



UNIVERSITÀ
DEGLI STUDI
DI TRIESTE

Regulatory Framework and Building Energy Design

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Italian interministerial Decree 26 June 2015 – Annex I

Buildings are classified, based on their intended use, in the categories referred to in article 3 of the Presidential Decree 412/1993

What if a building has more than one intended use?



If a building is made up of parts that can be identified as belonging to different categories, for the purpose of calculating the energy performance, they must be evaluated separately, each in its relevant category. The building is evaluated and classified based on the prevailing intended use in terms of air-conditioned volume

Interventions are divided in different types:

- New buildings
- Major renovations
- Energy requalifications

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New buildings

Building whose qualifying title was requested after the entry into force of this document

What is a qualifying title?



An authorization or permit issued by the relevant authorities, usually the municipal administration or local authorities, which allows an individual or company to carry out construction works on a building or a property

These qualifications are necessary to ensure that construction works comply with local building, safety and urban planning regulations and laws

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A brief focus on qualifying titles

DPR 380/2001	D.Lgs 222/2016	L.R. 19/2009
Building permit		
“Super” notification of activity commencement	“Super” certified notification of activity commencement	
Notification of activity commencement	Certified notification of activity commencement	
Communication of work starting	Sworn communication of work starting	Sworn free construction activity
Free construction activity		

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New buildings

Building whose qualifying title was requested after the entry into force of this document

The following situations are considered equal to new buildings:

- demolished and reconstructed buildings, regardless of the necessary qualification
- expansion of existing buildings, *including cases of recovery of existing volumes previously not air-conditioned or cases of change of intended use (e.g. recovery of attics, warehouses, etc.)*, if the new portion has a gross air-conditioned volume greater than 15% of the existing one or in any case greater than 500 m³

The extension can be functionally connected to the pre-existing volume or constitute a new real estate unit

In these case verification of compliance with the requirements must be conducted only on the new portion of the building

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New buildings

If the expansion is served through the extension of pre-existing technical systems, the calculation of the energy performance is carried out in reference to the technical data of the resulting common systems

If a major renovation (or an energy requalification) is carried out at the same time as the expansion?



Requirements established for both the expanded part (new building) and for the existing renovated or requalified part must be fulfilled, drafting separated checks and reports

If the new portion has a gross air-conditioned volume less than or equal to 15% of the existing one or in any case less than or equal to 500 m³?



Not considered as new building, but requirements for the building must still be respected for major renovations or for energy requalification depending on the interventions

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Major renovations

Interventions which affect the elements and integrated components constituting the building envelope which delimit a temperature-controlled volume from the external environment and from non-controlled environments, **with an incidence greater than 25 % of the overall gross dispersing surface of the building**

If the building is composed of multiple real estate units, the surface area of which to calculate the percentage of intervention incidence is the envelope of the entire building, constituted by the union of all the real estate units

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Major renovations

Two levels of major renovations are defined:

1. Major first level renovations

- Intervention on the building envelope for **more than 50 %** of the overall gross dispersing surface of the building
- **Renovation** of the heating and/or cooling systems serving the entire building

↳ *Modification of both production, distribution and/or emission systems, also including the transformation from a centralized to an individual heating system as well as the rearrangement of systems in individual real estate units, or in parts of the building, in case of installation of an individual heating system after detachment from the centralized heating system*

In such cases the energy performance requirements apply to the **entire building** and refer to its energy performance relating to the service or services considered

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Major renovations

Two levels of major renovations are defined:

2. Major second level renovations

- Intervention on the building envelope for **more than 25 %** of the overall gross dispersing surface of the building
- It **may** affect the heating and/or cooling system

In such cases, the energy performance requirements to be verified concern:

- the thermo-physical characteristics of the portions and elements of the building envelope affected by the energy requalification
- ~~the global coefficient of heat exchange by transmission (H'_{\mp}) determined for the entire wall, including all the components on which work has been carried out~~
- *compliance with thermal transmittance thresholds (comprehensive of thermal bridges) referred to in Appendix B, paragraph 1.1, point 2*

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Energy requalification

Interventions not attributable to the previous cases and that have an impact on the energy performance of the building:

➤ Interventions on the building envelope for **less than or equal to 25 %** of the overall gross dispersing surface of the building

and/or

➤ New installation, renovation or other partial interventions on the heating system serving the building, including the replacement of the generator

In such cases, the required energy performance requirements apply **only to the building components and systems subject to intervention** and refer to their relative thermo-physical or efficiency characteristics

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Some exceptions

The following are excluded from the application of the minimum energy performance requirements:

- restoration interventions on the building envelope which involve only finishing layers, internal or external, which have no influence from a thermal point of view, or resurfacing of portions of plaster which affect a surface area of less than 10 % of the overall gross dispersing surface of the building
- ~~ordinary maintenance interventions on existing heating systems~~
- *interventions on the existing systems aimed at maintaining their efficiency and safety, not involving any replacement of the system or its parts*

In the case of energy requalification interventions on the opaque casing which involve thermal insulation from the inside or thermal insulation in the cavity, regardless of the size of the surface involved, the transmittance thresholds referred to in tables 1 to 4 of Appendix B are increased by 30%