

# Green Energy News

## Sunshine Powered Cars - March 5, 2009

The sky is a big blue dome. Most times sunlight is the predominant weather feature. The terrain is board flat. There are no hills for cars to struggle against. Someday, Florida, the Sunshine State, could be the nation's leader in solar-charged electric cars.

Each year, during my winter pilgrimage to the west coast of the state, I've noted that there seems to be more low-speed electric vehicles than the year before. The battery-powered cars are performing municipal duties, like parking enforcement, and where speed limits are low (25 miles per hour) the small golf-cart like vehicles seem to be quietly blending in with conventional cars and trucks.

As the electric fleets continue to grow the next logical step in the state is to complete the link between the ever-present Sun and the batteries of those cars. There's no shortage of sunlight in this state and on the flat roads electric cars can go greater distances not having to expel energy climbing hills. (The regenerative braking feature of many electric vehicles doesn't recoup 100 percent of lost hill-climbing energy.)

By this summer, RubeLab, a nonprofit corporation which assists inventors in bringing new green technologies to market, may be starting the sun-to-battery movement in the state with its first solar electric vehicle charging station installed in the group's Florida home town of Eustis. The RubeStation will include a 12-by-16-foot grid-connected solar array that will serve additional duties as a sunshade or rain shelter as well as be a clean power source for the grid. Power not used for charging vehicles will be purchased by the local utility thus reducing the municipality's electric bill.

The RubeStation is designed to be a top-off recharging station, not a full charge station. Electric vehicle drivers might plug in while shopping or dining to bring their vehicles up to 100 percent charge.

Rube, as you may have guessed, is used (with some tongue in cheek) in honor of cartoonist, artist, inventor Rube Goldberg.

For this first station the photovoltaic panel will be donated by Advanced Solar Photonics based in Lake Mary, Florida. The City of Eustis will pour the RubeStation's concrete slab and waive permitting fees for its construction. A local metal-works company will contribute toward building the facility which will cost at least \$20,000.

In the winter, snowbirds fly by way of commercial jet to Florida from chillier spots on the globe such as Canada. Canada will never be sunny and hot but it is getting greener. There the only production automaker selling highway-capable pure electric vehicles in North America and Europe, has begun selling cars. Charged on the Canadian grid, Tesla's will be among the cleanest vehicles in the world. Canada and Norway are the only two countries worldwide where the majority of electricity comes from renewable resources, including run-of-river small hydro, wind, biomass, geothermal and solar energy.

An electric vehicle recharged from the current Canadian grid, on average, would reduce greenhouse gas emissions by about 85 percent compared to an equivalent gasoline-powered vehicle. In hydro-dominant British Columbia, Quebec and Manitoba, the reduction would be an impressive 98 percent.

Florida is a long way from having most of its power generated from renewables. But if the state were to follow a long path of building greenhouse gas-free solar charging shelters then it too could make the claim of having some of the cleanest vehicles on the road.

Tesla, by the way, will deliver cars to Canadian customers through regional centers in Seattle and New York. The retail and service facilities will open in the first half of this year. Eventually, Tesla hopes to open facilities in Ontario, British Columbia and Quebec.

Tesla has plans to open a dealership in Miami too.

Links:

RubeLab

<http://www.rubelab.org>

Advanced Solar Photonics

<http://www.advancedsolarphotonics.com>

Tesla Motors

<http://www.teslamotors.com>