



SUSTAINABLE
ENERGY FOR ALL

Sustainable Bioenergy for Development and a Low Carbon Future

REEEAC Committee

Department of Commerce

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Global Lead

Sustainable Bioenergy High-Impact Opportunity

Sustainable Energy For All

Low carbon fuels are essential to achieving our environmental, social and economic goals

ENVIRONMENTAL GOALS

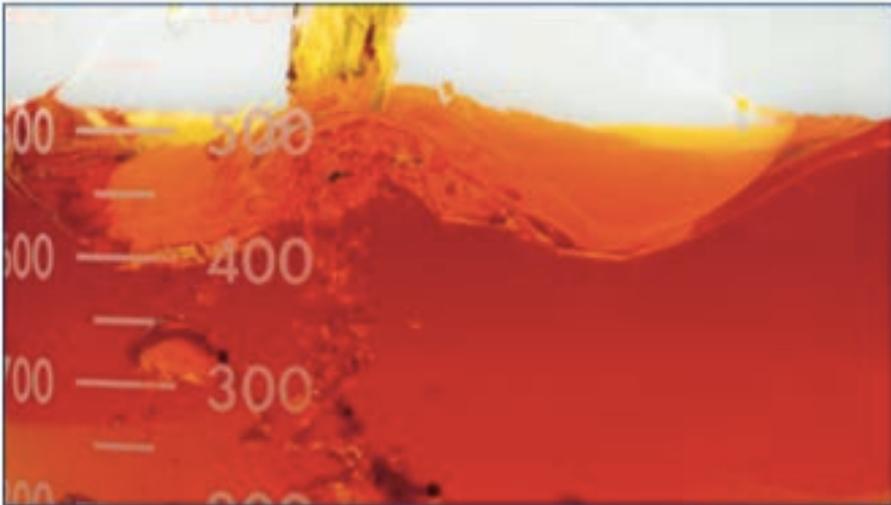
- Low carbon future
- Clean air
- Improved agricultural lands
- Healthier forests

SOCIAL GOALS

- Good jobs in rural areas
- Better labor conditions
- Healthy communities

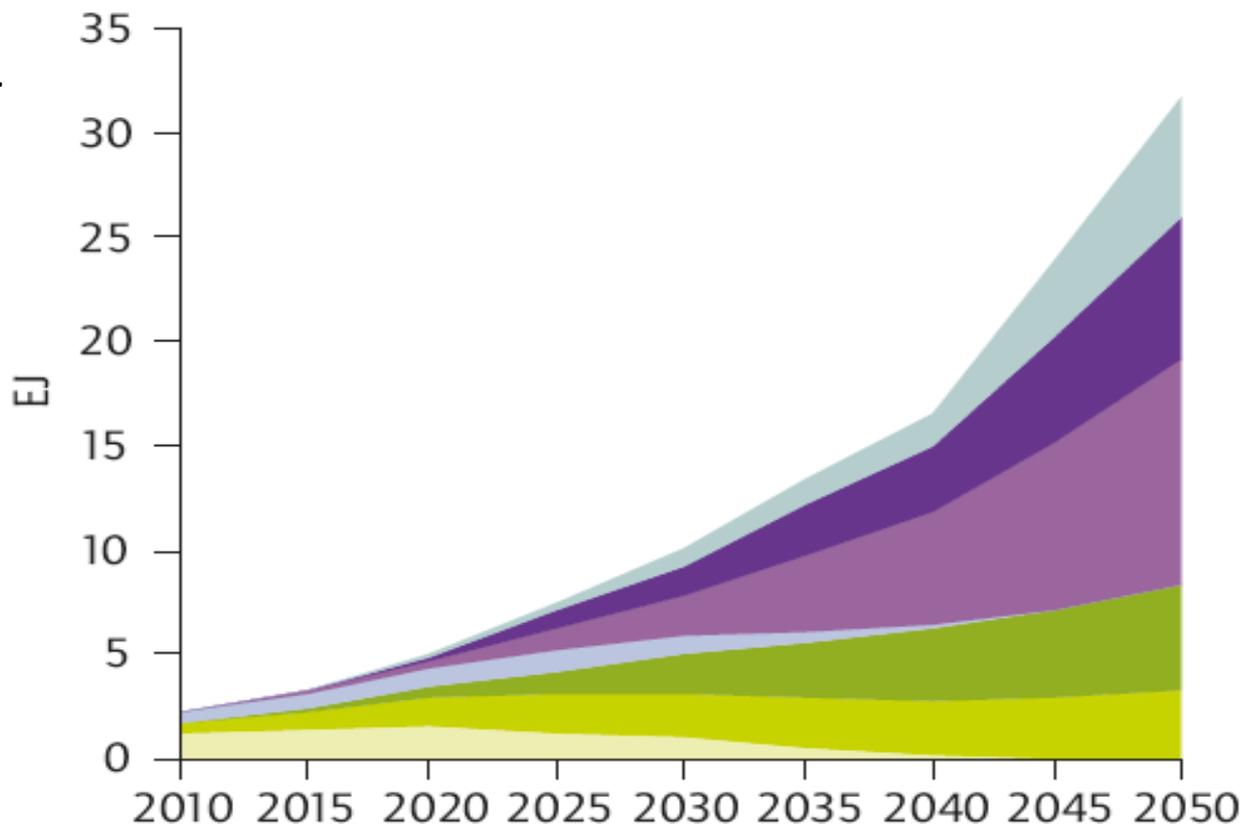
ECONOMIC GOALS

- Energy Security
- Economic development
- Thriving agriculture sector
- Food security



To remain below 2° C of warming, Sustainable Biofuels are needed to reduce GHG emissions from the Transport Sector

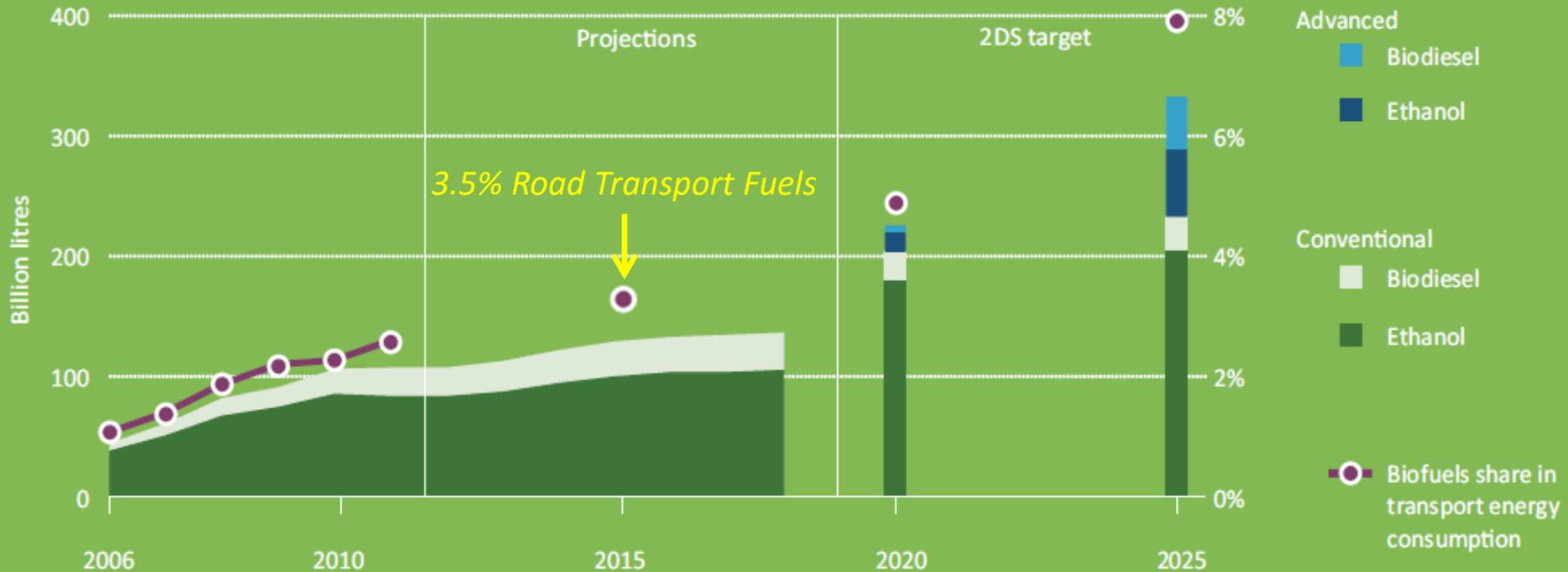
IEA ROADMAP 2011



- Global biofuel supply grows from 2.5 EJ today to 32 EJ in 2050
- Biofuels share in total transport fuel increases from 2% today, to 27% in 2050
- In the longer-term, diesel/kerosene-type biofuels are particularly important to decarbonise heavy transport modes
- Large-scale deployment of advanced biofuels vital to meet the roadmap targets

Biofuel use is not meeting IEA Biofuel Roadmap Goals

Global biofuels production



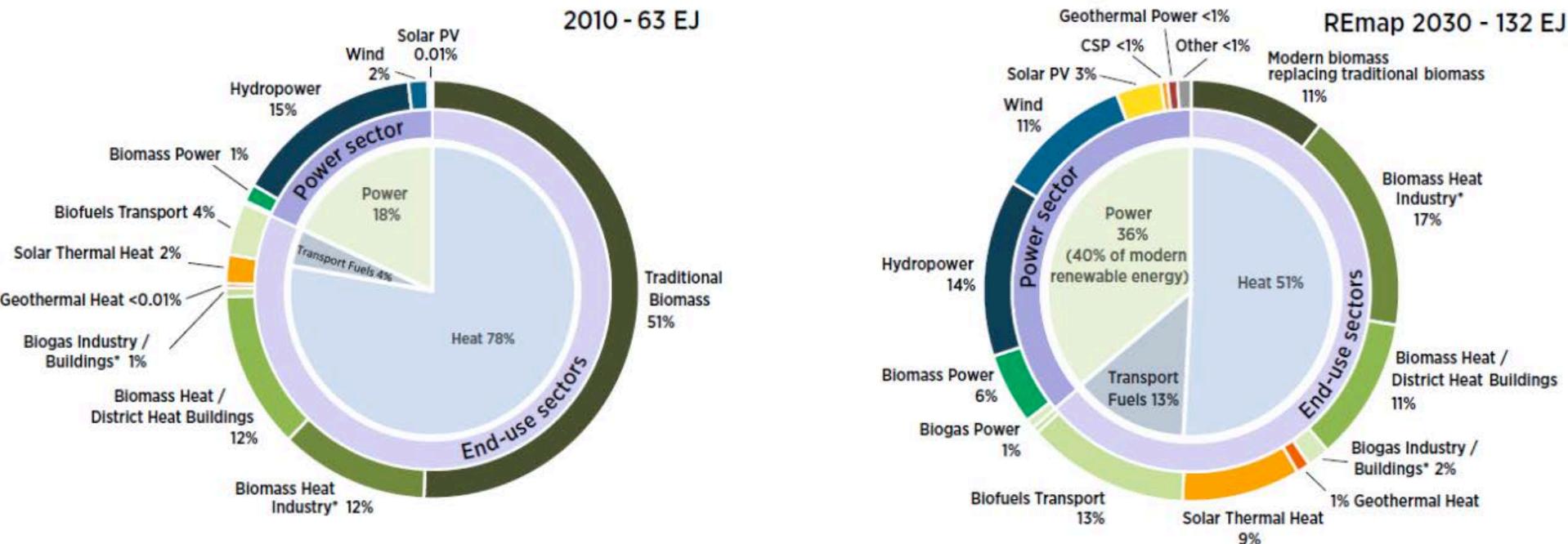
Source: IEA (2014) *Tracking Clean Energy Progress*

- Biofuels production affected by policy uncertainties in a number of key markets.
- Without significant improvements of the policy framework for advanced biofuels, long-term targets (27% in 2050) will not be met.
- **Need to create new biofuel markets.**

Global support for Bioenergy is growing:

The [International Renewable Energy Agency](#) expects biomass to contribute >50% to doubling renewables use.

Global renewable energy use by technology and sector, 2010 and in REmap 2030



Sustainable Bioenergy is needed to offset to fossil fuel use in the HEAT, POWER and TRANSPORTATION sectors.

Barriers to Bioenergy Deployment

- Lack of Awareness and Understanding of Bioenergy
- Perception that Bioenergy is Unsustainable
- Lack of Policy Stability
- Lack of Catalytic Finance
- Lack of Sustainable Supply Chains
 - Poor yields, Bad roads, etc

Key messages on bioenergy from FAO's work

- **Tools are now available** to help governments and operators reduce risks and enhance opportunities of bioenergy
- *Per se* **biofuels are neither good nor bad.** What matters is the way they are managed
- **Small-scale bioenergy is important for rural livelihoods and not very risky**



SE4All Sustainable Bioenergy Group

The SBG will promote

- Knowledge enhancement and information sharing
- Policy and sustainability support
- Deployment support

To drive the deployment of sustainable

- Increased Agricultural Productivity
- Energy from Municipal Solid Waste
- Aviation Biofuels
- Low Carbon Fuels





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Leveraging International Institutions to Drive Deployment

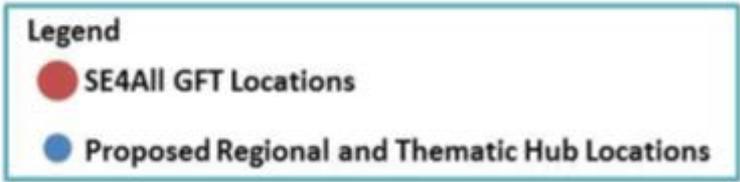
IRENA

World Bank

Regional Development Banks

Development Assistance

Governments

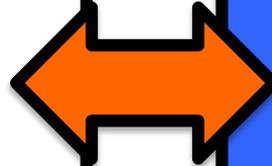




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PUBLIC SECTOR

Governments Donors
Multilateral Organizations
Development Banks



PRIVATE SECTOR

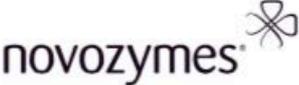
Multinationals - WBCSD
Local Entrepreneurs
Private Capital

Sustainable Bioenergy Group connects the Private Sector to SE4All countries and Stakeholders

The Low Carbon Fuels LCTP is deploying technologies to mitigate emissions from the transport sector.



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 CONFÉRENCE DES NATIONS UNIES
 SUR LES CHANGEMENTS CLIMATIQUES
COP21·CMP11

Large-scale deployment of sustainable biofuels will require joint effort between the businesses and governments.



Public support for the transition to low carbon fuels should

- Increase market demand for low carbon fuels,
- Promote investment and support for innovation and R&D,
- Provide clear standards for sustainability criteria based and reward emission reduction performance,
- Provide policy stability, including carbon pricing systems, so as to boost investor confidence.

The pace and scale of Sustainable Bioenergy deployment is currently constrained by a lack of available finance, in two areas:

Catalytic, early stage funds that projects need in order to validate feasibility, ensure robust and sustainable biomass supply, and develop projects from concept to bankable business plan; and

Construction and operations financing that projects need in order to finalize equity, sales, and feedstock contracts, complete final engineering and provide longer term financing so that the projects can be economically viable and sustainable.

In 2015 the SE4All Finance Committee released its Report on “Scaling Up Finance for Sustainable Energy Investments.”

There are three key finance conditions that need to be in place in order to meet the SE4All objectives:

- Countries will need to be ready and able to (a) absorb large amounts of capital by increasing implementation capacity and (b) putting enabling investment environment in place;
- A pipeline of bankable projects needs to be effectively developed; and
- Capital with a suitable risk appetite must be available and willing to be deployed.

CATALYZING ACTION

To accelerate and up-scale Sustainable Bioenergy deployment, we propose to establish the Sustainable Energy for All Bioenergy Finance Network that will:

1. **Collaborate with Public Sector institutions** in order to:
 - Systemically develop and deploy de-risking instruments that alleviate barriers specific to Sustainable Bioenergy investment;
 - **Lower the cost of capital** for Sustainable Bioenergy investments; and
 - Focus the attention of developing country governments on the **constructive role that bioenergy can play** in meeting their goals for Energy Security and reducing GHG emissions.

2. Partner with the Private Sector in order to:

- **Recruit utility involvement and support** for biopower projects;
- Increase the **use of Green Bonds** for Sustainable Bioenergy financing;
- **Establish an Advisory Team** with deep knowledge of best practices in financing Renewable Energy to assist in offsetting risks and other financing barriers; and
- Deepen the dialogue between private financial intermediaries and Development Financial Institutions in order to **develop risk mitigation procedures and credit enhancement support structures.**

3. Collaborate with Impact Investors and Development Financial Institutions to:

- Establish a **Bioenergy Project Development Fund** that will support Projects having high potential for success with grants and cost-sharing tools.

We are looking for public and private sector partners for this effort!

Contact us for more information on how you can participate.

SE4ALL Sustainable Bioenergy Group

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