



Master Thesis Topic: Costs and environmental impacts of road public transport

The topic of this thesis is to develop life cycle and cost assessments of road public transport. Models will be generated that estimate manufacturing, operation, and end-of-life costs and environmental impacts for several sizes of commercial buses based on available literature and manufacturer information. In particular, the impacts of different fuel sources and powertrains including diesel, electricity, compressed natural gas, hydrogen fuel cell, and hybrid configurations shall be examined. The impacts of different driving styles and traffic congestion may also be included. Furthermore, expected future developments will be used to estimate the costs and environmental impacts of road public transport in the future until 2050. Time permitting, the models may be used to represent the entire Swiss road public transport fleet, allowing insights to be gained on the overall costs and environmental impacts of road public transport in Switzerland. 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.

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.

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