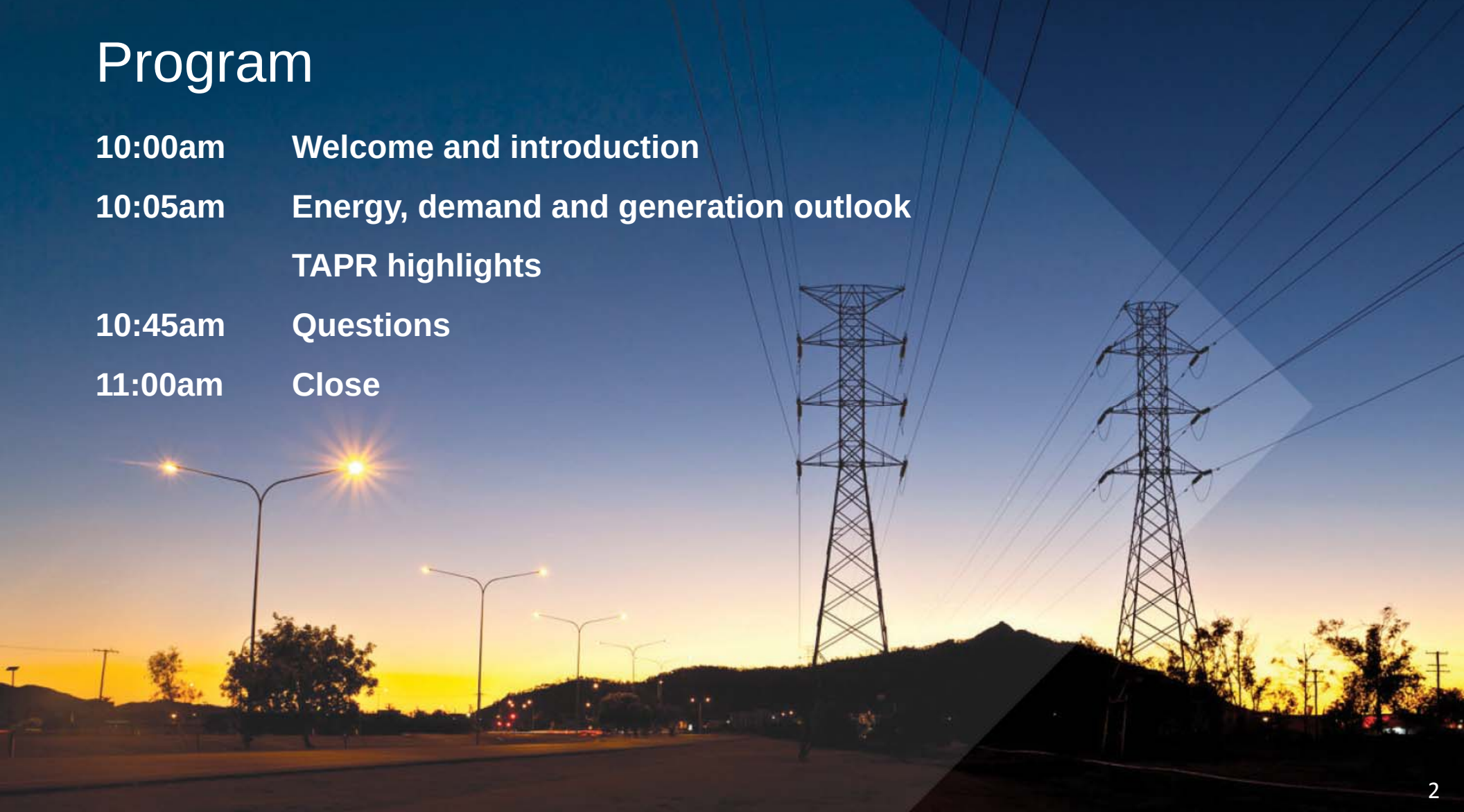
2018 Transmission Annual Planning Report Webinar

Program

10:00am	**Welcome and introduction**
10:05am	**Energy, demand and generation outlook**
	TAPR highlights
10:45am	**Questions**
11:00am	**Close**



Introduction

Powerlink's network

Energy, demand and generation outlook

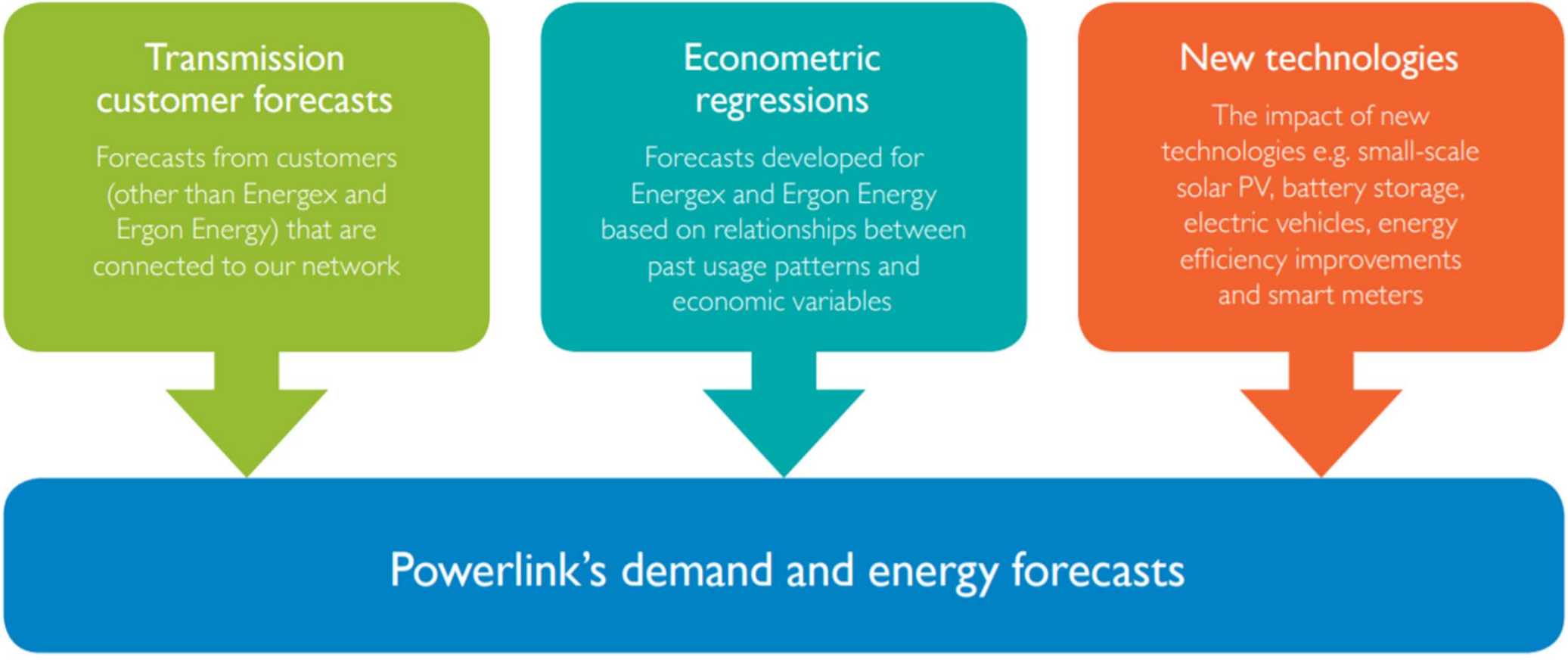
Damian Vermey

General Manager

Technology and Planning

Delivery and Technical Solutions

Forecasting methodology

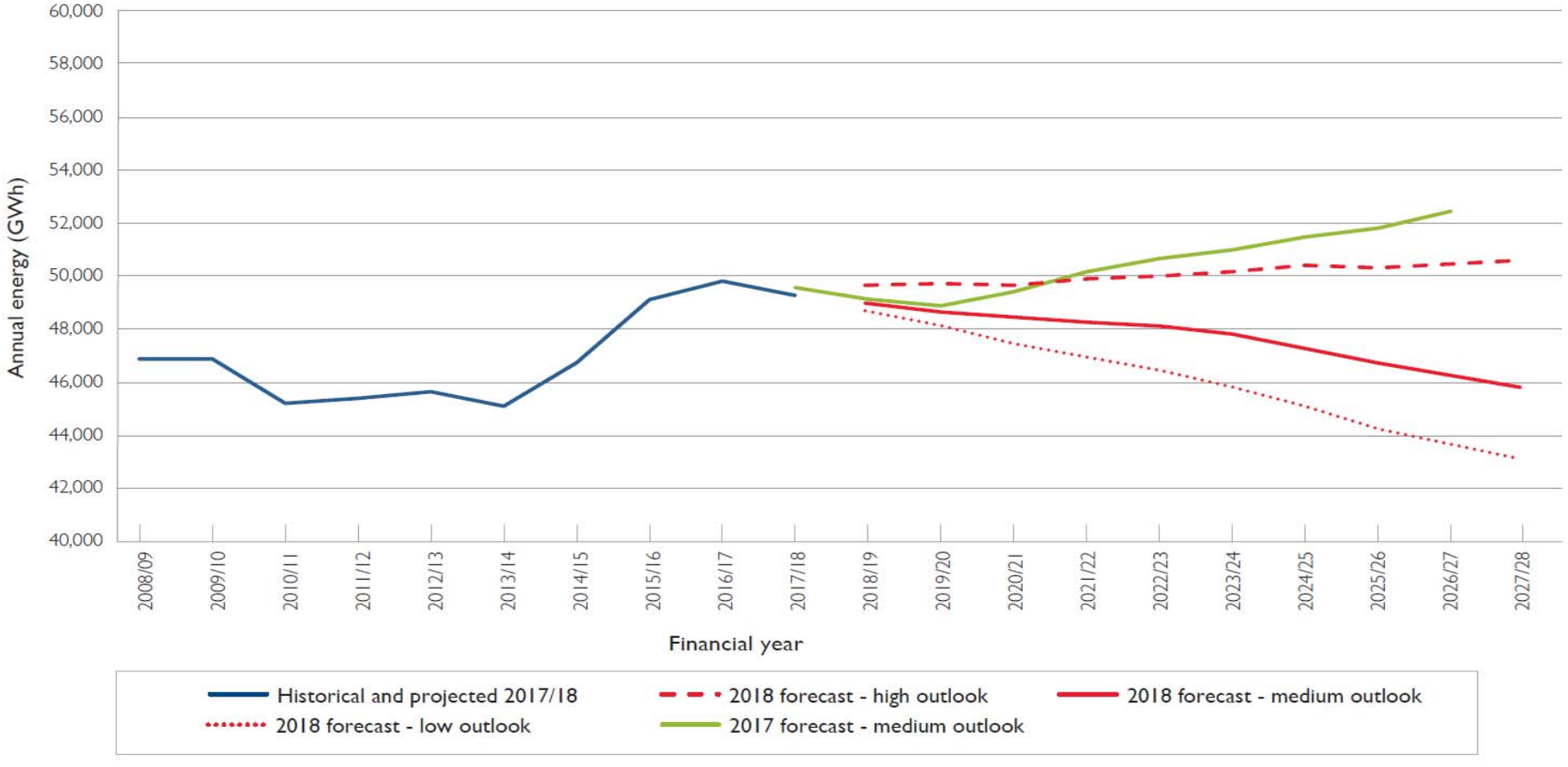


Energy forecast

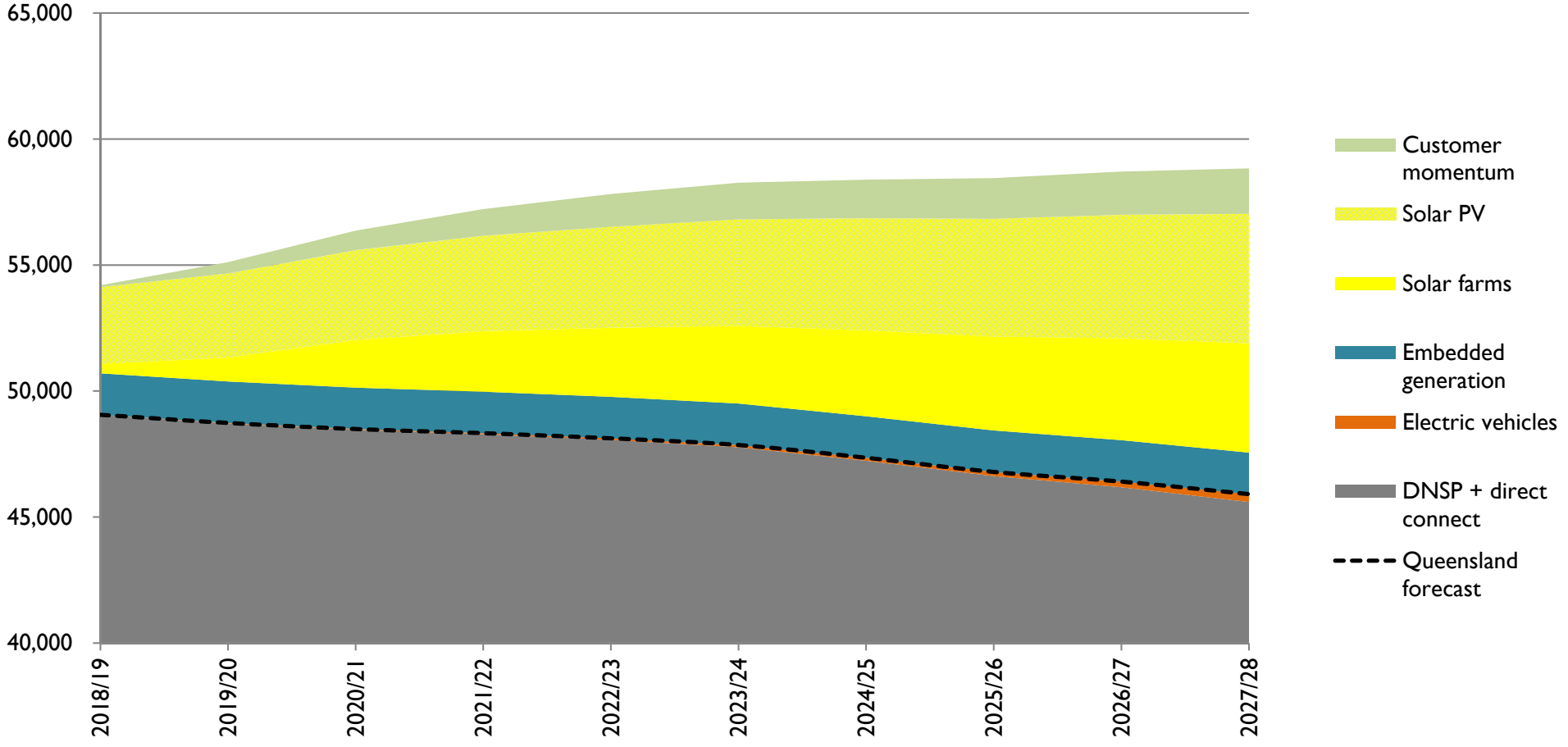
Queensland average forecast growth per annum over 10 years

	2017 Forecast	2018 Forecast
Energy	0.4%	-0.7%

Historical and forecast transmission delivered energy



Energy forecast with new technology adjustments

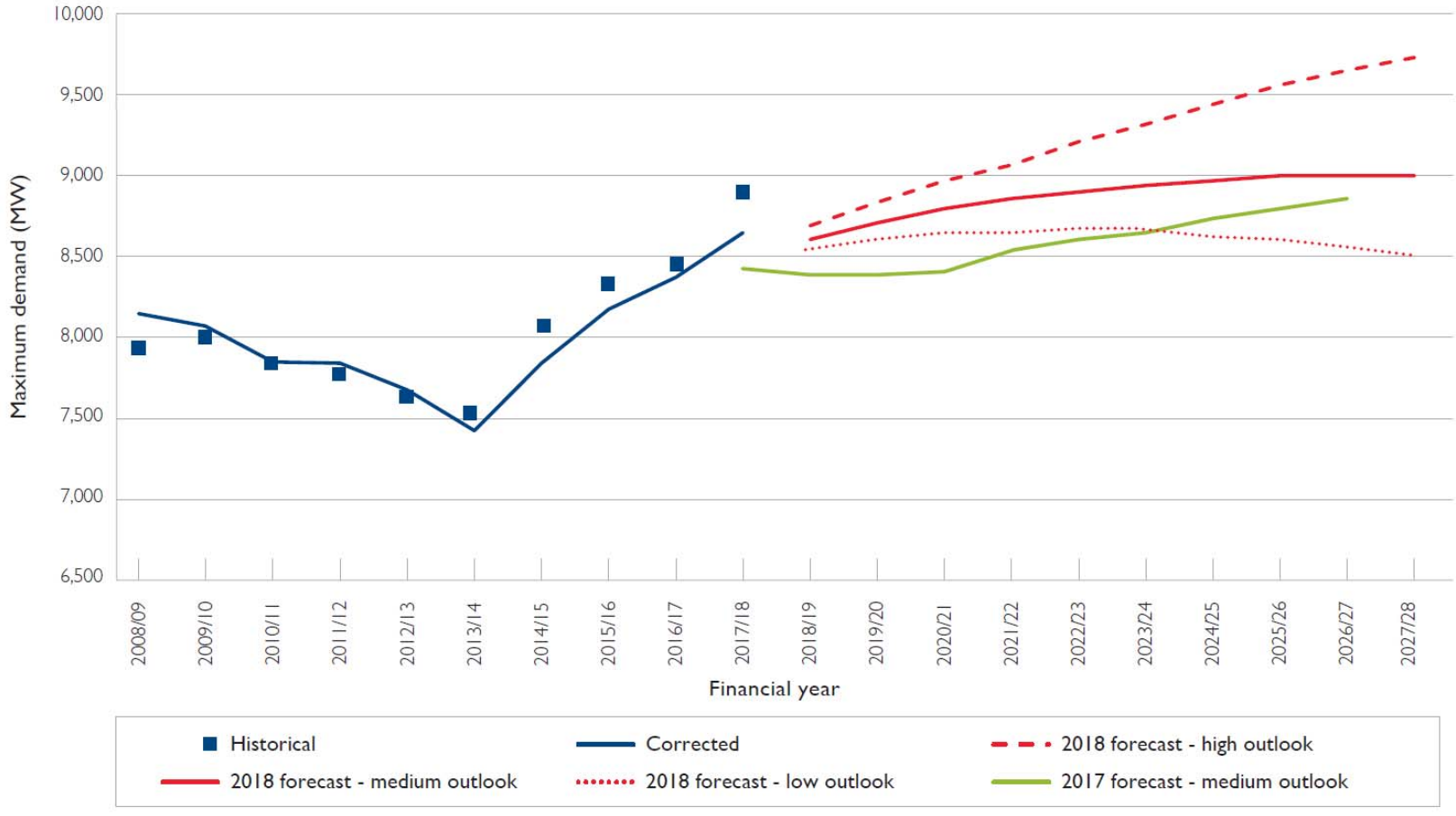


Queensland average forecast growth per annum over 10 years

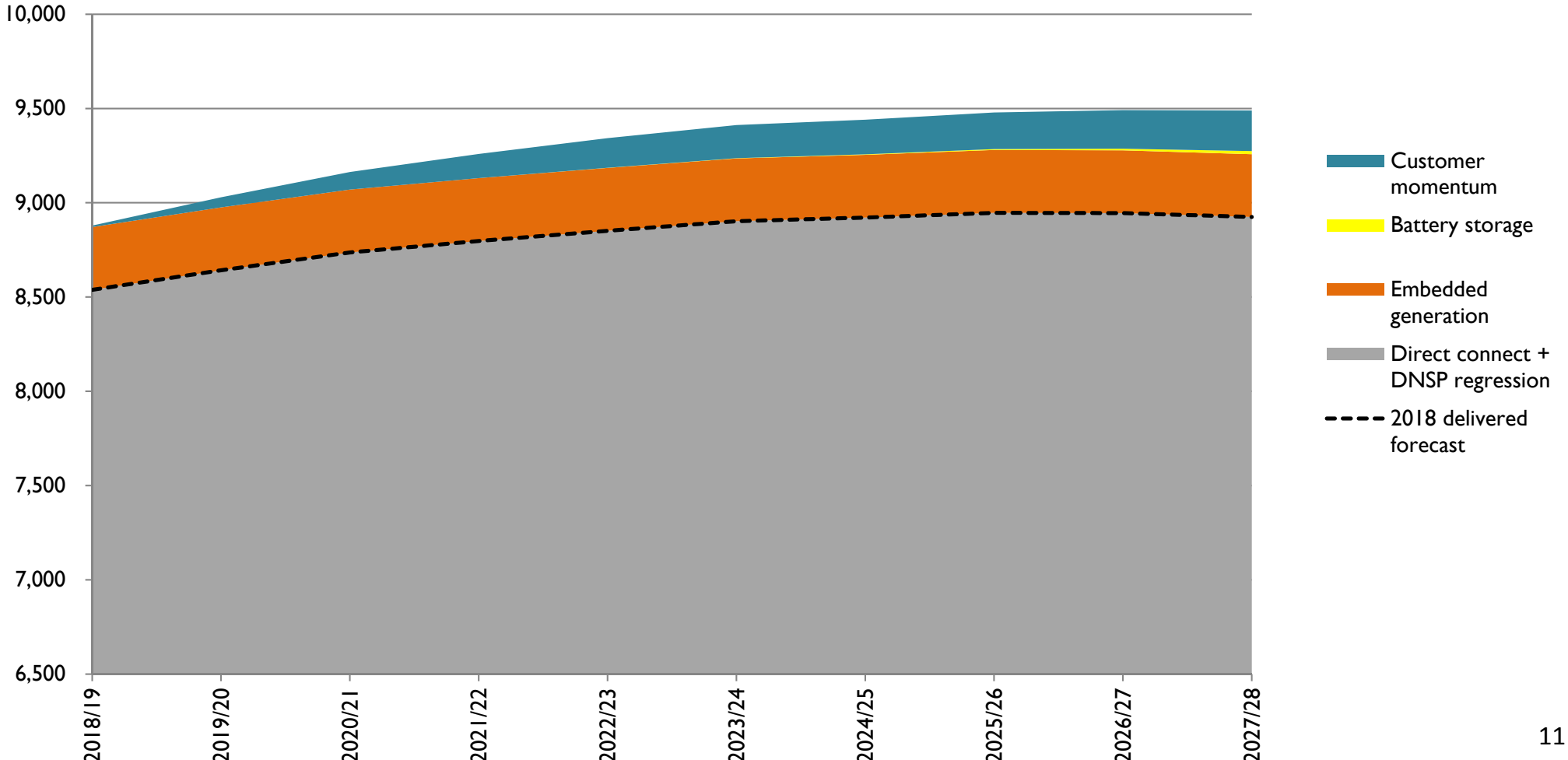
Maximum demand forecast

	2017 Forecast	2018 Forecast
Summer maximum demand	0.6%	0.4%
Winter maximum demand	0.6%	0.7%

Historical and forecast transmission delivered summer maximum demand



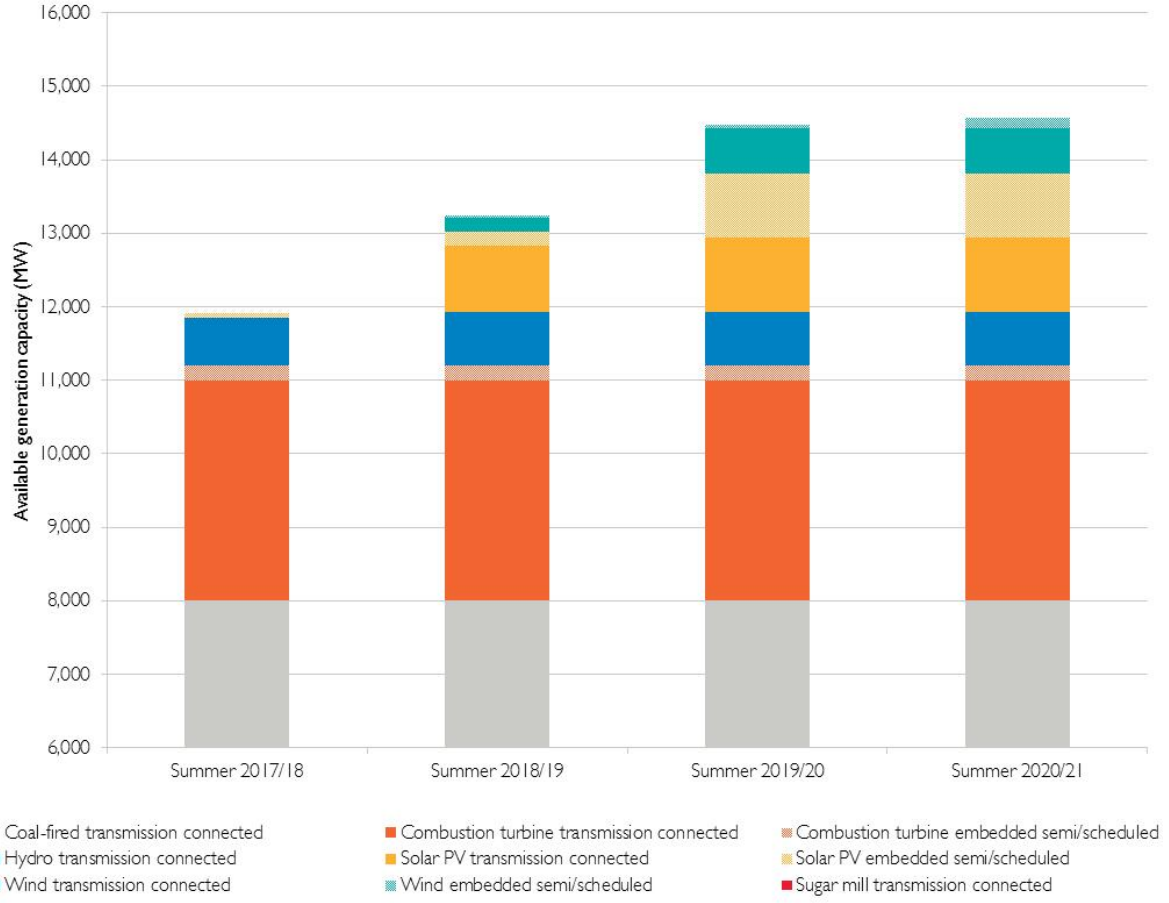
Summer maximum demand with new technology adjustments



Generation outlook – renewable energy

Generation outlook – renewable energy

Summer available generation capacity by energy source



AEMO’s Integrated System Plan (ISP)

- The first ISP in 2018 is an important step forward in integrated planning of transmission and generation in the National Electricity Market
- Powerlink, along with other Transmission Network Service Providers has provided input throughout the ISP process

AEMO’s Integrated System Plan (ISP)

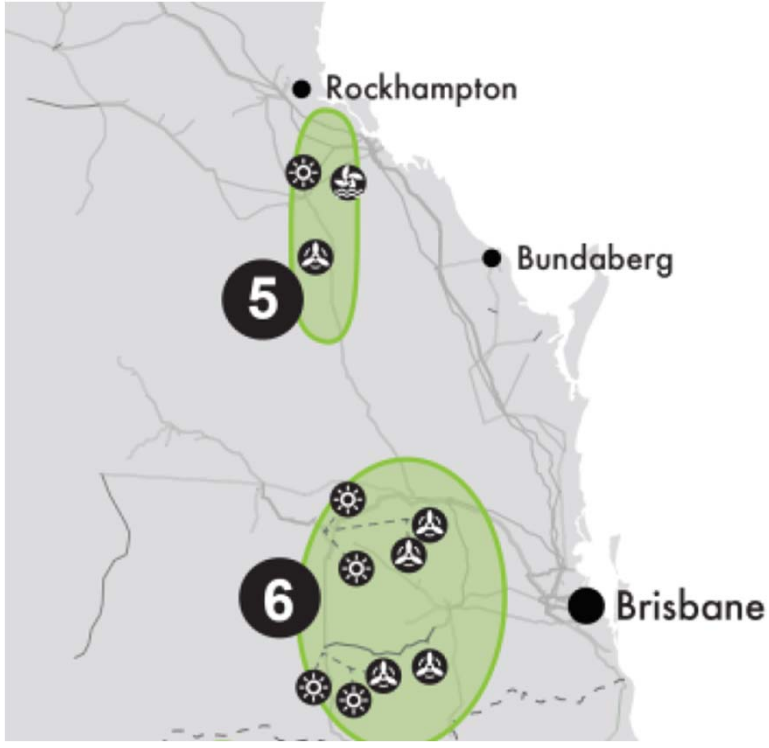
- The ISP identifies the potential need for increasing the capacity of QNI
- TransGrid and Powerlink have been investigating options for increasing the capacity of QNI
- Further details on investment options will be released in coming months

AEMO’s Integrated System Plan (ISP)

The ISP:

- also includes information on potential Renewable Energy Zones (REZs) across the NEM
- recommends priority of areas in Queensland which best meet a range of criteria

There is no formal restriction to these zones. Powerlink recommends review of the Generator Capacity Guide to inform proponents’ considerations.



TAPR Highlights

Mahesh Narotam

Manager Portfolio Planning and Optimisation

Network Portfolio

Strategy and Business Development

TAPR Highlights

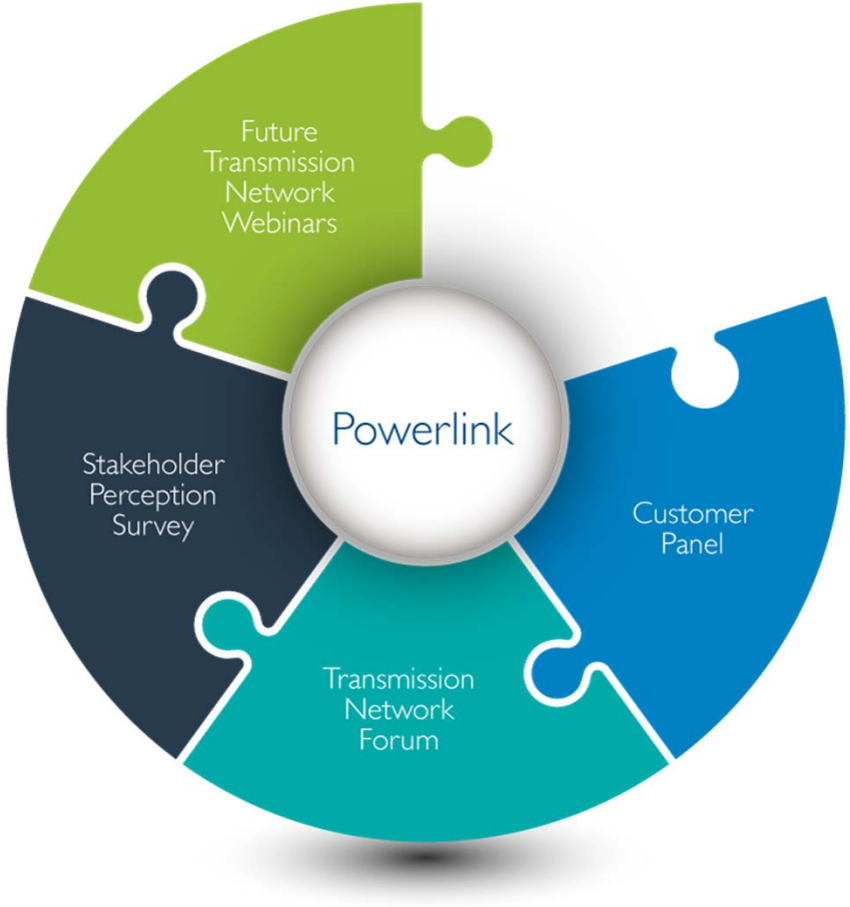
- Powerlink is responsible for planning the shared transmission network within Queensland
- The TAPR provides information about the Queensland electricity transmission network
- Identifies key areas of the transmission network in Queensland which may require expenditure in the 10-year annual planning review period
- Includes details of committed, current and recently commissioned network developments

Changing external environment

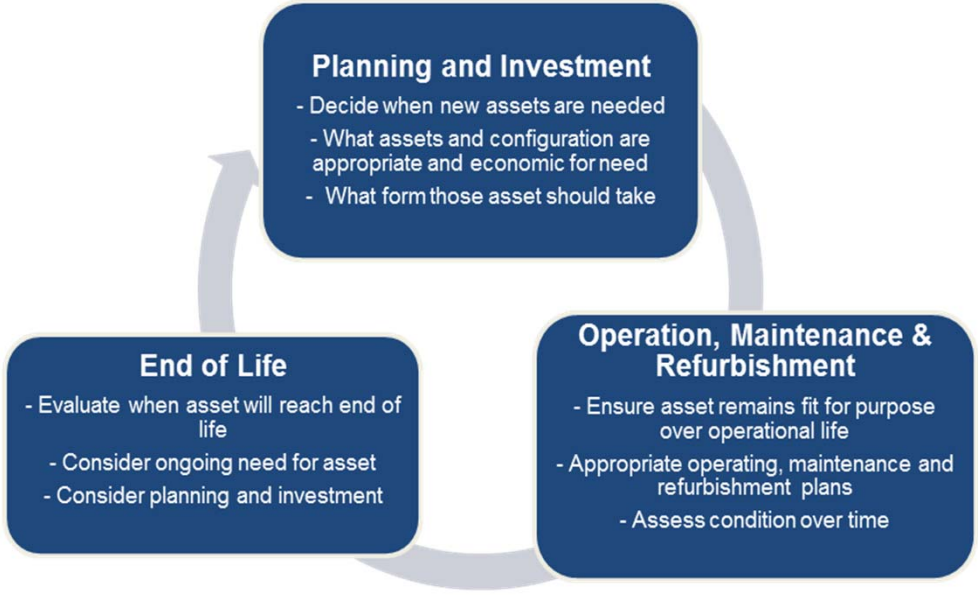
Powerlink is responding to these changes by:

- implementing and adopting the recommendations of the Finkel and other reviews
- adapting to changes in electricity consumer behaviour and economic outlook
- continuing to adapt its approach to investment decisions and adoption of non network solutions
- placing considerable emphasis on an integrated and flexible analysis of future reinvestment needs
- supporting diverse generation connection
- continuing to focus on delivering a secure, safe, reliable and cost effective transmission network

Continuing focus on proactive stakeholder engagement



Approach to asset management

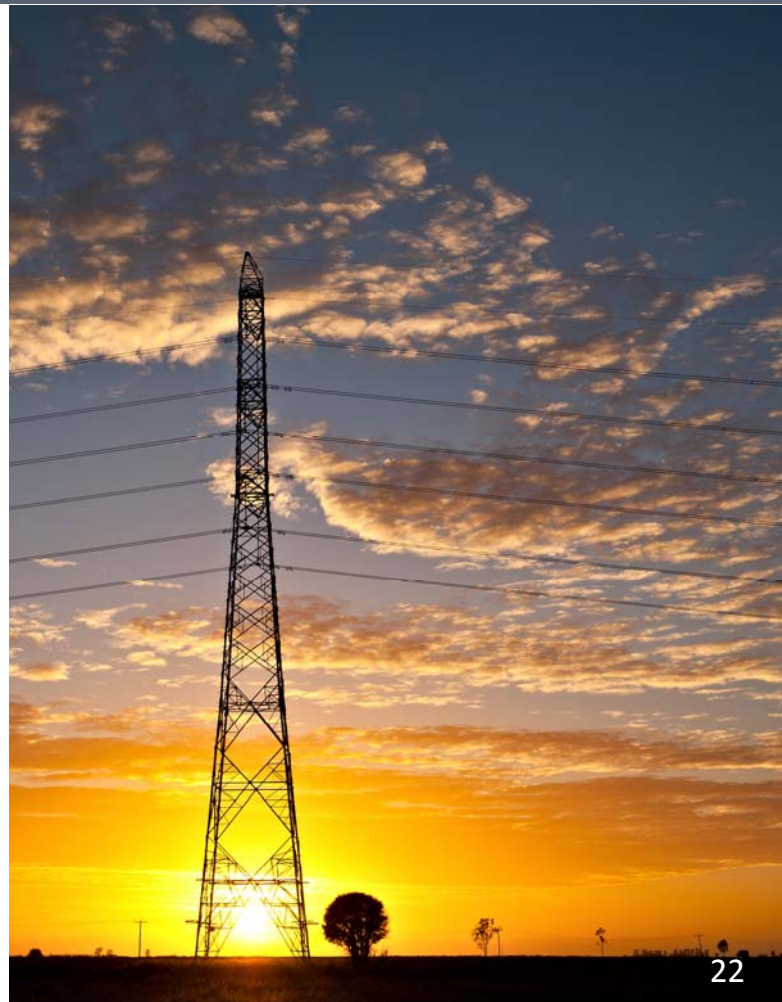


Asset life cycle

Asset management cycle

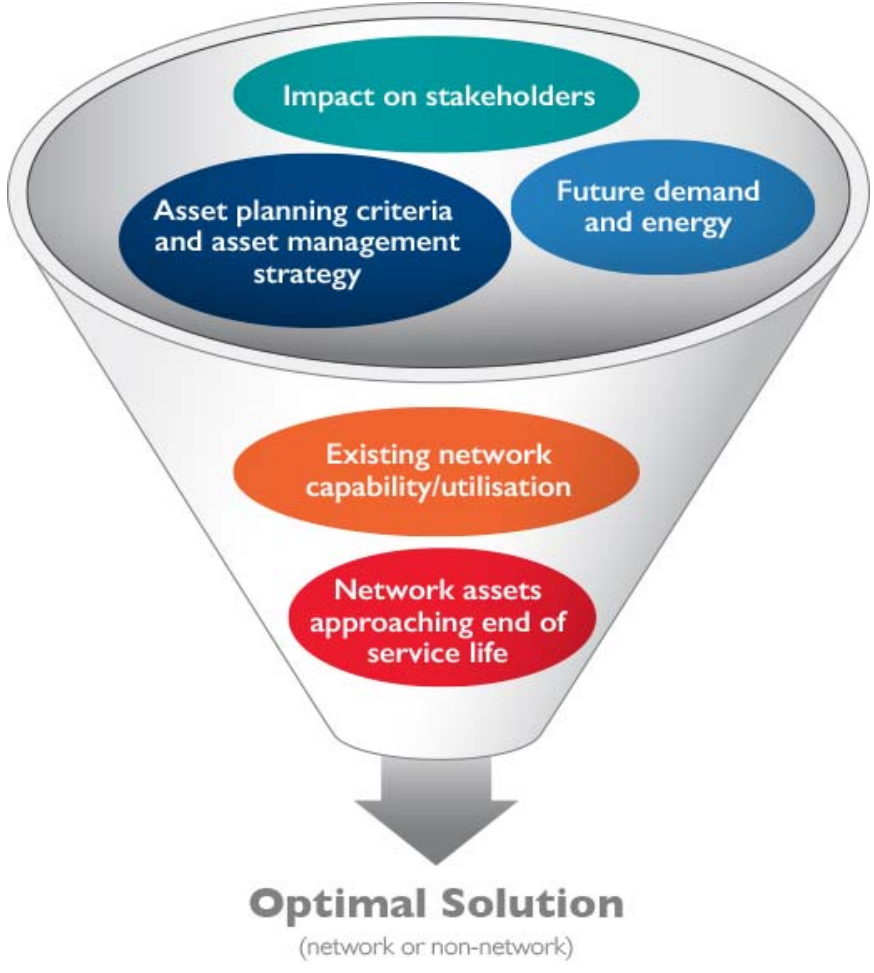
Future network development

- Queensland's transmission network experienced significant growth from the 1960s to the 1980s
- Many of these assets are now approaching end of technical service life
- Potential capital expenditure to manage the emerging risks related to this asset base represents Powerlink's program of work over the next 10 years
- Integrated planning approach has identified a number of potential reconfiguration opportunities across the transmission network



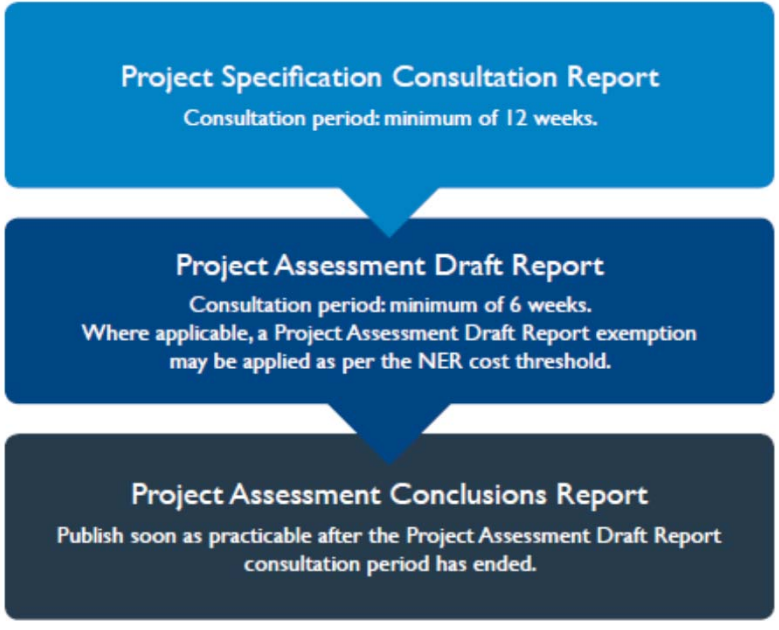
Integrated planning approach

Undertake integrated planning to develop Powerlink's future reinvestment program



RIT-T process

For potential network projects over $6 million analysis is also publicly assessed through the Regulatory Investment Test for Transmission (RIT-T) process



Possible future network developments

Upcoming RIT-Ts address:

- Expanding NSW-Queensland transmission transfer capacity
- Line refits on ageing transmission line assets such as Brisbane metro area, Townsville South to Clare South
- Substation replacements at Kamerunga and Mudgeeraba
- Transformer replacements at Lilyvale and Bouldercombe
- Multiple secondary systems replacements across the state

Additional information in the 2018 TAPR

Enhanced information with respect to forecasting data
Discussion on joint planning undertaken in the past 12 months
More detailed discussion on Powerlink's approach to asset management
Information on network control facilities and the outcome of the inaugural Power System Frequency Risk Review
New information on possible network reinvestments and asset retirements in the next 10 years
A compendium of potential non-network solutions over the next five years
Maturing the approach to renewable energy development and recent changes to the network connection process

Questions