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--- *by email only* ---

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Dear President Juncker

After the conclusion of the Paris agreement, my predecessor (Professor Jos van der Meer) wrote to you concerning the challenges the EU faced in implementing the agreement, and undertook to provide further scientific advice on the EU's role in meeting the critical targets to limit warming well below 2°C above pre-industrial levels. I am writing to you now to inform you of critical analyses carried out by EASAC which show that the EU is in danger of continuing or even expanding a policy which threatens to undermine the climate benefits of Member States' investments in renewable energy sources such as wind and solar.

The issue concerns the timescale over which the use of forest biomass for energy production can be assumed to be 'carbon neutral', and thus treated as a form of renewable energy (along with wind and solar). By signing up to the Paris agreement, the EU has accepted the need to reduce carbon emissions in the short term, i.e. before 2030, whilst the concept of carbon neutrality for the burning of forest biomass is valid only over many decades or in some cases centuries. The legal mandate to record forest biomass-fired energy as contributing to the EU's renewable energy targets has had the perverse effect of creating a demand for trees to be felled in Europe or elsewhere in order to burn them for energy, thus releasing the carbon into the atmosphere which would otherwise stay locked up in the forest, and simultaneously drastically reducing the carbon sink strength of the forest ecosystems. Of particular concern are power generating plants burning wood which typically emit 1.5 times the CO₂ emitted by coal-fired generating plants (and over three times that emitted by plants using natural gas), such that the effect of switching to forest biomass is to increase atmospheric levels of CO₂. We drew the attention of both the Commission and the Parliament in May 2017 to our analysis (EASAC Policy Report 32) which noted that the current use of imported pelleted forest biomass was leading to increased greenhouse gas emissions with no guarantee of when (or even if) the additional carbon released to the atmosphere would be offset by forest regrowth.

We have since taken part in various discussions related to the Parliament's current review of the new 'Clean Energy for All Europeans' energy package, and have recently noted concerns expressed by other leading scientists that the current drafts before the Parliament still do not take these fundamental scientific realities into account. We thus urge the Commission (and Parliament) to

review again the compatibility of forest biomass used for energy production with climate change targets, in particular taking into account the key recommendations in our report that:

- Using forest biomass for energy requires science-based standards to avoid deleterious effects on climate, since the wide range of bioenergy scenarios includes those where burning forest biomass releases significantly more carbon dioxide per unit of electricity generated than fossil fuels over extended periods. Regulations and governance should be designed to ensure that forest biomass energy makes an effective contribution to climate change mitigation.
- The potentially very long payback periods for forest biomass raise important issues given the UNFCCC's aspiration of limiting warming to 1.5 °C above preindustrial levels to 'significantly reduce the risks and impacts of climate change'. On current trends, this may be exceeded in around a decade. Relying on forest biomass for the EU's renewable energy, with its associated initial increase in atmospheric carbon dioxide levels, increases the risk of overshooting the 1.5°C target if payback periods are longer than this. The European Commission should consider the extent to which large-scale forest biomass energy use is compatible with UNFCCC targets and whether a maximum allowable payback period should be set in its sustainability criteria.
- Biomass energy is significantly less effective in reducing atmospheric concentrations of carbon dioxide than other sources of renewable energy. Policy-makers should re-examine environmental credit rules and associated subsidies to link financial incentives to the real contribution of each technology to climate change mitigation and to avoid perverse outcomes and negative climate impacts.

In view of the urgency of this matter, and taking into account the example which the EU may give to other countries prioritizing the use of their forests, we urge you to ask again the responsible Directorates to fully assess the scientific aspects and prepare criteria which avoid the current perverse effects of the EU's renewable energy targets on climate change mitigation.

With kind regards



Thierry Courvoisier

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President, EASAC