

NEW ZEALAND GENERATION BALANCE

NOVEMBER REPORT

EXECUTIVE SUMMARY

This month's New Zealand Generation Balance Report forecasts no N-1-G generation shortfalls for the next six months, irrespective of scenario or generation assumptions.

One change was made to the NZGB Model during October. This was to account for generation capacity lost during the First Gas Pipeline Outage (Auckland Anniversary Weekend).

The system operator has adjusted NZGB so that it uses 2019 load data for all forecasts in the 2021 calendar year (instead of 2020 load data). This is to remove the impact of COVID-19 from the load profile. The system operator has also changed the load growth factor applied to NZGB for the period 01 September 2021 to 31 August 2022 from 2% to 4% to reflect potential changes to load management practices once RCPD incentives are removed. Further information on the system operator assessment of RCPD changes is available [here](#).

The November NZGB report has been based on data taken from POCP on 01 November 2021.

WHAT IS NZGB?

NZGB is a tool operated by the System Operator to predict, up to six months in advance, whether New Zealand will have enough generation capacity to meet its daily peaks. The tool provides Asset Owners guidance for their outage scheduling.

There are two generation balance figures given: N-1 and N-1-G. The N-1 balance is the system's capacity to cover, over the peak, the loss of the largest risk-setter (a large generator or a HVDC pole). Likewise, the N-1-G balance is the system's capacity to cover, over the peak, the loss of the largest risk-setter if the next largest risk setter were also to become unavailable.

The analysis considers two different scenarios; a 'base scenario' where load is determined based upon load from the same period last year and a 'winter scenario', where the highest recorded winter loads from the last three years are applied across all winter months. Under each scenario, three different generation assumptions are made; a base assumption of generator outages as per POCP; a low gas assumption where North Island gas generation is decreased (a 542MW reduction in capacity); but the standard assumptions about wind are applied; and a low gas assumption where all wind generation is assumed to be at zero output.

The System Operator will issue a CAN highlighting potential shortfalls for instances where the base scenario with base load assumptions indicates an N-1-G shortfall.

For more information, please refer to the [website](#) or the [user guide](#).

BASE SCENARIO RESULTS

There are no N-1 or N-1-G generation balance shortfalls forecast for the base scenario irrespective of generation assumptions (Figure 1).

There are five significant outages during the six-month period this report covers:

1. [CUWLP NSY ROX 1 Duplexing Works](#) (4 October 2021 – 13 November 2021)
2. [CUWLP LIV NSY 1 Duplexing Works](#) (26 November 2021 – 13 December 2021)
3. [CUWLP LIV NSY 1 Duplexing Works](#) (18 January 2022 – 29 April 2022)
4. [First Gas Maui Gas Pipeline Outage](#) (28 January 2022 – 01 February 2022)
5. HVDC Outages (17 February 2022 – 22 February 2022)



There are no generation shortfalls (under any scenarios) forecast during any of these outages. The system operator will continue to monitor NZGB during the period of these outages and will highlight any shortfalls.

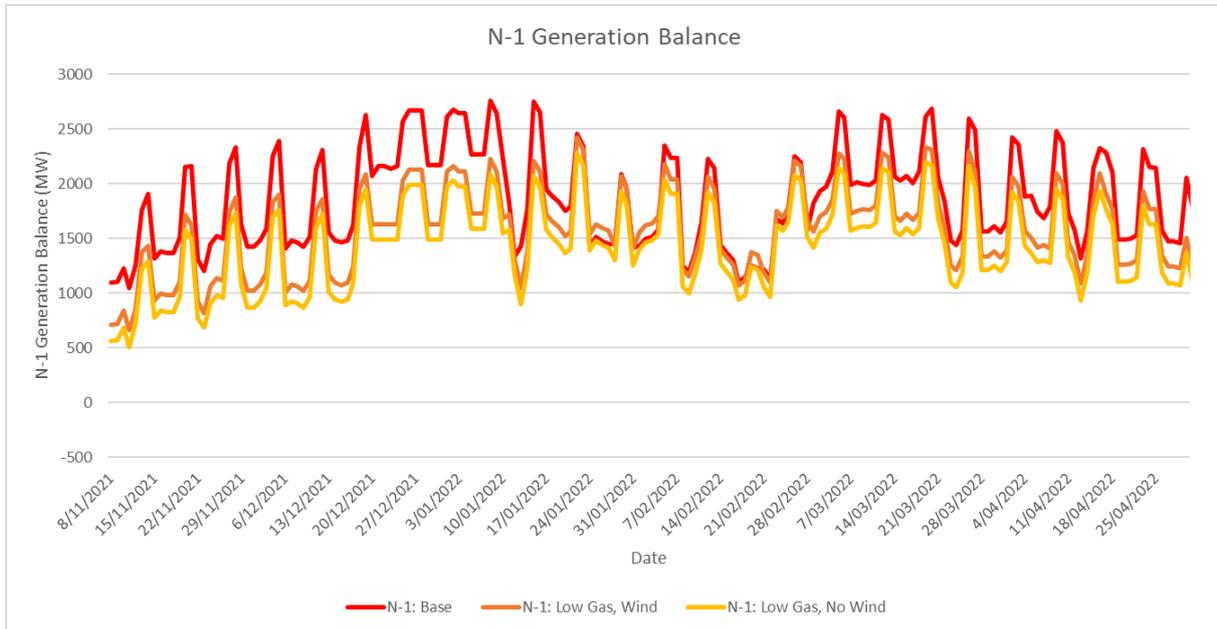


Figure 1: NZGB N-1 Balance – Base Scenario

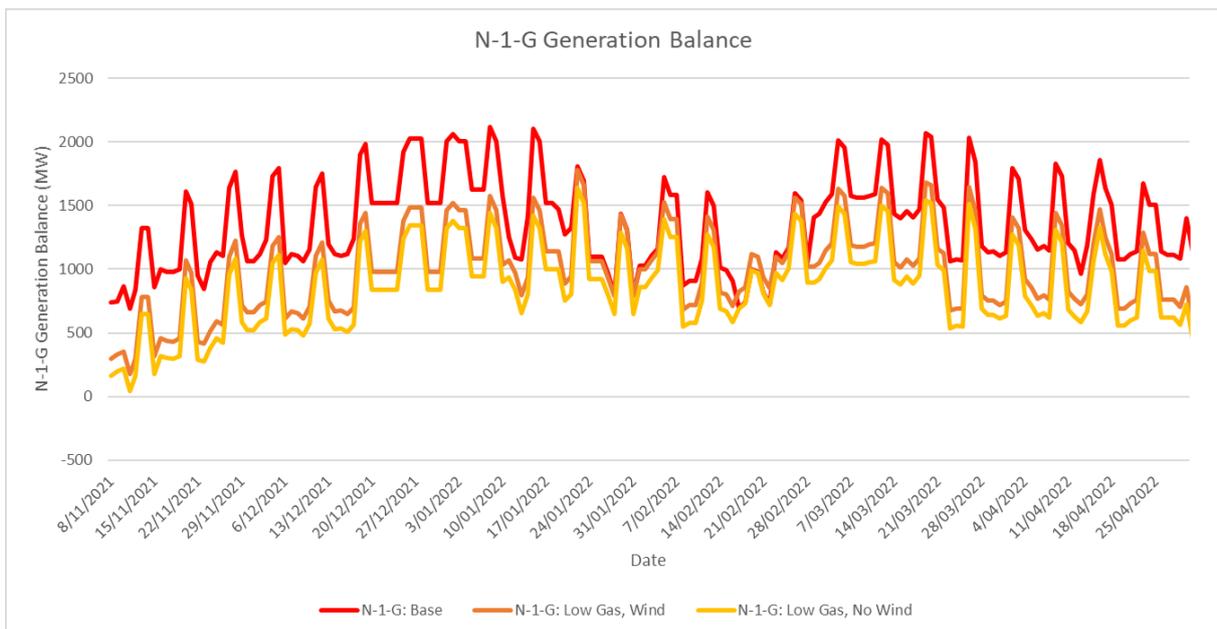


Figure 2: NZGB N-1-G Balance – Base Scenario

Further details of the predicted shortfalls are shown below in Table 1.



Table 1: Forecast base scenario shortfalls for the next six months

	Base Scenario		Low Gas, Wind Scenario		Low Gas, No Wind Scenario		Outages				
	N-1 Margin	N-1-G Margin	N-1 Margin	N-1-G Margin	N-1 Margin	N-1-G Margin	Generation		Transmission		HVDC
							NI	SI	NI	SI	
Nil											

To mitigate the risk of a shortfall on the dates with low or negative generation balance forecast, market participants should:

1. avoid scheduling additional outages which may remove or constrain generation; and
2. adjust demand and generation offers to minimise any risk of shortfall.

WINTER SCENARIO RESULTS

No Winter Scenario results are provided, as the November Report does not cover any Winter months (June – August).

CHANGES SINCE THE AUGUST 2021 REPORT

There has been one change to the NZGB model since the October 2021 Report.

1. Overrides added to model to account for generation capacity lost during the First Gas Pipeline Outage (Auckland Anniversary Weekend).

The system operator is aware of upcoming generator commissionings and will be working with the relevant asset owners to ensure these are correctly included in NZGB.

To provide feedback on the changes to either the NZGB modelling or monthly report, please contact Christian Jensen (christian.jensen@transpower.co.nz). For more details on the NZGB modelling, please refer to the [User Guide](#).



NOTABLE GENERATOR OUTAGES

The total MW loss of generator outages that impact the generation balance for the period studied are shown in Figure 3. Note that this does not capture the impact of transmission outages. For more information please visit [POCP](#).

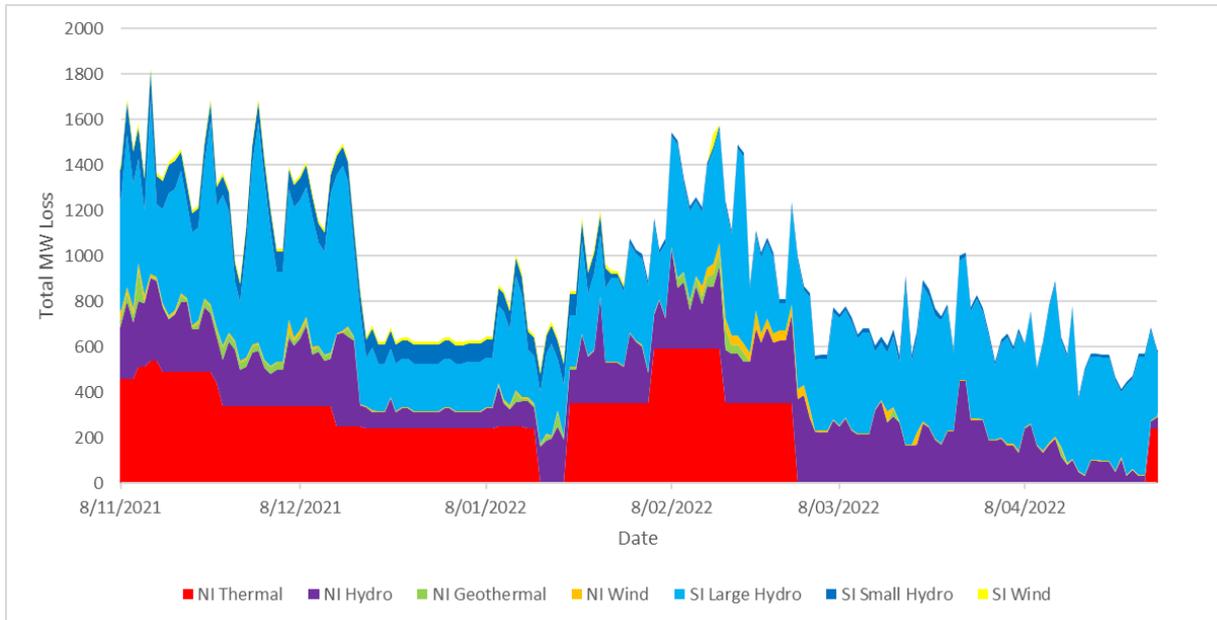


Figure 3: Total MW loss due to generation outages.

