**Attachment-A to Application to modify a development Consent**

# Crookwell 2 Wind Farm

## Modification-2 Application Date Lodged: 26th August 2016

Additional Information for Section 3:

### Lot Details for project area include:

Lot 91 / DP 750042, Lot 140 / DP 750042, Lot 1 / DP 1201348, Lot 2 / DP 1201348,
Lot 3 / DP 1201348, Lot 41 / DP 999621, Lot 2 / DP 865814, Lot 2 / DP 1091383,
Lot 1 / DP 79580, Lot 1 / DP 1087717, Lot 2 / DP 1087717, Lot 3 / DP 1087717,
Lot 18 / DP 252214, Lot 1 / DP 965855,
Right of Carriageway over Lot 18 / DP252214 Conveyance No. 622, Book 337.

Additional Information for Section 7:

### The proposed modifications include:

- Reduction of the number of approved turbines from 46 to 33 (a total reduction of 13 turbines);
- Increase in the maximum turbine envelope so as to accommodate the newer, more efficient turbine models now available. The changes proposed to the turbine envelope will:
  - Increase in the hub height from 80 metres to up to 95 metres;
  - Increase in the blade size from 47 metres to up to 64 metres;
  - Increase in the rotor diameter from 96 metres to up to 130 metres;
  - Increase in the blade tip height from 128 metres to up to 160 metres; and
  - Increase in turbine foundation area from 17 metres in diameter to approximately 20 metres;
- Inclusion of a 50 metres micrositing allowance which allows for the micrositing of turbines and project infrastructure by up to 50 metres from locations approved in Modification-1;
- Modifications to the obstacle night lighting design to match the turbine layout;
- Grid cut-in reconfiguration and inclusion of a taller replacement transmission line tower for TransGrid, and associated communications infrastructure; and
- Subdivision of the proposed switchyard and any deemed subdivision arising from the grant of leases for the wind farm.

New turbine models will enable the Crookwell 2 Wind Farm to generate more energy per turbine and increase the overall energy yield of the project. This is due to the increase in turbine height providing access to stronger wind resources, the increase in the swept path area due to the longer blade length, and an increase in generator capacity in the nacelle (up to approximately 3.6 Megawatts (MW)).

These changes combine to increase the amount of the wind energy harnessed by each turbine. Current estimates show that the amended project could generate up to 385 gigawatt hours per year (GWh/y) for the 33 larger turbines in comparison to only 270 GWh/y for the 46 approved turbines.

The reduction in turbine numbers will also reduce the Project's overall environmental impacts.