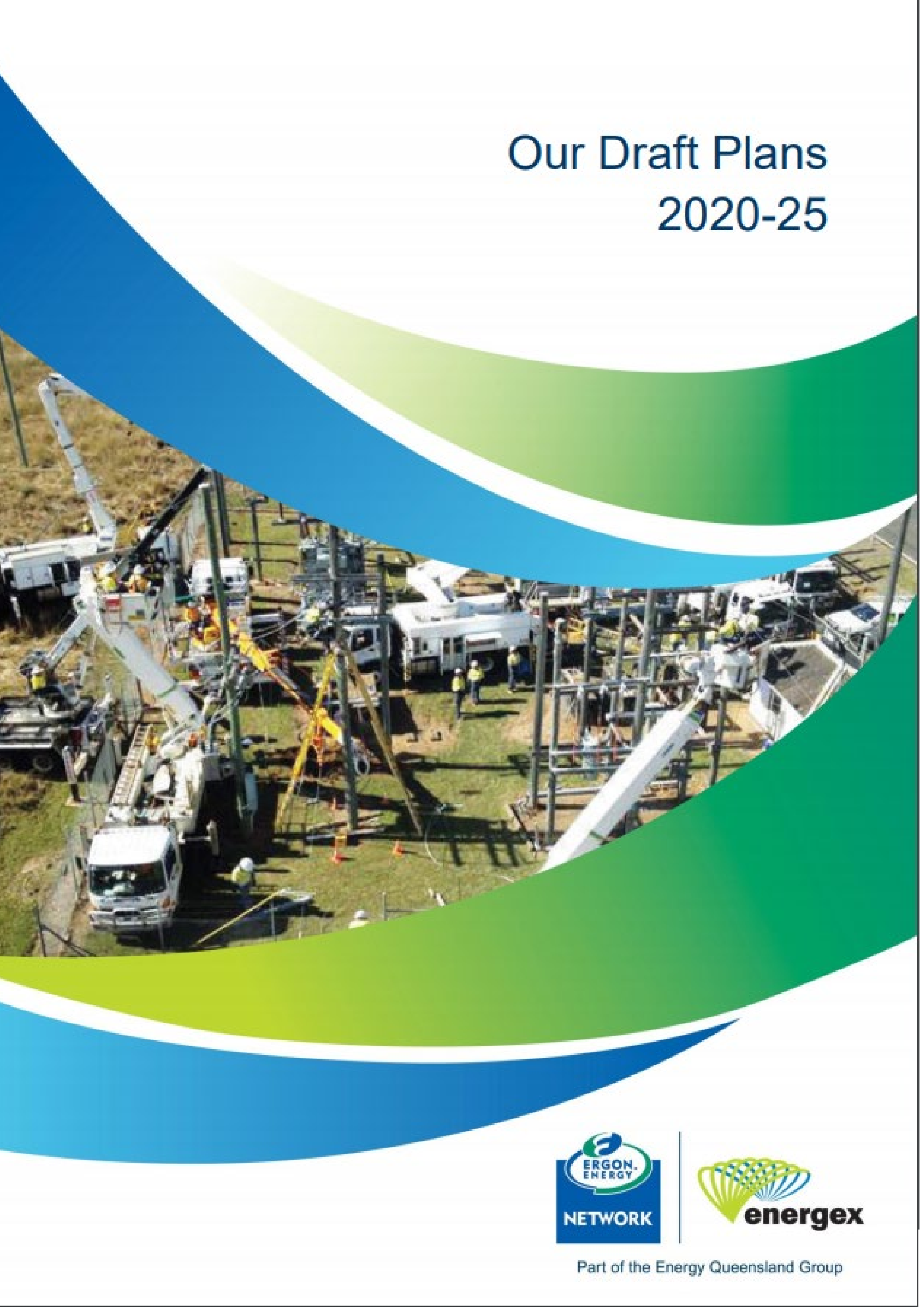


Dynamic Analysis

Advice to ECA on Energex and Ergon Energy Draft Plan

Purpose

The purpose of this briefing is to identify key strategic issues with the Draft Plan and to zone in on key issues

Structure

1. Snapshot of our feedback
2. Strategic issues
3. Zoning in on key issues

Snapshot of our feedback to the ECA

We have assessed whether the strategic direction outlined in the draft plan for 2020-25 will lead to improved affordability and services for Queensland customers in the long term.

Our findings

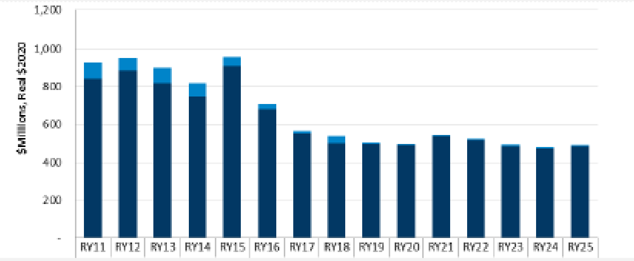
- ❑ Queensland distribution networks have tended to over-invest in the past, and have not kept pace with opex efficiencies of peer networks.
- ❑ Under the stewardship of Energy Queensland, the networks are exhibiting positive change that is improving affordability for customers.
- ❑ Moving forward, we would like to understand the long term strategy on how the networks will adapt to a changing energy market.
- ❑ We also consider that more efficiencies could be passed onto customers in the 2020-25 period than set out in the draft plan.

2000 → The Past → 2020 → Short term → 2025 → Long term → 2060

The Past (2000–2020)

- X Significant investment in networks led to high electricity prices
- X Over-investment has led to low utilisation
- X Opex significantly above peer networks in SA and Vic
- ✓ Genuine improvement since 2016 with reductions in capex and improvements in opex benchmarks.

Ergon Energy gross capex (Draft plan)

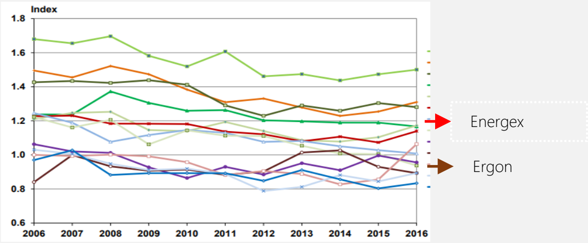


The Queensland networks had very high capex between 2011 and 2016, but this is dropped significantly.

Short term (2020–2025)

- ✓ 10% headline reduction in price
- ? RAB continues to be high, but showing a small decline
- X Limited productivity in forecast, and no stated transformation strategy across the business.
- X Limited evidence of using DER and capacity to reduce replacement and growth capex.

AER 2017 Benchmarking report MTFP index across Australian distributions network

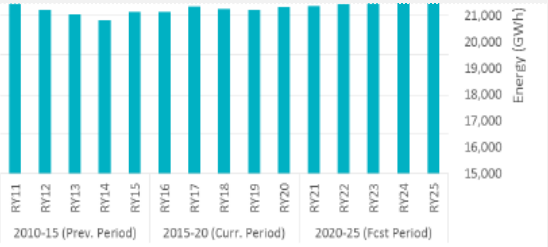


Energex and Ergon still perform in the mid to lower ranges of efficiency on AER industry benchmarks

Long term (2025–2060)

- ? Limited explanation of network strategy to optimise use of the network.
- ? High uptake of solar means some customers may drop off the network leading to higher average prices
- ? Interest rates at low point in cycle meaning there could be upward pressure on prices in future.

Energex energy volumes between 2010 and 2025



Energy sales have remained flat over the last decade as more customers move to solar

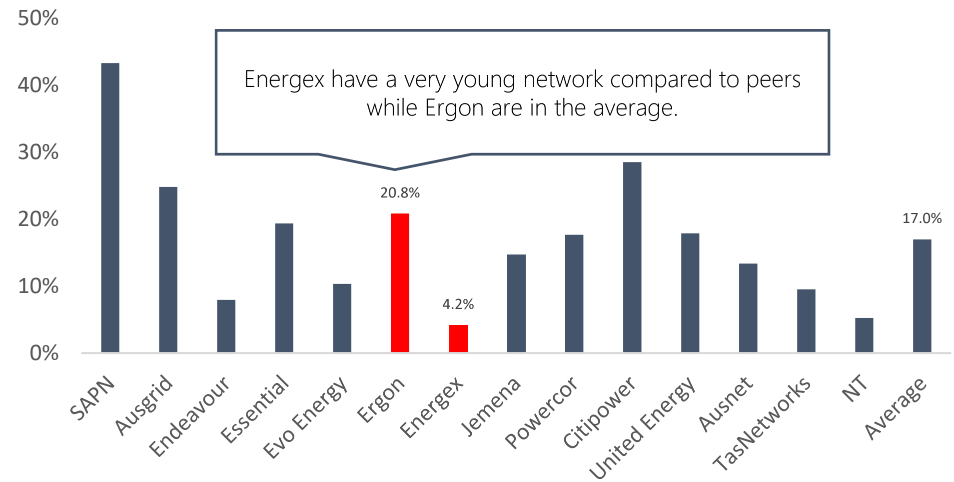
Strategic context

We tried to understand the underlying challenges and circumstances of the Queensland distributors

High RAB, but relatively young network

- Due to high levels of reliability investment in the past, there is available capacity on the network to meet system demand.
- The age of the network is relatively young overall compared to peers.
- This suggests there are opportunities to defer or avoid replacement of assets, and to use innovative demand management in constrained areas of the networks.

Percentage of asset value over 50 years of age



Note: Based on our review of the category analysis RIN over the last 3 years.
Replacement value has been derived by multiplying unit cost by population of assets

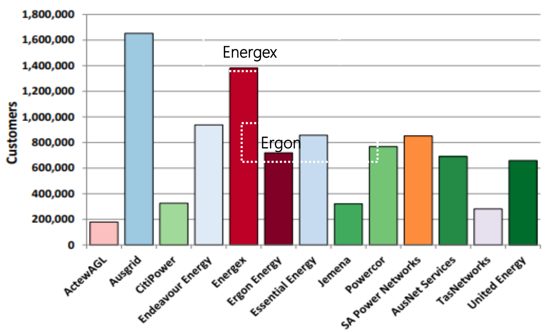
At the forefront of future network challenges

- Queensland has a lot of sun for solar. This has led to almost 30% of detachable houses with solar.
- Energy volumes have flattened in recent times, meaning that any increase in costs result in higher prices despite new connections.
- While need a more robust LV network, opportunities to slim the HV and sub-transmission networks.

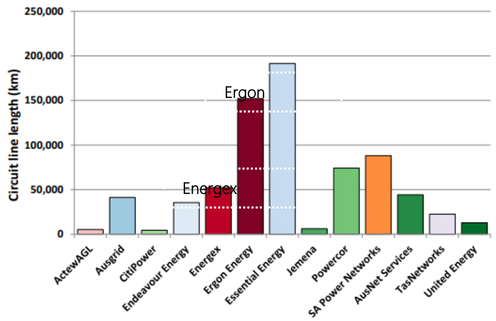
Varying operating conditions

- The 2 networks are fundamentally different in design and challenges.
- Energex services predominantly a large urban population, while Ergon Energy has a large geographical terrain with low customer numbers.

Number of customers – AER Benchmarking report 2017



Kilometres of cables and conductors – AER Benchmarking report 2017



Energex has a large number of customers but Ergon has far more kilometers of cable to service its rural coverage

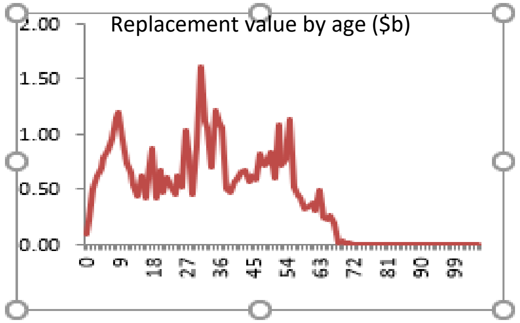
Strategic challenges

We tried to understand the underlying challenges of the Queensland distributors

Vision for the long term

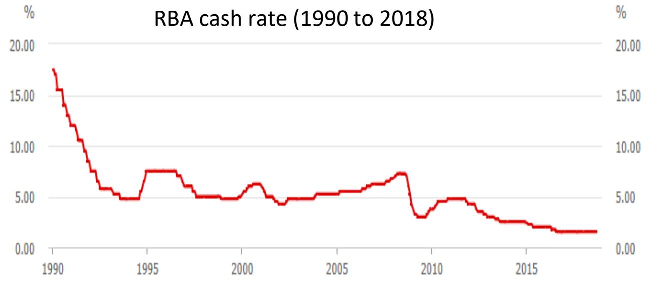
- There are some headwinds facing Queensland that may impact price and reliability in the medium to long term.
- We need to understand how the networks are responding to these challenges and how the 5 year period sets them up for the long term.

Long term replacement



How will Ergon replace its cohort of ageing assets in 20 years time without increasing prices?

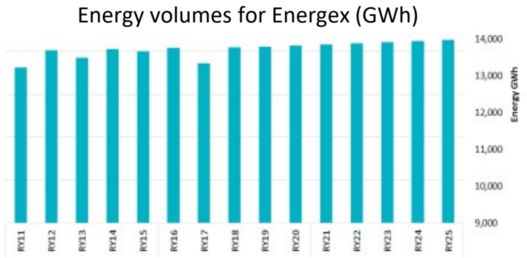
Interest rates

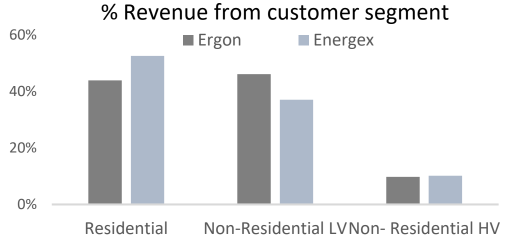


Source: RBA

A high RAB means that Queensland customers are exposed to higher prices when interest rates eventually rise

Volumes

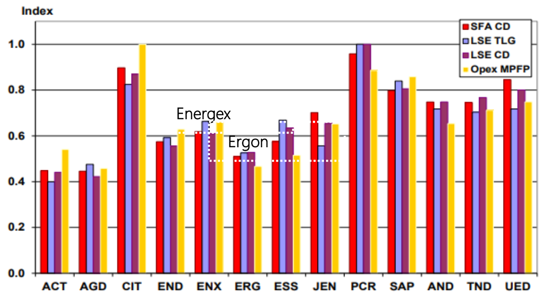




High energy growth helps keep average prices low. Energy volumes are flattening as a result of customers using solar. There is a risk that some large commercial customers may go off grid.

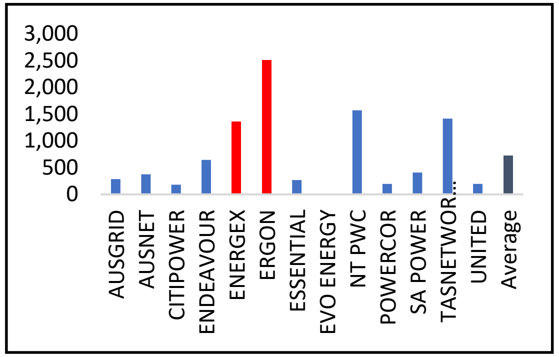
Productivity and transformation

- The networks have achieved considerable progress but still are in the middle (Energex) to lower (Ergon) ranks of DNSP efficiency.
- We need to understand how the networks are responding to these metrics in the regulatory period and the longer term



AER opex benchmarking shows that there is still considerable improvement to get into top quartile

Overhead conductor unit costs ($,000, 2017-18 RIN)



In some capital areas, Queensland seem to have a high cost of program delivery. This may be due to cost reporting anomalies, or a level of inefficiency. We consider that the networks should examine these areas in more detail.

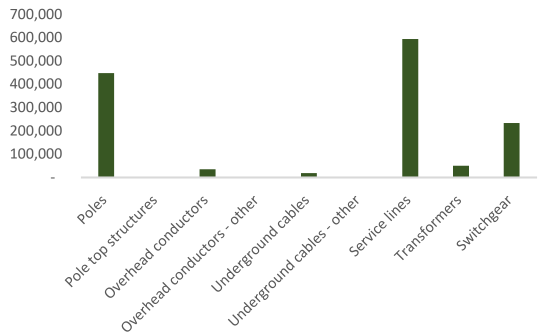
Strategic questions to address

We would like the regulatory proposals to set out the long term strategy for Queensland networks

Driving optimal investment decisions

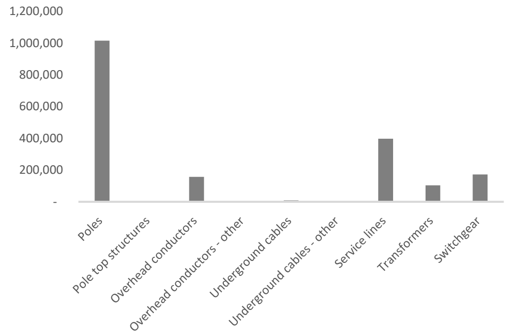
- What are the key challenges facing the network and merged business?
- What is the long term vision?
- How is this 5 year period fitting into a longer term plan?
- If you had your chance again, how would the optimized network look today?
- What will the optimized network look like tomorrow?

Asset composition of Energex network



Is there scope for optimizing the asset base to slim the network of the future?

Asset composition of Ergon network



Driving efficiency in the business

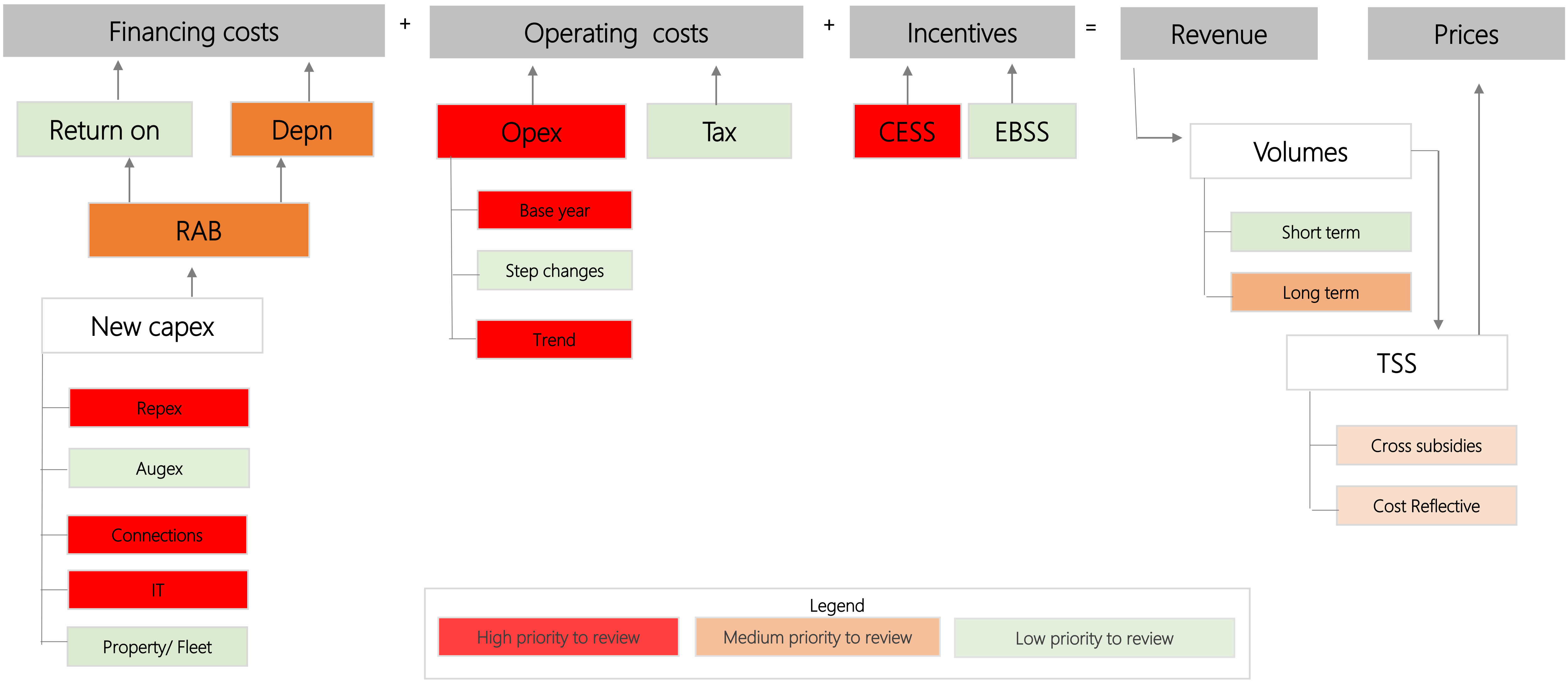
- What research data has the transformation program been based on?
- What are the focus areas of efficiency in the next period, and has enough been done to share this with customers in the short run?
- What level of savings are required to keep prices moving down over the long term?

Activity view	Cost view
Corporate	
IT property and fleet	Internal labour
Planned maintenance	Outsourcing
Planned vegetation	Materials
Emergency response	Project delivery
Building new network	

Has every aspect of the businesses been explored as part of transformation?

Zoning in on key issues

Based on our strategic review of the circumstances and challenges of the Queensland distributors, we consider the following areas of the Draft Plan should be further justified, clarified or amended for the regulatory proposal



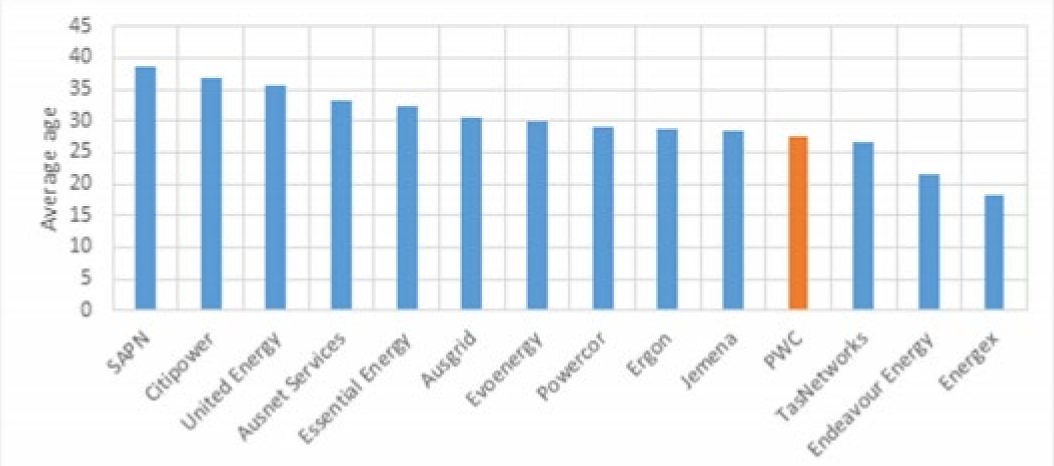
Zoning in on key issues - Capex

The key to affordability in the long term is to ensure RAB declines over time. Keeping a lid on capex provides the best means of reducing the RAB over the medium term.

Replacement

- The Energex and Ergon networks seem to be relatively young compared to peer networks.
- We would like to understand how Ergon and Energex risk methodology is extending asset life.
- We also want to understand how it chooses options to replace an asset at the end of its life including retiring the asset without replacement.

AER Analysis of average age of network asset (Source: Power and Water draft decision)



Energex and Ergon have very young network ages relative to their peers.

Connections

- Connections capex is a large component of proposed expenditure. This is placing upwards pressure on the RAB in the medium term.
- We would like to understand if the connection policy is encouraging fair and efficient outcomes for customers.
- Can large customers pay a larger share of augmentation works when they connect?

Energex and Ergon are forecasting to spend $790 million on connections in the 2021-25 period.

IT capex

- IT is driving a large component of capex.
- We would like to understand where Energex and Ergon are at with their journey to automation and digitalization, and what cost savings this will bring in the long term
- With such a large investment we would have expected a significant productivity adjustment for capital projects and opex.

Zoning in on key issues - Opex

We question whether Energex and Ergon base year should be accepted as efficient.
We also consider that higher productivity adjustments can be achieved

Base Year

- AER benchmarking on multi-factor productivity indicate that Energex is performing in the mid-range of distribution networks (6th) and that Ergon is performing towards the bottom end of the networks (12th).
- We understand that this may be due to some anomalies when undertaking such benchmarking data, and due to some unfavorable operating and environmental factors.
- However, when looking across the AER's benchmarking metrics, there is significant doubt that the base year can be ticked off as efficient.

Productivity trend

- Energex and Ergon have the right intention in incorporating a productivity dividend into its trend forecasts.
- However the 2.8% across 5 years, amounts to only 0.6% each year. We consider that much higher targets can be set for Queensland networks due to investments in IT, and much greater opportunity for transformation.

AER 2017 Benchmarking report – Rankings based on multi-factor productivity

DNSP	2016 Rank	2015 Rank	MTFP 2016 Score	MTFP 2015 Score	2015 to 16 % change
CitiPower (Vic)	1	1	1.50	1.47	+2
SA Power Networks	2 ↑	3	1.31	1.26	+4
United Energy (Vic)	3 ↓	2	1.28	1.30	-2
Powercor (Vic)	4 ↑	5	1.17	1.10	+6
Jemena (Vic)	5 ↓	4	1.17	1.19	-2
Energex (QLD)	6	6	1.14	1.07	+6
ActewAGL (ACT)	7 ↑	11	1.06	0.86	+24
Endeavour Energy (NSW)	8 ↓	7	1.01	1.03	-2
TasNetworks	9	9	0.96	1.00	-4
AusNet Services (Vic)	10 ↓	8	0.94	1.01	-7
Essential Energy (NSW)	11 ↑	12	0.89	0.84	+6
Ergon Energy (QLD)	12 ↓	10	0.89	0.93	-4
Ausgrid (NSW)	13	13	0.83	0.80	+4

Zoning in on key issues – Capital Incentive Scheme

We would encourage Energex and Ergon to refund the majority of the payment they will receive under the Capital Incentive Sharing Scheme (CESS)

- It is unclear from the Draft Plan whether Ergon and Energex will propose a reward for underspending capex
- Our view should be that a reward should not be provided for a deferral of projects. Over the last 2 periods, the networks have not spent the expenditure that they proposed or received from the AER. This suggests that the forecasts were incorrect rather than the networks pursuing efficient costs.
- We consider the reward should only be provided for cost efficiency in delivery, rather than forecasting inaccuracy.