

## Demonstration project Iceland

### *Iceland: Hydrogen in transportation*

Approximately 70% of the total energy use in Iceland is produced locally with renewable resources. Heat for industrial plants, households and services is provided mainly by geothermal district heating systems or local hot springs. Electricity is generated either by hydro- or geothermal power. The Icelandic government aims to reduce the use of fossil fuels in transportation in order to come to a 100% renewable energy supply. INE (Icelandic New Energy) has developed a roadmap with three major milestones in order to introduce hydrogen into the transportation and fishing sector.



The first milestone was finalised in August 2005, the ECTOS project. This hydrogen fuel cell bus demonstration was the forerunner of the larger CUTE project that demonstrated hydrogen technologies in 10 other European cities. With financial support of the European Commission and some international partners, the first pre-commercial electrolytic hydrogen station in the world that makes compressed hydrogen from water and electricity was opened in April 2003. A few months later three pre-commercial fuel cell buses were shipped from Germany and were used within the public transportation service in Reykjavik. The public reaction to the project was very positive.



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The demonstration project with the hydrogen fuel cell busses stopped as planned in August 2005, but later continued under Hy-Fleet CUTE. ECTOS was organised to become a learning experience that can facilitate the use of hydrogen as a fuel on a large scale within Icelandic conditions. Furthermore the outcomes of ECTOS were used to indicate drivers and barriers within the implementation of a future hydrogen economy and further political decision making in Iceland, but also in other countries.

The second step in the hydrogen roadmap - to introduce hydrogen into the transportation and fishing sector - consists of a demonstration project with hydrogen passenger vehicles and light applications. In September 2006 the government allocated financial support for the import of approximately 30 hydrogen personal cars from three continents. This project also includes a fuel cell module to be integrated into a whale watching vessel. The implementation will begin in 2007.

