



**Meeting on
Steering Platform on Research for Western Balkan Countries**

An integrated regional project for Next Generation Biofuels

**Presentation by
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- **Next Generation Biofuels** are an attractive option/priority for any eco-friendly energy strategy: they address CEI priorities in Energy, Science, Innovation, Environment, Agriculture, Competitiveness
- In fact Next Generation Biofuels are the best equation **combining**
 - Energy requirements
 - Environment protection
 - Rural development and food security
 - Far-reaching global market opportunities (to sell technology)
- CEI Member Countries have large agriculture and forestry sectors
- The challenge of Next Generation Biofuels: **from waste to energy!**

- Biofuels efficiently produced from **different feedstock** without competing with food or cash crops for fertile land and water, reducing global greenhouse gas emission as an additional advantage
 - Crop residues, plentiful where there is an agricultural production
 - Residues from sustainably harvested forests and undergrowth
 - Algae or other spontaneous vegetation
 - Municipal solid waste

- Many **world players** are turning to Next Generation Biofuels: oil majors, top research and technology centres, even Petrobras in Brazil

- Why not a priority project in the framework of **CEI**?

- **Technologies** for Next Generation Biofuels are around the corner, five years from now, according to the prevailing **educated estimate**: this is a very short time in view of a long-term sustainable strategy and several pilot plants / bio-refineries are already being built worldwide
- **Mission**: dissemination of interdisciplinary scientific knowledge (in Chemistry, Biology, Physics) and technology know-how (such as plant engineering, also for SMEs)
- **Needed**: in house research to further increase **process efficiency**
 - Orienting and organising human resources through advanced training
 - Catalysing all financial resources/different instruments already available in support of an **ambitious, integrated regional project** according to the respective status of CEI Member Countries versus the EU
 - Capacity building through workshops, seminars, e-learning, networking
 - Support for research projects and pilot activities (**grants**)

- **CEI Science & Technology Network**
7 centres of excellence based in Trieste and their associated institutions
an interdisciplinary group on Next Generation Biofuels is now being assembled
- **CEI University Network**
18 coordinating universities in the region to promote mobility and joint programmes
- **CEI Trust Fund at the EBRD**
Financing Technical Cooperation Projects in view of future investments by the Bank
- **CEI Know-How Exchange Programme**
Grant financing for projects of capacity building and technology transfer
- **CEI Cooperation Fund**
Grants for seminars, workshops, training courses and similar events
- **EC (co)funded Projects**
Promotion, planning, execution and management as leader or partner

- Dramatic breakthroughs in basic and applied research are needed, but **pilot or demonstration plants** are being built around the world
- Countries in **Central Eastern Europe** and in the **Balkans** cannot wait several years to buy new technologies, since these decisions would force an external impact on national priorities and strategies
- These countries must **invest now** in Next Generation Biofuels, first of all **in research** and development, with adequate resources: **human resources** are definitely **available**, but must get organised !!
- We should promote a **network of centres of excellence** or of adequate scientific and/or technological competence involving all the CEI countries, to launch a major joint R&D project: a **virtual critical mass of over one thousand scientists** and researchers could easily be directly involved, in a very short time, as CEI has already made an **inventory** of almost one hundred such centres in the region

- CEI Secretariat will identify institutions in all member countries ready to participate in this regional project on Next Generation Biofuels
- After the definition of the project, involving CEI Science and Technology Network and other qualified international players, CEI Secretariat will catalyse different instruments of financial support according to the status of its member states versus the EU
- Main features of the project will be:
 - capacity building, competitive fellowships and collaborative research
 - research grants to all the labs available to support joint R&D projects
 - integration with research activities of European labs / industrial partners
 - network of centres for innovation and technology transfer in CEI region
 - building awareness in public opinion and Industry (mainly SMEs)

- The development of Next Generation Biofuels is complemented by that of biorefinery, i.e. production of added value biochemical materials, which will be the basis for a **new chemical industry**
- Chemical industry today heavily depends on the by-products of oil refinery: by-products of Next Generation Biofuels will bring about a **revolution** which also will require more R&D efforts and imply new opportunities
- The prospects of additional income for farmers – therefore a consistent rural development and a consequent environment protection - must also be a crucial element in the evaluation for a strategic choice in favour of Next Generation Biofuels

- In order to achieve all the possible outcomes we must overcome the main **barrier** to the development of Europe's bio-products potential: i.e the perceived investment risk due to policies with no clear incentives
- All alternative / renewable / eco-friendly energy options need a **substantive incentive policy**: that for Next Generation Biofuels may be the cheapest!
- It is necessary to secure, as a first priority for CEI member countries and EU **policy-makers**, the introduction of a **wide mandate** for Next Generation Biofuels, along the lines of the policy in the US covering 2009-2022 period
- EU policy-makers should also introduce **incentives for the collection of biomass** through an adequate assistance programme and through the Common Agricultural Policy: this would mean a stronger rural development
- **Bloomberg**, which studies the impact of Next Generation Biofuels on the European Union (27 members), has been asked to prepare a report specifically on the CEI region: this will provide more accurate data about the following estimates.

CEI member countries have a unique opportunity to develop over the next decade, Next Generation Biofuels and other bio-products with benefits for:

- **Job creation**, in the range of a million man-years of employment between 2010 and 2020, which will be predominantly in rural areas and therefore difficult to outsource overseas
- **Innovation and economic growth**, generating internally 25-30 bn EUR per year by 2020
- **Natural resources**, between 200m and 250m tonnes of biomass residues annually available for bio-product conversion by 2020, **without changing** today's agricultural **land use patterns** or cultivating energy crops
- **Environment**, since available biomass residues by 2020 could displace more than 50% forecast fossil gasoline consumption in the CEI region, thus reducing CO₂ emission from gasoline by around 40% by 2020
- **Energy security**, moving from high dependence on foreign oil towards greater fuel self-efficiency for transport

- Final objective of CEI regional project on Next Generation Biofuels: a portfolio of bankable and more efficient projects for biorefineries using different feedstock, with indication of the grant component still (maybe) necessary to ensure sustainability at the present level of technology.
- Do not forget: according to EU legislation, by 2020 Next Generation Biofuels must reach 10% of the total fuel consumption for transportation in the Union. Are we **willing to abandon this market** to oil majors or other global players?
- Our countries have plenty of the **necessary raw material** (feedstock), but who will produce this quantity of Next Generation Biofuels? Where? How? Is our region to import biofuels and/or the technology to produce them? Industry in our countries could easily acquire the necessary know-how.
- Are we willing and ready to **mobilise the necessary resources now?** **Waste to Energy**: the challenge and an extraordinary potential of Next Generation Biofuels. More facts in the Bloomberg report on CEI region.

The Trieste Declaration (19 October 2011)
adopted by the CEI Ministerial Meeting on Science and Technology
promotes a multidisciplinary integrated regional project:
we need the full and convinced support by all of you to implement it.

THANK YOU FOR YOUR KIND ATTENTION

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