



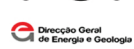
BUILD UP SKILLS

ENERGY TRAINING FOR BUILDERS

PORTUGAL



www.buildupskills.pt



- bringing together THE PORTUGUESE STAKEHOLDERS related to craftsmen working on the building sector and installers of energy systems including renewable energy sources
- establishing A NATIONAL PLATFORM of engagement
- setting up A NATIONAL ROADMAP driving the training process until 2020 and beyond

EXPLORATORY MEETINGS

February, 20th
AFID, Associação de Fabricantes e Importadores de Equipamentos de Quiloma (EQUIAR), Associação Portuguesa dos Engenheiros de Frio Industrial e Ar Condicionado (EFAIC), Centro de Formação Profissional para a Indústria Térmica, Energia e Ambiente (APIEF), Instituto da Sólida e Qualidade (ISQ)

March, 1st
Associação Certificadora de Instalações Eléctricas (CITELE), Associação Empresarial dos Setores Eléctrico, Electrodomestico, Fotografia e Electrónico (AGEFE), Instituto da Construção e do Imobiliário, I.P. (INCI), Sindicato Nacional da Indústria e da Energia (SINDEL)

March, 8th
Associação Nacional dos Fabricantes de Janelas Eficientes (ANFAJE), Associação Portuguesa de Comerciantes de Materiais de Construção (APCMC), Associação Portuguesa da Indústria Solar (APROSOLAR), Centro de Formação Profissional da Indústria da Construção Civil e Obras Públicas do Norte (CICOPN), Federação Portuguesa da Indústria da Construção e Obras Públicas (FEPCOP)

WORKING SESSIONS

May, 29th
Instituto da Construção e do Imobiliário, I.P. (INCI), Sindicato Nacional da Indústria e da Energia (SINDEL), Associação Nacional dos Fabricantes de Janelas Eficientes (ANFAJE), Associação Portuguesa da Indústria Solar (APROSOLAR), Federação Portuguesa da Indústria da Construção e Obras Públicas (FEPCOP)

GOAL

MAIN STEPS

- DISSEMINATION
- ENDORSEMENT
- ROADMAP
- PLATFORM
- STARTING POINT



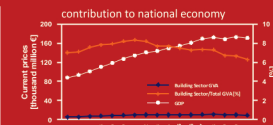
ANALYSIS OF STATUS QUO NATIONAL REPORT

1

BUILDING SECTOR

PAST, PRESENT...
The key drivers responsible for the poor performance of the Building sector in the country were:
REDUCED PRODUCTION, WEAK CORPORATE CONSOLIDATION and LOW PRODUCTIVITY.

- Significant drop in production, geared by the residential segment;
- The Portuguese Building market shows a low level of consolidation and the five largest construction firms have a market share of only 13%;
- Average productivity is significantly lower than the European average.



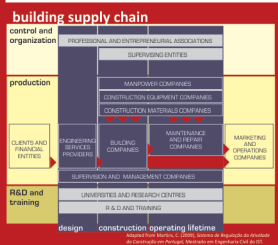
... AND PERSPECTIVES

- Retracted public and private investment;
- Government, companies and households find it difficult to obtain credit;
- Surplus offer of building stock (housing and services);
- Evolution of the international markets is highly uncertain.

10.5% of MIGRANT WORKERS in the Building sector workforce;

GAP between their EDUCATIONAL qualifications (same as national workers) and their SKILL level;

SEMI-SKILLED or SKILLED workers:
59% of immigrant workers against 39% of national workers.



3

STATISTICS

BUILDING SECTOR

Building stock
3.5 millions residential buildings
87% of those with one dwelling
0.3-0.4 millions non-residential buildings

building stock

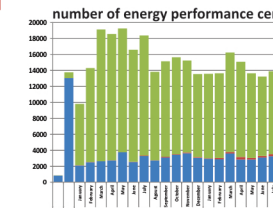
New buildings (2011)
5 700 licensed buildings
7 800 concluded buildings
17 000 licensed dwellings

Total licensed floor area [thousands of m²]
2 800 for non-residential buildings
4 100 for residential buildings

Annual DECREASE on licenced floor area
25% in tourism buildings
20% in commercial buildings
11% in residential buildings

BUILDINGS ENERGY EFFICIENCY

- Existing buildings have a **LOW ENERGY EFFICIENCY** level, compared to **new buildings**.
- **HIGH POTENTIAL** for improving energy efficiency as, in addition to traditional retrofitting, they may adopt energy efficiency improvement measures.
- Demands imposed by the thermal regulations on buildings currently in force have triggered a **REMARKABLE IMPROVEMENT** of energy efficiency in buildings, although other improvement measures can still be considered.



2

2020 ENERGY POLICY

NATIONAL STRATEGY ON ENERGY
includes a set of measures aimed at **RE-LAUNCHING THE ECONOMY** and **FOSTERING EMPLOYMENT**, investing in technological research and development and increasing Portugal's energy efficiency.

energy savings

Programmes	Primary energy (ktoe)
Home and office renewal	131
Buildings energy certification	241
"Renewable at the time"	53
Energy efficiency in the Public	72
TOTAL	497

EXPECTED RESULTS BY 2020

- Consolidate the cluster associated with **renewable energy sources (RES)** in Portugal, so as to ensure a Gross Value Added (GVA) of 3 800 million € and the creation of another **100 000 jobs** (in addition to the sector's existing 35 000).
- Continue to **develop the industrial cluster associated with the promotion of energy efficiency**, securing the creation of **21 000 jobs**, generating an investment of **13 million €** and yielding extra exports amounting to 400 million €.

Expected MICRO PRODUCTION from renewable energy sources
Annual energy production: 375 GWh
Installed power: 250 MW

Residential and Services

4 Home & Office Renewal Programme	• Incentives programme for sustainable urban rehabilitation, with the objective of achieving 1 in 15 homes with optimised energy class (equal or higher than B+).
5 Energy Efficiency System in Buildings	• Programme to renew 1 million large electrical appliances • Replacement of 5 million lamps with CFL • 75 thousand electricity-producing homes (165MW of installed power) • 1 in 15 buildings with Solar Hot Water.
6 Renewable at the Time and Solar Programme	• Energy certification for all State buildings • 20% of State buildings of class B or higher • 20% of State vehicles with CO ₂ emissions lower than 110 g/km • Phase-out of inefficient street lighting • 20% of traffic lights with efficient lighting (LED)

4

VET PROVISIONS

NATIONAL VET SYSTEM

Coordination National Agency for Qualification and Professional Education

Technical-advisory groups Sector Councils for Qualification Construction and urban planning Energy and Environment Computer, electronics and telecommunications Metallurgy and metalworking

Training Training centers of the Employment and Vocational Training Building sector: CICCOPN e CENFIC Electronic, energy and metalwork: CINEL, APIEF, CENFIM Primary and secondary public schools with specific courses Private professional schools Other certified training entities

Financing State budget European Social Fund Axis 1 - initial qualification (youth) Axis 2 - adaptability and lifelong learning (adults)

Training arrangements
Professional courses (level 4)
Apprenticeship courses (level 4)
Adult education, EFA (level 2 and 4)
Modular training
Technological specialization courses (level 5)

- Regional asymmetries in the OFFER of training;
- Higher investment has been made in training associated with **RENEWABLE ENERGIES** (installation of solar equipment, either photovoltaic or thermal);
- Sharp drop of **ADULT** training in 2011 as regards the EFA education and training modality.

COURSES AND TRAINING SCHEMES ENERGY EFFICIENCY AND RES

2090 trainees
13% gas
36% electricity
48% SOLAR THERMAL
1% HVAC
1% energy efficiency

144 courses
18% gas
41% ELECTRICITY
38% SOLAR THERMAL
1% HVAC
2% energy efficiency

86% approvals
77 000 total training hours

5

BARRIERS

Following a **SURVEY** made to a number of entities, we also identified the following **KEY BARRIERS** that, by impeding the qualification of this sector's professionals, may put at jeopardy the fulfilment of goals associated with the 2020 strategy:

- **ABSENCE OF TRAINING OFFER** that matches the needs of companies;
- **ECONOMIC** drivers;
- **TIME** to be made available by the companies.