



GREEN LIQUID FUELS OF THE FUTURE AND THEIR KEY ROLE IN THE ENERGY TRANSITION

TRANSFORMATION OF THE FUELS INDUSTRY

The transformation of Petroleum Distribution Companies

towards decarbonization



Dr. Nikolaos Liapis COO, ELINOIL SA Athens 11/2/2021

THE ENERGY PRODUCT MIX IS RAPIDLY CHANGING MOVING TOWARDS 2050 AND DECARBONIZATION

Refined products are losing a significant market share in favor of alternatives and renewables

 Energy efficiency reduces total energy demand

 Electrification is strongly promoted for private cars

Natural gas pipelines and grids are expanding

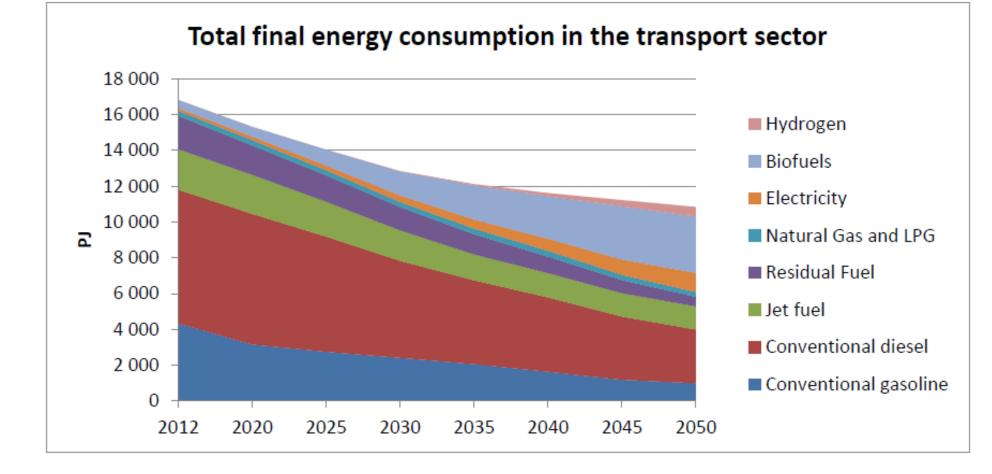
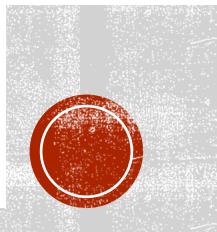
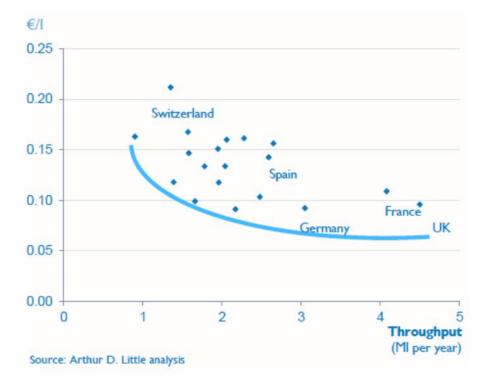


Figure 7 - Total energy consumption in the transport sector in the 2 degree scenario in EU28 (PJ) (Source: IEA ETP (2015))







- Competition has turned fuel wholesale and retail distribution to a low Return on Capital Employed segment.
- Market share of independent retailers has been growing since the end of the last century, further deteriorating the historical margins of this segment.
- LPG and lately CNG are also increasing their market share
- Increase in taxation and financial crisis turned consumers in quest of low prices



OPPORTUNITY COST OF PETROL STATIONS IS CHANGING

- Increasing vehicle autonomy reduces consumption
- Prices are growing mainly through taxes, and so is financing cost
- Real estate values in urban centers are rising
- Technology and legislation demand bigger investments
- Margins decline
- New, costly obligations arise year by year for Distributors







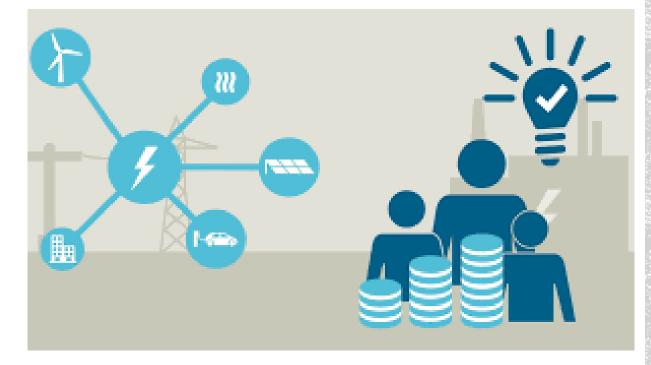


GAS STATION NETWORK OPERATORS FOCUS ON INCREASING NON-FUEL PRODUCTS AND SERVICES

- Cooperation with coffee and snack chains
- Minimarket
- Car wash
- 24/7 operation

BUT THIS DOES NOT SEEM ENOUGH





...THE SECTOR MUST TURN TO NEW BUSINESS MODELS

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OIL DISTRIBUTORS TURN TO ALTERNATIVES

- Market Premium Products
- Take a strong position in other energy sources, such as biofuels
- Invest on alternative fuels: LPG, CNG, LNG and finally Hydrogen
- Convert their gas stations into energy stations
- Diversify in other energy sectors through grids: Natural Gas and Electricity
- Expand their operations creating vertical enterprises: international trading, gas station ownership
- Expand to other countries
- Invest on EV chargers in points other than gas station
- Diversify into quite different sectors (construction, energy services etc)
- Sell their network to bigger players



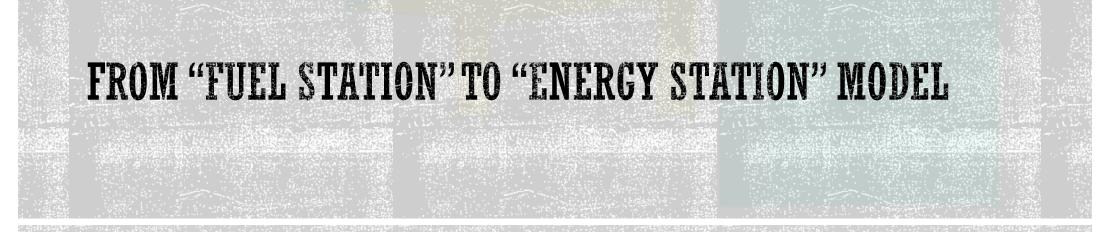




- Conventional fuels and lubricants
- LPG
- CNG
- LNG for vehicles and as supply point for industrial customers
- Superchargers for electric vehicles
- Sale spots for new NG and EE contract customers (sales through grid)

And following:

Hydrogen / ammonia for powering fuel cell vehicles



PATHWAYS FOR ENERGY SUPPLY 1

Conventional Fuels or/and conventional Logistics Fuels: Diesel, Gasoline, HFO, Liquid biofuels, Pyrolytic fuels, Methanol

Pros

- No or low investments needed
- Engines and burners made for these will last for more than 20 years

Cons

- Declining market share
- High competition









PATHWAYS FOR ENERGY SUPPLY 2

Alternative fuels with high-cost infrastructure: CNG, LNG, Ammonia, Hydrogen

Pros

- Increasing market share
- Potential to be produced from renewable sources, and thus "survive" decarbonization

Cons

- High investments in new infrastructure needed
- Slow market development will raise financing costs



PATHWAYS FOR ENERGY SUPPLY 3

Non-Conventional Fuels: Electricity

Pros

Fast penetration

Cons

- Gas station is not the ideal spot
- Superchargers are high-cost investments
- Low RoI at the moment





QUESTIONS ARISE:

- Is low profitability of oil distributors capable to "fuel" high investments?
- Will verticalization of big players drive independent companies out of business?
- Will electrification of private cars expand much faster than predicted?
- Will electrification expand in other mobility categories (HDV, Shipping)?
- Will oil wholesalers mentality allow them to transform fast enough into "energy providers"?



ONLY ONE ANSWER:

Oil distributors, in order to survive, must form a clear and realistic vision for the future, showing high flexibility and adaptation skills

