Beyond energy savings:
The multiple benefits of energy efficiency
Session 1: Workshop overview and recent policy experiences

“Italian experience on tax breaks for building renovation: achieved results and impacts on economy”

Paris, French Foreign Affairs Ministerial Conference Centre, March 5th 2018

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ENEA - Italian National Agency for Energy Efficiency
Directive 2012/27/UE, Article 7: Energy efficiency: Italian targets and policies

Summary of expected savings (Mtoe/year 2014-2020)

Source: Ministry of Economic Development
Tax breaks for energy efficiency

The measure

- energy efficiency technologies for residential buildings
- tax deduction of 50%, 65%, 70%, 75% of eligible expenses
- breaks in personal or corporate income taxes, no tax credit;
- deduction is carried out in 10 years;
- maximum spending ranges from 30.000 to 100.000 euros;
- beneficiaries can transfer receivables to suppliers or other private subjects, (for «No-Tax Area» also to banks)
Tax breaks for energy efficiency

The actors:

Introduced by L. 296 - 2006 (National Budget Law 2007)
Extended by L. 205 - 2017 (National Budget Law 2018)

- Ministry of Economy and Finance
  establishes the annual budget

- ENEA
  manages the measure

- Ministry of Economic Development
  defines technical requirements

- Revenue Agency
  defines fiscal aspects and performs the audits
Tax breaks for energy efficiency

Allowed interventions Art. 1 - National Budget Law 2018

• global energy requalifications of buildings
• building envelope
• solar thermal systems
• heating and dhw production plants
• micro cogeneration plants
• building automation systems
• Interventions on common parts of condominiums
Results

From ENEA REPORT 2017

2016:
360,000 applications
1.1 GWh/year energy saving
3.3 billion euros investment

2007-2016:
2.9 million of applications
14,000 GWh/year energy saving
31.3 billion euros investment
Results

Investments

<table>
<thead>
<tr>
<th>Technology/intervention</th>
<th>2016</th>
<th>2014-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opaque vertical structures</td>
<td>301.1</td>
<td>1.074</td>
</tr>
<tr>
<td>Opaque orizontal structures</td>
<td>651.2</td>
<td>1.734</td>
</tr>
<tr>
<td>Windows</td>
<td>1.447.9</td>
<td>4.357</td>
</tr>
<tr>
<td>Solar Thermal</td>
<td>56.4</td>
<td>223</td>
</tr>
<tr>
<td>Solar Shadings</td>
<td>148.4</td>
<td>249</td>
</tr>
<tr>
<td>Condensation boilers</td>
<td>543.3</td>
<td>1.412</td>
</tr>
<tr>
<td>Geothermal plants</td>
<td>4.1</td>
<td>11</td>
</tr>
<tr>
<td>Heat pumps</td>
<td>110.3</td>
<td>297</td>
</tr>
<tr>
<td>Hot water heat Pumps</td>
<td>20.7</td>
<td>59</td>
</tr>
<tr>
<td>Building automation</td>
<td>9.2</td>
<td>9</td>
</tr>
<tr>
<td>Other</td>
<td>16.1</td>
<td>39</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3.308.7</strong></td>
<td><strong>9.463</strong></td>
</tr>
</tbody>
</table>

Font: ENEA
# Results

## Savings

### Savings (GWh/year) for thecnology, year 2016 and total years 2014-2016

<table>
<thead>
<tr>
<th>Tecnologia/intervento</th>
<th>Anno</th>
<th>2016</th>
<th>%</th>
<th>2014-2016</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opaque vertical structures</td>
<td>GWh/a</td>
<td>106,9</td>
<td>9,6%</td>
<td>351</td>
<td>10,7%</td>
</tr>
<tr>
<td>Opaque orizontal structures</td>
<td></td>
<td>239,1</td>
<td>21,5%</td>
<td>603</td>
<td>18,4%</td>
</tr>
<tr>
<td>Windows</td>
<td></td>
<td>482,3</td>
<td>43,4%</td>
<td>1.531</td>
<td>46,6%</td>
</tr>
<tr>
<td>Solar Thermal</td>
<td></td>
<td>40,3</td>
<td>3,6%</td>
<td>160</td>
<td>4,9%</td>
</tr>
<tr>
<td>Solar Shadings</td>
<td></td>
<td>19,8</td>
<td>1,8%</td>
<td>33</td>
<td>1,0%</td>
</tr>
<tr>
<td>Condensation boilers</td>
<td></td>
<td>167,8</td>
<td>15,1%</td>
<td>428</td>
<td>13,0%</td>
</tr>
<tr>
<td>Geothermal plants</td>
<td></td>
<td>0,9</td>
<td>0,1%</td>
<td>3</td>
<td>0,1%</td>
</tr>
<tr>
<td>Heat pumps</td>
<td></td>
<td>37,5</td>
<td>3,4%</td>
<td>138</td>
<td>4,2%</td>
</tr>
<tr>
<td>Hot water heat Pumps</td>
<td></td>
<td>5,6</td>
<td>0,5%</td>
<td>16</td>
<td>0,5%</td>
</tr>
<tr>
<td>Building automation</td>
<td></td>
<td>5,4</td>
<td>0,5%</td>
<td>5</td>
<td>0,2%</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>6,9</td>
<td>0,6%</td>
<td>13</td>
<td>0,4%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1.112,5</td>
<td>100%</td>
<td>3.282</td>
<td>100%</td>
</tr>
</tbody>
</table>

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*Font: ENEA*
Tax breaks for energy efficiency

Advantages

• high rate of fiscal deductions;
• large spending limits;
• fiscal credit transfer;
• several eligible interventions;
• several eligible subjects;
• buildings of any real estate register category;
• increased comfort;
• property added value;
• reduction in energy costs;
• simplified documentation
Tax breaks for energy efficiency

Advantages for the system

• recovery of the existing building stock
  decorum
  functional performance
  seismic risk prevention

• support for the construction industry
  support of the production and of the employment of the sector
  contrast illegal work

• accelerating the diffusion of advanced technologies

• environmental benefits
  energy saving for heating and cooling, reduction of CO₂ in the atmosphere
Impact of the incentives on employment

Support for the construction industry

<table>
<thead>
<tr>
<th>Year</th>
<th>Total investments activated (Mln €)</th>
<th>direct employee</th>
<th>Total direct employee + industrial activities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TOTAL</td>
<td>works</td>
<td>VAT</td>
</tr>
<tr>
<td>2011</td>
<td>16.716</td>
<td>15.136</td>
<td>1.581</td>
</tr>
<tr>
<td>2012</td>
<td>19.209</td>
<td>17.385</td>
<td>1.823</td>
</tr>
<tr>
<td>2013</td>
<td>27.957</td>
<td>25.302</td>
<td>2.654</td>
</tr>
<tr>
<td>2015</td>
<td>25.147</td>
<td>22.751</td>
<td>2.396</td>
</tr>
<tr>
<td>2016</td>
<td>28.243</td>
<td>25.552</td>
<td>2.691</td>
</tr>
<tr>
<td>2017*</td>
<td>28.030</td>
<td>25.359</td>
<td>2.671</td>
</tr>
</tbody>
</table>

Total employees

2017= 418 thousand
279 thousand direct employees
140 thousand in industrial activities

2011-2017= 2.6 Mln
1,7 Mln direct employees
865 thousand in industrial activities

Font: Chamber of Deputies study, by Cresme
Impact of measure on State Budget

Estimate of the economic and financial impact of the incentives (M€ discounted to 2017)

Font: Chamber of Deputies study, by Cresme
Impact on national economy

Further economic estimates of measures (M€)

- Higher income from investment (+)
- Increased consumption by new employees (+)
- Minor tax revenue for reduction of energy consumption (-)

POSITIVE BALANCE of About 8.8 billion euros

Font: Chamber of Deputies study, by Cresme
Thanks for your attention!

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