PROTON
THE LEADER IN ON SITE GAS GENERATION

Hydrogen Fueling
An Opportunity for Connecticut

Connecticut Energy, Environment and Economic Development Conference

Cromwell, CT

March 17th, 2104

Proton OnSite

- World leader in PEM electrolysis
- Founded in 1996
- Headquarters in Wallingford, Connecticut
- ISO 9001:2008 registered
- Over 2000 systems operating in 75+ different countries

Certified to ISO 9001:2008

TÜVRheinland®

Precisely Right.

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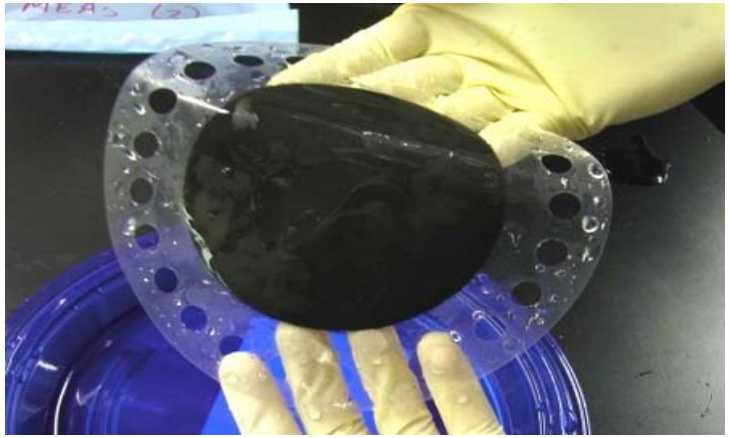
So What is Electrolysis?

- Electrochemical Process
- Splits Water's base elements
- Zero Harmful Emissions
- Produces Hydrogen and Oxygen from Electricity and Water
- High Pressure (2400 + psi) with no mechanical compressors
- Very fast start and response times



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Hydrogen Fueling Experience

- Over 25 hydrogen stations domestically and internationally
- Fuel both buses and cars
- Hydrogen produced in part from renewable energy
- Have funded our own hydrogen station

Early Fueling Demonstrations

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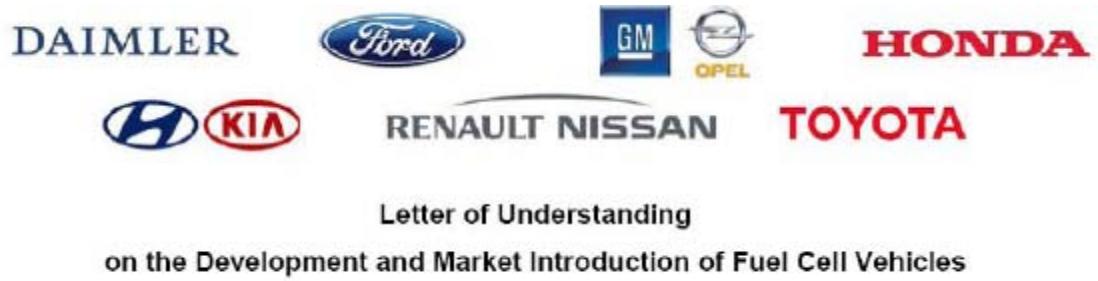
Hydrogen Infrastructure Plans

- Domestic focus is Northeast, California, and Hawaii
- International focus is Germany, Europe broadly, and Japan
- Connection to renewable energy is important for electrolysis stations
- Automotive companies are ready

Letter of Understanding Signed in Germany
Automotive Industry Support for Battery & Fuel Cell Technology



- Battery and fuel cell vehicles complement each other
- Fuel Cell Electric Vehicle commercialization from 2015 onwards anticipated
- Hydrogen infrastructure network with sufficient density required by 2015
- Germany is starting point for Europe

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Germany

- H2 Mobility agreement signed between major oil companies, automotive OEMs, and Industrial Gas companies
- 50 stations to be built by 2017
- 400 stations to be built by 2020
- Proton is in the first H2 Mobility station to be deployed later this year

Japan 2015 Announcement

- **Japanese gas suppliers and oil companies will seek to build some 100 hydrogen supply stations at four major city areas to prepare for the launch of mass-produced hydrogen-powered fuel cell vehicles in 2015.**

- **A total of 10 energy companies made the announcement in a statement jointly issued with Toyota Motor Corp, Nissan Motor Co and Honda Motor Co, signaling their coordinated efforts to expand the next-generation eco-friendly vehicle in Japan.**

- ***‘‘Automakers and hydrogen fuel suppliers will work together to expand the introduction of FCVs and develop the hydrogen supply network throughout Japan,’’ the statement said, while also calling on the government to support their efforts.***

SunHydro – Wallingford, CT

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GNHTD FC Bus Fueling at SunHydro

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AC Transit – Emeryville, CA

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Fraunhofer, Germany

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BP / SMUD Station
Sacramento, CA

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AQMD Station
Burbank, CA

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Yeager Airport Station
Charleston, WV

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Shell Station
White Plains, NY

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Hydrogen Fuel Cell Cars

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Hydrogen Fuel Cell Car Facts

- Range of 300 to 360 miles depending on the manufacturer
- Commercial readiness in 2015
- Millions of miles logged already on fuel cell cars
- Every major automotive OEM has committed to hydrogen fuel cell cars

Closing Thoughts

- Need to align vehicle rollout with station rollout.
- Public needs to experience “commercial-like” fueling stations.
- Products are ready for the marketplace.
- Local company can and is playing a major role.

Thank you!

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