DEESME
National schemes for energy efficiency in SMEs

Final Project Results

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The DEESME project focused on enabling companies to manage the energy transition by taking profit of multiple benefits from energy management and audit approaches, it also provided guidelines and recommendations for national authorities to empower their schemes under article 8 EED (now 11), using the multiple benefits’ approach.

The project identified and shared good practices from national schemes, EU projects, and other initiatives with national authorities and supported them in developing more effective policies dealing with energy audits and energy management systems.

This report collects and summarises the main project outputs, including policy recommendations for National Authorities in the implementation of Article 11 of the Energy Efficiency Directive, best practices identified on the multiple benefits approach applied to energy audits and management and finally, results from DEESME’s audits in SMEs and how the Multiple Benefits impact their company.
DEESME provided policy recommendations for National Authorities to face the challenges of implementing Article 11 of the Energy Efficiency Directive (EED) through an interactive map (see next page) and a comprehensive report.

The recommendations were collected from 10 countries (Austria, Bulgaria, Croatia, Finland, Greece, Ireland, Italy, Poland, Slovenia and Spain) which demonstrated how relevant challenges of implementing energy management systems for companies will be with the implementation of Article 11 of the Energy Efficiency Directive.

The report highlighted the following aspects:

- Identified barriers and solutions
- Consultations with companies and key actors
- New challenges with the changes of the EED
- Discussions with National Authorities
The calculation tool developed in the framework of DEESME allows to analyze Energy efficiency investments including the associated Multiple Benefits (MBs).

Multiple Benefits are not usually included in investment evaluations, due to a general lack of data, methodology and skills.

This tool allows to give a good feedback to companies on the economic return of their energy efficiency investments and the associated MBs.

Some of the Multiple Benefits are relevant for company purposes like the calculation of the carbon footprint or other information needed to complete economic social and environmental sustainability assessments that are increasingly requested to comply with new EU regulations.
Results from a Bulgarian company audited

Net Present Value

-144.571 € Results without Multiple Benefits

Results with Multiple Benefits 1.256.085 €

Internal Rate of Return

-15% Results without Multiple Benefits

Results with Multiple Benefits 1%

Payback time

Results without Multiple Benefits 6 years

Results with Multiple Benefits 2 years
Results from a Bulgarian company audited

**Net Present Value**

Results *without* Multiple Benefits

-59.692 €

Results *with* Multiple Benefits

1.099.459 €

**Internal Rate of Return**

Results *without* Multiple Benefits

0%

Results *with* Multiple Benefits

0.3%

**Payback time**

Results *without* Multiple Benefits

9 years

Results *with* Multiple Benefits

3 years
### Results from a Bulgarian company audited

<table>
<thead>
<tr>
<th>Category</th>
<th>Results with Multiple Benefits</th>
<th>Results without Multiple Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net Present Value</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-327.88 €</td>
<td>2,265,503 €</td>
<td></td>
</tr>
<tr>
<td><strong>Internal Rate of Return</strong></td>
<td></td>
<td></td>
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<tr>
<td>-11%</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td><strong>Payback time</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Results without Multiple Benefits</td>
<td>&gt; 10 years</td>
<td></td>
</tr>
<tr>
<td>Results with Multiple Benefits</td>
<td>2 years</td>
<td></td>
</tr>
</tbody>
</table>
Results from an Italian company audited

Net Present Value

Results without Multiple Benefits: 440,224 €
Results with Multiple Benefits: 1,480,908 €

Internal Rate of Return

Results without Multiple Benefits: 17%
Results with Multiple Benefits: 43%

Payback time

Results without Multiple Benefits: 5 years
Results with Multiple Benefits: 2 years
Results from an Italian company audited

Net Present Value

- Results **without** Multiple Benefits: €20,494
- Results **with** Multiple Benefits: €334,460

Internal Rate of Return

- Results **without** Multiple Benefits: 9%
- Results **with** Multiple Benefits: 57%

Payback time

- Results **without** Multiple Benefits: 6 years
- Results **with** Multiple Benefits: 2 years
Multiple Benefits identified for SMEs during audits

Environmental benefits
- Reduced energy consumption
- Reduced carbon footprint
- Increased recycling
- CO₂ reduction

Productivity and quality
- Improved quality and maintenance
- Improved product/service efficiency
- Increased utilisation
Multiple Benefits identified for SMEs during audits

**Employee and customer satisfaction**
- Acquisition of new customers
- Improved stakeholder relationship
- Increased employee and customer satisfaction

**Innovation**
- Introduction of new products/services
- Development of innovations
The DEESME project gathered a wide range of best practices on applying the multiple benefits approach to energy audits and management, the report collected 10 best practices that can be implemented for companies in the four testing countries: Italy, Bulgaria, Poland and Germany.

The report highlights how these practices can and should be used as a management tool and provides the methodology for the identification of best practices within the DEESME project. The report also offers a focus on the key learnings that can be used as guidelines for future implementations.

DEESME also provided a summary of these practices into seven infographics (see next page).
Accurately identify areas of energy waste

Develop accurate recommendations for improvement

Begin activities in advance which will allow companies to collect and analyze accounting data in depth

Track progress over time or analyze energy performance under different configurations e.g. changes to equipment, operations, or maintenance practices

1. Complete & accurate data

Complete and accurate data comes from an energy audit, which provides a complete data set for taking decisions on energy issues.

E.g. assess the effectiveness of energy conservation measures and identify new opportunities for improvement.
1. Drive innovation and continuous improvement
   includes funding, personnel, and access to information and data

2. Top management commitment
   sets their commitment on sustainability and energy efficiency for all employees.

Provide the necessary resources and support
employees are more likely to be aware of and engaged in sustainability initiatives

Create a culture of sustainability and energy efficiency
3. **Communicate success**

- Boost employee morale and engagement leads to improved productivity & performance.
- Raise awareness of energy efficiency and sustainability can lead to employees taking steps to reduce their own energy consumption.
- Enhance the company's reputation.
- Identify and replicate successful practices.
- Comply with regulations.

Communicate success to internal stakeholders and external stakeholders.
4. Quantification of energy-related problems

- Help to identify the most significant areas of energy consumption and waste
- Track progress over time and find areas of improvement
- Help companies to comply with regulations, attract investors, and enhance reputation
- Make informed decisions about energy investments
5. Training personnel and managerial staff

Ensure that employees and managers understand the multiple benefits approach and the requirements of the energy management system.

Build a culture of energy efficiency and sustainability, e.g., improve the organization's energy performance.

Develop knowledge and skills that employees need to perform their roles in the Energy Management System.
Assess the financial feasibility of energy efficiency projects

Support revealing, quantifying and tracking financial benefits of energy efficiency projects

6. Wide participation in the project management team

Energy systems are complex and interconnected, and it takes time to understand them and to identify opportunities for improvement.

Energy efficiency measures often require significant upfront investments.

Changing employee behavior can be a challenging and time-consuming process.

Energy needs and technologies are constantly changing.

7. Energy efficiency is a long-term procedure.
Discover DEESME 2050!

DEESME 2050 is a continuation of the DEESME project and develops energy efficiency projects in SMEs for European 2050 targets, in the furniture sector.

Follow the project on LinkedIn, Twitter and find all the project’s contents on our website.

Contact

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