

Vattenfall's view on the review of the Energy Efficiency Package (EED & EPBD)

Background

On November 30th, the EU Commission published its '*Winter Package*' that should help to deliver 'Clean energy for all Europeans'. The package is a major compilation of measures to keep the European Union competitive, as the clean energy transition is changing global energy markets. The proposals from the EU Commission is based on three main goals:

- putting energy efficiency first,
- achieving global leadership in renewable energies, and
- providing a fair deal for consumers.

Vattenfall's analysis suggests that the measures, when implemented, will trigger: decentral energy generation, increased flexibility, and a further greening of the energy sector.

This document outlines Vattenfall's assessment covering the energy efficiency package, which consists of the:

- Energy Efficiency Directive (EED), and
- Energy Performance of Buildings Directive (EPBD)

With regard to both directives Vattenfall has the following proposals:

Energy Efficiency Directive (EED)

- *Ambition level and the alignment with EU ETS*: If Energy Efficiency targets >30% would be decided (EED: art. 1 & 3), they should be accompanied with higher targets & Linear Reduction Factor for the EU ETS. This in order to avoid further downward pressure on the EU ETS price. In general, commitments should support the ambition to reach the Paris arrangements. While the ambition level largely is a political decision, we would propose to have the target only binding (not indicative) at EU level. The main goal is to reduce CO₂ emissions and reach the EU target, the Energy Efficiency target should be supporting that.
- *Transport sector*: The transport sector consumes about a third of EU energy consumption and efficiency gains so far have been rather limited. This can be changed when energy efficiency measures implemented at the national level (EED: art. 7a & 7b) also must cover the transport sector. When electric vehicles are powered with electricity from 100% renewable sources they have

zero CO2 emissions per kilometre and are 60% more efficient than conventional cars.¹ Even with the current Dutch/German electricity mix, electric vehicles emit ~25% less CO2 and are 25% more efficient than their fossil fired counterparts.² From this point of view we also welcome the views stated in the Parliaments reports on the EED from rapporteur Gierek and Guteland that would to remove the exemption for the transport sector under article 7.

- *Energy Poverty*: While we understand the reasoning behind the energy poverty proposals, we believe that poverty (and also energy poverty) should be primarily dealt with via social policy and not via energy regulation. For affected households, we see limited access to financing as the main bottleneck. This can be addressed in the energy efficiency directives and should accordingly be the focus of EED art. 7, EPBD: art. 2 (a2)
- *Level playing field*: Vattenfall is in favour of safeguarding a level playing field between central & decentral production. On-site RES production is not an Energy Efficiency measure and needs to be included when calculating the energy consumption of a building. Not excluded as is proposed in the EU Commissions proposals. We there suggest to delete EED: art. 7(2e) and adjust EPBD art. 2 & Annex.
- *Primary Energy Factor (PEF)*: PEF's need to reflect the actual efficiency of the energy system, so that they will also trigger the use of electricity when that is the more efficient option. From that point of view the stronger focus on primary energy savings in the ort is appreciated.
 - Vattenfall proposes that PEFs are differentiated per country (some countries have a much more efficient energy system: e.g. Sweden and that efficiency needs to be rewarded), and need to be updated every couple of years (e.g. take a rolling average of the last three years) to reflect efficiency improvements.
 - Reducing the default coefficient (from 2,5 to 2,0) in the Annex of the Energy Efficiency Directive is in line with increased utilization of electricity from renewable sources. In addition, increasing efficiency in energy transformation processes should appropriately calculated by using a separate default coefficient of 2.5 corresponding to the efficiency of modern power plants. However, apart from these default values, Member States should individually follow the national circumstances.
 - For the purpose of calculation of real physical primary energy savings, the method set out in Annex II of Directive 2012/27/EU (s.c. 'Finish Method') results in inappropriate low values for the primary energy share of electricity. A physically correct method for the determination of physical primary energy savings and the calculation of the primary energy share for electricity in CHP would be the Carnot method described in ANNEX V Chapter C, b (iv)

Energy Performance of Buildings Directive (EPBD)

- *Charging infrastructure*: Without charging infrastructure, e-mobility cannot take off. The requirements for charging infrastructure in the built environment are a good start, but can be

¹ Internal combustion engines have an average efficiency of about 30%. If you charge an electric car with an cable its final energy efficiency is about 95%. This means 95% of the electric energy used to charge the battery is transformed into motion energy by the electric motor.

² When electric vehicles are not powered by 100% RES electricity, the emissions and efficiency losses from power production also need to be taken into account. Because every country has a different generation mix, these numbers also differ from country to country. In general: the cleaner the electricity, the higher the emission reductions and efficiency improvements. The German Ministry of Environment ([BMU](#)) has calculated that CO2 reductions from switching to EVs already now add up to 23%. Vattenfall estimates show that emission reductions in the Netherlands are ~30% (having a higher share of clean gas generation), while Sweden's low CO2 mix achieves emission reductions >80% and primary energy savings of ~40%

further improved by: 1) moving the date for pre-cabbling forward to 2020 (only limited cost involved), 2) (partly) extending them to existing buildings as well, 3) and introducing a 'right to charge' for residents of apartment buildings. Especially the pre-cabbling requirement under article 8 (2) of the EPBD is considered as an essential measure for the development of e-mobility. The additional cost of pre-cabbling are limited, retrofitting buildings with stronger cables at a later stage is much (about 3 times) more expensive. Next to that, stronger electricity infrastructure in buildings will also facilitate the transition to more efficient, electricity based heating solutions (e.g. heat pumps). For these reasons we believe that efforts need to be made to keep the pre-cabbling requirement for new buildings under article 8 (2) of the EPBD part of the revised directive. Also, to ensure that RES electricity production and electric vehicle charging can be, and are, synchronized, all charging boxes should indeed be equipped with technology capable of starting & stopping in reaction to market price or DSO signals.

- *Energy Poverty:* As under the EED, Energy Poverty is also brought up under the EPBD. While we understand the reasoning behind the energy poverty proposals, we believe that poverty (and also energy poverty) should be primarily dealt with via social policy and not via energy regulation. For affected households, we see limited access to financing as the main bottleneck. We therefore propose improve access to financing for households affected by energy poverty. This can be addressed in the energy efficiency directives and should accordingly be the focus of EED: art. 7, EPBD: art. 2 (a2)
- *Level playing field:* As under the EED, the level playing field is also a relevant topic under the EPBD. Vattenfall is in favor of safeguarding a level playing field between central & decentral production. In district heating systems both new builds and the existing building stock are simultaneously supplied. Apart from the increasing renewables share and there limitations in urban areas, decarbonisation of the heating market should necessarily focus on the efficiency of heat generation and supply. The ecological advantages of district heating are the same for both new buildings and the building stock connected to the district heating network. Therefore every improvement of efficiency, CO2-reduction or increase of renewable share will automatically be applicable to every building connected to district heating. Connection to Efficient District Heating in the sense of Article 2 (41) EED should be equally treated to fulfill the requirements on a "nearly zero-energy building". Appropriately adjust EPBD Art. 2 and Art. 6/7. Art. 7 should be maintained in every case and adjusted. Delete EED: art. 7(2nd) and adjust EPBD art. 2 & Annex.