

Carl Berglöf  
Swedenergy  
+46 701 64 44 46  
carl.berglof@energiforetagen.se

## Consultation on EU Taxonomy Delegated Acts: Comments from Swedenergy

Swedenergy collects and gives voice to around 400 companies that produce, distribute, sell and store energy. Our goal is to develop the energy industry – for the benefit of all, based on knowledge, an overall view of the energy system and in cooperation with our environment.

### Summary

#### General remarks

Electrification driven by high climate ambitions will lead to investments in the energy sector far above 100 bn € until 2045 in Sweden. This indicates large future capital costs. Thus, the taxonomy regulation may assist the transition of the Swedish energy sector. However, since DNSH criteria are set too high, a large part (87%) of the practically fossil-free electricity production and low-carbon heating will fall outside the taxonomy. The proposed criteria put access to green financing at risk and will thus not support the high climate ambitions of Sweden. Instead, the proposal may counter-act its purpose by introducing risk that lead to higher total investment costs.

DNSH criteria in the proposal are generally defined without reference to existing legislation. Criteria often define stricter environmental requirements than existing legislation. That introduces a double standard and undermines the environmental relevance of existing EU and national legislation. Without the possibility to refer to decisions of competent authorities on requirement fulfillment, it will be impossible to prove fulfillment of DNSH criteria. It is our strongest advice that every criterion of the delegated acts must refer to relevant EU legislation. Otherwise, the taxonomy will be practically impossible to use.

According to a study by Swedenergy, the effects of the taxonomy on the financial conditions for green investments are far reaching and impossible to quantify. The report is included in the attachment. Swedenergy fears that the proposal has much larger impact than intended, which leads us to the conclusion that the delegated act goes beyond the mandate of the Commission.

Judging from the proposed technology-specific criteria, Swedenergy concludes that the principle of technology neutrality (Article 19.1.a) has not been respected.

#### Hydropower

Hydropower is an important resource to combat and adapt to climate change and it is unfortunate that the proposal will increase the costs for operation and modernization of hydropower. The detailed criteria listed under 4.5 DNSH#3 are particularly problematic, because the taxonomy users cannot be expected to assess relevant biological and

hydromorphological mitigation measures. Such judgement requires comprehensive analysis both locally and on a system level and can only be made properly by an environmental court. Swedenergy strongly recommends that these criteria are replaced by references to relevant EU legislation, which is implemented in national law to assure long-term sustainability of European waters.

### **Bioenergy**

Bioenergy must be considered a long-term renewable energy source that enables substantial contribution to climate mitigation. Bioenergy used in the Nordic countries are produced from waste and residues and is essential to deliver on climate neutrality. District heating and cogeneration are capital intensive activities that require long-term investment conditions. Defining heating, cooling and electricity from bioenergy as transitional causes a major risk for the lenders to bind its capital to an activity that requires long-term obligations. The criteria proposed by the Commission will go beyond provisions in the RED Directive. This will cause overlap and confusion between the Taxonomy and relevant EU law.

### **Technologies outside the proposal**

The Commission has already underlined that waste-to-energy has a role to play in the circular economy. The Commission should further investigate, and invite the Platform on Sustainable Finance to consider, under what conditions waste-to-energy should be considered taxonomy-eligible.

Swedenergy also notes that nuclear power is not included in the proposal since the investigation on DNSH-criteria for nuclear power has not been completed.

Swedenergy regrets that not all relevant technologies that contribute substantially to climate mitigation are managed collectively in the same delegated acts.

### **General Remarks**

Swedenergy fears that a large part of Swedish electricity and heating sectors may not be considered taxonomy aligned according to the proposed delegated acts under the Taxonomy Regulation. Sweden has today a practically decarbonized electricity system. Nevertheless, large investments are foreseen until 2050 to meet an increased demand due to high electrification ambitions and to accomplish necessary reinvestments. Swedenergy finds it deeply problematic that large amounts of climate neutral production may be left outside the taxonomy given the high climate and environmental performance of the Swedish electricity and heating systems, the tremendous investment needs (more than 100 bn € until 2045) and the system's potential in driving the decarbonization of the entire society. The taxonomy, applied as proposed, would significantly increase the capital cost of the transition to a climate neutral economy in Sweden.

The criteria of the delegated acts should not go beyond other legislation within the EU or nationally. When financial criteria become stricter than current regulations, ordinary decision-making processes are overridden, which brings substantial legal uncertainty into activities that aim at improving climate and environmental performance. Thus, the criteria may counter-act the aim of already existing regulation and cause sub-optimized and more expensive environmental protection.

The Commission should ensure technology neutrality in the criteria of the taxonomy in line with article 19.1.a in the Taxonomy Regulation. Criteria specifically designed for individual activities create political arbitrariness. Swedenergy regrets that not all electricity production activities are included in the assessment, thus making the decision

basis incomplete. Moreover, the criteria within the proposal should be more streamlined. In particular, obligation (or non-obligation) to perform life-cycle analyses and reference to existing regulations as a sufficient criterion to be met.

Swedenergy affirms that the individual delegated acts set ambitious targets to fulfil their own purposes, in this case climate change mitigation and adaption, but the purpose of the DNSH criteria of each delegated act is to assure that no significant harm is made to any of the other values; in our view that is to reach an acceptable level. Swedenergy strongly advice that the compliance with EU-law is used to define that acceptable level when it comes to the DNSH-criteria. Maximising the ambitions in all directions, in every document will exclude many activities that are necessary to achieve a sustainable system. In this context, Swedenergy would like to stress whereas-clause 40 of the Taxonomy Regulations stating that also the benefits of an activity should be considered. In this proposal, focus has been on the environmental harms without acknowledgements, or stated metrics, in relation to the benefits of the activities other than the fulfilment of the primary objective of the delegated act. For instance, firm power supply from hydropower and bioenergy contributes with regulating power that enables an increasing amount of wind and solar power. Such system-wide contributions are very valuable in a climate and environmental perspective but is not covered in the taxonomy. The taxonomy may be used successfully as proposed to describe specific sustainable activities. However, the taxonomy fails in describing a sustainable system. A mechanism that allows an optimal system to be described from a sustainability perspective must be added to the taxonomy.

#### Activity 4.5: Electricity Production from Hydropower

Hydropower is a very valuable renewable resource, both when it comes to climate change mitigation and adaption. Not only is it renewable itself – hydropower also has a very large dispatch flexibility used to balance the load and non-dispatchable renewables such as wind- and solar power on all time scales from seconds to hours, to days, weeks, seasons, and years. Furthermore, hydropower contributes significantly to climate change adaption by counteracting the effects of extreme weather, e.g., droughts and floods. Both these important contributions to mitigation and adaption are inherently linked to “unnatural” regulation of water; without that unnatural water management, these societal values would not be created.

To assess the biological effects of that water management is however very complex. Surely, fish-passages and ecological flows are motivated on many sites, but far from all. What biological and hydromorphological mitigation measures that are motivated must be assessed both locally on each site as well as on a system level. It cannot be expected that the intended interpreters of the taxonomy have the expert knowledge and overview required to make a balanced judgement. Therefore, it is very important that the taxonomy is designed in a way that

- 1) directs capital to activities that provide sustainability at the system level, and
- 2) gives the intended users the possibility to make fair and balanced assessments.

Regarding hydropower, Swedenergy would like to make the following remarks on the delegated acts proposal.

#### **General remarks**

Swedenergy welcomes that hydropower is no longer categorized as a transitional activity, as suggested in the final TEG report. Furthermore, we appreciate that no distinction

between different hydropower capacities (small / big) is made, as possible adverse effects are always site-specific and cannot be attributed to a specific plant size.

Concerning the exemption for hydropower facilities with a power density above 5 W/m<sup>2</sup>, it is unclear how this measure is defined. We see particular challenges to calculate the measure for hydropower cascades, which are very common in the Nordic countries, i.e., when one plant utilizes the water to different extent from multiple reservoirs. Since most hydropower plants are well below the threshold of 100 gCO<sub>2</sub>eq/kWh, Swedenergy recommends that the requirement to perform the life cycle analysis is removed for all hydropower facilities, which would also make the regulation technology-neutral between all the renewable power sources.

Regarding the DNSH-criteria, Swedenergy strongly argue that the specific requirements listed under (3) "Sustainable use and protection of water and marine resources", are removed and replaced by a reference to the Water Framework Directive (WFD), which has been in place for 20 years, and where large efforts have been put into developing a common understanding, as well as guidance and clarification of various requirements. The environmental objectives in WFD, Art 4.1 – 4.9, cover operation of existing hydropower plants, as well as construction of new plants (Art. 4.7), while further details are elaborated within other articles and annexes, in particular WFD Annex V.

The DNSH-criteria refer to "good status/potential of the specific water body", which obviously refers to the WFD. However, the WFD also introduces exemptions, articles 4.4 - 4.7, for deviation from good status/potential under certain circumstances. These environmental objectives, defined by art. 4.4 – 4.7, are certainly defined in accordance with art. 1, implying sustainable use of the water resources. Moreover, the cumulative impact assessment envisaged in the Annex I/II of the new regulation for construction of new hydropower plants are fully covered by the reporting requirements in WFD.

**The Swedish National plan for environmental adaptation of all hydropower plants is intended to find a long-term sustainable balance between local environmental values and hydropower to support the energy system transformation and electrification**

Since the 1st of January 2019, Sweden has got new legislation in place to ensure that Swedish hydropower fulfils the requirements of the Water Framework Directive and EU Nature legislation, e.g., the Habitats directive. On the 25th of June 2020, the Swedish government decided on a national plan to work through all water bodies affected by hydropower over a twenty-year period in a systematic way to find the best balance between local environmental measures and the societal need for hydroelectric power to support the ongoing and very ambitious Swedish electrification plans and the simultaneous transformation of the European energy system, where the share of wind and solar power is increasing rapidly and other dispatchable sources such as nuclear power are partly being phased out.

The Swedish national plan recognizes the fact that biological and hydromorphological mitigation measures, such as those proposed as DNSH criteria in the delegated acts proposal, are not motivated or even desirable everywhere. It recognizes the fact that the assessment of these measures is very complex and require specialist knowledge from multiple disciplines, and it recognizes the fact that long-term societal sustainability can only be achieved if assessment is made on a system level. The whole purpose of the Swedish national plan is to find the best balance between these partly conflicting objectives, river by river, in accordance with the WFD and all other EU legislation. Adding a new regulatory framework, focusing on one of these objectives inevitably leads to an environmental sub optimization.

It is also relevant in this context to mention that the Swedish hydropower sector has agreed to finance the execution of the national environmental adaptation plan – 10 billion SEK - through a unique fund solution. The taxonomy proposal with the suggested DNSH criteria will retroactively make this very large effort more costly, thus reducing the room for all investments in hydropower. This counteracts the very purpose of the taxonomy itself.

When it comes to the DNSH-criteria for building new hydropower, we want to add our concerns about the intention to introduce compensatory continuity measures on another location in the same river basin district. With different legal bodies having the property rights, as the case often is in Sweden, that can simply be impossible.

### **Concluding remarks**

Considering that the proposed DNSH criteria for hydropower are counterproductive, Swedenergy strongly argue that they are removed and replaced by references to other relevant EU legislation, which is already in place to protect and assure long-term sustainability of the European waters and ecosystems – legislation built on targets and requirements that are possible to reach and follow up. By doing so, the European hydropower resources can be adapted to meet both local environmental objectives and multi-national energy system needs, thus fulfilling the purpose of the Sustainable finance regulation.

Activity: 4.8. Electricity generation from bioenergy, 4.20. Cogeneration of heat/cool and power from bioenergy, 4.24. Production of heat/cool from bioenergy

### **Consider bioenergy as a long-term renewable energy**

We are strongly concerned that bioenergy is mentioned as a transitional technology. Bioenergy must be considered as a long-term renewable energy source that meet sustainability criteria set and contribute to substantial climate change mitigation. Bioenergy is essential to deliver on climate neutrality. The Nordic example with a long tradition of sustainably managed forestry shows that sustainable use of biomass is already a fact under present regulation. Bioenergy used in the Nordic countries are produced from waste and residues. The Commission should consider the specificity of local conditions. District heating and cogeneration are capital intensive activities that require long-term investments. Defining these activities as transitional will lead to a significantly reduced opportunity for the plants to obtain green loans as it causes a major risk for the lender to binds its capital to an activity that requires long-term obligation. The commission should allow bioenergy to play a major role in a carbon neutral economy by 2050.

According to 9.1 research, development and innovation on a transitional activity cannot be considered as a sustainable activity. Bioenergy must be considered as a long-term renewable energy that enables substantial contribution to climate mitigation. Research, development and innovation in the bioenergy sector is essential to deliver on climate neutrality.

### **Criteria based on existing EU regulation**

Swedenergy supports mitigation criteria as well as criteria on “Do no significant harm assessment” which refer to existing EU-legislation on the impact on local water (consumption and sewage), the fulfilment of the applicable waste and recycling criteria,

the emission control in line with BREF and Medium Combustions Plants Directive and the avoidance of direct impacts on sensitive ecosystems, species or habitats.

However, the criteria proposed by the Commission will go beyond provisions in the RED Directive, since requirements are set on plants below 20 MW and all existing plants will be included and shall apply sustainability criteria and climate savings set in RED. The Taxonomy should as a general rule base itself on existing EU regulation and only in the absence of relevant definitions, concepts or criteria seek to create new standards. This is essential in order to avoid overlap and confusion between the Taxonomy and the relevant EU law.

In the RED Directive, all plants below 20 MW are excluded considering requirements on sustainability criteria for biomass from forest and agricultural land. According to article 29.1 *“Biomass fuels shall fulfil the sustainability and greenhouse gas emissions saving criteria laid down in paragraphs 2 to 7 and 10 if used in installations producing electricity, heating and cooling or fuels with a total rated thermal input equal to or exceeding 20 MW in the case of solid biomass fuels”*.

According to Article 29.10 in RED Directive: *“The greenhouse gas emission savings from the use of biofuels, bioliquids and biomass fuels taken into account for the purposes referred to in paragraph 1 shall be at least 70 % for electricity, heating and cooling production from biomass fuels used in installations starting operation from 1 January 2021 until 31 December 2025, and 80 % for installations starting operation from 1 January 2026.”*

Swedenergy strongly opposes the fact that the EU Commission goes beyond its own regulation on sustainability criteria which has not yet been implemented in Member States. The Commission must use its own legislation as a starting point. The Commission must clarify that the limit of 20 MW applies, also that climate savings of 70 percent apply to plants that come into operation after 1 January 2021 and 80 percent for plants that come into operation after 1 January 2026.

We are also concerned that the criteria for bioenergy is set at lower levels as in sections 4.19 and 4.23 covering other kinds of fuels.

#### **Avoid overlapping regulation of bioenergy**

Regulatory overlap of bioenergy and other fuels with criteria in points 4.7 should be avoided. Electricity generation from gaseous and liquid fuels 4.19. Cogeneration of heat/cool and power from gaseous and liquid fuels and 4.23. Production of heat/cool from gaseous and liquid fuels:

In points 4.7, 4.19 and 4.23 it is written that all fuels are covered: *“Construction and operation of combined heat/cool and power generation facilities using gaseous and liquid fuels (not exclusive to natural gas, oil or other refined products).”* We believe that biofuels for electricity and heat production should not be subject to regulatory overlap in several points in the taxonomy. It is not justified to have tighter criteria for bioenergy than for other kinds of fuels. The Nordic example with a long tradition of sustainably managed forestry shows that sustainable use of biomass is already a fact under present regulation. Restrictions beyond the REDII directive should thus not be introduced.

#### **Waste-To-Energy plants should be considered as a transitional activity**

The Commission has already underlined that Waste-to-Energy has a role to play in the circular economy<sup>1</sup>. The Commission should invite the Platform on Sustainable Finance to positively consider Waste-to-Energy and to assess under what conditions it can be considered as taxonomy-eligible.

Waste-to-Energy of non-recyclable non-hazardous residual waste must be considered as a complementary tool to recycling.

- It safely treats the residual waste that remains after reuse and material recovery and takes pollutants out of the eco-cycle, thus being a sink for hazardous substances and other contaminants. It is also among the sectors with the most stringent pollutant emissions requirements under EU rules.
- It diverts residual waste from landfills where the waste would be lost as a resource and its organic fraction would emit methane, a greenhouse gas with a global warming potential 23 times carbon dioxide.
- It ensures the implementation of the EU landfilling target of maximum 10% for municipal waste in 2035, as demonstrated in Member States with the most advanced recycling schemes.
- It turns waste into energy to produce heat, steam and electricity, which can substitute fossil fuels and meet citizens and businesses need for electricity and heat when the wind does not blow and sun does not shine. The energy output from Waste-to-Energy plants is about 60% renewable, due to the organic portion of municipal residual waste.
- It recovers valuable secondary raw materials, metals and salts. Recently, several plants for recovery of zinc and salts are in pipeline in Sweden and Denmark.

#### Activity: 4.9. Transmission and distribution of electricity

The delegated act requires the DSOs that construct or operate a transmission line or distribution network to monitor the emission levels of equipment connected to the infrastructure. This is outside the control of the DSO. The DSO may not put emission requirements on entities that connect equipment to the DSO network. This criterion is not in line with the Regulation on the internal market for electricity, Article 6, on non-discrimination.

#### Activity: 4.1. Electricity generation using solar photovoltaic technology and Activity: 4.3. Electricity generation from wind power

The technical screening criteria on transition to a circular economy are unclear and without a clear acceptance level. For instance, the criterion on high recyclability is hard to interpret. Instead, a reference to existing regulation should be included. In absence of regulation, a clear methodology or guidance should be described.

#### Activity: 3.9. Manufacture of hydrogen

The criterion for manufacture of hydrogen refers to regulation that is restricted to hydrogen use in the transport sector and to manufacture of hydrogen based on renewable energy sources only. Moreover, related delegated acts under RED are still under development, meaning that the consequences of the criterion are not clear as of today. Additionally, the manufacture of hydrogen should be technology neutral and not restricted to renewable energy.

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<sup>1</sup> Communication on the role of Waste-to-Energy in the circular economy

Instead, Swedenergy proposes a life-cycle GHG emission limit corresponding to the equivalent of 100 g/kWh of hydrogen based heat production. Such limit would be in line with power production criteria and would offer a technology neutral approach to hydrogen manufacture.

### Activity: 7.7. Acquisition and ownership of buildings

In point 1, the Commission proposes *“For buildings built before 31 December 2020, the building has at least Energy Performance Certificate (EPC) class A. 2”*. This is a very high set criteria since A class stipulates 50% better than nearly zero-energy buildings requirements. The criterion sets too high energy efficiency ambitions that will be counterproductive and even make it easier to fulfil criteria for new buildings where the criteria in point 7.1 is that the Primary Energy Demand (PED) 511, defining the energy performance of the building resulting from the construction, is at least 20 % lower than the threshold set for the nearly zero-energy building (NZEB) requirements. From an environmental point of view, the criteria A class is not appropriate as it means that a major part of all building in Europe must be renovated or rebuilt. As is well-known today, the construction phase of a building stands for more than 80 percent of the climate emissions of a building’s lifetime (50-100 year). This is also unreasonable from an economic point of view and will lead to huge amounts of waste in the near future.

We believe more reasonable energy performance criteria, that take into account the levels of energy performance in the existing building stock, should be set. It is unrealistic for example for a F class building to achieve A class without a very deep renovation, which in practice would need investments on a level that could make it more viable to actually demolish an existing building and replace it by a new construction, which would not be in line with the sustainability ambition. A more reasonable criteria for existing buildings would be to have at least Energy Performance Certificate (EPC) class C, which is in line with nearly-zero-energy building requirements and more in line with previous TEG report on *“top-class 15 per cent”*.