

The smarter way to monitor air

Envirowatch Ltd: E-MOTE



With the growing recognition of air quality and its link to environmental and health issues, it has never been more relevant to monitor our environment.

Envirowatch LTD uses a Cell Pack Solutions battery pack to power its devices across the UK and Europe.

The Challenge: Provide a portable power solution for a compact, air quality and noise pollution monitor.

Envirowatch LTD provides a system that allows users to track and monitor air quality through revolutionary devices called E-MOTEs. The E-MOTEs can work stand alone or as a network depending on the size of the area they are monitoring. They are designed to be small, unobtrusive, self-powered and easy to install, unlike the traditional large cabinet sized devices they replace. Existing solutions require mains power and teams to install them but due to the small size of the E-MOTE, they can be installed easily, close to the source of pollution.

Envirowatch LTD turned to Cell Pack Solutions in 2010, during the prototyping of the E-MOTE. The challenge was to provide a power solution that would store energy produced by the solar panel yet reliably power the unit, even in low light.

The Solution: A Duo of Custom Battery Packs: one rechargeable pack and a back up battery.

Cell Pack Solutions worked with Envirowatch LTD to find the best power options to match the E-MOTE's budget, design and reliability. The solution was 2 battery packs: One NiMH rechargeable pack, linked to the Solar panel; and a Primary Lithium pack to power the device in low light.

The solar panel trickle charges the rechargeable pack while it powers the device. When the rechargeable pack reaches a specific voltage, the device switches to the back up Lithium pack and the solar panel charges the NiMH pack.

The lithium battery pack has enough capacity to power the pack for up to a year of regular use on its own. It is made using Tadiran cells for their proven reliability in demanding temperatures, to ensure complete peace of mind.

The project has turned into an ongoing partnership with regular interaction and developments as the E-MOTE evolves. To date, there have been 3 adaptations of both packs to coincide with advances to the device.

“The flexibility and bespoke nature of working with Cell Pack allows the E-MOTE to evolve.”

Peter Neasham
Director of Envirowatch LTD

