

The background of the entire page is a soft-focus, light-colored image of tall grasses or reeds, creating a natural and green aesthetic.

BULGANA

GREEN POWER HUB

Construction Update

ISSUE N°10

February 2019

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 AUSNET Interfaces (100% complete)

- Terminal Station is complete and energized
- Substation 33kV switch board interface also energized

Civil & Structural Balance of Plant (CBoP) Activities (93.7% complete)

- | | |
|--|---------------|
| — Internal Roads | 100% complete |
| — Crane hardstand areas | 91% complete |
| — WTG foundations | 94% complete |
| — Backfill & grout | 81% complete |
| — O&M Building | 46% complete |
| — External local road maintenance in progress; | |

Electrical & SCADA Balance of Plant (EBoP) Activities (47% complete)

- | | |
|---|---------------|
| — 33kV Cable delivery & installation in progress | 63% complete |
| — Control Room construction (on site) in progress | 85% complete |
| — Switchyard in progress | 94 % complete |
| — BESS manufacture and transport in progress | |
| — Harmonic Filters manufacture in progress | |

Wind Turbine Generator (WTG) Activities: (overall 17.95%)

- | | |
|---|----------------|
| — Manufacturing Status (complete): (94% complete) | |
| o Tower (sets) | 34/56 complete |
| o Nacelles | 56/56 complete |
| o Drive trains | 56/56 complete |
| o Hubs | 56/56 complete |
| o Blade (sets) | 54/56 complete |
| o Elevators | 56/56 complete |
| o Switchgear | 56/56 complete |
| — Shipping Status (complete): (73% complete) | |
| o Blade shipments | 3/5 complete |
| o Tower shipments | 2/2 complete |
| o Nacelle, Drive train & Hub shipments | 2/3 complete |
| — Delivery, Installation, Commissioning & Testing (complete): | |
| o Delivery | 7/56 complete |
| o Pre-Assembly | 14/56 complete |
| o Final Assembly | 4/56 complete |
| o Mechanical & Electrical Completion | 0/56 complete |

195,571
147

Hours worked on site

People on average on site

Figure 1 – Final Assembly of BU01 (left) and BU02 (right)



Figure 2 – WTG Installation progress



Figure 3 – Terminal and Substation Progress



Figure 4 – Overhead Gantry and Droppers Progress



Figure 5 – BESS Bench Preparation

