

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°11

March 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 (95% complete)

- Internal Roads 100% complete
- Crane hardstand areas 100% complete
- WTG foundations 100% complete
- Backfill & grout 85% complete
- O&M Building 55% complete
- External local road maintenance in progress;

Electrical & SCADA Balance of Plant (EBoP) Activities (59% complete)

- 33kV Cable delivery & installation in progress 89% complete
- Control Room construction (on site) in progress 90% complete
- Switchyard in progress 96 % complete
- BESS manufacture and transport in progress
- Harmonic Filters manufacture in progress

Wind Turbine Generator (WTG) Activities: (overall 24%)

- Manufacturing Status (complete): **(95% complete)**
 - Tower (sets) 36/56 complete
 - Nacelles 56/56 complete
 - Drive trains 56/56 complete
 - Hubs 56/56 complete
 - Blade (sets) 56/56 complete
 - Elevators 56/56 complete
 - Switchgear 56/56 complete
- Shipping Status (complete): **(85% complete)**
 - Blade shipments 4/5 complete
 - Tower shipments 2/2 complete
 - Nacelle, Drive train & Hub shipments 3/3 complete
- Delivery, Installation, Commissioning & Testing (complete):
 - Delivery 30/56 complete
 - Pre-Assembly 24/56 complete
 - Final Assembly 14/56 complete
 - Mechanical & Electrical Completion 1/56 complete

231,357
165

Hours worked on site

People on average on site

Figure 1 – Blade Lift at BU 21

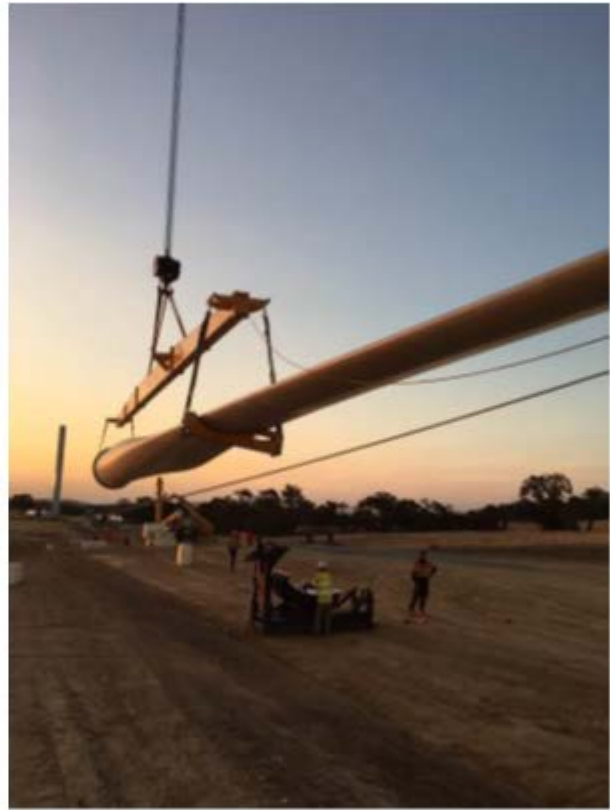


Figure 2 – WTG Installation progress CG1



Figure 3 – WTG Installation progress CG2



Figure 4 – Substation Complete



Figure 5 – O&M Building Progress



Figure 6 – First Tesla Inverters delivered to site

