Toward Clean Hydrogen via Plasma-Based Reforming



Dr. Sean Niknehzad has been involved in multiple multi-milliondollar projects as an engineer, researcher, and manager. The American Energy Association and McFerrin Entrepreneurship Center have awarded him. Also, he filed an international patent for producing clean hydrogen. Currently, he holds a research position at Texas A&M Energy Institute and is leading 2 projects for producing clean



Bahman Yazdani has over 38 years of practical experience in the field of energy management, energy efficiency, and energy codes. He has served as the PI for over \$45,000,000 in research projects for the USDOE and other research projects in the field of energy efficiency and energy management. Over the years he has helped over 150 municipalities, 20 counties, and 30 school districts in Texas, as well as many other private entities with various energy efficiency programs.



Modularized Electrified Plasma-based Reforming System

The Hidden Cost of "Clean" Hydrogen

hydrogen.

830 Tonnes CO_2 for producing H₂ in America

Total emissions of the UK and Indonesia Combined

Facilities in the Houston hub emit 156.2 million metric tons (Mt) of CO₂ e annually, including 77.4 Mt from stationary combustion and 31.0 Mt from process emissions.

<u>There are 14 hydrogen-producing facilities in the Houston hub already co-located with the central corridor of industrial activity and fossil fuel use. Industrial facilities in this regional hub use a total of 1.4 billion MMBtu of fossil fuels per year.</u>



Brad Hall- Operation Director, RELLIS Campus Patrick Yee - Associate Operation Director, RELLIS Campus

We will collaborate with the Texas Engineering Experiment Station to establish the Pilot size plant to move toward commercialization from TRL 3 to 7.

