

USIPA Response to Consultation on revised Climate, Energy and Environmental Aid Guidelines (CEEAG)

The revision of the Guidelines on State aid for climate, environmental protection and energy (CEEAG) is an important step in realizing the ambition of the EU Green Deal. Delivering increased climate ambition requires a significant amount of additional investment - estimates indicate the investment gap for meeting the EU 2030 targets are at least €300 billion a year.¹ To reach net-zero by 2050, €28 trillion will need to be invested in clean technologies and techniques.² Closing that investment gap will be the difference between success and failure. Despite the increasing competitiveness of renewable technologies, regulatory consistency and policy support are still critical components of ensuring successful ramp up of renewables to achieve the climate goals set out by the EU.

Bioenergy is currently the largest source of renewable energy in the EU and provides almost 60% of gross renewable energy consumption. Recent analysis shows a need to grow the use of sustainable biomass by up to 60% by 2030, and that, by 2050, its share of final energy consumption could be as high as 20%.^{3 4} Government support and a stable regulatory environment will be crucial in making this a reality. Sustainable biomass, as a renewable dispatchable power and heat source, supports the integration of variable renewable generation and can ensure that essential energy system services are not just the preserve of fossil fuels. Furthermore, biomass will increasingly be sought for the decarbonization of the industrial sector, and will be key, through the application of Bioenergy Carbon Capture and Storage (BECCS), in delivering the negative emissions needed to reach net-zero. To enable this, we offer the below recommendations.

We would also like to take this opportunity to also address the recent Fit for 55 proposals from the Commission to amend the Renewable Energy Directive. Under the new Article 3(b), Member States would be prohibited from granting support to the production of electricity from forest biomass in electricity-only installations from 31st December 2026.

This restriction is not in keeping with the spirit, rationale, or philosophy of the EU state aid regime. As confirmed by the 2020 EJC ruling on Hinkley Point C nuclear power station, EU state aid is intended to facilitate the development of economic activities and ensure no undue market distortion, and is **not** designed to limit a Member State's own choice of energy sources or general structure of energy supply.⁵ This is commensurate with Member States' rights to determine their own energy mix, as per section 176A of the Lisbon Treaty. The proposed language to limit subsidies is not consistent with these concepts and should be removed.

¹ <https://www.bruegel.org/2020/01/a-trillion-reasons-to-scrutinise-the-green-deal-investment-plan/>

² <https://www.mckinsey.com/business-functions/sustainability/our-insights/How-the-European-Union-could-achieve-net-zero-emissions-at-net-zero-cost>

³ <https://publications.jrc.ec.europa.eu/repository/handle/JRC118592>

⁴ <https://www.iea.org/reports/net-zero-by-2050>

⁵ <https://curia.europa.eu/jcms/upload/docs/application/pdf/2020-09/cp200112en.pdf>

Further still, as expanded on below, restrictions on forest biomass use in power stations undermines the economic case for one of the only scalable, renewable power source that can provide essential system services. Rather than supporting the achievement of renewables and emissions reductions targets, such an intervention will offer a lifeline to fossil-fueled power generation.

Recommendations:

1. Article 107: *“To avoid undermining the objective of the measure or other Union environmental protection objectives, incentives must not be provided for the generation of energy that would displace less polluting forms of energy. For example, where cogeneration based on non-renewable sources is supported, ~~or where biomass is supported,~~ they must not receive incentives to generate electricity or heat at times when this would mean ~~zero air pollution~~ renewable energy sources (as defined in RED) would be curtailed.”*

➤ **Unnecessary discrimination against biomass as a renewable technology should be removed from the Guidelines.**

EU climate goals seek to increase the use of renewable energies across Member States, and State Aid rules should support this effort by facilitating fair and equal development of renewables markets, and by encouraging investment and technological advancement. Preference should not be given for some technologies over others.

Further, this article runs contrary to the principle outlined in the Lisbon Treaty which gives Member States the authority to make decisions and determinations regarding their energy supply. In Article 176A of the Lisbon Treaty, Member States are given the right to determine the conditions for exploiting energy resources, and to choose between different energy resources and the general structure of their energy supply. Establishing a preference for some renewables over others is not appropriate or in keeping with the spirit of the Lisbon Treaty.

State Aid for renewable energy technologies should not restrict Member States ability to use a variety of renewables to meet energy targets. This will create extreme difficulties in reaching renewable energy and emissions targets by 2030 and beyond. Member States need to be granted flexibility in implementation in order to accommodate locally-diverse situations and resource availability.

➤ **The Guidelines must be aligned with the Renewable Energy Directive, based in robust science, and should recognize the role of biomass in providing essential system services.**

Alignment with RED

The Renewable Energy Directive establishes stringent emissions and efficiency levels required for plants using bioenergy, and establishes criteria under which bioenergy is considered sustainable. Under the RED, forest biomass used in the EU must meet strict sustainability standards that ensure: biomass sourcing is legal, that forest regeneration will occur, that nature protection areas remain

preserved, is considerate of soil quality and biodiversity, and that harvesting maintains/ improves long-term production capacity of the forest. **If biomass is in compliance with these criteria and meets the appropriate emissions and efficiency levels, it is not reasonable for there to be further discrimination against its use.**

Basis in robust science

One of the underpinning principles of the EU Green Deal is the removal or reduction in use of fossil fuels, not the replacement of one renewable source for another. **The science supporting biomass as a climate mitigation tool is well-established.** For example, the IPCC in its August 2019 Special Report on Land and Climate, stated that sustainable forest management “aimed at storing carbon while yielding timber, fiber, and *bioenergy*” will produce the best results for the climate. The report also indicates that almost all scenarios to prevent warming above 1.5C include a combination of bioenergy, carbon capture, and reforestation and afforestation – sustainable woody biomass supports all 3 of these areas.⁶ The carbon savings associated with biomass are well documented in science^{7 8 9} and the misconceptions about its sustainability and use have also been roundly rebutted in recent peer-reviewed literature.¹⁰

Essential system services

Baseload resources and intermittent technologies are not an either-or scenario – rather, sustainable biomass and other renewables work *together* to create a low-carbon energy system. Back up-power and other energy system services provided by baseload energy sources will always be needed to stabilize the grid, and traditionally are provided by coal and gas. As a dispatchable, baseload renewable resource, biomass serves as a low-carbon replacement for fossil fuel generation while also providing these essential system services.

System services supported by biomass include:

- **Security of supply:** To maintain security of supply, back-up power from a baseload source must always be on hand to prevent power surges and power loss, usually through mechanisms such as a Capacity Market. These markets are paid for by the consumer via energy bills and this service is often filled by fossil-based resources. Dispatchable biomass can fill this role with low-carbon energy, thereby supporting deployment of wind and solar technologies. Without biomass, there is currently no scalable alternative to produce this back up power except with fossil-based resources.

⁶ https://www.ipcc.ch/2019/08/08/land-is-a-critical-resource_srccl/

⁷ <https://img1.wsimg.com/blobby/go/9afce926-cdfb-428d-9af3-8ec23009b16a/downloads/saf.pdf?ver=1622050148248>

⁸ <https://energycentral.com/c/ec/climate-solution-we-cannot-afford-ignore-biomass-sourced-naturally-managed>

⁹ [https://img1.wsimg.com/blobby/go/9afce926-cdfb-428d-9af3-8ec23009b16a/downloads/Wang_2015_Environ. Res. Lett. 10 114019.pdf?ver=1619022421638](https://img1.wsimg.com/blobby/go/9afce926-cdfb-428d-9af3-8ec23009b16a/downloads/Wang_2015_Environ._Res._Lett._10_114019.pdf?ver=1619022421638)

¹⁰ <https://onlinelibrary.wiley.com/doi/epdf/10.1111/gcbb.12844>

- **Variability:** Dispatchable technologies, like biomass, have more control over their output, allowing them to contribute when electricity is most needed, and quickly scale up and scale down when energy demand peaks and falls.
- **Balancing:** Balancing is needed when a technology fails to deliver the output it has committed to with the system operator in advance of actual delivery. Because biomass is a baseload technology, these commitments are met more frequently and can even over-deliver when necessary, which can help to lower the costs of associated subsidies.
- **Transmission:** Biomass can be deployed at existing grid connection points, which are generally located close to demand centers. This keeps costs of transmission and distribution low.

In many cases these system services require that plants are also run at times when there is a surplus of energy on the system. For example:

- **Balancing:** For a biomass plant to step in at the required time when other technologies cannot deliver their committed output, the plant must already be running when the turndown occurs.
- **Inertia:** Kinetic energy stored in the spinning turbine of a power plant is essential in providing near instantaneous response to sudden changes in grid frequency. The turbines must be spinning for there to be inertia, which means plant must be running, even when there is surplus wind and solar.
- **Reactive power:** To “steer” the power system, reactive power is needed to keep voltage at the correct level. Biomass plants can absorb or distribute reactive power as needed. Variable renewables can provide this service, but not on demand and, crucially, due to their distributed nature, are often not located where needed. Biomass used in converted coal power stations is deployed at existing grid connection points, which are generally located near where reactive power is required.

Each of these services requires plants to be running even when wind and solar are oversupplied. These are non-negotiable realities of operating today’s power system in a secure and safe manner. **The denial of support for biomass as outlined in Article 107 would result in operators instead using more coal or gas, and would not result in an increase of wind or solar usage.**

➤ **Denying biomass support for cogeneration would create double financial jeopardy for plants and result in higher heat costs for consumers.**

Article 107 as proposed would undermine or eliminate the efficiency benefit of cogeneration. For many CHPs, increasing heat output automatically results in increased electricity output. For example, if support were removed when wind and solar were dominating the system but there was still a strong heat demand, the plant would still need to run, and would therefore still generate power. The proposed language in 107 would mean that not only would this power output not be able to receive Government support, but if there was enough wind and solar on the system that it would be curtailed, power prices would be negative and the plant would be forced to sell their power output at a loss.

The impact of this would most keenly be felt by the homes and businesses receiving heat from the CHP. The dual generation of heat and power is factored into the offer to customers - they receive a lower heat price because the plant generates income from the power sales, either from the market or support schemes. If this is disrupted and power generators are denied this support and forced to sell power at a loss, the result would be an increase in heat price for customers.

2A. Article 77: *Indirect land-use change (ILUC) occurs when the cultivation of crops for biofuels, bioliquids and biomass fuels displaces production of crops for food and feed purposes, **as specified in delegated act (EU) 2019/807**. Such additional demand increases the pressure on land and can lead to the extension of agricultural land into areas with high-carbon stock, such as forests, wetlands and peatland, causing additional greenhouse gas emissions. This is why Directive (EU) 2018/2001 limits food and feed crops-based biofuels, bioliquids and biomass fuels **and (EU) 2019/807 provides safeguards**. The Commission considers that certain aid measures can aggravate indirect negative externalities. The Commission will therefore, in principle, consider that support for biofuels, bioliquids, biogas and biomass fuels exceeding the caps defining their eligibility for the calculation of the gross final consumption of energy from renewable sources in the Member State concerned in accordance with Article 26 of that Directive **and exceeding the respective thresholds in (EU) 2019/807**, do not produce positive effects which outweigh the negative effects of the measure.*

➤ **The Guidelines should remain consistent with existing EU legislation.**

The Commission has already identified biofuels which may be associated with high-risk of indirect land use change (ILUC) and provides thresholds for use of those biofuels (EU 2019/807). All other biofuels are considered to have low-risk of ILUC, and therefore it cannot be concluded that their use or expansion produces negative effects that outweigh the positive effects.

2B. Article 77: ~~*Furthermore, the Commission will verify whether Member States took into account in the design of their support mechanisms the need to avoid distortions on the raw material markets from biomass support, in particular for forest biomass."*~~

➤ **Raw materials markets for forest material are extremely complex, and the cause or result of market fluctuations cannot be drawn down to one single factor.**

This requirement oversimplifies the marketplace and risks attributing incorrect conclusions or assumptions to biomass when the industry makes up just a small fraction of the overall forest products sector. This sentence should be deleted.

- **DG Competition has twice formally investigated market distortion issues related to biomass from US Southeast forests, and both times, after a 6+ month investigation, has found no undue market distortion related to EU biomass demand.**^{11 12}
- **In the US Southeast, biomass makes up less than 4% of all harvested material each year. The risk of distortion effects from this niche market are very low.**¹³

Forest biomass is produced from lower-value woody material that is undersold or has no other buyer in the local market. Biomass producers sit at the bottom of the value chain and have a low paying capacity relative to other forest products industries.

Across the US Southeast, over 85% of forestland is owned by small, private family landowners.¹⁴ Many of these landowners carefully manage their lands as working forests to sustainably supply a variety of forest products industries. Long-term management and harvesting decisions are based on the sawtimber industry, which uses the highest-value wood. Lower-value wood, which does not meet the specifications for sawtimber, can be used for paper, packaging, bioenergy, and other industries.

Strong markets for wood products lead to strong forests. Markets for forest products provide financial incentive for landowners to continue replanting and sustainably managing their lands. Without this financial incentive, landowners may convert their lands to something more lucrative, such as agriculture, or commercial development. Lower-value markets, in particular, help landowners by purchasing felled wood that does not meet the specs for sawtimber, allowing them to clear their lands for replanting.

Basic economics and industry best practices ensure that harvested trees are used to maximize their value. Consider the price differential between sawtimber and pulpwood: In Q4 of 2020, the stumpage price for pine sawtimber averaged \$28/ton across the US South, whereas the stumpage price for pine pulpwood was roughly \$8/ton.¹⁵ The chart below shows that average sawtimber prices in the region are significantly higher than average pulpwood prices on a consistent basis.

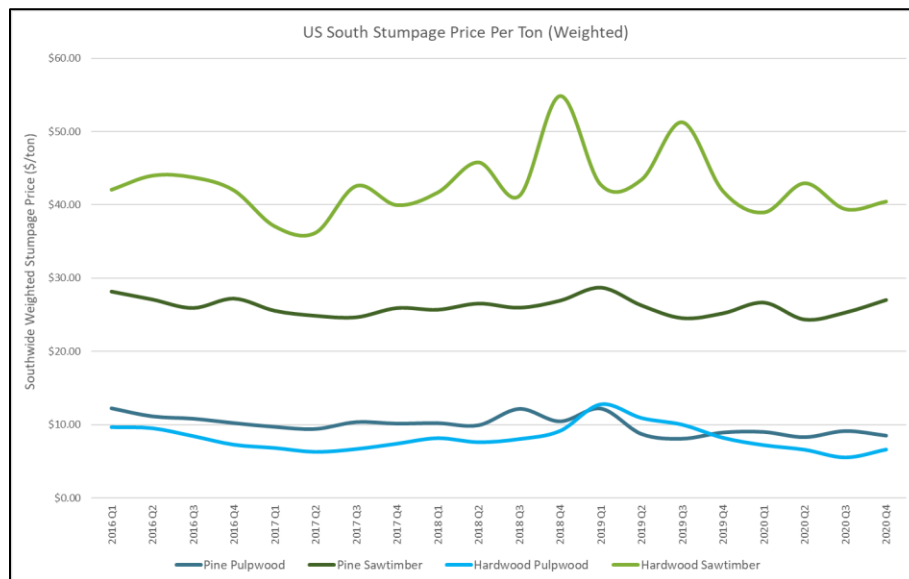
¹¹ https://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=3_SA_38760

¹² https://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=3_SA_38762

¹³ https://www.forest2market.com/hubfs/2016_Website/Documents/20151119_Forest2Market_USSouthWoodSupplyTrends.pdf

¹⁴ <https://www.srs.fs.usda.gov/futures/technical-report/06.html>

¹⁵ <https://www.forest2market.com/timber-prices/stumpage-prices>



Q1 2016 - Q4 2020 Average Stumpage Prices in US South, Forest2Market

While the financial incentive from pulpwood sales are not high enough to be the primary motive for harvesting or management decisions, demand for lower-value pulpwood is important to forest health as it does result in incremental cash flows for timberland owners, which helps to support sustainable forest management activities, such as replanting, fire prevention, etc. The price differential also ensures that available pulpwood remains a result of land management activities, as opposed to an incentive to manage forests solely for pulpwood production.

3. **New Article:** Continuation of 'operational aid' for existing bioenergy assets

- As noted above, sustainable biomass, as assured by the RED, can play an important role in lowering greenhouse gas emissions, while displacing fossil fuels that will otherwise be relied upon to provide dispatchability and other essential systems services. Despite biomass' increasing competitiveness, market dynamics often justify the need for operational support, which is also the case for existing biomass fired power and CHP plants. The persistence of fossil fuels subsidies and low wholesale energy prices prevent some plants from being profitable. Further, despite increasing EU-ETS prices, absent Government support, operators do not have the confidence they need to make investments that may be necessary for the continued operation of the plant.

Often biomass plants are providing essential system services that are required for keeping the lights on and heating homes. Therefore, existing depreciated assets should still be eligible to receive operational aid (as they are under the existing EEAG) if this results in a more environmentally-friendly choice for the plant operators. This will guard against the risk of re-carbonisation, especially in cases for "must run" biomass plants.