Associated_with_Lignocellulosic_Bioethanol_Production_and_Consumption_Considering_Renewable_Energy_Policies_in_Turkey

The Challenges Associated with Lignocellulosic Bioethanol Production and Consumption Considering Renewable Energy Policies in Turkey

Data of Your Paper

Topic
Energy

Title of the Paper
The Challenges Associated with Lignocellulosic Bioethanol Production and Consumption Considering Renewable Energy Policies in Turkey

Form of Presantation
Presentation

Short Description (maximum 2500 characters)
The number of vehicles in the world is expected to double in the next 15 years, imposing both energy supply and environment related problems. Globally, 61% of all oil consumption is caused by transportation activities. The adverse effects of greenhouse gas (GHG) emissions from transportation together with the estimated 30 years life time of petroleum reserves have brought a rising interest for bioethanol from renewable resources such as biomass and organic waste. Since, agricultural products are also used as food and animal feed, it is more advisable to use their residues and wastes to produce bioethanol. There are three main reasons that make renewable energy sources preferable; strategic necessity to overcome dependency on petroleum and ensure greater energy security, the environmental need to reduce GHG.
Many countries have implemented programs for fuel bioethanol consumption to decrease dependency on oil such as ProAlcool in Brazil and Clean Cities in US. Additionally, many sales/use taxes and tax exemptions are applied in bioethanol producing countries. For instance, 12 cents per liter intensive is presently applied by a volumetric ethanol excise tax credit (VEETC) in US. In EU, member states have their own bioethanol schemes for expanding biofuel use in the context of renewable energy programs. In this context, bioethanol is used for ETBE production and direct gasoline blending is possible in France and Spain.
Turkey has a high potential for bioethanol production from agricultural wastes but, bioethanol production and consumption has not yet been widely applied due to lack of regulatory support. Considering that Turkey imports 90% of its petroleum requirement, bioethanol seems to be the most reasonable alternative for transportation. This paper evaluates the challenges associated with bioethanol production and consumption in Turkey such as the storage and distribution of bioethanol, taxes and legislation on renewable energy resources. It is concluded that improvement of tax incentives and development of governmental programs should be considered in the short term to increase renewabable bioethanol fuel usage in Turkey.