

# **NASEO Transportation Committee**

**August 31, 2015**



# FCHEA's Mission

- **Our mission is to advance the commercialization of and promote the markets for fuel cells and hydrogen energy**



# Our Members



DAIMLER



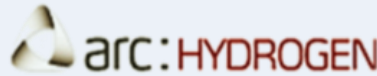
FuelCell Energy  
Ultra-Clean, Efficient, Reliable Power



BALLARD



3M



NISSAN GROUP  
OF NORTH AMERICA

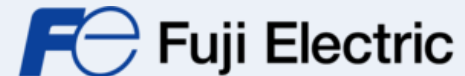


NUVERA

Making hydrogen make sense.



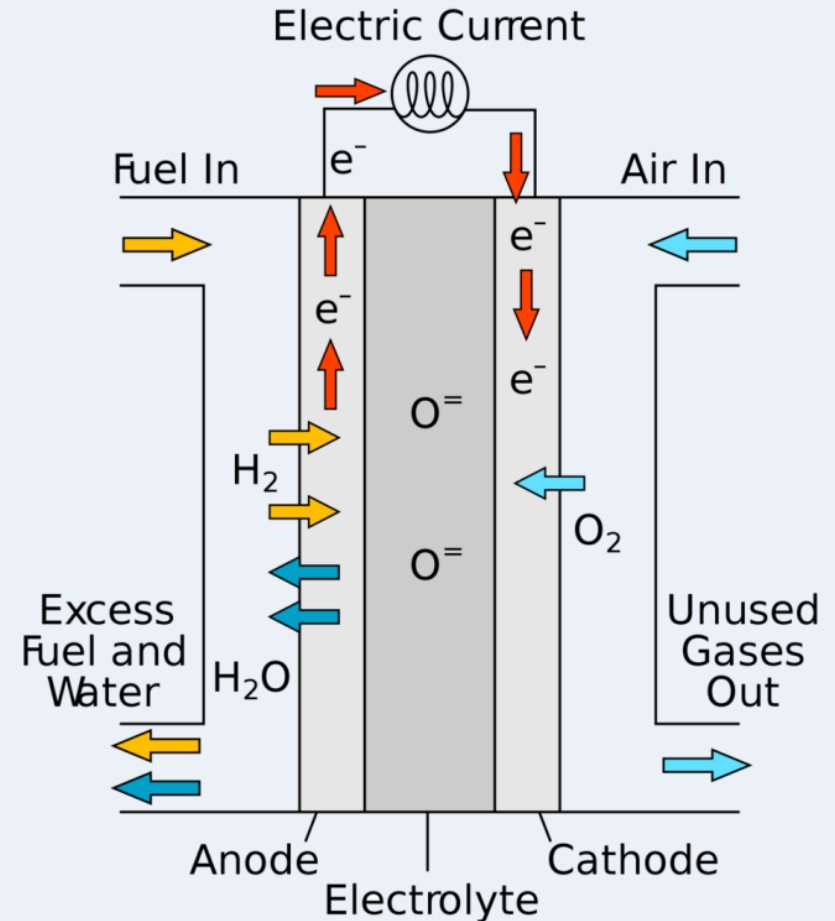
AREVA



YOUR POWER SOURCE

# Fuel Cells 101

- ▶ Fuel cells generate electricity using hydrogen to drive an chemical reaction, not combustion – the only byproducts are heat and water
- ▶ Hydrogen can be generated from a range of sources, both traditional and renewable



# Fuel Cells 101

- ▶ Fuel cells can be used to power nearly anything that uses electricity, including utilities, businesses, datacenters, telecommunications towers, forklifts, and light-duty vehicles



# FCEV Developments

- **Hyundai Tucson Fuel Cell**
  - Began leasing to customers in Southern California in June 2014
- **Toyota Mirai FCEV**
  - Will be sold and leased to customers in California later this year
- **Honda FCV Concept**
  - Will be sold to customers starting next year



# FCEV Developments (cont.)

- **Mercedes-Benz B-Class F-Cell**
  - On-going Daimler FCEV Pilot for began in 2010
- **Volkswagen / Audi**
  - Unveiled three hydrogen-powered FCEV concept vehicles at 2014 LA Auto Show
    - A7 Sportback h-tron quattro
    - Volkswagen Golf HyMotion
    - Volkswagen Passat HyMotion



# Automaker Partnerships

- **Toyota / BMW**
  - Working on joint next-generation FCEV platform for 2020
- **Ford / Nissan-Renault / Daimler**
  - Jointly Developing a FCEV stacks and systems targeting 2017
- **General Motors / Honda**
  - Co-developing a next generation fuel cell and hydrogen storage system for 2020 timeframe





# **H<sub>2</sub>USA**

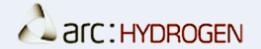
## **Mission Statement**

**The mission of H<sub>2</sub>USA is to promote the commercial introduction and widespread adoption of FCEVs across America through creation of a public-private collaboration to overcome the hurdle of establishing hydrogen infrastructure.**

# Goals

- **Establishing necessary hydrogen infrastructure and leveraging multiple energy sources, including natural gas and renewables**
- **Deploying FCEVs across America**
- ***Will result in...***
  - *Improving America's energy and economic security*
  - *Significantly reducing greenhouse gas emissions*
  - *Developing domestic sources of clean energy and creating jobs in the United States*
  - *Validating new technologies and creating a strong domestic supply base in the clean energy sector*

# Signatories on the Letter of Understanding



# H<sub>2</sub>USA Organization Chart

