

# Forced Outage Data Working Group (FODWG)

## Terms of Reference

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Development*

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## Table of Contents

1. BACKGROUND.....	1
2. OBJECTIVE.....	1
3. SCOPE.....	1
4. TIMETABLE.....	2
5. FODWG STRUCTURE .....	3

## 1. Background

Forced Outage Rates (FORs) are a significant input into market simulations conducted for reliability assessment and other longer term planning studies. In previous NEMMCO reliability assessments, FORs have been highlighted as the most significant factor in the determination of regional minimum reserve levels. In general terms, high generator FORs can cause higher levels of unserved energy within regions. This leads to a higher minimum reserve level requirement to ensure that the unserved energy does not exceed the Reliability Panel standard.

In recent years it has become apparent to NEMMCO that a review of the definitions and collection procedures used for forced outage data is necessary. Currently NEMMCO does not have adequate confidence in the consistency and reliability of collected FORs to warrant using this data alone, hence FORs are doubled in reserve level assessment calculations. In developing and adopting a more rigorous approach to the collection of this data, NEMMCO may be able to modify the assumptions related to FORs in future reserve level assessment calculations. The extent to which NEMMCO will be able to do this will depend on the level of rigour and transparency achieved through the Forced Outage Data Working Group (FODWG). The FODWG has been formed as a body of representatives from selected generators and NEMMCO to expose and resolve the issues surrounding current forced outage data collection practices

## 2. Objective

The overall objective of the FODWG is to improve the quality of generator input data used by NEMMCO for reliability forecasting purposes.

The following items identify how this overall objective will be achieved:

- To further develop and refine a set of standard forced outage definitions to be used by all generators in any forced outage data collection process conducted by NEMMCO;
- To clearly specify what data needs to be collected by generators;
- To resolve any data collection or processing issues that have previously been identified;
- To promote transparency of the data collection process and NEMMCO's application of the data;
- To define a formal process for the provision and collection of forced outage rate data; and
- To define how data would be used to calculate forced outage rates in accordance with ESAA and IEEE standards;

## 3. Scope

The FODWG's scope of work includes:

- Address the issues identified by NEMMCO in the circulated issues paper titled “NEM Forced Outage Data Collection” and any other issues which become apparent in this process;
- Provide expertise and advice on issues relating to data collection from generators, including development of hardware and software systems and associated timeframes;
- Streamline the current forced outage definitions and collection practices adopted by NEMMCO to develop a set of definitions suitable for NEM wide application and appropriate for international benchmarking.
- Propose a formal process for the collection and provision of forced outage data.

It is expected that work produced by the FODWG would also assist JPBs in their market simulations studies.

#### 4. Timetable

It is proposed that the FODWG should attempt to substantially progress its work by the end of October 2005.

To this end, the work will be split into two stages:

Stage 1, targeted for completion by the end of October 2005, will focus on incremental improvements that can be made to the current data collection process to improve the integrity of the forced outage data. This will include:

- Identifying the data items to be collected for all generators;
- Prioritising these data items for each class of generator;
- Determining standard definitions for each data item;
- Developing a draft guide book based on the definitions determined;
- Promoting transparency of the data collection process and NEMMCO’s application of the data;
- Updating generator reporting systems;
- Engaging a consultant statistician and developing a terms of reference the statistician to:
  - Improve the utility of the data that has already been collected for reliability modelling purposes; and
  - undertake statistical analysis of the forced outage data as outlined in the Issues Paper under Section 4.6 Statistical Analysis of forced outage data; and
- Developing a verification/validation process for the forced outage data.

A forced outage data collection process in November 2005 will follow the completion of the FODWG's draft guide book. It is expected that the consulting statistician will undertake statistical analysis of the data once collected. The data collected will be used in NEMMCO's review of minimum reserve levels in early 2006, intended to take account of the impact of Basslink (April 2006) and Kogan Creek (late 2007).

The second stage will have a longer-term focus including:

- Instituting formal processes for the collection and provision of forced outage data;
- consideration of other data collection approaches, including real time (or near-real time) reporting mechanisms; and
- Developing FOR distributions for each class of generator through the statistical analysis of historic data, to be undertaken by the consulting statistician.

This stage is likely to continue well into 2006. Once Stage 1 is complete, the FODWG will determine a more detailed scope and associated timeline for subsequent stages.

## 5. FODWG structure

The FODWG has been formed as a sub group of National Generator Forum (NGF) and has members from selected generators and NEMMCO.

Generator members have been selected on the basis of:

- A representative from each jurisdiction
- Various plant/fuel types

The following is a list of the current members of the FODWG:

<b>MEMBER</b>	<b>ORGANISATION</b>
Adam Peard	NEMMCO
Krste (Chris) Jovceski	NEMMCO
Ben Skinner	SPI
Mark Vella	Stanwell
Peter Edwards	NRG
Simon Appleby (alternate)	NRG
David Hoch	International Power
Roger Oakley (alternate)	Loy Yang Marketing Management Company Pty
Jim Beckwith	Macquarie Generation
Tony Callan (alternate)	Delta Electricity
John Arneaud	Hydro Tas
Ken Woolley	AGL