

### The World's First Electric Highway

The world's first electric road has been inaugurated near the city of Gävle in central Sweden, the result of a unique partnership demonstrating the path towards fossil-free transportation. Scania is supplying the electrically-powered trucks, which will operate under real traffic conditions. Opened on 22 June, the two-kilometer strip on the E16 motorway sees electrified trucks from Scania driven in open traffic, using conductive technology developed by Siemens.

The beauty of the new technology, which is the result of several years of cooperation between the Swedish Government and the private sector, is that it permits the trucks to operate as electric vehicles when on the electrified road and as regular hybrid vehicles otherwise. All Scania trucks on the road are hybrid and Euro 6-certified, running on biofuel. Scania says that the electric road is one important milestone on the journey towards fossil-free transport. Scania is committed to the success of this project and is committed to sustainable transport solutions. The truck receives electrical power from a pantograph power collector that is mounted on the frame behind its cab. The pantographs are in turn connected to overhead power lines that are above the right-hand lane of the road, and the trucks can freely connect to and disconnect from the overhead wires while in motion.

When the truck gets off the electrically-powered lane, the pantograph is disconnected and the truck is then powered by the combustion engine or the battery-operated electric motor. The same principle applies when the driver wants to overtake another vehicle while on the electrified strip of the road. Scania sees the electric road as a key component in achieving Sweden's ambitious goal of an energy-efficient and fossil-free vehicle fleet by 2030. It can also help to strengthen Sweden's competitiveness in the rapidly-developing area of sustainable transport.

The potential fuel savings through electrification are considerable and the technology can become a cornerstone for fossil-free road transport services. The investment in the Electric Road E16 program in Gävle is a result of a program for the public procurement of innovative solutions that was launched by Swedish authorities. The program consists of about SEK 77 million in public money, with about SEK 48 million in co-financing from the business community and the Gävleborg regional authority, which administers the area of Sweden where the electric road is situated. The Swedish transport authority Trafikverket, the Swedish Energy Agency Energimyndigheten, innovation agency Vinnova, Scania and Siemens are the main funders of the technology, while Region Gävleborg is the project coordinator.

The electric road is only one of several pioneering technologies that Scania is working on to help the spread of sustainable solutions within both urban and long-haul transport. The company is also developing technologies for alternative fuels, hybridized and fully-electric vehicles, and autonomously and wirelessly-connected transport in parallel with its work to further enhance and refine the products of the future.

Adapted from [www.scania.com](http://www.scania.com)

**Ex. 1 Find the words or expressions in the text which mean the following:**

- 1) to officially start sth: \_\_\_\_\_
- 2) one of a kind: \_\_\_\_\_
- 3) a section of sth, e.g. of a road or land: \_\_\_\_\_
- 4) to allow sth: \_\_\_\_\_
- 5) an important step: \_\_\_\_\_
- 6) above: \_\_\_\_\_
- 7) cars owned by a company: \_\_\_\_\_
- 8) to introduce sth to the market: \_\_\_\_\_
- 9) providing money for sth together: \_\_\_\_\_
- 10) a person or a business who provides money for sth: \_\_\_\_\_
- 11) related to the city: \_\_\_\_\_
- 12) to improve sth: \_\_\_\_\_

**Ex. 2 Match the expressions from the two columns into logical collocations:**

- |                   |                     |
|-------------------|---------------------|
| 1) fossil-free    | power collector     |
| 2) conductive     | authority           |
| 3) an electrified | procurement         |
| 4) sustainable    | an ambitious goal   |
| 5) a pantograph   | transportation      |
| 6) to achieve     | technology          |
| 7) rapidly        | technology          |
| 8) public         | road                |
| 9) a regional     | developing          |
| 10) a pioneering  | transport solutions |

**Ex. 3 Provide English equivalents of these expressions:**

1) dostarczyć coś	7) energooszczędny
2) być napędzany czymś	8) konkurencyjność
3) być oddanym czemuś	9) znaczne
4) w ruchu	10) składać się z
5) silnik spalinowy	11) środki z budżetu państwa
6) wyprzedzać kogoś	12) transport dalekobieżny

**Grammar corner...**

In order to produce advanced speech you not only have to express simple ideas with simple sentences, but you may want to connect them into longer pieces of speech. Some of them include: therefore (as a result), nonetheless (despite anything to the contrary), otherwise (in a different case), meanwhile (at the same time), undoubtedly (without a doubt), etc.

**Ex. 4 Complete the gaps with the right conjunctions.**

1. Sally wore her rubber boots; \_\_\_\_\_, her feet stayed dry during the storm. (however, therefore, on the other hand)
2. I love green; \_\_\_\_\_, this shade seems a little too bright. (therefore, nonetheless, in fact)
3. You have to be on time; \_\_\_\_\_, you'll miss the plane. (nonetheless, however, otherwise)
4. Jill likes to read; \_\_\_\_\_, her sister Julia prefers to watch TV. (however, in contrast, again)
5. She really wanted to have ice cream; \_\_\_\_\_, she had a salad. (however, likewise, instead)
6. We were working hard; \_\_\_\_\_, Jill and Jerry were lounging by the pool. (meanwhile, instead, therefore)
7. He is a bad leader; \_\_\_\_\_, he has plenty of supporters. (otherwise, moreover, nevertheless)
8. She has a beautiful voice; \_\_\_\_\_, she will go far in her music career. (otherwise, undoubtedly, similarly)
9. Mary wanted to make pie but didn't have apples; \_\_\_\_\_, she decided to bake a cake. (therefore, namely, in contrast)
10. We had hoped to go to Ireland; \_\_\_\_\_, we ended up in France. (otherwise, instead, again)

<b>GLOSSARY</b>	
<b>to inaugurate sth</b>	zainaugurować coś
<b>unique</b>	jedyny w swoim rodzaju
<b>a strip</b>	odcinek (np. drogi)
<b>to permit sth</b>	zezwoić na coś
<b>a milestone</b>	kamień milowy
<b>overhead</b>	ponad
<b>a fleet</b>	flota
<b>to launch sth</b>	wprowadzić coś na rynek
<b>co-financing</b>	współfinansowanie
<b>a funder</b>	fundator
<b>urban</b>	miejski
<b>to enhance sth</b>	poprawić coś
<b>fossil-free transportation</b>	transport wolny od paliw kopalnych
<b>conductive technology</b>	technologia przewodnikowa
<b>an electrified road</b>	droga pod napięciem
<b>sustainable transport solutions</b>	rozwiązania zrównoważonego transportu
<b>a pantograph</b>	pantograf
<b>to achieve an ambitious goal</b>	osiągnąć ambitny cel
<b>rapidly-developing</b>	szybko rozwijający się
<b>public procurement</b>	zamówienia publiczne
<b>a regional authority</b>	władze lokalne
<b>a pioneering technology</b>	pionierska technologia
<b>to supply sth</b>	dostarczyć coś
<b>to run on sth</b>	być napędzany czymś
<b>to be committed to sth</b>	być oddanym czemuś
<b>in motion</b>	w ruchu
<b>a combustion engine</b>	silnik spalinowy
<b>to overtake sb</b>	wyprzedzać kogoś

<b>energy-efficient</b>	energooszczędny
<b>competitiveness</b>	konkurencyjność
<b>considerable</b>	znaczne
<b>to consist of sth</b>	składać się z
<b>public money</b>	środki z budżetu państwa
<b>long-haul transport</b>	transport długodystansowy

**ANSWER KEY:**

*Ex. 1*

- 1) to inaugurate sth
- 2) unique
- 3) a strip
- 4) to permit sth
- 5) a milestone
- 6) overhead
- 7) a fleet
- 8) to launch sth
- 9) co-financing
- 10) a funder
- 11) urban
- 12) to enhance sth

*Ex. 2*

- 1) fossil-free transportation
- 2) conductive technology
- 3) an electrified road
- 4) sustainable transport solutions
- 5) a pantograph power collector
- 6) to achieve an ambitious goal
- 7) rapidly-developing
- 8) public procurement
- 9) a regional authority
- 10) a pioneering technology

*Ex. 3*

- 1) to supply sth
- 2) to run on sth
- 3) to be committed to sth
- 4) in motion
- 5) a combustion engine
- 6) to overtake sb
- 7) energy-efficient
- 8) competitiveness
- 9) considerable
- 10) to consist of sth
- 11) public money
- 12) long-haul transport

*Ex. 4*

- 1) therefore
- 2) nonetheless
- 3) otherwise
- 4) contrast
- 5) instead
- 6) meanwhile
- 7) nevertheless
- 8) undoubtedly
- 9) therefore
- 10) instead