



Energy Systems
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Remarks on modernization of the Water Framework Directive to efficiently balance local and global environmental needs

Swedenergy is a non-profit industry and special interest organisation for companies involved in the supply, distribution, selling and storage of energy, mainly electricity, heating, and cooling. As the united voice of the Swedish energy sector, the organisation monitors and promotes the interests of its members and the energy sector in general. Swedenergy has a total of 400 members, which includes state-owned, municipal, and private companies as well as associations within the energy sector.

A sustainable society requires a holistic view on the use of water, balancing local environmental and human aspects against national and global societal needs

Swedenergy genuinely supports the aims of the Water Framework Directive (WFD) and welcomes that the European Commission has made water protection one of the priorities of its work. It is obvious and necessary to protect aquatic ecology, valuable habitats, drinking water resources and bathing water. However, a sustainable society requires a holistic view on the use of water, where local environmental and human aspects are balanced against other national and global environmental and societal needs. Dispatchable low-carbon electricity and heat production plays a crucial role when it comes to fulfilment of renewable energy and climate policies.

Swedenergy does not see any fundamental problems with the WFD that would motivate a full revision. However, environmental problems and priorities have changed significantly over the past 20 years, as well as the technology available to address them. Hence, it is reasonable to modernize parts of the WFD to make it more fit for purpose and to increase the coherence with other objectives. In this document, Swedenergy shortly would like to describe water use from a Nordic energy conversion perspective and point out a few matters regarding the WFD and its guidance documents that are important to our members.

It must be possible to operate and develop valuable energy conversion facilities under the WFD and its guidance documents

In electricity and heat production, water is utilized, e.g., for cooling of thermal power plants, or as a renewable “fuel” to power hydroelectric plants. Dispatchable power sources such as thermal and hydro are enablers of weather dependent sources since they provide necessary ancillary services and maintain the balance between generation and load. Nordic hydropower reservoirs can

store around 120 TWh of renewable energy – water – which makes it possible to install and balance large quantities of weather dependent generation in Northern Europe if that water can be utilized efficiently for electricity generation.

The construction of a dam to create a regulated water reservoir may change the characteristics of both the upstream and downstream water bodies quite substantially. Nordic hydropower projects are often cascade river systems, where the water reservoirs are semi-natural lakes. Most dams and power plants have been in place for a long time (50-100 years or even more) and the surrounding ecosystems have since long adapted to the new conditions. Stream water habitats have become lake habitats etc. There are certainly measures that could improve the ecological status of these waters and Swedenergy's members are fully dedicated to implement all measures that are expected to have a good ecological effect, and that can be done at a reasonable cost.

A sustainable society requires that valuable energy conversion facilities can be operated and developed under the WFD. Therefore, Swedenergy would like to stress the following:

- The designation Heavily Modified Water Body (HMWB) is key to allow hydropower facilities under the WFD. It is reasonable and desirable that most, if not all, hydropower facilities are designated as HMWB:s.
- It is not unrealistic that solutions to counteract climate change involve new thermal power plants. Hence, the conditions for exemptions under Article 4.7 should be broadened to allow also emitting operations of large environmental and societal value.

An efficient water management process is particularly important for Sweden due to our very large number of water bodies

Sweden has a quite small population – 10 million (2% of the European Union), but a very large number of water bodies – 27000 (20% of all European water bodies). Thus, both the administrative burden and costs for monitoring and measures are much larger for Sweden than for many other European countries – both in absolute terms and per capita. It is therefore extra important for Swedish companies and authorities that the WFD and its guidance documents promote an efficient water management process. Swedenergy would like to make the following remarks:

- To ensure effective measures, consideration of national specificities, an efficient implementation process and fair sharing of responsibilities and costs, it is important that all relevant stakeholders are involved in the development and implementation of the WFD.
- To enhance the commitment of individuals and companies, and to increase the private and public willingness to pay, environmental progress must be visible. In that regard, the “one-out-all-out principle”, i.e., that the quality factor with the lowest level determines the overall status, is counterproductive.

- The requirements of technical and economic feasibility, as well as significant measurable improvement of Art. 4 are very important and must be kept.
- It must be ensured that guidance documents are coherent with the WFD and with each other. Guidance documents should propose best practice procedures and targets rather than unspecific standard solutions, and they should not include additional obligations, which can never be legally binding anyway. Furthermore, obligatory reporting requirements should be kept at a minimum.
- To achieve measures that are truly effective, it is important to keep the current systemic approach of the WFD, where Biological Quality Elements (BQE) constitute main indicators and Hydromorphological Quality Elements are supporting indicators. The reason is that there is no overall valid connection between them.