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Bioenergy is ready to deliver ambition and action

Bioenergy is Indispensable for Achieving Climate Goals: A Call for Ambition and Action
Message to the International Energy and Climate Community at COP29

As the global community convenes at COP29 in Baku, we face a critical juncture. The impacts of climate change are no longer future projections, but present realities. The global average surface temperature in **August 2024** was **1.51°C above pre-industrial levels**, with record-breaking weather phenomena becoming the norm. The urgent need to transition to a sustainable energy system has never been clearer.

Despite the promises of climate action, **fossil fuels met 80% of global energy demand in 2023**, locking in emissions for decades to come. The energy sector remains the largest source of global carbon dioxide emissions, which **increased by 1 Gt in 2023 compared to 2019 levels**.

To mitigate human-induced climate change impacts, renewables offer a sustainable path forward. Although **renewable power capacity** is growing, reaching an unprecedented **3 870 GW in 2023**, this progress remains insufficient to meet global climate targets. Deployment also varies significantly across technologies and regions, highlighting the need for accelerated and more evenly distributed growth in renewables worldwide.

Bioenergy's Unique Role in the Energy Transition

Bioenergy stands at the forefront as the largest renewable energy source. It is versatile, utilizing a multitude of feedstock to meet all end uses for energy, materials, and chemicals. **Modern bioenergy usage reached 41 EJ in 2022**[i], accounting for 55% of renewable energy and over 6% of the global energy supply.

Bioenergy plays an indispensable role in established sectors—**accounting for 96% of renewable heat, 93% of renewable transport fuels, and 8% of renewable electricity generation**—while also supporting emerging technologies in hard-to-abate sectors like aviation, shipping, and heavy industry.

Looking forward, **bioenergy is projected to nearly triple by 2050**, fulfilling **20% of global energy demand** in the Net Zero Emissions Scenario[ii]. Importantly, bioenergy contributes not only to emissions reductions but also to **energy security**, particularly in regions facing

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energy supply risks. It also promotes **local economic development** and **job creation** through sustainable biomass supply chains. In emerging economies, bioenergy can drive a just energy transition, offering alternatives to fossil fuels while delivering socio-economic co-benefits in line with the **Sustainable Development Goals (SDGs)**.

The 2030 Deadline: NDCs and Policy Gaps

As we approach 2030, the world is far from on track to meet the targets set in the Paris Agreement. By 2030, we must reduce emissions by **43% (from 2019 levels – according to IPCC to be in line with the Paris Agreement[iii])** and **triple renewable energy capacity** to meet the **11 TW** target (according to the UAE Consensus[iv]). Yet, the latest data shows that emissions are still increasing, and very few countries have set clear renewable energy capacity targets within their Nationally Determined Contributions (NDCs) before COP28[v].

Moreover, out of 195 countries, only a fraction of these parties explicitly include bioenergy as a critical tool in their NDCs. Even bioenergy-dominant countries, such as **Brazil, India, China, and the United States,** have not adequately highlighted the role bioenergy can play in meeting their climate goals. On the other hand, countries like **Indonesia and Canada** have integrated bioenergy into their energy transition plans, offering models of how policy can successfully drive bioenergy deployment. Indonesia aims for nationwide adoption of B40 biodiesel by 2030, while Canada plans to invest $1.5 billion in its Clean Fuels Fund to help grow the clean fuels market, including the production of solid and liquid biofuels.

The Call for Ambition and Action: What COP29 Must Deliver

At **COP29**, the World Bioenergy Association (WBA) urges world leaders to not only raise their ambitions but also to **take decisive action**. We propose six key principles to ensure bioenergy is integrated into the global clean energy transition:

Ambition

- **Increase renewable energy targets in revised NDCs**, ensuring alignment with the 1.5°C Paris Agreement pathway, and mandate bioenergy's role in decarbonizing hard-to-abate sectors.
- **Phase out fossil fuels** by implementing clear and just transition plans for all end-use sectors, especially in industries and transport, with a timeline for removing fossil fuel subsidies.

- Secure ambitious **climate finance commitments** to support both mitigation and adaptation efforts, particularly for emerging economies and vulnerable communities

Action

- **Strengthen policy frameworks** – Create long-term, stable, technology-neutral, and holistic to cover all sectors.
- **Develop robust climate progress reports**: Transparent, publicly available, science-based reporting mechanisms must be established to track NDC implementation and provide regular updates on renewable energy progress.
- **Facilitate international cooperation**: Support bioenergy technology transfer and capacity building between advanced bioenergy markets and emerging economies to accelerate global deployment.

The WBA calls on the international community at COP29 to recognize bioenergy's indispensable role. With strong policies, targeted financing, and coordinated global action, bioenergy can be a cornerstone of the world's sustainable energy future. Now is the time to move from ambition to action—bioenergy is ready to lead the way.

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[i] IEA (2024). Renewables: Bioenergy
[ii] Jeremy Moorhouse (2023). Bioenergy and Net Zero [presentation]
[iii] United Nations (2024). Climate Change: Net Zero Coalition
[iv] The UEA Consensus negotiations outcome
[v] IEA (2024). Renewables 2024: Analysis and Forecasts to 2030.