

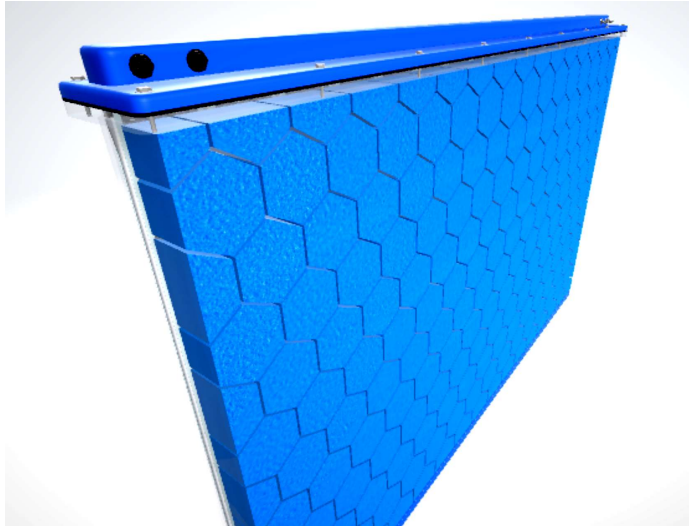
阳光氢™

TECHNOLOGY INTRODUCTION

阳光氢™ SOLAR-ASSISTED HYDROGEN

Employs sunlight to produce 3X more hydrogen per kWh than PEM electrolyzer for Electrical Energy Storage, FCEV Mobility, Telecom, and Manufacturing

阳光氢's LFG80LH hydrogen generator can produce more than 80 liters per hour (L/h) of pure hydrogen from water and sunlight with only 1.6 kWh/NM³. Solar-to-Hydrogen (STH) device efficiency is a World-Record 25%.



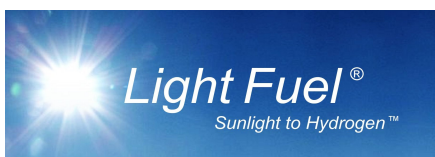
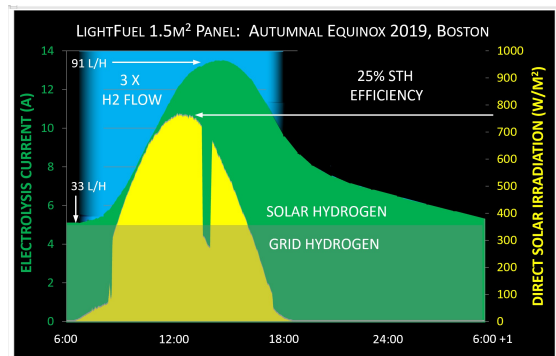
Its patented photo-anode leverages sunlight to reduce the electrical power needed by the hybrid electrolyzer to split hydrogen from water to 1/3 of that required by non-solar electrolyzers. An international team of scientists developed it over 10 years with \$8M in funding from NASA, U.S. Dept. of Energy, Mass. CEC, and private investors.

Mobility: For FCEV hydrogen vehicles, LFG80LH panels can supply scalable distributed on-site 阳光氢 hydrogen at less than USD \$2.39/kg @ \$0.10/kWh grid electricity with 1/3 the carbon, or Zero carbon with 1/3 the renewable electricity.

Electrical Energy Storage (EES): 阳光氢 provides nearly loss-less: 90% Round-Trip (R-T) Efficiency when coupled with a fuel cell @ 60% efficiency. Intermittent photovoltaic (PV), wind, and grid electricity is stored as hydrogen—Power-to-Gas (P2G)—for stable on-demand supply. 阳光氢 reduces the cost to store and time-shift electrical power to < \$0.08/kWh USD.

Capital cost (CapEx) is significantly less than electrolyzers of equivalent H₂ production. And Return-on-Capital (RoC) is excellent because 阳光氢 continues throughout the night and on cloudy days. The 1.5m² panels are scalable and distributable and easily add and connect to produce more hydrogen.

"A 3-hectare installation of 阳光氢™ LFG80LH panels can produce more than 2,666 kgs of hydrogen each day for FCEV Mobility, or for Power-to-Gas, can convert up to 100 MWh/day of intermittent solar, wind, or grid electricity into hydrogen for time-shifted on-demand Electrical Energy Storage."



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