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SCAN ME

GREEN STEEL APAC

DAY 1 - 15 NOV 2023, WEDNESDAY

07:15 Registration & Coffee

08:00 **CMT & Chairperson's Welcome**

08:10 **Opening Keynote Address**
Hon. Bill Johnston MLA, Minister for Mines & Petroleum; Energy; Hydrogen Industry; Industrial Relations
Department of Mines, Industry Regulation & Safety

08:40 **Creating a Sustainable Steelmaking Industry in Western Australia**
- Starting small & starting now with well understood steel recycling mini-mills to create the required skills, infrastructure & confidence
- Scaling up by combining WA's abundant iron ore & renewable energy resources & proven technology

Azlan Ho, Managing Director,
Green Steel of WA

09:10 **Accelerating Green Steel in Our Region**
- A regional approach to steel decarbonisation
- Towards a regional green iron market: trade & investment opportunities
- Policy & partnerships to realise Western Australia's green iron opportunity

Tristy Fairfield, Director,
Low Carbon Australia

09:40 Morning Coffee & Networking

10:20 **Decarbonization of Steel Industry in Japan: Role of green iron trade**
- Current status of Japanese steel Industry
- Challenges of Japanese steel industry decarbonization
- Strategies for decarbonization - Green iron trade as a key role
- Tokyo steel's strategic vision called as Tokyo Steel EcoVision 2050
- Examples of co-working for sustainable industries with green partners

Yuko Nishida, Senior Manager, Climate Change,
Renewable Energy Institute

Gaku Ito, General Manager,
Tokyo Steel Manufacturing

11:20 **Paving towards Sustainable Steel Business & Productions in South East Asia**
- Asia steel demand market outlook, and trends towards sustainable steel products
- Motivation factors & Opportunities for green steel production in Thailand
- Journey to secure partners & financing, and next steps

Oscar Perez, VP, Supply Chain,
Meranti Green Steell

11:50 Conference Luncheon & Networking

13:05 **Afternoon Chair's Remarks**

13:10 **Green Steel: Synergies between the Australian Iron Ore Industry and Product of Green Hydrogen**
- Strong correlation between hydrogen hubs & iron ore operations
- Optimised renewable generation mix reduces storage, curtailment & production costs
- Green Steel Economic Fairways Mapper – an online platform combining spatial & temporal mapping to improve site selection & system design, fostering cohesive green metals development

Dr. Changlong Wang, Research Fellow,
Monash University

13:40 **1.5C Science Based Targets for Steel: The heat is on-why science-based targets are the new' must-have for companies**
- What is Science Based Targets (SBT)?
- Why setting Science Based Targets?
- How steel producers and supply chain set SBT?

Brenda Chan, Technical Manager,
The Science Based Targets Initiative

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14:10 **Commercializing Europe's First Large-Scale Green Steel Plant with Partnerships**
- Introduction to H2 Green Steel: Pioneering the decarbonization of hard-to-abate industries
- Commercialization status update: Europe's first large-scale green steel plant
- The power of collaborative partnerships: Accelerating the transformation towards sustainable steel production

Michael Lövgren, Commercial Director - Global Growth & Hydrogen,
H2 Green Steel

14:40 Afternoon Tea & Networking

15:10 **Green Hydrogen & Ammonia for WA's Green Steel Making (tbc)**
Rob Grant, Managing Director - Head of Projects,
Pollination Group

15:40 **Role of Biomass in Industrial Decarbonisation**
- Raw material from nature-residues (wood based, agriculture residue)
- Simplified & sustainable processes
- Ongoing pursuits by power generation & industrial energy users

Yoshinobu Kusano, General Manager, Fuel Procurement, Biomass / Executive Advisor,
RENOVA

Yoshida Hinako, Trader, Energy Dept 2, Renewable Energy Section,
Hanwa

16:30 **Biochar & Biocarbon: Pioneering Green Solutions for Modern Steelmaking**
- Current State of Steelmaking & Lingering Dependence on Coal
- Understanding Biochar & Biocarbon-Revolutionizing Steelmaking Technologies
- Future Prospects of Biocarbon in Steelmaking: Positives, Negatives, & Implementation Pathways

Cameron Bell, CEO,
Pyrochar

17:00 Evening Cocktail Reception Sponsored by:

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18:15 End of Day ONE

DAY 2 - 16 NOV 2023, THURSDAY

09:00 **Chairperson's Remarks**

09:10 **Modelling of Green Steel Pathways in WA & Further Research on Viable Green Iron**
The MRIWA green steel model is an online tool which can evaluate pathways to green steel with various iron ore and energy inputs. The tool is evaluating the best product and scenarios for low intensity processing iron ore.
David Trotter, Research Portfolio Manager,
Minerals Research Institute of Western Australia

09:40 **Iron Ore Quality Requirements & Green Steel Technologies Processes**
Gilberto Cardoso, Founder & CEO,
Tarraco Commodities

10:10 **Upgrading Iron Ore Quality (topic to be advised)**
Alireza Rahbari, Research Fellow,
Australian National University

10:40 Networking & Morning Coffee

11:10 **Energiron: Flexible Solution for Iron Ore Reduction**
Marco Lapasin, Vie President, DRP Process,
Danieli & C. S.p.A.

11:40 **Topic to be advised**
Martin Smith, Business Development Director,
Primetals Technologies Limited

12:40 **Carbon Capture Collaboration & Economics**

13:10 Networking Luncheon

14:30 End of Conference

"Towards a Decarbonised Supply Chain in Steel Making"

GREEN STEEL APAC

Steel has been a foundational pillar of the industrialized world, and global demand is projected to grow by 15% between 2021 and 2050. Yet, its significance comes with a major environmental cost, as it stands among the leading sources of carbon dioxide emissions. According to Wood Mackenzie, iron and steel production alone contribute approximately 7% of global emissions.

The urgent need to decarbonize this sector has captured the attention of various stakeholders, including steelmakers, industrial end users, financiers, and policymakers. Achieving a world where global warming is limited to 1.5°C above pre-industrial levels requires a substantial investment of US$1.4 trillion ($2.07 trillion) in the steel industry. Additionally, this endeavor may lead to a fivefold increase in global demand for high-grade iron ore by 2050.

Europe has emerged as a pioneer in the drive towards green steel production, making tangible progress by shifting from mere announcements and pilot projects to practical commitments and funding decisions. Encouragingly, other regions are now following suit, actively embracing the pursuit of sustainable steel production.

Several strategies hold promise in reducing CO_2 emissions and reducing the industry's dependence on fossil fuels. These include adopting more fuel-efficient processes, implementing carbon capture technology to mitigate emissions, and incorporating lower-carbon fuels like biomass or natural gas. Increasing the utilization of electric arc furnaces (EAF) offers another avenue for emission reduction and sustainable steel production. These furnaces efficiently recycle substantial amounts of scrap metal, thereby lessening the demand for primary iron ore reduction while utilizing greener electricity instead of coal.

Hydrogen offers the most promising prospect for complete decarbonization, as it can be both produced and utilized without generating CO_2 emissions. With the aim to slashing emissions from the polluting sector by 90%, hydrogen coupled EAF is expected to drive a considerable increase in demand for direct reduced iron ore, high-grade iron ore, or steel scraps. Hence the challenge of sourcing sufficient high-grade iron ore becomes apparent. Presently, most of it

is produced in the Americas, Europe, and the Middle East, while good quality reserves can also be found in South Africa, India, Russia, and Brazil.

Endowed with abundant renewable resources and a significant exporter of iron ore, Australia is well placed to support this global pursuit. The present need is to strategically improve the lower quality ore produced, refining and processing it to suit hydrogen-powered electric arc furnaces. Western Australia has recently announced the Green Steel Opportunity report, charting pathways to leverage its iron ore to reduce emissions in steelmaking.

Embark on Asia Pacific's green iron and steel supply chain journey with CMT's Green Steel APAC conference on 15 - 16 Nov 2023 at the Parmelia Hilton Perth Hotel offers an insightful 1.5-day discussion for those interested in the sustainable future of the industry. Key sessions and highlights of the agenda include the following:

Key Highlights:

- Policy support & push for sustainable steel supply chain.
- Carbon markets & climate-aligned financing towards green steel.
- Greening the upstream mining operation, in iron ore & etc.
- Alternative (interim) fuel resources to wean-off coal/fossil fuel reliance -hydrogen as the eventual solution; what about in the short term transition?
- Decarbonising technologies/solutions in steel production.
- Towards carbon reduction - carbon capture (CCUS) & etc.
- Partnership/collaboration to achieve the eventual net-zero in supply chain.

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