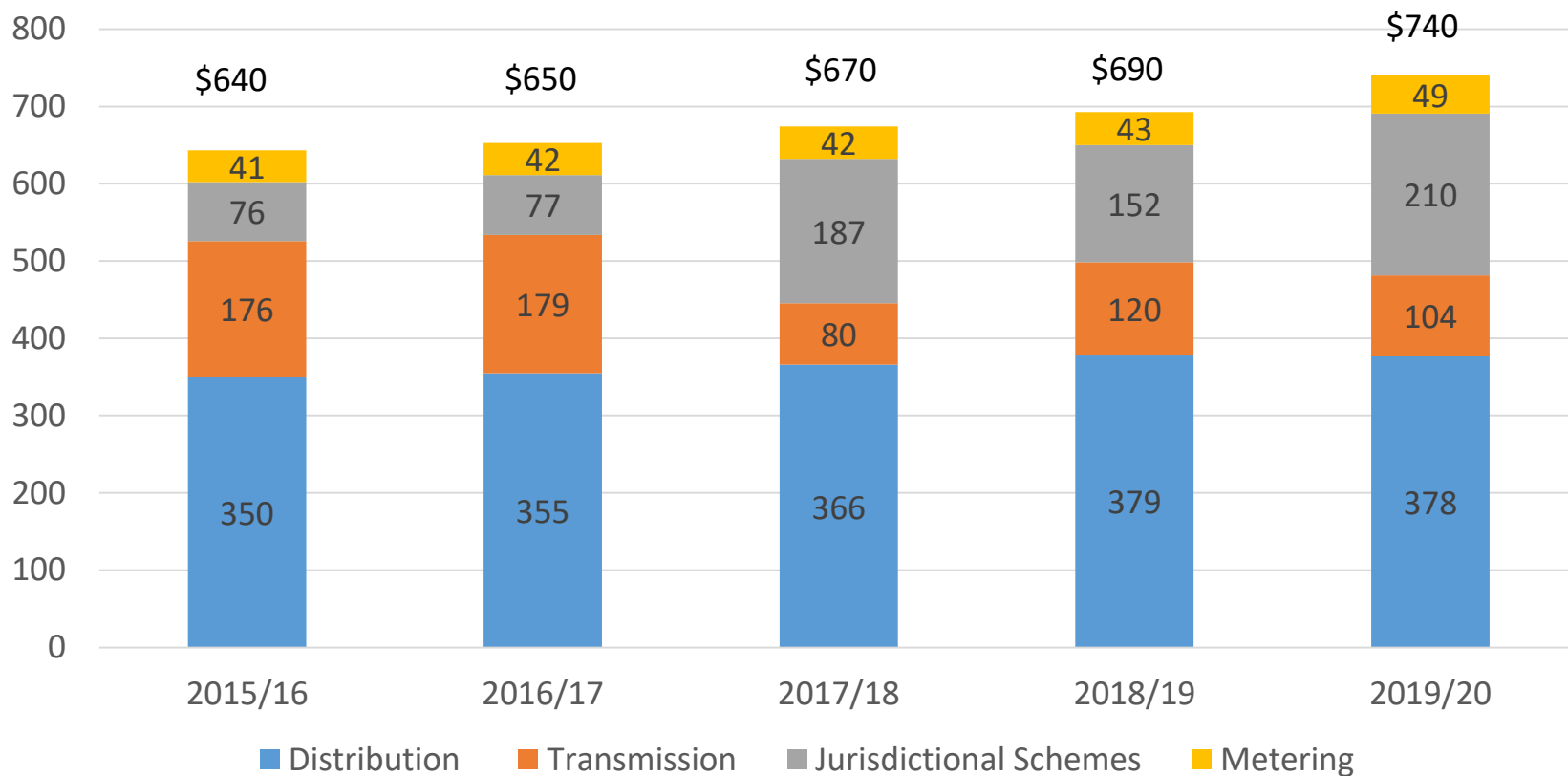


# Network tariff components

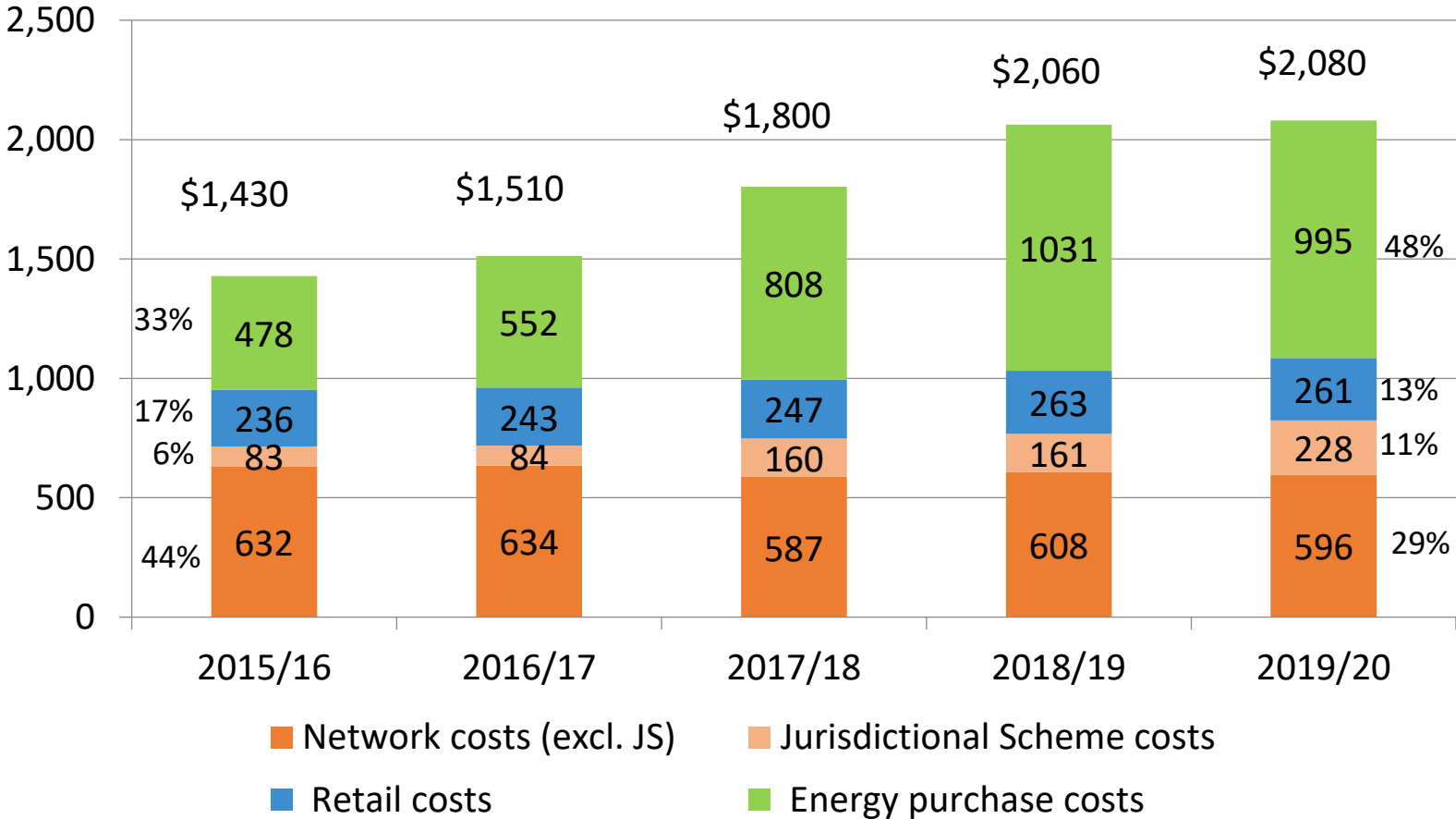
- Transmission
- Distribution
- Jurisdictional schemes
- Metering



# Typical residential **network** bill (\$/year)



# Typical residential retail bill (\$/year)

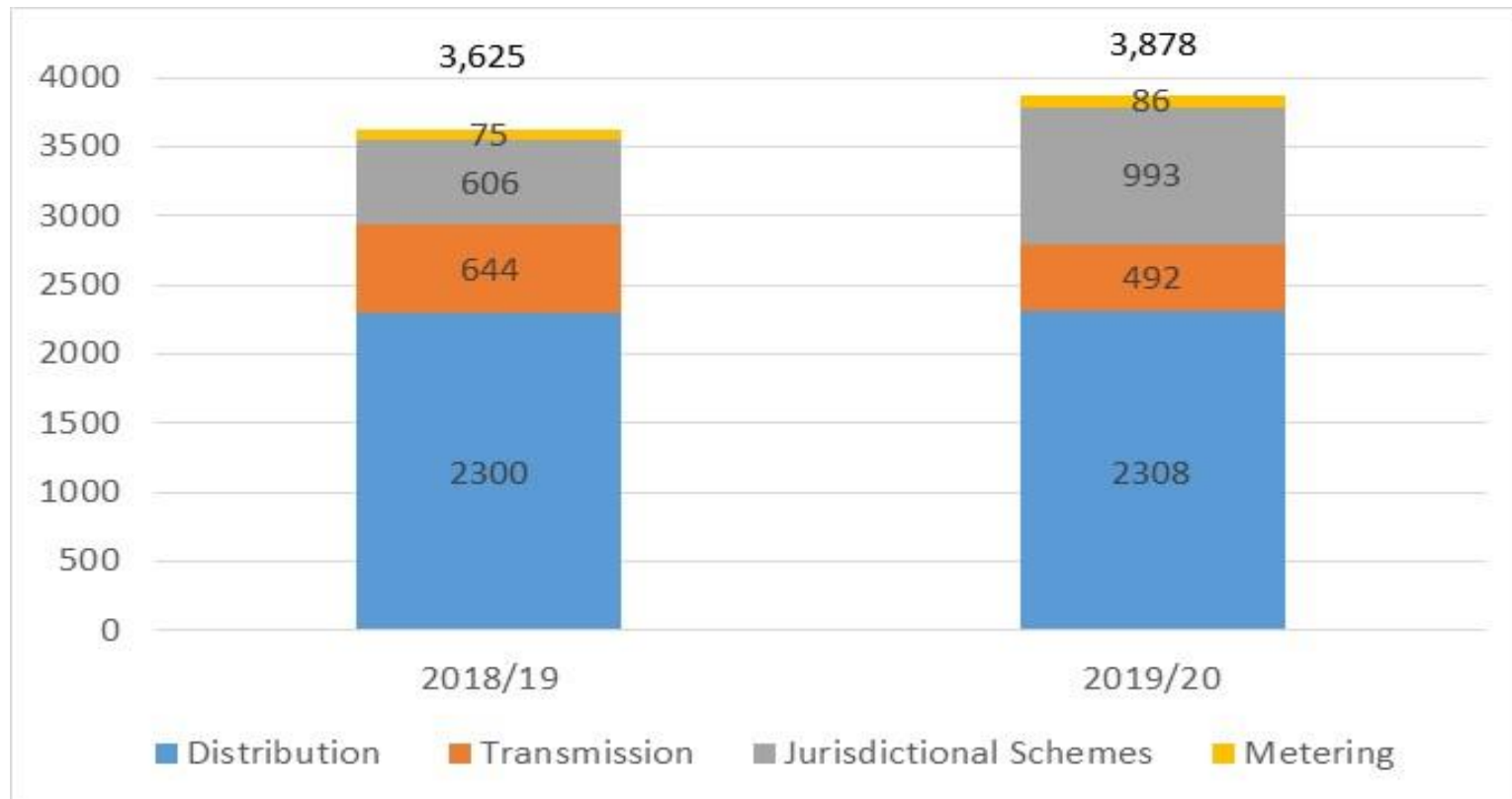


Source: Independent Competition and Regulatory Commission (except 2015/16 and 2016/17 Jurisdictional Scheme costs)

Notes: Based on customer using 7,500 kWh per year on an ActewAGL Home Plan  
 Bill impacts are in nominal terms, excluding GST.



# Typical small commercial **network** bill (\$/year)





# EnergyShare SMS

Eddie Thanavelil, Demand Side Innovation Engineer

# EnergyShare SMS

Energy Share is a virtual demand management program, where Evoenergy will work in partnership with eligible customers to manage heavy demand in the network by redirecting their energy resources for short periods of time.

Sharing energy across the network in this way can prevent unplanned power outages, and keep the power on during extremely hot or cold days.

# Registration window 17 Apr – 17 May



Up to 250 registrations before May 3rd after which an email reminder was sent leading to an additional 150+ registrations.

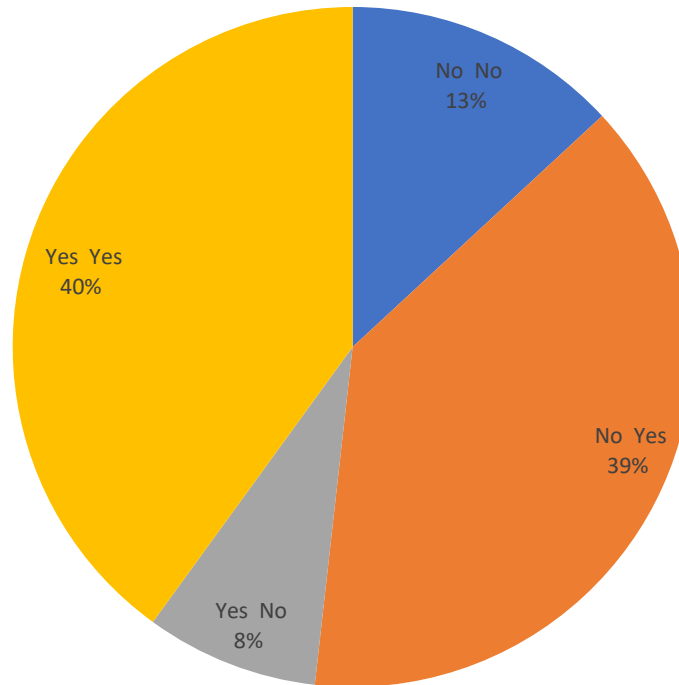
# Registrations stats



Highest number of participants in Kambah, Coombs followed by newer developments in Greenway, Kingston, Throsby, Moncrieff etc.

# Electric Hot water/Heating Survey

Percentage of participants with Electric hot water and heating



Hot Water	Heating	Percentage
Yes	Yes	40%
Yes	No	8%
No	Yes	39%
No	No	13%

# Status Update

	Event 1 – May 11 (Sat)	Event 2 – May 16 (Thurs)	Event 3 – May 30 (Thurs)	Event 4 – June 11 (Tues)
Total Registered	467	470	476	476
Total "Yes" Responses	323	274	267	279
Participation Rate	69%	58%	56%	59%
Incentive	1 X \$200 gift card	2 X \$100 gift card	2 X \$200 gift card	1 X \$500 gift card

Total invitees = ~ 9100\*

Total Registered = 476 (around 5.2%)

Average of 61% participation rate for the events.

\*Note – some letters were sent to residences/houses that were still being built, but had been registered with a smart meter.

# Participation

	All four events	At least three events	At least two	Single event
Participation	27%	32%	21%	19%

- Almost 60% of participants were willing to repeat their engagement (participated in 3 or more events).
- We had 9 participants withdraw from Energy Share SMS over the entire period. That is around 2% of total registrations.

# Evoenergy

