



Naturskyddsföreningen

**Law, fund and strategy – the way towards truly  
green hydro power.  
by Ellen Bruno**

# Hydro power is good but should be great

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## FIRST

- Hydro power is an important part of our energy system and it is vital for us to be able to reach our goals to minimize climate change.
- The Swedish Society for Nature Conservation certify hydro power with its own certification system Bra Miljöval

## BUT

Hydro power has many negative effects on the local and regional environment that need to be addressed for it to be called truly sustainable.



# Swedish Hydro Power

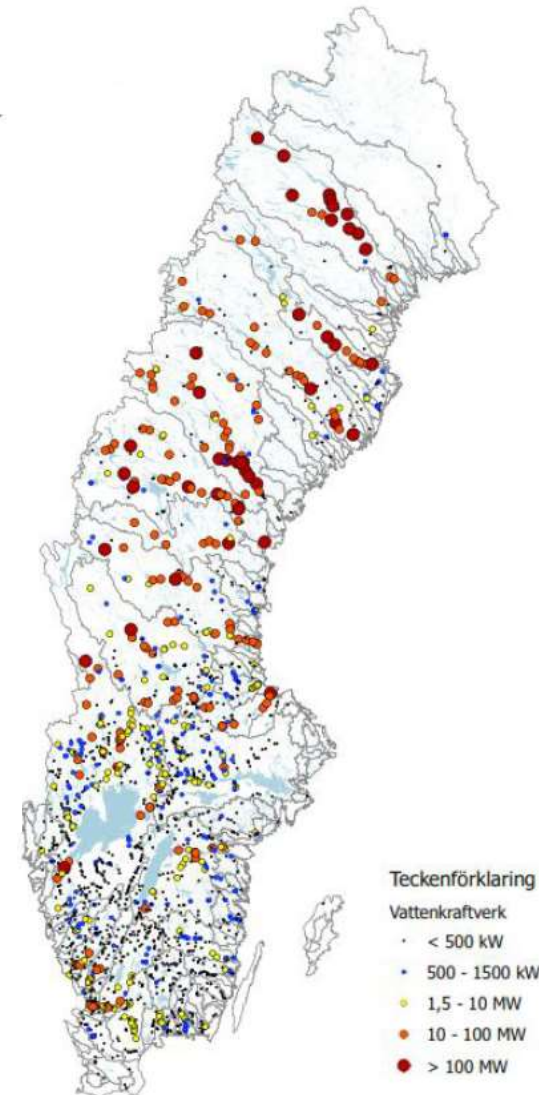
- 2 100 hydro power plants, of which 1700 are small scale

Tabell 4.2 Antal vattenkraftverk fördelade på olika storleksklasser och procent av total produktion.

Installerad effekt	Antal kraftverk	Procent av total produktion
> 10 MW	208	94 procent
1,5 till 10 MW	187	3,9 procent
125 kW till 1,5 MW	ca 680	2,1 procent
< 125 kW	ca 1030	0,5 procent

Källa: Havs- och vattenmyndigheten, *Vattenkraften i vattenförvaltningen – några resultat från statistiska analyser*, presentation från år 2013.

- Only those with effect over 1,5 MV are used for regulation to other power sources.



# What is the problem

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- Biodiversity in running water is threatened. Hydro power plants and dams are important reasons.
- Less than 5% of our hydro power plants have been assessed in relation to our environmental law.
- The EU Water Framework Directive and our national environment goals demand Good Environmental Statuses in all waters
- Only 2 % have functioning fish passages
- With the system we have today it will take 600 years to get modern permits for all hydro power plants.





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**What is happening in politics**

# Political progress

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- In 2006 the parliament demanded that Swedish hydro power should have rules for fish passage and environmental adaptations
- In 2012 the governmental "water activity investigation" was launched. Results came fall 2013 and spring 2014.
- There has been broad national dialogs every year since 2012
- In July 2014 the SwAM and the Energy Agency released the National Strategy for biodiversity and hydro power.
- So called high level meeting took place between NGOs and the sector during 2014 och 2015.
- Spring 2015 the parliament called for an efficient process for permits for small scale plants.
- The water agencies launched their programs of measures in 2015. They are currently being assessed by the government.
- The energy deal came in June 2016



# Proposal from the Water Activity Investigation

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- A system with new permits for power plants without modern permits.
- A system for more efficient reassessment of modern permits.
- Right for government to launch "general rules" for water activities.
- Permits with time limits.
- Environmental reports.





# The "National strategi for biodiversity and hydro power"

Prioritization tool – compare ecological values and values for electricity production and regulation capacity

Divides the big drainage areas into 6 groups with different level of ambition when it comes to environmental adaptation.

- In 60 out of 120 power plants over 10 MW (those with long dry river beds) more or less no adaptations that would reduce production or regulation
- In 60 out of 120 power plants over 10 MW – fauna passage and minimum flow.
- Rest of the power plants – minimum flow MLG and fauna passages

Should add up to around 2,3% of yearly production or 1,5 TWh





# ”High level” meetings - results

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## Solution should include:

Efficient system for giving and assessing permits (with time limits)

A national strategy to prioritize measures, should be reassessed every 6th year.



A fund for measures and (some) loss in production based on solidarity within the whole sector



# The "Energy deal"

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1. Swedish hydro power shall have environmental adaptation and reach Good Environmental Statuses or Good Environmental Potential;
2. The sector shall pay for all costs. Would be good if that could be arranged through a fund based on solidarity within the whole sector;
3. Property tax reduced so that the sector can manage the costs.



# Its time to smash

We have

A national strategi which should be reevaluated every 6 years

Money to create a fund based on solidarity

We need

A new law

Resources to courts and county administrations (nature and culture)





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**Until then**

# What can be done now

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- Acknowledge the values of environmental adaptation and fauna passages on a local and regional level. Adaptations give work, growth, tourism and well being.
- It is possible to do a lot on voluntary basis!
- Apply for money. Exist throug SwAM and Swedish Board of Agriculture and through Miljöfonderna.



# Miljöfonderna - Environmental Funds

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Aim at reducing the effect of hydro power on biodiversity in running water

Is produced through sold electricity from hydro power plants certified with Bra Miljöval. Around 1500-2500 kr per GWh.

Pay around 12 miljons Kr/year. Half through the central fund, the rest through company funds.





# Who gets funding

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- "Anybody" with a good idea on how to reduce the negative impact of hydro power on biodiversity in running water.
- All applications go through SSNC.
- Good if measures help threatened species
- Shall give durable effect
- Not to research or information spreading
- Shall be done in "Norden"



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**Thank you**

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