

EN



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels,

COMMISSION DECISION

on

establishing the ecological criteria for the EU Ecolabel for New buildings

(Text with EEA relevance)

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on

establishing the ecological criteria for the award of the EU Ecolabel for New buildings

(Text with EEA relevance)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Regulation (EC) No 1980/2000 of the European Parliament and of the Council of 17 July 2000 on a revised Community Eco-label award scheme¹, and in particular the second subparagraph of Article 6(1) thereof,

Whereas:

Under Regulation (EC) No 1980/2000 the Community Eco-label may be awarded to a product possessing characteristics which enable it to contribute significantly to improvements in relation to key environmental aspects.

Regulation (EC) No 1980/2000 provides that specific Eco-label criteria, drawn up on the basis of the criteria drafted by the European Union Eco-labelling Board, are to be established according to product groups.

It also provides that the review of the Eco-label criteria, as well as of the assessment and verification requirements related to those criteria, is to take place in due time before the end of the period of validity of the criteria specified for the product group concerned.

The ecological criteria, as well as the related assessment and verification requirements, should be valid until for five years from the date of notification of this Decision.

For new buildings, the ecological criteria should be divided into mandatory and optional criteria.

As regards the fees relating to applications for and use of the Eco-label by micro enterprises, as defined by Commission Recommendation 2003/361/EC of 6 May 2003², concerning the definition of micro, small and medium-sized enterprises it is appropriate, in order to take account of the limited resources of micro-enterprises and their particular importance within this product group, to provide for reductions additional to those provided for by Regulation (EC) 1980/2000 and Article 1 and 2 of Commission Decision 2000/728/EC of 10 November 2000 establishing the application and annual fees of the Community Eco-label³, accordingly to Article 5 of Commission Decision 2000/728/EC.

Measures provided for in this Decision are in accordance with the opinion of the Committee instituted by Article 16 of Regulation (EC) No 66/2010,

Commento [MSOffice1]: To be modified by the EC in accordance with the new Ecolabel Regulation 66/2010

¹ OJ L 237, 21.9.2000, p. 1

² OJ L 124, 20.05.2003.

³ OJ L 293, 22.11.2000, p. 18.

HAS ADOPTED THIS DECISION:

Article 1

1. The product group “new buildings” shall comprise “buildings considered in their entirety, as well as small houses, new, public or private, used for residential purpose and for use as offices”.
2. For the purposes of this Decision, individual apartments and flats in a building are excluded; garages and cellars are excluded.
3. New buildings are defined as buildings built and operational from the date of notification of this Decision;
4. A building has a residential purpose if it is used as, or is suitable for use as, a dwelling
5. Use as offices is meant for administrative, bureaucratic and educational activities, public or private;
6. An application form can comprise one or more than one building identical to each others, belonging to the same building license;
7. Applicant is meant to be owner or builder, public or private.

Article 2

1. In order to be awarded the EU Ecolabel for new buildings under Regulation (EC) N° 66/2010 (hereinafter "the EU Ecolabel"), a building shall fulfil all of the following requirements:
 - (a) it shall fall within the product group "new buildings"
 - (b) it shall comply with each of the criteria set out in Section A of the Annex of this Decision
 - (c) it shall comply with a sufficient number of the criteria set out in Section B of the Annex of this Decision, in order to acquire the requisite number of points as referred to in paragraph 2.
2. For the purpose of paragraph 1 c) the building shall acquire at least 24 points, as following:
 - a. At least 6 points for criteria within Documentation, Planning-Project-Construction, Impact on site issues;
 - b. At least 12 points for criteria within Materials and Energy issues;
 - c. At least 6 points for criteria within Health and well-being, Operation and maintenance, Facilities provided issues.

Article 3

The ecological criteria for the product group "new buildings", as well as the related assessment and verification requirements, shall be valid for five years from the date of notification of this Decision.

Article 4

For administrative purposes the code number assigned to the product group 'new buildings' shall be '...'.

Article 5

This Decision is addressed to the Member States.

Done at Brussels,

*For the Commission
Janer Potočník
Member of the Commission*

ANNEX FRAMEWORK

The aims of the criteria

The aims of criteria are:

- limit energy and water consumption,
- limit waste production and enhance recycling,
- favour the use of materials with high environmental performances;
- favour the use of renewable resources and of substances which are less hazardous to the environment,
- favour indoor well-being,
- promote information and education on the correct management of the building.

Assessment and verification requirements

The specific assessment and verification requirements are indicated immediately below each criterion in Sections A and B. Where appropriate, test methods and standards other than those indicated for each criterion may be used if their equivalence is accepted by the Competent Body assessing the application. Where the applicant is required to provide declarations, documentation, analyses, test reports, or other evidence to show compliance with the criteria, it is understood that these may originate from the applicant and/or his supplier(s) and/or their supplier(s), et cetera, as appropriate.

Competent Bodies shall carry out on site inspections before awarding the license. On site inspections can be carried out by independent and accredited experts according to the implementation of article 17 and 18 of the Directive 2010/... on the energy performance of buildings, after adequate training on the environmental criteria.

Commento [LC2]: Under approval.

Where appropriate, Competent Bodies may require supporting documentation and may carry out independent verifications. During the license period the Competent Bodies shall monitor compliance with criteria.

The Competent Bodies are recommended to take into account the implementation of recognised environmental management schemes, such as EMAS or ISO 14001, when assessing applications and monitoring compliance with the criteria. (*Note: it is not required to implement such management schemes.*)

General requirements

In order to apply for the Ecolabel the applicant needs to comply with European, national and local legal requirements. In particular, the building shall be:

1. built legally and respect all relevant laws or regulations of the locality in which it is built, especially those related to landscape and biodiversity conservation;
2. in compliance with European, national and local laws and regulations regarding energy conservation, water sources, water treatment and disposal, construction products and materials, waste collection and disposal, maintenance and servicing of equipment, safety and health dispositions;
3. completed and operational.

SECTION A

MANDATORY CRITERIA

Documentation

1. Building Book

The building shall have an information and description document (Building book) where are reported all information and technical characteristics about the building.

Assessment and verification: The Building Book shall provide at least following information:

- all technical characteristics of the building fabric
- all building related technical installations
- the operational building management
- the year of construction and commissioning
- the owner or owners of the building
- the architect/designer,
- project data and design plans,
- the building permission
- the energy certificate according to the Energy Performance for Buildings Directive
- where relevant and applicable the permission for (specific) use of the building
- relevant fire inspection reports and/or certificates (including specification of fire escape routes and passive and active fire safety provisions and where relevant their certificates and inspection reports (e.g. fire doors, fire escape doors, escape route signs, extinguishers, smoke ventilators, sprinkler installations, etc.)
- accessibility and escape routes
- the report of the environmental assessment and/or certificates where applicable
- technical installations, including their maintenance and inspection schemes
- the maintenance, replacements and renovation plans
- any renovation and modification that were carried in the past
- certifications awarded
- evidence of failures, damages, repairs, fire and/or explosion incidents
- remarks from users or third parties and corrective actions undertaken
- Other relevant information

The owner is responsible for the Building Book and its accuracy of the information.

The Building Book may be updated and tracked by the building's manager, such as the administrator for residential buildings, or any other professional for offices and schools.

2. Maintenance plan

The building shall have an explicit plan for maintenance and efficient operation of the facility, covering all technical systems, system maintenance and replacement guidance over at least a 10-year period.

Maintenance plan shall guarantee the adequate working of filter systems.

Assessment and verification: The applicant shall provide the Maintenance plan showing compliance with the criterion.

3. User's guide

The building shall have a User's guide giving information on the use of the building and on its equipments.

Assessment and verification: The applicant shall provide documentation showing compliance with the criterion. In particular, the User's guide, shall contain specific information on the correct use of plants and equipments directly managed by the users, e.g radiator valve adjustment, air conditioners etc. The User's guide can be provided both as single document or as specific instruction for every appliances/equipments directly managed by the users.

Planning - Project - Construction

4. Design for disassembly, re-use, recycling

The List of materials (Annex I) shall indicate, for each kind of materials or products, information for disassembling, reuse, recycling.

Assessment and verification: The applicant shall provide information fulfilling the apposite sector in the Annex I.

5. Social responsibility during the construction phase

Assessment and verification: prEN 15643-3 Sustainability of Construction Works - Assessment of Buildings - Part 3: Framework for the assessment of social performance.

Commento [LC3]: Criterion under evaluation.

Impacts on site

6. Heat island

In order to avoid the Heat island effect, for areas classified from BWh to Csb according to the Koeppen Climate Classification System⁴, the building shall use passive systems.

Assessment and verification: The applicant shall provide documentation listing the measures taken in order to reduce the Heat Island effect (such as for instance planting of local trees, use of light colours for exposed external surfaces (albedo effect), solar screens, green roofs, green vertical gardens, etc.).

Materials

7. List of materials/products

The List of materials/products shall contain materials and products used for the building manufacturing and related quantity at the least for the 90% by weight.

All products and materials used for interiors (including floor coverings, windows, doors, partitions, paint and varnishes, plasters and their components and auxiliary materials - glue, resins, foams, ..) shall be reported in the List of materials.

⁴ For details see: Peel, M. C. and Finlayson, B. L. and McMahon, T. A. (2007). "[Updated world map of the Köppen-Geiger climate classification](#)". *Hydrol. Earth Syst. Sci.* **11**: 1633-1644.

Assessment and verification: The applicant shall provide the List of materials/products compiled according to the format presented in Annex I.

8. Wood based materials

At least 30% wood-based material shall originate from reuse-recycling and/or from sustainable managed forests which have been certified by independent third party schemes fulfilling the criteria listed in paragraph 15 of the Council Resolution of 15 December 1998 on a Forestry Strategy for the EU and further development thereof.

Assessment and verification: The applicant shall provide documentation from the wood supplier indicating the types, quantities and precise origins of wood used in the building. The applicant shall provide certificate(s) showing that the certification scheme correctly fulfils the requirements as laid down in paragraph 15 of the Council Resolution of 15 December 1998 on a Forestry Strategy for the EU.

9. Wood materials

At least 60% of solid wood shall originate from reuse-recycling and/or from sustainable managed forests which have been certified by independent third party schemes fulfilling the criteria listed in paragraph 15 of the Council Resolution of 15 December 1998 on a Forestry Strategy for the EU and further development thereof.

Assessment and verification: The applicant shall provide documentation from the wood supplier indicating the types, quantities and precise origins of wood used in the building. The applicant shall provide certificate(s) showing that the certification scheme correctly fulfils the requirements as laid down in paragraph 15 of the Council Resolution of 15 December 1998 on a Forestry Strategy for the EU.

10. Long life service materials

For external and internal coverings and partitions, doors, windows and plants the service-life shall be declared according to technical specification provided by producers. Materials and products having a service life lower than 10 years shall not be used.

Assessment and verification: The applicant shall provide information compiling the apposite section of the List of materials (Annex I) and providing product datasheets.

11. Plastic materials

At least 90% by weight of plastic parts/products used for the building manufacture shall be visibly labelled for recycling according to ISO 11469 standard.

Assessment and verification: The applicant shall provide proper indication in the List of materials (Annex I).

Energy

12. Energy efficiency - Heating

The primary energy requirement for heating shall be not higher than 30 kWh/m²*year

Assessment and verification: The applicant shall provide the energy efficiency certification showing the annual energy use per area for heating expressed as kWh/m²*year.

13. Renewable energy source

At least 50 % of the energy used for all purposes shall come from renewable energy sources.

Assessment and verification: The applicant shall provide documentation showing compliance with the criterion, in particular the share and the type of renewable energy provided.

Water consumption and management

14. Rainwater use

The building shall have a rainwater harvesting system. The collected water shall be used for toilet flushing and/or laundry and/or garden, etc.

Assessment and verification: The applicant shall provide documentation showing compliance with the criterion providing at least information on the capacity of collecting system and main uses of collected water.

15. Water saving systems

A) The average water flow of the taps and shower heads, excluding kitchen and bath tub taps, shall not exceed 8 litres/ minute.

B) WCs shall be dual-flushing toilets consuming 6 liter / 3 liter per flush.

Assessment and verification: The applicant shall provide a detailed explanation of how the building fulfils this criterion, together with supporting documentation.

Waste management

16. Recycling facilities

The building shall have common waste areas in order to differentiate domestic and special wastes, produced by the building's users, in accordance with local regulations.

The criterion does not apply to one-family houses if they are not part of a condominium.

Assessment and verification: The applicant shall provide documentation showing compliance with the criterion.

Health and well-being

17. Dust

The building shall have apposite service rooms for placing machines generating dust (such as printers, copy machines, plotters, etc.).

The criterion shall only apply to offices and schools.

Assessment and verification: The applicant shall provide documentation showing compliance with the criterion.

18. Radon

Radon concentration shall be at least 10% lower than the limit indicated by the Commission Recommendation 90/143/Euratom of 21 February 1990 on the protection of the public against indoor exposure to radon for New Buildings, namely < 180 Bq/m³.

Assessment and verification: The applicant shall provide a declaration from a professional technician accredited indicating compliance with this criterion.

19. Day lighting - Common areas

The Daylight Factor in every common areas (e.g. Halls, Staircase, ..) shall be > 5%.

The Daylight factor is defined as follow:

$$DF = SC + ERC + IRC$$

where:

SC = light from the patch of sky visible at the point considered, expressed as the sky component,

ERC = light reflected from opposing exterior surfaces and then reached the point, expressed as the externally reflected component,

IRC = light entering through the window but reaching the point only after reflection from internal surfaces, expressed as the internally reflected component.

Assessment and verification: The applicant shall provide a technical report from a professional technician reporting the list of rooms taken into consideration, the assessment method used and the result values.

20. Lighting system control

The lighting system present in common area of the building (such as staircases, hallways, bathrooms for offices and schools, etc.) shall be equipped with automatic shutdown.

Assessment and verification: The applicant shall provide documentation showing compliance with the criterion.

21. Day lighting - Glare Control

Offices and school rooms and rooms used during the day in residential building shall have a Daylight Glare Index (DGI)⁵ lower than 20.

$$DGI = 10 \log \sum_{i=1}^n Gi$$

where

$$Gi = 0,478 \cdot \left(\frac{L_s^{1,6} \cdot \Omega_i^{0,8}}{L_b + 0,07 \omega^{0,5} \cdot L_w} \right)$$

where

⁵ Bellia L, Cesarano A., Iuliano G.F., Spada G., *Daylight glare: a review of discomfort indexes*, Detec – Università degli Studi di Napoli Federico II.

L_s is the luminance of each part of the source [cd/m²];

L_b is the average luminance of the surfaces in the environment, within the field of view [cd/m²];

L_w is the weighted average luminance of the window, in function of the relative areas of sky, obstruction and ground [cd/m²];

ω is the solid angle of the window [sr];

Ω is the solid angle of the source, modified in function of the line of sight [sr].

Assessment and verification: The applicant shall provide a technical report from a professional technician reporting the list of rooms taken into consideration, the assessment method used and the result values.

22. Integrated indoor well-being

The building indoor environment shall comply with the EN 15251 standard, integrating thermal environment, indoor air quality and ventilation rates, humidification and dehumidification, lighting and noise indicators.

Assessment and verification: The applicant shall provide a technical report from a professional technician indicating compliance with this criterion according to the ISO 15251 standard (Annex II).

23. Day lighting - Daylight Factor

The Daylight Factor in each room of the building shall be > 3%. Criterion does not apply to store-rooms and other service-rooms.

The Daylight factor is defined as follow:

$$DF = SC + ERC + IRC$$

where:

SC = light from the patch of sky visible at the point considered, expressed as the sky component,

ERC = light reflected from opposing exterior surfaces and then reached the point, expressed as the externally reflected component,

IRC = light entering through the window but reaching the point only after reflection from internal surfaces, expressed as the internally reflected component.

Assessment and verification: The applicant shall provide a technical report from a professional technician reporting the assessment method used and the result values.

24. Materials used for the interiors

Materials and products used for interiors (floor coverings, windows, doors, partitions, paint and varnishes, plasters and their components and auxiliary materials - glue, resins, foams, ..) shall not contain substances or preparations/mixtures meeting the criteria for classification as toxic, hazardous to the environment, carcinogenic, mutagenic or toxic for reproduction (CMR), in accordance with Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures OJ L 353, 31.12.2008, p. 1., or substances referred to in Article 57 of Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

(REACH), establishing a European Chemicals Agency OJ L 396, 30.12.2006, p. 1. or substances that meet the criteria of Article 57 of Regulation (EC) No 1907/2006 and that are identified according to the procedure described in Article 59 of that Regulation, present in mixtures, in an article or in any homogeneous part of a complex article in concentrations higher than 0,1 % (weight by weight).

Assessment and verification: The applicant shall provide EU Ecolabel certification or Material Safety Data Sheets.

25. VOC emissions in indoor environment

The VOC emissions from the building products used for interiors shall comply with the EN ISO 16000-9 to -11 standard.

Assessment and verification: Test report based on the outlined method in EN ISO 16000-9 to -11.

Facilities provided

26. Common TV antenna

The TV antenna, or equivalent equipment, shall be centralised.

Assessment and verification: The applicant shall provide documentation showing the compliance with the criterion

27. Transport facilities

The building shall have:

- for residential buildings no more than 1 car-place for flat;
- for offices/schools buildings no more than 1 car place for the 30% of employed persons.

The building shall have facilities for charging electric vehicles and open-space parking for LPG vehicles.

Car places shall include a percentage reserved to pregnant women and disabled persons (5%).

Assessment and verification: The applicant shall provide documentation showing the compliance with the criterion.

28. Cycle Facilities

All building users shall have adequate cycle storage facilities, either indoor or outdoor to ensure dry storage of bicycles.

Assessment and verification: The applicant shall provide documentation showing compliance with the criterion.

Fitness for use

29. Test of building and equipments

The building book shall contain evidence of final tests carried out on the structure of the building and on its equipments.

Assessment and verification: The applicant shall provide documentation showing compliance with the criterion.

SECTION B

OPTIONAL CRITERIA

Each of the criteria set out in this Section has been attributed a value expressed in points or fractions of points. In order to award the EU Ecolabel, the building must score a minimum of 24 points, according to:

- At least 6 points for criteria within Documentation, Planning-Project-Construction, Impact on site issues;
- At least 12 points for criteria within Materials and Energy issues;
- At least 6 points for criteria within Health and well-being, Operation and maintenance, Facilities provided issues.

Documentation

30. Other environmental certification systems (up to 3 points)

The building shall have an ISO type I environmental certification according to:

- A) if the certification is a Threshold Level (like the EU Ecolabel) - 3 points;
- B) if the certification is a Rating System;
 - B1 - 3 points for the first upper level;
 - B2 - 2 points for the second-upper level;
 - B3 - 1 point for the third-upper level.

Assessment and verification: The applicant shall provide valid Certification as awarded by the Certification Body.

Planning - Project - Construction

31. Site selection (2 points)

The site location shall prefer:

- abandoned areas (residential or industrial);
- fringe areas in urbanised zones.

Assessment and verification: The applicant shall provide documentation reporting the previous use of the area.

32. Experience of designers in environmental construction (2 points)

The design's team shall demonstrate experience with environmental building design in at least two projects carried out in the last five years.

Assessment and verification: The applicant shall provide documentation showing compliance with the criterion. In particular projects shall show at least the adoption of following measures (indicative list):

- The use of renewable energy sources
- Bioclimatic architecture
- Use of construction materials and products complying with Ecolabels ISO type I

- Water efficiency
- Waste reduction

33. Quality Management System (2 points)

Companies in charge of the construction of the building shall have a Quality Management System according to the ISO 9001 standard.

Assessment and verification: The applicant shall provide documentation, such as the QMS certification according to ISO 9001 standard.

34. Building Life Cycle Assessment (LCA) (3 points)

A Life Cycle Assessment shall be produced for the building according to the ISO14040 standard.

Assessment and verification: The applicant shall provide documentation such as calculation made according to CEN/TC 350 - prEN 15978 (Sustainability of construction works - Assessment of environmental performance of buildings - Calculation method) or LCA studies carried out according to standard ISO 14040.

35. Environmental Management System (up to 2 points)

Companies in charge of the construction of the building shall have an Environment Management System according to EMAS regulation (2 points) or ISO 14001 standard (1 point).

Assessment and verification: The applicant shall provide the EMS certification according to EMAS regulation or ISO 14001 standard.

36. Construction and demolition waste (3 points)

At least 75% of construction and demolition wastes generated during the construction phase shall be reused or recycled.

Assessment and verification: The applicant shall provide the waste management plan and relative documentation showing compliance with the criterion.

Impacts on site

37. Green areas (1 point)

In the green areas, existing trees shall be preserved and species belonging to the local dynamic series shall be used.

Assessment and verification: The applicant shall provide documentation showing compliance with the criterion.

38. Heat island (1 point)

In order to avoid the Heat island effect, for areas classified from Af to Aw and from Cwa onwards according to the Koeppen Climate Classification System⁶, the building shall use passive systems.

Assessment and verification: The applicant shall provide documentation listing the measures taken in order to reduce the Heat Island effect (such as for instance planting of local trees, use of light colours for exposed external surfaces (albedo effect), solar screens, green roofs, green vertical gardens, etc.)

Materials

39. Energy embodied in materials/products (2 points)

Energy embodied values shall be declared for at least 50% by weight of materials/products reported in the List of materials.

Assessment and verification: The applicant shall provide the List of materials (Annex I) with information provided by calculations made according to the CEN/TC 350 - FprCEN/TR 15941 (Sustainability of construction works - Environmental product declarations - Methodology and data) or EPDs made according to ISO 14025 standard or literature data.

40. Use or re-use of recycled materials/products (2 points)

At least 30% by weight of materials/products used for building's manufacturing shall originate from re-used or recycled materials. Re-used/recycled materials/products must not contain asbestos, PCB or heavy metals (mercury, cadmium, lead).

Assessment and verification: The applicant shall provide information compiling the apposite section of the List of materials (Annex I) and providing a declaration of producers on the content of asbestos, PCB and heavy metals (mercury, cadmium and lead) or MSDS (Material Safety Data Sheets).

41. Responsible sourcing of materials (2 points)

At least 30% by weight of products/materials used for building's manufacturing shall come from producers operating according to the SA8000 standard.

Assessment and verification: The applicant shall provide information compiling the apposite section of the List of materials (Annex I) and providing a copy of related certification of producers.

42. Use of materials/products locally produced - non-structural functions. (2 points)

At least 30% by weight of products/materials used for non-structural functions shall come from a distance not longer than 500 km.

Assessment and verification: The applicant shall provide information compiling the apposite section of the List of materials (Annex I) and providing documentation showing the origin from materials/products (such as invoices, delivery notes, declarations from producers).

⁶ For details see: Peel, M. C. and Finlayson, B. L. and McMahon, T. A. (2007). ["Updated world map of the Köppen-Geiger climate classification"](#). *Hydrol. Earth Syst. Sci.* **11**: 1633-1644.

43. Use of materials/products locally produced - structural functions (2 points)

At least 30% by weight of products/materials used for structural functions shall come from a distance not longer than 300 km.

Assessment and verification: The applicant shall provide information compiling the apposite section of the List of materials (Annex I) and providing documentation showing the origin from materials/products (such as invoices, delivery notes, declarations from producers).

44. Labelled construction products (2 points)

At least 20% by weight of all materials/products used in the building shall have been awarded the EU Ecolabel or other national or regional ISO Type I Ecolabels.

Assessment and verification: The applicant shall provide information compiling the apposite section of the List of materials (Annex I) and providing a copy of related certification for materials/product, showing at least the certification body, the number of licence.

45. CO₂ embodied in materials/products (2 points)

GWP assessment values (as CO₂ eq) shall be declared for at least 50% by weight of materials/products reported in the List of materials.

Assessment and verification: The applicant shall provide the List of materials (Annex I) with information provided by calculations made according to the CEN/TC 350 - FprCEN/TR 15941 (Sustainability of construction works - Environmental product declarations - Methodology and data) or EPDs made according to ISO 14025 standard or literature data.

46. Indoor and outdoor paints and varnishes, coverings materials (up to 2 points)

a) At least 50 % by weight of the indoor and/or outdoor painting used in the building shall be awarded with the EU Ecolabel or other national or regional ISO Type I eco-labels (1 point).

B) At least 50 % by weight of covering materials used in the building shall be awarded with the EU Ecolabel or other national or regional ISO Type I eco-labels (1 point).

Assessment and verification: The applicant shall provide information compiling the apposite section of the List of materials (Annex I) and providing a copy of related certification for materials/product, showing at least the certification body, the number of licence.

Energy

47. Energy efficiency - Heating (3 points)

The primary energy requirement for heating shall be not higher than 15 kWh/m²*year.

Assessment and verification: The applicant shall provide the energy efficiency certification showing the annual energy use per area for heating expressed as kWh/ m²year.

48. Energy efficiency - Cooling and ventilation (3 points)

At least the 50% of the annual needs for ventilation and cooling shall be satisfied through the use of passive systems.

Assessment and verification: The applicant shall provide design documentation showing the total annual cooling and ventilation demand and the related sizing of plants.

49. Energy efficiency - Hot water (3 points)

At least the 50% of the annual needs for hot water production shall be satisfied through the use of passive systems.

Assessment and verification: The applicant shall provide design documentation showing the total hot water demand and the related sizing of plants.

Health and well-being

50. Domotic systems (up to 3 points)

Plants and equipment in the building shall be controlled and managed by domotic systems.

In particular domotic systems shall be foreseen:

- for Heating, Ventilation and Air Conditioning (HVAC) (point 1);
- for Lighting (point 0,5);
- for Natural lighting (point 0,5);
- for Audio and Video (point 0,5);
- for Security, including Fire protection (point 0,5).

Assessment and verification: The applicant shall provide documentation showing compliance with the criterion.

51. Natural ventilation (3 points)

The building shall adopt only natural ventilation systems, with the exclusion of sanitary and kitchen areas.

Assessment and verification: The applicant shall provide technical documentation showing compliance with the criterion according to the EN 15251 standard and following modifications.

Operation and Maintenance

52. Internal partitions and walls (up to 2 points)

Internal partitions and walls, without structural functions, shall be:

- removable and reusable (point 2);
- or removable and recyclable (point 1).

Assessment and verification: The applicant shall provide documentation showing compliance with the criterion.

53. Piping and cabling (up to 3 points)

Building utility systems (water, heating, ventilation, cooling, electrical) shall be planned and installed to facilitate ease of maintenance, monitoring and replacement.

Piping and cabling shall be placed in accessible spaces (such as service ducts, countertops, etc) with regular access points.

- water system (point 1);
- heating / ventilation-cooling system (point 1);

- electrical - ITC plant (1).

Assessment and verification: The applicant shall provide technical documentation showing compliance with the criterion.

Facilities provided

54. Open spaces, green areas, common areas (1 point)

The building shall have common recreational area. Rules of their use shall be reported in the User's Guide.

The criterion does not apply to one-family houses if they are not part of a condominium.

Assessment and verification: The applicant shall provide documentation showing the compliance with the criterion.