

15th World Bioenergy Congress and Expo

Bioenergy: A Path towards sustainable future

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Bioenergy is renewable energy made available from materials derived from biological sources. Biomass is any organic material which has stored sunlight in the form of chemical energy. As a fuel it may include wood, wood waste, straw, manure, sugarcane, and many other by products from a variety of agricultural processes. Some of the important components of the [bio energy](#) market are biogas, starch-based and cellulosic ethanol, biodiesel, etc. Presently, the biofuels segment is the only one to have shown great promise of achieving large-scale CO₂ emission reductions. According to analysts, the growth of this segment is also expected to create jobs, improve energy security, and boost economic growth. The bio energy market faces challenges in terms of technological assistance, economics, and knowledge. Several environmentalists are also opposed to the idea of burning forest biomass as it leads to greenhouse gas emissions. However, the biggest opportunity for the global bio energy market is the increasing demand for electricity across the world.

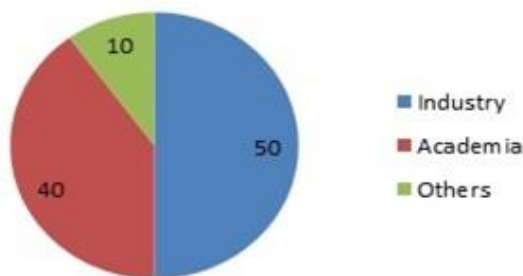
The organizing committee is gearing up for an informative conference program including plenary lectures, symposia, workshops on a variety of topics, poster presentations and various programs for participants from all over the world. We invite you to join us at the Bioenergy-2020, where you will be sure to have a meaningful experience with scholars from around the world. All members of the Bioenergy-2020 organizing committee look forward to meeting you in Berlin, Germany

For more details please visit: [Bioenergy-2020](#)

Importance & Scope:

The demand for renewable energy is growing enormously. From the evidence available today, we believe that renewable energy could, with developments in technology and favourable policy constitute up to 30% of the world transport fuel mix by 2030. The advantages of renewable energy – whether in greenhouse gas benefits, energy security or rural development-mean that many governments are keen to foster the industry through current phases of technology development to deliver material scale and reduced costs. The world is in a state of renewable energy fever. In 2006 biofuel constituted 49 bnlitres, or 3%, of the 1,600 billion litre market for gasoline and diesel fuel. By 2015 the renewable energy market is likely to have tripled to 155 billion litres. In practical terms that is an increase of around 10 billion litres per year over ten years. In terms of current ethanol yields of 5,250ltrs / ha, this equates to an increase of land use for renewable energy of approximately 17,000 square km per year. The bulk of the [global demand](#) for ethanol and biodiesel comes from a few major regions. The USA accounted for very nearly 50% of global ethanol consumption in 2006, with Brazil taking 36% of global volumes. The EU accounted for 75% of global biodiesel consumption in 2006. The reason why we believe the feverish rate of growth is likely to materialize is because, with no carbon beneficial substitutes available in the near term, renewable energy are being promoted by governments. Clear examples of this are the trends of regulations in the EU, and the intentions announced in the US. BP is already a major player in the global renewable energy market. In 2006 BP blended 3,016 million litres of ethanol into gasoline – a 25% increase on the previous year. Thus BP is already well exposed to the renewable energy fever – and the theme of this paper is to suggest how the industry can tap the heat of the fever in a positive sense.

The renewable energy policies in the European Union have already led to a significant progress; the energy mix should further change until 2020. Italy is planning to meet the 2020 targets on renewable energies also thanks to a relevant paradigm shift in renewable energy exploitation. Indeed, in 2005 the sector where RES were more present in Italy was electricity production with 203 PJ of renewable origin, while in the heating and cooling sector renewable energy penetration was limited to 80 PJ. On the contrary, in 2020 heating and cooling is expected to absorb the highest amount of renewable energy (438 PJ) with renewable electricity expected to count for 356 PJ. Bioenergy, a renewable energy resource particularly suitable for electricity, heating & cooling and in transport, will be at the core of this sectorial shift in renewable energy production and use and is expected to become the dominant form of RES before 2020. The paper makes a detailed analysis of the recent developments and expected evolution of the Italian energy mix in next decade. It provides an overview of the Italian bioenergy sector in comparison with other [Renewable Energy Sources](#) (RES) and with leading countries in the European Union with a special focus on the production, exploitation and potentials on the basis of the analysis of the Italian National Renewable Action Plan



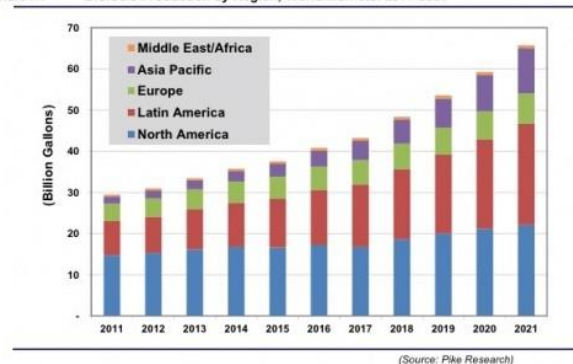
Market Analysis:

The demand for renewable energy is growing enormously. From the evidence available today, we believe that biofuels could, with developments in technology and favorable policy constitute up to 30% of the world transport fuel mix by 2030. The advantages of bioenergy – whether in greenhouse gas benefits, energy security or rural development-mean that many governments are keen to

foster the industry through current phases of technology development to deliver material scale and reduced costs.

Our belief is that the industry can be developed sustainably, provided appropriate feedstock's are grown, which do not adversely compete with food, using good land management to minimize environmental impact. This will require development of appropriate sustainability standards; it will not be easy, but by engaging in the industry, responsible businesses will work out appropriate business models and want to see enforcement of standards across the industry. This paper sets out the characteristics of the global fuels market, the significance of joint industry studies with car manufacturers and the choices around land use that society must make. The approach taken by BP is then described whereby guiding principles have been defined to set the boundaries of our impact on ecosystems.

Chart 1.1 Biofuels Production by Region, World Markets: 2011-2021



Bioenergy 2020 Congress supported by the organizing committee network of renowned scientific and professional expert such as Haiyan Pei , Professor at Shandong University China, it provided a platform for collaboration among colleagues, vendors, and academia to reveal new innovations, solutions, ideas, and emerging technologies in [Environmental Sciences](#) and Chemistry. Characteristics of the biofuels market: its size and growth rate, the world is in a state of biofuels fever. In 2006 biofuel constituted 49 bnlitres, Or 3%, of the 1,600 billion litre market for gasoline and diesel fuel