

Hydrogen Working Group Meeting

25 July 2022 3.00 pm – 5.00 pm

180 Kitchener Road, #06-10, City Square Mall (Sky Park), Singapore 208539

| No | Name | Company | Signature |
|----|-------------------------|--|-----------|
| 1 | Chiap Khiong Koh | Sembcorp Industries Ltd - SUT Division | Present |
| 2 | Naveen Selvam | ABS Group | Present |
| 3 | Vijay Sirse | Ampyr Energy Solutions Pte Ltd | Present |
| 4 | Sandra Seah | Bird & Bird ATMD LLP | AWA |
| 5 | Louis Lee | Bluefield Renewable Energy Pte Ltd | Present |
| 6 | Xander Pierik | Borouge PTE ltd | AWA |
| 7 | Chin Chien Chua | Bosch Thermotechnik | Present |
| 8 | Ashish Anil | Bureau Veritas Marine (Singapore) | Present |
| 9 | Eng Yew Yeoh | Bureau Veritas Singapore | Present |
| 10 | Benjamin Wu | Danfoss Singapore Pte Ltd | Present |
| 11 | Lian-Gee Chua | DNV | AWA |
| 12 | James Laybourn | DNV | Present |
| 13 | Jian Ming Cheang | EDF HQ Singapore Pte Ltd | Present |
| 14 | Laurence Kwan | EDPR-Sunseap APAC | Present |
| 15 | Senthil Kumar Karuppiah | ENERGI TRANZ PTE LTD | Present |
| 16 | Joseph Tan | Energreen Technologies Pte Ltd | Present |
| 17 | Ling GW | Energreen Technologies Pte Ltd | AWA |

| No | Name | Company | Signature |
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| 18 | Wei Chee Liew | Environmental Resources Management (ERM) | AWA |
| 19 | Mark Eisenegger | Environmental Resources Management (ERM) | AWA |
| 20 | Indradi Soemardjan | Environmental Resources Management (ERM) | Present |
| 21 | Abhishek Kaul | IBM Pte Ltd | Present |
| 22 | Krishnakumar Nagarajan | IBM Pte Ltd | Present |
| 23 | Heng Seng Meng | ITE | AWA |
| 24 | Kenneth Low | ITOCHU Singapore Pte. Ltd. | Present |
| 24 | Wee Meng Tan | Jurong Port Pte Ltd | AWA |
| 25 | Errol Goh | Jurong Port Pte Ltd | Present |
| 26 | Colin Koh | LKH Precicon | Present |
| 27 | Kian Chye Kang | Luft Env Technologies Pte Ltd | Present |
| 28 | Ee Yoon Kuet | OceanMaster Engineering | Present |
| 29 | Kendy Siew | Oilmaster | Present |
| 30 | Alex Ng | Orcades Marine Asia | Present |
| 33 | Ken Tay | Rystad Energy Asia Pte. Ltd. | Present |
| 34 | Valerie Lee | Sembcorp Industries Ltd - SUT Division | Present |
| 35 | Gareth Wong | Sembcorp Industries Ltd - SUT Division | AWA |
| 36 | Lee Tse Luen | Sembcorp Industries Ltd - SUT Division | Present |
| 37 | Florence Yee | Sembcorp Industries Ltd - SUT Division | AWA |
| 38 | Zulhairi Pasuni | Sembcorp Solar Singapore Pte Ltd | AWA |
| 39 | Sunil Kumar | Siemens Energy Pte Ltd | Present |

| No | Name | Company | Signature |
|----|---------------------------|-------------------------------------|-----------|
| | | | |
| 40 | David Koh | Sumitomo Mitsui Banking Corporation | Present |
| 41 | Tias van Moorsel | Sumitomo Mitsui Banking Corporation | AWA |
| 42 | Jason Teoh | Sobono Energy Pte Ltd | Present |
| 43 | Yi Ming Law | Sun Cable Pte Ltd | Present |
| 44 | Srinivasan Sivaraman | TIPL | Present |
| 45 | Mei yee Chan | TUV SUD PSB Pte Ltd | Present |
| 46 | Clement Teo | TUV SUD PSB Pte Ltd | AWA |
| 47 | Joseph Dong Xia | TUV SUD PSB Pte Ltd | Present |
| 48 | Balakrishnan Ramesh Kumar | TUV SUD PSB PTE LTD | Present |
| 49 | Hitendra Shetty | Warstila Singapore Pte Ltd | AWA |
| 50 | Kevin Lee | YTL PowerSeraya | Present |
| 51 | Yatin Premchand | Black & Veatch (SEA) Pte Ltd | Present |

| | Description | Action By |
|----|--|-----------|
| 1. | Welcome and introduction by Ms Kavita Gandhi, Executive Director, SEAS | |
| | Ms Kavita Gandhi (KG) welcomed everyone to the first meeting of the Hydrogen group and introduced the Chairman of the Group, Mr Koh Chiap Khiong, Head of Singapore, Southeast Asia and China. KG invited Chairman to say a few words. | |
| 2. | Welcome Remarks by Chairman, Mr Koh Chiap Khiong, CEO of Singapore and | |
| | Southeast Asia at Sembcorp Industries | |
| | Chairman welcomed everyone to the meeting and shared that hydrogen industry will play an important role to meet Singapore ambitions to be net zero by 2050 | |
| 3. | <u>Presentation by Mr Lee Tseluen, AVP, Group Strategy & Projects, Sembcorp Industries Ltd - SUT Division</u> | |
| | Mr Lee presented on Sembcorp Industries and its activities, the different views on Hydrogen value chain in Singapore (production, transport and distribution | |

| | and end use), from low carbon intensity to greater carbon intensity and why hydrogen is one of the gateways to net zero. | |
|----|--|--|
| | He also shared on the significant market potential in the future of hydrogen and its unique role in decarbonisation the power sector. Additionally, he shared that green hydrogen has huge cost reduction potential but there are technology challenges that has to be overcome by hydrogen in the future. After the presentation, he opened the questions to the floor. | |
| 4. | <u>Updates by Secretariat, Ms Kavita Gandhi, Executive Director, SEAS</u> | |
| | Ms Kavita Gandhi shared on the upcoming activities that SEAS is planning, including the business mission to Dubai, Asia Clean Energy Summit and PowerACE competition. | |
| 5. | Hydrogen Working Group Workplan | |
| | In the proposed activities for the Group to potentially explore on, members of the group expressed interest in White Paper, Training and Advocacy & Engagement activities. 1. White Paper | Members to take part in survey to express which areas they are keen to contribute. Survey link. |
| | One of the proposed activity for the group is to produce a white paper to discuss the outlook of hydrogen in the sector. Before doing so, members shared that it is important to have discussions with government and policy makers to see what the plans for hydrogen in Singapore are, where are the timelines or milestones for the hydrogen sector and the roadmap for hydrogen targets. | Survey mik. |
| | Some of the topics that should be addressed in the white paper are the digitalisation and logistic issues, applications in marine, power generation and transport, certificate of origin – how to guarantee the quality of hydrogen and creating demand for the industry. | |
| | 2. <u>Training</u> Another activity that the group is looking at are the training and capacity building to re-train manpower so that they do not fall behind once the hydrogen motion takes place. | |
| | KG shared that if there are any interests to develop training topics, members should approach SEAS secretariat. | |
| | 3. Advocacy & Engagement Members are interested to engage in sessions with MTI, EMA or ADB (an enabler for many countries) to potentially discuss standards for hydrogen. Chairman suggested to have networking sessions as well with these agencies. | |
| 6. | As there were no other matters, the meeting concluded with thanks from the Chairman and participants at 5.00 pm. | |

Recorded by : Nur Asyiqin

Vetted by : Kavita Gandhi

Approved by : Koh Chiap Khiong