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ETHANOL LOGISTICS FOR FUEL CELLS APPLICATIONS IN BRAZIL

Egberto Gomes Franco

Paulo Lucas Dantas Filho

dantas@iee.usp.br

Geraldo Francisco Burani

Flavio Taioli

Carlos Eduardo Rollo Ribeiro

Instituto de Eletrotécnica e Energia – IEE – USP

Rua Professor Luciano Gualberto, 1289 - Cidade Universitária

CEP 05508-010 - Butantã - São Paulo SP - BRASIL

Phone: (5511) 3091-2500 - Fax: (5511) 3812-3352

ABSTRACT

One important element to reduce the impact of the present economic development model in nature is the energy generation. The need for more efficient sources of energy is evident, as the world relies on fossil fuel sources that become scarcer and expensive. Furthermore, imposes the use of clean fuels, like hydrogen and renewable primary fuels in large scale. The fuel cells technology have shown to be an interesting and very promising alternative, among others, to solve the problem of generating clean energy with high efficiency, using hydrogen, natural gas and ethanol. Hydrogen production from ethanol is an attractive technique, due to it renewable source, allowing clean energy generation. To permit that, the logistics of ethanol plays an essential role, allowing easy and full access to this fuel also in remote areas. In this article, we identify the necessary infra-structure to lead Brazil as a global player in the Hydrogen Economy. The costs of natural gas and ethanol as “carriers” were identified, pointing out weaknesses and strongest points of these primary fuels. The combination of these two technologies could drive Brazil to a clean and renewable energy source, mainly in remote areas.

Word-key

Etanol - Hydrogen - Cell the Fuel - Logistic - Distribution