

Press release

Dübendorf / St. Gallen / Thun, February 22, 2008

Empa-study compares environmental impact of Electro-Scooters, gasoline powered cars and Motorcycles

Electric vehicles for environmentally friendly commuting

Using an environmentally friendly mode of transport such as an electric scooter instead of a gasoline powered auto protects the environment and our climate. Interim results of an Empa research study done for the Swiss Federal Office of Energy show that E-Scooters produce approximately 17 times fewer greenhouse gases than the average Swiss automobile. Thus, in cities with a large volume of cars, such as Zürich, electric vehicles can bring about environmentally friendly commuting.

Traffic in Switzerland is responsible for almost 30% of all greenhouse emissions leading to climate warming. Electric vehicles such as E-Scooters can substantially reduce CO₂ emissions so long as the electric current used to charge them was not from fossil sources, but as an example, obtained from solar power. Empa in its environmental study for the Swiss Federal Office of Energy calculated how large could be the environmental benefit of electrically powered vehicles in urban surroundings. «In comparison with the average passenger vehicle, a E-Scooter powered with today's Swiss electric current mix produces 17 times fewer greenhouse gases during its entire life time use, in relation to a kilometer traveled», summarized Empa-researcher Marcel Gauch the main results of the study at a press conference at the E-Scooters exhibition in this year's SwissMoto Show which took place in Zürich on February 20. Within the two-wheeler class, electric models are approximately 11 times «cleaner» than those powered by «gasoline».

E-Scooter as an attractive Commuter vehicle

A quarter million commuters travel daily to work by car or motorcycle in the City of Zurich, and produce thereby CO₂ gases, fine particulate dust and the irritant gas Ozone, not to mention noise nuisance. Consequently, electrically powered vehicles used for commuting to work can offer an environmentally friendly and healthy alternative. The preliminary results of the Empa study show that when a commuter decides to purchase an electric scooter for commuting, as an addition to his gasoline powered auto, «after 1500 kilometers he has already economized the greenhouse gases generated by the production and the use of his E-scooter in addition to his car», explained Empa's study co-author Rolf Widmer the ecological attractiveness of electric mobility.

The additional electric current consumption by these vehicles is rather small: if all motorized commuters in the City of Zurich will start using electrically operated two- wheelers only 0.13 percent of the total production of electricity in Switzerland would be needed for such commuting. An interesting scenario appears from a

recent study by EWZ (The Zurich City Electric Power Works) . According to this study, one and a half square kilometers of roof spaces in Zurich are suitable for the production of solar electricity, so that the number of commuters who could be supplied with this 100% renewable energy could even be doubled. On the other hand, this quantity of electricity could also be sufficient to operate all electrically powered Swiss two-wheelers.

Before these scenarios become a reality, more persuasive and development research in the field of electrically powered vehicles is necessary. After the SwissMoto Show, one can have a look into the possible future at the Autosalon in Geneva, which opens its doors on March 6, and in which the focal point is electric cars; 17 new models with electric drive will be on display.

Further Information

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The electric two-wheelers are coming! Various models at the Special Exhibition SwissMoto 08 in Zurich.