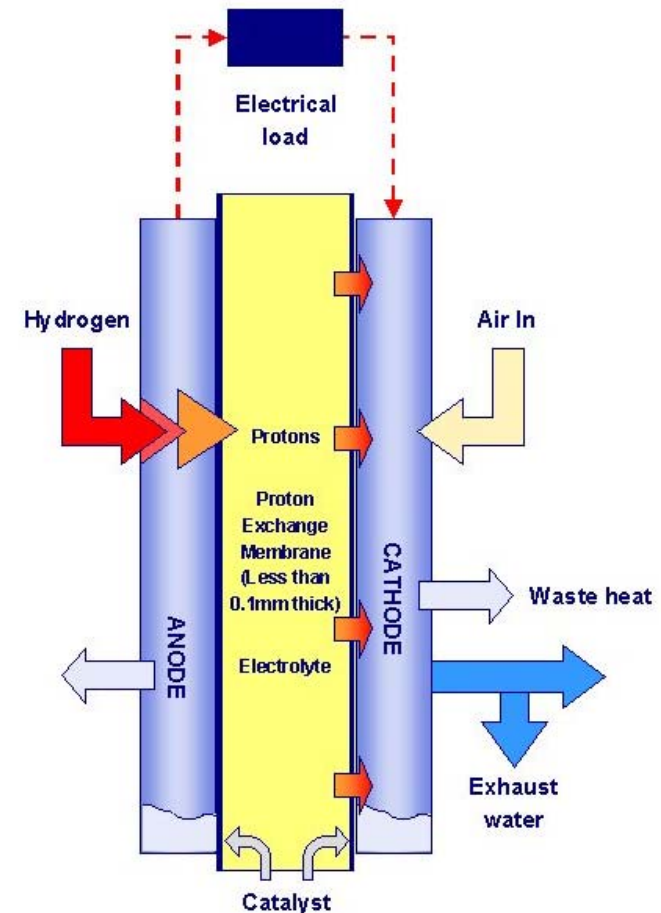


Black Cabs Go Green – A Fuel Cell Hybrid Vehicle



Fuel Cells – the power inside

- Electrochemical conversion
- Refuelled not recharged
- Zero tail-pipe pollution
- Pure water exhaust
- Highly efficient
- Power dense
- Wide power range



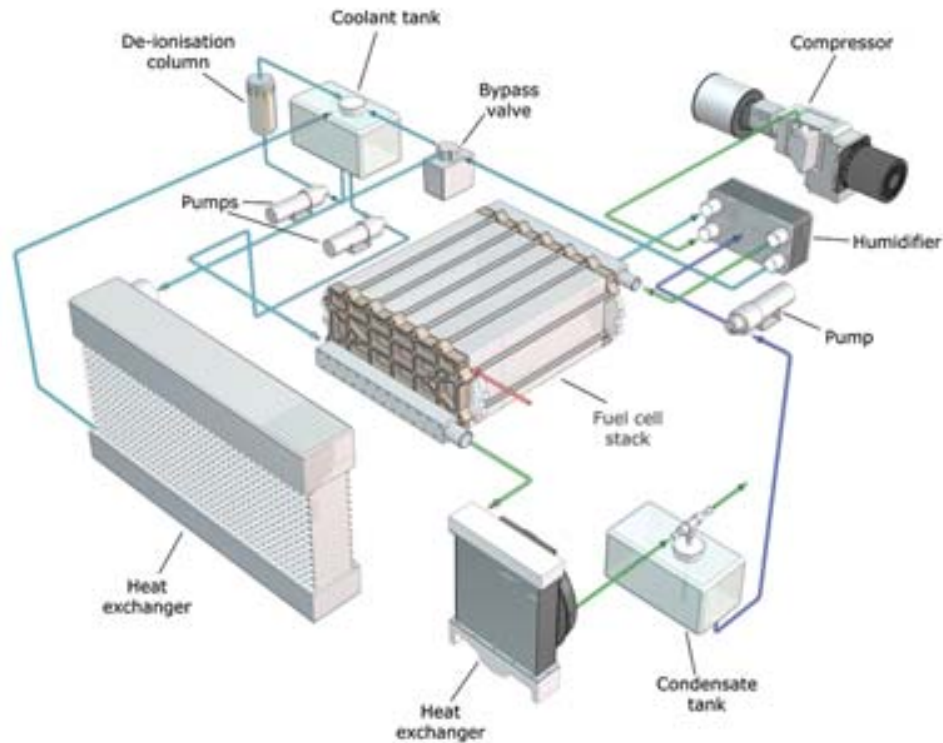
Intelligent Energy's Automotive Fuel Cell Systems

- Compact and powerful
- Robust metallic plate construction
- Designed for low cost mass manufacture
- Exceptional cold start capability
- Evaporatively cooled
- Reduced balance of plant

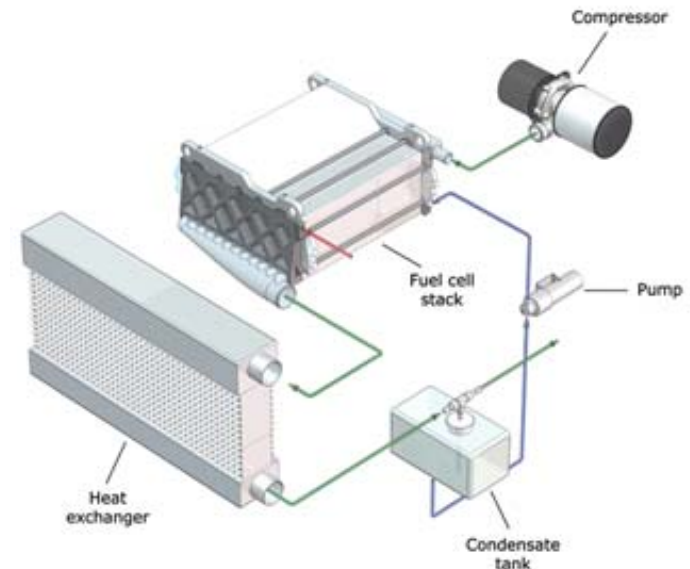


Fuel Cell System – key differentiators

Conventional



Intelligent Energy



- ✓ High power density
- ✓ Higher reliability
- ✓ Lower cost
- ✓ Rapid sub-zero start-up

Vehicle requirements

- Performance comparable with standard diesel variant
- Sufficient range for a typical days usage
 - Rapid refill time (<5 minutes)
- Maintain passenger and luggage space
- Maintain compliance with Public Carriage Office regulations
- Vehicle safety maintained
- Zero tailpipe emissions

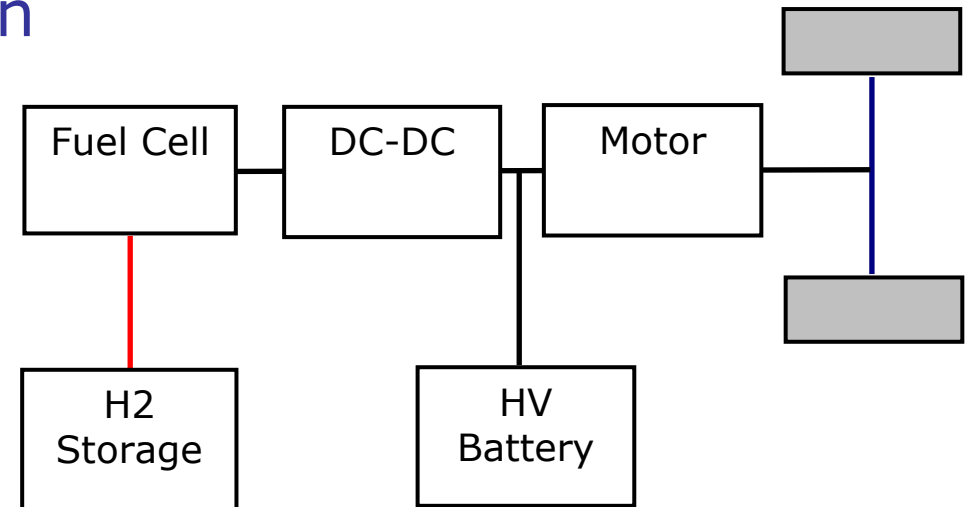
Taxi Fuel Cell System

- High efficiency - 58%
- 30kW net power output
- Developed and manufactured at IE Group Head Quarters, Loughborough, UK

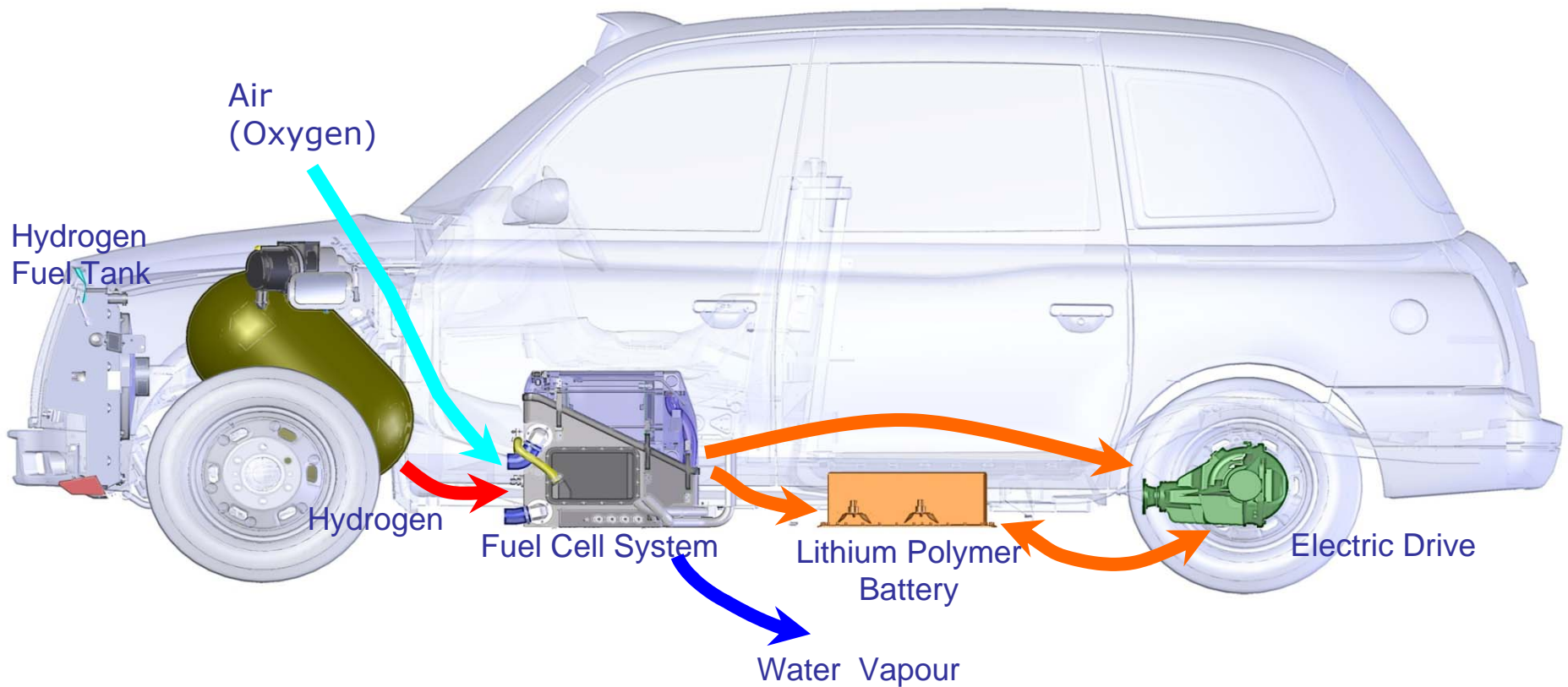


Powertrain configuration

- Fuel cell hybrid configuration
- Fuel cell system and High Voltage battery pack
- Gaseous hydrogen storage at 35MPa
- Rear wheel drive
- Regenerative braking
- Also a plug-in hybrid

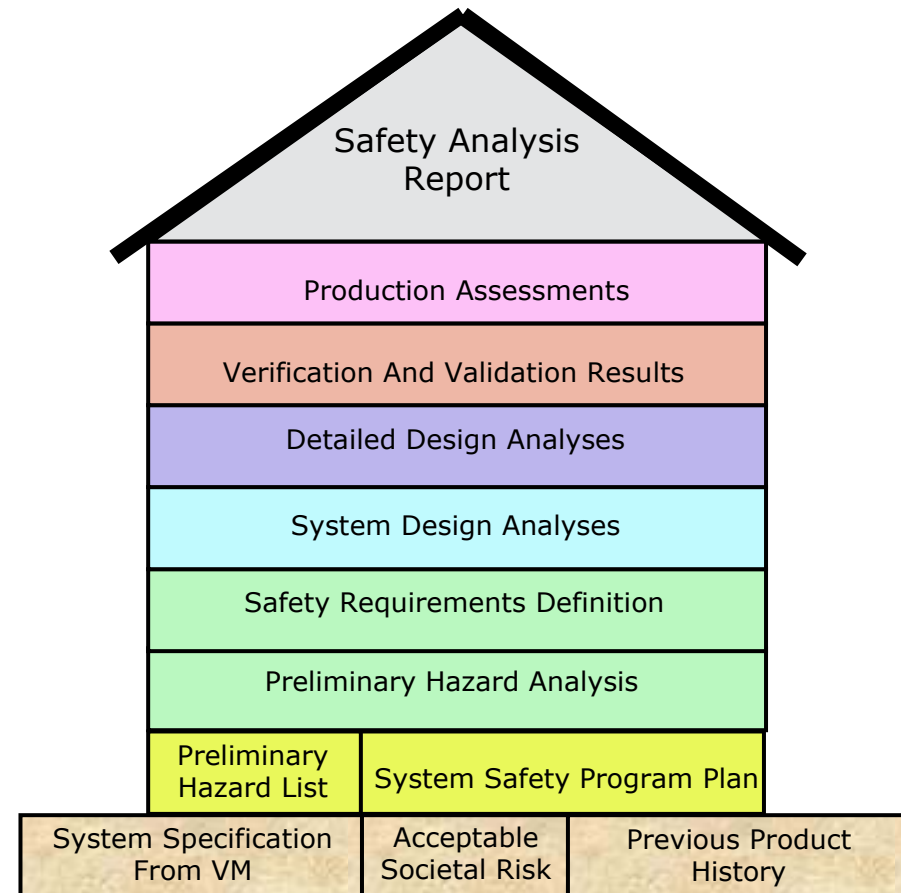


Vehicle System



Vehicle Safety

- Safety analysis is being conducted by TRW Conekt:
 - Steering system
 - Braking system
 - Hydrogen conversion system
 - Electrical drive system
- Safety Case based on recognised automotive practices
- Vehicle Certification Agency and Public Carriage Office conformity planned prior to use on public roads



Vehicle Specification

Overall Length	4580mm
Overall Width	2036mm (including mirrors)
Overall Height	1834 mm
Weight	2180kg
Motor	3-phase brushless permanent magnet (100kW)
Fuel Cell	PEMFC (Intelligent Energy)
Fuel Storage	Pressurised Hydrogen Tank (35 MPa)
Battery	Li-Polymer Battery, 14kWh
Range	250 miles / 402 km
Top Speed	81 mph



Black Cabs Go Green



Media Contacts

James Kennedy

AxiCom PR for Intelligent Energy

james.kennedy@axicom.com

+44 (0)208 392 4091

Dr Jon Moore

Director of Communications, Intelligent Energy

jon.moore@intelligent-energy.com

+ 44 (0)1509 271271

