Accepted Manuscript

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PII: S0959-6526(16)00225-0

DOI: 10.1016/j.jclepro.2016.02.055

Reference: JCLP 6756

To appear in: Journal of Cleaner Production

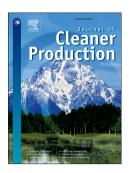
Received Date: 30 June 2015

Revised Date: 9 February 2016

Accepted Date: 10 February 2016

Please cite this article as: Borén S, Nurhadi L, Ny H, Robèrt K-H, Broman G, Trygg L, A strategic approach to sustainable transport system development – Part 2: the case of a vision for electric vehicle systems in southeast Sweden, *Journal of Cleaner Production* (2016), doi: 10.1016/j.jclepro.2016.02.055.

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ACCEPTED MANUSCRIPT



Word count: 8280

A strategic approach to sustainable transport system development – Part 2: the case of a vision for electric vehicle systems in southeast Sweden

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Abstract

Electric vehicles seem to offer a great potential for sustainable transport development. The Swedish pioneer project GreenCharge Southeast is designed as a cooperative action research approach that aims to explore a roadmap for a fossil-free transport system by 2030 with a focus on electric vehicles. In the first paper of this tandem publication, the authors propose a new generic process model embedding the Framework of Strategic Sustainable Development. The purpose of applying it in an action-research mode as described in this paper was twofold: (i) to develop a vision for sustainable regional transport and a coarse roadmap towards that vision, and, while doing so, (ii) get additional empirical experiences to inform the development of the new generic process model. Experts from many sectors and organizations involved in the GreenCharge project provided vital information and reviewed all planning perspectives presented in Paper 1 in two sequential multi-stakeholder seminars. The results include a sustainable vision for electric vehicle systems in southeast Sweden within a sustainable regional transport system within a sustainable global society, as well as an initial development plan towards such a vision for the transport sector. The vision is framed by the universal sustainability principles, and the development plan is informed by the strategic guidelines, of the above-mentioned framework. Among other things, the vision and plan imply a shift to renewable energy and a more optimized use of areas and thus a new type of spatial planning. For example, the vision and plan implies a lower built-in demand for transport, more integrated traffic modes, and more multi-functional use of areas for energy and transport infrastructures, for example. Some inherent benefits of electric vehicles are highlighted in the vision and plan, including near-zero local emissions and flexibility as regards primary energy sources. The vision and plan also imply improved governance for more effective cross-sector collaboration to ensure coordinated development within the transport sector and between the transportation sector and other relevant sectors. Meanwhile, the new generic process model was refined and is ready to be applied and further tested in the GreenCharge project and in other projects within the transport sector as well as other sectors. The study confirmed that the new generic process model suggested in support of sustainable transport system and community development is helpful for giving diverse stakeholders, with various specialties and perspectives, a way of working that is goal-oriented and builds on effective, iterative learning loops and co-creation.

Keywords: Sustainability, Cross-sector, Traffic, Electric Vehicles, Strategic planning, Vision

Abbreviations:

CO₂ Carbon dioxide EU European Union EV Electric vehicle

FFF Investigation for how to reach a fossil-fuel-independent vehicle fleet by 2030

FSSD Framework for Strategic Sustainable Development

GHG Greenhouse gases

ICEV Internal combustion engine vehicle

SP Sustainability principle

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