



## HYDROGEN GENERATION USING SOLAR ELECTRICITY

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**ABSTRACT:** Hydrogen as a Clean Fuel combined with atmospheric oxygen can be used in Internal Combustion coupled with alternator to produce electricity for running Industry, hydrogen as it is for Transportation, and house hold purpose. Hydrogen can be used for room heating. Hydrogen can be produced in small as well as large quantity by splitting water using electricity produced by Solar Energy based Photo Voltaic PV panels.

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### INTRODUCTION

Hydrogen produced by Splitting Water using solar energy-based electricity generated from Photo Voltaic or PV panels requires initial Investments. The initial investment, periodic maintenance and their corresponding financial calculations can be made and it is found to be profitable.

#### Running Industries and Automobiles with Hydrogen fuel Engines:

Hydrogen fuel produced by splitting water using electricity from solar PV panels can be used to run the Engines which in turn can be coupled with alternator to produce electricity. There by any Industry, Transportation or for automobiles Trains, Ships, Aero Planes and for house hold purpose hydrogen can be used.

#### Expected Life:

Life expected for PV panels is fairly large enough and Investment is not only recoverable but also Profitable.

Polluting Thermal and Dangerous Nuclear Power Plants can be withdrawn in due course of time. Hydro-Electric power plants, Ocean wave Energy based power Plants and other non- polluting everlasting power sources alone can be allowed to prolong in future for producing electricity.

#### Room heating:

For Room heating hydrogen as a fuel can be very well used safely. P-V panels can produce DC or Direct current which can be converted into AC or Alternate Current using suitable devices.

#### Room Coolers:

In hot tropical countries room coolers can work with current produced by Internal combustion which are otherwise known IC engine coupled with alternator. IC engines can be powered with hydrogen as a fuel.

#### For Cold Countries:

Cold Countries where solar energy is not abundant Roof Top Wind Turbines of suitable capacity can be added to produce electricity in combination with Solar panel-based electricity.

### CONCLUSION

Individuals and Country as a whole may invest in Wind energy, Solar energy and Ocean wave energy in nearby ocean or elsewhere in the ocean to produce electricity in large quantity and use it to produce hydrogen fuel.

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