

## **COMMITTED TO** DECARBONIZATION

Green Grid Inc. (GGI), founded in 2011, is a climate-focused California business providing advanced IT/OT solutions & services for transportation electrification, grid decarbonization, nature protection and compliance risk management. GGI has 60+ years collective industry-leading experience in green hydrogen, including development of hydrogen fueling infrastructure, hydrogen fueling O&M protocols, SAE J2601 and NFPA 2 standards. GGI is an integral part of multiple ARCHES working groups and technical committees, and is committed to the success of the California Hydrogen Hub.

**Green Hydrogen is** solar and wind energy used at a different time and place

### **GGI HYDROGEN**



SERVICES

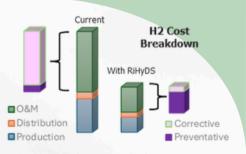
H2 Project Feasibility Assessment, H2 Strategic Planning, Codes and Standards Review, HAZOP Study and FMEA, Engineering & Equipment Selection, System Modeling, Pro-forma Development, Financial Modeling, Site Plan Design, Permitting Assistance, Environmental Analysis, O&M Optimization, Workforce Transformation, Proposal Writing, Project Management, Stakeholder Engagement



GGI's patented Robotic Intelligent Hydrogen Delivery System (RiHyDS™) leverages AI and smart IoT sensors to optimize the entire hydrogen supply chain (production, distribution, storage, end-use application), improve safety, enhance worker training, and most importantly, minimize costs, especially O&M costs, through predictable and preventative equipment maintenance

U.S. Patent No. 11.796.132 and 12.173.853; and Australia Patent No. 2021266250; U.S. Patent Publication No. 2023/0417367 A1; and other patents pending

RiHyDS is the much-awaited solution for achieving cost parity with gasoline or diesel



### **NOTABLE PAST PROJECTS**



Green H2 unit in San Ramon, CA

- <u>Archimedes Energy Park</u>: GGI is the project development & engineering firm and owner's representative for a one-of-a-kind 30 TPD green hydrogen energy park in Greater Sacramento region, CA
- <u>City of Lancaster Strategic Plan</u>: Developed strategic plan for deployment of cost-effective green hydrogen infrastructure to decarbonize City's facilities and vehicle fleet, workforce development, and ensure resource adequacy and resilience
- Hydrogen Fueling Infrastructure Deployment: Supported commissioning and O&M of four hydrogen fueling stations in California, located in West Sacramento, San Juan Capistrano, San Ramon, and Mountain View
- AC Transit: Developed initial custom hydrogen fueling protocol (precursor to SAE J2601 protocol), and proposed improvements to dispenser software and hardware



# Renewable Hydrogen Energy Storage

**Green Grid Inc.** (GGI) provides program development and technical services for renewable hydrogen energy storage to utilities, oil and gas, government, public, private and academic customers. GGI founders have decades of experience in hydrogen technologies, system integration, pilot projects and scale up to mass production and commercial operations and maintenance.

### Why Hydrogen?

Hydrogen storage systems produce hydrogen when and where there is a renewable energy source. It can then be transported or used onsite for electricity generation, mobility or heat. Hydrogen storage uses steel, aluminum or composite vessels which are easily recyclable. Large capacity storage translates into lower lifetime cost and allows for more renewable generation to meet carbon-free energy targets. Hydrogen technology is usable for long duration backup power during outages and electric utilities' public safety power shutoff (PSPS) events for commercial, industrial and residential applications. Due to its scalability, hydrogen is an important component to consider for microgrid energy systems.

### **Solutions and Services**

- ▶ Renewable hydrogen techno-economic analysis
- Project specific pro forma
- Levelized cost of energy analysis
- System design and equipment selection
- System modeling and engineering analysis
- Pipe and instrument drawings
- Site designs and drawings
- Code and standards review
- Permitting
- Construction management and inspection
- Net metering interconnection
- Low carbon fuel standards analysis
- Remote secure VPN network design and deployment
- Cloud-based equipment data analytics
- Operations and maintenance planning
- Computerized maintenance management system setup
- Solar and wind integration
- Staff training

#### Hydrogen Technologies

Hydrogen energy development is where solar was about 20 years ago. Utilities can have a positive impact by building pilot plants to move this technology toward maturity, cost reduction and mass adoption to achieve carbon-free energy goals.



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Green Grid Inc. (GGI) is a climate-focused company providing digital technology solutions and professional services to the decarbonizing economy. Founded in 2011.

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