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## Agenda Item 7b: REGWG Work Package 1 Interim Report

### 1. BACKGROUND

The Renewable Energy Generation Working Group (REGWG)<sup>1</sup> is tasked with the review and investigation of potential issues associated with high levels of penetration of intermittent renewable energy generation projects within the South West interconnected system (SWIS). The working group has been tasked with investigating the range of issues presented by renewable energy generators and to develop and propose solutions to the various issues.

The REGWG has established an overall Work Program to address these issues which broadly comprise the following four Work Packages:

- Work Package 1: Scenarios for Modelling Renewable Generation in the SWIS<sup>2</sup>;
- Work Package 2: Reserve Capacity and Reliability Impacts;
- Work Package 3: Frequency Control Services; and
- Work Package 4: Technical Rules.

ROAM Consulting was appointed to undertake Work Package 1 and was required to:

- identify existing policies or regulations that may promote or impede intermittent generators or dispatchable renewable energy generators locating in the SWIS as a precursor to scenario development;
- determine the likely scenarios for the future generation mix in the SWIS as a result of State and Federal Government policies and regulations; and
- identify the key drivers and constraints that determine these scenarios and how changes in those drivers would change the scenario outcomes.

### 2. INTERIM REPORT

The Interim Report is attached as Appendix 1, this report has been endorsed by the REGWG to be presented to the MAC. The analysis contained in the report may vary based on new load forecasts (once available).

As a result of ROAM's analysis and modelling four unique scenarios were addressed in its report exploring possible futures for the SWIS. These are based upon various combinations of the drivers considered to be most significant, including the CPRS target, the level of demand growth, the gas price, and the availability of various low emissions technologies.

For each of these scenarios, a unique planting schedule outcome has been developed, based upon actual generators that are currently proposed for development in the SWIS or have

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<sup>1</sup> Additional background to the REGWG can be found at: <http://www.imowa.com.au/REGWG>

<sup>2</sup> Initially called "Impacts from State and National Policy" but refined during the working group process.

made applications for connection agreements. Decisions on which plants are most likely for installation in each year of the study were made to be consistent with a wide variety of parameters, including the annual supply-demand balance, maintenance of economically viable capacity factors, requirements of the renewable energy target, and the external drivers relevant to that scenario.

The resulting four planting schedules provide a strong basis for further modelling to explore potential futures for the SWIS.

### 3. RECOMMENDATIONS

The IMO recommends that the MAC:

- **Note** the REGWG Work package 1 Interim Report.