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Emissions Trading System: Stop Perverse Climate Impact of Biomass by Radically Reforming CO2 Accounting Rules

Several European countries who are considered leaders in climate protection owe their apparently good emission reductions to biomass. These might turn out to look quite different in the future, if carbon-accounting under the Emissions Trading System (ETS) were to be based on science and the real effects on climate. As the European Commission works on a revision of its central climate policy tool, the European Academies' Science Advisory Council suggests a radically new standard.

“Labelling forest biomass as renewable has a perverse impact on the climate. Much of the

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biomass employed in Europe is anything but carbon neutral. Current accounting rules under the emission trading scheme let certain power plants and countries shine as climate pioneers although they actually damage the climate”, says Prof. Michael Norton, EASAC’s Environment Programme Director.


EASAC’s and many other scientists’ work has shown that swapping coal with biomass in power stations often does not reduce, but increases net emissions to the atmosphere, when the whole life cycle is properly accounted for. The negative impact on climate may persist for many decades and thus increase the risk of overshooting Paris agreement targets, explains Norton. *“Today’s carbon accounting rules under the ETS that allow biomass stack emissions to be ignored, give forest biomass a free ride – despite its massive climate effects. From a scientific standpoint, not correcting this mistake is climate hypocrisy.”*

The scientists call upon EU lawmakers to introduce a new requirement that net carbon emissions from biomass power stations be properly accounted for and declared under the Emissions Trading System. It should not be possible to just

removal: an update

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assume that millions of tons of carbon coming out of a power station stack are 'zero'. The ETS should be reformed to link accounting to the real effects on CO2 levels in the atmosphere. This will require calculating the 'carbon payback period' for each biomass facility and its supply chain. Regulators need to know how long it will take until the initial perverse effects of biomass on climate are overcome and net reductions in atmospheric CO2 concentrations achieved.

"Since recent estimates are that 1.5 °C may be exceeded in 10-20 years, an acceptable payback period should be no longer than 5 to 10 years", explains Norton. The concept would ensure that the most damaging facilities have to report their emissions in the same way as those using fossil fuels.

"I'd expect this to have an impact on how we look on countries like Denmark, Estonia, Finland, Sweden, Netherlands, the UK, and others who use a lot of biomass. This places challenges for such countries to reach their renewable energy targets with less climate-damaging biomass. But much more would be achieved in tackling climate change if the huge subsidies currently given to biomass could be diverted to technologies that

really helped the climate,” concludes Norton.

The submission presented by Prof. Norton on behalf of EASAC to the Commission’s consultation on the Emissions Trading System and an overview of biomass use for electricity production are accessible through the link provided below.

References:

[EASAC Commentary on Forest Biomass, carbon capture and storage, and carbon dioxide removal](#)

[EASAC Response to the consultation of the European Commission](#)

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