



THE INSTITUTION OF ENGINEERS, SINGAPORE

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Tel: (65) 6469 5000 Email: ies@iesnet.org.sg

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GST Reg No.: M400019924 Co. Reg No. : S665S0041B

Strictly embargoed till 17 January 2023, 9.00 pm

MEDIA RELEASE

IES celebrates 56th Annual Dinner with launch of the IES Green Plan 2030

Championing a new trail to support Singapore's sustainable development in collaboration with more than 30 government and partner organisations

The Institution of Engineers, Singapore (IES) today launched the **IES Green Plan 2030** at its 56th Annual Dinner to spearhead initiatives in support of the government's efforts to safeguard Singapore against the impact of climate change for our future generations. Ms Grace Fu, Minister for Sustainability and the Environment, was the guest-of-honour at the dinner.

2 The IES Green Plan 2030 is an initiative by IES, the national society of engineers in Singapore, to provide national-level institutional support to advance Singapore's sustainable development imperative. It lays out concrete engineering-centric action plans from 2023 to 2030 to support the Singapore Green Plan 2030.

3 Guided by the Singapore Green Plan 2030, it is aimed at strengthening the nation's engineering capabilities and capacities to develop sustainability solutions to mitigate the impact of climate change and public health threats by aligning with the five key pillars of the Singapore Green Plan 2030 – City in Nature, Energy Reset, Sustainable Living, Green Economy and Resilient Future.

4 The IES Green Plan focuses on harnessing engineering to strengthen Singapore's commitments under the United Nations' 2030 Sustainable Development Agenda and Paris Agreement. It will contribute to Singapore's position to achieve our aspirations to reduce emissions to 60 million tonnes of carbon dioxide equivalent by 2030 and achieve net zero emissions by 2050.

5 With this plan, IES will supplement the Singapore Green Plan 2030's goals, for instance, in promoting cleaner-energy vehicles by installing electric vehicle charging points at IES premises; and in building up capabilities for solar deployment by conducting training courses for engineers in solar photovoltaic technology.



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6 A living action plan, the IES Green Plan 2030 is structured along a framework organised according to the stakeholder groups that IES interacts with: Internal, National and International, with a strong emphasis on collaborative activities with partners.

7 The plan is also aimed at strengthening the position of IES to achieve its mission as the actionable voice of Singapore's engineers. The formulation of the plan is built upon a refreshed vision arising from the IES Repositioning Study 2021 to address the grand challenges facing Singapore and to transform engineering and engineers in support of Singapore's sustainability goals.

Focus: Upskilling of Engineers in Sustainability Space

8 A key element of the plan is to equip Singapore's engineers sufficiently to create new possibilities and value opportunities for the society, economy and environment, thus capitalising on the ingenuity inherent in the discipline to make use of technology to facilitate Singapore's transformation into a climate-resilient nation-state.

9 In support of the focus on upskilling engineers in this space, IES has partnered SkillsFuture Singapore (SSG) to release the Jobs-Skills Quarterly Insights (JSQI) in conjunction with the launch of the IES Green Plan. The publication highlights a suite of green skills highly sought after by employers from engineers for work related to sustainable practices. The top identified skills are energy management and audit, environmental sustainability management and sustainable engineering.

10 JSQI also observed an emergence of newer "green" roles in areas such as solar PV engineer and energy sustainability, requiring engineers to be well-versed in skills for the development of evolving clean technologies, harnessing clean energy, managing environmental sustainability, as well as in Internet of Things application, programming & coding, and big data analytics.

11 With the support of SSG and other partners, IES will continue to empower engineers through continuous skills development as well as professional certification programmes such as the IES Chartered Engineering certification schemes, and courses offered by industry bodies and institutes of higher learning (IHLs).



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12 With full commitment from government agencies, IHLs, professional associations and partners, IES aims to galvanise the engineering community to transform Singapore into a city of green possibilities with their expertise, knowledge and creative solutions.

13 “Climate change is an existential threat to humankind but acknowledging the need to act is not good enough. We must act immediately. As engineers, we can contribute to the goals set in the Singapore Green Plan with our engineering expertise, innovations and creative solutions. It is with this objective in mind that IES has taken the initiative to develop the IES Green Plan 2030 in support of Singapore’s sustainability journey. It is a bold, yet necessary plan to act as a springboard for future green initiatives and inspire more engineers to step forward to contribute towards Singapore’s ambitions of a green future,” said Mr. Dalson Chung, President of IES.

Recognising Exemplary Engineering Achievements

14 At the dinner, themed “Engineering for Sustainability”, IES conferred the title of **IES Honorary Fellow** on Mr Chee Hong Tat, Senior Minister of State for Finance and Transport, in recognition of his contributions in shaping the engineering profession and advancing the interests of IES. IES also conferred the **IES Lifetime Engineering Achievement Award** on Mr Seah Moon Ming, Chairman of SMRT Pte Ltd, for being an extraordinary leader and role model in engineering whose outstanding and sustained engineering contributions have immensely benefited the engineering industry and the community.

15 NTUC clinched the **IES Outstanding Partner Award** for its significant contributions to IES and for making a profound impact on the practice of engineering in Singapore.

16 The **IES Prestigious Engineering Achievement Awards** were presented to the following engineering teams, in recognition of their contributions to engineering practice, environmental practicality, social impact and originality of their innovations:

- Use of Plastic Waste to Construct Durable Asphalt Pavement by *Samwoh Innovation Centre and Singapore Polytechnic, supported by the Land Transport Authority (LTA) and the National Environment Agency (NEA)*
- A330 Multi-Role Tanker Transport Hangar by *Defence Science and Technology Agency (DSTA)*



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- WaterfrontI&II@Northshore by *Housing and Development Board (HDB)*
- Tuas Port Phase 1 (TPP1): Reclamation, Wharf Construction & Dredging Project by *Maritime & Port Authority of Singapore (MPA) and Surbana Jurong Consultants Pte. Ltd. (SJC)*
- HaptGlove – Wireless Pneumatic Glove for Multimode Haptic Feedback in the Metaverse by National University of Singapore (NUS)

17 Two outstanding students also received the **IES-Yayasan Mendaki Scholarship award**:

- Muhammad Nur Hazwan bin Mohamed Haron, Aircraft Systems Engineering, Singapore Institute of Technology
- Muhammad Raqib Rifai Bin Fadli, Electrical & Electronic Engineering, Singapore Polytechnic

Please go to:

- <https://www.ies.org.sg/> for more information on the IES Green Plan 2030
- The Annex for more information on the award winners
- <https://drive.google.com/drive/folders/1bDc-zmlG3OqVpQD8RWkeV4WI0wYT2-p5?usp=sharing> for the IES Annual Dinner press kit that includes event photos that will be uploaded after the event.



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Notes to Media

Chinese glossary

Terms in English	Terms in Chinese
The Institution of Engineers, Singapore (IES)	新加坡工程师学会
Mr Dalson Chung, President, IES	钟德旋, 会长, 新加坡工程师学会
IES Green Plan 2030	新加坡工程师学会绿色发展蓝图 2030
IES Honorary Fellow	新加坡工程师学会荣誉院士
IES Lifetime Engineering Achievement Award	新加坡工程师学会终身工程成就奖
IES Prestigious Engineering Achievement Award	新加坡工程师学会卓越工程成就奖
IES Outstanding Partner Award	新加坡工程师学会杰出合作伙伴奖

About The Institution of Engineers, Singapore (IES)

The Institution of Engineers, Singapore (IES) was formally established in July 1966 as the national society of engineers in Singapore. IES is the premier engineering institution in Singapore and is called upon by the Government to provide feedback on professional engineering matters.

IES is well represented among the faculty members of major engineering institutions of higher learning in Singapore. Through close collaboration with local universities and polytechnics as well as the industry, IES organises courses, seminars and talks for engineers and IES members to advance the continuous development of engineers.

The Institution maintains close links with professional organisations of engineers regionally and throughout the world. These include organisations in Australia, China, Japan, United Kingdom and the United States. The Institution also represents Singapore in the World Federation of Engineering Organisations (WFEO), ASEAN



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Federation of Engineering Organisations (AFEO) and the Federation of Engineering Institutions of Asia and the Pacific (FEIAP) in promoting goodwill, fellowship and exchange of knowledge among all engineers in the region and internationally.

Through its Engineering Accreditation Board (EAB), IES obtained full signatory status in the Washington Accord (WA) in June 2006. The entry grants IES the authority to represent Singapore, the first country within the ASEAN region which has obtained full signatory status in the WA, to vet education systems under the WA mutual recognition framework.

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Annex - IES Prestigious Engineering Achievement Awards Project Descriptions

Applied Research and Development Category

Use of Plastic Waste to Construct Durable Asphalt Pavement

By Samwoh Innovation Centre and Singapore Polytechnic, supported by the Land Transport Authority (LTA) and the National Environment Agency (NEA)

A joint study was conducted to evaluate the use of plastic waste in asphalt. Laboratory test results have shown that the use of certain types of plastic waste in asphalt can enhance its durability and performance as well as reduce the life cycle cost as compared to conventional asphalt. A field trial is being conducted to validate the performance of the plastic asphalt under actual traffic and weather conditions to monitor the road pavement condition as well as groundwater / surface runoff with input from government agencies.

Engineering Project Category

A330 Multi-Role Tanker Transport Hangar

By Defence Science and Technology Agency (DSTA)

The A330 Multi-Role Tanker Transport (MRTT) hangar is currently the Singapore Armed Forces' (SAF) first and largest integrated hangar for wide-body aircraft maintenance. The hangar was conceptualised and developed by the Defence Science and Technology Agency (DSTA), in collaboration with the Republic of Singapore Air Force (RSAF) and industry partners. It features an environmentally sustainable design that improves work efficiency and reduces aircraft maintenance downtime. The hangar is also the SAF's first net positive energy building with an integrated solar energy harvesting system and is a best-in-class energy performing building generating 30% more electricity than it consumes. It has been awarded the Building and Construction Authority (BCA) Green Mark Platinum (Positive Energy) Award and a 2021 Defence Technology Prize Team (Engineering) Award.



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Waterfront@Northshore By Housing and Development Board

Located in Punggol Northshore District, Waterfront@Northshore is home to one of HDB's 1st smart & sustainable waterfront precincts. This development is designed by HDB's multi-disciplinary team and incorporates design approaches and initiatives with the aim to transform Punggol Northshore into a living laboratory for smart and sustainable living. Smart initiatives implemented in this project have been rolled out to all new public housing developments that were launched since November 2021 to support Singapore's vision to create a Smart Nation.

Tuas Port Phase 1 (TPP1): Reclamation, Wharf Construction & Dredging Project By Maritime & Port Authority of Singapore (MPA) and Surbana Jurong Consultants Pte. Ltd. (SJC)

Tuas Port Phase 1 (TPP1): Reclamation, Wharf Construction & Dredging Project Reclamation was completed in November 2021, marking a significant milestone for Singapore's ambitious move to consolidate the container terminals and develop the Tuas next-generation port to be the largest fully automated containerised terminal at a single location in the world by 2040. TPP1 consists of 21 deep-water berths that can handle 20 million twenty-foot equivalent units (TEUs) annually, and the project entailed soil improvement works on 414 hectares of reclaimed and existing land, fabrication and installation of 221 10-storey tall caissons (each weighing 15,000 tons) to form 8.6km of seawall, and the deepening of the sea bed to 23m below sea level. TPP1 is recognised for the adoption of several innovative and sustainable engineering solutions and green initiatives to protect the environment and reduce carbon footprint.



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Young Creators Category

HaptGlove – Wireless Pneumatic Glove for Multimode Haptic Feedback in the Metaverse

By National University of Singapore (NUS)

We developed a patent pending haptic glove (HaptGlove) which is wireless and lightweight and allows users to “physically” interact with the virtual world and enable the sense of touch in a natural and realistic manner. HaptGlove is highly integrated with five pairs of haptic feedback modules, providing both kinesthetic and cutaneous feedback. With our software development kit, HaptGlove can be easily implemented to deliver various haptic effects for different applications in the metaverse, such as training, education and entertainment.