



# Renewable Energy School of Skills South-East Europe



GLOBAL WIND ORGANISATION

The Global Wind Organization (GWO) is an association of Wind Turbine owners and manufacturers with the aim of supporting an injury-free work environment in the wind industry. The objective of this Standard is to develop common industry training and best practice Standards for health and safety as a vital and necessary way forward to reducing risks for personnel in the wind industry working on site and to reducing environmental risks across Europe and the globe.

**Safety is the number one priority for the companies in the global wind industry and to contribute to a better and safer work environment, Global Wind Organisation was setup by 13 leading wind power companies in 2009.**

GWO was established between Vestas, RePower (now Senvion), Suzlon and Siemens Wind Power at a meeting the 24th of November 2009 hosted and initiated by Falck Nutec in Esbjerg. At this meeting all parties agreed to find an impartial institution to gather information send from each wind turbine manufacturer. The management at Falck Nutec offered their support and GWO accepted that Falck Nutec initially carried out the secretary function for GWO, now together with the Danish Wind Industry Association.

#### **GWO Modules available in Constanta :**

**RESS-FA-02 :** Emergency First Aid for working at height

**RESS-WAH-05 :** Working at heights and rescue training

**RESS-FAW-16 :** Fire awareness and fire-fighting

**RESS-MH-22 :** Manual Handling

**RESS-BTT-01 :** GWO Basic Technical Training *(Feb 2018)*



BZEE e.V. has been working on quality standards in wind energy since 2000 with their main focus being on identifying necessary training measures. Founded by leading companies from the wind energy sector, BZEE e.V. now includes more than 90 members from production, services, personnel services and BZEE training partners.

The BZEE Global Training Partnership delivers wind energy skills at 29 locations worldwide and boasts a track record of over 3600 highly qualified wind energy technicians.

Currently approx. 4000 skilled company staff per year undergo working-at-heights and rescue training focused on the specific environment of wind turbines.

BZEE's commitment to Real Turbine Learning together with continuous alignment to stakeholder needs provide the skills needed to drive wind power.

### Training Committee

The BZEE Training Committee assesses stakeholder qualification demands, monitors the development of the BZEE training portfolio and advises the Board on the approval of BZEE training services.



## ADVISORY COMMITTEE MEMBERS

The BZEE advisory committee formulates and evaluates new requirements for qualifications, pursues the development of new training modules and advises the board on development progress.

The BZEE advisory committee convenes four times a year.

Q•R•C GROUP  
Quality Recruitment Competence



DNV-GL



SIEMENS

SENVION  
wind energy solutions

Vestas

WEST

Renewable Energy School of Skills (RESS) is the leading consultancy, innovation and technology company for wind energy in Romania. Working with more than 75% of the market, WPE has acquired knowledge in turbine operation technique, now operating also the largest private dispatch center in Romania with more than 900MW under technical management. As a consultancy company, WPE learned how to train people in new areas.

Our Energy School of Skills aims to become the biggest training school in South -East Europe and together with BZEE's commitment to Real Turbine Learning our target is to improve Turbine Operation all over Europe.

### Training Modules available in Constanta :

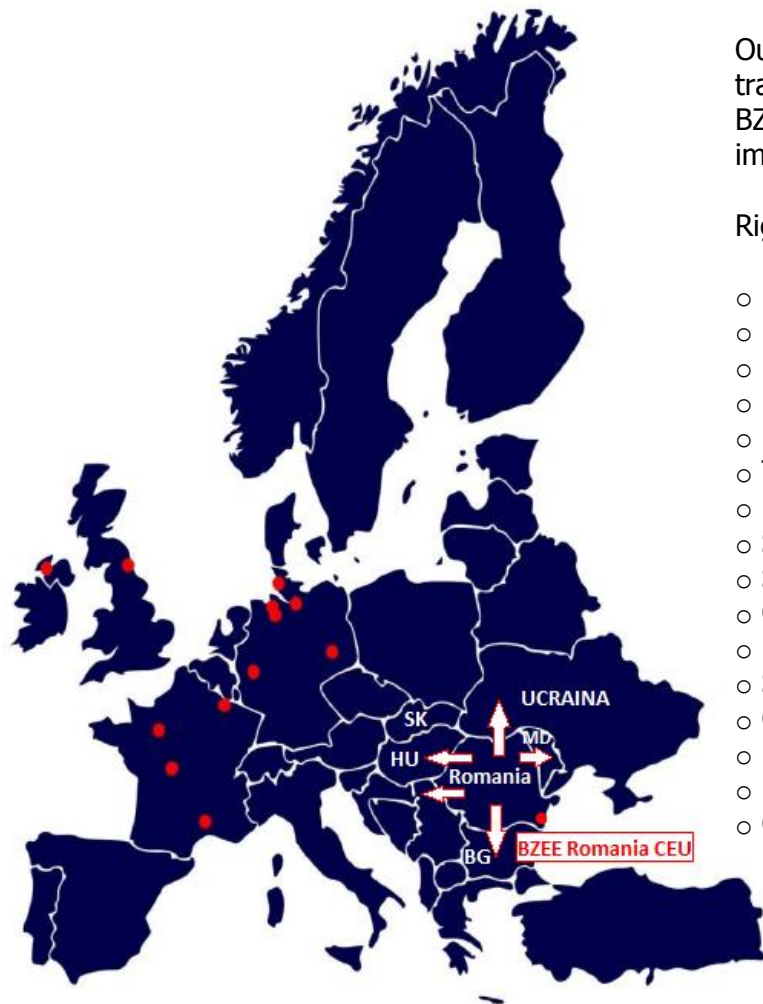
- **RESS-FA-02 / RESS-FAR-03** : Emergency First Aid for working at height basic/refresh
- **RESS-WAH-05 / RESS-WAHR-06** : Working at heights and rescue training, basics/refresh
- **RESS-FAW-16 / RESS-FAWR-16** : Fire awareness and fire-fighting, basic/refresh
- **RESS-MH-22 / RESS-MHR-22** : Manual Handling, basic/refresh
- **RESS-BTT-01** : GWO Basic Technical Training (*Feb 2018*)
- **BZEE-ELT-06** : Switching authorization up to 52 kV
- **RESS-RSVTI-A** : RSVTI Operator - Local Training
- **RESS-RSVTI-B** : RSVTI Operator - re-authorization
- **BZEE-ROT-01** : Rotor Blade Inspection
- **BZEE-ROT-02** : Rotor Blade Repair
- **RESS-WTB-01** : Wind Turbine Basic
- **RESS-TET-01** : Technical English Basic
- **RESS-HSE-18** : Hazardous handling - ONLINE
- **BZEE-ELT-01** : Basic Electric / Earthing Protection
- **BZEE-WHT-01** : Hydraulic Wrench Training



Our Energy School of Skills aims to become the biggest training school in South -East Europe and together with BZEE's commitment to Real Turbine Learning our target is to improve Turbine Operation all over Europe.

Right now we welcomed staff from :

- Romania
- Bulgaria
- Ukraine
- Moldova
- Hungary
- Turkey
- Poland
- Sweden
- Serbia
- Greece
- Montenegro
- Spain
- Great Britain (UK)
- Denmark
- Holland
- Croatia



We are waiting for new countries to join our Training Center.

# GWO Modules available in Constanta

## **RESS-FA-02 / RESS-FAR-03 : Emergency First Aid for working at height basic/refresher**

This course applies common first aid procedures to the special environment of wind turbines. Emphasis is placed on reacting effectively to accidents at work, administering first aid and performing life-saving measures on the spot under the restrictions of a wind turbine environment. Statutory provisions and standard procedures are highlighted in the module, which is a prerequisite for all work on wind turbines.

## **RESS-WAH-05 / RESS-WAHR-06 : Working at heights and rescue training, basics/refresher**

This safety training for work on wind turbines features basic safety guidelines and procedures and emergency rescue drills. The training session enables the participant to conduct rescue operations on wind turbines in a safe manner. The module includes PPE handling, care and maintenance. This module is a prerequisite for all work on wind turbines.

## **RESS-FAW-16 / RESS-FAWR-16 : Fire awareness and fire-fighting, basic/refresher**

This module gives an overview of the causes of fires and preventative fire protection measures. Participants are taught to extinguish naked flames with various kinds of extinguishers.

## **RESS-MH-22 / RESS-MHR-22 : Manual Handling, basic/refresher**

This module provides an overview of the various types of sling (attachment) gear and hoisting devices use especially in the production, erection and maintenance of wind turbines. Focus is on the construction and function of sling gear and hoisting devices, and on unequivocal communication between slinger and crane operator. Participants learn so select and use suitable sling gear and hoisting devices.

## **RESS-BTT-01 : Basic Technical Training – Under Certification, Available in Feb 2018**

Upon completion of the Global Wind Organization (GWO) Basic Technical Training (BTT) Delegates will possess awareness of hydraulic, mechanical and electrical systems, preparing candidates for working both on and off shore in the wind power industry. Each of these training modules is not a stand-alone qualification but can be delivered independently of one another.







# Under Certification: GWO Basic Technical Training

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The Basic Maintenance Training modules are targeted at candidates who have no previous experience of hydraulic, mechanical or electrical systems but may also be used to up skill candidates who have some knowledge of these areas in other spheres not specifically wind turbines

The GWO Basic Maintenance Training is divided into the following three modules:

- ✓Hydraulics – 16h
- ✓Mechanical – 16h
- ✓Electrical – 20h





# Electrical Training

## BZEE-ELT-06 : Switching authorization up to 52 kV

This module is aimed at electrical engineers, master electricians and electricians, who carry out maintenance and servicing in the medium voltage range up to 52 kV on wind turbines and who connect and disconnect the turbine from the grid. This module is prerequisite for receiving written switching authorization from the employer. Instruction on the corresponding switch gear must be given by the employer.

Duration	16 hours, 80% theory / 20% practical exercises
No. of participants	Maximum 10
No. of trainers	1
Validity of certificate	1 year







# Local modules: RSVTI



**Marian RADUCANU**  
[www.marianraducanu.ro](http://www.marianraducanu.ro)

## ❑ **RESS-RSVTI-A : RSVTI Operator Training program (Newly Authorized)– module A**

❖ Duration : 10 hours theory, 6 hours practical

## ❑ **RESS-RSVTI-B : Training program for extending the validity of the RSVTI authorization - module B**

❖ Duration : 8 hours theory

Starting 2017, RESS has teamed up with **MARIAN RADUCANU**, former ISCIR director, in order to extend the courses and the activities of the training centre. With these new courses we can integrate the wind industry standard courses with local legislation in regards to lifting equipment inside wind turbines and not only. The courses are specific for the Romanian legislation and are only available in Romanian language.

Trainees will be given information according to the legislation in force and will be provided with participant handbook, providing participants with a tuition in accordance with the highest standards of application of ISCIR technical prescriptions in force.



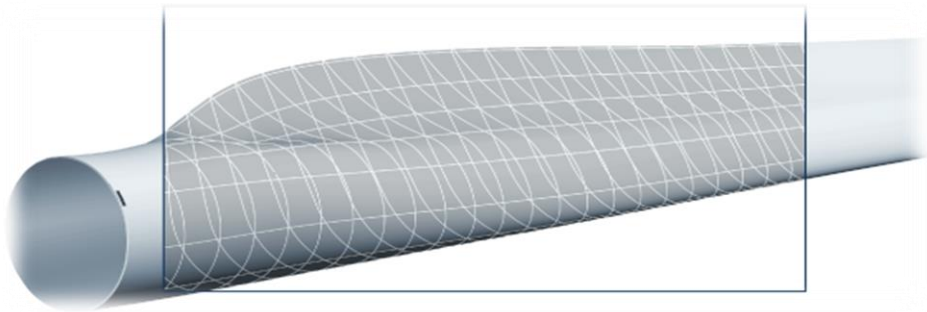


# Rotor Blade Inspections

## BZEE-ROT-01 : Rotor Blade Inspection

The module enables participants to identify, assess and document damages to rotor blades. Key elements include a range of rotor blade access techniques, blade construction and deployed materials and the tools for diagnosing blade damage. Participants are made aware of the hazards encountered in working on and inside rotor blades.

- ❖ Duration : 16 hours, 50% theory, 50% practical assignments
- ❖ Validity : UNLIMITED



- ✓ Wind turbine blade design basics
- ✓ Rotor blades stall and pitch basics
- ✓ Wind turbine blade flow elements basics
- ✓ Blade access techniques basics
- ✓ Damage categorization techniques
- Causes of damages and their consequences

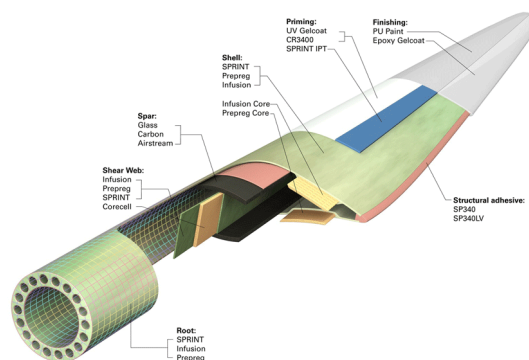


# Rotor Blade Repairs

## BZEE-ROT-02 : Rotor Blade Repair

This module enables participants to identify and document damage to the rotor blades and their dimensions, as well as, professionally perform and document repairs. Focus here is on the different access techniques, blade structure and material composition of the rotor blades as well as the selection and safe conduct of appropriate repair measures.

- ❖ Duration : 72 hours, 20% theory, 80% practical
- ❖ Validity : Unlimited





# Wind Turbine Basics

These modules can train a non-experiences trainee to gain basic turbine knowledge in two weeks. If you hire non-experienced employees this is a perfect induction plan to use for your training matrix.

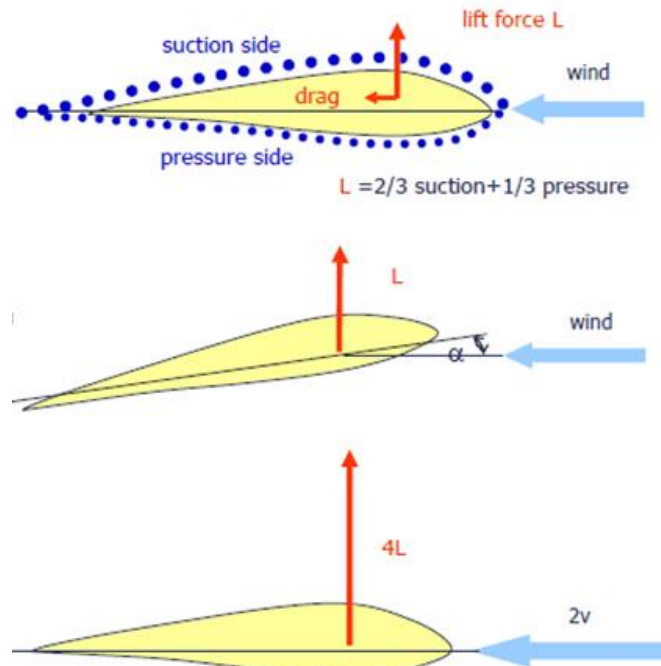
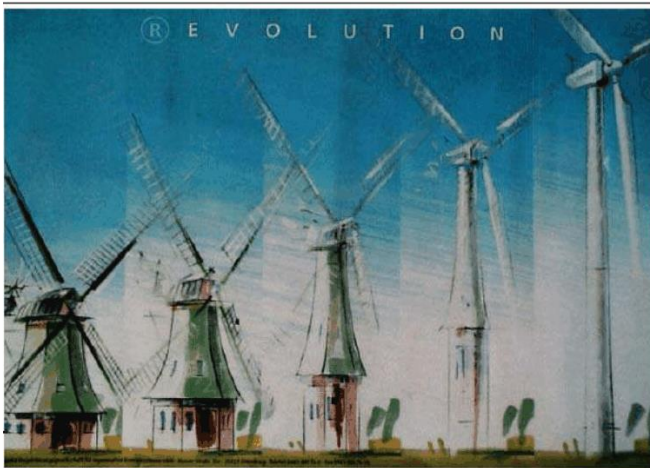
## RESS – WTB – 01: Wind Turbine Basic

Trainees will be given information about:

- History of a wind turbine
- Technology of a wind turbine
- Main compenents of a wind turbines
- Sensors of a wind turbine
- The operation of a wind turbine

❖Duration : 8 hours theory

Wind Energy Converters -  
Evolution of Windmills



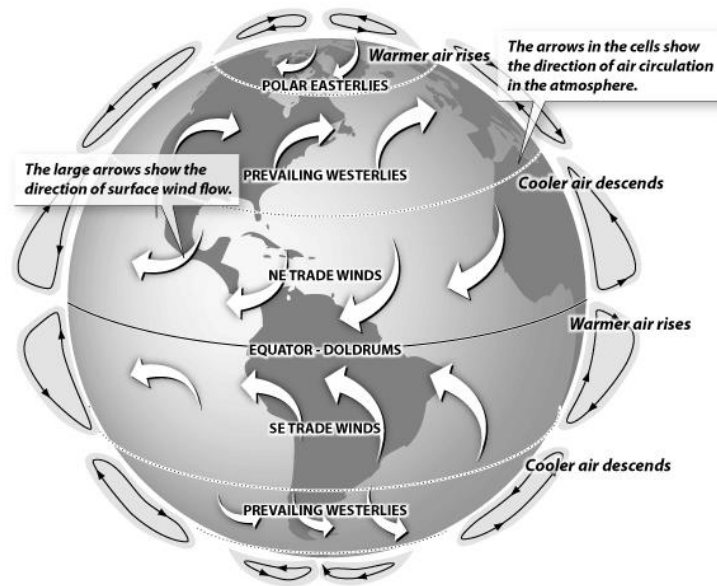
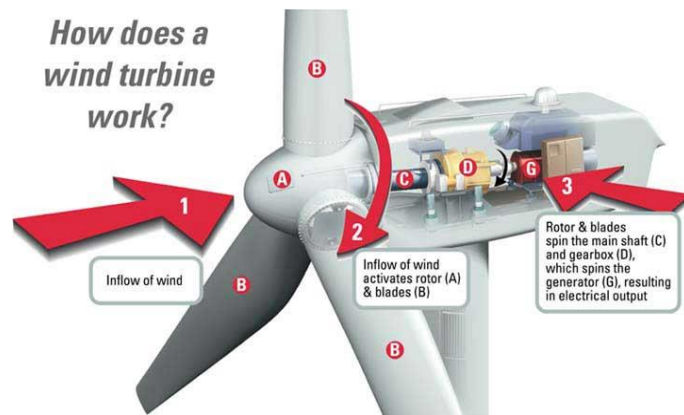


# Technical English for Wind Turbines

## RESS – TET – 01: Technical English Basic

In this module, participants learn to use technical terms and expressions used in English language documentation for standard industrial scale wind turbines, to understand and translate English language operating manuals, maintenance manuals and maintenance reports. This is an on-line training module and at the end of the day participants will take a knowledge test which will count for the overall mark of the Induction Program.

❖Duration : 8 hours theory



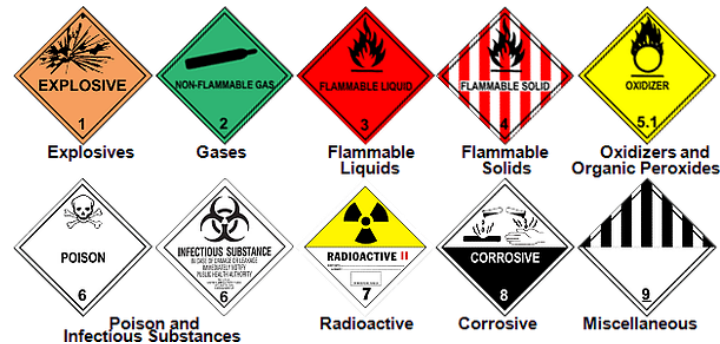


# **NEW** Hazardous Handling

## **RESS – HSE – 18: Hazardous Handling - Online training**

The course is addressed to employees who, in their current activities, manipulate, use, store dangerous substances and also dangerous chemicals. The course deals with topics that concern the classification of dangerous substances and preparations, the associated hazard, identification by labeling, information on the associated risks, actions and intervention measures in case of accidents, first aid.

❖Duration : 4 hours theory



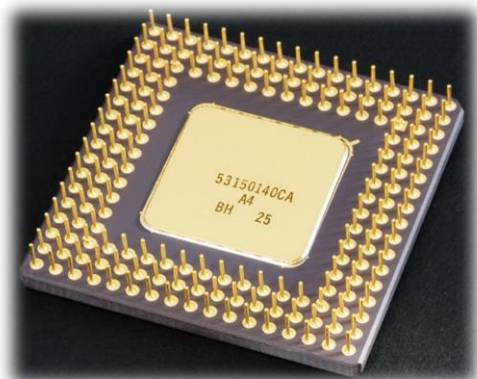
# **NEW** Basic Electrics – Wind Technician

## **RESS-ELT-01 : Basic Electric / Earthling Protection – Specific Training**

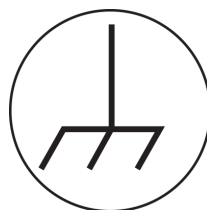
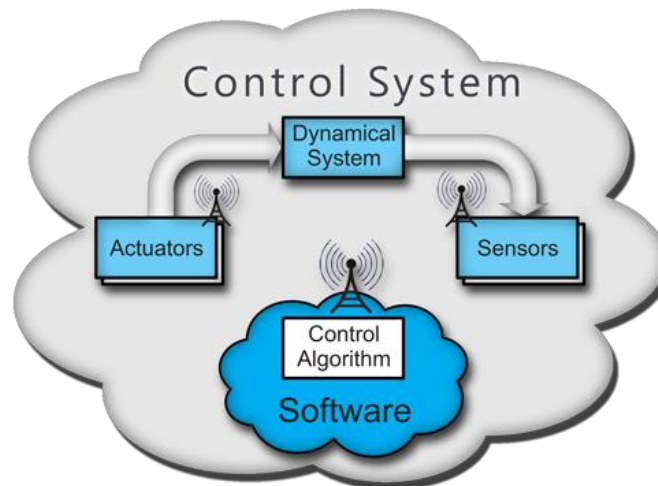
Trainees will be given information about:

- Introduction to electricity
- Electrical Safety
- Electrical components
- Sensors
- Electrical circuits
- Electrical measuring instruments
- Summary and theoretical test
- Evaluation

❖Duration : 12 hours theory



**Processing unit**



In electrical engineering, **ground** or **earth** is the reference point in an electrical circuit from which voltages are measured.

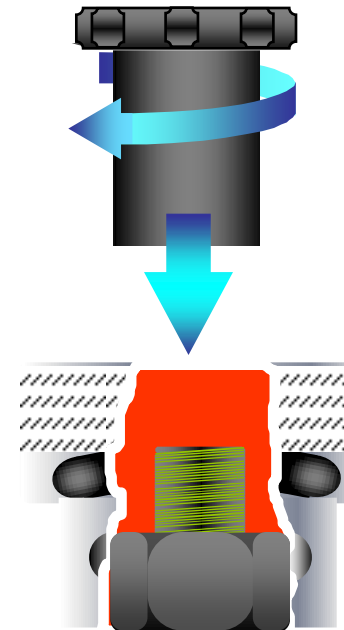
**NEW**

# HYDRAULIC TORQUEING & TENSION BOLTED CONNECTION TECHNIQUES

## RESS – HWT – 01: Hydraulic torqueing & tension bolted connection techniques – Specific Training

Overview of the techniques for using torque wrenches, hydraulic wrenches and tensioning devices. Instructions about choosing the appropriate torqueing device in the controlled bolting. Using the torque wrenches and tensioning devices.

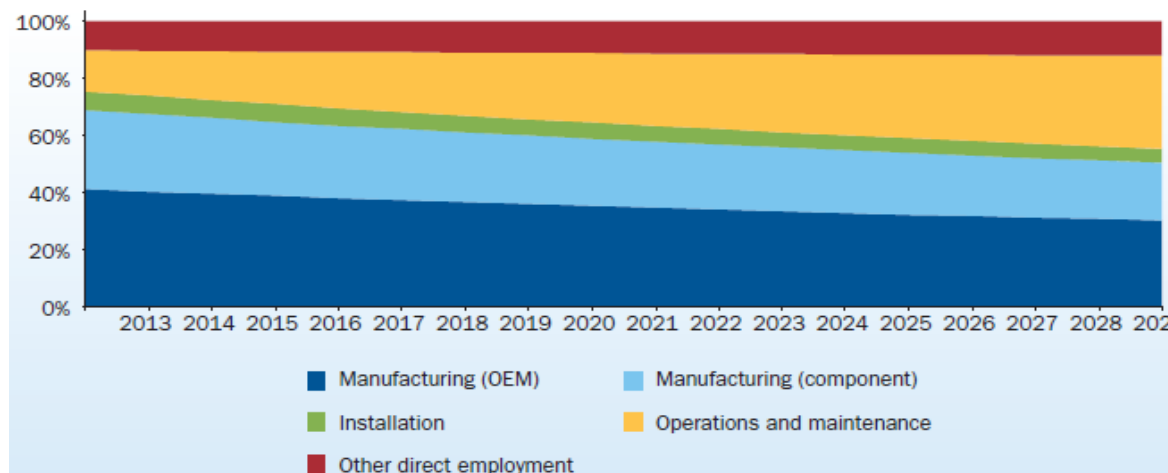
❖Duration: 16 Hours, 50% theory, 50% practical



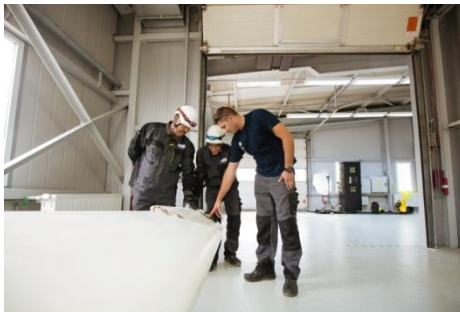
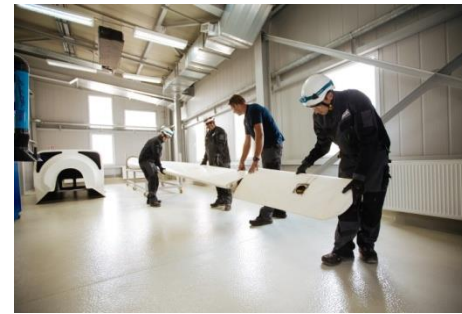
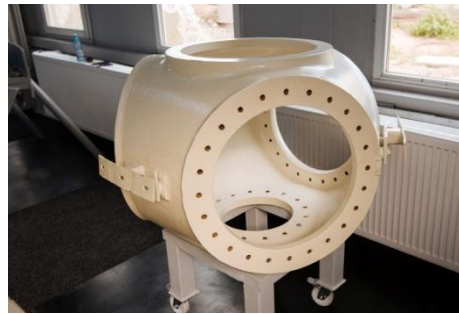
Estimations shows that the skills shortage is likely to be greatest in operations and maintenance (O&M) roles in the wind energy sector. A minority of the wind energy workforce is engaged in non technical roles but the requirement could double by 2030, exacerbating the existing skills gap. The main skills area are as per below description:

Manufacturing engineering	VET (Vocational Education and Training)
Electrical/power engineering	Service and maintenance
Quality control	Installation and commissioning
Diagnostics	Introduction to wind energy
Metal fabrication	On-site safety (eg. Global Wind Organisation training platform)
Machining	Fire fighting
Mechanical and electrical fitting	Tower climbing
Testing	Rescue
	First-aid

Nearly 50,000 additional trained staff will be needed by the industry by 2030. By that year, operations and maintenance will become the greatest source of new jobs and demand for trained staff.



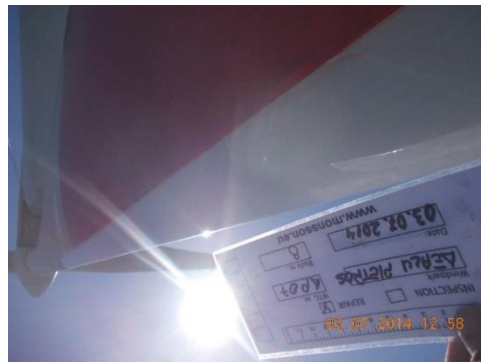




**Book your training today.**

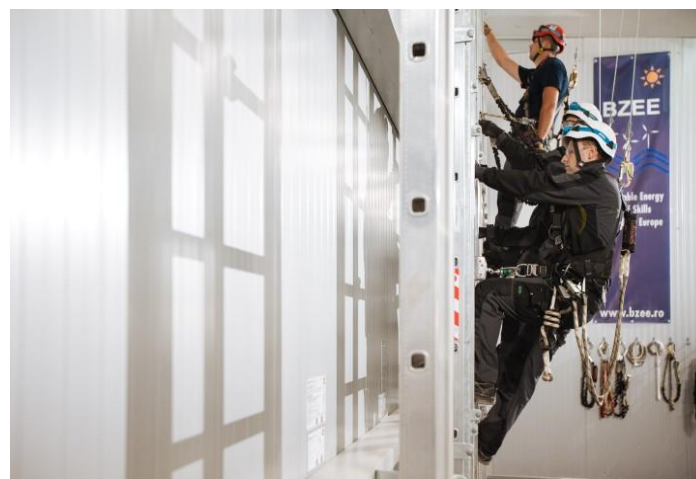
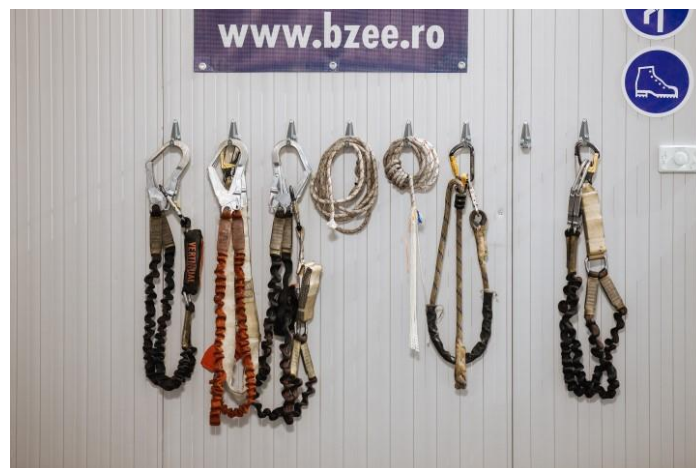
**BZEE**





Book your training today.

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