

Total Assessment of Hydrogen Energy System

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There is a high expectation that hydrogen will be a dominant secondary energy in the long term future due to its carbon free and zero emission character. This paper aims at evaluation of total efficiency of hydrogen energy system in comparison with that of fully electrified system which seems highly compatible with it. The result indicates that remarkable progress in hydrogen related technologies, particularly those of converting primary energy into hydrogen and fuel cells is indispensable for hydrogen to be one of main secondary energies in the future energy system. Keywords: hydrogen, fuel cells, electricity, energy systems.