

EKOenergy's criteria for renewable heat and cold

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<https://www.ekoenergy.org/ecolabel/criteria/renewable-heat/>

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1. Introduction

EKOenergy is an international ecolabel for renewable energy. The ecolabel helps consumers find the best available renewable energy options. It is also a tool for consumers and sellers to speed up the energy transition and to communicate in a concrete and positive way about their commitment to a 100% renewable and sustainable world.

Only sellers who have signed the licence agreement for the use of the EKOenergy label can market (i.e. advertise and sell) EKOenergy-labelled heat and cold.

In the text hereafter, we mention only heat. The same rules apply, wherever applicable, to cold. Chapter 2-6 apply to off-site heat production (Scope 2), chapter 7 sets the criteria for on-site heat production.

2. Off-site heat production - Sustainability criteria

2.1 General requirement: fulfil all legal requirements

The production units where the heat originates from have to fulfil all legal requirements as well as all the requirements imposed by their permits.

2.2 Allowed types of renewable heat and specific requirements

A. Heat produced with heat pumps and by means of heat recovery

Heat produced by a heat pump and/or through heat recovery qualifies for EKOenergy if the installation uses electricity that fulfils EKOenergy's sustainability criteria. When the used electricity is hydropower, "fulfilling EKOenergy's sustainability criteria" includes a payment of a contribution to EKOenergy's Environmental Fund too. The origin of the electricity needs to be proven in a reliable way and without leaving any risk of double counting¹.

If only a part of the needed electricity qualifies for EKOenergy, no more than a proportional part of the produced heat can be sold/used as EKOenergy-labelled.

Heat pumps must have a Seasonal Coefficient of Performance (SCOP) of 3.40 or more.

When installations use ambient heat or cold from lakes and rivers, the operator needs to show that there is no significant impact on the aquatic ecosystems, e.g. because the impact on the temperature of the heat or cold source is negligible.

¹ See EKOenergy's criteria for electricity for more information about accepted ways of proving the origin of electricity.

When installations use waste heat (or cold) EKOenergy only accepts unavoidable heat (or cold) which would otherwise be dissipated unused in air or water².

However, the following waste heat never qualifies for the EKOenergy ecolabel:

- heat resulting from electricity production unless when and to the extent that the produced electricity qualifies for EKOenergy.
- heat from installations belonging to the fossil and nuclear energy sector's production chain.

B. Solar thermal energy

Solar thermal energy qualifies for EKOenergy if;

- the installation is building-integrated, or
- if the heat is generated through installations that are not located in:
 - a) Nature reserves designated by the authorities.
 - b) Natura 2000 areas (<http://natura2000.eea.europa.eu/>).
 - c) Important Bird Areas (<http://www.birdlife.org/datazone/site/search> > view maps).
 - d) UNESCO World Heritage Sites (see <http://whc.unesco.org/en/254/>).

EKOenergy's Board can add other types of protected areas to this list, in cooperation with national and local environmental organisations. This is only possible if there are clear maps available and if these can be shared on EKOenergy's website.

On the other hand, EKOenergy's Board can accept installations within the listed protected areas, taking into account the legislation in force at the place of production as well as the conservation objectives of these areas. The decision will be taken after consultation of local stakeholders.

C. Geothermal heat³

Geothermal heat qualifies for EKOenergy if the geothermal installations use best available technology to avoid the escape of greenhouse gases and are not located in:

- a) Nature reserves designated by the authorities.
- b) Natura 2000 areas (<http://natura2000.eea.europa.eu/>).
- c) Important Bird Areas (<http://www.birdlife.org/datazone/site/search> > view maps).
- d) UNESCO World Heritage Sites (see <http://whc.unesco.org/en/254/>).

EKOenergy's Board can add other types of protected areas to this list, in cooperation with national and local environmental organisations. This is only possible if there are clear maps available and if these can be shared on EKOenergy's website.

² Note: Some of this recovered heat (or cold) may not be considered as renewable in all situations or under all legislation and standards. Consumers willing to communicate about the renewability of their heating need to check this on a case by case basis. In such situations, the EKOenergy label can anyway be used, even though EKOenergy is in principle an ecolabel for renewable energy only.

³ These criteria are the same as those that exist for EKOenergy-ecolabelled electricity from geothermal energy.

On the other hand, EKOenergy's Board can accept installations within the listed protected areas, taking into account the legislation in force at the place of production as well as the conservation objectives of these areas. The decision will be taken after consultation of local stakeholders.

D. Heat produced with EKOenergy-eligible renewable gas

Heat produced with renewable gas qualifies for EKOenergy if, and to the extent that, the used gas

- Fulfills EKOenergy's sustainability criteria for renewable gas.
- Or is produced through a power-to-gas process using EKOenergy-eligible electricity (with regard to hydroelectricity, this also includes the payment of a contribution to EKOenergy's Environmental Fund).

E. Heat produced with bioenergy

E.1 Accepted sources of bioenergy

1. Biogenic waste that cannot be used as food or feed, while respecting the waste hierarchy⁴.

- Agriculture residues including manure and crop residues⁵.
- Organic residues of production processes (so called processing residues), e.g. residues from the food industry (such as bakery or brewery waste) or forest industry by-products and waste products (such as sawdust or bark).
- Biomass originating from nature management in accordance with a nature management plan approved by a national or regional nature protection agency

2. Woody biomasses

- Forestry biomass, but always excluding:
 - Stumps and roots
 - Logs with a diameter of more than 10 cm
 - Woody biomass harvested from protected areas, unless harvested in implementation of a nature management plan as specified above.
 - Rotten wood
- Short-rotation coppice, unless harvested from land that was forested or had a high conservation value before being planted with short-rotation species.

3. Sewage or waste water

4. Landfill gas

4 The following waste hierarchy shall apply as a priority order in waste prevention and management legislation and policy: (a) prevention, (b) preparing for re-use, (c) recycling, (d) other recovery, e.g., energy recovery, (e) disposal. (See for example article 4 of the EU Waste Framework Directive 2008/98/EC).

5 Crop residues are defined as an integral part of the commercial production of agricultural crops; these may include damaged or misshapen fruit or vegetables, trimmings and other plant parts which are not the intended end product, such as straw, leaves or tops. These can be collected from the field or from a packing unit, prior to leaving the farm-gate. Agricultural residues also include crops from excess production and biomass originating from intercropping cultivations which are not used as food.

E.2 Rules regarding to co-fuelling

The installation is essentially a 100% renewable energy installation. Other, non-renewable fuels are used only for starting up the combustion and in exceptional circumstances. The use of peat is never allowed.

If a production device uses both eligible forms of bioenergy and other types of bioenergy, it can only produce EKOenergy-eligible electricity and heat in the same proportion as EKOenergy-eligible bioenergy has been used. The proportion is calculated on an annual basis.

3. Off-site heat production - Climate and additionality

For each MWh of sold EKOenergy-labelled heat, there is a contribution of at least 0.10 € (ten cents) to EKOenergy's Climate Fund. These contributions are used to finance projects that stimulate further investments in renewable energy, in particular renewable heat and cold, and that contribute to the realisation of the UN Sustainable Development Goals.

Licensed sellers and users of EKOenergy-labelled heat will get communication materials such as texts and pictures about these projects.

EKOenergy will not set up its own projects, but will select projects proposed by experienced organisations, through an open, transparent and fair selection process.

4. Off-site heat production - Proving the origin and avoidance of double counting

To ensure that the renewable heat has really been produced and to avoid double counting, the origin of the heat needs to be efficiently tracked and the renewable attributes have to be cancelled/redeemed by or on behalf of the final consumer. In the European Economic Area, the origin needs to be proven with Guarantees of Origin.⁶

If there is no official Energy Attribute Certificate system for heat available, other systems can be used after the approval of the EKOenergy Board. The system will be approved if it is reliable, neutral, open to all interested market players, and if double counting is excluded.

If there is no Energy Attribute Certificate system at all in a given country, or if it is not available for whatever reason, the EKOenergy Board will evaluate the (contractual) tracking solution suggested by the seller and/or the consumer. The approval of such a system is temporary and can only be accepted if it is reliable, based on third-party verified information and if double counting is excluded.

⁶ As soon as the revised Renewable Energy Directive 2018/2001 enters into force.

A list of accepted registers and systems will be available on www.ekoenergy.org.

EKOenergy also allows the unbundled sale of tracking certificates but tracking certificates can only be used within the 'district heat network' where the heat has been produced.

The maximum time span between production and consumption is one year.

5. Off-site heat production - Auditing and verification

5.1 Sellers

Once a year, the Licensor organises an audit of the sales of EKOenergy-labelled energy. The audit is based on data that has previously been checked or certified by public authorities and/or reliable third-party certifying organisations, in particular information available on the accepted Energy Attribute Certificates.

If certified data is not readily available or if the Licensee is not able to share the required data and proofs, the information provided by the Licensee needs to be confirmed by an auditor complying with all the requirements of International Standards on Auditing and accepted beforehand by the Licensor.

As part of the audit, the Licensed seller also informs the Licensor about larger consumers of EKOenergy-labelled energy (consumption of at least 1 GWh/year).

5.2 Audit of the production

The fulfilment of the criteria will be checked at least once a year. The audit will be based on information that is made available by public authorities and other information provided and warranted by reliable third-party sources, e.g. information available via accepted Energy Attribute Certificate systems or information which is used to receive subsidies.

If such information is not available, the information needs to be verified by an auditor complying with all the requirements of the International Standards on Auditing and accepted beforehand by the Licensor.

6. Off-site heat production - Fees and contributions

The final seller (the seller to the end consumer) pays:

- Licence Fee: eight cents (0.08 €) per MWh of sold EKOenergy-labelled heat, to finance the network's activities and to support its actions to increase the demand for renewable energy.

If during a calendar year, more than 250 GWh of EKOenergy-labelled heat is sold to the same end-consumer, this fee doesn't have to be paid for the part exceeding 250 GWh.

- At least ten cents (0.10 €) per MWh of sold EKOenergy-labelled heat to finance renewable energy projects as described in paragraph 3 of these criteria.
- At least ten cents (0.10 €) per MWh of hydropower used to produce the EKOenergy-labelled heat, to finance river restoration projects.

Payments happen at least once a year, by 30th April of the year after the calendar year in which the heat has been used.

7. On-site heat production (Scope 1)

Energy consumers with own on-site renewable heat production (off-grid or grid-connected renewable energy installations) can also use the EKOenergy ecolabel under the following conditions:

- They fulfil the same criteria as required for off-site produced heat. If the annual consumption of on-site produced heat is higher than 1000 MWh, the user has to sign EKOenergy's Licence Agreement or involve an EKOenergy licensee.

OR

- The used gas and/or electricity is EKOenergy-ecolabelled and double counting is avoided: The EKOenergy ecolabel cannot be used for heat that has been added to a heat distribution network. If Energy Attributes Certificates (e.g. Guarantees of Origin) are issued for on-site heat production, these certificates have been redeemed to cover the on-site consumption.

8. Governance

Chapter 3 of EKOenergy's criteria for electricity 'EKOenergy – Governance structure and criteria for electricity' describes the decision structure of the EKOenergy Network.

- See www.ekoenergy.org → ecolabel → criteria.
- See also www.ekoenergy.org → about us → governance.