

What can I choose in the calculator?

The calculator lets you choose the share of natural gas vehicles in the total vehicle fleet in Switzerland in the selected year (2035 or 2050).

Natural Gas Vehicle (NGV)



Par

Kevin.B (Travail personnel), via Wikimedia Commons

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IMPACT - What are the impacts of CNG vehicles?

In Switzerland, substituting standard gasoline / diesel vehicles by NGVs (compressed or liquefied natural gas - CNG or LNG) of comparable size will have the following impacts:

Energy system

- ☹️ Increase final energy demand in case of LNG.
- ☹️ Reduce total diesel / gasoline consumption.
- ☹️ No increase of the share of renewable energy sources in the energy mix (unless biogas is used).
- ☹️ Likely to increase energy security (through diversification).

Environment & Climate

- ☹️ Reduce CO2 emissions by up to 25% per km (on a Well to Wheel basis). [1]
- ☹️ Slightly reduce emissions of harmful pollutants.
- ☹️ Slightly reduce noise of engines compared with diesel equivalent.
- ☹️ Likely to have no impact on deposited waste.

Society & Economy

- ☹️ Likely to have limited impact on the cost of the energy transition.
- ☹️ Despite higher purchase cost, may reduce total cost for vehicles owners.
- ☹️ Likely to have limited impacts on balance of payments.
- ☹️ Reduces Confederation income from the tax on mineral oil under the current taxation system.
- ☹️ Require fuelling and distribution infrastructure to be created

GLOBAL MARKET - What is the global market for NGVs?

The global natural gas vehicle stock (passenger cars only) reached over 16 million units in 2013[2] (equivalent to 2% of the global passenger car stock[3]). Between 2003 and 2012 the global stock of natural gas vehicles has increased by 21.6% per year.[4] The biggest fleets are those of Iran, Pakistan and Argentina (3.3, 2.6 and 2.4 million respectively) and the EU fleet reached 1.1 million passenger cars in 2012.[4]

DEFINITION / CONSTRAINTS

DEFINITION - What is an NGV?

A CNG vehicle runs on compressed natural gas or biogas. The gas is stored on board in high pressure tanks (200-250 bar). An alternative, Liquefied Natural Gas (LNG) is sometimes favoured in trucks due

to the increased energy density of liquefied gas.