

Clean Energy Committee Meeting

20 March 2023

15:00

SEAS Office, 180 Kitchener Road, #06-10 City Square Mall, Singapore 208539

Minutes

No	Name	Company	Signature
1	Christophe Inglin	Energetix Pte Ltd	Present
2	Law Gee Yong	Energy Market Authority (EMA)	Present
3	Pillai Karthik	AGC Asia Pacific Pte Ltd	Present
4	Quek Eugene	AGC Asia Pacific Pte Ltd	Present
5	Subramanian Shiva	AGC Asia Pacific Pte Ltd	Present
6	Goh Terrance	Bird & Bird ATMD LLP	Present
7	Chan Chelsea	Bird & Bird ATMD LLP	Present
8	Premchand Yatin	Black & Veatch	Present
9	Yeoh Eng Yew	Bureau Veritas Singapore	AWA
10	Ng Koon Siang	C&W Services Pte Ltd	AWA
11	Chee Liang Ang	C&W Services Pte Ltd	Present
12	Kwan Laurence	EDPR-Sunseap APAC	AWA
13	Karuppiah Senthil Kumar	Energi Tranz Pte Ltd	Present
14	Tan Joseph	Energreen Technologies Pte Ltd	Present
15	Eisenegger Mark	Environmental Resources Management (ERM)	AWA
16	Singh Oman	Hero Future Energies Asia Pte Ltd	AWA

No	Name	Company	Signature
17	Brouwer Michael	Impiro	Present
18	Tan Jun Wei William	Jones Lang Lasalle Property Consultants Pte Ltd	Present
19	Lim Brandon	KPMG Services Pte Ltd	Present
20	Somani Sharad	KPMG Services Pte Ltd	Present
21	Koh Colin	LKH Precicon Pte Ltd	AWA
22	Visvalingam Thiagu	LYS Energy Group	Present
23	Seet Qinhong	Mainstream Renewable Power	Present
24	Kwek Melissa	McDermott Will & Emery Singapore LLP	AWA
25	Ng Kelvin	Megawatts Sustainable Energy Pte Ltd	Present
26	Koh Andrew	Megawatts Sustainable Energy Pte Ltd	Present
27	Esteban Pedro	Merus Power Plc.	Present
28	Ng Peter	Narada Asia Pacific Pte Ltd	AWA
29	Tay Garry	Noco-Noco Pte Ltd	Present
30	Lim Kenneth	Noco-Noco Pte Ltd	Present
31	Morgan Craig	Northmore Gordon Pte Ltd	AWA
32	KUET Ee Yoon	OceanMaster Engineering	Present
33	Aziz Farah	OPIS- Dow Jones	AWA
34	Ng Alex	Orcades Marine Asia Pte Ltd	AWA
35	Miyake Kento	Osaka Gas Singapore Pte. Ltd.	AWA
36	BAI JIE	Power Systems Consultants Asia	AWA
37	Chim Yuen Chong	Rolls-Royce Singapore Pte Ltd	Present

No	Name	Company	Signature
38	Yamasaki Sakura	Singapore Solar Exchange Pte Ltd	AWA
39	TAN Sei Hoe	Sumitomo Mitsui Finance and Leasing	Present
40	Toh Rachel	TotalEnergies	AWA
41	Eu Henry	Trina Solar	Present
42	Kumar Ramesh	TUV SUD PSB Pte Ltd	AWA
43	Ng Dylan	Union Solar Pte Ltd	AWA
44	Yeo David	Valores Global Pte Ltd	Present
45	Shetty Hitendra	Wartsila Corporation I Energy	Present

Description	Action by
<p>1. Opening by Chairman</p> <p>Chairman CE committee, Christophe Inglin (CI) opened the meeting and welcomed everyone. He also invited all the members to introduce themselves around the room.</p>	
<p>2. Presentation by Law Gee Yong, Energy, Director (Policy & Planning) Market Authority (EMA) on Advancing the Singapore Energy Transition</p> <p>Gee Yong introduced and explained the role of EMA as an industry regulator and operator and their involvement as part of the Singapore Energy Transition. He also shared their role in addressing the energy trilemma and shared that industrial and commercial industry consumes the most energy as of today, and how we need to decarbonise these industries to meet Singapore's climate ambitions. EMA has ramped up their efforts by launching the Energy Story – introducing the four switches in 2019 and releasing the Energy 2050 report last year. After his presentation, CI opened the floor for questions.</p> <p><u>Questions from the members:</u></p> <p>i. How has the current geo-political scenario changed in the 2050 roadmap?</p> <p>Gee Yong responded that the 2 scenarios that are affected by geo-politics are imports and carbon credits/trading across the world. He does not see any changes in the long term direction, as the technologies are still developing as we speak.</p>	

<p>ii. Is Singapore open to consider hydrogen and ammonia as a fuel?</p> <p>Gee Yong responded that he could see 2 possible sectors – aviation and maritime – as offtakers of ammonia and hydrogen. It all depends on how we can bring the hydrogen and ammonia into Singapore, how much will it cost and the global impact on using them (eg how would it affect the neighbouring countries via sea).</p> <p>iii. What are the main challenges from EMA’s perspective on maritime?</p> <p>Gee Yong explained that he’s aware of the trials for electrification that are currently happening in the maritime industry, and if the technology makes sense there shouldn’t be difficulties to adapt.</p> <p>iv. In comparison to similar cities in the world, how is Singapore doing in terms of solar deployment?</p> <p>Gee Yong explained that those countries have vast land to deploy the solar power to import to their cities, unlike Singapore. He further mentioned that Singapore is one of the most solar-dense cities in the world.</p>	
<p>3. New Members Presentation by Senthil Kumar Karupiah, Founder and CEO, Energi Tranz Pte Ltd</p> <p>Senthil presented Energi Tranz’s mission to help corporates and utilities on their sustainable energy transition. They provide various energy advisory services – tailored solutions from solar deployment, EV charge points, ESG reporting, demand response, RECs, and electricity procurement.</p>	
<p>4. Updates on the SCDF meeting from the Chairman</p> <p>CI updated on the meeting with SCDF on 15th of March, attended by SEAS CE committee Chair, ED, ESG and EMA representatives. The issue raised was installing sprinklers or fire-rated boards within the building costs twice as much as the PV installation. Kelvin from Megawatts faced a challenge getting an approval from SCDF when installing non-waterproof boards in an open carpark and had to make corrective actions and find alternative solution. Shiva from AGC also shared his challenge with SCDF as he struggled with high cost in his projects. Hence, CI suggested two ways as channels to communicate with SCDF.</p> <p>i. Attend presentations by SCDF. SCDF can invite SEAS to attend presentations together with other agencies (eg HDB, JTC). However, we must await a relevant SCDF presentation topic (eg next one is about fires in underground tunnels and not relevant to rooftop PV).</p> <p>ii. Develop guideline in collaboration with SCDF. By developing a guideline and include case studies and examples on what are the best practices in the PV building industry. SEAS members could form a working group to work on the guideline, where we will share it with SCDF for their inputs and then launch it.</p>	<p>PV project members who are keen to take part in the learners guide, please email to admin@seas.org.sg</p>

<p>Other issues:</p> <p>David from Valores Global had raised a question to see if any members were also struggling with the Civil Aviation Authority of Singapore (CAAS) on their height restrictions for PV on buildings. CI explained that for CAAS approval, there are 3 criteria – Height above the ASML (above mean sea level) for flight path, height of crane to hoist the PV and also reflection/ glare of the solar panels affecting flight control towers. Henry from Trina Solar advised that companies need to get approval from BCA to fulfil at least their 20% requirement and for EPCs to submit the anti-glare report, which would then help the approval process from CAAS.</p>	
<p>5. Any other matters</p> <p>Kavita presented on the secretariat updates and shared about the recent MOU signing of the Green Corridor Projects in Indonesia which will open up more opportunities for Singapore companies to expand their businesses in Indonesia. She also introduced the upcoming UAE business mission scheduled in May, and encouraged companies to sign up.</p> <p><u>Next Meeting</u> Annual General Meeting – 17 May 2023 Clean Energy committee meeting – 25 July 2023</p>	

Recorded by : Nur Asyiqin
Vetted by : Kavita Gandhi
Approved by : Christophe Inglin