



Biogas and gas vehicles in Östersund



Biogas production



In Östersund

Since the inauguration of Göviken's biogas filling station on the 22d of May 2007 the inhabitants of Östersund have the possibility to drive with biogas, the most environmentally friendly vehicle fuel available today.

The biogas is a secondary resource from the sludge of the Göviken sewage plant. Methane gas is produced in a digester chamber through decomposition by micro-organisms in an anaerobic environment; the resulting gas is then upgraded and cleaned to the vehicle fuel that the cars fill their tanks with at the filling station.

The installation has the capacity to yearly produce around 500 000 m³ of vehicle fuel, which is enough for approximately 350 vehicles.

At this time there are about 200 biogas vehicles in Östersund. 75 of these belong to the municipality, of

these there are two biogas garbage trucks. It is currently being investigated how to expand the biogas production through new installations digesting organic wastes. The biogas that today is not used as vehicle gas is used for district heating.

In Sweden

Except out of sewage sludge, biogas in Sweden is also produced out of wastes from the food industry and organic household wastes.

The vehicle gas sold in Sweden is usually a mixture of renewable biogas and fossil natural gas, the biogas share out of the total volume of vehicle gas is presently around 55 %.

In Östersund however, the available vehicle gas is 100 % biogas, with a minimal impact on the climate.

Filling your car in Östersund

The filling station for biogas is situated at the road Lugnviksvägen in Göviken, follow signs from the crossing Trondheimsvägen-Arkivvägen (where the museum Länsmuséet is).

You can find instructions for filling the car at the filling station, and at www.ostersund.se/biogas. Payment is through card; the most common bank cards except American Express and Diners Club are accepted. Companies can apply for company cards (at www.ostersund.se/biogas).

The price of the biogas is 9 SEK/normal cubic metre, which is equivalent to a petrol price of 8.10 SEK/litre, this corresponds to 0.73 euros/litre. In the comparison the amount of gas has been recalculated to so called petrol equivalents to energetically compare it with petrol.

Owners of biogas cars who want to receive e-mail and text message (to mobile phone) in case of temporal disturbances in the operation of the station, are welcome to submit their contact information to Green Traffic.

Those who are interested of this can get in touch via tel. 063-14 46 61 or by sending an e-mail to anne.sorensson@ostersund.se.



Filling your car in other parts of Sweden and Europe

Presently there are approximately 90 filling stations for gas open for the public in Sweden.

Filling stations in northern Sweden

- Boden (possible to pay with ordinary bank cards)
- Skellefteå (special card needed, application via www.skelleftea.se, or call 0910-73 50 00)
- Sundsvall (opens in June 2009, will be possible to pay with ordinary bank cards)
- Uppsala (special card needed, application via www.uppsala.se, or call 018-727 94 00)

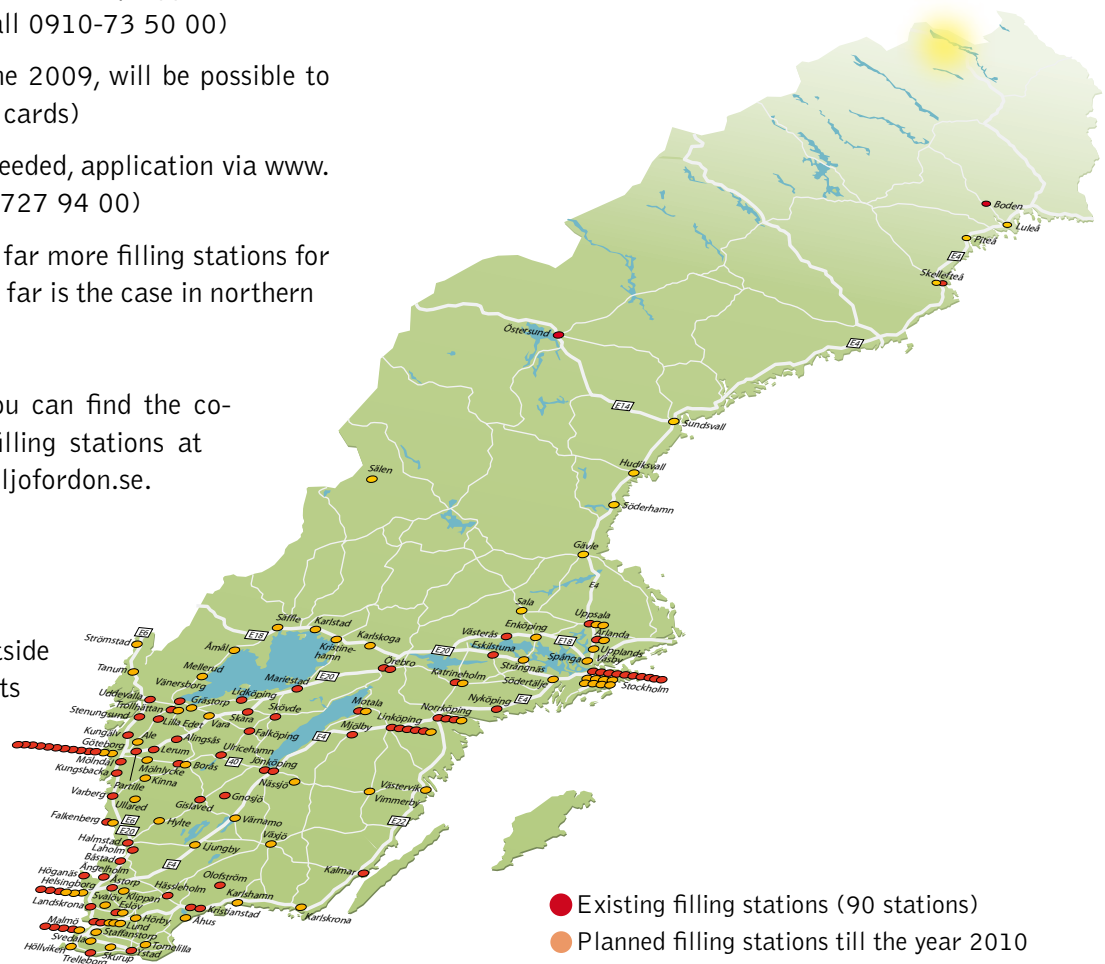
South of Uppsala there are far more filling stations for gas, compared with what so far is the case in northern Sweden.

If you are using a GPS you can find the coordinates to all Swedish filling stations at www.gasbilen.se or www.miljofordon.se.

What about going outside Sweden?

Taking the gas car outside Sweden's boundaries presents no problems. In Germany there are about 800 filling stations, in Italy about 650, in Austria about 130, in Switzerland about 120 etc. Further information about filling stations for gas outside Sweden

can be found at www.erdgasfahrzeuge.de (Germany), www.guidametano.com (Italy), www.erdgasautos.at (Austria), www.erdgastanken.ch (Switzerland), www.gazdefrance.fr (France), www.ngva.co.uk (United Kingdom), www.dutchfour.com (The Netherlands), www.cng.cz (Czech Republic).



Facts about vehicle gas



What is vehicle gas?

Vehicle gas is a collective name for biogas and natural gas, used as fuel for vehicles. The gas is mainly methane; the difference is in how it is produced. Biogas is renewable and does not cause new carbon dioxide entering the atmosphere, whilst natural gas is a fossil fuel; however it decreases the environmental impact compared to petrol and diesel.

A gas car that is only filled with biogas decreases climate impact with about 85 %* compared to if it would have been filled with petrol. The figures for a gas car only filled with natural gas is about 21 %* decreased climate impact compared with petrol, and for ethanol cars only filled with ethanol (E85) about 56 %* decreased climate impact. Except less climate impact the use of biogas also decreases the pollution of toxic substances.

Safety

Filling and driving your car with vehicle gas is not dangerous. The cars are tested in the same way as petrol cars. The system is closed which implies that leakages are avoided for instance while filling. The gas tanks are well protected and constructed to cope with a collision, moreover the gas is lighter than air, it is not poisonous and its temperature of ignition is higher than for petrol, diesel and E85. The risk for fires or explosions in connection with traffic accidents is therefore less with vehicle gas than with other fuels. Vehicle gas is ignited at 540 degrees, compared to petrol at 228 degrees, diesel at 260 degrees and E85 at 257 degrees.

*Source: Index över nya bilars klimatpåverkan (Index over new cars climate impact), Swedish Environmental Protection Agency and Swedish Road Administration

Gas vehicles

There is today a wide range of vehicle models of all size classes to choose between for those who want to drive with biogas, and more models are coming. The pictures on the right are examples of some of the models for sale. All passenger cars and non-heavy biogas vehicles are so called Bi-fuel, meaning they also have a petrol tank. If the car runs out of gas it automatically and unnoticed switches to petrol. An Opel Zafira has a range of 380 kilometres with biogas and another 150 kilometres with petrol. Heavy biogas vehicles, on the other hand, usually only have a gas tank, this is for instance the case with Östersund's two biogas-fueled garbage trucks.

Conversion

Gas conversion of various petrol cars is offered through for instance Stadspartner AB in Linköping (www.tekniskaverken.se/stadspartner), Miljöbilscenter and Alternative Fuel Vehicles in Gothenburg (www.miljobilscenter.com, www.afv.nu), or Konvegas in Växjö (www.konvegas.se).

Buying a gas car in Östersund

Gas cars are for sale in Östersund at for instance Bilbolaget (063 - 14 94 00), Berners (0611 - 55 20 40), Jemtobil (063 - 15 59 00), Bilcenter (063 - 19 59 00), Folkes bil (063-12 13 44), Mabil (063-12 67 67) or Fordhallen (063-663 50 10). Used gas cars can be found at for instance www.kvd.se, www.blocket.se or www.fordonsgas.se.

Is it expensive?

Gas cars are indeed more expensive than corresponding petrol models (because of the double tanks) but they also have lower fuel costs thanks to the lower gas price, and more economic benefits are available, see next page.

New cars



VW Touran



Opel Zafira



VW Caddy



VW Passat



Fiat Grande Punto



Opel Combo Tour



Ford Focus Trend 2,0



Ford C-max Trend 2,0



Mercedes B-klass



Fiat Panda



Citroën C3

Used cars



Volvo V70



Volvo S80



Mercedes



Opel Astra



Fiat Punto



VW Golf

Cars



Volvo S60



Skoda Octavia 1.6



BMW 316G



BMW 518G Touring



Fiat Multipla



Variant

Vans & Minibuses



VW Transporter Skåp



VW Caddy Skåp



VW Transporter Pick Up



VW Caravelle transporter



Mercedes Sprinter



Opel Combo Skåp



Fiat Doblo



Iveco Daily Skåp

Converted cars



Volvo V70 2.5 FT



Fiat Bravo



Renault Kangoo



Chevrolet Captiva

Economic benefits

Grant for purchase

Until the 30th of June 2009 private persons purchasing new so called green cars can utilize the government's green car rebate of 10 000 SEK (906 euros), automatically supplied from the Swedish Road Administration.

As from the 1st of July 2009 private persons are recommended to instead apply for the municipality of Östersund's grant for purchase of new biogas cars, which can be applied for until the 31st of December 2009.

For private persons the grant is up to 50 % of the extra cost (however, maximum amount is 9 000 SEK - 815 euros). For companies and car cooperatives (that are not included in the government's green car rebate and therefore already before the 1st of July might be interested in the municipality's grant) the grant is up to 30 % of the extra cost (however, maximum amount is 9 000 SEK - 815 euros). Form can be downloaded at www.ostersund.se/biogas.

Home pages

www.ostersund.se/biogas
www.gasbilen.se
www.miljofordon.se
www.fordonsgas.se
www.gasforeningen.se

Östersunds kommun

Östersunds kommun, 831 82 Östersund, Tel 063-14 30 00. www.ostersund.se

Lower value of fringe benefits

Biogas cars (as well as other green cars) that are company cars entitle the owner to 40 % lower fringe benefits tax compared to a conventional vehicle. This means hundreds of SEK in saved tax money for every biogas car, more info at www.miljofordon.se and www.skatteverket.se.

Free parking

In the municipality of Östersund biogas cars (and other green cars) with a valid parking permission park for free at public parking spaces (streets and public car parks), for an administrative fee of 200 SEK (18 euros). Free parking for green cars is in effect at least until the 31st of December 2009. Form can be downloaded at www.ostersund.se/grontrafik.


Questions & suggestions

Call Green Traffic at 063-14 46 61, or e-mail anne.sorensson@ostersund.se.

Date of print: 2009-06-15

Currency rates from: 2009-02-20



Intelligent Energy  Europe



ÖSTERSUNDS
KOMMUN