

Bio-Based Industries Initiative: using renewable natural resources and innovative technologies for greener everyday products

- Moving towards a post-petroleum society;
- Replacing petrol-based products with bio-based ones;
- Turning agricultural and forestry waste into useful products;
- Creating new jobs and growth;
- Helping farmers diversify their revenues;
- Leveraging Europe's bio-based investment in research and technology.



What is the challenge?

A strong European bio-based industrial sector will significantly reduce Europe's dependency on petroleum products, help the EU meet climate change targets, and lead to greener and more environmentally friendly growth. The key is to develop new biorefining technologies to sustainably transform renewable natural resources into bio-based products and biofuels. This nascent sector is expected to grow rapidly and create new markets and jobs, and is already attracting substantial investments in the US, China and Brazil. The EU must, therefore, pool its public and private resources and expertise to exploit its potential for research and innovation.

What is the Bio-Based Industries (BBI) initiative?

The European Commission proposes to set up a new Joint Technology Initiative (JTI) to support bio-based industries

under the EU's new research programme, Horizon 2020. It will focus on three main streams of activities: Feedstock, by fostering sustainable biomass supply with increased productivity and new supply chains; Biorefineries, by optimising efficient processing through R&D and demonstrating their efficiency and economic viability at large-scale demonstration biorefineries; and Markets, products and policies, by developing markets for bio-based products and improving policy frameworks

The new Bio-Based Industries (BBI) JTI is expected to start in January 2014 and to end in 2020.

The industrial partners come under in the Bio-based Industries Consortium (BIC), which to date brings together almost 50 European companies, clusters and organisations across a broad range of sectors (e.g. agriculture, agro-food, biotech, forestry, pulp and paper, chemicals and energy), leading research teams, SMEs and other participants.

What results and benefits do we expect?

This JTI will create new jobs, especially in rural regions, and offer Europeans new and sustainable products sourced and produced locally. Making the economy more sustainable by using renewable resources in a smart and efficient manner will benefit society as a whole.

Bio-based industries will increase the competitiveness of the European economy through reindustrialisation and sustainable growth. New value chains will be created between often unconnected sectors, ranging from primary production and processing industries to consumer brands. The development of new bio-based products and markets based on smart and efficient use of resources will diversify industries' revenue streams. The JTI should therefore enable European companies to be more competitive in the global bioeconomy race with the US, China and Brazil.

The JTI is expected to bridge European research knowledge with commercial scale bio-based products, making full use of European scientific and technological knowledge.

The JTI should benefit all Member States. The EU13 and their strong biomass potential are expected to play a key role in realising the bioeconomy in Europe.

What will the total budget be?

The estimated budget of this new initiative is €3.8 billion. The EU will contribute €1 billion from the Horizon 2020 programme budget. The industrial partners will commit €2.8 billion. This gives an exceptional leverage factor: for every €1 of public money spent, industry will spend €2.8. Member States will be closely associated to the JTI and are expected to actively promote the deployment of developed technologies.

How will it be managed?

The BBI JTI is a partnership between the EU and industry. It establishes its own strategic research agenda. Projects are selected through open and competitive calls for proposals. The best proposals will be selected based on independent

Innovative multipurpose biorefineries for regional growth in Europe

The EUROBIOREF project, one of three big projects selected in a Joint Call on biorefineries under the current EU research framework programme, is an example of what could be undertaken on a more comprehensive scale under the new BBI JTI. Working with a €23 million EU contribution, EUROBIOREF was set up to demonstrate a biorefinery that: handles multiple types of biomass, such as oil plants, lignocellulosics (e.g. grasses, willow), and agricultural and forestry residues; processes them in multiple ways (chemical, biochemical, thermochemical); and produces multiple high added value bio-based products, (e.g. chemicals, biopolymers and aviation biofuels). Ambitious targets have been set: 30% improvement in cost-efficiency; 30% reduction in energy use; and zero waste production. Furthermore, the developed biorefinery will be modular and flexible, so that it can be installed in various locations around Europe as a large- or small-scale unit depending on regional conditions.

More information on EUROBIOREF: www.eurobioref.org



Biorefineries: the key to a post-petroleum society

peer review and concluded by formal funding agreements.

The new JTI will be managed by a dedicated Joint Undertaking whose Governing Board comprising an equal number of European Commission and BIC representatives will take funding decisions

Useful links

Bio-based Industries JTI: bridge2020.eu