Implementation of Energy Audits in Republic of Macedonia: what works and what doesn’t?

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10.02.2011 – Energy Law (from 2011-2017 there have been 8 changes/amendments)

2013 – Rulebook on energy audit (1 change) and Rulebook on energy performance of buildings (2 changes)

24.01.2014 – Accredited 5 companies to train energy auditors

285 certified energy auditors in the 1st year

2017 – 425 certified energy auditors
10.02.2011 – 31.05.2013 Energy Agency is responsible for monitoring the trainings, exams and the Ministry of Economy certifies energy auditors

31.05.2013 – 27.11.2013 Energy Agency is responsible for monitoring the trainings, exams and certifies energy auditors

From 27.11.2013 Energy Agency is responsible for monitoring the trainings, but the ME is conducting exams and certifies energy auditors (amazing changes for the exams)
Certificate for energy performance of buildings is required for new buildings, substantially renovated buildings, buildings/apartments that are rented or sold.

**After 05.10.2015** – only new buildings are required to be certified. (buildings that are rented/sold after EU accession)
Energy audits trainings

Pricing

300 € - Energy audit training per person (accredited training center)

300/100 € - Exam and certification per person (Ministry of Economy)

100 € - certification for energy auditing company (Ministry of Economy)

1,3 € - paperwork taxes (Energy Agency)

Certification requirements for Energy Audit Company – 2 permanently employed energy auditors
Energy audits

Pricing

0,5 €/m² for basic energy audit (certification)

0,8 €/m² for detailed energy audit
Energy audit in a average house in Kocani

- Average house size 150m²
- 2 energy auditors (1 company) (no taxes)
- Vehicle/car consumption 7 l/100km (no maintenance)
- Average day rate for employee 16€ (net)
Energy audit as a business

Assumptions

- 2 energy auditors (1 company)
- Yearly average salary for 1 employee 6000 €
- Yearly rent 3600 €
- Training of the employees 900 €
- Transport local 1500 €
- Office supply 1500 €
Energy agency is responsible for monitoring the energy audits – at least one random check up in 3 years

- No access to the centralized system for building permits (no information on new/reconstructed buildings)
- The software provided does not have a server component
- Every energy audit and certification is provided in paper
- Gaps in the rulebook on energy performance of buildings and the rulebook on energy audit

- Quality of the audits and certification is questionable (almost all certificates are class A energy efficient buildings) !?!
Energy agency received less than **80 energy audits and certifications in 3 years**

According to the State Statistical Office:
- 2016 – **2076** new building permits are issued
- 2015 – **1938** new building permits are issued
- 2014 – **1830** new building permits are issued
- Clear and transparent energy audit legislation – stability is the key (lessons learned is knowledge retained)

- Clearly defined obligations and responsibilities

- Access to information (energy efficiency is multidisciplinary subject – it should be treated as such)

- Interconnection of systems – paper is not an option
Recommendations

- The pricing has to have basic economic sense (napkin test)

- Social component of the price is easily mitigated

- Monitoring is key element – it builds trust

- Budget for monitoring and verification

- Internal human capacity or outsource
Thank you for your attention!

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