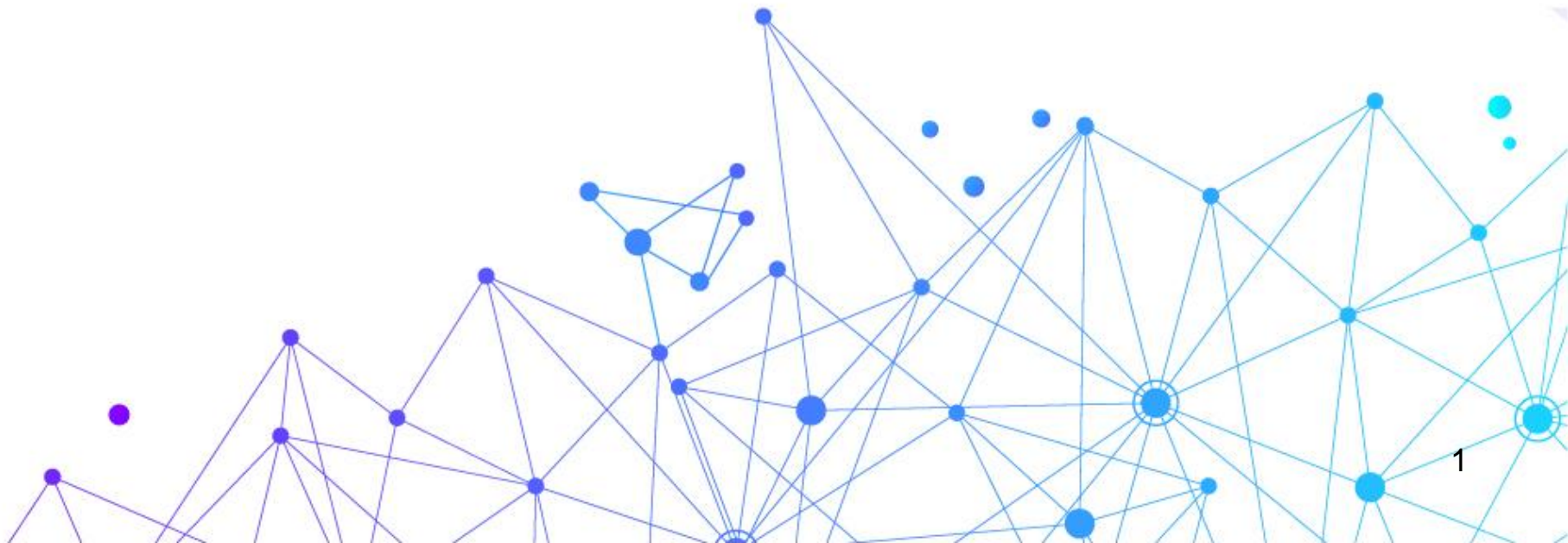


Whole of System Plan

Market Advisory Committee

29 July 2019



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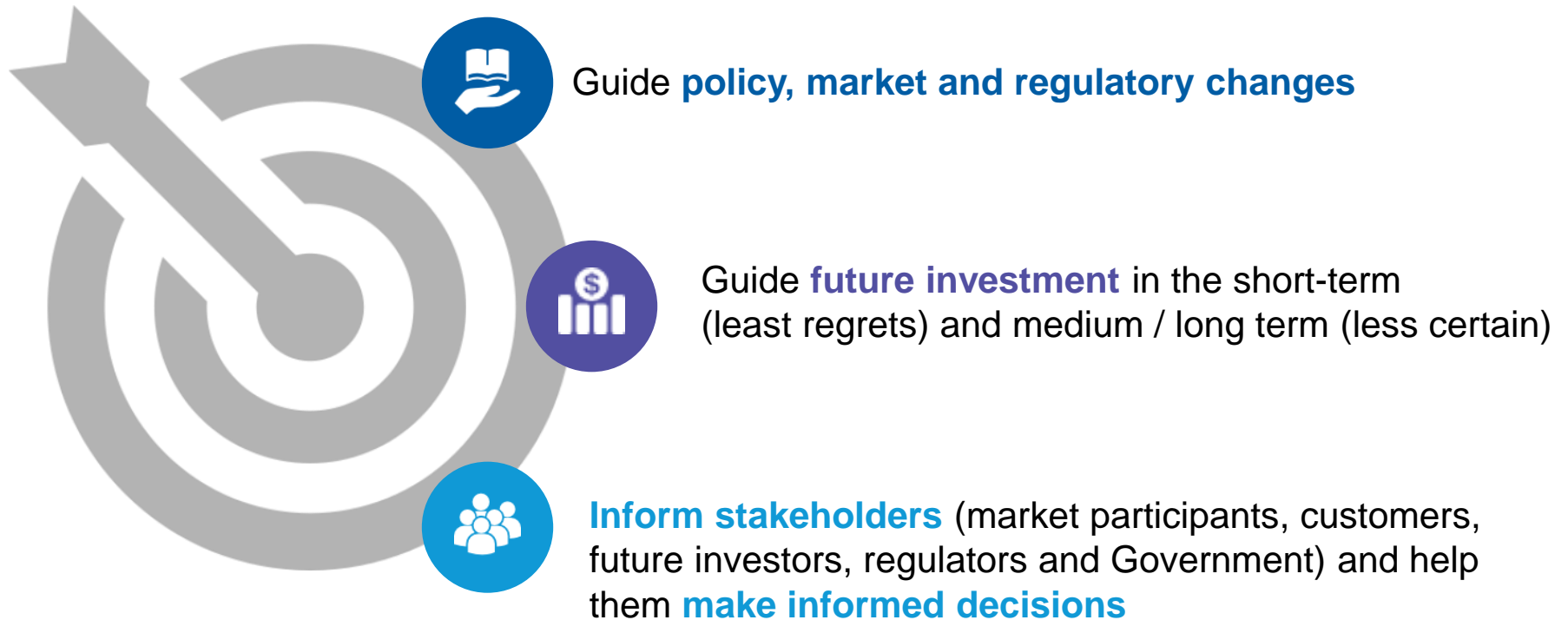
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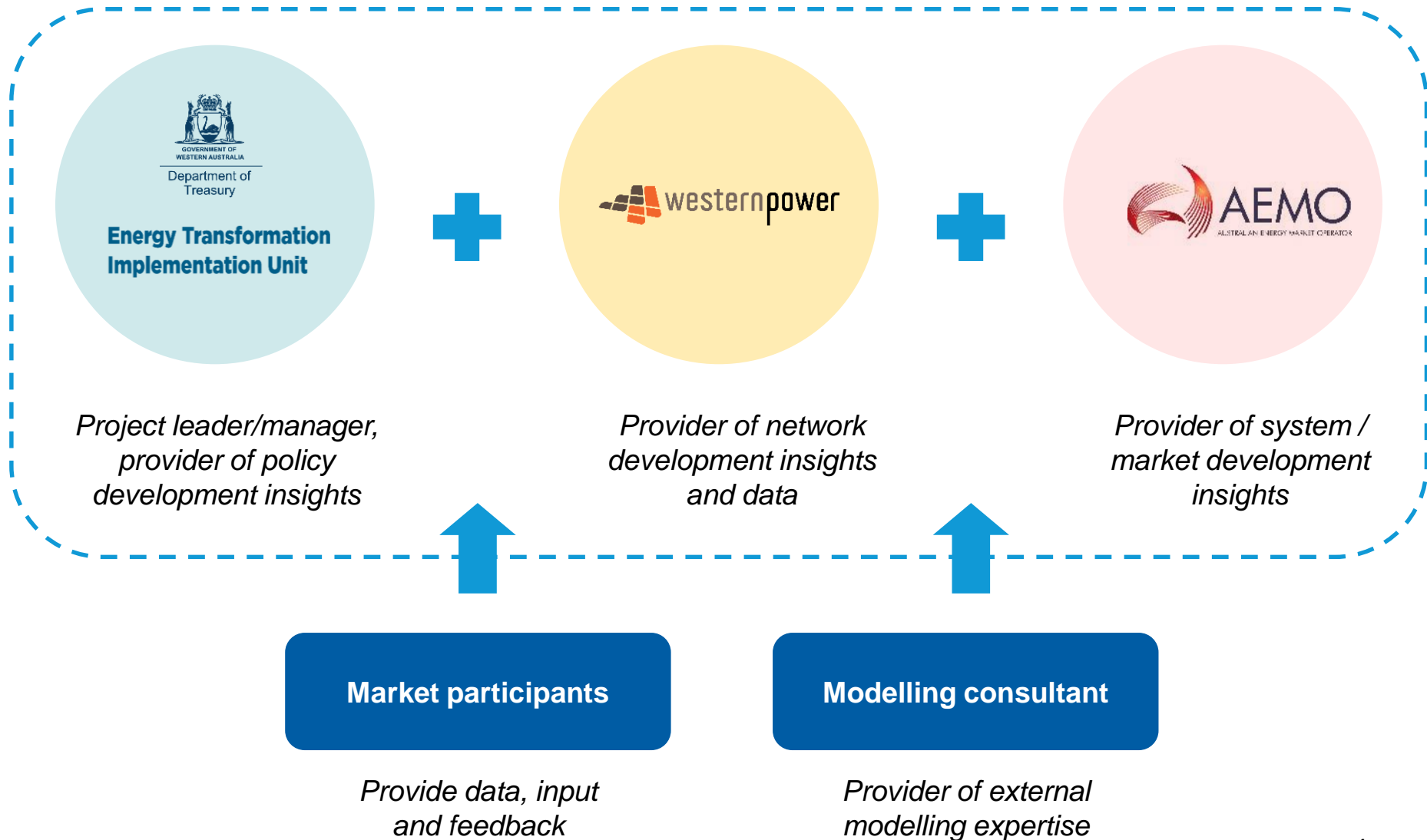
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PURPOSE OF THE WOSP

WOSP should demonstrate how to deliver electricity supplies at lowest sustainable cost within the reliability and security standards over a 20 year period.



ROLES AND RESPONSIBILITIES



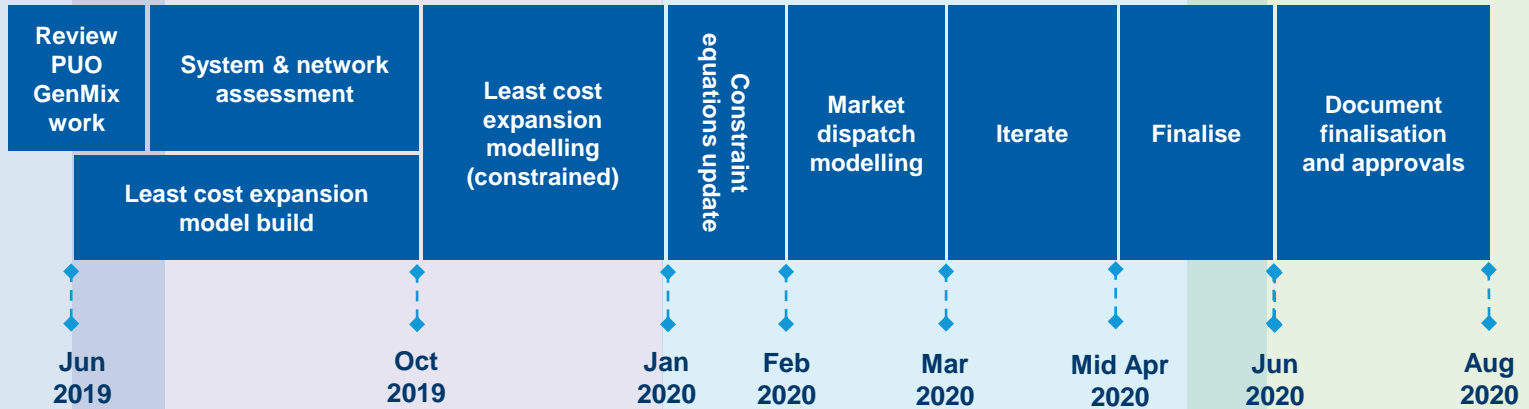
TIMEFRAMES

PHASE 1
Develop and agree scenarios
 Apr – Jul 2019

PHASE 2
Deliver forecasts, technical assessments and modelling
 Jul – Dec 2019

PHASE 3
Develop capability/network /system recommendations and investment plan
 Jan – Jun 2020

PHASE 4
Deliver Whole of System Plan
 May – Jul 2020



Q2 2019

Q3 2019

Q4 2019

Q1 2020

Q2 2020

Q3 2020

Jul 2019

- Industry forum on scenarios
- 1:1 meetings with stakeholders
- Present to MAC on scenarios
- Finalise scenarios

Sep 2019
 Present to MAC on inputs and assumptions

Dec 2019
 Present to MAC on technical assessment

Mar 2020
 Present to MAC on preliminary generation and network plans

Jun 2020
 • Present to MAC on SWIS/network investment plan
 • Industry forum on preliminary findings

Aug 2020
 Government approval to publish WOSP

SCENARIOS

The following scenarios have been developed in close collaboration between the Energy Transformation Implementation Unit, Western Power and Australian Energy Market Operator.

1

Cast Away

Leaving the grid with muted economic growth.

2

Groundhog Day

Renewables thrive, but reliance on the network remains high.

3

Techtopia

Technological change places downward pressure on energy costs.

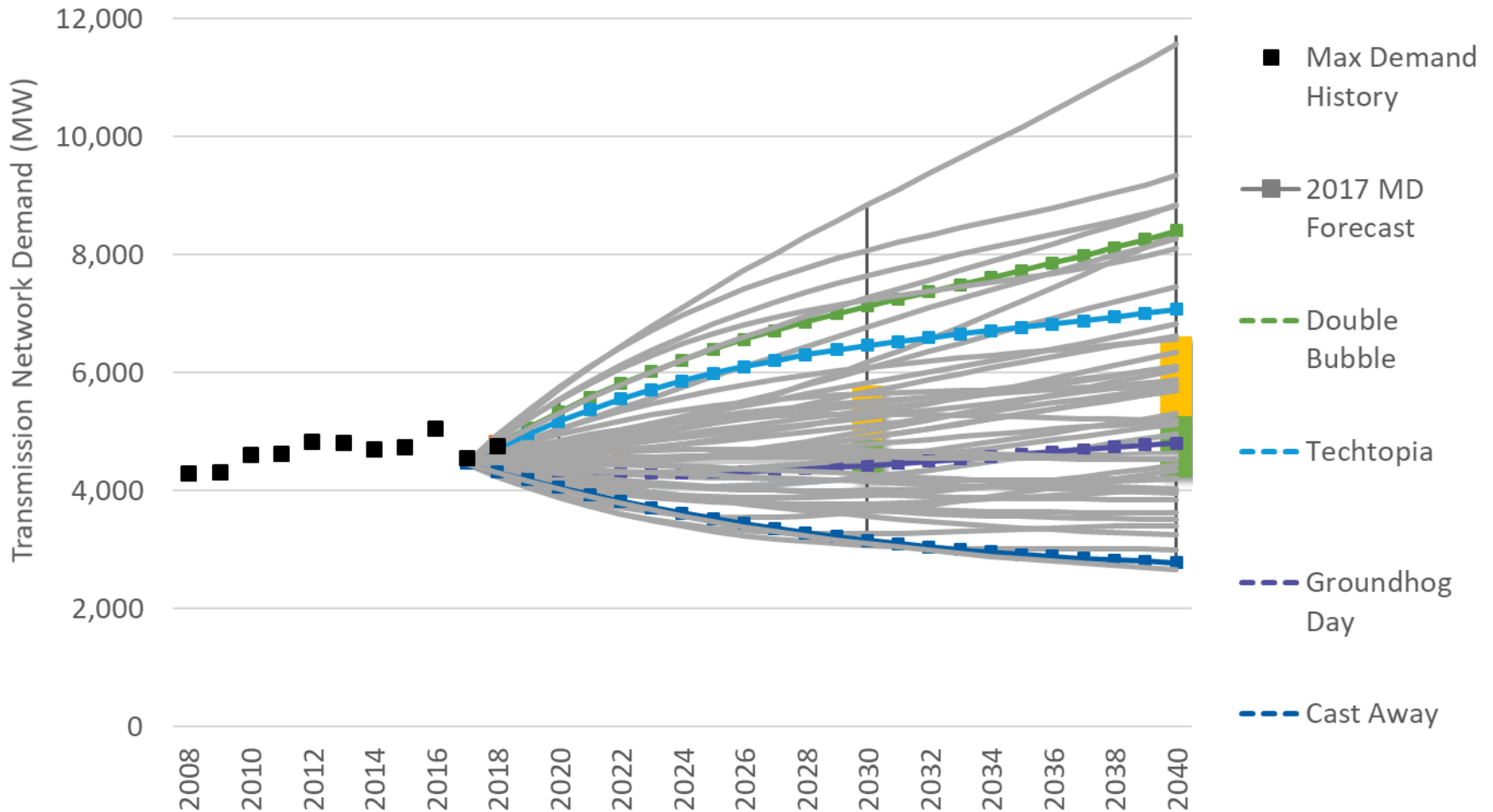
4

Double Bubble

Booming economy with limited global action on climate change.

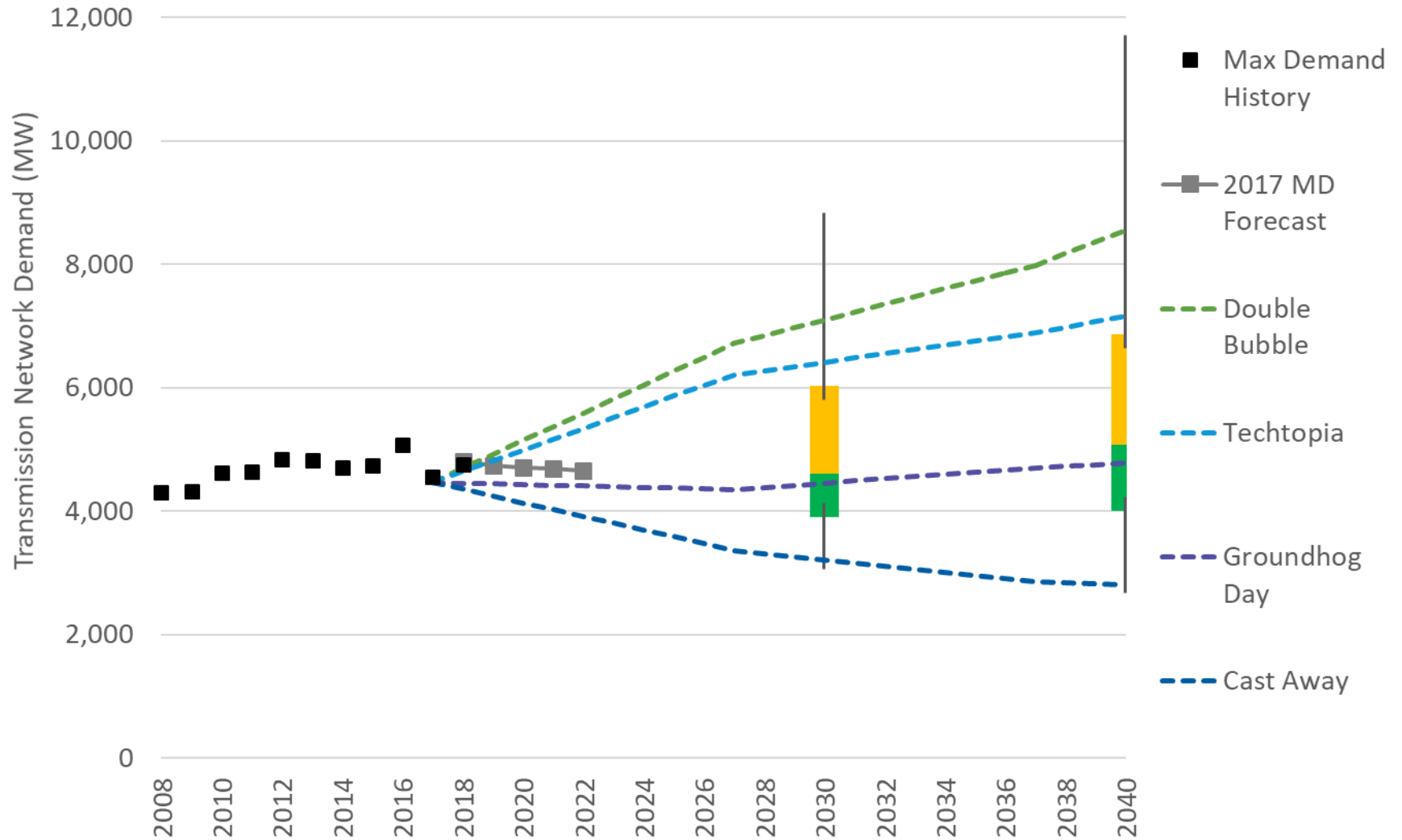
MAXIMUM DEMAND – 50 SCENARIOS

There are 50 energy forecasts generated based on the different permutations of key drivers.



Source: Western Power

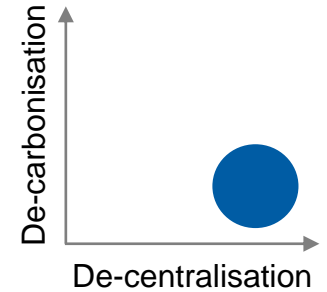
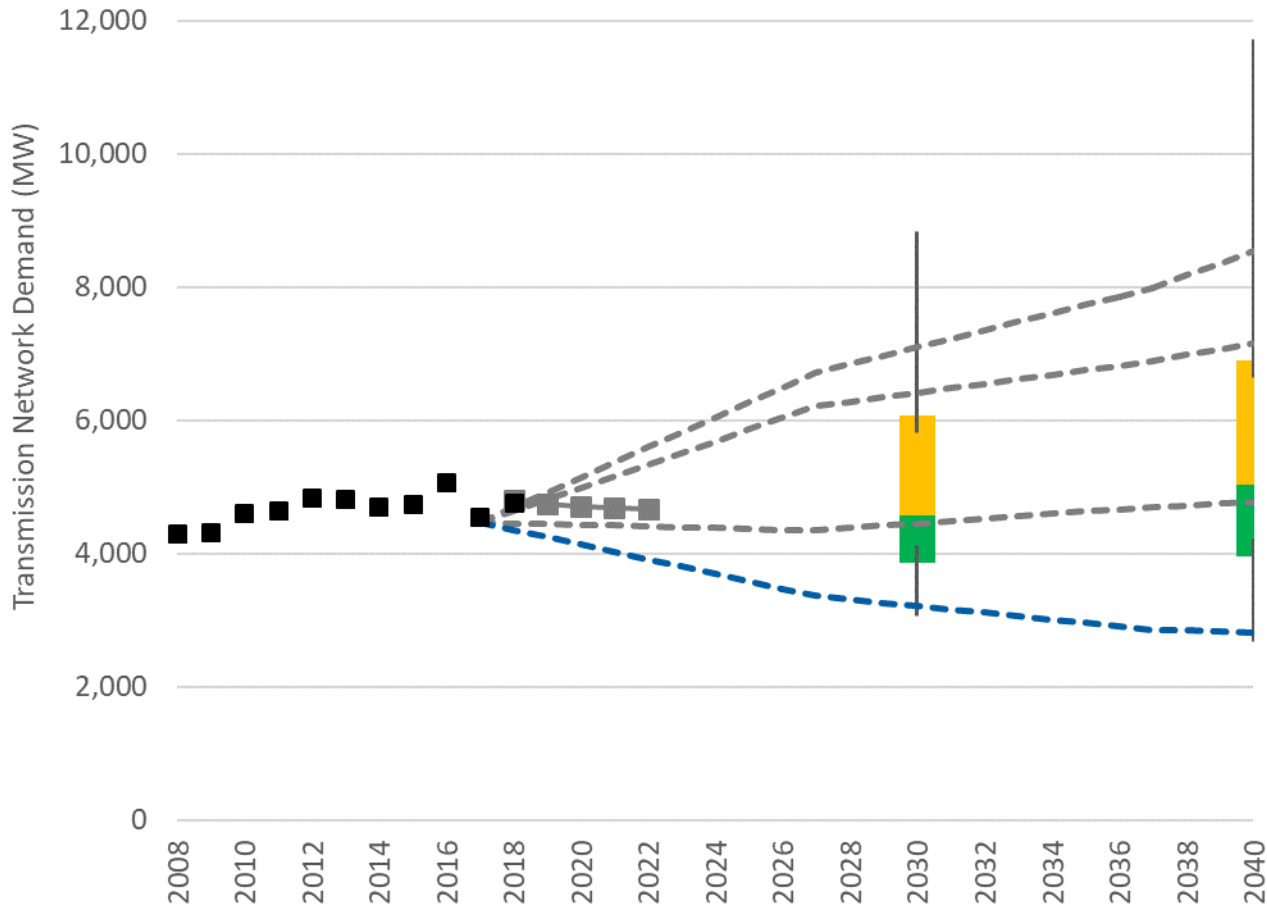
MAXIMUM DEMAND – FOUR SCENARIOS



Source: Western Power

1 CAST AWAY

Leaving the grid with muted economic growth



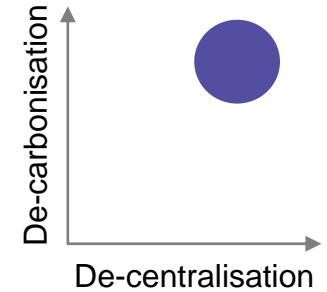
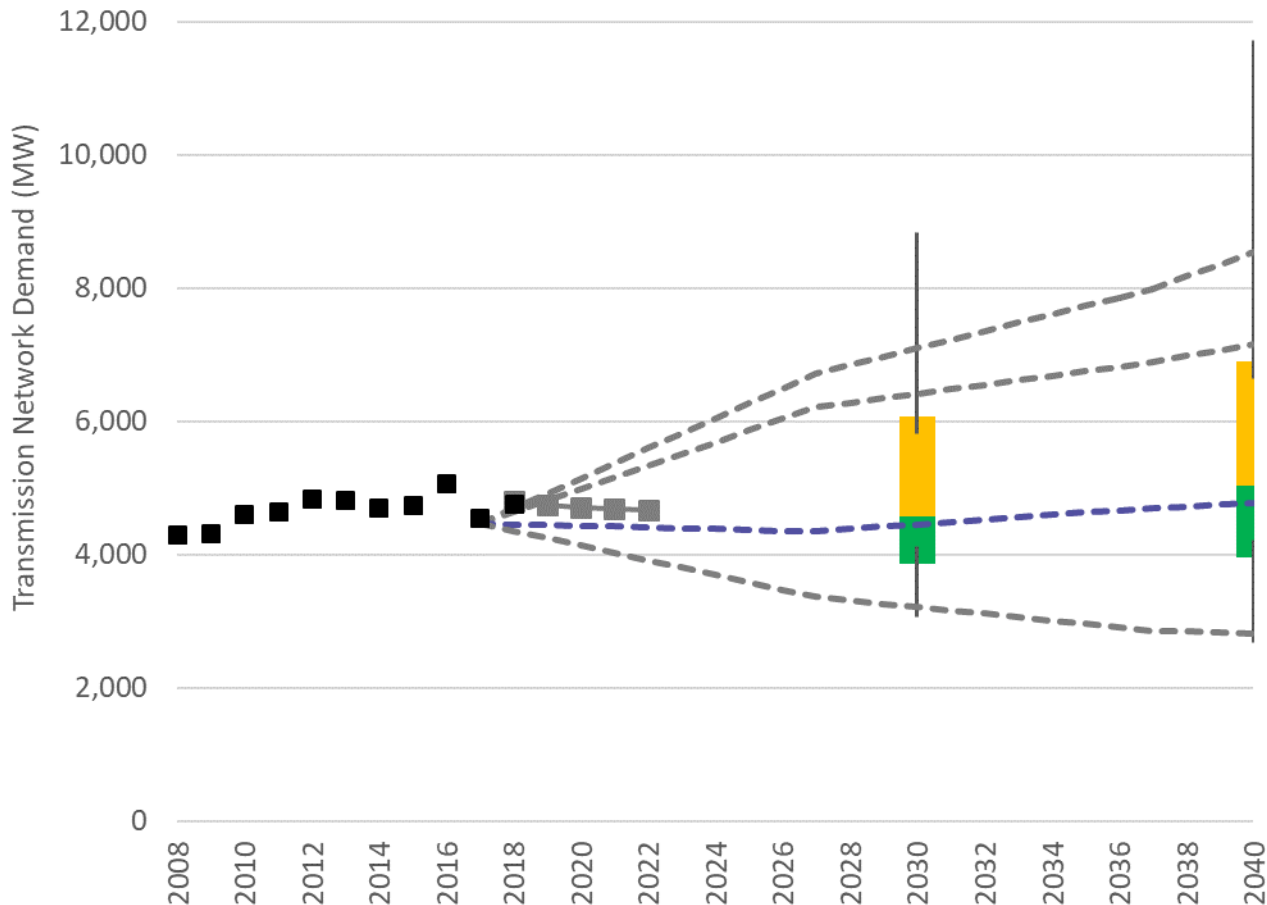
PROFILE

- Low economic growth
- Low de-carbonisation
- Low (on grid) DER uptake
- Low utility scale renewables

2

GROUNDHOG DAY

DER thrives, but reliance on the network remains high



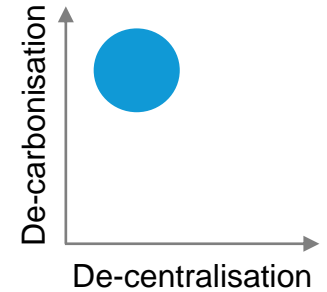
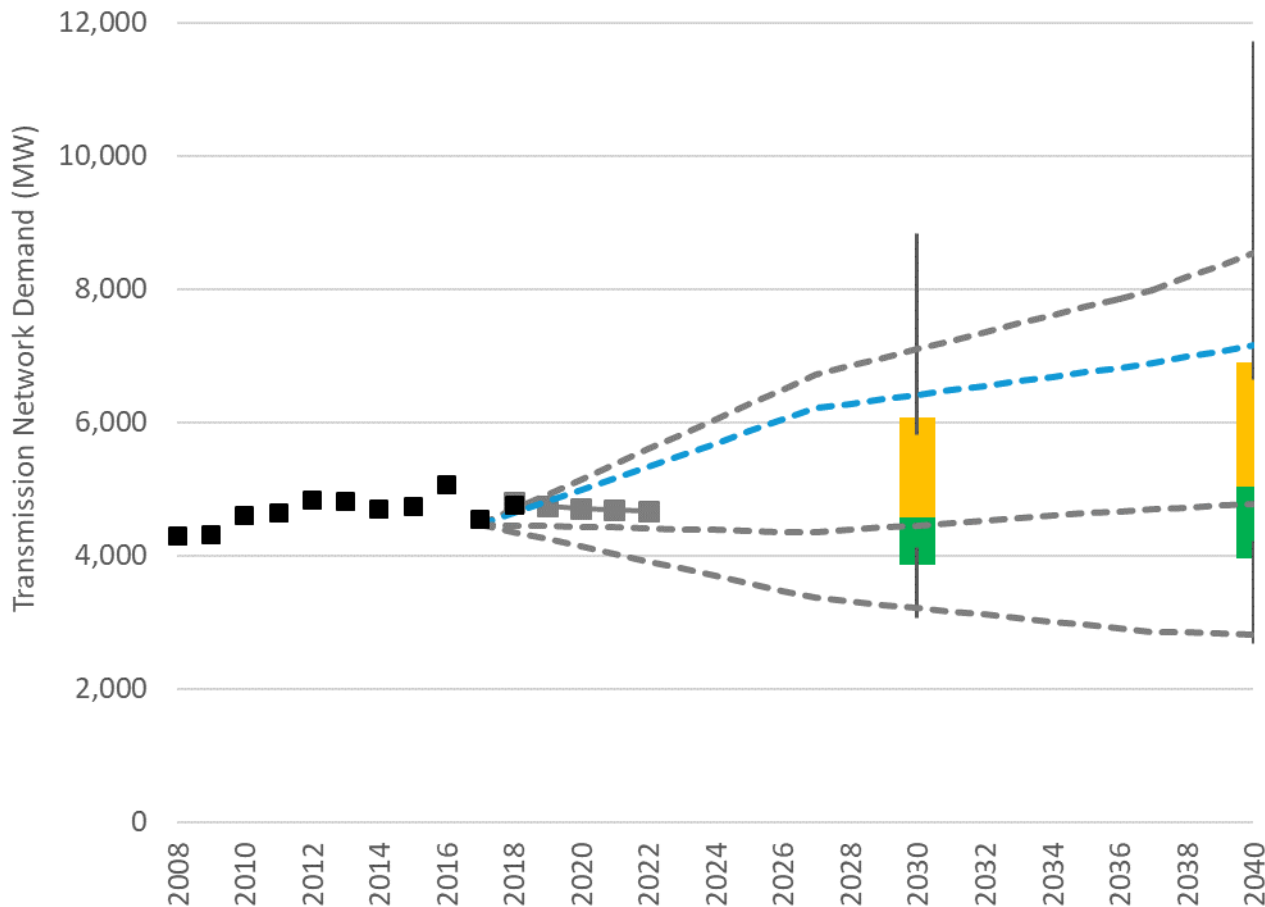
PROFILE

- Medium economic growth
- High de-carbonisation
- Extremely high DER uptake
- Medium utility scale renewables

3

TECHTOPIA

Technological change places downward pressure on energy costs

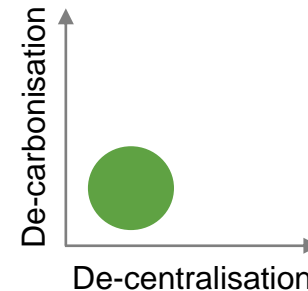
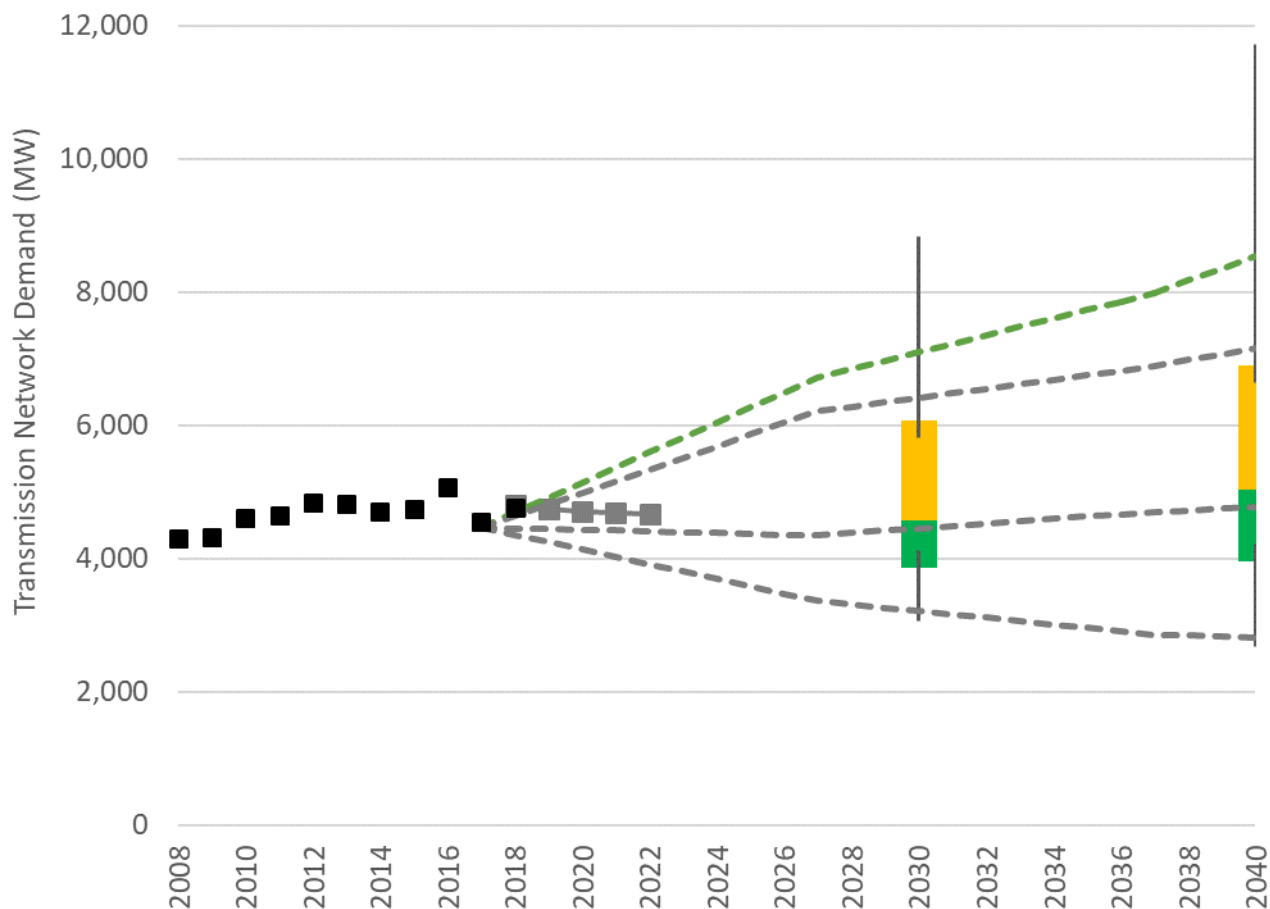


PROFILE

- Medium economic growth
- High de-carbonisation
- High DER uptake
- High utility scale renewables

4 DOUBLE BUBBLE

Booming economy with limited global action on climate change



PROFILE

- High economic growth
- Medium de-carbonisation
- Medium DER uptake
- High utility scale renewables

STAKEHOLDER ENGAGEMENT

The Project Team has engaged with a wide range of industry stakeholders

~100

attendees at the Industry Forum from 52 organisations across the energy sector

18+

1:1 meetings with interested stakeholders since late May 2019*

160+

unique views of the Industry Forum presentation*

Market Generator

Market Customer

Contestable Customer

Advocacy Group

Other



* Please note data is as at 25 July 2019.

STAKEHOLDER FEEDBACK

Industry has generally been supportive of the WOSP and the four proposed modelling scenarios that have been chosen as inputs for demand



Five main themes have emerged from the stakeholder feedback:

1

Investment Signals and Viability

2

Impact of Distributed Energy Resources (DER) in the Modelling

3

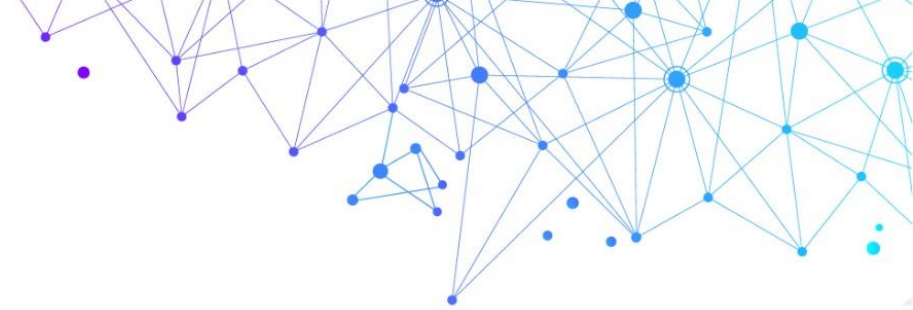
Evolution of Essential System Services (ESS)

4

Future Generation Mix (including fuel security)

5

Role of Demand Side Management



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For further information, please visit our webpage:

<http://www.treasury.wa.gov.au/Energy-Transformation/Whole-of-System-Planning/>