Hybrid topology

- $E_{fuel}$
- $m_{fuel}$
- Engine
- $P_{engine}$
- $P_{request}$
- $E_{battery}$
- $P_{electric}$
- Electric Machine
- $P_{EM}$
- Energy Management Strategy (EMS)
Biodiesel: 1 kilometer per jaar per m² zonlicht

Koolzaad levert 4,9 kWh per m² Na zaaien, bemesten, oogsten, raffineren en distribueren blijft daarvan 0,6 kWh over Auto op biodiesel benut daarvan 0,15 kWh

Waterstof: 150 kilometer per jaar per m² zonlicht

Zonnepaneel levert 105 kWh per m² Na electrolyse, compressie, distributie en gebruiken brandstofcel blijft daarvan 28 kWh over Auto op waterstof benut daarvan 22 kWh

Elektriciteit: 500 kilometer per jaar per m² zonlicht

Zonnepaneel levert 105 kWh per m² Na transport en opladen blijft daarvan 90 kWh over Auto op elektriciteit benut daarvan 75 kWh
SHOCKWAVE TRAFFIC JAMS RECREATED FOR FIRST TIME

Footage courtesy of University of Nagoya, Nagoya, Japan
CACC

ACC equipped host vehicle

radar beam

target vehicle

$v_h, a_h$

$x_r, v_r$

$v_t$
CACC vs ACC
A270 test

PhD thesis Naus 2010, TU/e
By 2040 Autonomous Cars Forecast To Comprise 75 Percent of All Vehicles

Published September 26, 2012

By Jeff Cobb

This year the state of Nevada issued a driver’s license to a Google Prius. How long before a variety of driverless vehicles become the norm? If ever?

If you follow the headlines as do a lot of people, you’ll note today’s youngest drivers have less-to-no interest in driving automobiles. While marketers are chasing the elusive “Gen Y” species with a variety of lures, perhaps these younger folks’ sensibility is a sign of things to come, given a recent pronouncement that by 2040 three out of four cars will be autonomous.

This prediction for 75 percent driverless vehicles comes via eminent members of the world’s largest professional association for the advancement of technology, the Institute of Electrical and Electronics Engineers (IEEE).

Over the next 28 years, they say, vehicular travel and the automotive landscape as we know it will radically evolve toward driverless cars.
Be careful...
TU/e-studenten debüteren met zonne-gezinsauto in Solar Challenge