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# Technology as a Productivity Tool

Siemens Canada

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# Siemens eHighway

Scania ©

The efficient and cost-effective solution for heavy duty road transport

October 2014

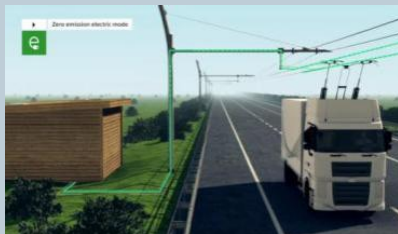
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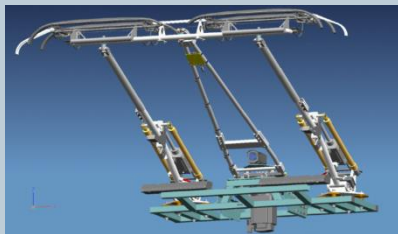


# eHighway – electrification of hybrid trucks via an overhead catenary system

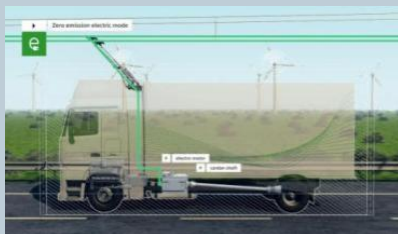
## Electrification infrastructure



## Active current collector



## Hybrid-electric drive train



## Advantages of eHighway



- **Open and proven** system with **scalability**
- Addition to existing road infrastructure **without direct interference**
- Improved **efficiency** by e.g. direct transfer of energy
- **Financing** of the infrastructure possible through **operative savings**



# eHighway is developing quickly and is ready for commercial use in near future



## Project

- Development cooperation with e.g. Scania & Volvo
- Test track of 2,1km with realistic highway conditions (bridge, signs, curves, etc)
- Technical assessment of complete system by Tech. U. of Dresden & Fed. Highway Research Institute.
- Analysis of the economic and ecological impacts by German ministries of Environment and Transport

## Market

- Several potential applications in Scandinavia
- Strong interest in California and first public demonstration in LA
- Independent reports confirm the potential of the system
- Initially focused on single transport routes with high heavy-duty traffic rates (e.g. harbors, mine transport)



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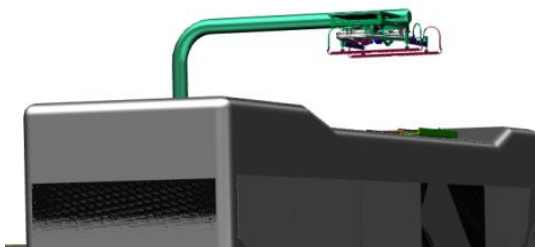


# Siemens eBus

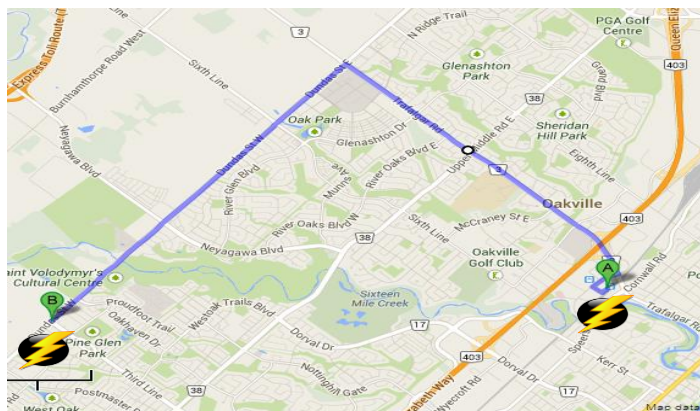
Fast En Route Charging

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# eBus



Reverse Pantograph



~10km Route

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## Advantages of eBus



- Service proven components
- Charging 6-8 minutes
- Maximize passenger capacity
- Zero emissions



# eBus Projects





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# High Speed Rail Alberta

## High Speed Rail in Alberta

- **Established technology and service models**
  - **Siemens is one of the pioneers in HSR**
  - **Global experience under extreme environmental conditions**
  - **More than 440 million miles of operation**
  - **Mature 4th generation design**
  - **Proven reliability and availability with similar tracks & environments**
  - **California High Speed progressing with RFP**
  - **Assortment of established procurement models available.**

### International High Speed Trains



China

Russia

Spain

### Enhanced Customer Experience



### Manufactured in the U.S.



Sacramento Factory



Thank You@



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