10 November 2022

To the Ministry of the Environment

Consultation Response to the EU Commission's Draft Revision of the Urban Wastewater Directive

Thank you for the opportunity to submit a consultation response to the draft revised Urban Wastewater Treatment Directive published by the European Commission on 26 October 2022.

We hope that the consultation response will contribute to the basis and input for the further work to develop the Danish position on the proposed Directive. We are happy to provide further elaboration and clarification on the elements of the proposal that we believe Denmark should work to amend or retain.

Overall

Fundamentally, the Commission recognises that time has passed from the 1991 Directive, which solely focused on the treatment and discharge of wastewater, to the present day where we must consider treatment plants as resource installations. The Danish Green Tech Association agrees with this approach and generally finds that there are many good elements in the draft for the Directive, including the extension of the scope to include plants down to 1,000 PE, that, in continuation of Covid 19, monitoring for viruses etc. is to be carried out, that the circular economy is supported to a greater extent in the sector, e.g. focus on sludge management, phosphorus extraction, and water recycling, and that limit values for nutrient removal are tightened. In general, the new nutrient removal limits are not considered a major challenge for Danish wastewater treatment plants, but it increases the export potential for Danish technology providers, which are strong in both the treatment of wastewater for nutrient content and technologies to capture some of these for resource use.

The Danish Green Tech Association recommends that the Danish position in relation to the draft revision of the Urban Wastewater Directive has a particular focus on the following issues: reduction of stormwater overflows and urban runoff, climate and energy neutrality, and regulation of environmentally hazardous substances and extended producer responsibility.

Stormwater Overflows/Urban Runoff

Increasing rainfall due to climate change requires an increased focus on stormwater overflows and urban runoff. The Danish Green Tech Association notes with satisfaction that this has been included in the draft. The Directive does not call for the treatment of stormwater overflows and urban runoff but instead for the intelligent control and monitoring of the entire water system. This is proposed to be implemented through integrated water management plans that set targets and methodology for reducing substance discharges for all installations above 100,000 PE and for installations above 10,000 PE where there is a risk to the environment and human health. Emphasis is placed on preventive measures through natural retention of water and optimisation of existing infrastructure and pipeline networks through increased digitalisation and monitoring, and an indicative target is set that overflows do not exceed 1% of annual wastewater discharge in m^3 calculated in dry weather conditions.

In Denmark, we are well advanced in digital tools to ensure co-management of treatment plants and sewerage systems. Several consultants and technology providers in Denmark have products that could be implemented immediately, and which could, for example, reduce the amount of overflow, but also reduce energy consumption when electricity prices are high.

The Danish Green Tech Association believes that management plans for reducing substance emissions from stormwater overflows and urban runoff are an excellent approach. However, it is far from sufficient to require a plan for installations above 10,000 PE by 2035 and an indicative target by 2040. We know that overflows can have a major negative impact on the environment locally, and urban runoff is a significant source of amongst others environmentally hazardous substances, including several heavy metals and microplastics.

In Denmark, we have several technologies that can treat stormwater overflows, and the Directive should at least be supplemented with fixed requirements for reducing substance discharges (concentrations) differentiated according to stormwater overflows and urban runoff. This should be supported by an unambiguous and much more precise definition of what constitutes stormwater overflow and urban runoff than is provided in Article 2 of the draft to provide a common regulatory basis across the EU.

Energy- and Climate Neutrality

As mentioned above, the European Commission's draft revised Directive rightly put an end to the narrow notion of wastewater treatment plants as just purification measures and proposes that the plants be considered as resource and energy plants. The EU Commission states directly in the draft that "the wastewater treatment sector offers the opportunity to significantly reduce its own energy consumption and to produce renewable energy, for example by producing biogas from sludge" and the Impact Assessment shows that, with few exceptions, there is a general lack of understanding in the sector of the potential for energy savings.

Biogas production at wastewater treatment plants is taking place at many locations in Denmark today and there is a lot of attention from abroad. The extensive Danish experience and expertise also means that there is already a focus in Denmark on resource recovery from, for example, sludge from wastewater treatment plants in many ways. The Danish Green Tech Association therefore welcomes the Commission's proposal for energy neutrality for all plants above 10,000 PE. For the smaller plants within this boundary, it is expected to push for further consolidation, but it is very welcome that the Commission sets an ambitious target both in terms of untapped potential for energy efficiency and energy production, which Denmark has long worked for. However, the time frame for achieving energy neutrality at national level by 2040 is far too unambitious and Denmark should work for a faster transition, including ensuring that requirements for energy production are technology-neutral so that there is flexibility, e.g. where biogas cannot immediately substitute natural gas.

On the other hand, the Danish Green Tech Association sees a major challenge in the Commission's lack of ambition regarding the climate part. First, the proposed target for the reduction of climate gas emissions of just over 37% is far too low and unambitious and is solely an effect of the proposed energy reduction and production. This does not address the direct emissions (scope-1) of the powerful climate gases such as nitrous oxide and methane that are generated during the treatment process at the wastewater treatment plants. Secondly, the Directive does not specifically address potential emissions of climate gases from the energy production of the plants. With increased energy production, plants become energy sources. It

would therefore be natural to subject installations to the same emission monitoring requirements as apply to other parts of the energy sector, but the proposed energy audits are based solely on an identification of the potential for cost-effective use or production of renewable energy.

In the 'traditional' energy area, ambitious work is being done on requirements for mandatory monitoring, including both quantification measurements (top-down) and leakage tracing (bottom-up), as well as commitments to improvements, e.g. as a follow-up to the EU Methane Strategy (COM(2020), 663). The same ambition should apply to all parts of the energy sector, including those from "green" production.

In this context, it is noted that the EU methane strategy states that there may be problems with "uncontrolled emissions [...] from the treatment of sludge from sewage treatment plants and emissions from biogas plants due to poor construction or maintenance". This challenge will only increase as biogas production increases and the energy neutrality target is met. Unless this is addressed, there is a risk that the proposed Directive will lead to an increase in greenhouse gas emissions rather than a reduction. Contrary to intentions.

The climate agenda and ambitions for climate neutrality in the water sector are thus difficult to discern, as emissions of climate gases (N_2O and CH_4) that are not a consequence of energy efficiency improvements and production are largely omitted from the proposed Directive. Of the total process emissions (13.03 Mton), as calculated by the Commission, this part represents as much as 64% (8.4 Mton), which is not addressed as the reduction is almost exclusively due to indirect emissions (scope-2). This low level of ambition is surprising as it is not in line with the general climate objectives of the EU. Reading the argumentation from the EU, scope-1 emissions of climate gases from wastewater plants are stated as relatively low. However, this is due to a methodological error, where existing scope-3 emissions from the pipeline network are included in the analysis, resulting in relatively low emission percentages from climate gases. It is important that both Scopes 1, 2 and 3 are reflected in the Directive, but this needs to be done in the right way so that real future and unmanaged impacts are the basis for regulation.

The Danish Green Tech Association therefore calls on Denmark to argue for the inclusion of scope 1 emissions, and for requirements to reduce direct emissions of methane and nitrous oxide. The overall target for the reduction of greenhouse gases from wastewater treatment plants can thus become much more ambitious and Denmark should work for a concrete tightening, e.g. from the current 37% to +50%, as well as for the introduction of requirements for monitoring and supervision (audits) of all relevant greenhouse gases in the treatment processes, optimisation of energy efficiency and resource recovery for biogas, possibly as an extension of the requirements in the proposed energy audits.

Environmentally hazardous substances

The threat posed to our health and environment by environmentally hazardous substances should not be underestimated, as the PFOS disaster in Korsør last year clearly demonstrated. The Danish Green Tech Association therefore welcomes the proposal to introduce a 4th treatment stage for the removal of environmentally hazardous substances. We believe that the level of implementation on all installations above 100,000 PE by 31 December 2035 and by the end of 2040 on all installations above 10,000 PE where environmentally hazardous substances pose a risk to the environment or health is the right one. This will result in a large number of installations in Denmark being covered, and if multiplied up to the European level, even with the structural differences, we see that it can have a real impact on the reduction of environmentally hazardous substances in the aquatic environment in Denmark and at European level.

It is extremely important that the Urban Wastewater Directive supports an ambitious regulation of environmentally hazardous substances. Environmentally hazardous substances include many chemical compounds that, even in small doses, can be very harmful to the environment and human health. In concentrated form, these substances often originate from industry and other businesses, but they are also emitted from households, transport, and other sources. The effects are very diverse. Some are acutely toxic, others have long-term effects and can be carcinogenic or endocrine disrupting. Many of the substances are persistent and accumulate in the food chain. In addition to tracing the source and more knowledge about the individual substances, their distribution and toxicity, the Danish Green Tech Association therefore shares the Commission's assessment that something must also be done about discharges from central sewage treatment plants, where diffuse inputs have proved difficult to regulate at source. The introduction of a requirement for a 4th stage of treatment (advanced treatment) at central plants is the right way forward and supports the acceleration of technology development for monitoring, analysis, and treatment.

Even though Denmark has only relatively recently begun to take an active approach to environmentally hazardous substances, many utilities are developing strategies and action plans on their own initiative to gain an overview of the challenge of environmentally hazardous substances, and Danish consultants and suppliers are well advanced with products that can, among other things, contribute to monitoring and overviews. There are also purification technologies that could be used. This is a positive development that is in demand by Danish suppliers and has great export potential to the rest of the EU.

The draft Directive provides for a simple model where the advanced treatment in the 4th treatment stage should reduce several indicator substances by 80%. The Danish Green Tech Association would have liked to see a reduction percentage based on the concentration and toxicity of the individual substances, but this does not change the fact that the level of ambition in the Directive is relatively ambitious for the EU, both in terms of time frame and the number of plants that must implement a 4th treatment stage, and Denmark must work to ensure that this remains in the Directive.

This should be seen in the light of the fact that, as part of the Commission's zero pollution package, proposals have also been put forward to amend the Water Directives (Water Framework Directive, the Groundwater Directive, and the Environmental Quality Standards Directive) in relation to priority substances. These include adding several new substances to the EU priority list for both surface water and groundwater, including certain pharmaceuticals, and tightening environmental quality standards for substances already on the list. By introducing more EU limit values (EQS), the Commission aims to support several other EU directives, including the Urban Wastewater Directive and its revision.

The Danish Green Tech Association believes that, overall, this makes a very positive contribution to the future regulation of environmentally hazardous substances in Denmark and in the rest of the EU, and that Denmark should give this maximum support so that the discharge of environmentally hazardous substances into the aquatic environment can be reduced as far as possible. This is also in line with the objective of the Strategy for Environmentally Hazardous Substances in the Aquatic Environment launched by the previous government in December 2021.

However, an issue is the general lack of regulation of microplastics discharges, which by 2040 have been reduced by only 9%, and this only because of action on rainfall-related discharges. Denmark would do well to point out that this is too unambitious. Furthermore, the Directive should deal more actively with residues, e.g. in sludge, which may arise in connection with treatment processes for environmentally

hazardous substances in wastewater, so that the problem substances do not simply transfer between different kinds of matrix, including in particular the persistent PFAS substances, but are actually managed.

Extended Producer Responsibility

Following the proposal for a 4th treatment stage, the Directive also addresses, for the first time, the financing of this stage. Thus, the Commission proposes to cover part of the cost of the additional treatment of environmentally hazardous substances through an extended producer responsibility for the pharmaceutical and cosmetic industries, as their products are a major source of environmentally hazardous substances in the aquatic environment. The extended producer responsibility would be based on the quantities and 'hazardousness' in wastewater of the products marketed in each Member State.

The Danish Environmental Technology Association believes that with the proposal for extended producer responsibility the Commission is taking the 'polluter pays' principle seriously. We hold a very positive view of this and believe that it is the right way to go and that it can help to ensure that products in the EU are developed with a view to having the least possible impact on the environment.

It is acknowledged that the model for implementing extended producer liability in the individual Member States and the link to reducing emissions of environmentally hazardous substances may be administratively cumbersome, but with the requirement for industries to establish new producer responsibility organisations, the groundwork has been laid for handling the matter, and Denmark should work to ensure that extended producer liability is retained in the Directive and that it can be extended to other sectors in the long term.

Yours sincerely

Danish Green Tech Association

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The Danish Green Tech Association:

The objective of the Danish Green Tech Association is to highlight the need for ambitious regulation promoting advanced technical solutions to global environmental challenges and climate issues, placing them at the top of the political agenda nationally, in the EU and Globally. The association is representing more than 70 large, medium, and small companies mainly within water, climate adaption, clean air and clean soil solutions. Companies such as Grundfos, Danfoss and Krüger/Veolia, Xylem and Unisense are all members.