

The background of the entire page is a close-up, slightly out-of-focus photograph of tall, thin blades of grass, likely reeds or similar aquatic plants, growing upwards. The grass is a light brownish-green color, and the lighting creates a soft, natural feel.

# **BULGANA**

## **GREEN POWER HUB**

**Construction Update**

**ISSUE N°8**

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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.

Civil & Electrical Balance of Plant works are in progress on site. WTG components and towers manufacture are in progress. The first delivery of blades and towers has arrived on site.

## Progress detail

### Terminal Station and Interface

- 33kV OHL foundation construction completed.
- Approximately 50% of poles erected. Stringing commenced.
- Installation of switchyard equipment nearing completion.
- Station bus works installation commenced.
- Protection and Control testing underway.

### Civil & Structural Balance of Plant (CBoP) Activities (overall 89% complete)

- WTG foundations 90% complete
- Internal Roads 97% complete
- Crane hardstand areas 85% complete
- O&M Building 25% complete
- External local road maintenance in progress

### Electrical & SCADA Balance of Plant (EBoP) Activities (overall 29% complete)

- 33kV Cable delivery & installation in progress 39% complete
- Control Room construction (on site) in progress 40% complete
- BESS manufacture in progress
- Harmonic Filters manufacture in progress

### Wind Turbine Generator (WTG) Activities: (overall manufacturing 70% and overall shipping 30% complete)

- Power Curve Verification (PCV) data collection complete
- Manufacturing Status (complete):
  - Tower (sets) 34/56
  - Nacelles 41/56
  - Drive trains 52/56
  - Hubs 39/56
  - Blade (sets) 44/56
  - Elevators 56/56
  - Switchgear 56/56
- Delivery, Installation, Commissioning & Testing (complete):
  - Delivery 0/56
  - Pre-Assembly 0/56
  - Final Assembly 0/56
  - Mechanical 0/56

**133**

People on average on site

**195,304**

Hours worked on site

Figure 1 – Grouting Works Commenced



Figure 2 – U/G Cable Works





Figure 3 – Substation Control Room Delivery



Figure 4 – First Blade Delivery



Figure 5 – First Tower Delivery



Figure 6 – Crane and Tower Sections





Figure 7 – SGRE End Of Year BBQ

