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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:

CO ₂	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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