



## Allowing electricity from 5 Norwegian hydropower plants

**10 May 2013**

### Background

The Norwegian company ECOHZ wants to launch EKOenergy. That means that their sales department will try to sell EKOenergy in more than 15 European countries. (See also my mail of April 11th)

They would like to start selling electricity from the following plants:

Hydropower

Country	Name	Owner	Capacity	Year of construction (renovation)
Norway	Braskereidfoss	Eidsiva VannKraft AS	22 MW	1978
Norway	Kongsvinger	Eidsiva Energi Kraft AS	70 MW	1975 (2011)
Norway	Harpefossen	Opplandskraft DA	92 MW	1965
Norway	Hunderfossen	Opplandskraft DA	112 MW	1963
Norway	Embretsfoss	Embretsfoss kraftverkene DA	42 MW	1954 (2013)

ECOHZ has informed us already on the RECS market that they had difficulties to get in contact with Norwegian NGOs, and in particular to get concrete ideas from them about possible river restoration projects in and around rivers affected by the hydropower.

We promised them that we would take this over. As getting into closer contact with the Norwegian NGOs is top priority.

### Contacts

During the start-up of EKOenergy, we had already been in contact with the 6 main Norwegian NGOs. Most of them are interested, but gave our project a very low priority, 'because all Norwegian electricity is already green' (which is not true), and because 'Norway has it's own rules, and is not in the EU' (Which is only half true, most of the Directives about electricity and energy are valid in the EEA, and Norway is part of the EEA).

Anyway, we used the ECOHZ application as a good opportunity to recontact our Norwegian friends. We are moving in the right direction, but we have not been able to

really fully involve them, and we have not got any single concrete suggestion about possible river restoration projects in Norway.

Best contacts were with:

- Naturrestaurering: a group of scientists, focusing on river restoration.
- Sabima: an umbrella organization of nature NGOs and fisher organizations, focussing on the implementation of the Water Framework Directive in Norway.
- Naturvernforbundet (Norwegian Nature Conservation, member of the Friends of the Earth network)
- Our Norwegian speaking volunteer has called at least 3 important stakeholders from the direct surrounding of each of the suggested power plants. She contacted local activists, local authorities and river ecosystem scientists. She found these persons via internet and via-via.

We have informed all of them, and many more that we cannot wait any longer.

### List of river restoration measures

After comparing all pros and cons, we suggest to accept the list (we removed a small hydropower plant after comments of a local branch of Naturvernforbundet), together with the following list of measures

Note 1: these measures that CAN be funded from the income of the sales of EKOenergy. But money will only be granted once sales have led to contributions into the EKOenergy environmental fund, and after approval of the Board.

Note 2: Most of the suggested measures are located outside Norway. This isn't only because none of the contacted Norwegian stakeholders could suggest us concrete projects, but also because we expect that most of the first sales will take place in western Europe, where the green energy market is most active.

#### **1. Improved fish migration next to Kongsvinger hydropower plant (Norway)**



Kongsvinger hydropower plant is a run-of-the river plant in the River Glomma, the largest river in Norway. It is located seven kilometers downstream the city of Kongsvinger, in Hedmark County in the southeastern part of Norway. Annual power production is approximately 200 GWh.

River Glomma had previously a good population of long-distance migrating, large growing brown trout. Individual weights of 5-7 kg was common. This population has decreased due to migrating obstacles as hydropower dams, and degradation of spawning and nursery habitats. All hydropower dams are equipped with fish ladders, however, the functionality is often suboptimal to their potential.

A reconstruction of the Kongsvinger power plant a few years ago caused a different discharge pattern that calls for some improvements of the fish ladder. The entrance opening and the system to guide the water to the intake, have to be renewed. At the same

time a counter for automatic registration of fish ladder migration will be installed. Improved migration past Kongsvinger power plant is important, because it links spawning areas upstream to feeding areas downstream.

## 2. River restoration of Lower Havel (Untere Havel) (Germany)



The Lower Havel is one of the most important wetlands in Central Europe. The area suffered serious ecological degradation especially in the 20th century due to stream corridor construction projects.

NABU, the main German environmental NGO is now restoring the river to make it again a natural paradise. The restoration of the lower Havel is the largest project of its kind in Europe and will likely serve as a model for new and innovative approach to restoring degraded lakes and rivers, especially in light of the EU Water Framework Directive.

See [NABU's project website](#) for more information (in German).

## 3. Fish passage to Virtaankoski power plant (Finland)



Virtaankoski power plant is a small hydro power plant in the Tainionvirta river. The Tainionvirta river connects the Lake Päijänne and lake lands on its Eastern side. The first power plant at Virtaankoski was built on 18th century to serve the needs of a local mill. The power production began in 1913. It has been reconstructed in 1930, 1956 and 2007. The capacity of the power plant is 450 kW + 100 kW. Authorities suspended its operations in 2012 because of missing fish passage. All other obstacles hindering migration of seriously endangered Päijänne Trout (*Salmo trutta lacustris*) on Tainionvirta have been removed. Spawning areas upstream of Virtaankoski power plant have just been restored. The project would include technical plans of fish passage and its construction work.

## 4. Co-financing LIFE+ project Kleine Nete (Belgium)



Natuurpunt, the main environmental NGO in Belgium (Flanders), owns and manages 400 nature areas spread over the country. The NGO has now started a large-scale habitat restoration project in the Valley of the Kleine Nete. The project include purchase of lands along the river, restoration of floodplains and the construction of a fish passage at a water mill in the village of Viersel. The project happens in collaboration with the Flemish Nature

Agency and has got EU LIFE support. EKOenergy could participate by providing cofunding to the Kleine Nete project.

[Click here](#) for more information about the project (in Dutch).

## 5. Restoration of salmonid spawning grounds in the river Norina (Latvia)



The main Latvian environmental NGO [Latvian Fund for Nature \(LDF\)](#) aims at achieving stable fish migration conditions on the river Norina. This includes the removal of remnants of an old watermill dam and of a wooden construction about 1 km from the river Norina inflow into the river Salaca. These constructions hinder the upstream migration of lamprey as well as of aquatic invertebrates.

This measure will be organized in close cooperation with the North Vidzeme Biosphere reserve and supervised by a river restoration expert Andris Urtans. Monitoring of project results will be carried out by rangers and experts of the North Vidzeme Biosphere reserve.

## 6. Brooks lead to stream project (Finland)



The “Puroista syntyy virta” project improved migration and breeding conditions for salmon in the Isojoki-Lapväärtinjoki (Pohjanmaa) and the Karvianjoki (Satakunta). It was funded by Kraft & Kultur and its Finnish Ekoenergia fund. The project could continue:

- by building crayfish reservates to the upstreams of the project area and/or
- continuing fish-planting and river restorations
- buying a vacuum dredger to pump mud from meanders.

More information on the project website [here](#) (in Finnish).

## 7. Restoration of the Dommel Valley (Belgium – Netherlands)



The valley of the Dommel is a small, natural valley in its upper reaches, with, among others, very good developed alluvial forests, marsh zones and nutrient-poor grasslands, on the border between Belgium and the Netherlands. The main Belgian nature conservation organization (Natuurpunt) and the main Dutch Nature Conservation organization (Natuurmonumenten) work together to restore the valley of the Dommel. This includes the purchase of land along the river and the restoration of flood plains. The project has got LIFE support from 2007 to 2011.

[Click here](#) for more information (in Dutch).

### Status

Approved, the approval is valid until 10 May 2018.