

Transportation

The Hawaii Natural Energy Institute (HNEI) is engaged in research and development activities relating to transportation in a variety of arenas. One important subject is the demonstration of advanced, specialized vehicles in the State of Hawaii. HNEI's prime program areas include hydrogen (see the [Hydrogen](#) [1] section for details). This program has included the establishment of the [Hawaii Hydrogen Power Park](#) [2].

Building from the Power Park concept, the Institute is implementing hydrogen fueling stations on the Big Island of Hawaii and on Oahu. These stations will be capable of dispensing hydrogen for: 1) the plug-in hybrid electric vehicle (PHEV) shuttle buses being operated for transporting tourists at the Hawaii Volcanoes National Park (HAVO), and 2) the General Motors Equinox fuel cell electric vehicles being operated at the Marine Corps Base Hawaii on Oahu. For details on each of these projects, see the [Hydrogen for Hawaii Volcanoes National Park Vehicles](#) [3] and [Hydrogen for GM Equinox Vehicles](#) [4] sections of our website.

Another important endeavor involves electrification of advanced electric drive vehicles. Through the partnership with the [Hawaii Center for Advanced Transportation Technologies](#) [5] (HCATT), HNEI is working with a variety of industrial partners in evaluating advanced drive systems using fuel cells and batteries and needed infrastructure. HNEI researchers at the [Electrochemical Power Sources](#) [6] Laboratory have been working on this subject area since the mid-1990s, including activities concerned with battery and vehicle testing, novel fuel cell development, rapid charging technology, electric vehicle field data collection and analysis, battery modeling and life prediction, and battery diagnostic and prognostic tool development.

One recent project in the area of battery diagnostics focuses on a better understanding of battery life as used in electric drive vehicles. For details on this project see the [Battery Diagnostics on Path-Dependent Aging Overview](#) [7] section of our website.

For information regarding other HNEI research activities relating to transportation issues, refer to the [Energy Storage](#) [8], [Fuel Cells](#) [9], [Grid Systems](#) [10], and [Hydrogen](#) [1] sections of our website.

Last Updated: Wednesday, March 13, 2013

Tags: [transportation](#) [11]

[Hawaii Natural Energy Institute](#) ? 1680 East West Road, POST 109 ? Honolulu, HI 96822 ? Ph: (808) 956-8890 ? Fax: (808) 956-2336 ? Email: [Contact](#) ?

Source URL: <http://www.hnei.hawaii.edu/research/transportation>

Links:

[1] <http://www.hnei.hawaii.edu/research/hydrogen>

[2] <http://www.hnei.hawaii.edu/research/hawaii-hydrogen-power-park>

- [3] <http://www.hnei.hawaii.edu/projects/hydrogen-hawaii-volcanoes-national-park-vehicles>
- [4] <http://www.hnei.hawaii.edu/projects/hydrogen-gm-equinox-fuel-cell-vehicles>
- [5] <http://htdc.org/hcatt.html>
- [6] <http://www.hnei.hawaii.edu/research/electrochemical-power-sources>
- [7] <http://www.hnei.hawaii.edu/projects/battery-diagnostics-path-dependent-aging-overview>
- [8] <http://www.hnei.hawaii.edu/research/energy-storage>
- [9] <http://www.hnei.hawaii.edu/research/fuel-cells>
- [10] <http://www.hnei.hawaii.edu/research/grid-systems>
- [11] <http://www.hnei.hawaii.edu/term/transportation>