Mission Innovation Clean Hydrogen Mission Workshop
Hydrogen for Cargo Handling at Ports

- Hydrogen policy and technology for port application -

January 26 (Thu), 2023

7:00-9:00 EST / 9:00-11:00 CLST / 12:00-14:00 BST / 13:00-15:00 CET / 21:00-23:00 JST / 23:00-01:00 AEDT

Program (time: CET)

13:00-13:03 Host's Welcome

Masaomi KOYAMA
Mission Innovation Steering Committee Member
Director, International Affairs Office, Industrial Science and Technology Policy and Environmental Bureau,
Ministry of Economy, Trade and Industry (Japan)

13:03-13:08 Mission Innovation: Clean Hydrogen Mission

Matthijs SOEDE
Director, Mission Innovation Clean Hydrogen Mission
Research Programme Officer, Energy Directorate, DG Research and Innovation **(European Commission)**

13:08-13:10 Meeting protocol

Moderator – Akiteru MARUTA

13:10-13:55 Government Perspectives Session

USA: National Clean Hydrogen Strategy and Port Activities

Sunita SATYAPAL
Director, Hydrogen and Fuel Cell Technologies Office,
U.S. Department of Energy

This presentation will cover an overview of the U.S. Department of Energy (DOE) Hydrogen Program and outline key priorities within the DOE National Clean Hydrogen Strategy and Roadmap. This includes the Hydrogen Shot to reduce the cost of clean hydrogen by 80% to $1 per 1 kilogram in 1 decade ("1 1 1") as well as ramp up of hydrogen at scale across applications. Topics consist of the Bipartisan Infrastructure Law, also known as the Infrastructure Investment and Jobs Act, which includes $9.5 billion for hydrogen technologies. DOE will discuss the various consortia and priorities through national laboratory, university, and industry projects. Preliminary input from stakeholder feedback and DOE workshops will also be presented.

Europe: European initiatives to promote hydrogen in port operations

Bart BIEBUYCK
Executive Director
Clean Hydrogen joint undertaking

The Clean Hydrogen Partnership is a public private partnership between the European Commission, The Industry "hydrogen Europe" and the research community "Hydrogen Europe Research", the main purpose is to provide grants to consortia to accelerate the development of hydrogen and fuel cell technologies. In Europe the partnership set up a European network for hydrogen in ports where during two years, the quantities of hydrogen required in various EU ports activities is inventoried and regulatory and research needs identified. Finally this will lead to a roadmap for hydrogen in European ports. Funded projects like H2PORTS in the port of Valencia where special port vehicles will be put on hydrogen, provide us with first results on which other ports can build further.

Japan: Hydrogen and Fuel Cells perspective in Japan

Eiji OHIRA
Strategy Architect
New Energy and Industrial Technology Development Organization (NEDO)

The technology development program for hydrogen and fuel cells in Japan is shifting to the phase of accelerating social implementation. The presentation will deliver NEDO's recent technology development efforts with the key words of scale-up and integration.

13:55-14:55 Technology/industry session

USA: Fuel Cell Hybrid Container Handler for Ports

Gus BLOCK
Director of Marketing & Corporate Development
NUVERA FUEL CELLS, LLC

A Hyster® H800-1050HD/S fuel cell hybrid top loading container handler was deployed at the Port of Los Angeles in October 2022 and is in routine operation. The machine can operate 24 hours/day with hydrogen range extension and wireless charging. The container handler is powered by two Nuvera® 45 kW fuel cell engines and a 130 kWh lithium ion battery, and has 30 kg of on-board hydrogen storage. The presentation will provide an overview and describe the project status.

Europe: H2PORTS - Implementing Fuel Cells and Hydrogen Technologies Port Operations

Aurelio LÁZARO CHUECA
R&D Project Manager
Fundación Valenciaport

Fundación Valenciaport is coordinating H2PORTS project aiming to test hydrogen powered handling machinery in port terminals daily operation. The presentation covers the current status of the project including the hydrogen supply solution developed, technical details of the terminal machinery involved the first results of the hydrogen refueling system fully operational on-site.

Japan: Zero Emission RTG

Kinya ICHIMURA
Manager, Head of Strategic Planning Gr.
MITSUI E&S MACHINERY

MITSUI E&S MACHINERY are developing hydrogen fuel cell powered RTG, so called Zero Emission (ZE) RTG under the Japanese sub-governmental organization funding program. MES-M will complete in-house development by March 2023 in Oita, Japan, and will begin on-site trial since 2Q of 2024 in Los Angeles, USA. MES-M received the orders of six Near Zero Emission (NZE) RTG from Japanese container terminals witch installs small diesel engine generator (DG) set.

14:55-15:05 Remarks from Governments

15:05-15:10 Closing Remarks

Registration: https://gaiax.webex.com/weblink/register/r995bd08868f3fad62f96d86b724db87f
Registration close: January 25, 2023 of each time zone (Archive is available for limited period upon the registration)

Language: English (Japanese translation is available for live streaming. Archive is in English only)

Platform: WebEx

Host: Ministry of Economy, Trade and Industry (METI), Japan

Contact: For questions on workshop program: Dr. Akiteru MARUTA, Technova Inc. maruta@technova.co.jp
For questions on registration and workshop: BORDER Inc. admin-01@borders.co.jp