



Development of European Ecolabel Criteria for Buildings

The Energy Issues in the use phase

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The energy issues in the use phase

- The energy aspects will be referred to the criteria included in EPBD (Directive 91)
- Building projects that will be presented from the 1° January 2010 will have to comply with the minimum requirements (Class C). The Eco-Label criteria should consider higher energy efficiency.
- Eco-Label criteria should consider also existing buildings with lower performance than new buildings
- The purpose for Eco-label criteria should consider mandatory energy efficiency class A for new buildings and class C for existing buildings
- It is also possible to establish optional criteria with different scores for buildings that could reach also higher classes such as: Class B, Class A, Class A+



Energy Efficiency criteria

| | Energy efficiency class | Mandatory | Assessment |
|-------------------|-------------------------|------------|-------------------------------|
| New building | A | yes | Energy Efficiency Certificate |
| Existing building | C | yes | |

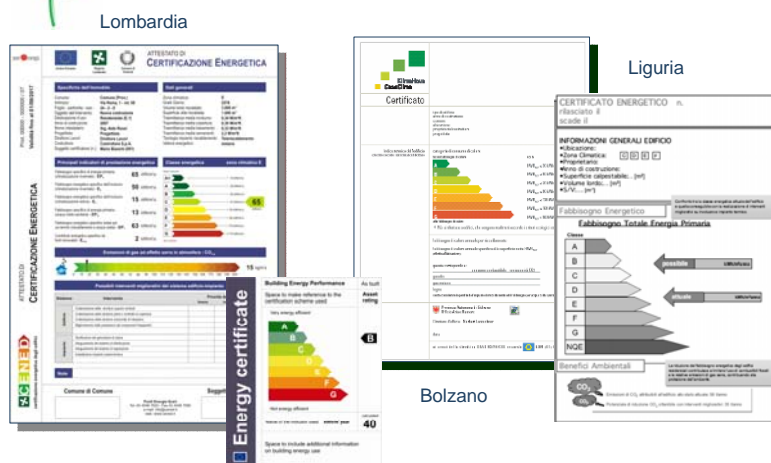
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Many different certification schemes in Italy



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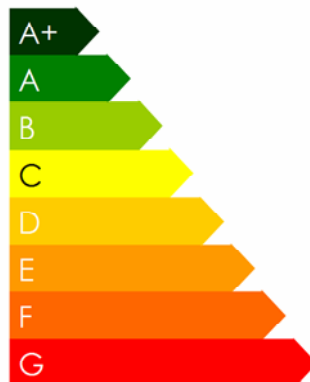
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Italian Guide Lines for Energy Certification

| |
|---|
| $\text{Classe } A_{i+} \leq 0,25 \text{ EPiL}_{(2010)}$ |
| $0,25 \text{ EPiL}_{(2010)} < \text{Classe } A_i \leq 0,50 \text{ EPiL}_{(2010)}$ |
| $0,50 \text{ EPiL}_{(2010)} < \text{Classe } B_i \leq 0,75 \text{ EPiL}_{(2010)}$ |
| $0,75 \text{ EPiL}_{(2010)} < \text{Classe } C_i \leq 1,00 \text{ EPiL}_{(2010)}$ |
| $1,00 \text{ EPiL}_{(2010)} < \text{Classe } D_i \leq 1,25 \text{ EPiL}_{(2010)}$ |
| $1,25 \text{ EPiL}_{(2010)} < \text{Classe } E_i \leq 1,75 \text{ EPiL}_{(2010)}$ |
| $1,75 \text{ EPiL}_{(2010)} < \text{Classe } F_i \leq 2,50 \text{ EPiL}_{(2010)}$ |
| $\text{Classe } G_i > 2,50 \text{ EPiL}_{(2010)}$ |



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Italian Guide-Lines for Energy Certification

Limit values for Energy Performance (Primary Energy. kWh/m² year)
(Residential buildings)

1/1/2010

Envelope surface / Volume

| S/V | ZONA CLIMATICA | | | | | | | | | |
|------|----------------|--------|--------|--------|---------|---------|---------|---------|---------|----------|
| | A | | B | | C | | D | | E | |
| | <600 DD | 601 DD | 900 DD | 901 DD | 1400 DD | 1401 DD | 2100 DD | 2101 DD | 3000 DD | >3000 DD |
| <0.2 | 8,5 | 8,5 | 12,8 | 12,8 | 21,3 | 21,3 | 34 | 34 | 46,8 | 46,8 |
| >0.9 | 36 | 36 | 48 | 48 | 68 | 68 | 88 | 88 | 116 | 116 |

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Italian Guide-Lines for Energy Certification

Limit values for Energy Performance (Primary Energy. kWh/m³ year)
(Non residential buildings)

1/1/2010

Envelope surface / Volume

| S/V | ZONA CLIMATICA | | | | | | | | | |
|------|----------------|--------|--------|--------|---------|---------|---------|---------|---------|----------|
| | A | B | | C | | D | | E | | F |
| | <600 DD | 601 DD | 900 DD | 901 DD | 1400 DD | 1401 DD | 2100 DD | 2101 DD | 3000 DD | >3000 DD |
| <0.2 | 2,0 | 2,0 | 3,6 | 3,6 | 6 | 6 | 9,6 | 9,6 | 12,7 | 12,7 |
| >0.9 | 8,2 | 8,2 | 12,8 | 12,8 | 17,3 | 17,3 | 22,5 | 22,5 | 31 | 31 |

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Energy Efficiency criteria (Mandatory)

Compact building (S/V = 0,3), Location: **Milan (DD 2400)**

| | Energy efficiency class | Indicator (kWh/m ² y) |
|-------------------|-------------------------|----------------------------------|
| New building | A | 44,4 |
| Existing building | C | 88,9 |

Small building (S/V = 0,8), Location: **Milan (DD 2400)**

| | Energy efficiency class | Indicator (kWh/m ² y) |
|-------------------|-------------------------|----------------------------------|
| New building | A | 23,4 |
| Existing building | C | 46,7 |

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Energy Efficiency criteria (Mandatory)

Compact building ($S/V = 0,3$), Location: **Rome (DD 1415)**

| | Energy efficiency class | Indicator ($\text{kWh/m}^2 \text{ y}$) |
|-------------------|-------------------------|--|
| New building | A | 30,8 |
| Existing building | C | 61,7 |

Small building ($S/V = 0,8$), Location: **Rome (DD 1415)**

| | Energy efficiency class | Indicator ($\text{kWh/m}^2 \text{ y}$) |
|-------------------|-------------------------|--|
| New building | A | 14,1 |
| Existing building | C | 28,2 |