

The background of the entire page is a light, monochromatic image of tall, thin grasses or reeds, creating a textured, natural feel. The text is overlaid on this background.

# **BULGANA**

## **GREEN POWER HUB**

**Construction Update**

**ISSUE N°2**

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## Terminology:

The scope of works includes 220kV Terminal Station and Interface, 33kV Substation, 15km overhead 33kV line, two (2) 220 /33kV TXs, Battery Energy Storage System (BESS) as well as fifty-six (56) WTGs configured in four (4) Collector Groups (CGs).

**CG 1:** BU 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 & 11;

**CG 2:** BU 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 23, 25 & 26

**CG3:** BU 29, 30, 31, 32, 33, 34, 35, 36, 37, 49, 50, 51, 52 & 53

**CG4:** BU 40, 41, 42, 43, 44, 54, 55, 56, 57, 58, 59, 61, 62, 63, 64, 65, 66 & 67

The Project is also split into groups of activities:

**Terminal Station and Interface** Including civil and electrical installation

**CBoP** (Civil Balance of Plant) including internal roads, Crane Hardstand areas and foundations

**EBoP** (Electrical Balance of Plant) including all electrical works to be prepared before WTGs can be energized (Cable trenches, Substation electrical installation, earthing circuits, etc.) and the Battery Energy Storage System (BESS)

**Wind Turbine Generators (WTG)** including shipping, transport to site, installation and commissioning.

## Progress detail

### Terminal Station and Interface

- Civil Design completed
- Primary Design completion pending
- Structural Design completion pending
- Protection and control settings design ongoing
- 33kV Lines design progressing
- Control and Battery buildings under construction
- Access road sub base built up with the two crossover drainage pipes under road installed
- Site benching including drainage progressing
- Pile drilling and foundation works underway
- Steel fixing works underway for transformer pad

### Civil Balance of Plant (CBoP) Activities

- Site establishment is complete;
- Civil design is ongoing, with Area 1 and 2 issued at IFC. Area 3 has been submitted at 80% with Areas 4, 5 and 6 submitted at 15%;
- Civil construction works has progressed to begin WTG foundation excavations in Area 2, with access tracks progressing in Area 1;
- The concrete batching plant is being delivered and assembled on site.

### Electrical Balance of Plant (EBoP) Activities

- Design is in progress

### Wind Turbine Generator (WTG)Activities:

- Procurement is underway for WTG Crane & Installation and Logistics.
- A letter of Intent (LOI) has been issued to Keppel Prince Engineering (KPE);
- WTG work packages including overseas Towers, Blades, Power curve Verification (PCV) equipment, Nacelle and hubs are in progress.

**8,109**

Hours worked on site

**35**

People on average on site



Figure 1 View from BU23 Access Track, looking down on BU21 (RHS) and Access Track to Bulgana Rd LHS.



Figure 2 View from BU12 during foundation excavation, in the background BU13 (LHS) and BU14 (RHS).



Figure 3 *Terminal Station Pad Benching Construction*

