EKOenergy – Network and label

8.3 Specific requirements

C. Hydroelectric power

EKOenergy aims to promote the protection of habitats and ecosystems of free-flowing rivers, minimize impact on nature from existing installations and encourage hydropower industry to take environmental issues into consideration. The EKOenergy ecolabel aims to prevent and mitigate the adverse environmental impact of hydropower in the immediate site of the power plant and in the affected water course, and to compensate elsewhere.

EKOenergy does not support the construction of new hydropower dams in water bodies. We can accept power plants with dams that started operation before 1st January 2013. However, EKOenergy can also accept power plants constructed more recently if there are no negative impacts on the water body. For instance newer plants located in a water supply tunnel or in an irrigation canal may apply, as well as plants that do not dam the entire flow or the river.

Hydropower installations with a capacity of less than 1 megawatt may be dismissed if the electricity production is minor compared to the adverse environmental impact of the plant.

EKOenergy focuses on power plants that are able to provide information that is needed for ecolabelling.

Suomen luonnonsuojeluliitto

EKOenergy secretariat
c/o Finnish Association for Nature Conservation
Itälahdenkatu 22 b A, 00210 Helsinki, FINLAND
www.ekoenergy.org | virpi.sahi@sll.fi | +358 50 308 2457

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EKOenergy River Fund

EKOenergy hydroelectricity sellers contribute to the EKOenergy River Fund, in addition to the licence fee (see 6.3.) and the contribution to the Climate Fund (see 9.1.),

For each megawatt-hour sold as EKOenergy hydropower, a contribution of minimum 0,10 euro (ten eurocents) is paid into the River Fund. The hydroelectricity seller may apply for a discount for the River Fund fee if the plant where the electricity derives from has reached the advanced level in all three environmental criteria.

The EKOenergy River Fund is managed by the EKOenergy Secretariat, under the supervision of the EKOenergy Board. Costs related to the management of the Fund must not exceed 5% of the amount contributed to the Fund.

The funds raised for the River Fund are used to implement projects that help to avoid, reduce, mitigate or compensate the environmental damage caused by hydropower. An open call for projects is organized annually. The geographical target of the call takes into account the country of origin of the electricity production and the country where the electricity has been sold. Project proposals are evaluated by an independent expert panel. Important elements in the selection of the projects to be financed are ecological significance, cost-efficiency, ecological and social impact, opportunities for co-financing, communication potential and the financial solvency of the applicant.

The financed projects are managed by the beneficiaries who are in charge of the implementation and communication of the project. The EKOenergy Secretariat communicates about the project outcomes in collaboration with the suppliers from whom the money originated through EKOenergy sales.

Environmental requirements for hydroelectric installations

General requirements for EKOenergy (e.g. fulfilling all legal requirements, see 8.2.) assume that the operation of the hydropower plant is in compliance with its legal concession and permit documentation. In case authority has taken action to define a more advanced level of concession and permit conditions, this level must be followed.

In addition, EKOenergy sets specific environmental requirements for hydropower installations. They are applied in all hydropower plants except those located in a water supply tunnel or in an irrigation canal.

Environmental requirements for hydropower plants include three criteria: fish migration, water flow and river habitats. Each criterion includes basic performance level and advanced performance level. For the hydropower installation to qualify for EKOenergy, the basic level must be reached within each *three* criteria. In addition, an advanced performance level must be reached within *one* of the three criteria.

However, if the advanced level is reached in *two* criteria, it is possible to apply for liberation from the third criteria for a justifiable reason. EKOenergy Secretariat can allow the liberation after distinct examination and consideration.

Criterion 1. FISH MIGRATION. Fish can pass the hydropower plant

Goal description	**Fish species, typical for the water basin, can pass the hydropower installation upstream and downstream on their own as needed.**	**Indicators**
Basic level	A functional fish pass, suitable for the target species, exists. It is a natural bypass or a technical fish pass. Fish species and amounts of fish has been verified with monitoring.	Photograph, plant and fish pass on a map, report on the operation of the fish pass.
Advanced level	In addition, the monitoring is regular and according to the monitoring results, additional measures have been taken to improve the function of the fish pass. Measures have improved the conditions for upstream migration in the fish pass. Also downstream migration has been considered and measures have been taken to direct fish past the power plant.	Report on regular monitoring. Report on measures taken and their impact.

Criterion 1 is not applied in the following case: Power plant is located in a place where no fish could pass neither upstream nor downstream even before the construction of the applying power plant (and other plants of the water body) and the power plant operation does not diminish possibilities for fish migration on other river stretches.

Verification: Report on the power plant's location and operation, and on regulation of the water body in present situation and before the plant was build.

Criterion 2. WATER FLOW. The river is never dry.

Description	**The operation of the plant guarantees an adequate and uninterrupted flow in the river reach through bypass channel or through turbines and/or fish pass.**	**Indicators**
Basic level	Minimum water discharge at discharge points is defined by using average low flow as a reference. Hydro-peaking with zero flow to the bypass reach (if present) or to the lower channel i.e. tail race (if bypass is not present) does not occur in normal operation of the plant. Exceptional shortcutting and situations which leads to zero flows must be reported with a new established plan to avoid them.	Points of flow measurements on a map, flow curves (m^3/s), average low flow of the river (m^3/s), minimum discharge through plant (m^3/s), minimum discharge through fish pass and/or bypass (m^3/s), reports
Advanced level	In addition, ecological flow for the river has been defined for each season, including minimum flow, maximum flow, timing of flood events, speed of ramping up and down the peaking. It is applied in the operation of the power plant and the fish pass, and/or in the planning of relevant mitigation measures.	Report on ecological flow, report on application in the operation

Criterion 2 is not applied in cases where the plant is located in a water supply tunnel or in an irrigation canal.

In cases of plants with reservoirs high up in mountains/fells and a tunnel system for intake and outflow of water to power plants, criterion 2 is applied at discharge points downstream of the power plant.

Criterion 3. RIVER HABITATS. Stream-inhabiting species have a place to live and breed.

Goal description	**Habitats for species that inhabit and reproduce in the river ecosystems is available in the section of water body where the hydropower plant is located.**	**Indicators**
Basic level	All-year-round watered habitat, suitable for river organisms, is maintained or restored in the river reach or in a tributary reach, in a bypass (natural fishway or old natural reach) or in a compensatory reach built for this purpose. The habitat is accessible for the river organisms in relation to the plant site.	Report on quality and quantity of the habitats. General description, water levels and locations on a map. Area of habitats (total area in m2 or 100 m river stretch).
Advanced level	In addition, the function or habitats as a living and breeding environment for river organisms is monitored. The feedback from monitoring is applied to increase the quality and/or quantity of the habitats. The measures improve e.g. flow conditions and bottom substate.	Breeding result of specified river organisms (e.g. smolt production per hectare), report on measures to restore or improve habitats.

Criterion 3 is not applied in cases where plant is located in a water supply tunnel or in an irrigation canal.

In cases of plants with reservoirs high up in mountains/fells and a tunnel system for intake and outflow of water to power plants, criterion 3 is applied for downstream river reaches.

Applicant can, for justifiable reasons, apply for a modification for criterion 3 so that instead of fulfilling the basic level applicant chooses to pay an additional contribution of ten eurocents per megawatt-hour of the annual sales of EKOenergy to the River Fund. A justifiable reason may be for instance that creating habitats is proven to be impossible. A modification for the criteria can be accepted for one 5-year period.

Application procedure, publicity and validity period

Electricity from hydropower installations can only be sold as EKOenergy after an application procedure. The procedure where the plant(s) can be approved is as follows:

- Application to the EKOenergy Secretariat according to the Guidelines (ANNEX). The applicant is the producer of the electricity, or optionally the trader or seller.
- Fact-check and public consultation
- Decision-making on eligibility of the power plant(s) by the EKOenergy Secretariat

A separate application should be submitted for each power plant. All measures that are necessary to fulfil the requirements need to be completed before the approval can be issued.

Public consultation means that the application will be available online for a minimum of 30 working days. Relevant stakeholders and the EKOenergy Board are informed and asked to comment as needed. Relevant stakeholders include in particular national or regional environmental and fisheries NGOs and authorities, as well as member organizations of river basin management cooperation groups and owners of water areas.

The list of EKOenergy-approved hydropower plants is publicly available on www.ekoenergy.org. The list includes a summary report showing how the criteria were met by the power plant.

The approval of hydropower plants is valid for 5 years, thereafter the application can be renewed with updated information.

A hydropower plant will be removed at any time from the list if it does not fulfil

a) all legal requirements in force at the place of production and imposed by its permits (see also paragraph 8.2).

b) environmental requirements for hydroelectric installations (as described in paragraph 8.3.), as accepted during the issuing process and verified with application documents.

In case of force majeure that temporarily interrupts fulfilment of the criteria, an exception from removal can be applied. A force majeure is e.g. natural disaster or sudden legal conditions that clash with the environmental requirements of EKOenergy.