

Note: the initial results of the draft report are presented below

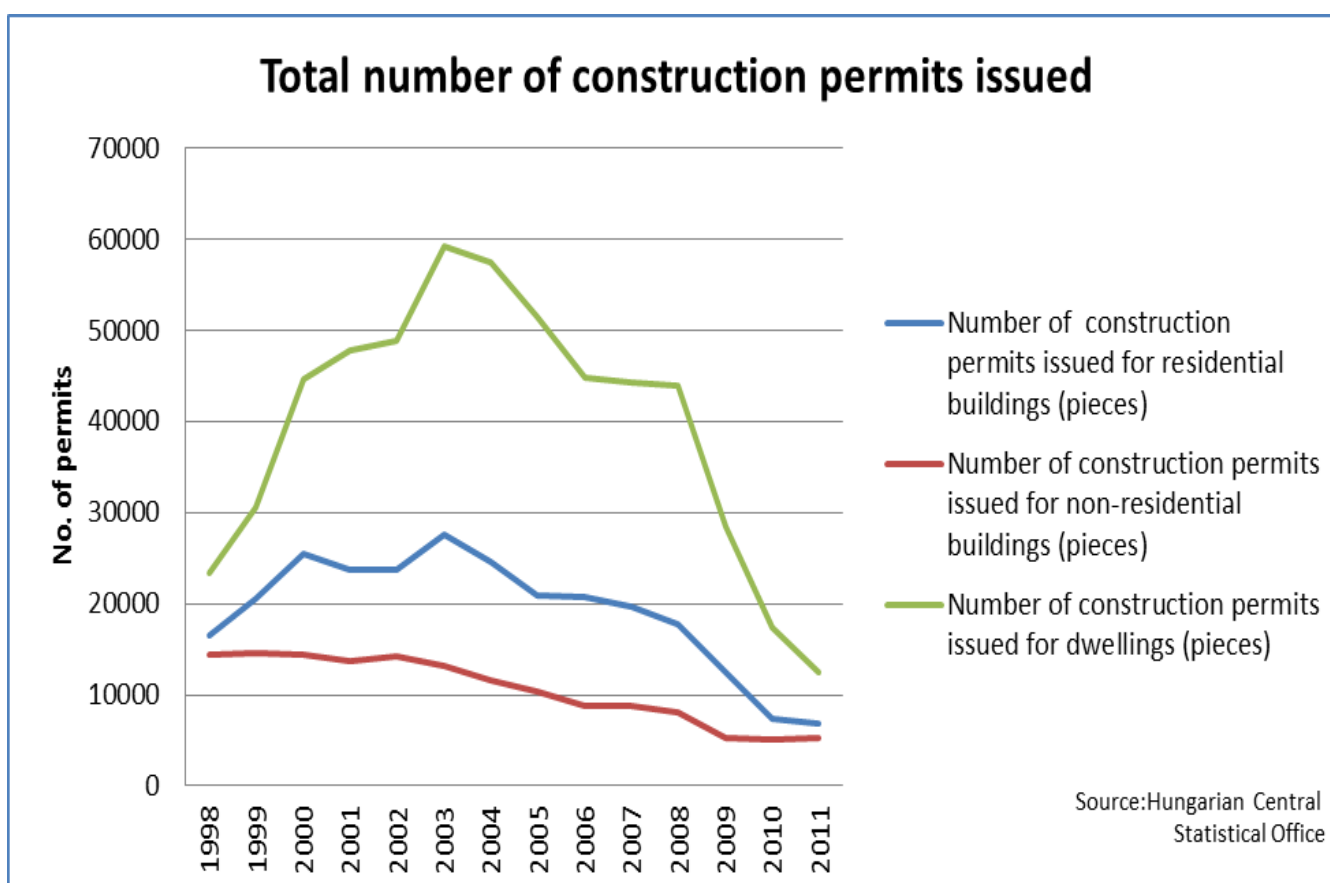
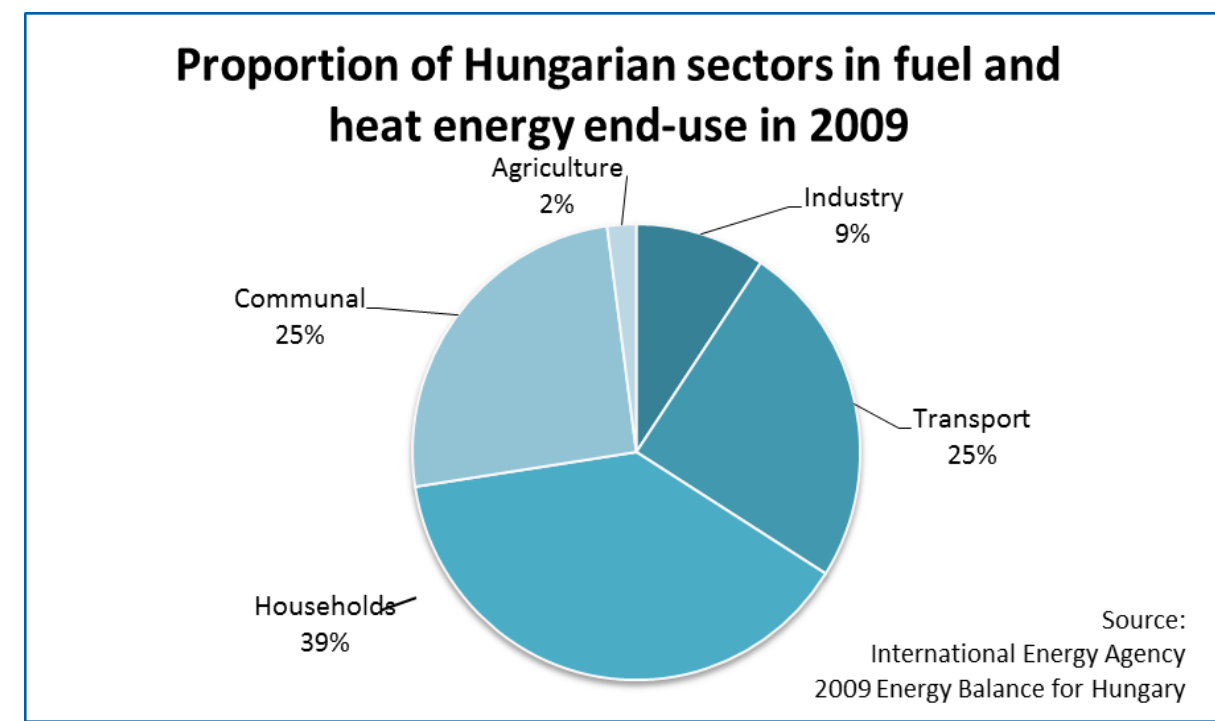
The Hungarian building sector

At least 70% of the 4,2 million buildings in Hungary do not meet the technical requirements of modern heating - therefore they need renovation. Approximately 10% of the buildings are outdated to such an extent that they need to be rebuilt. This situation is improving thanks to the implementation of residential energy efficiency programs over the past few years.

Energy status and characteristics of the Hungarian buildings

In residential energy consumption Hungary is in the top ten compared to the 27 countries of the EU. Therefore renovation and modernization of Hungarian buildings has a particularly significant potential in the field of energy. Households are the largest users of fuel and heat energy, responsible for 39%.

The most used heat transfer in Hungarian households is natural gas, followed by wood and district heating.



The structure of the construction industry

In the period of 2007-2009 building construction fell on average 10%, and though public works were also more dynamic over the past two years, the weight of the two main groups in the building industry almost evened out by 2009.

Housing construction

The construction industry, which has a decisive role in the national economy, performs worse year by year - it is in a deepening crisis. Currently there are about ten thousand unsold new buildings. Investment is modest. Lack of information is one of the characteristics of the sector; the significantly diminished market should be informed about the benefits of better quality and better achievements of energy levels.

Independent research and financial institutions forecast stagnation of the building industry in 2012, positive changes only could be started from 2013, 2014.

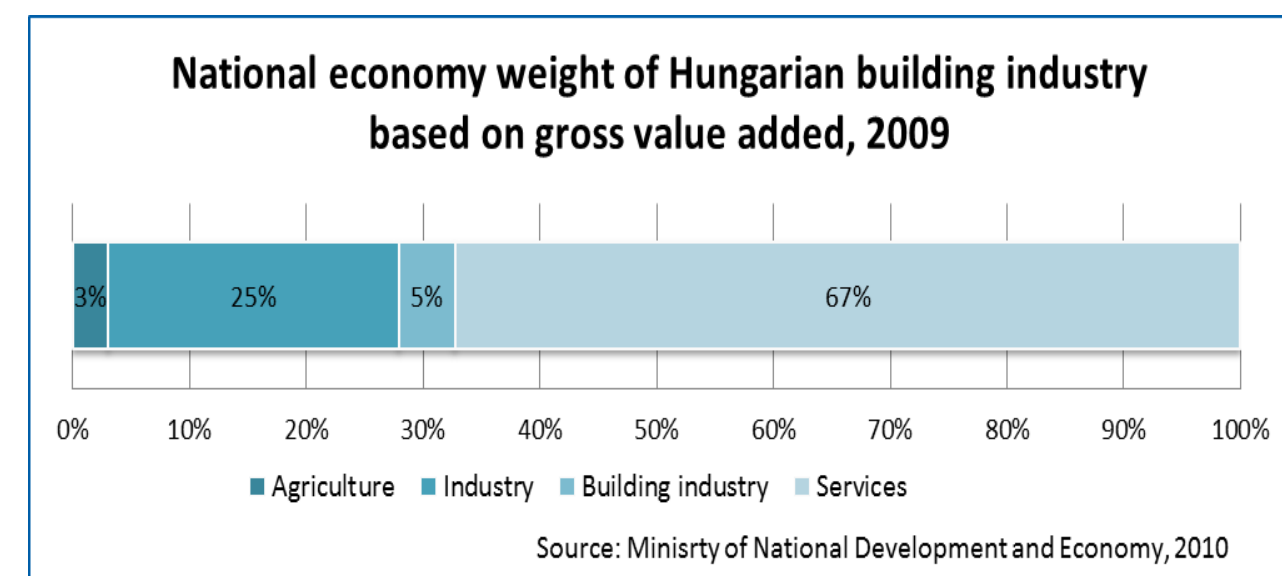
The role of the construction industry in the national economy

The construction industry reached the least dynamic growth of the nation's four major economic areas in the 2000s. In total the average value added volume growth in the construction industry, in the nine year review (2001-2009), was below 1% per year.

In the building industry sector, which accounts for about three-quarters of construction sector, specialized construction - mostly installation and finishing works - gave nearly one third of construction industry's production, based on 2009 figures.

The overall conclusion is that:

- the energy modernization of the building stock is a breaking point for EU and Hungary, furthermore in the energy supply of a more energy-efficient building stock, renewable energy sources could perform a much greater role.
- currently there is no reliable data which would allow the analysis and the estimation of the forecast of renewable energy consumption in buildings.



Proposals for the construction industry

- An evaluation report should be carried out for the Hungarian Government every year.
- Building Economic Strategy and according to the strategy, action plans should also be prepared to help the re-generation of the building industry.
- A unified building stock model should be prepared based on building typology and representative surveys, which is suitable for monitoring the energy performance of the Hungarian building sector.

Suggested criteria for the selection of building types:

- The building should be typical
- The geometric characteristics of building should be typical
- The structural characteristics of the building should be typical
- The applied energy source and heating mode

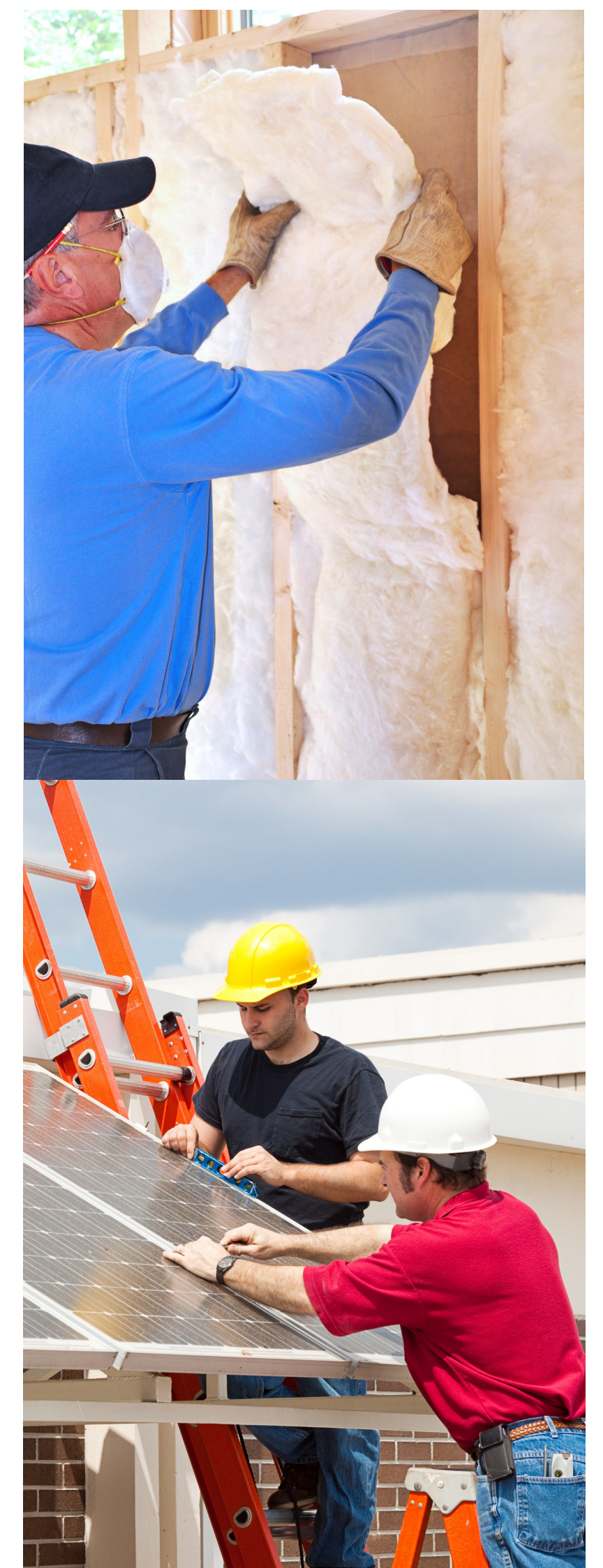


Legislative framework for energy efficiency and renewable energy

Improvement of the energy performance of buildings is the most appropriate tool to achieve the climate and energy goals of the government. Energy performance developments are also in line with the job creation efforts of the governmental programs, because many skilled professionals (not necessarily from the higher education sector) and workers are needed for building renovation and new building constructions. The Program of National Cooperation (the Program of the Government) states that a national energy efficiency program should be launched, in line with the European energy-efficient buildings initiative, to jump-start the construction industry by providing support for the spread of green technologies; the fulfillment of climate protection targets; job creation; and small enterprises.

The following national policies and strategies are framing the development of the building sector:

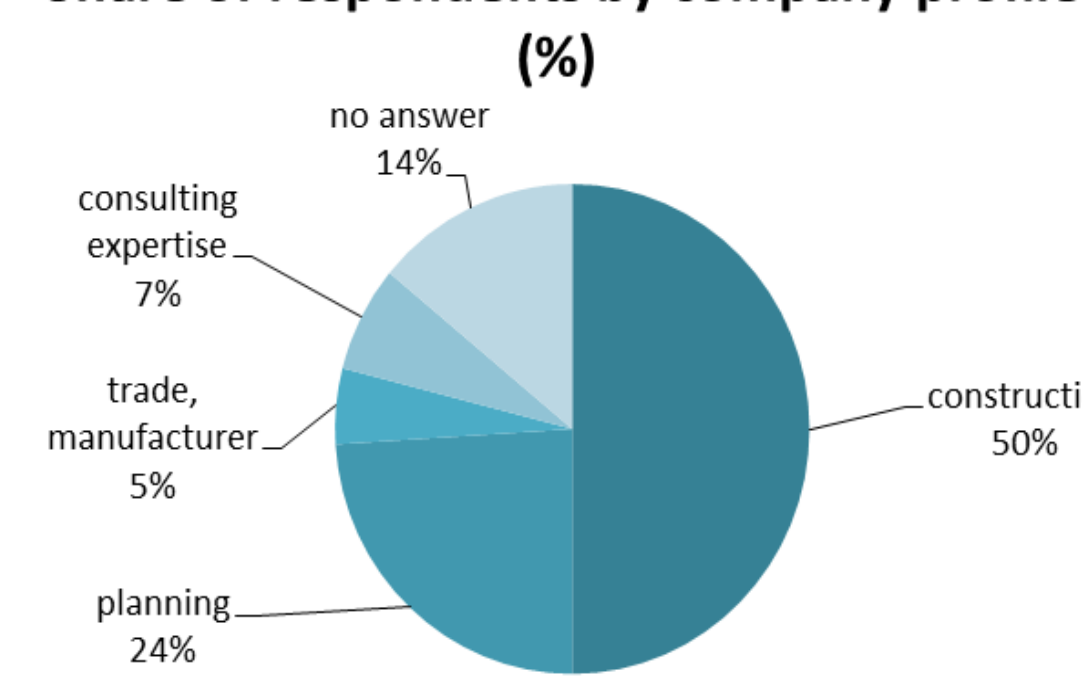
- National Energy Strategy**
The energy consumption of buildings is targeted to be reduced by 30% and to increase the share of renewable energy to 20% within primary energy consumption by 2030.
- 2nd National Energy Efficiency Action Plan**
The energy efficiency plan, as part of the Hungarian National Energy Policy, is in favor of supporting energy efficient and environmentally friendly buildings, equipments, technologies and modes of transport for the public - for policy makers as well as for market actors. The aim of the action plan is to set targets on efficient energy use in Hungary for the 2008-2016 period. It determines the detailed national targets regarding reduction of final energy consumption by 1% per year meaning 57.4 PJ/year (15970 GWh/year) by 2016. According to the document this is 1395.8 billion HUF (approx. 4.6 billion EUR).
- National Renewable Energy Action Plan**
The approved 2009/28/EC directive on renewable energy sets binding targets on the share of renewable energy in gross final energy consumption. The Government set an ambitious target to reach 14.65% (120.56PJ) whereas the EU requirement was 13%. It is intended to increase the share of renewable energy for heating (and partial cooling) in buildings from the current 8,6% to 18,9%.
- New Széchenyi Plan (National Development Plan until 2020)**
The provisions of the Plan related to the building sector are included in its "Green Economy Programme", composed of the following sub-programmes: New Green Home Building; Panel renewal; District heating efficiency; Home refurbishment; Renewed public institutions; Green SMEs.
- Kálmán Széll Plan 2.0**
This updated (April 2012) national reform plan highlights the importance of energy efficiency improvements in buildings and it plans to transfer approx. 495 million EUR (0,5% of the GDP) from the Cohesion Funds to support energy efficiency investments



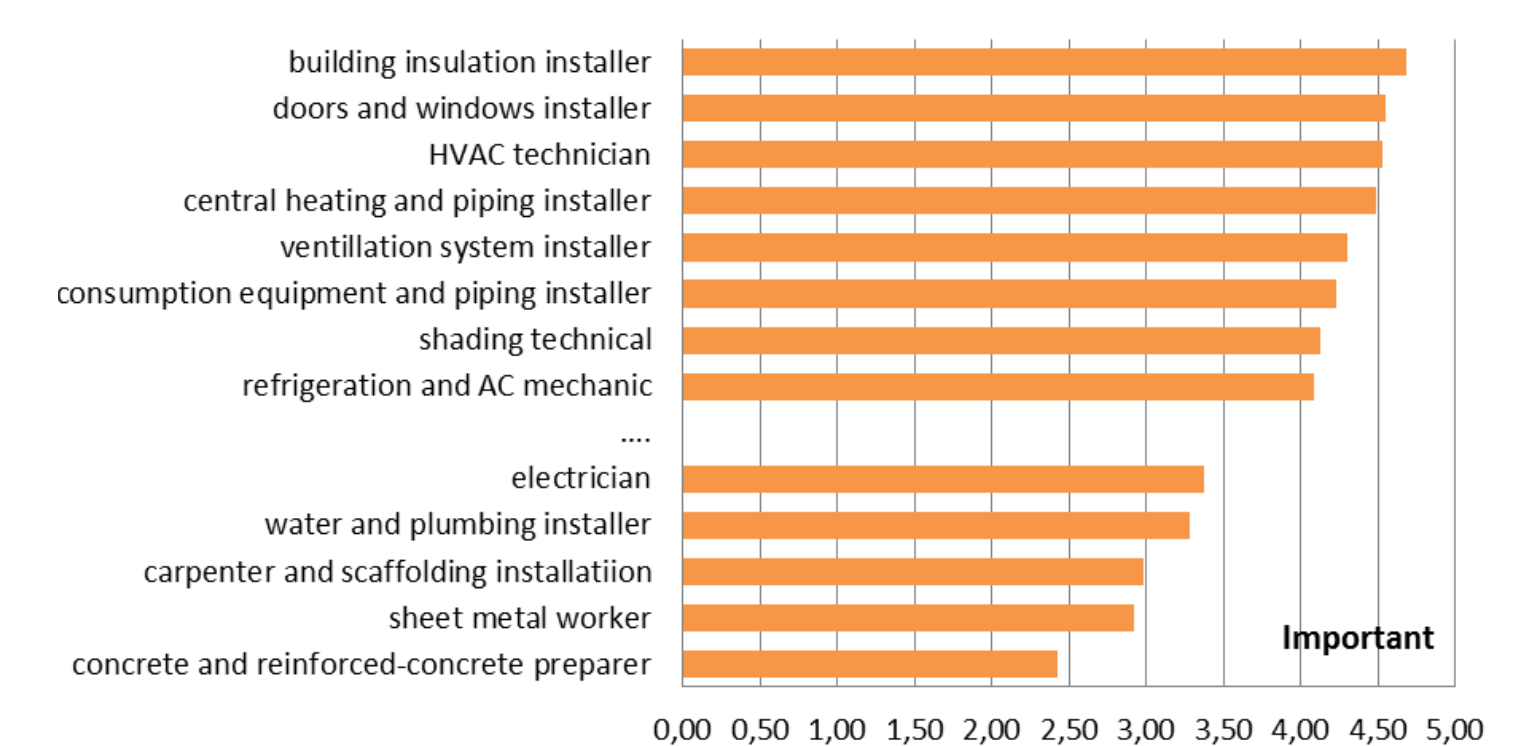
Preliminary result of questionnaires - building sector

Two questionnaires were prepared to ask the opinion of stakeholders. The initial result of the „building sector” questionnaires are presented here. The „educational” questionnaire is still being processed. The analyses of the building sector is based on 218 questionnaires collected mainly from SMEs (93%) and 72% of the responding companies have less than 5 employees.

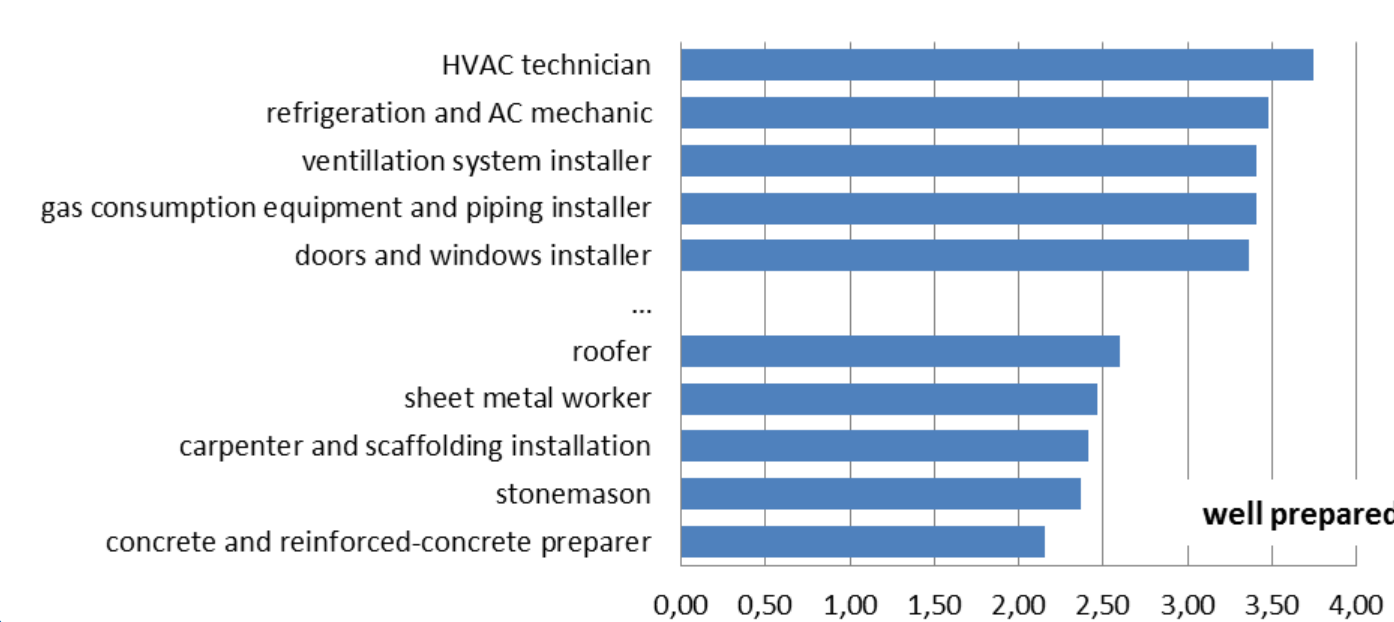
Share of respondents by company profile (%)



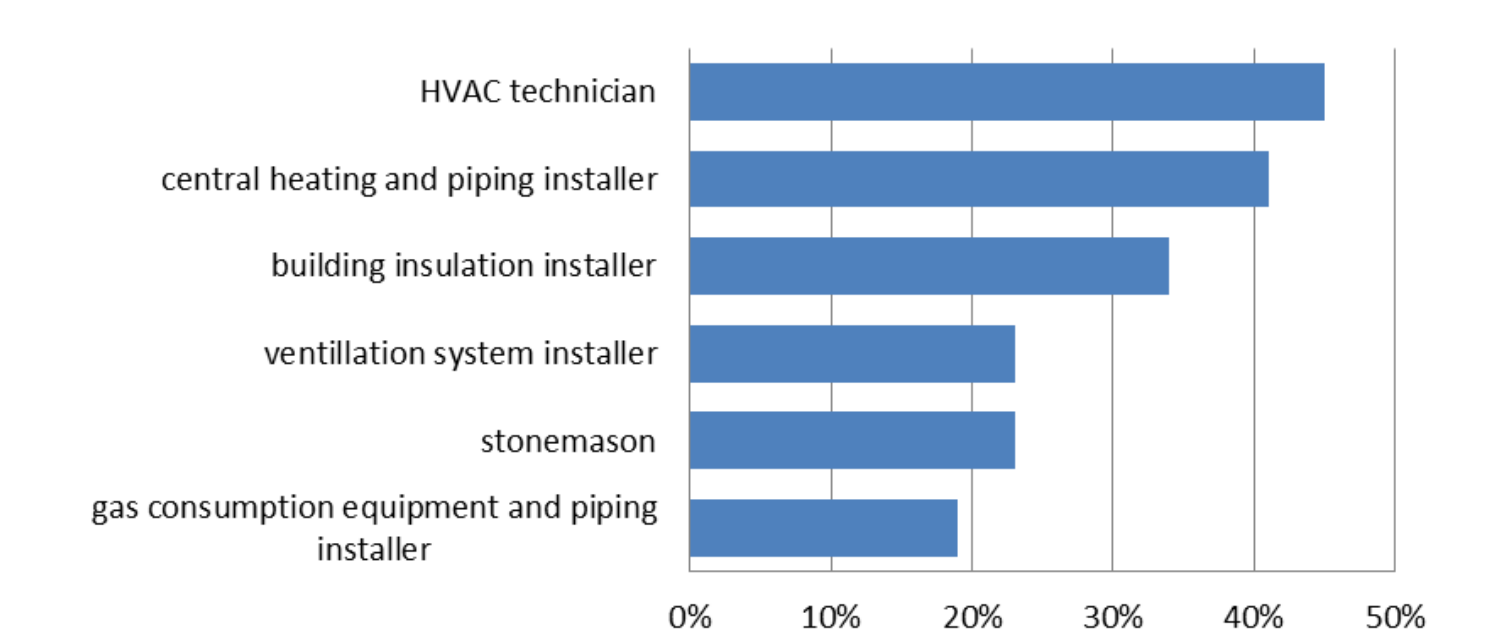
Importance of professionals to increase the energy performance of buildings (average)



Professional skills (preparedness) of the effective implementation of building energy renovations (average)



Need to train more professionals in building industrial fields (% of respondents)



Status of the construction labour, employment and vocational training

In the second half of 2000s the number of construction employees, performing a minimum of 60 hours per month, reduced on average by 2.6% per year, thus the number of construction employees shrunk to 4.4% (less than 118 thousand persons) of the national economy workforce.

In summary, based on approximate calculations, the construction sector employees (154 thousand persons; 5,8% of the national economy workforce—based on 2009 figures) shrunk to about 2.8% annually, but in fact it only diminished rapidly in the last three years, which is coincident with the decline in construction output.

Examining the sectors of the national economy it may be observed that the lack of internal orders in the construction industry is one of the most significant problems. Only 13.3% of the construction enterprises account for increasing investments, which is the lowest rate in terms of the individual economic sectors.

The increase in the number of employees of organizations does not exceed 1% in the building industry. In terms of planned recruitment of young workers the building industry has one of the lowest rates among national economy sectors in 2012. Even so the proportion of organizations with persistent labour shortages was 5.5% in 2010 and 6.6% in 2011.

The proportion of companies providing training is 17% and the proportion of employees participating in training is 9,5%. Organisations within the building industry –among other industries, like catering, trade, processing– have provided the most training for its own employees.

The main characteristics of the current education system

VET is governed by six main laws amended over time and supplemented by a series of decrees and other regulations., such as the Public Education Act (LXXIX of 1993); Higher Education Act (CXXXIX of 2005); The VET Act (LXXVI of 1993); The act on vocational training contribution and support for development of training (Act LXXXVI of 2003); The act on adult training (Act CI of 2001)

Continuing vocational training for workers including on-the-job trainings

Technical schools (secondary level) offering profession related curricula are the starting point for more specialized vocational training. It is estimated that around 30% of the 380,000 students (114,000 people) study professions related to the building sector. (certification: high-school graduation)

Increasingly important actors in the formal education system are Regional Training Centres that have been established recently (2008). This new institutional setting allows for a modul-based architecture, a flexible inter-professional cooperation combined with a strong practical orientation. There are general or more sector-related ones, amongst them a few are specialized in building. They are offering 1 to 3 year courses. Their specialized training can be complementary to the more general profiled ones offered by secondary schools. (certification: skilled worker certificate)

Continuing vocational training for workers including on-the-job trainings

In order to meet the demand for vocational trainings not covered by the formal education system, more and more market based continuing education programmes are available. These courses are accredited based on specific requirements (technical and HR) and are registered in the National Registry of Qualifications. This latter is currently under revision by the responsible ministry and broader institutions. The currently available building related accredited trainings are: Building engineering and technician; Central heating and plumbing; Climatisation technician; Air-conditioning mechanic; Electro-technician; renewable energy technician.

The number of people acquiring qualifications in building professions in 2010 was around 28.000: 3000 in the formal education and 25,000 in the informal education (up from 8,400 in 2009). Out of them there are 4,000-5,000 persons acquiring qualification in building professions related to energy on a yearly basis.

Higher education

A number of universities and colleges offering BA degrees run programmes to train building engineers. Most of them offer pedagogy qualifications for them (teacher-engineer) who operate as teachers and trainers in vocational training and continuous education.

The Hungarian education and training system

