



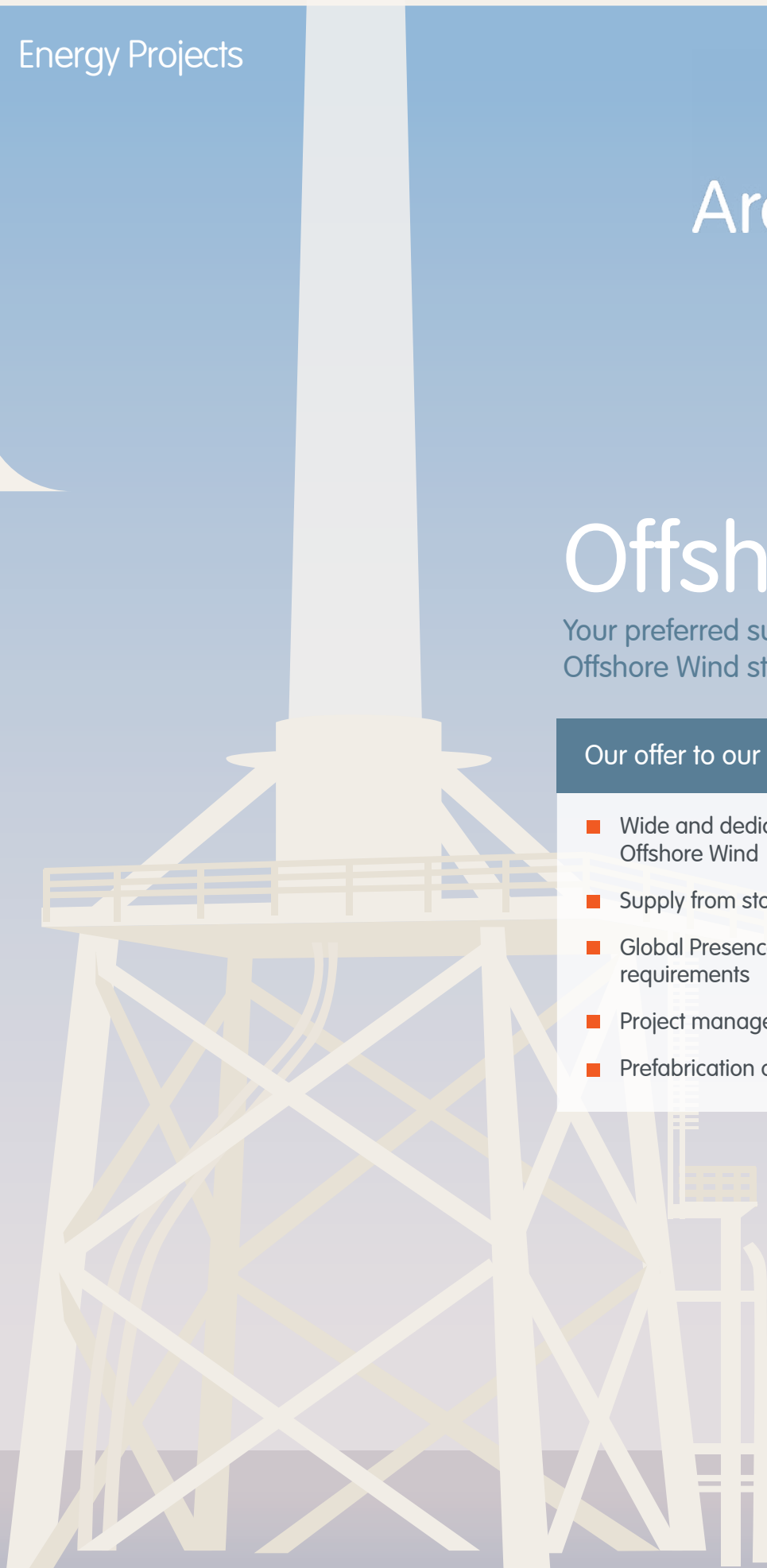
ArcelorMittal

# Offshore Wind

Your preferred supplier & partner for complete Offshore Wind structural steel packages

## Our offer to our Offshore Wind customers:

- Wide and dedicated range of steel products for Offshore Wind
- Supply from stock and (own) steel mills
- Global Presence to support your project requirements
- Project management and logistics expertise
- Prefabrication and supply of sub-assemblies



**Energy Projects** has a strong track record in the complete package supply of structural steel to the main players in the (renewable) Energy industry.

As every project is unique, we work closely with Utility companies, EPCI contractors and fabricators to tailor our product and service solution to their specific needs and requirements.

Our thorough understanding of the industry standards ensures that our high yield structural steel conforms to stringent quality requirements and international offshore specifications.

## OUR STRUCTURAL STEEL IS SUPPLIED FOR THE FOLLOWING APPLICATIONS:

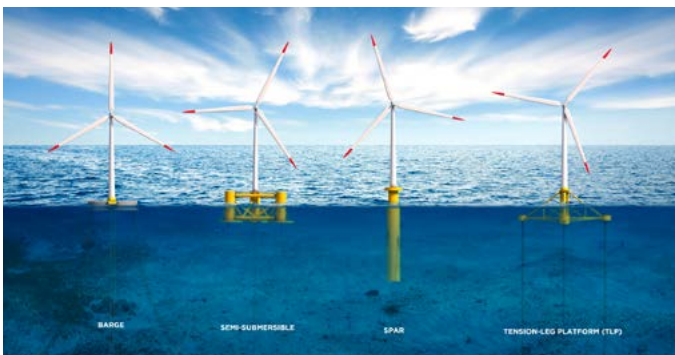


Photo Credit : Bernard Biger / Chantiers de l'Atlantique.

### JACKET FOUNDATIONS FOR OFFSHORE WIND STRUCTURES AND SUBSTATIONS

Key products supplied are::

- Large diameter LSAW tubulars for jacket legs, bracings, cones, stubs and nodes
- Plates or large diameter LSAW tubulars for jacket piles
- Complete structural steel package for substations topsides
- Tubulars, plates and beams for transition pieces
- Seamless and welded tubulars and bends for J-tubes
- Seamless tubulars for boatlandings
- Secondary and tertiary steel



### STEEL STRUCTURES FOR FLOATING OFFSHORE WIND PLATFORMS

Key products supplied are:

- Large diameter LSAW tubulars
- High tensile plates
- (Inverted) angles
- Secondary and tertiary steel

## SPECIFICATIONS & REQUIREMENTS

### Supplied steel specifications

Our comprehensive product offer meets all major offshore wind technical specifications, such as:

- DNVGL-OS-B101
- EN 10225 S355/S420/S460
- EN 10025 S355/S420/S460
- EN 10210 S355/S420/S460
- EN 10219 S355/S420/S460
- DNV/LR AH/DH and EH 36

### Fulfilled supplementary requirements

- CTOD pre-qualification
- TTP / Z35 testing
- Charpy V-notch impact testing
- Strain ageing testing
- Simulated post weld heat treatment
- Ultrasonic testing to EN 10160
- Dimensional tolerances to EN 10029
- Surface conditions to EN 10163

### Fabrication specifications to:

- DNVGL-OS-C401
- EEMUA 158
- NORSOK M-101
- API 2B
- EN 1090-1/2

### Certification (EN 10204 3.2):

- ABS / BV / DNV / LR

# OUR PRODUCTS:

## TUBULARS

LSAW tubulars are supplied from 12" (323.9mm) up to 260" (6604mm) by press bending or roll bending with piece lengths and to customer requirements. Point-to-point delivery can be offered, including 3D cutting, pipe end profiling and welding to subassemblies.

Smaller diameters and secondary steel can be supplied in seamless or welded condition:

- Seamless tubulars are supplied from: 2" – 24" with wall thickness ranging from 3mm – 50mm
- HFW tubulars are supplied from 4" – 24" in wall thicknesses up to 25.4mm

## HEAVY PLATES

Plate sizes can be standard or tailored to project requirements with minimum order quantities as low as 2 metric tons per size.

Thickness range: 8mm to 200mm Yield strength range: 355 – 490 N/mm<sup>2</sup> or higher.

## BEAMS SECTIONS & ANGLES

Our structural beams and sections are produced in the highest quality such as our proprietary Histar<sup>®</sup> grade. The size range includes the following:

- American (W size)
- British (UB/UC size)
- European (IPE/HE/UPN)
- (Inverted) Angles
- Bulb Flats

Beam height: 100mm – 1100mm

Beam breadth: 100mm – 420mm

## ADDITIONAL SERVICES



- Supply of shop drawings
- Cutting according to requirements
- Profile and tube bending (J-tubes, anode cages, etc.)
- Tube end profiling / 3D cutting
- Fabrication of Cones / Bellmouths
- Quality control and inspection
- Documentation and project management
- Logistic solutions and temporary storage
- Shotblasting and priming

Photo Credit : Principle Power

# REFERENCES

Photo Credit : Navantia



## East Anglia One (714 MW)

**Scottish Power Renewables**

**Project location:** United Kingdom, North Sea

**Foundation type:** Jackets

**Scope of supply:** Substation topsides

**Year of supply:** 2017

**Products:** Beams, HP profiles and seamless tubulars

Photo Credit : Principle Power



## Kincardine (50 MW)

**Pilot Offshore Renewables Limited**

**Project location:** United Kingdom, North Sea

**Foundation type:** Semi-submersible (floating)

**Scope of supply:** Stiffeners for floating platforms

**Year of supply:** 2019

**Products:** Inverted angles



## BorWin3 (900 MW)

**TenneT Offshore GmbH**

**Project location:** North Sea, Exclusive Economical Zone of Germany

**Foundation type:** Jacket

**Scope of supply:** Topside and jacket

**Year of supply:** 2015 and 2016

**Products:** CS plates and beams

## HornSea Two (1.4 GW)

**SMIY (Admiralty Yard Offshore) / Bulktrade**

**Project location:** United Kingdom, North Sea

**Foundation type:** Jacket

**Scope of supply:** Substation topside & Jacket

**Year of supply:** Jan–May 2019

**Products:** Beams, LSAW tubulars, seamless pipes, angles, bulbflats and hollow sections

## Moray East (950 MW)

**EPD Renovaveis**

**Project location:** United Kingdom, North Sea

**Foundation type:** Jackets

**Scope of supply:** Transition pieces topside

**Year of supply:** 2019

**Products:** Steel plates for fabrication of transition pieces

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