



## **PRESS RELEASE**

### **SILENT DIESEL GENERATOR FITTED TO MARSHALL UGV ON DISPLAY AT DSE I 2011**

*Nordic Power Systems and Marshall Land Systems show Fuel Cell in operation scenario*

**Cambridge, 13<sup>th</sup> September 2011;** To meet the growing requirements for power Marshall Land Systems in partnership with Nordic Power is showing a prototype silent diesel fuel cell generator fitted to its Trakkar<sup>®</sup> Unmanned Ground Vehicle. The UGV and generator will be on stand SD-7 in the UV area at DSEi being held at ExCeL from 13 to 16 September.

The fuel cell generator is targeted at users requiring virtually silent auxiliary power to keep batteries at peak operating condition. In the situation depicted on the stand the fuel cell, producing 1kW, is providing sufficient power to maintain the batteries of Trakkar<sup>®</sup> at peak power so that when the vehicle needs to operate in silent mode it is ready to do so.

The diesel fuel generators are based on a Nordic Power patented technology, named "Cool Flame". The primary role of the generator is expected to be as an auxiliary power unit to extend and enhance silent watch capability and duration.

"The current development programme is producing an integrated standalone advanced technology demonstrator. At present it is producing 1kW, sufficient to charge batteries, but as the technology is scalable our long term ambition is to produce up to 10kW. We see DSEi as an important step in the next stages of the development and we hope to use it to get the views of potential users," said Peter Callaghan, Chief Executive of Marshall Land Systems.

The technology, owned and developed by Nordic Power, has been tested by Marshall Land Systems and packaged into the unit on display. It is now being further developed in both Norway and the UK by a joint team from Marshall and Nordic Power. During this development work the team will focus on system optimisation, reducing the electronic emissions further and ruggedisation of the system to ensure the generator will meet military requirements.

Tor Geir Engebretsen, Chief Executive of Nordic Power Systems, commented:

“Achieving the present milestone is testament to the dedication of the team on both sides of the North Sea. ”

The diesel fuel cell at present produces 1kW has a 28 volt output, noise levels of less than 45dBA at 2m and is at least as efficient as a standard diesel generator.

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## **Note to Editors**

### **About Nordic Power Systems**

Nordic Power Systems (NPS) has developed a silent and clean power generator based on fuel cell technology. Emission friendly fuel cell power solutions are expected to play an important role in the future both for stationary and mobile markets. Examples of markets are stand alone power generators, power supply to trucks and yachts and range extender for plug in hybrids / electric vehicles. So far the introduction of fuel cells has had a relatively slow adaption, mainly because of hydrogen being used as fuel. The patented NPS technology is unique since it allows on board and on demand production of hydrogen from conventional fuels like diesel and bio oils, meaning fuel cells may be operated without any need for hydrogen supply chain and storage.

NPS is currently delivering its first prototypes to selected partners. The company is preparing the commercial introduction of the power generators.

Further information is available at [www.nordicpowersystems.com](http://www.nordicpowersystems.com)

### **About Marshall Land Systems**

Marshall Land Systems (MLS) is part of Marshall Group, a large (£750M) family owned independent group of companies involved in the automotive, aerospace and land systems areas. Headquartered in Cambridge UK, Marshall Group can trace its history back to 1909. In 2010 the company established Marshall Land Systems Australia Pty Ltd to further its activities in the Asia-Pacific area and, Marshall SV Norway, to support its work in that country.

Marshall Land Systems specialises in defence vehicle and shelter design, manufacture, integration and product support. The company has five major components, which design and produce shelters and specialist vehicles, manufacture vehicle load beds, a specialist design division which carries out UOR work, EOD, EMI, EMC, Safety Cases and Consultancy, a fleet solutions division dedicated to provision of whole fleet support and an armouring solutions joint venture.

Further information is available at [www.marshall-ls.com](http://www.marshall-ls.com)

### **Recent Announcements**

Marshall provides mobile CT Scanner to UK MOD

Marshall provides Loadbed for Ocelot light protected vehicle Utility variant

Marshall provides Wolfhound with its Loadbed

Challenger Powerpack Run Up Trolley Upgraded by Marshall Land Systems

RAF to use Marshall Battery Charger Units

**Contacts:**

Tim Otter  
Future Business Director  
Marshall Land Systems  
Tel +44 (0) 1223 373079  
Mob+44 (0) 7748 090802  
[tim.otter@marshall-ls.com](mailto:tim.otter@marshall-ls.com)  
[www.marshall-ls.com](http://www.marshall-ls.com)

or Mark Broughton  
Marontech Communications  
Tel: +44 (0) 1428 647979  
Mob: + 44 (0)7880 506345  
[mark.broughton@marontech.co.uk](mailto:mark.broughton@marontech.co.uk)  
[www.marontech.co.uk](http://www.marontech.co.uk)

**Picture** (for high resolution image please click [here](#) or contact Mark Broughton)



The Nordic Power and Marshall Land Systems diesel fuel cell generator fitted into a Marshall Trakkar<sup>®</sup> UGV. Designed as an Auxiliary Power Unit to extend and enhance silent watch capability and duration, it currently provides sufficient power to trickle charge batteries, and over the next year or so it is expected that its power output will increase.