Centre for Transport Studies

STOCKHOLM

Infrastructure for alternative road fuels

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Traditional fossil road fuels

- Diesel (available everywhere)
- Gasoline (available everywhere)

- LPG (in some countries)
- CNG (in some countries)

Alternative fuels (fossil and/or renewable)

	Fossil	Renewable
LNG	LNG	LBG
Ethanol	-	E10, E85, ED95
Hydrogen	X	X
DME	X	X
Methanol	X	X
Biodiesel	-	FT, HVO, FAME

Challenges

- Fuel production capacity and cost
- Vehicle compatibility with fuels
- Customer acceptance
- Infrastructure investment for fuel distribution and facilities at gas stations
- Drastically falling total demand for road fuels due to improved fuel economy and electrification
- Taxation of new fuels compared to traditional

Different kind of fuel markets

1. Niche markets based on local fleets of dedicated vehicles – predominantly in large cities
2. Major freight corridors (TEN-T) – a pump every 300 km may be sufficient
3. Towns and rural areas – low density of population and demand – commercially not room for many parallel alternatives

Proposed EU directive COM(2013) 18 final

- Making it mandatory for Member States to make LNG and hydrogen available **by 2020** at fuelling points no further than respectively **400** and **300 km** apart

- Demanding every Member State to provide a minimum number of electric vehicle recharging points of which **10%** must be publicly accessible

Critical issues that need to be adressed

- How many fuels can different markets support?
- Who should pay? Distributors or the State?
- Grounds for European harmonisation (beyond technical standards)? Top-down or bottom-up?
- Drop-in (E20 and HVO 50) versus pure fuels?
- Electricity versus liquid and gaseous fuels?
- How should hydrogen be taxed?