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Media Release

World Engineers Summit (WES) on Climate Change 2015 Gathers Engineers and Climate Change Experts in Singapore to Drive Global Climate Resilience

Deputy Prime Minister Mr Teo Chee Hean witnessed official unveiling of Singapore's first batch of Chartered Engineers and a nationwide mission to recognise the top 50 local engineering feats

The World Engineers Summit (WES) on Climate Change 2015 officially raised its curtains today to an international gathering of some 800 engineers, climate change experts and professionals from 35 countries at the Suntec Singapore Convention and Exhibition Centre. **Mr Teo Chee Hean**, Deputy Prime Minister, Coordinating Minister for National Security and Minister for Home Affairs graced the joint opening ceremony of the WES on Climate Change 2015 and the National Engineers Day (NED) 2015.

Hosted by The Institution of Engineers, Singapore (IES) from 21 to 24 July, WES on Climate Change 2015 has convened leading authorities and advocates of sustainability to exchange best practices and explore ideas on 'Sustainable Urban Development for Global Climate Resilience'. Building upon a successful inaugural run in 2013, the conference will continue to place the spotlight on critical issues that the world faces today, emphasising the role of engineering innovations in shaping the mitigation and adaptation to address extreme weather conditions brought on by climate change with a special focus on urban resilience.

Summit Highlights

WES on Climate Change 2015 held its inaugural pre-Summit Industry Roundtable¹ on 21 July, gathering business leaders from different industries to surface the main challenges and opportunities in climate change adaptation, the role of businesses in climate change mitigation and the role of women in building climate resilience.

Leading the conversations on the opening day were plenary keynote speakers including **Dr Bindu N Lohani**, Institute for Global Environmental Strategies, Japan Distinguished Fellow and Former Vice President for Knowledge Management and Sustainable Development, Asian Development Bank, Philippines; **Mr Tan Gee Paw**, Chairman, PUB, Singapore; and **Mr Philippe Joubert**, Senior Advisor and Special Envoy for Energy and Climate, World Business Council on Sustainable Development and Executive Chairman of the Global Electricity Initiative at World Energy Council. These speakers also participated in a panel session chaired by **Professor Tommy Koh**, Ambassador-at-Large, Ministry of Foreign Affairs, Singapore.

The Summit will feature four tracks focusing on issues most pertinent to sustainable urban development. Delivering the opening track keynotes are **Mr Lee Yi Shyan**, Senior Minister of State, Ministry of Trade and Industry and Ministry of National Development; **Mr Teo Ser Luck**, Minister of State, Ministry of Trade and Industry, **Mrs Lim Hwee Hua**, Executive Director, Tembusu Partners Pte Ltd; and **Dr Bindu N Lohani** who will speak respectively on Sustainable Development & Infrastructure; Sustainable Energy; Clean Environment & Water Resources and Resilience & Adaptation against Climate Change on the opening day.

The illustrious list of globally-renowned speakers include **Dr Steven Wade**, Principal Consultant and Head of Scientific Consultancy, MET Office, United Kingdom; **Mr Stephen E Selkowitz**, Department Head, Lawrence Berkeley National Laboratory, United States and **Dr Arab Hoballah**, Chief of Sustainable Consumption and Production Branch, Division of Technology, Industry and Economics, United Nations Environment Programme, Kenya. Together, they will raise the level of discussions with the latest ideas, research findings and best practices on the adaptation and mitigation of climate change.

Mr Chan Chun Sing, Secretary-General, National Trades Union Congress (NTUC) and Minister, Prime Minister's Office (PMO), will grace the WES Gala Dinner & Awards Night on 23 July and present the IES Lifetime Engineering Achievement Award 2015 to an exemplary engineering leader, and the IES Prestigious Engineering Achievement Awards 2015 to 13 engineering teams. The winners of the WES Photography Competition 2015 Awards will be announced at the dinner.

“By hosting the second World Engineers Summit on Climate Change in two years, we hope to drive greater awareness amongst global communities to employ engineering innovations to

¹ Refer to Annex 1 for Fact Sheet on the Industry Roundtable

address climate resilience for the benefit of our future generations,” said Er. Tan Seng Chuan, Chairman, World Engineers Summit (WES) on Climate Change 2015 Steering Committee.

“The WES on Climate Change 2015 is an excellent platform to showcase cutting edge engineering practices that are relevant to smart and sustainable urban solutions, a key growth area identified under SkillsFuture,” said Mr Ng Cher Pong, Chief Executive of the Singapore Workforce Development Agency (WDA).

To complement the dialogue on sustainable urban development, WES on Climate Change 2015 will feature the WES Expo 2015 to showcase the latest in urban and industrial sustainable technology, products and solutions developed by corporate and industrial climate change champions and engineering leaders as well as the best entries from the WES Photography Competition.

Unveiling of First Batch of IES Chartered Engineers and Engineering Feats@IES-SG50

At the opening ceremony, Mr Teo presented certificates to Singapore’s first batch of Chartered Engineers². A total of 41 engineers in the aerospace, chemical & process, environmental & water, marine & offshore and systems engineering sectors have been accredited for their professional competence under the IES Chartered Engineers Programme. This validation of their professional experience, expertise and competence will set these engineers apart for greater employability and career prospects and raise the engineering standards in various industries in Singapore.

Mr Teo also witnessed the launch of the Engineering Feats @ IES-SG50³ competition, an IESSG50 initiative that seeks to identify the top 50 engineering achievements that have made the greatest economic, infrastructural or societal impact to Singapore over the past 50 years. Engineers and project managers are invited to submit their projects completed between 1965 and 2015, for the public to cast their votes.

National Engineers Day 2015

At the sixth NED⁴ organised by IES, students will discover the fun and verve of engineering through a series of engaging talks and exhibits on diverse engineering topics from robotics to nanotechnology. For the first time, the event will also host the finals of the inaugural Energy Innovation Challenge (EIC), whereby more than 70 school teams have competed over a fourmonth period to explore alternative energy sources under the mentorship of practicing engineers. Jointly organised by IES and Science Centre Singapore, EIC is supported by the Ministry of Education, the National Research Foundation and the Energy Market Authority. The Minister

² Refer to Annex 2 for *Fact Sheet on the IES Chartered Engineer Programme*

³ Refer to Annex 3 for *Fact Sheet on Engineering Feats @ IES-SG50*

⁴ Refer to media release on NED 2015 attached separately

for Education, Mr Heng Swee Keat, will address the audience and present awards to the winning teams at the NED 2015 Closing Ceremony on 24 July.

“For this year's NED, students can get to immerse in the fascinating world of engineering through a series of informative talks and engineering exhibits. The highlight of NED 2015 is the Energy Innovation Challenge where students were given the opportunity to work on real engineering problems in the past four months. Through this Challenge, the students were exposed to the potential role that they can play in building a sustainable future. By participating in these activities, IES hopes to motivate our younger generation to choose engineering as their career. This will help to build a strong talent pipeline to support Singapore’s future growth,” said Dr Yeoh Lean Weng, Chairman, NED 2015 Organising Committee.

Signing of Agreements

To enhance the global standing of the Chartered Engineers, IES signed a Mutual Recognition Agreement with Engineers Australia and a Memorandum of Understanding with The Chartered Institution of Water and Environmental Management (CIWEM) at the Summit.

For more information, please visit www.wes-ies.org and www.ned-ies.org or follow us on <https://www.facebook.com/2015WES> and <https://www.facebook.com/2015NED>

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About World Engineers Summit

The biennial World Engineers Summit (WES) launched in 2013 is a premier platform that focuses on addressing global challenges arising from the impact of climate change by gathering influential thought leaders, policy makers, specialists, business leaders, multi-disciplinary engineers and leading academics from across the globe, to exchange expert opinion and present sound engineering solutions for the future. The WES is organised by The Institution of Engineers, Singapore (IES), the heart and voice of engineers in Singapore.

Hosted in Singapore from 21-24 July 2015 at the Suntec Singapore Convention & Exhibition Centre, WES on Climate Change 2015 includes a three-day conference with topical technical tracks and site visits. Held in conjunction with the Summit, the WES Expo showcases innovative sustainable engineering technology. The WES on Climate Change 2015 photography competition is open to the industry, the public and students worldwide and highlights the growing impact of climate change across the globe.

For more information, visit www.wes-ies.org.

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 the major engineering institutions of higher learning in Singapore. Through close collaboration with the local universities and polytechnics, 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 ASEAN Federation of Engineering Organizations (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 ASEAN and the Asia-Pacific region.

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.

For more information, visit www.ies.org.sg.

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Annex 1

Fact Sheet – World Engineers Summit (WES) on Climate Change 2015 Industry Roundtable

21 July 2015, Tuesday, 8.00 am – 2.30 pm

Suntec Singapore Convention and Exhibition Centre

Background

Climate change will impact businesses. The signature effects of climate change – rising sea levels, more frequent bouts of extreme weather events, increased occurrences of heat waves – all have specific and measurable impacts on a company’s assets and economic activities. Reputations, regulatory obligations, financial reporting, operations, and supply chains are some examples of what can be affected by a changing climate. In this context, how a company reacts to this change will have a direct bearing on its risk profile and strategic positioning. Climate change is a business issue and companies should start building up their resilience to the potential impacts of climate change. This is a by-invitation event.

Objectives

1. To raise awareness on how climate change can affect businesses.
2. To find out what is needed by businesses to help them prepare for climate change and learn from the experiences of leading companies.
3. To identify key business opportunities in the area of climate resilience.

Target Audience Organisations

in:

- Engineering and infrastructure
- Reinsuranciers and finance
- Logistics and supply chain management
- Environmental services providers
- Government agencies

Industry Roundtable Topics

1. Climate Change Adaptation – Challenges and Opportunities
2. Climate Change Mitigation – The Role of Businesses
3. Role of Women in Building Climate Resilience

Topic 1: Climate Change Adaptation – Challenges and Opportunities

Climate change greatly impacts businesses. The signature effects of climate change – rising sea levels, more frequent bouts of extreme weather events, increased occurrences of heat waves – have specific and measurable impacts on a company’s assets and economic activities. Reputation,

regulatory obligations, financial reporting, operations, and supply chains are some examples of what can be affected by a changing climate. In this context, how a company reacts to this change will have a direct bearing on its risk profile and strategic positioning. Climate change is a business issue and companies should start building up their resilience to the potential impacts of climate change.

Topic 2: Climate Change Mitigation – The Role of Businesses

Climate change is a potential game-changer for businesses. It can cause disruptions to operations and supply chains and increase the cost of raw materials. On the other hand, businesses that adopt energy efficient technologies and processes can turn it into their competitive advantage. Investors and consumers are also demanding businesses to take action on climate change and changing their buying habits to take into account corporate responsibility.

Topic 3: Role of Women in Building Climate Change Resilience

Climate change will impact Humankind. Today's Women in Society is beyond household roles, they are engineers, scientists, company executives, human resource managers, in addition to being family and school leaders. Therefore, business corporations, non-governmental organizations, communities and societies are demographic networks that require expanded coverage that will compliment efforts with the local government and agencies, brought upon by changing climate. In perspective, how community and family leaders prepare to respond to this change will have a direct strengthening on building resilience within the society. Ultimately, climate change affects the people; this is where the leadership of people, where role of Women has the greatest contribution to our resilience to the impacts of climate change.

Annex 2

Fact Sheet - IES Chartered Engineer Programme

Background

The Institution of Engineers, Singapore (IES) launched the Chartered Engineer (Singapore) Registry at the Opening Ceremony of the inaugural World Engineers Summit (WES) 2013.

Providing accreditation to engineers in fields that do not require Professional Engineer registration, the programme was first rolled out for engineers in the aerospace, chemical & process, environmental & water, marine & offshore and systems engineering sectors and was recently extended to engineers in the railway and transportation engineering sector.

The accreditation programme is based on independent peer review of an individual's experience, expertise and practicing competence. For engineers, it provides employers with a yardstick to determine and recognise their professional competence, which will in turn enhance their employability and career prospects. Through the Chartered Engineer programme, IES, the accreditation body, aims to raise engineering standards in Singapore by adding value to engineers, employers, government, business and society.

Criteria and Application Process

To qualify for the Chartered Engineer programme, engineers must possess a recognised engineering degree and a minimum of four years of practical experience, maintain continuing professional development and comply with the Chartered Engineers' Code of Conduct.

A completed application form should be submitted and after the application is assessed to be suitably completed, a peer interview will be carried out to confirm whether the candidate has the adequate depth and breadth of experience, while also having that all important "engineering judgment" sought after by employers.

Key Figures

Number of engineering disciplines under the Chartered Engineer programme: 5

Total number of engineers accredited with 'Chartered Engineer' status on 22 July 2015: 41

Number of Chartered Engineers in Aerospace Engineering as of 22 July 2015: 9

Number of Chartered Engineers in Chemical & Process Engineering as of 22 July 2015: 9

Number of Chartered Engineers in Environmental & Water Engineering as of 22 July 2015: 9

Number of Chartered Engineers in Marine & Offshore Engineering as of 22 July 2015: 4

Number of Chartered Engineers in Systems Engineering as of 22 July 2015: 10

More information on Singapore's Chartered Engineer programme can be found at www.charteredengineers.sg.

Annex 3

Fact Sheet – Engineering Feats @ IES-SG50

Background

In celebration of Singapore's 50th birthday in 2015 and IES' 50th anniversary in 2016, and in appreciation to engineers for their contributions in the past 50 years, The Institution of Engineers, Singapore (IES) will be launching Engineering Feats @ IES-SG50 on 22 July 2015. The competition seeks to honour 50 engineering projects from various engineering fields that Singaporeans believe to have made the greatest economic, infrastructural and societal impact to Singapore.

Criteria

- The completion dates of the engineering projects or commercialisation of engineering products must be between 1965 and 2015
- The engineering projects or products shall have made significant impact to the society at time of its inception and, in particular, contributed to Singapore's economic growth or well-being of its citizens.
- Nominations may be for any scale of engineering projects, engineering systems or products that are deemed impactful or highly innovative, whether in design, manufacturing, product or systems integration.

Submission / Nomination Process

- Engineers or project managers can submit their engineering achievements or projects for the competition via <https://www.ies.org.sg/sg50> between 21 August 2015 and 30 November 2015.
- All entries must include a completed entry form with formal consent from the project manager, if the project manager is available, and a project report to support the proposed nomination.
- Members of the public can also nominate engineering projects that they think are worthy. Nominators are required to contact the project managers, if they are available, for the project details and obtain their consent.

Selection Process

All submissions will be reviewed by a panel of judges from the private and public sectors. Shortlisted entries will be put up for public voting through various media. The top 50 projects with the highest number of votes will clinch the title of Top 50 Engineering Feats.

Significant Dates

Submission of projects	21 August 2015 – 30 November 2015
Public voting	1 March 2016 – 30 May 2016
Announcement of winners	1 July 2016@ IES-SG50 Golden Jubilee Dinner