Public consultation on the review of progress towards the 2020 Energy Efficiency Objective and a 2030 Energy Efficiency Policy Framework

A. Energy efficiency targets and measures

1. Do you think the right approach in addressing the shortfall is:

The current structure with legally binding EU targets for greenhouse gas emissions along with renewable energy shares and non-binding targets for energy efficiency should be retained even for the period after 2020. The targets must also have clear system boundaries that provide opportunities for the sharing of the burden among the EU countries. The Member States would then in turn be able to choose to distribute the burden among regions and/or sectors.

The Stockholm Region is well aware of the difficulties with setting a general target for energy efficiency at the EU level, taking into account that the potential for energy efficiency measures differ significantly between both individual EU countries as well as between the various sectors. A target for only the reduction of greenhouse gas emissions does not lead to energy efficiency. Meanwhile, more efficient use of energy is however crucial in order to conserve natural resources and protect biodiversity. Energy efficiency targets may also be needed in order to reduce the needs in relation to energy imports. For these reasons, non-binding EU targets for energy efficiency are desirable, where the burden can then be distributed between Member States and sectors.

A. Energy efficiency sectors

2. Do you think that further policy measures are needed at the EU level to foster energy efficiency in buildings?

It is possible to conduct successful energy efficiency efforts in buildings without further EU regulation. The Stockholm Region has previously shared its views on the Energy Efficiency Directive and expressed its reservations against several binding measures, including Articles 4 and 5. In the proposal, the Commission proposed a high degree of regulation within areas where Sweden has for a long time and very successfully applied the general economic instruments to influence change.

Within the EU and Sweden, there is the goal that the building sector will become 50% more energy efficient in absolute terms by 2050 compared with 1996. The energy efficiency target includes all usage of energy for the operation of existing buildings, operation of future buildings that are built up to the year 2050, household electricity usage and commercial electricity usage within buildings. As part of achieving that goal, each country should establish energy requirements for new buildings as well as targets for improving the energy efficiency of existing buildings. For the buildings in Stockholm, the Planning and Environmental Department in the City of Stockholm has estimated that

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new buildings have to remain within an energy usage of a maximum of 50 kWh/m² in 2030 (heating, hot water, building electricity and comfort cooling). Meanwhile, existing buildings must increase their energy efficiency by about 35% by the year 2050.

3. **Do you think that further policy measures are needed at the EU level to foster energy efficiency in industry?**

The Stockholm Region's view is that the usage of economic instruments as a means of influence should be promoted in the EU's environmental policy. The prime example of such a system today is the EU's system of emissions trading. The Stockholm Region is well aware of the problems that currently exist in the system, including currently a very low price for carbon dioxide. The Stockholm Region does not however consider the current challenges as an argument to abolish the system after 2020. The emissions trading scheme should instead be reformed in order to contribute in a cost-efficient manner to the reduction of greenhouse gas emissions during the period 2020 - 2030.

4. **Do you think that further policy measures are needed at the EU level to foster energy efficiency in transport?**

Regulation (EC) no. 443/2009 regulates the energy efficiency of new cars by putting a limit on how much CO^2 may on average be emitted from the exhaust pipe on new cars sold. In 2015, this may be no more than 130 g/km, and from 2020, 95 g/km. This is a very stringent requirement and means that a large proportion of the motor vehicles in use will be replaced by electric vehicles.

The Regulation however does not differentiate between carbon dioxide emissions of fossil origin – which increases climate impacts – and carbon dioxide of biological origin – which does not increase the climate affects as this carbon dioxide is part of the carbon's natural cycle. In practice, this dimension is not climate related, but rather a measurement of energy efficiency. This also means that the Regulation favours such technology as diesel over biogas technology, for instance – resulting in both increased greenhouse gas emissions, which also increase the local emissions hazardous to human health, as well as constituting a very strong barrier to the development of energy-efficient biofuel vehicles, primarily biogas vehicles. The development of second generation biofuels and vehicles adapted for these is disadvantaged too.

The Regulation therefore must be reworked and instead be based on the climatic effect, i.e. carbon dioxide equivalents, Well-to-Wheel. This favours the optimal combination of energy efficiency and renewable fuels.

5. **Do you think that further policy measures are needed at the EU level to foster energy efficiency in electrical equipment?**

In order to achieve an increase in energy efficiency in household electricity and the needs of businesses for electricity, the Ecodesign Directive concerning household appliances, electronics and the like are gradually tightened.

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6. **Do you think that further policy measures are needed at the EU level to foster energy efficiency in generation and distribution?**

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7. **Do you think that further financial mechanisms and instruments are needed at the EU level to mobilise energy efficiency investments?**

Regarding financial support for energy efficiency in buildings, it is important to develop national (i.e. not primarily European) financial assistance available to property owners, such as low interest loans or reductions on taxes after renovation with a proven reduction in energy usage. However, it may be worth considering a targeted EU assistance to property owners, especially when according to the Energy Performance of Buildings Directive (2010/31/EU) (EPBD) should act as role models in this area.

8. **Do you think that further measures are needed to build the capacity of actors in the energy efficiency sector?**

It is especially important that the starting point for all EU regulations should be that they respect the principles of subsidiarity and proportionality, and protect local self-government, that the proposals do not go further than necessary, allow for flexibility, and that they are cost effective.

9. **What are the most promising technology solutions that can help deliver energy savings in the 2020 and 2030 time horizon? How can their development and uptake be supported at the EU level?**

Energy production: Large increase in the degree of the efficiency in a Combined Heat and Power Station/cogeneration plant can be achieved with flue gas condensation.

Existing buildings: One cost-effective measure is to install heat recovery from exhaust air.

Transportation: small electric vehicles for local (urban) transport distances under approx. 15 km: Electric bikes, electric mopeds, small electric cars that do not yet exist and which require amended regulations for passenger vehicles, for instance three wheel cars for 1-2 person(s) which become classified as motorcycles and only require a motorcycle license. The possibility of large positive side effects – reduction of traffic congestion, improved city air, less need for land for cars in cities.

Smart Grid solutions that enable integration of renewable energy sources such as solar and wind power on a small scale, but which collectively can provide a good supply of energy while at the same time energy consumption can be partially controlled in time.

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10. Further Comments

Question 1 contined: With the sharing of the burden of the energy efficiency targets, consideration of how the target concerning the share of renewable energy is distributed should be taken into account. It is also important that in future EU measures, the commission makes consideration for the various different conditions that exist in.

Question 3 continued: Since all Member States annually report the climate performance of individual fuels sold, this modification can be easily implemented.

EU's measures to promote greater energy efficiency in the public sector should focus on supporting voluntary action and efforts, such as *Smart Cities and Communities* and the mayor agreement *Covenant of Mayors*.

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