## FOR IMMEDIATE RELEASE

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# Hitachi develops automotive lithium-ion battery having the world's highest output<sup>\*1</sup>; sampling set to start in autumn



Tokyo, May 19, 2009 --- Hitachi, Ltd. (NYSE:HIT / TSE:6501,hereafter Hitachi) today announced that Hitachi, Ltd. and Hitachi Vehicle Energy, Ltd. which develops and manufactures lithium-ion batteries for automotive applications such as hybrid electric vehicles, have developed a lithium-ion battery having the world's highest power density of 4,500W/kg, 1.7 times the output of the company's mass-produced, automotive lithium-ion batteries. Sampling of the new battery by domestic and overseas car manufacturers will start in autumn.

To reduce internal resistance, the battery employs a new manganese cathode and an original Hitachi battery structure, in such as thinner electrodes, power collection method and effective configurations to achieve the world's highest output.

In recent years, lithium-ion batteries have been used for many consumer product applications, including mobile telephones, notebook PCs and digital cameras. For the same energy density, a lithium-ion battery has about half the volume and weight of a nickel hydrogen battery, and about one-third the volume and weight of a lead battery. This makes the lithium-ion battery a small, light, high-energy-density secondary battery that is attracting attention for its applicability to hybrid and electric vehicles.

In 2000, the Hitachi Group used its extensive technological and manufacturing capabilities in

fields ranging from materials to battery control systems, to develop and mass-produce the world's first safe, high-performance, long-operating-life lithium-ion battery for automotive applications.

A second-generation lithium-ion battery with a power density of 2,600 W/kg which currently is being delivered for automotive and railway applications, is the world's only mass-produced lithium-ion battery for on-board applications. Up to this point, a total of some 600,000 cells have been delivered, mainly to car manufacturers and railway companies.

Moreover, development of a third-generation lithium-ion battery with an even higher power density (3,000 W/kg) has already been completed. This battery will go into mass-production in 2010, with deliveries scheduled to begin the same year.

The battery set to start sampling this autumn has been developed as a fourth-generation lithium-ion battery that is even smaller and lighter yet able to provide the world's highest output. The high reliability of the new battery, in terms of mass-production and quality, is the culmination of manufacturing technology that Hitachi has built up in the course of its extensive market achievements and through the feedback from its customers.

In addition to this lineup of stand-alone battery cell products, Hitachi will continue to meet customer needs by providing optimal battery system solutions that include control systems.

In line with its long-term "Environmental Vision 2025"<sup>\*2</sup> plan to combat global warming, the Hitachi Group is using the expansion of its systems business, starting with its battery operations, to make a contribution to the future of the global environment, and to strengthen its social innovation business.

The new battery will be on display at the Automotive Engineering Exposition 2009 held at PACIFICO Yokohama from May 20 to May 22.

- \*1: Lithium-ion battery for on-board applications, as of May 2009.
- \*2: Announced December 20, 2007 in the press release entitled Hitachi Develops the Long-term Plan "Environmental Vision 2025" to Combat Global Warming.

### Outline of Hitachi Vehicle Energy, Ltd.

Company Name	:	Hitachi Vehicle Energy, Ltd.
Representative	:	Hidetaka Kawamoto
Common Stock	:	75,000 million yen
Established	:	(Hitachi, Ltd. 65.3%, Shin-Kobe Electric Machinery Co., Ltd. 24.7%, Hitachi Maxell, Ltd. 10.0%) June 25, 2004
Principal Office	:	1410, Inada Hitachinaka-shi, Ibaraki, Japan
Business	:	Marketing, development and manufacture of lithium-ion batteries for hybrid electric vehicles, etc.

#### About Hitachi, Ltd.

Hitachi, Ltd., (NYSE: HIT / TSE: 6501), headquartered in Tokyo, Japan, is a leading global electronics company with approximately 400,000 employees worldwide. Fiscal 2008 (ended March 31, 2009) consolidated revenues totaled 10,000 billion yen (\$102.0 billion).

The company offers a wide range of systems, products and services in market sectors including information systems, electronic devices, power and industrial systems, consumer products, materials, logistics and financial services. For more information on Hitachi, please visit the company's website at <a href="http://www.hitachi.com">http://www.hitachi.com</a>.

#### About Hitachi Europe Ltd.

Hitachi Europe Ltd. is a wholly owned subsidiary of Hitachi, Ltd., Japan. Headquartered in Maidenhead, UK, it has operations in 16 countries and employs over 5400 people across Europe, the Middle East and Africa. As a 'Best Solutions Partner' Hitachi Europe tailors its services and solutions to meet the specific needs of its customers. Hitachi Europe comprises eleven key business areas: Rail systems, power and industrial systems; information systems; high performance computing; digital media, consumer products; automotive; air-conditioning and refrigeration systems; procurement and sourcing; and corporate technology group (research & development) and the Hitachi Design Centre. For more information about Hitachi Europe Ltd., please visit <a href="http://www.hitachi.eu">http://www.hitachi.eu</a>.

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