

# Innovation in Vocational Training 2010

**Bremer Landesinitiative**



## Introduction of a new Technical College for Training of Engineers for OWE Indust

**Technical College Bremen / Bremerhaven**

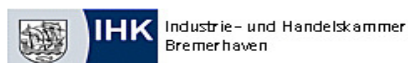
# Innovation in Vocational Training 2010

## Bremer Landesinitiative



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New Technical College for Training of Engineers for OWE Industry



# Mechatronics for Energy Engineering

## Specialist for Offshore Wind Energy

### Bremer Landesinitiative

#### Specific needs in Bremen

In view of the rapid developments of the wind energy industry in Bremen and particularly in Bremerhaven, we possess a unique opportunity to ensure qualified jobs. The need for skilled workers, technicians and engineers has risen rapidly and is likely to lead to more than a thousand new jobs for new offshore wind energy plants. These skilled employees require special training that adheres to European standardised requirements and norms at the different European places of work. Such a skilled workforce is not yet available in sufficient numbers.

In order to secure the success of existing and newly created enterprises, Bremen has to provide the appropriate training and study opportunities so sufficient specialists at different levels can be trained for the future. But it is not only locally that the demand for specialists in the energy sector has risen.

Germany is the third biggest energy market in the Western World and the demand for both energy and innovative solutions will continue to grow. It is no surprise, that more manpower is so in demand and offers good career prospects.

"We could surely use two to three times as many engineers with know-how in energy engineering as the few hundreds who will finish their studies in the near future", said Professor Wolfgang Schroepel, Chairman of the Energy-Technical Society in the Federation of Electro-technology, Electronics and Information Technology (VDE)

We should act in two directions, to enlarge existing training opportunities and to develop new ones. As a new module in the "State Initiative Innovative Vocational Training 2010" (IBB 2010) in Bremen, we suggest the establishment of a Technical College with a core module in Mechatronics for Energy Engineering with specialisation in Offshore Wind Energy.

#### Concept

The dual professional training is a two-year programme, where theoretical learning phases at Technical College alternate with practical phases in wind energy industry enterprises. Special reference tasks prepare the students for their future job descriptions as technicians. Some important advantages emerge for the enterprises:

Systematic work experience is integrated in theoretical learning



After two years at Technical College graduates are able to work as technicians without a longer initial skill adaptation training period

Employees and enterprises know each other quite well and are able to judge their respective suitability for each other

The Technical College is integrated in a wide model of technical vocational education. Technical education starts with an initial dual apprenticeship as mechatronic, lasting 3 ½ years, in different enterprises in Bremen and Bremerhaven, and possibly further afield.

After passing the examination as a skilled worker one can apply to the Technical College Bremen/Bremerhaven to obtain the next higher professional level as a technician. A condition of admission is a part-time-contract with a wind energy enterprise in Bremen, Bremerhaven or somewhere in proximity to both towns. This might be easier for apprentices who passed their first vocational training in those enterprises. Other applicants need a new contract but due to the expected large demand for technicians this should not pose a problem. In addition to young apprentices applicants from other age-groups are also encouraged to apply to the Technical College.

After two years Technical College, students pass an exam as state certified technicians. They also can pass a second exam to gain entry to an academic study for Maritime Technology at the University of Applied Science (UAS) Bremerhaven. Due to the fact they have already achieved a high level of technical expertise the UAS Bremerhaven will recognise equivalent modules of the Technical College education with the aim of shortening the years of study. For this purpose the Technical College will need to partly teach the first semesters at an equivalent level to UAS Bremerhaven. This requires an adequate curriculum that also has to adhere to the appropriate state guidelines.

The alternation of theoretical and operational learning blocks requires a balance between the interests of the enterprises and the Technical College. This has to be discussed with all partners and jointly decided.

Since English prevails as the common language on European and non-European building sites, two specialized technical subjects will be lectured in English.

### **Information campaign**

As a result of good career prospects and a bigger demand for well-educated technical employees at different levels, an information campaign will be started to attract both technical apprentices in vocational schools as well as school leavers in lower secondary schools. The campaign has to present the different vocational and academic educational options, so that young people are able to plan an attractive career.



## Location

Bremen and Bremerhaven as a two-town-state has to decide whether the Technical College will be located in Bremen or Bremerhaven. Considering the current and further development within the wind energy industry one can see that an increasing number of wind energy enterprises are locating in Bremerhaven. A Technical College located in Bremerhaven would therefore doubtless enable a closer cooperation between the College and the enterprises than if it were to be located in Bremen.

