Crookwell 3 Wind Farm Project Background

Proponent

Crookwell Development Pty Ltd (CDPL) is the proponent for the Crookwell 3 Wind Farm project. CDPL is a fully owned subsidiary of Union Fenosa Wind Australia Pty Ltd (UFWA), a subsidiary of a Spanish Utility called Gas Natural Fenosa.

The Gas Natural Fenosa group is one of the leading multinational companies in the gas and electricity sector. The company:

- operates in 25 countries
- employs around 20,000 staff
- has approximately 15.4 GW of installed power, and
- has nearly 20 million customers.

Gas Natural Fenosa has a strong commitment to social and environmental issues throughout all aspects of its business.

Gas Natural Fenosa's goal is to achieve sustainable growth in electricity and gas production, transport, distribution and marketing activities that focus on protecting the environment and quality of life.

Gas Natural Fenosa's efforts in this regard have been rewarded in recent years with a number of prizes and the achievement of significant milestones. They received numerous awards and public acknowledgements in 2011 including the 2011 Platts Global Energy Award in New York for the most outstanding community development program for its Cuartel V gasification project located in Buenos Aires, Argentina.

UNION FENOSA WIND AUSTRALIA

Current Projects

Hawkesdale 31 turbines (62 MW) \$150 million investment Planning permit granted **Construction started**

Crookwell II 46 turbines (92 MW) \$220 million investment Development consent granted Construction started

Paling Yards 55 turbines (250 MW) \$275 million investment Planning permit application underway

UFWA has eight wind farm projects (in development, approved and early construction stages) across NSW and Victoria. This portfolio represents a potential investment of approximately \$2.0 billion in renewable wind energy generation with a wind generation capacity of over 1,000MW.

Gas Natural Fenosa is committed to the community in which it operates, where it generates value through its condition as an energy company and through community investment.

Ryan Corner 67 turbines (134 MW) \$327 million investment Planning permit granted **Construction started**

Berrybank 99 turbines (178-248 MW) \$484 million investment Minister's decision that no EES is required. Planning permit application approved

150 turbines (300-450 MW) \$720 million investment Minister's decision that no EES is required. Planning permit application under way

Darlington

Crookwell 3 30 turbines (54-102 MW) \$90-110 million investment Planning permit application underway

Gas Natural Fenosa international Portfolio



The Proposal

The project comprises a number of elements, including:

- up to 30 individual wind turbines standing up to 152 metres at the top of the blade tip with a capacity of up to 3.4MW each (some of the turbines may be fitted with obstacle lighting as required);
- up to 30 individual kiosks for the housing of 33kV Transformers and 33kV Switchgears and associated control systems to be located in the vicinity of the wind turbine towers (in some turbine models the kiosk's equipment is integrated within the tower or nacelle);

either an underground or overhead connection between the site boundaries and the Crookwell 2 site boundary to reach the substation approved as part of the Crookwell 2 Wind Farm;

- up to three wind monitoring masts fitted with various instruments such as anemometers, wind vanes, temperature gauges and potentially other electrical equipment;
- up to two temporary concrete batching plants during the construction phase only, to supply concrete for the foundations of the turbines and other associated structures;

gasNatural fenosa

Figure 1: Union Fenosa Wind Australia - Current Projects

Figure 2: Union Fenosa International Projects

Project Team

- Tract Consultants Pty Ltd Environmental Planning & Approvals
- Anderson Environmental Consultants Pty Ltd Flora and Fauna and Indigenous & Non-Indigenous Archaeological Heritage
- Aviation Projects Pty Ltd Aviation Safety & Obstacle Night Lighting
- Garrad Hassan Pacific Pty Ltd Electromagnetic Interference & Shadow Flicker
- Coffey Geotechnics Pty Ltd Geotechnical
- Futureye Pty Ltd Socio-Economic
- Green Bean Design Pty Ltd Landscape & Visual
- SLR Consulting Australia Pty Ltd Noise
- URS Australia Pty Ltd Traffic
- d Farm (8 Tur 104 ● Highland Par **CROOKWELL 3 EAST SITE**
- internal unsealed tracks for turbine access;
- upgrades to local road infrastructure as necessary to provide access to the site;
- an underground electrical and communication cable network linking turbines to each other within the site boundary and then utilising
- the removal of vegetation as required to enable access to, and the construction of, the project;
- vegetation replanting to provide screening; and
- all ancillary and incidental uses and activities.

Project History

The project was initiated in its current form in 2009. This followed on from the approval of a modification to the approved Crookwell 2 Wind Farm in July 2009. Crookwell 2 Wind Farm provides essential infrastructure that can support both it and the proposed Crookwell 3 Wind Farm project, and there are synergies to be gained from co-locating the wind farms.

Due to the close proximity of the proposed Crookwell 3 to the approved Crookwell 2 Wind Farm, the projects can share infrastructure, bringing significant benefits such as increasing commercial viability. This approach also reduces the potential amenity impacts arising from separate substations, control buildings and switchyards that are usually separately provided for each wind farm.







International example of a Wind Farm

Figure 3: Regional Plan



