



Master thesis topic: LCA of advanced vehicle power train components considering size scaling

How do the environmental impacts and costs of fuel cells and batteries scale with system size for transport applications? In most studies this is assumed to be linear, but how true is this?

The main goal of the thesis is the development of Life Cycle Inventory (LCI) data for fuel cells and other advanced power train components in a modular way, which can be scaled over a wide range of sizes and applications, from scooters to city buses and freight trucks. The new LCI data shall be submitted to the ecoinvent database, which guarantees high data quality due to independent peer-review.

The thesis is to be performed within the Technology Assessment group in the Laboratory for Energy Systems Analysis and the Paul Scherrer Institute in Villigen, Switzerland. This thesis is part of the SCCER Mobility.

Interested students are encouraged to contact Brian Cox* for more information. Please include a short academic background on yourself including study programme, course list, and current grades.

*More information:

Email: brian.cox@psi.ch

PSI group webpage: www.psi.ch/ta/

SCCER Mobility project webpage: www.sccer-mobility.ch/