Main Title: Norwegian Build Up Skills Project
Acronym: NBUSP

- Project number: IEE/11/BWI/478/SI2.604614
- Project Duration: 11.11.2011 - 11.05.2013 (18 months)
- Date – Update slides: 10.07.2013
- All documents can be downloaded from
  - The European website of the build up skills project
  - The website of the Norwegian Low-Energy Program
Background: A highly skilled building workforce is necessary in order to contribute to the energy and climate 20-20-20 targets

Goal: Identify actions for education, training and lifelong learning in the building workforce on energy efficient building and use of renewable energy

Organized by the Norwegian Low-Energy Program:
- A national co-operation program between public authorities and the construction industry to increase competence on energy efficient building and the use of renewable energy
- Hosted by the Federation of Norwegian Construction Industries
Background

- **The Norwegian construction industry**
  - Approx. 40,000 companies (96% have less than 20 employees)
  - Approx. 200,000 employees (No system for systematic life-long learning)
  - Turnover new buildings: 1-2 %

- **European targets affecting the construction industry**
  - The energy and climate 20-20-20 targets
  - The European 2020-strategy to promote smart, sustainable and inclusive growth
  - EPBD goal: nearly zero energy buildings as standard for new buildings by 2020

- **The building workforce needs to be educated and trained to deliver new nearly zero energy buildings and high-energy performance renovations**
Objectives and main steps

- **Objectives**
  - Promote a highly skilled, sustainable and competitive construction industry
  - Promote energy efficiency, use of renewable energy and secure energy supply

- **Main steps / deliverables**
  - A status quo analysis, describing the current situation in the building workforce, new necessary skills to deliver on energy and climate targets and barriers
  - Roadmap towards 2020, describing actions and measures necessary to secure a highly skilled building workforce on energy issues, hence promoting smart, sustainable and inclusive growth in the construction industry
  - Endorsement report, describing how the proposed actions can be implemented

- **EU Exchange Activities** will provide valuable input to the work, by sharing experiences on education, training and life-long learning
Expected results

• **Short term results**
  • Common understanding on necessary actions and measures to improve education, training and life-long learning in the construction industry
  • Common understanding on resources, responsibilities and roles, to endorse the actions in the educational system and create structures for life-long learning
  • Input to European and national strategies on for instance energy efficiency, renewable energy and green skills and jobs

• **Long term results**
  • Increased energy efficiency and use of renewables in buildings (as trained craftsmen and blue collar workers will become even more efficient)
  • Less building flaws (as highly skilled craftsmen and blue collar workers will make less construction errors)
Organization and structure of NBUSP

Coordinator: The Norwegian Building Authority
- Contact towards the Commission
- EU Exchange Activities

Steering Group: Board of Low-Energy Program
- Quality assurance.
- Input to the work packages.

Consortium:
- Deliverance of reports.
- EU Exchange Activities.
- Reporting and documentation of costs.
- Project manager: The Low-Energy Program.

EU Exchange Activities:
- Experience sharing.
- Networking.
- Contact points.

Reference group:
- Input to the work packages.
- Participants from the entire construction industry, labour unions, public bodies, etc.

Communication:
- Webpage.
- Seminars.
- Workshops.
1. Competence of craft workers is identified as a barrier against rapid energy efficiency and use of renewable energy in the construction industry.

2. Surveys that have been carried out, show that the present day competence level in the field of energy among tradesmen and skilled workers is variable and in some cases lacking altogether.

3. Highly skilled construction workers, with a good knowledge of energy measures, could provide advise and guidance to consumers on energy efficiency, where maintenance or renovation of existing houses is undertaken in any case.

4. The construction industry is less involved in formal further education, continuing education and learning-intensive work than many other industries. Lack of time, high costs and centralised courses appear to be the biggest barriers to achieving organised learning among tradesmen.

5. Widespread willingness in the building and construction industry to acquire more competence in the energy field.

6. Creation of competence goals in the framework of the status quo analysis.
1. The Norwegian construction industry

- Glass workers
- Roofers
- Carpenters/joiners

Risks related to incorrect execution.

Return on investment.

2. Norwegian goals on renewable energy and energy consumption in buildings.

Projections of workforce needs in building and construction.

The long-term trend for energy consumption is levelling off.

The Norwegian government has adopted an objective of achieving a 70% reduction in greenhouse gas emissions by 2030 compared to 1990 levels.

Energy consumption in buildings was made up of:

- Electricity
- Natural gas
- District heating

The following are the main energy consumers in buildings:

- Electric heating
- Hot water for houses
- Non-electric water heating

Buildings

Energy consumption in buildings by 2040:

- Residential buildings
- Non-residential buildings

Source: Eidset, I., 2012: Awareness and knowledge of low energy buildings.

Participation in life-long learning:

- According to the Federation of Norwegian Building and Construction, scores lower for all forms of lifelong learning than a number of other industries.

Participation in courses. Other factors that may be important barriers to tradesmen's participation in courses:

- The sector is considerably behind the rest of the economy when it comes to taking advantage of national measures from being taken.

Building and construction must therefore take measures to increase knowledge of Norwegian buildings.

A low energy price will tend to maintain that there is a widespread willingness among craft workers to carry out renovation measures to increase energy performance.

Surveys that have been carried out show that the proportion of employees in the building sector who have the opportunity to participate in courses is currently the lowest of all employees.

Important for triggering the potential for owners of buildings to carry out renovation measures is that the owners of buildings and tenants both have the opportunity to participate in courses.

Buildings have a long lifespan.

Falling participation in both training and further education; Less than half of all those employed in the building industry who have the opportunity to participate in courses currently take advantage of it.

According to the Federation of Norwegian Building and Construction, the degree of participation in courses is lower in the building sector than in a number of other industries.

Participation in courses is an important prerequisite for those who wish to enter the building sector, and therefore degree of participation in courses will have a significant impact on the demand for employees in the building sector towards 2020/2030, including the need for building and construction workers.

Extending and post-insulating existing buildings to a very high energy standard.

Increased need for building and construction workers in order to carry out renovation measures to increase energy performance.

Build Up Skills Norway: Status Quo Analysis 11.05.2012
1. Strategic document for reaching energy efficient buildings.

2. Describing all relevant measures for vocational education, formal further education and post qualifying education.

3. Need to focus on a few strategic measures.

4. Positive economical and societal effect of competence enhancement of craft workers in energy efficient buildings after a 14-years period.

5. Draft competence indicator.
Roadmap BUSP Norway

To enhance competence at all levels – Agreement from the construction industry – Participation of relevant institutions – Socio-economic effects over a 14-years period

OVERALL STRATEGY

01
02
03
04

1. The training will be the greatest
2. Main target group for course participation is examiners and
3. Get knowledge of passive
4. Measures are being initiated!

energy efficiency and energy
site managers.

building both for new
and renovation.

Build up skills

Lavenergi

programmet
1. Describes measures that on a concrete level contributes to the implementation of the roadmap.

2. Gives an overview of measures for better coordination.

3. Meetings with the Ministry of Education and Research and the Education directorate with the view of changing education plans.

4. Endorsement letters from relevant stakeholders.
Contact information and partners

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- **Platform for project website:**
  - [http://lavenergiprogrammet.no/lavenergi-i-eu/build-up-skills/](http://lavenergiprogrammet.no/lavenergi-i-eu/build-up-skills/)

- **Partners:** The Norwegian Building Authority, ENOVA SF, The Federation of Norwegian Construction Industries (also hosting the Low-Energy Program), The Norwegian Association of Building Constructors, The Norwegian Association of Plumbing, Heating and Ventilating Contractors, The Norwegian Association of Masons and Bricklayers.