

Master thesis proposal

## Life cycle assessment of vehicles as a basis for policy instruments

### **Background**

In some countries or regions of the world there is an ongoing debate around using Life Cycle Assessment (LCA) as a basis for policy instruments. For instance, in EU, the Commission is drafting a version of such a policy instrument and there are also drafts available for a (voluntary or mandatory) standard in China. The overall purpose is to make it easier and more transparent for costumers to compare the environmental burdens of different vehicle options. Therefore, the outcome probably would make it easier to compare different vehicles from different car manufactures, as well as individual differences for the same model – different drive lines etc.

### **Project description**

The purpose of this project is to evaluate the pros and cons of different policy instruments based on LCA. Which are the most important methodological selections/system boundaries/choices of datasets etc. when creating harmonized methods? The project will include a literature review of existing drafts for LCA based regulation, as well as the methods used by car manufactures today (based on publicly available information).

The project will be conducted at Volvo Cars in Torslanda together with Environmental Systems Analysis, Chalmers, during the spring 2019.

### **Qualification**

The project requires a collaboration between two students with good ability to work independently and multidisciplinary. Students are preferably from the master's programs in Industrial Ecology or Sustainable Energy Systems. However, prior experience of life cycle assessment is required (e.g. Chalmers course on master's level VTM081), and a prerequisite is that at least of one of the students have good knowledge in Chinese.

### **Contact**

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