

IRENA Policy Talks 2022

Sustainable Bioenergy for the Energy Transition

2:00 – 3:30 PM GST, 28 June 2022

Introduction

Bioenergy makes up the largest share of renewable energy use today, accounting for around 9% of the world's total primary energy supply. More than half (54%) of bioenergy is consumed for cooking and heating buildings inefficiently. Modern uses of bioenergy include biomass and biogas/biomethane for industrial heat, power generation, and liquid biofuels road transport. However, they only contribute small shares of the final energy consumption of end uses: 7% of heating for buildings and industry and 3% of transport fuels.

Modern bioenergy has a major role to play in the energy transition. IRENA's 1.5°C scenario suggest that it will make up a quarter of the total primary energy supply or 17% of final energy demand by 2050. Bioenergy will need to be scaled up to provide heat for both industrial processes and buildings, as well as fuels for transport. It will also be needed as feedstock in the petrochemical industry to produce chemicals and plastics. Combined with carbon capture and storage technologies in the power sector and some industrial sectors, bioenergy can deliver the negative emissions needed to achieve the net-zero emission goal.

Various barriers impede the scale up of bioenergy, including the lack of policy certainty, low level of technology readiness (for example, advanced biofuels for aviation or biomass for the chemical industry), high cost of bioenergy compared to fossil fuels, as well as weak supply chains. Comprehensive policy measures are needed to address these barriers and scale up the deployment. Energy policy needs to closely interact with other sectoral policies such as agriculture, forest and waste management.

If the supply chain is not managed properly, bioenergy can have sustainability risks linked to land use (including competition with food supply), air pollution, reduced water and soil quality, and biodiversity loss. Ensuring the sustainability of bioenergy deployment is the most fundamental element of bioenergy policymaking. Sustainability governance, regulations, and certification schemes can help minimise potential impacts on environmental, economic, and social aspects.

The fourth IRENA Policy Talk 2022 will be the occasion to launch the Bioenergy for the Energy Transition: Ensuring Sustainability and Overcoming Barriers report, with a presentation of key findings from IRENA, followed by two panel sessions of bioenergy experts who will discuss Scaling up bioenergy for key applications and the Sustainability.

Tentative Agenda:

14:00-14.05 (GST)	<p>Welcome remarks Ms. Gauri Singh, Deputy Director-General, IRENA</p>
14:05-14.20 (GST)	<p>Scene-setting presentation: Sustainable bioenergy for the energy transition Mr. Jinlei Feng, Programme Officer, KPFC, IRENA</p>
14.20-14.50 (GST)	<p>Panel session 1: Scaling up bioenergy for key applications Moderator: Dr. Adam Brown, Energy Insights Panellist:</p> <ul style="list-style-type: none"> - Dr. Johannes Baur, Team Leader, Decarbonisation and Sustainability of Energy Sources, Directorate-General for Energy, European Commission - Mr. Toshimasa Masuyama, Advisor-Forests and Climate, Forestry Agency of Japan - Mr. Bharadwaj Kummamuru, Executive Director, World Bioenergy Association - Ms. Irene Di Padua, Policy Director, Bioenergy Europe
14.50-15.20 (GST)	<p>Panel session 2: Sustainability of bioenergy Moderator: Dr. Ute Collier, Deputy Director, KPFC, IRENA</p> <ul style="list-style-type: none"> - Mr. Dean Cooper, Global Lead-Energy Transition, WWF - Dr. Maria Michela Morese, Natural Resources Officer at FAO and Executive Secretary of the Global Bioenergy Partnership (GBEP) - Dr. Phosiso Sola, Scientist, Center for International Forestry Research and World Agroforestry (CIFOR-ICRAF) - Dr. Julia Tomei, Associate Professor, University College London
15.20-15.30 (GST)	<p>Closing remarks IRENA</p>