

**Deep dive session:** Unlocking Green Hydrogen's Potential in the Asia-Pacific

**Organizers:** Technology Executive Committee (TEC), High-Level Champions, IRENA

**Time:** Thursday, 8 July 2021, 9:00 - 11:00 GMT+9 (02:00 - 04:00 CEST)

**Venue:** Virtual platform, Asia Pacific Climate Week 2021

**Watch on demand:** <https://www.youtube.com/watch?v=u89toHouU7E>

**Link to event page:** [https://unfccc.int/ttclear/events/2021/2021\\_event03#greenpotential](https://unfccc.int/ttclear/events/2021/2021_event03#greenpotential)



### List of speakers

- Elizabeth Press, *Director of Planning and Programme Support, IRENA (moderator)*
- Gonzalo Muñoz, *High-Level Champion of the COP 25 Presidency of Chile*
- Stephen Minas, *Chair, Technology Executive Committee*
- Joseph Tay, *Deputy Director, Strategic Issues, National Climate Change Secretariat, Strategy Group, Prime Minister's Office, Singapore*
- Alli Devlin, *University of Oxford, Systems Engineering, YOUNGO*
- Frank Wouters, *Chairman, Middle East and North Africa (MENA) Hydrogen Alliance*
- Chris Bataille, *Associate Researcher, Institute for Sustainable Development and International Relations*
- Hyung-chul Lee, *Director, Hydrogen Business Department, POSCO*

### Description

Substantial growth opportunities abound for the green hydrogen sector in Asia Pacific over the coming years.

A key driver to its development is closely linked to the abundance of cheap low-carbon electricity for its production via electrolyzer technologies. The diffusion of renewable energy in the region, and its rapidly falling costs, will push production costs of hydrogen down and drive adoption of the technology.

Asia Pacific is the fastest-expanding region for energy demand and renewables growth over the coming decades, and it may represent a high potential market for green hydrogen. Nevertheless, several challenges may impede green hydrogen's full contribution to the energy transition of the region.

This deep-dive discussed the status of play of green hydrogen in the Asia-Pacific region and elaborate on drivers for its effective deployment around the question "How can the potential of green hydrogen be unlocked and accelerated in Asia-Pacific?"

Outcomes of the deep dive contributed to the development of a Technical Paper on climate technologies by the Technology Executive Committee. The session was also an opportunity for the High-level Champions to bring non-State actors in the region whose areas of expertise can help national governments implement their national plans by using the options for policies, technologies and solutions described in the Marrakech Partnership Climate Action Pathways as the basis for collaboration and inputs are received on to reflect regional context and needs.

### **Key takeaways**

*Representatives from the Government of Singapore, POSCO steel company, MENA Hydrogen Alliance, University of Oxford, Systems Engineering; YOUNGO and the Institute for Sustainable Development and International Relations stressed that the next two years are critical to integrate green hydrogen in the energy transition.*

*Despite its potential, the deployment of green hydrogen faces challenges including high costs for production, transportation and storage, lack of social awareness and limitations for large-scale development.*

*To unlock these challenges, the speakers discussed the importance of triggering demand throughout the whole value-chain; ensuring a coordinated approach across all end-use sectors; carbon pricing regulations; R&D towards innovative technologies; highlighting the benefits and safety of green hydrogen; and small-scale usage to gain experiences.*

*A key element is to build partnerships with actors with similar goals and develop common standards and frameworks. For example, if one country were to build green hydrogen-based ports and no other country does, ships wouldn't be able to re-fuel, breaking down the whole system. One actor alone cannot transform the system - therefore, collaboration is essential.*

### **Quotes from the session**

*"We are in a race to deliver a healthy, resilient and zero-carbon world. In this race towards a net-zero and resilient future, green hydrogen is becoming increasingly recognized as a viable solution. It is both technically and economically ready to be scaled up" – Gonzalo Muñoz*

*"While many countries' existing hydrogen strategies are rich in ambition, they are poor in policy detail. There is an urgent need for joint public and private sector collaboration" – Frank Wouters*

*"This is a great way to overcome the social barrier to success and nurture a well-informed society that embraces the energy shift" – Alli Devlin*