Master Class on
'Financing Green Hydrogen in South Asia'
– 3 Part Series

Part-I: November 28, 2023 | 2 PM to 5:15 PM IST → Registration Link

Part-II: December 05, 2023 | 2 PM to 5:15 PM IST → Registration Link

Part-III: December 12, 2023 | 2 PM to 5:15 PM IST → Registration Link

1. Concept Note

To fight climate change and achieve Net-Zero targets of South Asian countries, efforts are being deployed to decarbonise the energy sector, which is the biggest contributor to carbon emissions. As a step further to deployment of renewable energy, Green hydrogen is being recognised worldwide as an attractive source of clean energy and multiple governments have made policy announcements and provided incentives to promote its early adoption. Green hydrogen is currently at a nascent stage and to accelerate its adoption, aspects pertaining to legal frameworks, costing, economics, risk assessment etc need to be discussed and clarified in detail. It is especially important for banks, financing institutions, equity investors etc. who shall be responsible for providing the investments for the green hydrogen sector.

Of the South Asian Nations, India being the economic leader has launched the 'National Green Hydrogen Mission' and is planning to setup green hydrogen hubs. In addition, numerous initiatives like policy incentives, offtake structures, regulations etc are being tested in various other countries. It is essential to disseminate the learnings/structures from such worldwide initiatives so that the adoption of green hydrogen in South Asia can be accelerated.

The South Asian economies can also come together to collectively define a strategic roadmap for setting up of 'Green Hydrogen Infrastructure' in the region which can act as a catalyst for economic growth and regional cooperation, considering the synergies existing between them. The huge renewable energy potential of South Asia (solar & wind in India and hydro in Nepal & Bhutan) coupled with the huge dependence on fossil fuels can be a driving factor for enhance collaboration amongst South Asian nations. South Asia also has the potential to emerge as a potential Global hub of 'Green Hydrogen' and act as a key supplier from an export perspective and subsequently assist other economies in their decarbonization efforts.

For South Asia, 'Green Hydrogen' can act as an economic catalyst for the smaller economies and expedite long awaited plans for the region. For instance, development of hydropower potential in Nepal & Bhutan can be expedited as hydropower can be a key component in production of Low carbon Hydrogen. Similarly the long-conceived plan of supplying electrical energy to Sri Lanka from India can be alternatively pursued through supply of Hydrogen.

With the above background, USAID through South Asia Regional Energy Hub (SAREH) in collaboration with the Ministry of New and Renewable Energy (MNRE), Government of India is organising a Masterclass for the South Asian countries to sensitise and simplify the Green Hydrogen Sector for the stakeholders in the region. SAREH is USAID's coordination and communication platform which operates under the USAID's regional energy program, the South Asia Regional Energy Partnership (SAREP), facilitating coordination and communication of USAID's Clean EDGE Asia activities within the region.

This Masterclass will enable participants to understand important aspects in Financing the Green Hydrogen value chain. Various experts will deliver sessions on Green Hydrogen Fundamentals, Costing & Economics, Global developments, Contracting Issues and Risk Management Practices covering all the aspects of financing a Green Hydrogen Project.

2. Agenda

Time (IST)	Session details	Proposed Speaker
	Day 1 – November 28, 2023	
2 pm – 2:10 pm	Inaugural Address	**Dinesh Jagdale**, Joint Secretary, MNRE (Recording)
2:10 pm – 3:40 pm	Introduction to Green Hydrogen Economy • Applications & demand of Hydrogen • Why Green Hydrogen? • Green Hydrogen value chain • Global Push for Green Hydrogen • Policy Announcements in South Asia • National Green Hydrogen Mission • Announced/ Under development GH2 projects	**Anuraag Nallapaneni**, Manager – Hydrogen, Sustainable Cities and Transport program, WRI India
3.40pm - 5.10pm	Costing and Economics of Green Hydrogen • Components of Landed Cost of GH2 • Input Costs: RE Profile & System Design • Factors affecting Production Cost • Storage, Transport/Distribution Costs • Hands-on exercise – Calculation of Levelised Cost of Green Hydrogen	**Vivek Salwan**, Investment Facilitation Expert, SAREP

Time (IST)	Session details	Proposed Speaker
5:10 pm – 5:15 pm	Conclusion	**Namrata Mukherjee**, Deputy Chief of Party, SAREP
Day II – December 5, 2023		
2 pm – 2:10 pm	Welcome Address	**Aaron Schubert**, Deputy Office Director, USAID
2:10 pm – 2:20 pm	Keynote Address	**Ajay Yadav**, Joint Secretary, MNRE

2:20 pm - 3.40 pm	Evolving Technologies for Green Hydrogen
	• Production Technology – Electrolysers
	• Global Electrolyser Market
	• Modes of Storage, Transportation and Distribution of Green Hydrogen
	• End Applications:
	  ○ Chemical Feedstock vs Energy Carrier
	  ○ Industrial Decarbonisation
	• Transport – Shipping, Fuel Cells
		Kiran Kumar Alla, Senior Director of Business Development, Plug Power

3.40 pm - 5.10 pm	Contracting issues in green hydrogen economy • Type of Contracts across the GH2 value chain – Input Power, Equipment supply, Storage (Tolling agreements), Transport, Certification • Salient Features of sale and purchase Commodity contracts – Addressing GH2 specific issues through novel contractual features • GH2 Specific terms for contracts: Quantities, Pricing & Certification • Principles of Cross-border contracting	**Riyaz Bhagat**, Partner, Trilegal
5:10 pm – 5:15 pm	Conclusion	**Mayank Bhardwaj**, Procurement and Private Sector Lead, SAREP
Day III – December 12, 2023		
2:00 pm – 2:05 pm	Welcome Remarks	**Monali Zeya Hazra**, Regional Energy & Clean Energy Specialist, USAID/India
2:05 pm – 3:00 pm	Risk Management for GH2 projects (Developers' perspective) • Policy Initiatives required for development of Green Hydrogen Economy • Risk Management and Allocation • Innovative Financing Instruments for developing Green Hydrogen Projects • Global projects: Enabling Features of these projects	**Amit Sengupta**, Corporate Finance, Avaada

Time (IST)	Session details	Proposed Speaker
	• Potential of South Asian region as a Green Hydrogen Hub	
3:00 pm – 3:30 pm	Risk Management for GH2 projects (Investors' Perspective) • Macro-level and Project-level Risks • Risk Management Evaluation by creditors – Expected Loss Framework • Policy level Initiatives for Risk reduction • Addressing risks through Deployment of Concessional Capital	**Anurag Mishra**, Senior Energy Sector Lead, Green Climate Fund (Recording)

3:30pm - 5.00pm	Global Perspective – Standards, Policies & Regulations
	• Financing Initiatives of DFIs & other global investors
	• Suitable Financing Instruments for GH2 projects
	• Regulatory instruments for increasing GH2 adoption (Demand/Supply side)
	• Policy Interventions & Initiatives:
	  ○ EU: Hydrogen Banks/Valleys
	  ○ USA: Inflation Reduction Act
	• Need & Process of GH2 Standards
		Nishaanth Balasahanmugam, Country Manager-India, The Green Hydrogen Organisation (GH2)
		
		Joe Williams, Director of Strategy and Communications, The Green Hydrogen Organisation (GH2)
		
		&
		Sanmit Ahuja, Senior Advisor of Finance and Strategic Projects, The Green Hydrogen Organisation (GH2)

5:00 pm – 5:10 pm	Conclusion	**Bhumika Suri**, Manager – Training and Events, SAREP

SPOC(s) for the event:

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