

Preparing for National Deployment of Electrified Road Systems in Europe

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Challenges for electrification

- Cruising range
- Charging (waiting time, charging congestion, infrastructure installation incl grid demands, land use)
- Increased use of batteries (securing resources, disposal, deterioration of roads due to greater vehicle weight, vehicle agility)
- EVs load (battery weight and volume, reduction of load)
- Safety issues
- Costs & energy efficiency
- Interoperability



Electric Road System, ERS

“Road supplemented with an electrical installation intended for the transmission of electrical energy to vehicles during travel”

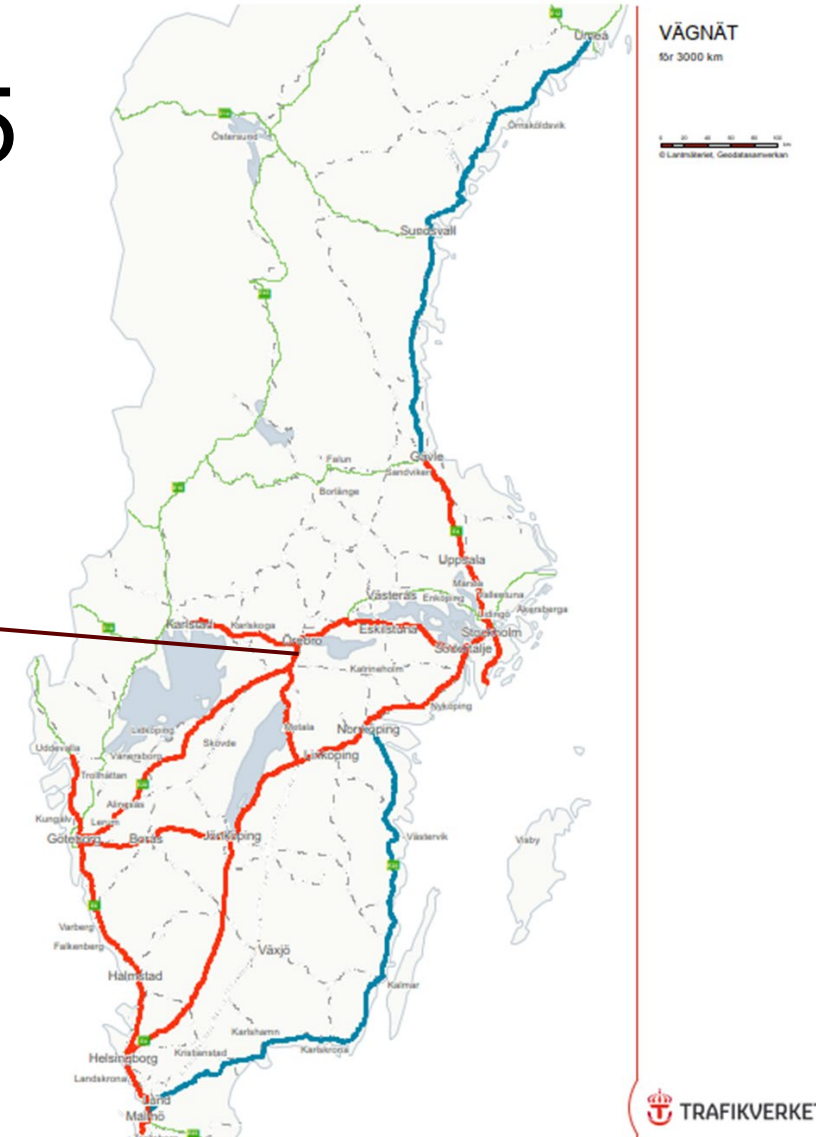
- Carbon neutral: Zero CO2 while driving
- Cruising range becomes unlimited
- No charging congestion
- Reduce on-board batteries
- Reduce vehicles weight - increased load factor
- Reduce vehicle cost



Permanent ERS in Sweden, 2025



**E20
Hallsberg – Örebro,
21km**



**2400km ERS
Could be possible!**

CollERS – A partnership for innovation



Electric Road Systems (ERS)

Sweden, Germany and France agree to work together to enhance electric road systems technology, identify means for cross-border operability and campaign at European level for the wider spread of this technology.

PIARC Taskforce – for ERS



PIARC Task Force; TF, for “Electric Road Systems” will grasp the field of Electrical Road systems (ERS).

The TF will share knowledge and experiences from these national Research and development projects as well as from demonstrators. Findings from these activities will be presented and spread.

To promote knowledge within the field of ERS, the TF will apart from technologies also review potential stakeholders, businessmodels, interoperability, national strategies and policies.

Finally the TF will try to present possible recommendations for how to accelerate implementation of ERS and also future international cooperations on ERS and role of PIARC.

The report will be presented at the PIARC World Conference in Prague, October 2023