



The Chronicle

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Fueling devices for natural gas or electric cars

Filling up or plugging in your car at home

Imagine pulling in your garage after work, plugging into an outlet or inserting a nozzle into your fuel tank and stepping inside your house to fix dinner. The next morning, you drive to work with a full tank. The convenience of fueling at home or work is available for Avista and Pacific Power customers in Southern Oregon. Here is a primer for people interested in residential fueling options.

Natural Gas Home Fueling

BRC FuelMaker manufactures fast-fueling outdoor and slow-fueling indoor devices for natural gas vehicles. The FuelMaker Phill can be installed indoors at a cost of about \$5,000. The disadvantage is the 20 hour fueling time for an 8-gallon tank. The fast-filling FMQ2 (for vehicles capable of handling 3,000 psi) and FMQ2-36 (for 3,600 psi) will produce one gallon of fuel per hour; a driver could fill the 8-gallon tank in a Honda Civic in 8 hours. These compressors cost about \$10,000 installed. They run for 4,000 hours (or 500 filled tanks) before they need a new cylinder head, which costs about \$1,000 for parts and installation. "I have one of these units that is 20 years old," said Smokey Stover, natural gas fueling expert and owner of CLNNGV Technology in Portland. Furthermore, home owners are eligible to receive a \$750 tax credit for a home fueling device. Oregon fire departments have required all models of natural gas compressors to be installed outdoors, despite federal guidelines (NFPA52) providing for indoor systems. "So far, it has never been approved in Oregon," he said.

Natural Gas Vehicles

There are several options for finding a natural gas or bi-fuel vehicle in Oregon. Beaverton Honda may be the only Oregon dealership that sells the Civic GX, the only dedicated natu-



See the all-electric Nissan Leaf on tour in Portland:

- December 17-20, Oregon Museum of Science and Industry, Portland
 - December 22-23, 8 am to 11 pm, Washington Square, 9585 SW Washington Square Road, Tigard
- RSVP: www.nissanusa.com/leaf-electric-car/tour or call 1-877-664-2738

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Drive an AFV?
Take our
survey!

✓ **Type of fuel my vehicle uses:**

B20 B99 E85
CNG LPG Hybrid
Electric Other (please specify)

✓ **Type of vehicle:**

Type
Manufacturer
Model
Year

✓ **Where is the vehicle driven:**

City
State
Zip

Please email answers to
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Thank you!

ral gas auto in production in the US. The Honda GX has an excellent range of 150 to 200 miles per charging but the car is limited by its single fuel capability. The state of Oregon owns 165 of them in the metropolitan areas, said Rick Wallace of the Oregon Department of Energy. But in rural Oregon, where natural gas fueling stations are rare, a bi-fuel vehicle is essential. Another option for a bi-fuel vehicle is converting a Chevy, GM, Dodge or Ford light duty truck at a cost of about \$6,000. Additionally, used natural gas vehicles are sold on the internet or through government auctions. To convert a vehicle or install a home fueling device, call CLNNGV Technology 503-254-8786 or email smokeysclnngv@yahoo.com.

Plugging in Electric Vehicles at Home

For charging an electric car, a residential garage needs to be equipped with a 220-volt line, similar to what is used for a dryer. Additionally, home charging would require an electrician to install a surge protector called an Electric Vehicle Service Equipment (EVSE). Charging time is about eight hours.



Chevy Volt coming in 2011.

Electric Vehicles

At least one auto manufacturer is promising an all-electric sedan and several others offer hybrid cars, which use electricity and gas. Coming in late 2010 is the Nissan Leaf, which features a 24kwh lithium ion laminated battery tested at 150,000 miles. Nissan partnered with NEC to form Automotive Energy Supply Corp; they anticipate production of about 60,000 batteries annually at plants in Japan, England and Portugal in preparation for selling electric and hybrid cars in the United States. The Nissan Leaf holds up to five people, reaches freeway speeds of 70 mile per hour, has about a 100-mile range and will be priced similar to a gasoline engine sedan. Another option in 2011 will be the Chevy Volt, an electric car with a range extender. The Chevy Volt runs off electricity from its battery and from electricity it creates from gas. It can also be filled with biofuel E85 ethanol.

— By Melissa Stiles for the Rogue Valley Clean Cities Coalition

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- Download an application for an Oregon tax credit
- Calculate the cost for natural gas fueling
- Download operating manuals for BRC FuelMaker natural gas compressors
- Read about the Nissan Leaf and Chevy Volt and RSVP for Portland tour
- Learn about Automotive Energy Supply Company and its work on the advanced batteries
- Download the Alternative Fuel Vehicle Buyer Guide for 2009

The Chronicle is a monthly publication of Rogue Valley Clean Cities Coalition. The Coalition is made up of businesses and agencies with a shared goal of reducing the nation's dependence on imported oil. Contact Sue Kupillas, coordinator, by email, sue@roguevalleycleancities.org. Learn more: www.roguevalleycleancities.org