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## NEWS RELEASE

# Groundbreaking 3-in-1 Emission Abatement System Affirms Singapore's Leading Role in Environmental Technology

*-- Low-Cost System Reduces Harmful Greenhouse Gas Emissions from Ships,  
Power Plants and Other Sites, with No Secondary Pollutants or Emissions --*

**SINGAPORE, May 2010** – The island nation of Singapore may be tiny, but it is very big on ideas, innovation, and problem-solving – all of which has put the country at the forefront of the rapidly growing field of environmental technology. Now, that position has been solidified further by Singapore-based research and technology company, Ecospec Global Technology, with its introduction of a low-cost system capable of dramatically reducing greenhouse gas emissions from ships, power plants, refineries, and other fossil fuel-burning sites.

The system, called CSNOx, is the first of its kind in the world capable of significantly reducing carbon dioxide (CO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), and nitrogen oxide (NOx), all in a single system and by a single process. The CSNOx technology not only effectively removes emissions that contribute to climate change but does so without producing secondary pollutants or generating further CO<sub>2</sub> emissions. Its compact size and low cost strengthen even further its potential for widespread implementation and positive impact on the environment on a global scale.

While the CSNOx technology is applicable to a wide range of onshore and offshore industries, Ecospec's initial implementation targeted the shipping industry, which is under increasing pressure to reduce its environmental impact and to comply with stricter emissions requirements. Shipping accounts for an estimated 3% of global CO<sub>2</sub> emissions, and SO<sub>2</sub> and NOx emissions from ships have increased by more than 42% since 1990. In initial testing onboard an Aframax tanker in December 2008, the CSNOx system reduced SO<sub>2</sub> by 92.9%, NOx by 82.2% and CO<sub>2</sub> by 74.4%.

In January 2010, Houston-based American Bureau of Shipping (ABS), one of the world's leading marine and offshore classification services, verified the system's efficiencies onboard a 100,000-ton tanker sailing from Singapore to the Middle East via Sri Lanka. The ABS verification showed the CSNOx effectively removing 99% of SO<sub>2</sub>, 77% of CO<sub>2</sub>, and 66% of NOx – results that place emissions well within the latest requirements of the International Maritime Organization and other international regulations.

“This is a major breakthrough for the global shipping and onshore industries,” said Mr. Chew Hwee Hong, Founder and Managing Director of Ecospec. “No other single piece of commercially available equipment is capable of removing all harmful emissions in one process; and with its compact size, the CSNOx meets the most demanding space constraint problems on board ships. In addition, it does not require ships to switch to lower-sulfur fuel, which costs more. For land-based, onshore industries, this would give conventional facilities like fossil fuel power generating plants a convenient, low-cost solution to reducing their carbon footprint.”

At the heart of CSNOx is Ecospec's proprietary Ultra-Low Frequency Electrolysis System, through which freshwater or seawater is fed to make it alkaline, reactive, and effective in removing CO<sub>2</sub>, SO<sub>2</sub>, and NOx through reductive absorption. It is then pumped through the exhaust stack to abate the flue gas, with the removed pollutants converted into harmless substances found naturally in the water. After abatement, the wash water may be further treated and recycled back to the abating process if water supply is limited, especially for land-based applications.

Ecospec's technological achievement with CSNOx received the "Environmental Protection" award at Seatrade Asia in June 2009, and was further recognized last month when it won the "Technology of the Year" award at the Green Ship Technology Conference 2010 in Copenhagen, Denmark.

Ecospec is now poised to roll out its technology on a global scale. The company recently signed an agreement with Dutch shipping company ForestWave Navigation to incorporate CSNOx technology in six new ship builds, and is in discussion with other shipping companies to install CSNOx on their ships. Ecospec has also formed partnerships with STX Heavy Industries Co. of South Korea and AE&E Lentjes GmbH of Germany to build CSNOx systems into large-scale, onshore industrial construction projects such as power plants, incinerators, and refineries.

Singapore has targeted clean energy as a strategic growth area to help the country diversify its economy. Since 2007, the country has earmarked \$250 million US to develop the industry, and maintains a Clean Energy Program Office (CEPO) devoted to research and development, grooming start-ups, and other activities to promote industry growth.

Added Mr. Chew "In a recent joint Canada-Singapore business networking seminar in Vancouver, International Enterprise (IE) Singapore worked with the Singapore Business Federation, Canadian Trade Commission, and Canada-Singapore Business Association to provide an opportunity for Ecospec to identify potential onshore partners for our carbon abatement technology in North America."

For more information on Ecospec and CSNOx, please email us at: [info@ecospec.com](mailto:info@ecospec.com) or visit our website: <http://www.ecospec.com>.

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