

SET-Plan Conference 2010

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**Spanish Presidency
of the European Union**

EUROPEAN INDUSTRIAL BIOENERGY INITIATIVE (EIBI)

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European Biofuels Technology Platform



GOBIERNO
DE ESPAÑA

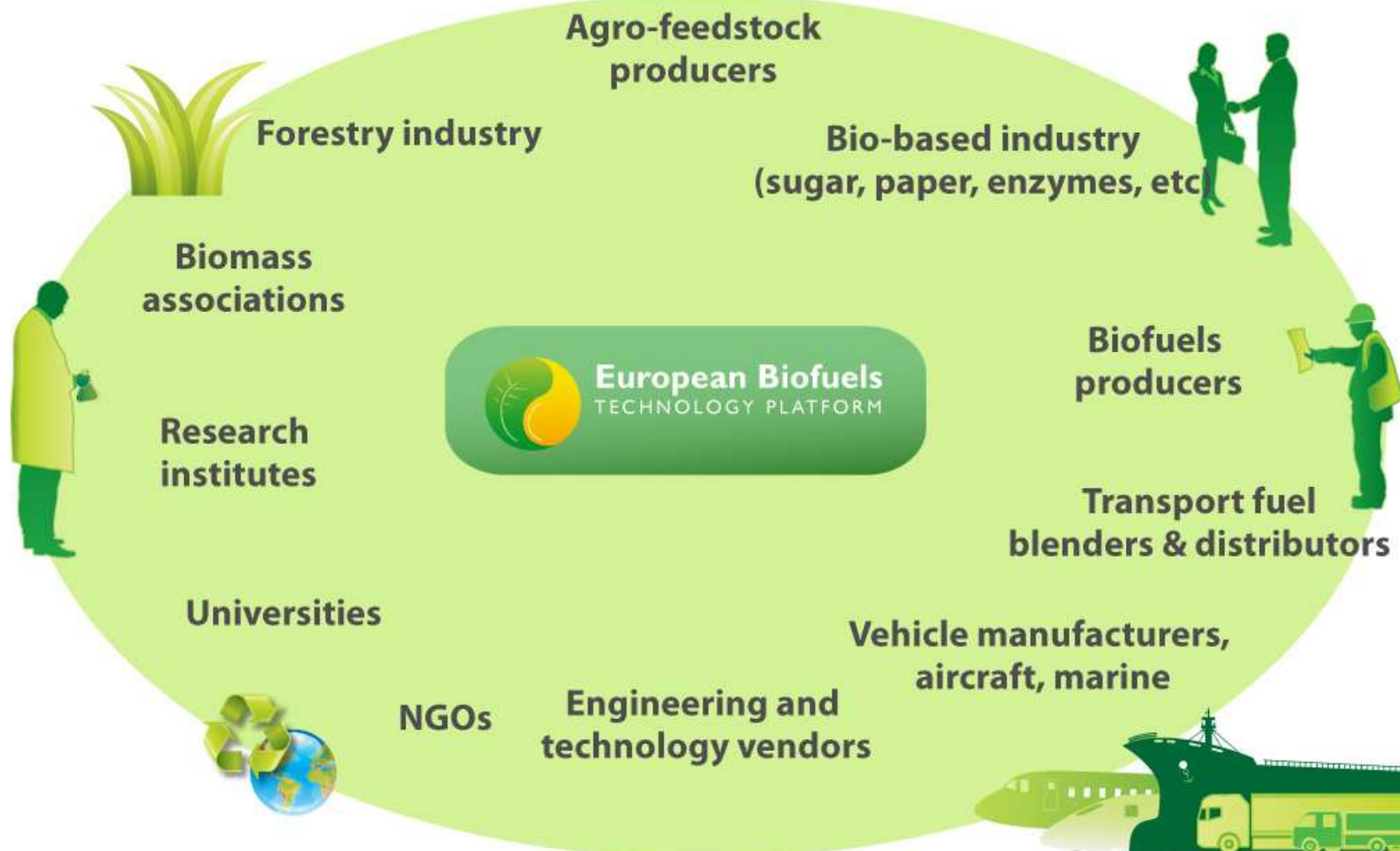
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About EBTP



Current and advanced bioenergy value chains - multiple options for feedstocks, conversion processes and end use

Feedstocks

Lignocellulosic energy crops

Energy grass
SRC

Multi purpose crops

Sugar crops
Oil crops
Starch crops

Residues / wastes

Forestry residues
Agricultural residues
Biowaste streams
(household/industry)

Aquatic biomass

Microalgae
Macroalgae
Halophytes

Conversion processes

Thermochemical conversion

Pretreatment/fractionation
Torrefaction
Pyrolysis

Gasification / Syngas cleanup
Fuel synthesis

Biological/chemical conversion

Pretreatment/fractionation
Hydrolysis
Fermentation
Upgrading
Reforming
Refining
Catalysis
Metabolic engineering

End use

Biofuels

Liquid

Fatty Acid Methyl Ester (FAME)
Ethanol
Methanol
Butanol
Alkanes/hydrocarbons
Hydrogenated Vegetable Oils
Biomass to Liquid (BtL)
Jet Fuel

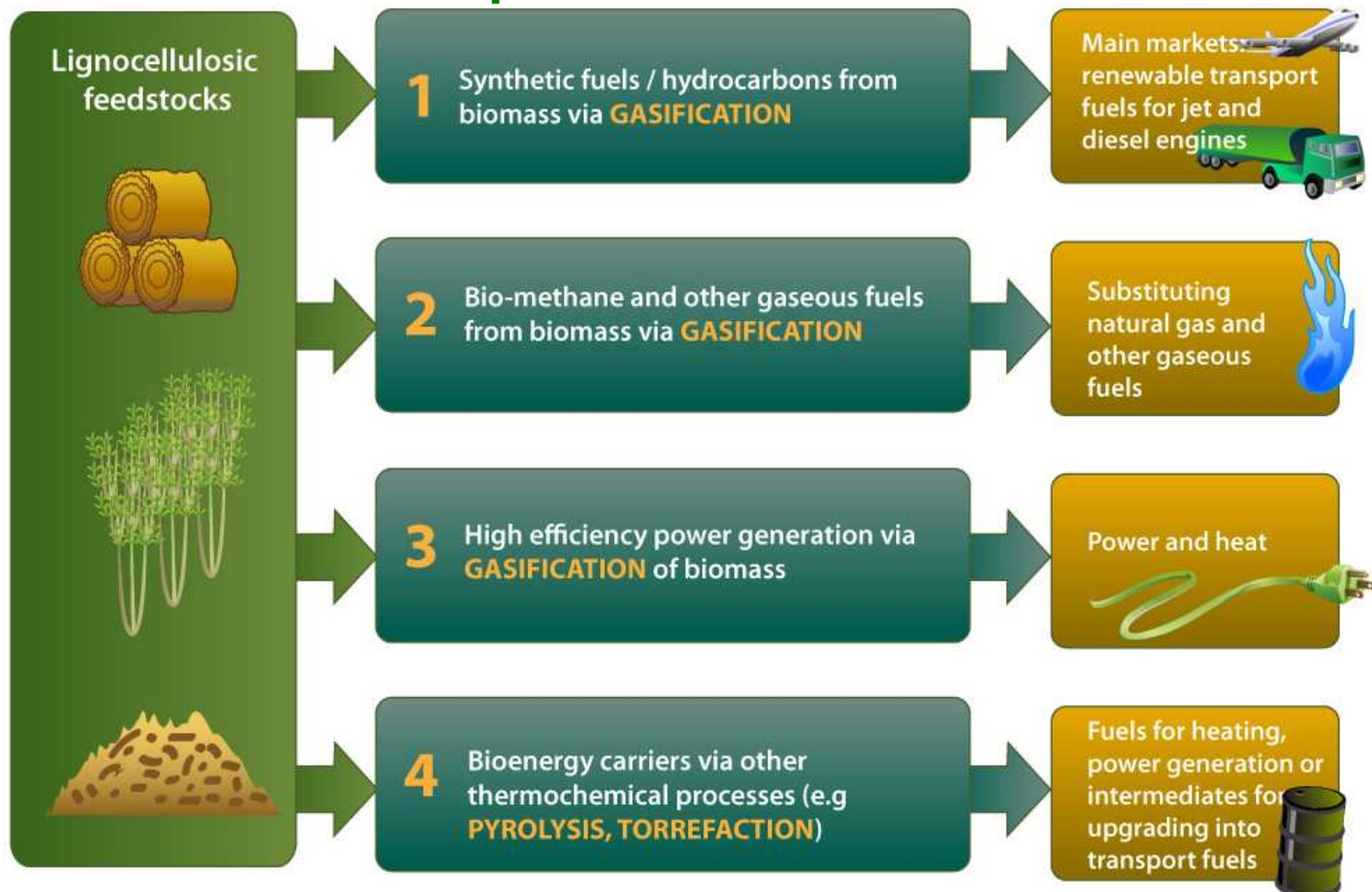
Gaseous

Methane/
Synthetic Natural Gas (SNG)
Dimethylether
Hydrogen

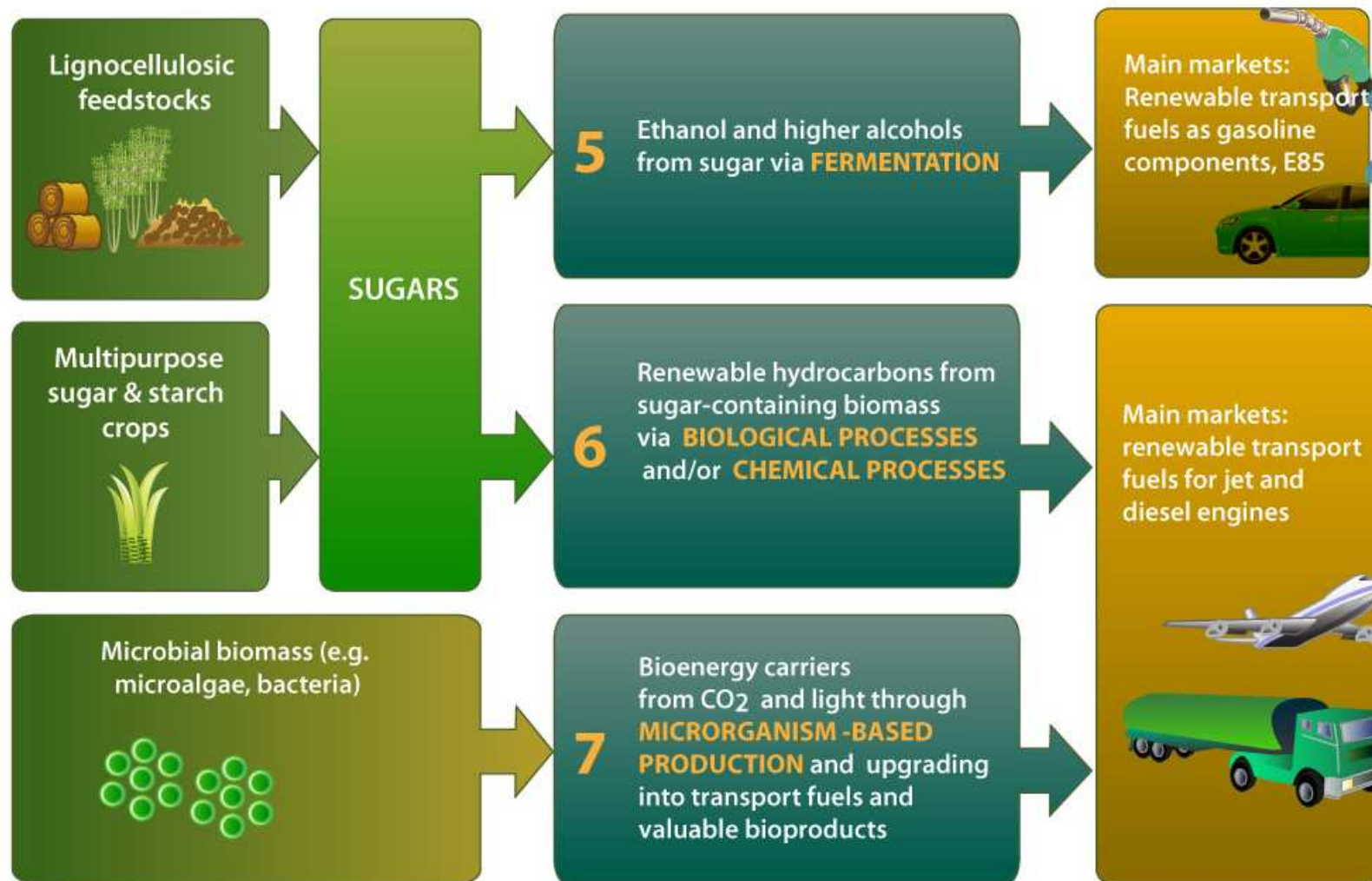
Heat

Electricity

Advanced conversion paths based on thermochemical processes



Advanced conversion paths based on biological and chemical processes



Several demonstration and reference plants needed for advanced pathways

- Significant variations within the individual generic value chains: feedstocks, conversion technologies, level of technical maturity
- Combinations of thermochemical and biological/chemical processes are possible
- Demonstration of sustainable performance of technologies over complete value chain is critical for securing financing for commercial large scale deployment and gaining social acceptance

Scope of the European Industrial Bioenergy Initiative

- Bio-energies and bio-energy carriers produced at industrial scale
- Innovative value chains: not yet commercially deployed
- Large scale potential
- Need to have an impact on the market by 2020
- European dimension

EIBI: objectives

- Enabling commercial availability of advanced bioenergy at large scale by 2020
 - including advanced biofuels covering up to 4 % of EU transportation energy needs by 2020
- Strengthening EU world technology leadership for renewable transport fuels, in particular for diesel and jet engines, serving the fastest growing area of transport fuels in the world

EIBI: activities and budget

Core Activities

- Selection and funding of demonstration and reference plants
 - Demonstration: Outcome of demo unit should allow first commercial unit to be designed and performance guaranteed
 - Reference plant: first commercial scale unit

Estimated budget

- 8 billion € over 10 years
- to fund 15 to 20 demonstration and / or reference plants

Core criteria for projects selection and evaluation

- **EU dimension, Sustainability, Maturity level, Industrial leadership, and Innovation**
- **Feedstock and market potential** for industrial scale:
 - Description of realistic scenario for feedstock sourcing for future industrial units
 - Outline of volume potential of corresponding bioenergy market
- **Timeline:**

First commercial contribution by **2015-2017** (projects from first demonstration call) and by **2020** (second demonstration call)

Further elaboration of EIBI: implementation plan

- **EIBI Governance and funding mechanisms**
- **Preparation of calls:**
 - Definition of eligibility and selection criteria
 - Definition of calls
 - Monitoring of demonstration and reference plants projects: key performance indicators
- **Complementary measures and activities**
 - Availability of sustainable biomass feedstock: common topic with other bio based sectors
 - Longer term R&D&D (EERA and FP)

Further elaboration of EIBI: EIBI team and schedule

➤ EIBI Team

- 16 nominations from Member States and associated Countries: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Lithuania, Slovakia, Slovenia, Spain, Sweden, United Kingdom, Switzerland, Turkey
- Four industrial EBTP nominees
- Further nominations by EC, MS, EIB, other stakeholders

➤ EIBI Criteria Task Force: 9 nominees from EBTP + 2 nominees from EC

➤ First meetings of EIBI Team and Criteria TF envisaged from June to October 2010

EIBI: Summary and Next Steps

- Building on ongoing activities, industry is ready to move further
- Critical to identify sources of public funding
- Timing is very important to achieve EU 2020 targets

Contact Information

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