Appendix 4D: Forecasts of Load Growth

2023-27 Transmission Revenue Reset

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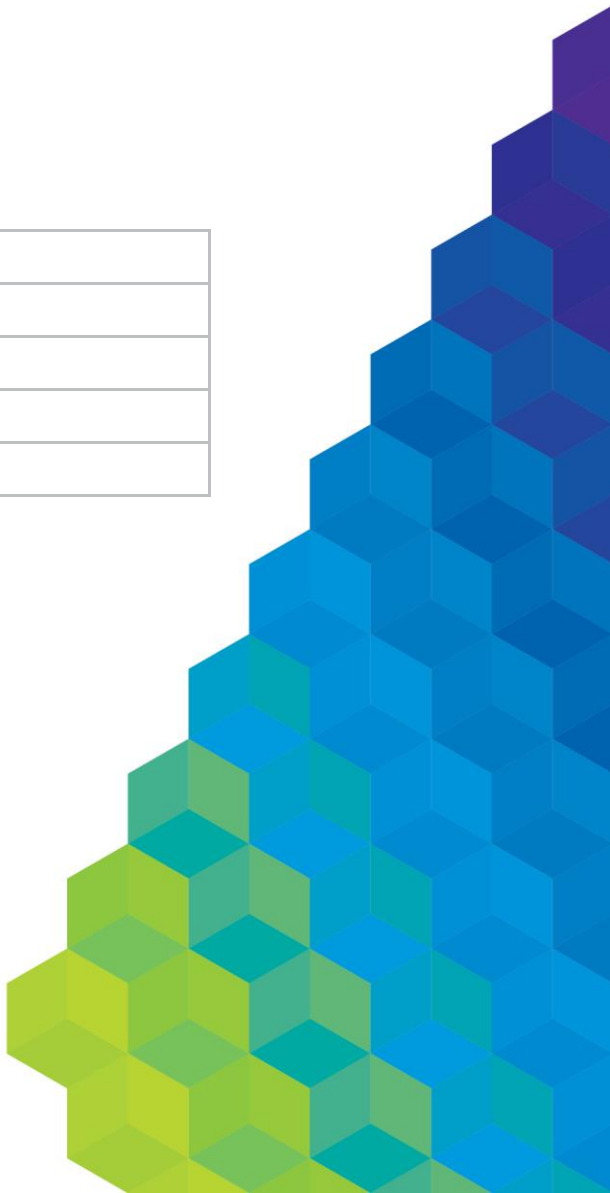

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1 Introduction

The purpose of this document is to provide the forecasts of load growth relied upon to derive the capital expenditure forecasts and the methodology used for developing those forecasts of load growth.

All information is prepared by AEMO and accessible via their website. Published material is in line with clause 5.20.6(b) of the National Electricity Rules, as part of its national transmission planner (NTP) functions.

2 Forecasts available to AEMO as at 25 June 2019

2019 connection point results and insights

Refer to the Dynamic interface (8.96 MB, xls) for detailed information on individual connection points.

Figures 1 and 2 show the summer and winter change rates based on the compound average rate of changes over the 10-year forecasting period in Victoria. Some direct-connect industrial loads are excluded due to confidentiality.

Figure 1: VIC 10% POE summer 10-year average annual growth rates, 2019-20 to 2028-29

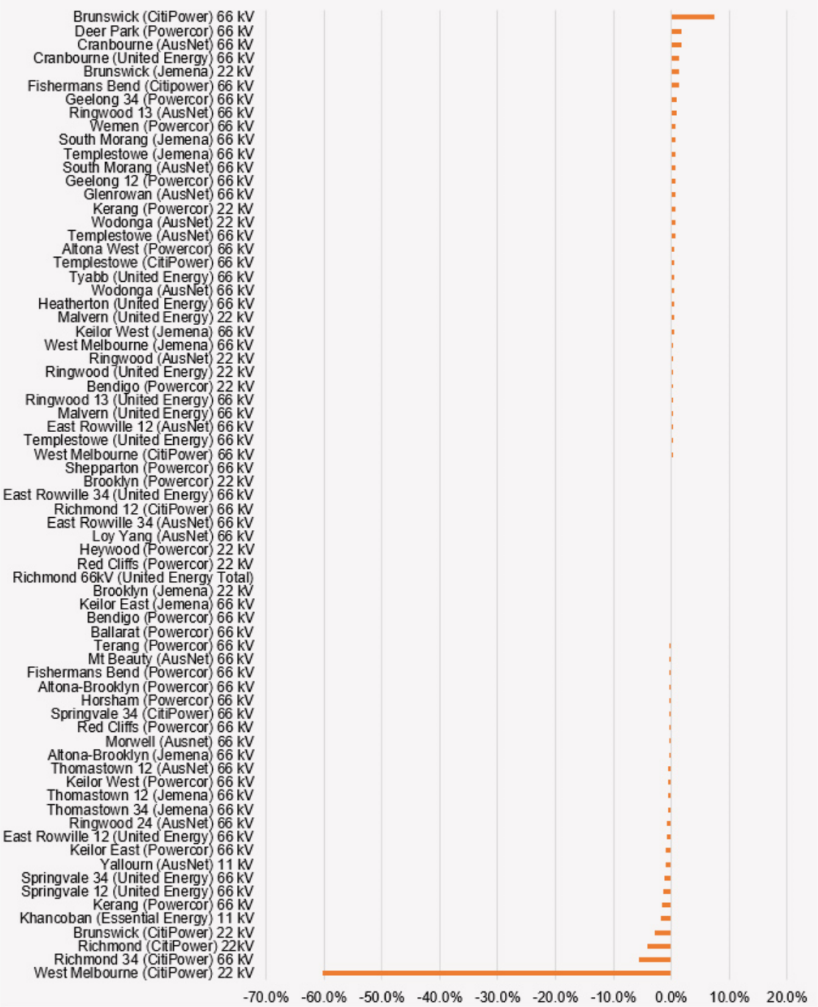

Figure 2: VIC 10% POE winter 10-year average annual growth rates, 2019 to 2028

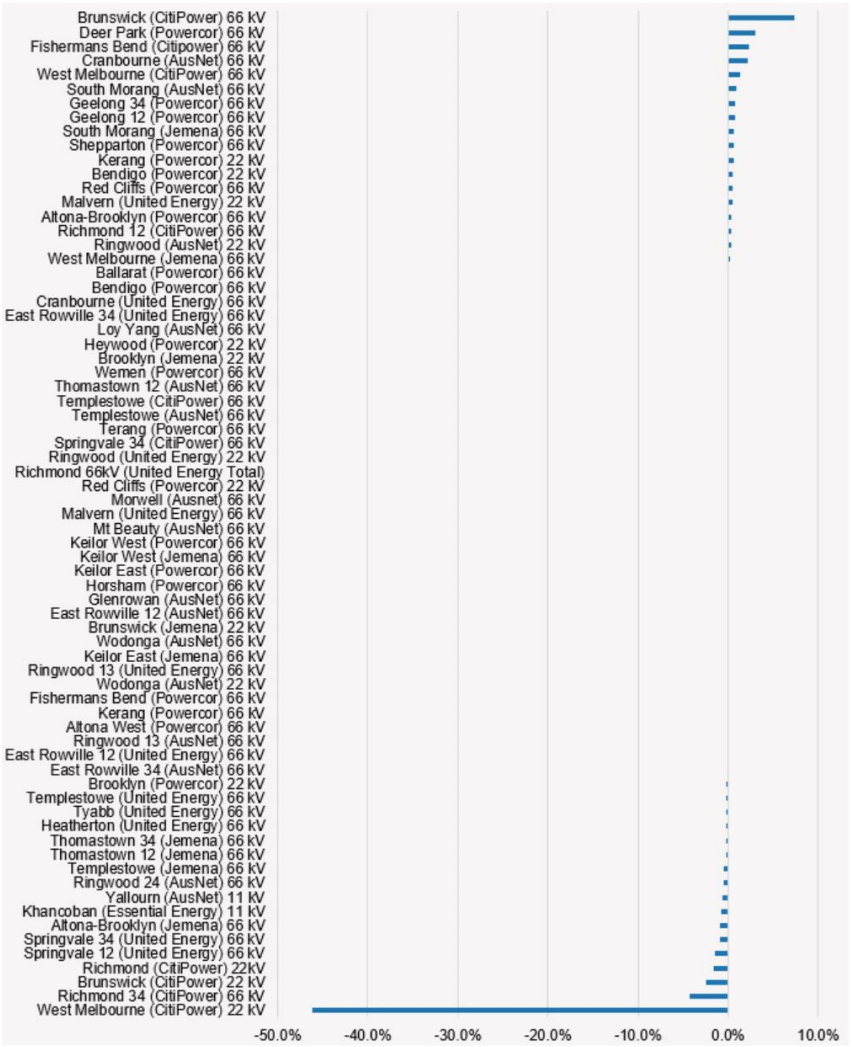

Table 1 lists the drivers of large changes (2% or greater) in connection points. Major industrial loads are excluded due to confidentiality.

Table 1: Drivers at connection points with change rates increasing (decreasing) more than 2%

Season	Forecast maximum demand increase greater than 2%	Forecast maximum demand decrease greater than 2%
Summer	*Brunswick (CitiPower) 66 kV:* Expected block loads received from West Melbourne 66 kV, West Melbourne 22 kV in 2021, and Richmond 66 kV in 2022. *Deer Park (Powercor) 66 kV:* Expected future block load received from Altona West 66kV in 2020 and 2021 as well as new local commercial/industrial loads. *Cranbourne (AusNet) 66 kV:* Expected local developments. *Fishermans Bend (CitiPower) 66 kV:* Expected new commercial loads.	*West Melbourne (CitiPower) 22 kV:* The load will gradually transfer to Brunswick 66 kV and West Melbourne 66 kV over the next three years, leading to a substantial negative growth and expected closure in 2024. *Richmond 34 (CitiPower) 66 kV:* Expected block load transfer to Brunswick 66 kV in 2022. *Brunswick (CitiPower) 22kV:* Expected load transfer to West Melbourne 66 kV in 2021. *Richmond (CitiPower) 22kV:* Expected load transfer to Richmond 66 kV in 2021 and load reduction following completion of the Metro Rail tunnel in 2024.

Winter	*Brunswick (CitiPower) 66 kV:* Expected block loads received from West Melbourne 66 kV, West Melbourne 22 kV in 2021, and Richmond 66 kV in 2022. *Deer Park (Powercor) 66 kV:* Expected future block load received from Altona West 66kV in 2020 and 2021 as well as new local commercial/industrial loads. *Cranbourne (AusNet) 66 kV:* Expected local developments. *Fishermans Bend (CitiPower) 66 kV:* Expected new commercial loads.	*West Melbourne (CitiPower) 22 kV:* The load will gradually transfer to Brunswick 66 kV and West Melbourne 66 kV over the next three years, leading to a substantial negative growth and expected closure in 2024. *Richmond 34 (CitiPower) 66 kV:* Expected block load transfer to Brunswick 66 kV in 2022. *Brunswick (CitiPower) 22kV:* Expected load transfer to West Melbourne 66 kV in 2021. *Richmond (CitiPower) 22kV:* Expected load transfer to Richmond 66 kV in 2021 and load reduction following completion of the Metro Rail tunnel in 2024.

Supplementary information

Dynamic interface	An Excel workbook with the following information for each transmission connection point: • Historical and forecast maximum demand (MD), including 10% POE and 50% POE, for active power. • Coincident and non-coincident values. • High-level commentary. • The option to export all forecast and historical data.
Reactive power system forecast spreadsheet	Separate spreadsheet for reactive power forecasts at each transmission connection point, providing complementary information for power system studies. Please note the current reactive power forecasting methodology is based off historical power factors at time of connection point maximum demand, and does not yet take into account a potential change in future power factors as a result of increased PV generation penetration. AEMO hopes to expand on this methodology in the future.
Interactive planning map	The interactive map complements AEMO's planning publications to enhance readability and clarity. The map contains various layers, including layers displaying forecasts and planning information.
Transmission Connection Point Forecasting Methodology 2016	The current AEMO transmission connection point forecasting methodology outlines the process through which the forecasts were developed.