IRENA SECRETARIAT

Regional Workshop
"Innovating Liquid Biofuels for the Transport Sector"

SUMMARY REPORT

November 27, 2015

BACKGROUND

The workshop "Innovating Liquid Biofuels for the Transport Sector" was held in Quito, Ecuador, on November 13, 2015. This regional workshop was jointly organised by the International Renewable Energy Agency (IRENA) and the National Institute of Energy Efficiency and Renewable Energy (INER) of Ecuador, as part of the International Congress of Sustainability and Scientific Fair.

This workshop is part of IRENA's suppport to member countries in deploying innovative renewable energy technology and products, corresponding to the activities defined in IRENA Work Programme 2014-2015, under its thematic area related to Enabling Investment and Growth. Specifically, this workshop is part of a wider portfolio of activities related to Innovation and Research, Development and Demonstration (RD&D).

This one-day workshop brought together ministers and representatives from national research institutions, the scientific community, stakeholders in the private sector, inter- and non-governmental organisations promoting the deploying advanced biofuels. Amongst other institutions, world-wide known institutions such as United Nations Conference on Trade and Development (UNCTD), U.S. Department of Energy's National Renewable Energy Laboratory (NREL), the Brazilian Agricultural Research Corporation (EMBRAPA) and the Latin American Energy Organisation (OLADE) participated in the event.

OBJECTIVES OF THE WORKSHOP

The goal of this workshop was motivating the discussion on current and projected market trends, research and development (R&D) resulting in the latest breakthroughs and potential of advanced biofuels in Latin America and the Caribbean (LAC). Specific objectives were:

- Presenting and discussing on IRENA's next publication, '*IRENA Innovation Technology Outlook for Advanced Biofuels*'. This publication is a global technology outlook for advanced liquid biofuels for transport from 2015 to 2045, which focuses on the role of innovation on advanced production pathways which have not yet reached large scale commercialization. The results of these publication were presented and discussed in two working groups, mainly dedicated to the following topics: i) R&D on feedstock and conversion technologies for liquid biofuels, and ii) mitigating risks for deployment of liquid biofuels. The feedback obtained from these discussions will be incorporated in the publication.

- Providing an opportunity for regional exchange of experiences on R&D of advanced biofuels along the entire production chain by facilitating the discussion between LAC experts and openning the debate to experts from other regions to share their lessons learnt.
- Exploring opportunities for active cooperation amongst different stakeholders involved in the production chain of advanced biofuels, involving harvesters, technology researchers, policy-makers and private sector innovators.

SUMMARY OF THE WORKSHOP

Participation

More than 270 regional experts attended to the workshop, which counted also with ministerial participation of Mr. Andres Arauz, Minister of Knowledge and Human Talent. Overall, 23 lecturers from 11 different nationalities participated in the International Congress of Sustainability and Scientific Fair, which was estimated to have visited by 2500 guests and had the participation of the Minister of Coordination of Strategic Sectors and the Minister of Electricity and Renewable Energy.

International lectures

Lectures were given from international and regional experts during the workshop. During the lectures, the urgent need to develop an affordable energy system that can substitute current fossil fuel and conventional biofuels to achieve an energy transition in the transport sector and the yet unbalanced geographical distribution of biomass potential versus the projects developed were emphasized. Various challenges which make the actual production of advanced biofuels not reaching the total capacity installed were also pointed. The multiple opportunities for non-food energy crops, as well as various innovative pathways to produce advanced biofuels were stressed. The lessons learnt from the Brazilian experience in conventional biofuel production were also presented. Feedstock diversification, integration of advanced biofuels in the existing system and generation of co-products with added value in biofuel production were also topics of discussion. Some of the experts insisted on the relevance of cooperating amongst countries and federal departments to develop deploy advanced biofuels globally.

Working groups

The participants of the workshop were divided in two working groups to discuss:

i) R&D on feedstock and conversion technologies for liquid biofuels: key issues discussed revolved around, in the mid and long term, technical challenges to technological development and commercialisation, as well as promising feedstock in LAC countries from the feedstock potential perspective, but also from the lifecycle emission, supply costs perspective. Other issues discussed prospects in the aviation sector.

ii) Mitigating risks for deployment of liquid biofuels: a debate on how risks associated to infrastructure, comodity prices or policy will affect the deployment of advanced biofuels and how mitigate their impact was held. Issues regarding industrial development and cooperation for scale up advanced biofuel production were also central topics of discussion in this working group.

OUTCOME

The workshop met all proposed objectives and the conclusion points obtained in the working groups discussions will be incorporated in '*IRENA Innovation Technology Outlook for Advanced Biofuels*'.