EU-GUGLE
Affordable refurbishment and comfort - experiences with innovative financing models

Michael Heidenreich, BOKU

Aachen
22-04-16

EU-GUGLE is co-financed by the European Commission under the 7th Framework Programme for Research and Technological Innovation, and is co-ordinated by CENER, Spain’s National Centre for Renewable Energies.

VIENNA and its smart district
VIENNA and its smart district

The Starting Point

- Turn around the pyramid
Case study 1

- Challenge is the cap of €1.50/m² additional monthly rent over 10 years.
- Considering energy poverty.
- Participatory actions to involve the tenants together with social forum (Wohnpartner).

Case study 1

- Open market value is not of relevance.
- Pooling is possible, but not practiced.
- Refurbishing is political.
Case study 2

- Redensification - additional attic apartments (26) on top with:
  - Natural gas boiler (Central heating system) (135 kW).
  - Low temperature underfloor heating system (40 °C) individually controlled.
- Mixed model of tenants and new flat owners.

Case study 2

- Minimization of heat losses, insulated envelope with $U = 0.19 \text{ W/(m}^2\text{K)}$.
- Installation of new windows with $U = 1.2 - 1.3 \text{ W/(m}^2\text{K)}$.
- Insulation of the cellar $U = 0.19 \text{ W/(m}^2\text{K)}$. 
Case study 2

- Nogging piece with insulation of the roof \( (U = 0.17 \, \text{W/(m2K)}). \)
- Energy-efficient elevators.
- Communication flow / quality assurance debates on weekly meetings.

Case study 2

- Step-by-step realisation of the energy efficiency measures have been completed in August 2014.
- Distribution and intermediation among all involved parties.
Case study 2

- Few building users complain particular delays and disturbances - satisfied as requested damages in the construction were repaired.
Conclusions

• Nearly Zero Energy Building design requires good communication.
• Knowing legal frame, promotion schemes and good practice will not eliminate all missteps.
• Establishing the necessary skill in EU-GUGLE and beyond is our goal.

Contact

For more information please contact:
Michael Heidenreich
E: gugle@boku.ac.at;

Or visit www.eu-gugle.eu