

March 29-30, 2018  
Edinburgh, Scotland

Govinda R Timilsina, Arch Chem Res 2018, Volume 2  
DOI: 10.21767/2572-4657-C1-001

## BIOFUELS: MARKETS, POLICIES AND FUTURE DEVELOPMENT PROSPECTS

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During the decade of 2000 production of biofuels, both biodiesel and ethanol, surged (Figure 1). While the production of ethanol increased by almost 3 folds over the period of six year between 2004 and 2010 from 31 billion liters in 2004 to 86 billion liters in 2010, production of biodiesel increased by more than 8 folds, from 2.3 billion liters in 2004 to 19 billion liters in 2010. After 2010, production of ethanol dropped for the next two years, whereas production of biodiesel increased continuously. This has happened despite the several adverse factors such as fuel vs. food controversy, indirect land-use change debate, drops in oil prices and so on. In 2016, the world produced 135 billion liters of biofuels of which 73% is ethanol and 27% biodiesel. Government policies are the major drivers for the continuous growth of biofuels. Policy instruments include blending mandates, tax exemption or rebate, direct investment grants. To date more than 35 countries around the world have introduced explicit blending mandates for biofuels (existing or planned). Some countries, (e.g. Costa Rica, Brazil, Indonesia, Paraguay) have mandates to blend biofuels more than 20% by volume. Despite many obstacles production of biofuels has increased overtime. Although the recent production growth (after 2010) is not as high as that of early 2000's, it is still growing steadily. We do not see any reason that will disrupt the small and steady growth of biofuels in the future.

**Figure 1:** Trend of global production of biofuels

**Source:** Renewable Energy Network (REN21)

This presentation will present the evolution global biofuels market. It will discuss the drivers of global growth of biofuels production and key challenge faced by the biofuels market around the world. It will then highlight policy instruments and market conditions to further expand the global biofuels market in the near future.

### Biography

Dr. Timilsina is a Senior Research Economist at the Development Research Group of the World Bank, Washington, DC. He has more than 20 years' experience across a board range of energy and climate change economics and policies at the international level. His key expertise includes biofuels, climate change policies, electricity economics and energy sector as well as general equilibrium modeling for policy analysis. Prior to joining the Bank, Dr. Timilsina was a Senior Research Director at the Canadian Energy Research Institute, Calgary, Canada. At present, he is leading a number of studies including economics of renewable energy including biofuels, modeling of carbon markets in China, sustainable urban planning in the Middle East and North Africa.

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