

# Wandoan South Battery Energy Storage System (BESS)

The New Horizon for Decarbonised Energy and The Energy Transition



## ANATOMY OF A UTILITY-SCALE BATTERY ENERGY STORAGE SYSTEM

### Design

- ▶ Power Rating / Storage Capacity: 100MW / 150MWh
- ▶ Technology: Lithium-ion
- ▶ Key Components: Battery Cells (*Samsung*), Inverters (*Power Electronics*)

### Enablers

- ▶ Battery pack prices reaching \$100/kWh levels as per BNEF, falling by ~90% over 10 years
- ▶ Increasing application in the Australian grid in an environment where traditional coal-fired power stations are being phased out

### Application

- ▶ **Firming & Ramping:** *Allows for smooth generation from variable RE output*
- ▶ **Frequency Regulation:** *To ensure grid frequency stays within specified limits*
- ▶ **Operational Reserve:** *Faster emergency response vs traditional generators*
- ▶ **Curtailement Mitigation:** *Storing surplus RE generation in market for peak use*

### Bankability

- ▶ 15-year offtake agreement with AGL for full operational dispatch rights
- ▶ First non-recourse private financing for a stand-alone BESS in Australia
- ▶ “Green Loan” denomination validates use of funds to support the energy transition and entails reporting on sustainability performance indicators

