



**BUILD UP  
SKILLS**

ENERGY TRAINING  
FOR BUILDERS



# BUILD UP SKILLS MACEDONIA

## Roadmap BUS-MK

[www.buildupskills.mk](http://www.buildupskills.mk)

### I. SKILLS REQUIREMENT



roof; facade;  
windows and  
doors; for  
reduced energy  
losses

**Building  
envelope**

interior walls  
and floors;  
electricity; HVAC;  
EE systems

replacement of  
equipment in  
order to decrease  
energy  
consumption

**Energy  
infrastructure**

CHP facilities;  
introduction of  
new RES

geothermal;  
biomass; solar  
heating; PV;  
wind turbines

**Energy  
sources**

### STRATEGIC APPROACH

The strategic approach is based on the development of training schemes for the construction vocations of the V-th qualification degree (highly qualified craftsmen).

### II. QUALIFICATION SCHEMES

#### 1. Training and qualification schemes

1.1 General knowledge of EE and RES. Training content: theory with examples of best practices.  
1.2 Specialization for acquiring the degree of skilled workman.

1.2.1 Construction occupations for building exterior	1.2.2 Construction occupations for building interior and energy infrastructure	1.2.3 Occupations for use of RES installation
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Training content for item: 1/3 theoretical training and 2/3 classes

1.3 Final exam (taking a theoretical exam and practical work for assessment)

#### 2. Qualification verification

2.1 Verified institutions for adult education non EE and RES (Certificate for final exam 1.3)

2.2 Verified construction companies (Specialization certificate for 1.2)

#### 3. Accreditation of the programmes and institutions and monitoring of the Roadmap implementation

##### 3.1 Verification

- Programmes and institutions
- Construction companies

##### 3.2 Monitoring

- Programme implementation
- Quality and number of courses

### III. ACCREDITATION AND TRAINING STRUCTURE

Accreditation and monitoring: Ministry for education and Adult Education Center

Verification of institutions for trainer training

1. Criteria for the institutions and the EE programmes
2. Faculties, secondary schools, economic chambers, crafts chambers

Verification of institutions for training of construction vocations for EE and RES

1. Criteria for the institution and the programme
2. Sec. schools, economic chambers, crafts chambers, NGOs, open civil universities

### PRIORITY MEASURES

#### Priority 1

Upgrade of the national education system within the construction occupations for the provision of EE and RES qualifications

#### Priority 2

According to the European experiences on the design of EE and RES programmes for certification schemes

- Development of curricula for 10 construction vocations
- Verification of 3 institutions for T4T
- Implementation of training for 300 trainers

#### Priority 3

- Identification and overcoming barriers
- Development of programmes for training of 500 unemployed, 300 building workers with lower qualification level and 300 workers from other sectors
- Training programmes for 500 graduated high school students from the construction vocations
- Informative campaign

#### Priority 4

- Capacity building of the education institutions
- Verification of 20 institutions
- Verification of 10 construction companies
- Training of 4,500 workers in 10 priority vocations

### IV. ACTION PLAN

**Period 2013 - 2016**

**2 Training for 4,800 workers**

**3 Provisional budget of the Action plan is €1,785,000**



СТОПАНСКА КОМОРА  
НА МАКЕДОНИЈА  
ECONOMIC CHAMBER  
OF MACEDONIA



АГЕНЦИЈА ЗА ЕНЕРГЕТИКА  
НА РЕПУБЛИКА МАКЕДОНИЈА  
ENERGY AGENCY OF THE  
REPUBLIC OF MACEDONIA



ГРАДЕЖЕН ИНСТИТУТ  
"МАКЕДОНИЈА" А.Д.  
CIVIL ENGINEERING  
INSTITUTE "MACEDONIA"

КРЕАЦИЈА  
ЗДРУЖЕНИЕ НА БИЗНИСИ И КОНСУЛТАНТИ



ФАКУЛТЕТ ЗА ЕЛЕКТРОТЕХНИКА И  
ИНФОРМАЦИСКИ ТЕХНОЛОГИИ  
FACULTY OF ELECTRICAL ENGINEERING  
AND INFORMATION TECHNOLOGIES