

ZERO EMISSION MOBILITY

The Renault-Nissan Alliance aims to be the leader of zero emission mobility – to get there it has already committed €4 billion into its electric vehicle (EV) and battery development programs and has over 2,000 engineers working on these projects.

The way the Alliance is approaching zero emission mobility is unique – the Alliance is putting in place a system that involves it in every aspect of the EV experience.

The Alliance will launch the first zero emission car in late 2010 - the Nissan LEAF which has already received more than 6,000 advanced orders in Japan and around 14,000 in the U.S. Nissan and Infiniti will launch four EVs, including the LEAF; Renault will launch four EVs starting with the Fluence and Kangoo in the first half of 2011 followed by Twizy in second half of 2011 and Zoe in the first half of 2012.



In May 2008, as part of the Alliance's zero emission strategy, Nissan and NEC formed a joint-venture company, Automotive Energy Supply Corporation (AESC) to focus on the development and mass production of advanced lithium-ion batteries for a wide range of automotive applications from hybrids, electric vehicles to fuel-cell vehicles. AESC began production in 2009 at its facility at Nissan's Zama plant in Kanagawa Prefecture where annual capacity is 65,000 units. Globally, Alliance battery production capacity will be 500,000 units a year by the end of 2013.

AESC will market its battery products to potential customers in the automotive industry worldwide; it has also been appointed as a supplier of li-ion batteries to Project Better Place which is partnering the Alliance for the first wide-scale deployment of zero emission vehicles in Israel and Denmark in 2011.

Other Alliance battery production sites, announced in 2009, include France, Portugal, the UK and the U.S.

Over 60 partnerships with public and private organizations have been forged worldwide in order to create the necessary conditions (incentives, infrastructures) for the introduction of electric vehicles. The Alliance benefits from geographical synergies that help maximize the global EV infrastructure and governmental support.

People around the world are increasingly focusing on the threat of global warming and the needs for lower vehicle emissions and independence from oil, and automakers are responding to the need with a variety of technological solutions. The Alliance continues to invest in a portfolio of "green" technologies, including clean diesels, hybrids and fuel cell vehicles. But the centerpiece of product strategy for the next five years will be zero-emission vehicles, beginning with all-electric cars.

“We are preparing a car that will be neutral to the environment – transportation without guilt over the environment,” said Carlos Ghosn Chairman and CEO of the Renault–Nissan Alliance. “We are emphasizing zero emissions. It’s a territory we want to own, and we are taking all the initiatives necessary to make it happen.”

Why has the Alliance committed itself to leadership in electric vehicles ahead of hybrids or other alternative forms of future propulsion? Simply, because EVs are the most mature form of technology that allows it to reach zero emissions. The technology, even as it exists today will be more than ample for most drivers, although there will need to be a change in mindset to conquer what is now being called ‘range anxiety’.

The battery in the Nissan LEAF is already good for 160km a day between charges (based on the LA92 urban driving cycle) , far more than the daily needs of 80 per cent of motorists around the world. Beyond the comparison with alternative forms of propulsion, when customers realise that EVs can save them money on running costs; they don’t ever need to visit a filling station, are fun to drive thanks to “on-demand torque” and a very low centre-of-gravity; and are silent; the Alliance believes the market will tip in the same way that the market for diesel cars tipped in Europe 15 years ago.



European initiatives

The Alliance is playing its part in helping develop breakthrough electric vehicle technologies, joining two European Union initiatives. The first is called EVA which aims to accelerate the market introduction of electric vehicles in a coordinated manner. The other is RELIBAT which is investigating the recycling and re-use of automotive lithium-based batteries. EVA is a four-year €41 million project involving 21 cities and regions. RELIBAT brings together eight of the leading European recycling companies, R&D laboratories, automakers and battery manufacturers. The project’s objective is to develop methods for the re-use, recycling and recovery of end-of-life car lithium-based batteries.