Building ENergy EFficiency Improvement: Demonstration for public buildings

Kozani, 21 September 2019
Energy upgrading policy in Europe and Greece

- At national and European level, the building sector is responsible for about 40%-45% of total energy consumption. In particular the need for heating of houses in Greece is around 70% of their total energy consumption.

- Energy consumption in buildings is steadily increasing, which results to a significant financial burden, due to the high cost of energy, and to the pollution of the atmosphere concerning mostly emissions of carbon dioxide.

- Thus, saving energy in buildings is imperative and is ensured by the appropriate design of buildings and the use of energy-efficient building components and systems.
Energy performance of buildings high on the European Union's (EU) priorities

Greece - Energy Efficiency Regulation of Buildings (KENAK-2017)
obligation of the country both to the requirements of the European Union (Community Directive 2010/31/EE) and to its citizens.

Buildings of the country - according to modern living standards
through proper management and energy saving must achieve better energy behavior

In addition to the security and aesthetics
Low energy consumption optimal conditions for users.

Clear direction for the EU's transition by 2020 in new buildings with almost zero energy balance (passive buildings)
BENEFIT Project: objectives, main outputs & results

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<th>BENEFIT project basic info</th>
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Partnership

Public enterprise for urban planning, architectural design and engineering Bitola
Overall objective:
to strengthen the capacities of public authorities in the cross-border area of Greece-Republic of North Macedonia towards **energy-efficiency planning for upgrading public buildings’ energy performance**, as well as to **increase energy awareness** of the wider society on benefits from energy-efficiency.
Main expected results

- Improved capacities of public authorities for **EE planning and energy retrofit projects** for public buildings
- **Exchange of experience** within networks of public authorities/stakeholders
- **Increase energy-awareness** at local/regional/national level through demonstration of ‘landmark’ public buildings’ energy retrofit projects in the CB area
- **Decrease in primary energy/CO2 emissions/operating costs** for 2 energy upgraded pilot buildings (Dioikitirio Thessaloniki, Sports House Bitola)
- **Boosting building industry in the field of EE materials/technologies** leading to growth and employment creation
- Attraction of investments through the preparation of bankable projects
- **Multidimensional contribution to goals** of Greece and North Macedonia towards 2020
- Contribution to **energy security & climate change mitigation** in Greece & North Macedonia
Project presentation: idea, objectives, main outputs & results

* Strategic assessment of energy-saving potential through energy-efficiency improvements
* Identification of financial mechanisms for EE interventions
* Transnational guidelines for energy-efficiency planning for public authorities
# Project presentation: objectives, main outputs & results

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<th>WP</th>
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<tr>
<td>WP 1</td>
<td>Project Management &amp; Coordination</td>
<td>01/09/2018</td>
<td>31/08/2020</td>
<td>90.568,00 €</td>
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<td>WP 2</td>
<td>Communication &amp; Dissemination</td>
<td>01/09/2018</td>
<td>31/08/2020</td>
<td>99.406,00 €</td>
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<td>WP 3</td>
<td>Mapping of energy efficiency for public buildings</td>
<td>01/09/2018</td>
<td>31/08/2020</td>
<td>113.135,00 €</td>
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<td>WP 4</td>
<td>Energy efficiency planning for Regions and Municipalities</td>
<td>01/02/2019</td>
<td>28/02/2020</td>
<td>51.378,00 €</td>
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<td>WP 5</td>
<td>Pilot Buildings' Energy Efficiency projects implementation in the cross-border area</td>
<td>01/11/2018</td>
<td>31/05/2020</td>
<td>772.452,00 €</td>
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<td>WP 6</td>
<td>Policy uptake and community engagement</td>
<td>01/11/2018</td>
<td>31/07/2020</td>
<td>43.536,00 €</td>
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**Total Budget**: 1.170.475,00 €
Ministry of Interior (Sector Macedonia and Thrace)  

Sports House - Bitola
The study will focus on 3 main aspects affecting energy consumption: the proposed measures will relate and improve the following issues:

- Windows energy behavior (glasses and framing included)
- Illumination of the offices and free/common areas
- Automated measurement and optimizing adjustment of the heating system operation
The initially expected improvements are the following:

- 20% reduction of gas energy consumption

- 20% reduction of illumination costs