

UNDERSTANDING AND DEVELOPING THE WIND INDUSTRY: TECHNOLOGY, SYSTEMS AND MARKETS

CAPACITY BUILDING

WORLD CLASS LECTURERS SHARE
THEIR KNOWLEDGE AND EXPERIENCE

ON SHORE/ OFF SHORE

ENGINEERS

INTRODUCTION
TO WIND ENERGY

Market

TECHNOLOGY

PROJECT
DEVELOPMENT

Technicians

WIND ENERGY COURSES FOR:

- Energy Companies
- Retailers
- Traders
- Manufacturers
- Subcontractors
- Developers
- Authorities
- Owners
- Investors
- Partners in the wind industry

Quantification

Wind energy
basic

Specialists

wind farm



ENERGY AND
CLIMATE
ACADEMY



TYPES OF COURSES

The courses are offered as open courses as well as customized courses.

TIME AND VENUE

Please refer to website:

www.energyandclimateacademy.com

POST-COURSE SURVEY

January 2018, where 6 engineers from Ceylon Electricity Board participated. Scale 1 to 5 where 5 are best:

Professional level of the content of the course	4,6
Relevance of the subject to the course overall	4,5
The lecturers ability to communicate the subject	4,5
How qualified was the course organized	4,2

Comments from the participants: All excellent.
Overall the staff and content is top notch.
Explanations to the presentations is very good.





With a background and years of experience in the electrical drive train of Wind turbines, it was really interesting to get updated on the rest of the parts needed to build a wind turbine, how to select the right wind site and to get market information and expectations from experts. This course gave me the insight and the lecturers were inspiring and very experienced.”



Joe Andersen
Senior Consultant
JA Inter-Trade

“As a newcomer to the wind industry, the course gave me a kick-start into my new job in a quick and effective way. My understanding of the mechanisms and challenges of the sector is now much deeper.”



Adam Piotrowski
Communication and
administration support
BIC Group

“DURING THE COURSE I HAVE GAINED A MUCH BETTER UNDERSTANDING OF THE PROCESSES, THAT LIES BEHIND THE ESTABLISHMENT OF A WIND FARM AND THE SIGNIFICANCE OF THE WIND ELECTRICITY IN THE MODERN ENERGY WORLD.”



Finn Kjelstrup Coordinator/
Project Manager, Northsea
Offshore Service Group



“Participating in the course gave me a solid technical understanding of the wind industry and the systems related to it.”

Sabrina Petersen, Coordinator, Engineering
LM Wind Power

“During the course we gained an understanding of the wind market, how the turbines work, technical data and also experiences from the industry so far. Experienced and skilled teachers gave us an useful insight to the wind industry and the systems related to it. We are pleased with the choice of Energy & Climate Academy to hold an in-house course for us.”



Kristin Monsen Lystad
Vice President HR & Administration
OLYMPIC SHIPPING



As a newly appointed Project Manager the course was very helpful understanding the wind industry. The lecturers were experienced and inspiring in a relaxed way. The knowledge I got is helping me talking to colleagues and customers.”

Mads R. Druedahl
Project Manager,
Nissens



Changes to the program may occur. Please see our webpage for further information

INTRODUCTION TO OFFSHORE WIND PROJECTS



Course Purpose

Providing the participants with knowledge to understand a wind energy project, the different stages and deal with the issues and special challenges in producing wind energy offshore.

Course Objectives

This course will give insight into off shore wind energy projects and knowledge about how offshore production differs from onshore.

Part of the course will address the challenges in transporting the energy from offshore to the power grid.

Who should attend?

Employees in energy companies and organizations interested in learning more about offshore wind energy projects. Knowledge about general wind energy production is an advantage but not a requirement.

The lecturers

The lecturers are all experienced and highly recognized for their knowledge and have worked internationally. See last pages for information about the faculty.

Prices and information

€ 700 excl. vat. This includes tuition, course materials, course certificate and all meals during the day. Accommodation and travels costs are not included in the price.

Venue and enrollment

Please go to www.energyandclimateacademy.com

PROGRAM:

Welcome and presentations

Introduction to Offshore Wind

The Offshore Wind Market

Project Planning

Building a project in reality

Q&A

Evaluation and winding up the course



INTRODUCTION TO OFF SHORE WIND ENERGY



Course Purpose

Providing the participants with knowledge to deal with the issues and special challenges in producing wind energy offshore.

Course Objectives

This course will give insight into the technologies involved in modern offshore wind power production and knowledge about how offshore production differs from onshore.

Part of the course will address the challenges in transporting the energy from offshore to the power grid.

There will also be a segment focusing on preparation, operation & maintenance, health & safety, environment and quality, all in relation to offshore energy production.

Who should attend?

Employees in energy organizations interested in learning more about offshore technology, knowledge about general wind energy production is an advantage but not a requirement.

The lecturers

The lecturers are all experienced and highly recognized for their knowledge and have worked internationally. See last pages for information about the faculty.

Prices and information

€ 1.375 excl. vat. This includes tuition, course materials, course certificate and all meals during the day. Accommodation and travels costs are not included in the price.

Venue and enrollment

Please go to www.energyandclimateacademy.com

PROGRAM:

1st day

Welcome and presentations
Introduction to Offshore Wind
The Offshore Wind Market
Project Planning
Building a project in reality
Q&A

2nd day

Offshore Wind Turbines and logistics
Wind Theory
The Weather Window
Operation and Maintenance,
Unique Conditions
Q&A
Evaluation and winding up the course



OPERATION AND MAINTENANCE OF WIND FARMS



As the number of windfarms increases, so does the demand for managers to handle the planning, operation and maintenance. Today the personnel primarily get the competencies to handle these tasks through on the job training, but this course offers a formalized education in this area.

You will gain insight into:

- Operation & Maintenance philosophy
- Basic theories
- Principles
- Methods
- Work-tools
- Roles
- Leadership

You will be able to formulate, analyze, audit, and exercise management and organization according to applicable rules and standards in the “Operation & Maintenance of Offshore Wind Farms.

Who should attend

The course is designed for employees and managers who already have or wish to get the responsibility for operation and maintenance of a windfarm.

The lecturers

The lecturers are all experienced and highly recognized for their knowledge and have worked internationally. See last pages for information about the faculty.

Prices and information

€ 2.400 excl. vat. This includes tuition, course materials, course certificate and all meals during the day. Accommodation and travels costs are not included in the price.

Venue and enrollment

Please go to www.energyandclimateacademy.com

PROGRAM:

1st day

- Welcome
 - Safety briefing.
 - Presentation of the course and participants.
- The wind turbine generator components
 - DS/EN 61400-3 2009
- Wind Farm onshore/offshore
 - LCA – Life Circle Assessment
- Stakeholder
 - Stakeholder theory
 - Analysis and overview
- Authorities
 - Overview based on Danish regulators
- Operation and Maintenance phases
 - Long term – Strategic Maintenance
 - Medium term – Tactical Maintenance
 - Short term – Operational Maintenance

2nd day

- Operation and maintenance “The Daily work and planning”
- Reflection’s from first day.
 - Questions
- Risk Management
 - Operational safety
- Yield and performance
 - Operational level
- Maintenance and service
 - Yearly service
 - Fault correction
 - Main component change
- Fault patterns – the nature of faults
 - Route Cause

3rd day

- Operation & Maintenance strategy “Improving the plan”
- Reflection’s from first and second day.
 - Questions
- Supply chain management
 - Suppliers
 - Logistic
 - Components
- Safety first
 - Culture and risk analysis
- Asset Management
 - Optimization
 - Planning
- Cases from the real world



OFFSHORE WIND FARM PROJECT DEVELOPMENT



Course Purpose

This course is designed to give insight into the different steps involved in developing a wind farm.

Course Objectives

Provides the participants with knowledge about the different aspects of developing a wind farm, such as:

- The ideal locations for wind farms
- Insight into the different stakeholders involved such as:
- Seabed conditions and leases
- Turbine manufacturers
- Grid operators

Who should attend?

Anyone interested in the development of wind farms.

Description of working sessions

The course takes place over 3 days. All sessions will be conducted in an open and positive dialogue with the participants.

The lecturers

The lecturers are all experienced and highly recognized for their knowledge and have worked internationally. See last pages for information about the faculty.

Prices and information

€ 2.275 excl. vat. This includes tuition, course materials, course certificate and all meals during the day. Travels costs are not included in the price. Accommodation is not included in Denmark. Accommodation in Turkey is included in the price.

Venue and enrollment

Please go to www.energyandclimateacademy.com

PROGRAM:

<p>Welcome</p> <p>Multiple choice</p> <p>The overview of project development</p>	<p>Site selection</p> <p>Site evaluation</p> <p>Wind assessment</p> <p>Environmental impact</p> <p>Turbine selection</p>
<p>Site selection</p> <p>Grid connection</p> <p>Sea lease agreement</p> <p>Permits</p>	<p>Finance and legal aspects</p> <p>Feasibility studies</p> <p>Legal and financial setup</p> <p>Supply Contracts and PPA</p>
<p>Realization</p> <p>Transport to site</p> <p>Construction</p> <p>Cranes</p> <p>Erection of WTGs</p> <p>Commissioning</p>	<p>Operation</p> <p>O&M agreement</p> <p>Insurance agreement</p> <p>Site management</p> <p>Right answers for the Multiple Choice questionnaire</p> <p>Evaluation of the course</p>



ONSHORE WIND FARM PROJECT DEVELOPMENT



Course Purpose

This course is designed to give insight into the different steps involved in developing a wind farm.

Course Objectives

Provides the participants with knowledge about the different aspects of developing a wind farm, such as:

- The ideal locations for wind farms
- Insight into the different stakeholders involved such as:
 - Land owners
 - Turbine manufacturers
 - Grid operators

Who should attend?

Anyone interested in the development of wind farms.

Description of working sessions

The course takes place over 3 days. All sessions will be conducted in an open and positive dialogue with the participants.

The lecturers

The lecturers are all experienced and highly recognized for their knowledge and have worked internationally. See last pages for information about the faculty.

Prices and information

€ 2.275 excl. vat. This includes tuition, course materials, course certificate and all meals during the day. Travels costs are not included in the price. Accommodation is not included in Denmark. Accommodation in Turkey is included in the price.

Venue and enrollment

Please go to www.energyandclimateacademy.com

PROGRAM:

<p>Welcome</p> <p>Multiple choice</p> <p>The overview of project development</p>	<p>Site selection</p> <p>Site evaluation</p> <p>Wind assessment</p> <p>Environmental impact</p> <p>Turbine selection</p>
<p>Site selection</p> <p>Grid connection</p> <p>Land agreement</p> <p>Permits</p>	<p>Finance and legal aspects</p> <p>Feasibility studies</p> <p>Legal and financial setup</p> <p>Supply Contracts and PPA</p>
<p>Realization</p> <p>Transport to site</p> <p>Construction</p> <p>Cranes</p> <p>Erection of WTGs</p> <p>Commissioning</p>	<p>Operation</p> <p>O&M agreement</p> <p>Insurance agreement</p> <p>Site management</p> <p>Right answers for the Multiple Choice questionnaire</p> <p>Evaluation of the course</p>



WIND RESOURCE AND SITE RISK ASSESSMENT



Course Purpose

This course establishes an in-depth knowledge of key issues in wind resource and site risk management.

Course Objectives

Providing the participant insight into the basics of atmospheric, wind speed measurement and flow modeling, and also give insight into the latest advancements in these fields.

The possibilities of remote sensing and CFD (computational fluid dynamics) will be explained.

Different concepts of power curve verification described. Uncertainties and exceedance statistics of wind resource assessment, key elements from an investor's point of view.

Who should attend?

Specialists, engineers and managers working with wind resource planning and calculation as well as site risk assessment.

Description of working sessions

The course takes place over 3 days. All sessions will be conducted in an open and positive dialogue with the participants.

The lecturers

The lecturers are all experienced and highly recognized for their knowledge and have worked internationally. See last pages for information the faculty.

Prices and information

€ 2.400 excl. vat. This includes tuition, course materials, course certificate and all meals during the day. Accommodation and travels costs are not included in the price.

Venue and enrollment

Please go to www.energyandclimateacademy.com

PROGRAM:

Wind - Atmospheric engine and atmospheric boundary layer

- Meteorological classification / Atmospheric scales
- Global and local wind systems
- Extreme winds and Tropical cyclones
- Cycles
 - El Niño
 - North Atlantic Oscillation
- Climatic change
- Internal boundary layer
- Turbulence and shear
- Atmospheric stability

Measurements

- Cup anemometer
 - Classification
 - Calibration
- Mounting
- Developing a measurement campaign: Position, height and number of masts
- Data checking and QC
 - Icing
- Ultra-sonics, propeller anemometer
- Remote sensing: Sodar and Lidar
- Bankability/Traceability

Wind resource

- Distributions: Weibull/Bi-Weibull
- Variation: diurnal, seasonal, interannual variation
- Long-term correction

Flow modelling

- The basics of WAsP: Advantage and short-coming
- Park and Wake losses
- Best practice: Input
 - SRTM
 - Landcover data
- Best practice: Analysis:
 - Forests
 - Ruggedness Index RIX
 - Heat flux
- The basics of CFD: Advantage and short-coming
- Bolund experiment
- Uncertainty and losses, exceedance statistics P50/P90

Power curve

- IEC 61400-12-1 (edition 1 2005 and draft as per 2012) and 2 (draft as per 2012)
- Site calibration
- Turbulence and shear
- Nacelle anemometry
- Uncertainty

Risk assessment

- IEC 61400-1:
 - Turbulence
 - Shear
 - Inflow
 - Extreme wind
 - Gumbel
 - Wasp Engineering
 - European Wind Turbine Standard EWTS
 - WAT/WindPRO compliance module

QUANTIFICATION OF RISK IN WIND POWER PROJECTS



The ability to quantify and manage the different elements of risk associated with Wind Energy Projects is paramount to any investor or financial advisor. Lecturers with decades of experience with wind power projects and science give the participants deeper knowledge to the nature of risk variables on technology, climate and legal structure of project agreements.

This course takes experienced due diligence performers to the next level. We do not teach you the basics, but provide you with new knowledge and tools for mitigating and quantifying risk.

Prices and information

€ 775 excl. vat. This includes tuition, course materials, course certificate and all meals during the day. Accommodation and travels costs are not included in the price.

Venue and enrollment

Please go to www.energyandclimateacademy.com

PROGRAM:

08:30 – 09:00	Registration
09:00 – 09:15	Welcome and presentation
09:15 – 10:30	Presentation of the technology. How does it work? What technologies are used? What technology can we expect in the future? Is certification a quality stamp? How does an engineer calculate lifetime of a component?
10:30 – 10:45	Break
10:45 – 12:00	What we cannot see but only feel – Wind. Where does it come from? How can we calculate the future wind? How hub height matters?
12:00 – 12:45	Lunch
12:45 – 14:00	The impact of climate change. What causes deviations? Why are two wind assessment studies not with exactly the same result? How to implement the uncertainty of a wind study in the budget?
14:00 – 14:15	Description of the legal documents for a wind power project. What is a product warranty? Requirements to a land agreement, is it suitable for the future? Does the manufacturers warranty and the insurance cover everything?
15:30 – 16	Panel discussion



WIND ENERGY FOR GENERALISTS



Course Purpose

For employees and managers in the industry, who wants a broader knowledge of the wind industry to understand the relationship between the different aspects. Improve the knowledge of Wind Energy in general, allowing for better communication between departments and towards partners and customers.

Course Objectives

Provide the employee in a Wind Energy organization insight into the technical aspect of Wind Energy, including:

- The physics related to generating electricity
- Introduction to the technical terms
- Insight into the challenges faced by their engineering colleagues
- The role of wind energy in relation to the power grid
- Introduction to various brands of wind turbines

Who should attend?

Any employee in a Wind Energy organization. Employees at companies and organizations working together with wind energy companies. No technical knowledge is needed for this course.

The lecturers

The lecturers are all experienced and highly recognized for their knowledge and have worked internationally

Prices and information

€ 1.950 excl. vat. This includes tuition, course materials, course certificate and all meals during the day. Travels costs and accommodation are not included in the price.

Venue and enrollment

Please go to www.energyandclimateacademy.com

PROGRAM:

1st day	<p>Welcome and introduction Multiple Choice questionnaire The Wind Industry History and character Energy and environmental politics The tendencies for the future</p> <p>The participants are introduced to each other and Energy and Climate Academy. Based on a multiple choice questionnaire the participants will do their personal testing on their knowledge to the subject in the entire course. The history of the wind industry is explained along with the most important mile-stone events that brought the industry to where it is today.</p>	<p>Wind Energy The kinetic energy of the wind Wind spectrum Power curve and energy yield Calculation of a project.</p> <p>A brief description of the physics in wind is given to understand the complexity of predicting the future production of a wind turbine. Terms such as wind speed average, gusts, turbulence are explained. Terrain influence and analysis is demonstrated by means of the wind atlas calculation methodology. Finally a full wind study is introduced.</p>
2nd day	<p>Wind Turbine Mechanics Blades Nacelle Tower Controller Foundation Loads on Wind Turbines</p> <p>The mechanical and electrical components in a modern wind turbine are introduced. Loads and load cycles are explained in a simplified manner.</p>	<p>Wind Turbine Applications Aerodynamics Stall- Pitch and variable speed Various brands of wind turbines</p> <p>A thorough explanation to the aerodynamics of a wind turbine blade is given. We even learn what makes the bumble bee fly, before we go the more serious debate about pros and cons of stall- pitch and variable speed regulation. Furthermore, the most common and some creative brands on and off the market are introduced.</p>
3rd day	<p>Grid Connection Generators Power Quality Power over run</p> <p>The function of the asynchronous generator is explained. And other types of generators are introduced. The implications of connecting wind turbines to the grid and how they interact with other suppliers of electricity. The special Danish phenomenon of power over run is explained.</p>	<p>Wind Power Projects Buyers of wind power plants The milestones of a project Operation and maintenance Multiple Choice results Evaluation of the course</p> <p>Based on examples from the real world, various types of customers and factors that play a role in a wind power plant are introduced. The important contracts in a project is explained and discussed. Finally the participants get a summary of answers to the multiple choice questionnaire, before we finish by evaluating the outcome of the course.</p>

WIND ENERGY FOR ENGINEERS AND TECHNICIANS



Course Purpose

To give the participants a broader knowledge of the wind industry to understand the relationship between the different aspects of the wind energy industry.

Course Objectives

To introduce newly hired engineers to the world of wind energy thus save time and energy on attaining this knowledge within the first years of their employment. Both the participants and his/hers colleagues will save time.

Introducing newly hired engineers to the complex mechanics of wind turbine technology and introduce them to the wind turbine business in general.

During the course the participants will receive a systematic presentation of all the work areas of engineers in the wind energy business.

Who should attend

- Newly hired engineers and technicians
- Engineers looking to improve their skillset and update their knowledge on the most recent developments within Wind Energy
- Managers wanting to know all aspects of the wind industry

Description of working sessions

The course takes place over 5 days. It begins on Monday at 9:00 am and ends at Friday at 2:00 pm. All sessions will be conducted in an open and positive dialogue with the participants.

The lecturers

The lecturers are all experienced and highly recognized for their knowledge and have worked internationally. See last pages for information about the faculty.

Prices and information

€ 3.200 excl. vat. This includes tuition, course materials, course certificate and all meals during the day. Travel and accommodation costs are not included in the price.

Venue and enrollment

Please go to www.energyandclimateacademy.com

PROGRAM:

1st day	<p>Welcome and introduction Multiple Choice questionnaire The Wind Industry History and character Energy and environmental politics The tendencies for the future</p> <p>The participants are introduced to each other and Energy and Climate Academy. Based on a multiple choice questionnaire the participants will do their personal testing on their knowledge to the subject in the entire course. The history of the wind industry is explained along with the most important mile-stone events that brought the industry to where it is today.</p>	<p>Wind Energy The kinetic energy of the wind Wind spectrum Power curve and energy yield Calculation of a project.</p> <p>A brief description of the physics in wind is given to understand the complexity of predicting the future production of a wind turbine. Terms such as wind speed average, gusts, turbulence are explained. Terrain influence and analysis is demonstrated by means of the wind atlas calculation methodology. Finally a full wind study is introduced.</p>
2nd day	<p>Wind Turbine Mechanics Blades Nacelle Tower Controller Foundation Loads on Wind Turbines</p> <p>The mechanical and electrical components in a modern wind turbine are introduced. Loads and load cycles are explained in a simplified manner.</p>	<p>Wind Turbine Applications Aerodynamics Stall- Pitch and variable speed Various brands of wind turbines</p> <p>A thorough explanation to the aerodynamics of a wind turbine blade is given. We even learn what makes the bumble bee fly, before we go the more serious debate about pros and cons of stall- pitch and variable speed regulation. Furthermore, the most common and some creative brands on and off the market are introduced.</p>
3rd day	<p>Grid Connection Generators Power Quality Power over run</p> <p>The function of the asynchronous generator is explained. And other types of generators are introduced. The implications of connecting wind turbines to the grid and how they interact with other suppliers of electricity. The special Danish phenomenon of power over run is explained.</p>	<p>Wind Power Projects Buyers of wind power plants The milestones of a project Operation and maintenance</p> <p>Based on examples from the real world, various types of customers and factors that play a role in a wind power plant are introduced. The important contracts in a project is explained and discussed. Finally the participants get a summary of answers to the multiple choice questionnaire, before we finish by evaluating the outcome of the course.</p>
4th day	<p>Design basis IEC61400-1 Design load cases Load simulations, examples Load analysis Ultimate loads Fatigue Important load cases</p>	<p>Wind turbine design loads - physics and modelling Wind Aerodynamics Structural dynamics Dynamic tuning Aero elasticity Control</p>
5th day	<p>Control and regulation General information about control and regulation Active stall regulation Pitch/variable speed with a double-fed asynchronous generator Multiple Choice results Evaluation of the course</p>	

FACULTY - WIND ENERGY



SVEND W. ENEVOLDSEN

MARINE ENGINEER, B.SC. BUSINESS DEVELOPMENT ENGINEER
With more than 30 years as an executive in the Danish wind industry, and lecturer for more than 1800 engineers in the wind industry, Svend is an experienced consultant, who since 1995 has been working world wide for Banks, OEM's, Insurance Companies, UN, Governments, Universities and others in his company Ecology Management.



JAKOB ØSTERVANG

ATTORNEY AT LAW
Serving as partner in one of the largest Danish law firms Bech Bruun, Jakob is highly experienced in wind energy transactions and has received various international achievements, hereunder been named "a leading lawyer for Energy & Infrastructure" by IFLR1000. He has advised clients in connection with transactions involving wind turbines all over the world.



EGON V. POULSEN

MARINE & POWER STATION ENGINEER
Egon is a full time working partner in Alpha Wind Energy ApS. He started his career in the wind industry as Chief Supervisor for Vestas in California in 1983 and has since then obtained world wide experience with wind power projects all over the world. From 1995 through 2005 he was active in Offshore Wind Projects.



SØREN "SAFETY" PEDERSEN

BTecMan & MarEng
Worked 6 years in DONG Energy Wind Power. Started on the Horns Riff 2 construction – warranty O&M period with the turbine supplier.
Design Specialist on O&M facilities and strategies in Denmark, Germany and France.



KAJ LINDVIG

Kaj Lindvig has a wide experience from 15 years as top manager and board member within the Wind Power Business, but he has also worked for the Oil & Gas sector, Maritime companies and project executing companies providing him with a very broad knowledge.



LARS HØST JOHANSEN

M.SC. MECHANICAL ENGINEER
Close to a decade Lars worked as product engineer at Vestas before he joined Dong Energy Wind department, wh



TORBEN JUUL LARSEN

M.SC. MECHANICAL ENGINEER
Lead Specialist Loads at Vestas. Former working as a senior scientist at DTU-Wind Torben co-authored his first scientific paper in 2003 about Status of Aero elasticity of Wind Turbines. Torben is in the forefront on theory and practice when it comes to loads and dynamics on wind turbines.



MADS BAY RASMUSSEN

ATTORNEY AT LAW
Vice President, Head of Legal (General Counsel) at MHI Vestas Offshore Wind. Mads is an international attorney with management experience and commercial mindset. Extensive expertise within international onshore and offshore wind energy projects and transactions. Mads has negotiated and processed transactions in Europe, The Middle East, Asia, South and Central America.



WIEBKE LANGREDER

DIPL. ING. APPLIED PHYSICS, M.SC.
RENEWABLE ENERGY SYSTEMS TECHNOLOGY
Wiebke has 20 years' experience in wind resource and risk assessment working for several international manufacturers. Her specialties are extreme winds and long-term corrections. Wiebke has been continuously involved in training activities world-wide. Head of Wind Energy Consulting at EMD International



Capacity Building

The mission for Energy and Climate Academy, ECA, is to raise the level of knowledge within energy, climate and environmental matters by courses, seminars and study tours.

ECA aims at this by offering post-graduate international education within the areas of energy and climate. This will be done in cooperation with Danish and international suppliers of knowledge at a professionally and academic high level.

The function of ECA is to participate in the development of the educational processes, perform marketing, manage the practical matters and be the liaison between the users and the suppliers of knowledge.

It is not the intention for ECA to accumulate professional knowledge within energy, climate and environmental matters. It is vital that ECA at any given time can cooperate with those, who are the leading institutions and key lecturers in the areas on a global level.



Torben Kirkegaard, CEO and founder of Energy and Climate Academy

Torben has 35 years of experience in education and training. For 8 years at Grundfos he was responsible for worldwide education and training. 25 years ago he founded Kirco Training Agency, consultancy assisting companies to develop their human resources in an effective way.

He has been owner and editor of the leading Danish Magazine on Learning and Development 1989 to 2013, "Human Resources", where it was sold to the Danish Association of Human Resource Managers.

Torben Kirkegaard, tki@energyandclimateacademy.com, +45 3023 7636



ENERGY AND
CLIMATE
ACADEMY

