



arcola
energy

Low carbon hydrogen use in road transport

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Arcola Energy

- Systems engineering company and Tier 1 supplier specialising in zero emission vehicles
- A UK leader in project development for hydrogen & fuel cells
- Main focus is on heavy duty vehicles – buses, trucks and trains
- Insistent on Quality, Safety & Compliance
- Internationally recognised as a leader in enabling fuel cell and hydrogen markets in the UK and worldwide
- Working across market and project creation, product development, manufacture and aftermarket support
- Leading projects to deploy fleet of vehicles with infrastructure working with partners in renewables, electrolysis, hydrogen supply and refuelling



Arcola Market Development View



Passenger



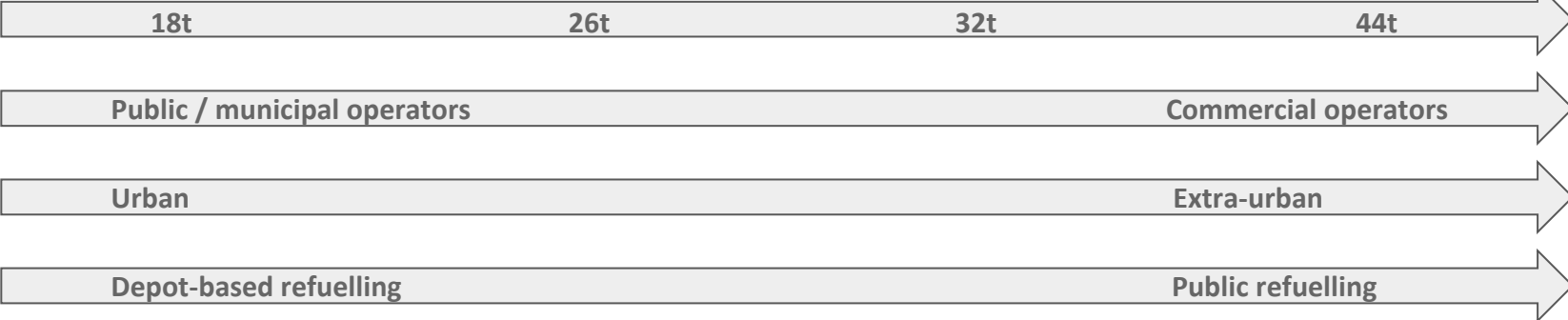
Municipal



Urban distribution



Long-haul

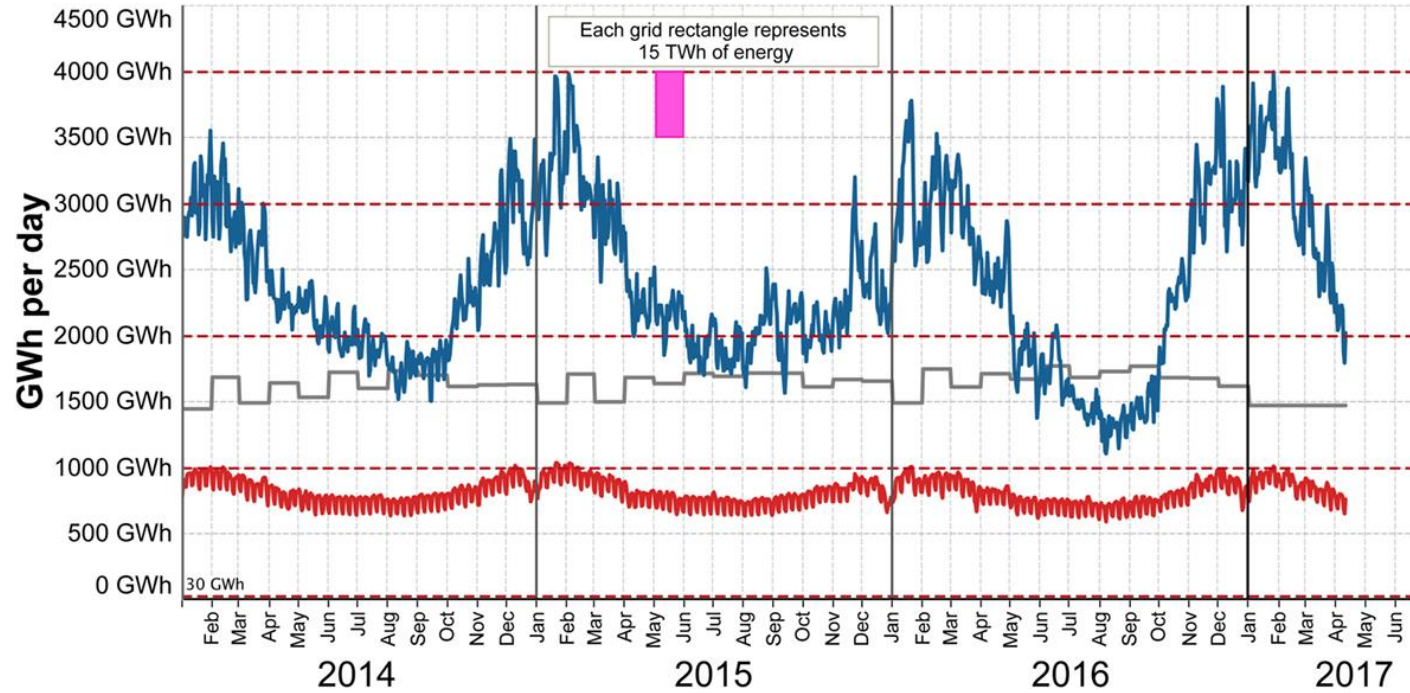


Hydrogen Now

- Project development for fleets of buses and RCVs
- 20-30 vehicles for 500kg to 1000kg per day of hydrogen
- Customer discussions for fleets of 50-100 vehicles
- On-site renewables directly linked to electrolysis
- Off-site production as part of business case for new renewables investment
- Several international “Hydrogen Strategies” published
- Calls for large scale strategic UK investment in vehicles, infrastructure and supply chain



UK energy demand



Key messages

- Hydrogen must be thought about at a system level
- Hydrogen for transport will be a by-product of use in other sectors
- Renewable energy developers already exploring developing hydrogen supply for transport as part of business case for new renewable investment
- Electrification of vehicle traction reduces energy demand and enables both BEV and hydrogen FCEV options
- Fleets of HDVs are a useful scale for building up demand for hydrogen



Policy Pointers

- Consider hydrogen at Transport and Energy system of system level
- Pursue long-term low-carbon hydrogen demand for industrial, heat and agricultural use
- Short term develop scale of hydrogen production and demand through fleets of heavy-duty vehicles
- Continue to support electrification of transport vehicles with a focus on supply chain for HDVs
- RTFO - improve design for hydrogen, particularly thinking of additionality at an energy system level, not just local



Thank you

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