

Strategies for Implementation of Fuel Cells in Quintana Roo, Short Technical-Economic Analysis

Manuel Sánchez¹, Romeli Barbosa¹, B. Escobar², Inocente Bojórquez¹, Roberto Acosta¹,
Victor Sánchez¹

¹Universidad de Quintana Roo, Boulevard Bahía s/n, Chetumal, Q. Roo, México, 77019.

^{*}Tel: +529831566032; e-mail: romelix1@gmail.com

²Instituto Tecnológico de Cancún, Av. Kábah Km. 3, Cancún, Q. Roo, México, 77500.

ABSTRACT

In the near future the world's energy demand will have to be supplied using energy sources different from fossil fuels. Within such scenario hydrogen fuel could be playing an important role as an energy vector. In this paper a short socio-technical-economic analysis of the implementation of hydrogen-based energy systems in the state of Quintana Roo is presented. Implementation of this technology is fully justified in the first instance, also the main local features are highlighted and a range of possible applications are described. Subsequently a quantitative analysis of the implementation of the hydrogen technology in communication networks projected for the northern region of the state was developed; ground transportation system specially designed for purpose and wireless communication networks in Cancun, Q. Roo is analyzed.

Keywords: hydrogen economy; communication networks; fuel cells

