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Two electric trucks and overhead power lines on the E16.



An electric truck powered by energy from rail in road, at Arlanda.



An electric bus powered by rail in road, in Lund.

## Electricity supply

- Increased wind and solar power needed
- 20 percent reduction in CO<sub>2</sub> emissions if Sweden's five busiest roads were electrified
- 40 kWh battery is sufficient for one truck with payload of 60 tonnes along the Swedish section of the E6 road

## Environmental impact

- Alteration of noise
- Material use is important, airborne particles?
- Effects of electromagnetic fields?

## Construction, operations, and maintenance

- Installation challenges, road strength
- Snow removals, guardrails

## Economic impact

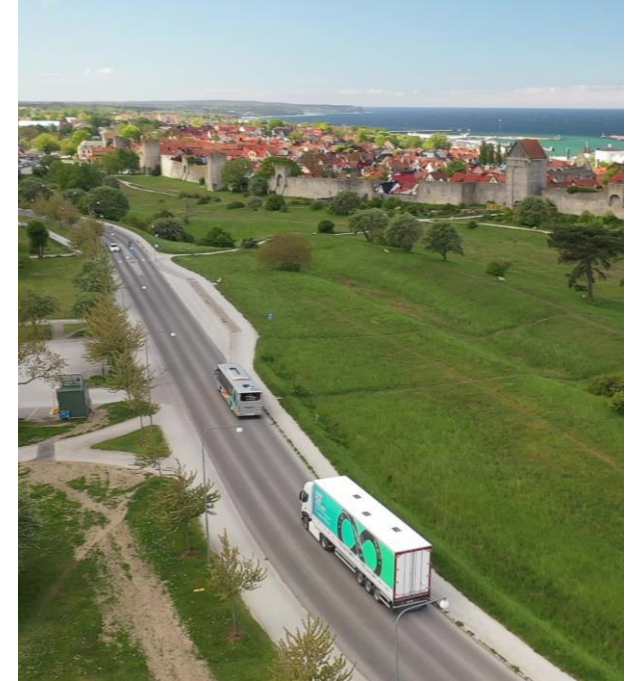
- Major investments
- Important energy gains
- Good economy and load capacity are important for the transport industry
- How to connect to the electricity grid is important for the electricity industry

## Business models

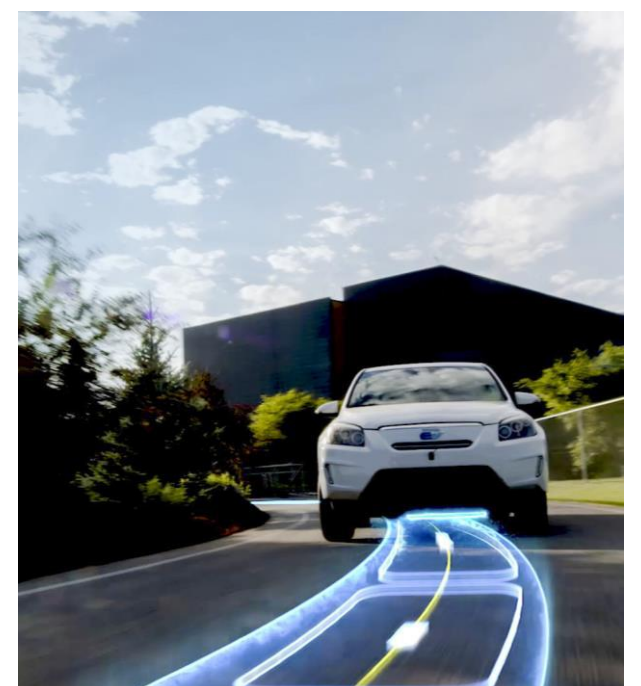
- Collaboration between road managers, transport operators and energy companies
- New roles and business models
- Access control
- Payment for use of infrastructure and energy

## Standards

- Emerging technologies
- No specific regulation
- Standards under development



An electric bus and an electric truck, wirelessly charged by an electric road on Gotland.



Visualization of wireless energy transfer from road to electric-powered car.

## Collaboration

- Researchers
- Businesses
- Public sector



Results at

<https://www.electricroads.org/>