HCNG (Hydrogen and Compressed Natural Gas)

HCNG Benefits

- Allows users to use nearly commercial technology to start using hydrogen; cheaper way to use hydrogen
- Allows for increased load for potential or projected hydrogen stations
- Allows governments/agencies to promote the use of hydrogen to greater number of people at lower cost
- Current CNG lean burn engines can be calibrated for 50% lower NOx with only 20% hydrogen by volume w/o major change to engine
- Allows hydrogen suppliers to develop volume, transportation solutions
- Allows hydrogen components suppliers to develop volumes, reducing costs
- Can take advantage of existing investment in natural gas infrastructure

Challenges

- Energy Density: For HCNG (20%vol), range is reduced by 10-15% for 3600 psi system -- could migrate in the future to 5000 psi system
- Fuel cost: Today H2 is more expensive than NG; however this can be mitigated by relying on NOx credits or by calibration that favors efficiency over NOx

HCNG Partners

Cummins-Westport

Hydrogen Components, Inc.

National Renewable Energy Lab (U.S. Department of Energy)

South Coast Air Quality Management District

SunLine Transit Agency

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