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Liquid Biofuels for Traffic

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Ms Ylitalo works as Bioenergy Specialist at the Energy department of UPM-Kymmene Corporation. Since the beginning of year 2006 her main duties have been market, economy, technology and policy studies concerning the biofuel sector.

Ms Ylitalo has studied at Tampere University of Technology majoring in Power Plants and Combustion. Studies in the field of Chemistry were supplemented by an exchange year in McGill University in Montreal, Canada. She has gained working experience at UPM-Kymmene paper mill sites in Finland and Germany.

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Liquid Biofuels for Traffic

Introduction

Liquid biofuels have become one of the most important routes to mitigate the CO2 emissions of traffic. Today media, politics, land owners, researchers and industrial companies have impressed their interest in the multidimensional world of transportation biofuels.

Substance

UPM-Kymmene announced in late 2006 that it will invest strongly in 2nd generation biofuels. The production of 2nd generation biodiesel via Fischer Tropsch process is a natural extension for a company whose core business is adding value to wood raw material. Advanced wood procurement and production of various wood end products allow the optimization of producing right products from optimal wood fractions.

Transportation biofuels can generally be divided to two main categories: 1st and 2nd generation. The major differences between these two categories are that 1st generation biofuels are mainly produced from agricultural products, oil crops and animal fats where as 2nd generation biofuels are produced from wooden biomass, and the quality of 2nd generation biofuels is superior to that of 1st generation biofuels. The only commercially available

biofuels today are 1st generation biofuels: bioethanol and biodiesel, but strong R&D will enable 2nd generation biofuels to come commercial within next few years. 2nd generation biofuels are most efficiently produced by integrating the production with heat consuming industry like pulp and paper mills, since waste heat is formed in the process.

Regulatory push has been very strong for bringing biofuels into markets. The ambitious target that the EU has set for 2020 is to put 10% share of biofuels into transportation fuels. The biofuels subsidies that are today applied for many EU countries are supposed to be replaced by mandates.

Conclusion

The strong biofuel policy, efficient R&D and the strong will to mitigate climate change have pushed forward the introduction of good quality, efficiently produced 2nd generation biofuels. This will enable higher blends in fossil fuels, and substantially broader range of raw materials will be available for biofuel production.