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## **Vattenfall's key messages on the EU long-term climate strategy**

### ***Input to the European Commission's public consultation on "Future climate and energy policy – a Strategy for long-term EU greenhouse gas emission reductions"***

- Climate change is one of the greatest challenges of our time. The planet is rapidly getting warmer as a result of the increased concentration of GHG emissions in the atmosphere. Turning this development around will require a profound transformation of the world's energy systems over the next decades. The work has already started to deliver on the Paris Agreement, which was a landmark decision in international policy making, but clearly efforts must be greatly intensified across all sectors and regions if the goals shall be met.
- The combined effect of all the climate targets contained in the national plans (NDCs) which have been submitted under the Paris Agreement to date is expected to lead to a continued global warming above 3 °C. Therefore, all parties must increase the ambition level of their respective pledges in order to align them with the overarching goal to limit the global mean temperature increase to well below 2 °C. This is valid also for the EU whose climate targets were set before the Paris Agreement (and the ambitious 1.5 °C objective) was adopted.
- Vattenfall has the ambition to become fossil-free within one generation. This corporate goal has already led to significant changes in our portfolio. We are continuously moving out of CO<sub>2</sub> heavy production assets, while investing largely in renewable energy and fuel switching. At the same time, we recognise that it will not be enough just to make the energy sector CO<sub>2</sub>-neutral. For that reason, we have entered a number of strategic partnerships to support the decarbonisation of other major CO<sub>2</sub> emitting sectors, such as industry and transport, primarily through electrification. Vattenfall is convinced that new partnerships with customers, suppliers, city partners, governments and regional/local authorities will be key for a sustainable future.
- We believe that our company's goal to become fossil-free within one generation fits well with the global objectives on climate, as well as the high expectations from our customers. However, in this endeavor we also need EU climate targets which are made fully consistent with the goals of the Paris Agreement, as well as a robust regulatory framework which guides the whole sector in the same direction.

### **The EU's climate targets need to be increased**

- By the time of preparing our response to the European Commission's public consultation on the 2050 climate strategy, the IPCC's special report on the 1.5 °C target (due in October 2018) had not yet been published. It will constitute an important basis for determining the necessary trajectories of drastically reducing GHG emissions on the global scale and give an indication on how much greater the EU's contribution must be compared to the climate targets already adopted. Clearly, it is envisaged that the very high ambitions the Paris Agreement and the new scientific evidence from the IPCC will require the EU to increase the ambition levels of its current 2030 and 2050 climate targets. While doing so, it would be appropriate to also formulate a 2040 target.

- In relation to Question 1 in the public consultation, it can already at this stage be concluded that the two first options, namely an EU contribution in the range of **(i)** 80 % and **(ii)** 80-95 % GHG emission reductions until 2050, do not represent any higher level of climate protection than the climate target adopted already in 2009, whereas the third option, **(iii)** to achieve a balance [net-zero] between emissions and removals in the EU by 2050, is obviously more coherent with the necessary GHG emission limitations as stipulated by the Paris Agreement and the 1.5 °C objective that was endorsed by the world leaders in 2015.
- Whereas the EU's climate targets date back to 2009 and 2014 respectively, the EU has more recently (2018) decided to increase the ambition level of the two energy policy related targets in the EU's 2030 climate and energy framework, from 27 % to at least 32 % for renewable energy and from 27 % to 32.5 % for energy efficiency. As a result, the EU's 40 % climate target for 2030 will likely be overachieved. But if the EU's 2030 climate target (and consequently the EU ETS allowance cap) is not adjusted accordingly, it will result in an imbalance of the overall 2030 framework, including a risk of new over-supply of ETS allowances and a weakening of the CO2 price signal.
- Revising the EU's climate target for 2030 is not only an obligation following from the Paris Agreement and a safeguard of the EU ETS role in the overall policy framework, it is also a no-regret option to politically articulate the GHG emission reductions which are strived for anyway and hence an opportunity for the EU to show more global leadership on climate. By taking early action, the societal costs for delivering the EU's contribution to the Paris Agreement can become more affordable, at the same time as the EU can more strongly contribute to decarbonisation globally by exporting knowledge and clean technologies.

### **EU ETS should be further strengthened**

- Vattenfall believes that the EU ETS should be the principal instrument to achieve the EU's climate targets. It is one of the most long-term, cost-effective, environmentally predictable and internal market compatible policies at hand to significantly reduce GHG emissions. It has potential to be a very powerful and efficient tool to achieve the EU's climate objectives in the captured sectors, which are jointly responsible for around ½ of the EU's overall GHG emissions. It is a technology-neutral instrument, meaning that it allows all CO2 abatement options to compete on equal footing and it gives companies as well as consumers a uniform CO2 price incentive to undertake all sorts of measures from the supply to the end-use side.
- In 2017, the EU Emissions Trading System (EU ETS) Directive was subject to a large overhaul in order to improve its functioning and make it prepared for the next trading period which starts in 2021. Among other things, the reform implies that large amounts of surplus ETS allowances will be removed from the EU ETS market in the coming years, through a strengthening of the Market Stability Reserve (MSR) from 2019, a permanent cancellation of surplus ETS allowances in 2023, and an increase of the Linear Reduction Factor (LRF) that determines the annual pace of reducing the ETS allowance cap from 1.74 to 2.2 % from 2021.
- Vattenfall is broadly supportive to the EU ETS reform agreed in 2017. However, already in this revision of the Directive, we insisted on the need to increase the LRF even further. The new LRF (2.2 %) that will be applied from 2021 is directly connected to the EU's 40 % GHG target for 2030. Though, it has always been envisaged that the EU's 2030 climate target needs to be increased ("at least" -40 %), which is even more obvious after the adoption of the Paris Agreement. We believe that the LRF could have been set at 2.6 % already on basis of the EU's 80-95 % objective for 2050. However in order to align the EU ETS with a forthcoming EU climate target which is guided by the 1.5 °C objective, it is likely that this constant has to be increased significantly also above that level.

- The review of the MSR to be conducted by 2021 should lead to a continuation of the 24 % annual intake rate into the reserve, which in the current EU ETS Directive only applies between 2019-2023. This is important in order to prevent that any new over-supply of ETS allowances emerges, for example driven by the use of overlapping policies on the EU and national levels. It should be secured that i.e. national decisions on decommissioning fossil fuel fired power plants lead to a withdrawal of a corresponding amount of ETS allowances.
- It is of utmost importance to ensure a balanced EU 2030 climate and energy framework. But as mentioned, the balance of the package is already altered by decisions to increase the EU's 2030 targets for renewable energy and energy efficiency, which is yet another strong argument for increasing the EU's 2030 climate target (and consequently the LRF), as well as for securing an effective functioning of the MSR also beyond 2023.
- Carbon markets are introduced or under preparation also in other parts of the world. This is a very encouraging development. After all, the EU only represents a subset of the global CO2 emissions as well as the global markets on which many industrial products compete. Therefore, it is important to make further collaborative efforts to develop the international carbon markets and to promote a more global price on CO2 emissions.

### **Europe should strive for joint solutions on climate policy irrespective of Brexit**

- It is in the common interest of the UK and the EU to maintain a deep cooperation on climate policy. A solution should be found so that UK and EU operators remain in the same carbon market and can meet their obligations cost-effectively. The overall ambition level in terms of reduced GHG emissions in Europe should not be lower even if the UK develops an own ETS, an own Mid-century climate strategy, an own pledge under the Paris Agreement, etc.

### **A corresponding CO2 price incentive is needed also in the non-ETS sectors**

- A shortcoming of the EU ETS is that it covers only limited part of the heat market. This situation leads to a distortion of competition in the heat market, at least in some Member states, and a risk of intra-EU carbon leakage. A potential solution to this problem is adding fuel suppliers into the EU ETS or exposing individual heat boilers to an adequate carbon pricing signal by other means. Thereby all competitors on the heat market can internalise the CO2 costs and are encouraged to cost-effectively contribute to achieving the EU's long-term climate objectives. A harmonised CO2 tax or flexibility to trade with the achieved CO2 reductions (or entitlements) in the non-ETS sectors between the Member states (and with the EU ETS) is important for promoting a cost-efficient EU climate policy overall, especially recognising the particular distribution key used under the Effort Sharing Decision (ESD).

### **Electrification is a key enabler for decarbonising other sectors**

- The ambitious route towards a CO2 neutral energy supply in the EU well before 2050 offers substantial opportunities to deeply reduce the GHG emissions also in other sectors, mainly through electrification. Replacing fossil fuels with clean electricity will be an increasingly important tool for reducing CO2 emissions within transport, heating and industry sectors. A new study<sup>1</sup> from Eurelectric shows that scenarios in the range of 80-95 % GHG emission reductions can be effectively achieved by 2050 through increasing the electrification rate in the society from 22 % to 38-60 % by 2050. As always, the actual solutions look different for the different sectors and regions in Europe, due to their diverse starting-points, natural preconditions and specific challenges. In general, though, electrification is the most direct, efficient, flexible and sustainable way to decarbonise the economy, while also bringing significant co-benefits such as better air quality in urban areas, lower import dependency and higher energy-efficiency.

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<sup>1</sup> <https://cdn.eurelectric.org/media/3172/decarbonisation-pathways-electrificatio-part-study-results-h-AD171CCC.pdf>

**A well-functioning power market and an increase in transmission grid infrastructure are essential for decarbonising the power sector**

- The future energy system will consist of both central and decentralised energy solutions. New and flexible technologies, such as batteries and demand response devices, are entering the market and the market shares for conventional, central generation will decrease. Profitability will be impacted by low and more volatile prices. Larger volumes of intermittent renewables will require higher degrees of flexibility in the electricity system in order to stabilise the grid. With the Clean Energy for all Europeans Package, European policy makers are setting the regulatory framework for the next decade. The currently negotiated proposals for the Electricity Directive and Regulation should ensure that the European power system is made more flexible and that a level-playing field is created for all market participants.
- The best way to incentivise demand-response and to stimulate flexibility is to allow for free formation of electricity prices and free competition. Freely moving prices are an important ingredient of the future market design as they allow the market to restore the supply and demand balance and to send investment and divestment signals to market participants thereby reducing the need for public intervention. The regulatory framework should be designed in a technology-neutral fashion to allow all investments to compete on an equal footing. Likewise, the number of exemptions from general market rules should be limited to ensure that everyone contributes to system stability.
- Further integration of European power markets needs to be accompanied by an increased focus on transmission grid build-out. Vattenfall supports transmission grid development and a strong interconnection of electricity systems as they enable a sharing of generation capacity and resources, which leads a more optimal use and lower costs for consumers.
- To manage the growing volume of distributed power generation as well as the uptake of e-mobility, electrification of industry and rapidly increasing urbanization in general, also the distribution network needs to be strengthened and modernized. At the same time, it is important that distribution system operators can use and get access to flexibility available on the market in order to be able to cope with customers demand and production in a secure and cost efficient manner. Access for Distribution System Operators (DSOs) to flexibility from the market should be subject to transparent and non-discriminatory rules.

**A stronger focus on Research & Development and Innovation is needed**

- The conditions for research, development and demonstration in the energy field clearly need to be intensified to support the challenge of fundamentally transforming the energy sector. In the early R&D and demonstration phases, it will be important with public-private collaboration to share the risks, and for the wider deployment a robust international CO2 price will be key in order to make these climate-friendly production methods competitive on the market. The EU ETS has a dual benefit in the sense that it can both generate funding which is needed in the early phases of technological development (a part of the revenues from auctioning ETS allowances accrue to the EU's new Innovation Fund), and produce the CO2 price which is needed for a large-scale deployment of low-CO2 technologies. The EU's research and innovation programme (Horizon 2) should also be used to support the development of technologies with large potential to reduce CO2 emissions in the future.
- Public funding is important for innovation projects that have a business potential, lead to a significant reduction of GHG emissions and can become competitive globally. Projects should be well-prepared and supported through all phases until they are operative on the market. The funding needs to match the investment process in terms of timing of payment, type and length of funding (long-term, at least 10 years). Innovation projects should get the opportunity to prepare and practice for the market conditions.