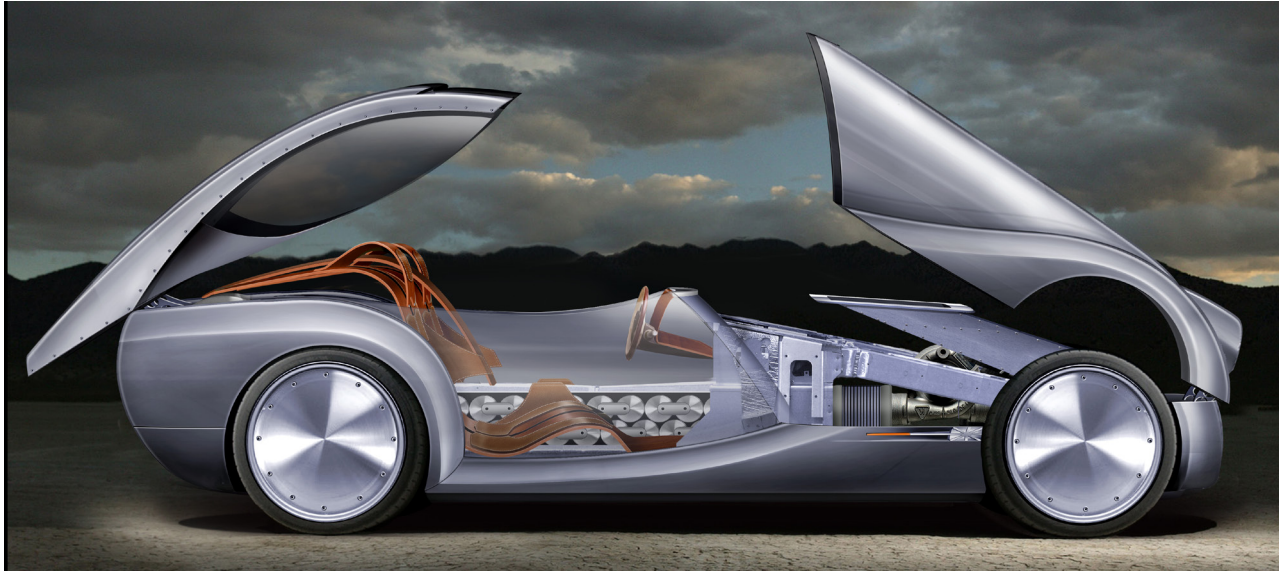




## Morgan LIFECar



**Morgan** - to quote Winston Churchill, "is a riddle wrapped in a mystery inside an enigma". They simply confound with the diametrically opposed styles and technologies they use.

Back in March 2008 Morgan presented the LIFECar at the Geneva Motorshow. A car unlike any other using technology unlike any other. Punching above their weight they entered the forward thinking alternate energy debate with a concept for a unique solution. Potentially the greenest realistic solution around.

Foregoing a combustion hybrid solution and batteries completely, they put forward a combination of Hydrogen fuel cell with what is essentially a KERS (kinetic recovery system) - plus capacitors in place of batteries to store recovered energy. With no emissions except heat and water and no nasty by-products from the battery manufacturing and disposal processes, coupled with Morgans standard timber from a renewable supply source and recyclable aluminium, (not that I expect any Morgans will ever be

scraped) - this car is as green as it gets.

The LIFECar is all about efficiency; with a fuel cell that is sized to meet the requirements of cruising (about 20% of peakpower), the additional power to supply the energy to meet the sporting nature of a Morgan is handled by the generator side of the electric motor/generators at each wheel. These motors provide an efficiency of 92-94% across their operating range - the energy from the inbuilt re-generative braking, is captured for release when rapid acceleration required - 4 electric motors can provide dynamic performance when coupled to a lightweight car.

Hugo Spowers of RiverSimple was the originator of the idea for the concept. As numerous new and advanced technologies were being used Morgan needed to partner with companies with the relevant expertise especially in the use of Hydrogen. Spowers brought Hydrogen supply chain experts Linde into the project as the main partner.

The LIFECar was designed and

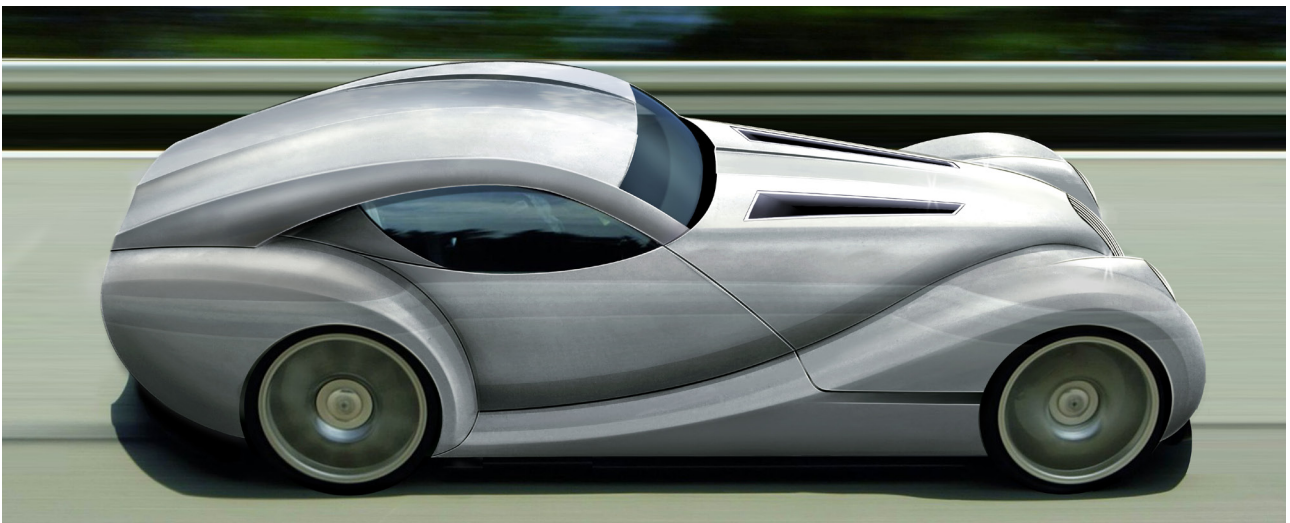
### Morgan LIFECar

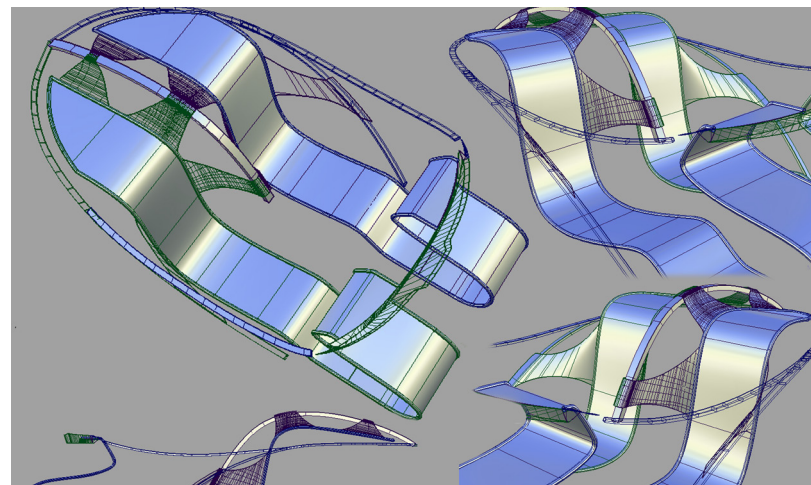
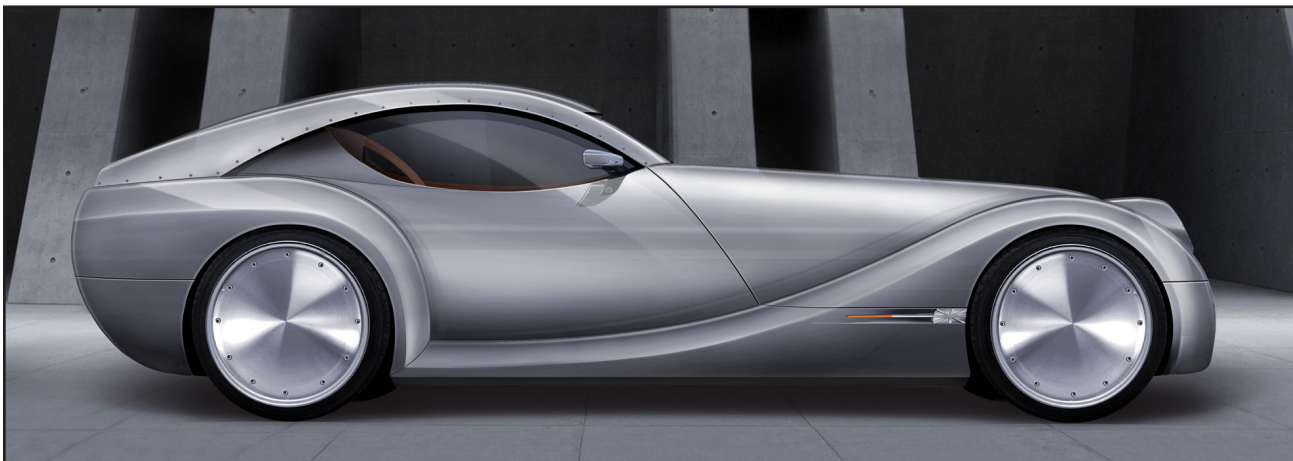
- Green Concept
- Hydrogen Fuel Cell
- Regenerative Braking
- Capacitor Storage
- 250 mile range
- 0-62 under 7 seconds

engineered to deliver the equivalent of 150 mpg (1.8 l/100km) with a top speed of 80-85 mph, a 0-62 time of under 7 seconds and a 250 mile range.

As important as the technology is, the LIFECar would not have created as much of a stir at Geneva or in the press if it was not for the styling and the advanced and artful use of beautiful materials. A simply stunning car that conjures up an alternate "Steampunk" reality.

**Rod Halligan**





Morgan LIFECar	
<b>Year</b>	2008
<b>Production</b>	Concept - Green
ENGINE	
<b>Configuration</b>	Hydrogen - Electric - KERS
<b>Layout</b>	4 Motors - 1 each wheel
<b>Fuel</b>	Hydrogen
<b>Cell Type</b>	4 stack PEM fuel cell
<b>Power</b>	22Kw plus 1000 amp capacitors
BODY	
Handformed aluminium panels over Ash frame. Alloy Chassis.	
<b>Weight</b>	not stated
<b>Length</b>	4120 mm (162.2 in)
<b>Width</b>	1770 mm (69.7 in)
<b>Height</b>	1200 mm (47.2 in)
DRIVE	
ALL Wheel Drive with regenerative braking	
PERFORMANCE	
0-62 mph	under 7 second
Top Speed	80 -85 mph
Consumption	equivalent to 150 mpg (1.8 l/100km)
Range	250 mile

