

Hybrid & Electric Cars

Investment Highlights

- While last year's spike in the oil price may feel a long time ago, it was a glimpse into our future. With more than 800 million cars and trucks already on the road worldwide, our demand for liquid fuels will soon exceed supply. However, society is far too addicted to cars and trucks so it needs more fuel efficient automotive technology and alternatives to power them. Hybrid and electric cars are part of the answer. Driving this push is not only a fear of high oil prices caused by peak oil, but a comprehensive worldwide strategy to mitigate global warming and its effects.
- We don't want to debate the availability/cost (including carbon credits) of electricity to power our cars nor the merits of moving the exhaust pipe from cars to power stations but with hybrid/electric cars basically the same cars currently on the roads with the ability to run on power supplied from a battery for a certain range, the big question is around those batteries. Hybrid cars are powered by nickel metal hydride (NiMH) batteries which contain 10-12kg of rare earths and electric cars use lithium ion batteries. Producers and potential producers of these high growth products are running hot around the world and all stocks with exposure will continue to ride the wave but our picks are **LYC 'Hybrid Car' leverage and ORE for its 'Electric Car' leverage.**
- The push for greener cars is gaining momentum. Recently the Obama administration announced US\$2.4 billion in grants to car companies and battery-makers to build next-generation auto batteries for hybrid and plug-in cars and Germany's Chancellor, Angela Merkel, pledged to spend more than \$700 million by 2011 on developing electric vehicles, as it tries to put 1 million electric vehicles on German roads by 2020. Almost every car maker has new hybrid and electric models about to come off the lines and consumer take up has already begun. You may have seen a few Toyota Prius Hybrid vehicles on the road. The Toyota Prius has already sold 1.8 million vehicles worldwide and in June this year it became Japan's no. 1 selling car, making it the first hybrid model to outsell other vehicles.
- Rare Earths (Hybrid cars):** Potential ASX listed rare earth producers are Lynas Corporation Ltd (LYC), Arafura Resources Ltd (ARU), Alkane Resources Ltd (ALK) and Navigator Resources Ltd (NAV) also has a small resource. **LYC is our pick as it has the highest grade, most advanced, new source of rare earths worldwide. High grade ore is already stockpiled on site and both the Mt Weld mine site and the Malaysian processing plant site are cleared ready for construction. FIRB approval for the CNMC funding package is due soon.**
- Lithium (Electric Cars):** Potential ASX listed lithium producers are Orocobre Ltd (ORE), Galaxy Resources Ltd (GXY) and Reed Resources Ltd (RDR). **ORE is a standout. Its brine project is located in the Argentinian Andes near industry majors SQM and FMC. With an initial resource of 1.5Mt of lithium carbonate and 4.4Mt of potash the project is large and expandable. Production costs will be competitive with majors.**
- Stricter emission controls on conventional petrol/diesel models in the western world (US & Europe) and new regulations in the developing world (China & India) will mean more efficient catalytic converters and more of them. China is now the largest car market in the world having recently overtaken the US but is coming off a very low base when it comes to catalytic converters. Leverage to growth in this sector will be through Platinum Group Metal (PGM) producers, platinum and palladium for petrol and platinum only for diesel engines. **Platinum Australia Ltd (PLA) is our pick here, however rare earths are also widely used in the auto catalyst industry (LYC) and the housing is made from zirconia (ALK).**

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Figure 1: Toyota Prius (No. 1 selling hybrid car)



Source: hybridcars.com

Figure 2: Dodge EV sports car



Source: hybridcars.com

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