



Hydrogen Enriched Natural Gas Bus

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Heavy-duty transit buses that run on hydrogen enriched natural gas fuel will be evaluated in a demonstration program managed jointly by the Institute of Transportation Studies (ITS-Davis) and Unitrans.

Unitrans, which serves the campus and the City of Davis, is among the first transit systems in the nation to test the hydrogen enriched natural gas bus in actual service conditions. The goal is to determine if the special hydrogen-natural gas fuel blend can achieve fuel economy and power similar to a standard natural gas bus and meet California's strict 2007 transit bus emissions standards.

The bus is one of 10 new clean buses recently added to the Unitrans fleet. Only this bus uses a special hydrogen enriched fuel; the other nine run on compressed natural gas. An additional hydrogen enriched natural gas bus will be delivered in 2004.

The cost of the new buses, the evaluation project and new hydrogen fueling facilities totals \$3 million. Congressman Doug Ose, former Congressman Vic Fazio, and former Assembly Member Helen Thomson were instrumental in securing federal and state funds for these continuing air-quality projects. Local and private sources also contributed.

Hydrogen Enriched Natural Gas Benefits

- Small cost increase over commercial natural gas bus
- 90-95% reduction in NO_x emissions
- Transition strategy to hydrogen infrastructure for fuel cell vehicles and buses

Specifications

- 8.1 liter John Deere engine
- Bluebird Que transit bus
- Bus fuels in less than 10 minutes at 3,600 psi

Partners

- Federal Transit Administration
- Caltrans
- California Air Resources Board
- Yolo-Solano Air Quality Management District
- Collier Technologies
- Air Products and Chemicals, Inc.
- Madison Government Affairs
- National Hydrogen Association