Implementation of a Hydrogen Control System Using PLC Applied to a Sustainable Housing

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ABSTRACT

At present the necessity to incorporate new ways of generating clean energy applied to the housing sector has become more relevant in the last decade, in as much as the rapid population growth which requires people to take responsibility for the environment and at the same time that they can enjoy the benefits to strengthen the delivery of basic services of a home, being one of the most important, electrical supply.

This paper deals with the implementation of a programmable logic controller (PLC) applied to the " Sustainable Housing " of IPN which today has been installed with two photovoltaic systems (SFV), the "SFV A" has a power of 1080 watt with polycrystalline silicon technology, the " SFV B" has a power of 600 watts with amorphous silicon technology, the proposed PLC aims to control the electric parameters between two SFV's and System PEM fuel Cells 500 W.

The control system discussed above, provides the foundation and restrictions for automatizing the hybrid power system of electric energy generation, Solar-hydrogen, in a future.

Keywords: PEM Fuel Cell, Sustainable Housing, PLC