Siemens helps Australia's 'Innovation Agenda' with game changing technology and unique partnership

- *$2.5m high temperature superconducting technology and research agreement – transferred from Germany to Australia – supporting Australia's 'Innovation Agenda'*
- *Three way partnership with Defence Science & Technology Group, Queensland University of Technology (QUT) and Siemens*
- *High Temperature Superconductor Technology (HTS) potential applications include transforming large scale motors (reduced size and weight by one third), through to levitation of trains, more efficient electric motors for cars and remote power generation*
- *Improved bilateral relations between Australia and Germany – technology and IP transfer and partnership for commercialization*

19 April, 2016 – Today, Assistant Innovation Minister Wyatt Roy and Siemens CEO Jeff Connolly unveiled prototype high temperature superconductor technology, which Siemens transferred from Germany into a partnership with Defence Science & Technology Group and QUT.

The ceremony took place at QUT and marks a significant step forward in Australia's innovation journey with global partnerships. Considered to be a transformative technology, the $2.5 million dollar investment includes Siemens' equipment which will be used to explore applications for Australia's maritime defence and industrial power requirements. The intent is to transition research findings into technology that can be trialed at sea.

Assistant Minister for Innovation Wyatt Roy, commended the initiative and positive implications that the research partnership will have on an array of Australian industries.

"This partnership between QUT, Siemens and the Defence Science and Technology Group highlights the meaningful, world-changing innovation that can come from collaboration between research, the private sector and government," Mr Roy said.

"It's also a strong sign of the confidence in Australia's innovation ecosystem," he said.

Siemens Australia CEO, Jeff Connolly, said the unique partnership reinforces Siemens' legacy of Australian investment and exemplifies the benefits of defence knowledge transfer and strong bilateral relations between Australia and Germany.

"This is a proud moment for Siemens. We have invested over 15 years HTS knowledge from Germany and together with local industry partners we are transferring that knowledge to Australia and helping the nation revolutionise how power is used in maritime defence, shipbuilding, power and transport."

"Our ability to continuously innovate as a nation hinges on the availability of technology and infrastructure that can facilitate and support the 'ideas boom'. It relies on doing things quicker, more cost effectively and with minimal impact on the environment," said Mr. Connolly.

For the Australian Navy, this partnership opens a pathway to more energy-efficient vessels with significant leaps forward in size, weight and capacity. HTS will also mean less environmental impact and reduced operating costs.

HTS technologies under development today in superconducting motors, generators and magnets can carry high-density currents with virtually no loss and have the potential to reduce the size and weight of conventional motors by more than 30 per cent.

"This first innovation launched out of our partnership gives people a clear view of the potential for more energy-efficient ships and more effective capacity utilisation. These ships will also have less environmental impact and will be cheaper to operate," Mr. Connolly said.

Mr. Connolly said the partnership is aligned to the Federal Government's vision for the future of the domestic manufacturing sector to be increasingly based on local R&D. He said the application of HTS technologies is not limited to defence industries and could renew other high energy-use sectors such as power and transport.

QUT Deputy Vice-Chancellor, Research and Commercialisation, Professor Arun Sharma said the university was purpose built to undertake this R&D because of its expertise and facilities, including the Banyo Pilot Plant Precinct, a leading specialist research centre for structural, mechanical and electrical engineering.

"Our partnership with Siemens and subsequent R&D puts QUT at the international forefront of superconducting motor research, an area of research that has the potential to radically transform many industries including maritime propulsion and transport drive systems."

"As the world strives to find more efficient and cleaner ways to power ships and other forms of large-scale transport, QUT will be testing this superconducting motor and at the same time looking at the other potential uses and benefits of this new technology," Professor Sharma said.

Defence Science and Technology Group has strategic alliances with 12 defence companies and research agencies. They partner with 28 universities across Australia to deliver game-changing capability for the future of the Australian Defence Force and continue to seek opportunities to expand this network.

Chief Defence Scientist Dr. Alex Zelinksy said the partnership focuses on transitioning research to outcomes that can deal with real world problems, starting with its potential applications to defence.

"The research is in line with our strategic goal to partner with the best talents in industry and academia to achieve a capability edge for defence," Dr. Zelinsky said.

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Siemens AG (Berlin and Munich) is a global technology powerhouse that has stood for engineering excellence, innovation, quality, reliability and internationality for more than 165 years. The company is active in more than 200 countries, focusing on the areas of electrification, automation and digitalization. One of the world's largest producers of energy-efficient, resource-saving technologies, Siemens is No. 1 in offshore wind turbine construction, a leading supplier of combined cycle turbines for power generation, a major provider of power transmission solutions and a pioneer in infrastructure solutions as well as automation, drive and software solutions for industry. The company is also a leading provider of medical imaging equipment – such as computed tomography and magnetic resonance imaging systems – and a leader in laboratory diagnostics as well as clinical IT. In fiscal 2014, which ended on September 30, 2014, Siemens generated revenue from continuing operations of €71.9 billion and net income of €5.5 billion. At the end of September 2014, the company had around 357,000 employees worldwide. Throughout Australia and New Zealand, where Siemens has been active for over 140 years, Siemens employs more than 2,200 people across 14 locations. Further information is available at www.siemens.com.

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