

“The lack of a cost-effective home fueling appliance is seen as a major impediment to the development of the NGV passenger automobile market”.

FC Gas Intelligence “Natural Gas Vehicle Market Whitepaper”

HYGEN

HOME FUELING APPLIANCE
FOR GASEOUS FUEL POWERED VEHICLES

CONTACT

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InnoEnergy is supported by the EIT,
a body of the European Union

NATURAL GAS VEHICLE

FUEL DISPENSER
(LOCATED AT YOUR CONVENIENCE)

ONE HOME - ONE FUELING STATION

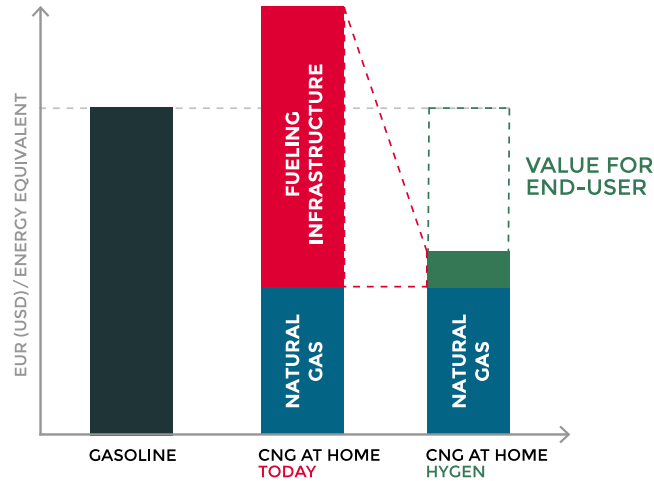
GASDROID -
CNG HOME FUELING APPLIANCE

COMPRESSED
NATURAL GAS (CNG)

RESIDENTIAL
NATURAL GAS
SUPPLY LINE



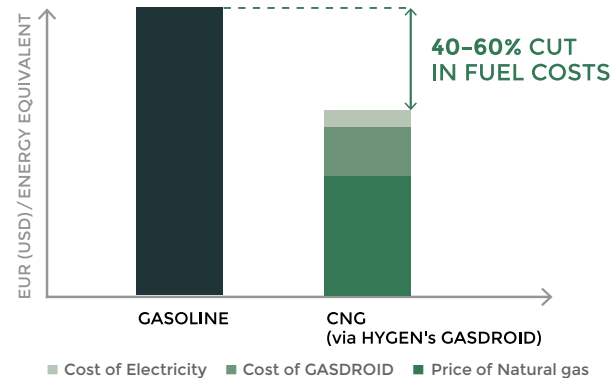
VALUE FOR GAS COMPANY



- Extends gas grid capabilities to fueling vehicles
- Allows to capture part of 30 B EUR (36 B USD) global commuter driver fuel market
- Enables to retail CNG at competitive price right at the door steps
- Up to 5 x gas sales to 1 detached house
- Increases Regulated Asset Base for Distribution System Operators
- Fulfills environmental and innovation commitments
- Economic driver for grid development
- Load leveling (winter & summer)

GASOLINE vs CNG + HYGEN

- Cuts fuel costs by 40–60%
- Convenience (3 min at home fueling)
- Emission reduction
- Additional benefits (free parking, bus & taxi lane, tax reduction)



HYGEN MAJOR BREAKTHROUGHS

1. LOW COST
2. LONG SERVICE LIFE
3. FAST AT HOME FUELING
4. SAFE AND EASY OUTDOOR INSTALLATION

EV vs NGV + HYGEN

	EV	NGV + HYGEN
Everyday fueling solution	Home & Office	Home & Office
Fueling time at home	4-8 h	3 min +
Driving extension (refueling options)	Sophisticated and expensive infrastructure	Existing gasoline stations (all NGVs are bi-fuel vehicles) +
Average incremental costs	9 000 EUR (11 000 USD)	2 200 EUR (2 700 USD) +
Mass produced car models	50	+100 +
Conversion of gasoline vehicle	NO	YES, widely available +
Energy distribution grid	Most households +	Less developed
Proven market traction	Emerging (' M vehicles)	YES (26 M vehicles) +

ONE APPLIANCE - TWO VEHICLES

NEW SAFETY DESIGN: GAS OUTSIDE -
ELECTRICAL COMPONENTS INSIDE.
CE LISTED. SOON TO BE CSA LISTED

NEW NATURAL GAS VEHICLE
(GASOLINE AS A BACK UP FUEL)

RETROFITTED
GASOLINE
BI-FUEL VEHICLE



TRANSFORMING NATURAL GAS GRID INTO VEHICLE FUELING NETWORK

The existing natural gas distribution grid delivers gas to more than 200 M homes worldwide. Our mission is to transform the gas grid into the largest alternative vehicle fueling infrastructure on Earth.



HYGEN ENABLES GAS COMPANIES TO:

- Capture a part of 30 B EUR (36 B USD) commuter passenger vehicle fuel market.
- Help clean up cities from smog and other local pollutants.
- Substantially reduce CO₂ emission in transportation.

HYGEN PRODUCTS

TODAY Home Fueling Appliance



- Compression flow 1,1 Sm³/h (0,65 SCFM)
1,3 GLE/h (0,3 GGE/h)*
- Storage capacity 19 Sm³ (675 SCF)
22 GLE (5 GGE)
- Fueling time 3 min
- Electricity consumption 0,4 kwh/GLE
(1,8 kwh/GGE)
- Power supply 220/240 V
- Service life 25 000 h

TOMORROW Small Business Fueling Appliance



- Compression flow 5 Sm³/h (3 SCFM)
6 GLE/h (1,4 GGE/h)
- Storage capacity 85 Sm³ (3000 SCF)
95 GLE (24 GGE)
- Fueling time 15 min
- Electricity consumption 0,4 kwh/GLE
(1,6 kwh/GGE)
- Power supply 220/240 V
- Service life 25 000 h

* SCFM - Standard cubic feet per minute / GLE - Gasoline Liter Equivalent / GGE - Gasoline Gallon Equivalent

CLEANER. CHEAPER. MORE CONVENIENT

MORE THAN 40%
REDUCTION IN FUEL COSTS

UNIQUE CUSTOMER
EXPERIENCE –
AT HOME FUELING

LOW ELECTRICITY
CONSUMPTION

FAST 3 MIN
FUELING

IMPROVES LOCAL AIR QUALITY.
REDUCES GREENHOUSE GASES

