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**STUDENTS SHOWCASE INNOVATIVE SOLUTIONS  
AT SENOKO SUSTAINABILITY CHALLENGE (SSCHALLENGE) 2016**

**Singapore, 29 July 2016** – Senoko Energy, Singapore’s largest power generation company, today announced the winners of the “Senoko Sustainability Challenge 2016” (SSChallenge 2016). The Guest-of-Honour for the Prize Award Ceremony was Mr Masagos Zulkifli, Minister for the Environment & Water Resources.

SSChallenge is a large scale community initiative by Senoko Energy to garner interest and heighten awareness among Singapore students about the importance of climate change and sustainability in our daily lives and the environment we live in. The theme for the 2016 competition is “**Life in 2030 – Action Plan for a Sustainable Future**” and it attracted almost 60 submissions from schools across Singapore. The projects submitted by the students covered topics from food, water, energy and health for a sustainable future.

This year’s competition attracted creative and innovative project submissions that tackled environmental and social issues. There were 15 finalists across three categories – 7 from the primary school division, 6 from the secondary school division, and 2 from the junior college / centralised institutes division.

Professor Leo Tan, Co-Chairman of the SSChallenge Advisory Committee, said, “The quality of the projects submitted by the students is highly commendable. The students took an innovative approach to their projects and came up with practical solutions, some of which are immediately applicable. For example, Juying Primary School, the first prize winner for the primary school division, suggested that photo-luminescent paint may be used to help make homes safer for the elderly. We applaud our students for thinking beyond their study scope and considering how their projects may benefit others around them”.

**Eco-friendly glow “sticks”**

Juying Primary School clinched the first prize in the Primary Division with the project “All About Photo-Luminescent Paint”. Troubled by the use of single-use disposable glow sticks, the students studied these glow sticks and found that they contained non-degradable and non-reusable chemi-luminescent chemicals. The students considered recyclable alternatives that make use of repurposed materials and photo-luminescent chemicals that can absorb and release light repeatedly. The students then conducted extensive tests to verify if photo-luminescent paints are a viable substitute for chemi-

luminescent chemicals. By applying photo-luminescent paints on repurposed items like empty water bottles, the students created reusable glow “sticks” that reduced additional waste.

### **Testing homemade solutions to recycle food waste**

Winner of the Secondary Division, Anglican High School, delved into a homemade solution to turn food waste into usable resources when they observed that Singapore’s food waste recycling rate was low. Through probiotic fermentation using bacteria that the students cultured themselves, the students managed to recycle biodegradable food waste into organic fertilisers and deodorant without the need to buy commercial microbes. With Singapore’s aim to reach an overall generated food waste recycling rate of 70 per cent by 2030, probiotic fermentation offers a practical and cheap solution in reducing our landfill waste.

### **Orange peel for solar energy**

Hwa Chong Institution, winner of the Junior College / Centralised Institutes Division, used food waste for the fabrication of dye-sensitised solar cells (DSSC). Their innovative approach of using orange peels and pencil stubs to harness solar energy offers a potential solution for defraying the high cost of conventional solar cells. Some potential creative applications of the DSSC include “solar trees” street lighting made with such cells and windows to generate electricity into the buildings. The students hoped that a cheaper and effective alternative to the conventional solar panels would increase the use of renewable energy, especially in Singapore.

Mr Paul Maguire, President & CEO of Senoko Energy, said, “Our choice of the theme was to encourage students to take personal responsibility in finding practical solutions to the sustainable issues facing us today. I am heartened to see the interesting projects that our students have devoted their time and energy to. We hope that the SSChallenge has served to encourage students to play an active role in a sustainable future. Our sincerest thanks also go to the teacher mentors who guided these students through their project work.”

The SSChallenge 2016 has the support of several government agencies and organisations, including the Ministry of Education (MOE), the National Environment Agency (NEA), the National Climate Change Secretariat (NCCS), and Public Utilities Board (PUB). Please refer to the appendix for the list of winners.

Mr Maguire added, “We are honoured that our supporting partners share our commitment to this competition among schools. Senoko Energy is committed to the future of our environment and we will continue to devote time and resources to inspire the development of a sustainability consciousness in students who may one day be Singapore’s future leaders.”

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### **About Senoko Sustainability Challenge (SSChallenge)**

Previously known as the National Weather Study Project which was launched in 2005, the SSChallenge is a community initiative that aims to increase awareness among students in Singapore on the impact of weather and climate change issues on our daily activities and the environment we

live in. The change of name to Senoko Sustainability Challenge took place in 2013 and has widened its scope to incorporate sustainability in the competition beyond climate change issues.

### **About Senoko Energy Pte Ltd (SEPL)**

Senoko Energy Pte Ltd is the largest power generation company in Singapore, having a licensed capacity of 3,300 megawatts (MW) and providing more than 20% of the nation's electricity needs. Senoko Energy was the first power generation company in Singapore to import clean natural gas for power generation in 1992, to launch a combined cycle plant in 1996, and to be certified the ISO 9001 in 1998, OHSAS 18001 in 2003, and ISO 14001 in 2004. Senoko is also certified ISO 22301 in 2012, and ISO50001 and ISO27001 in 2013. Senoko Energy received the President's Award for the Environment in 2008, and is the winner of the inaugural Singapore Energy Award in 2013.

SEPL is owned by an international consortium comprising ENGIE S.A. (30%), Marubeni Corporation (30%), The Kansai Electric Power Co., Inc. (15%), Kyushu Electric Power Co., Inc. (15%) and Japan Bank for International Cooperation (10%).