



Post Event Report

2022

December 5-7, 2022
Oman Convention & Exhibition Centre,
Muscat, Sultanate of Oman





“

Guiding our transition to clean energy is a bedrock commitment by the government of the Sultanate of Oman, alongside the international community, to enable our warming planet to heal for our sake and for the generations to come.

”

H.E. Salim bin Nasser Al-Aufi

Minister of Energy and Minerals,
Sultanate of Oman

EXECUTIVE SUMMARY

The second edition of the Green Hydrogen Summit Oman and Exhibition 2022 (GHSO) was held during December 5-7, 2022, under the patronage of the Omani Ministry of Energy and Minerals with the attendance of His Excellency the Minister, Eng. Salim bin Nasser Al Aufi. GHSO took place at Oman Convention & Exhibition Centre in Muscat and brought together decision-makers and energy industry stakeholders from different countries around the world. GHSO is aligned with Oman's energy transition goals and plans to achieve net-zero carbon emissions by 2050. All aspects of the International Hydrogen Industry were covered in the conference themes:

- Green Hydrogen Economy & Strategy
- Investments and Financing
- Green Hydrogen Projects Financing & Bankability
- Oman as a Green Hydrogen Hub
- Green Hydrogen Supply Chain
- Global Green Hydrogen Industry Review & Experiences
- Technological Development of the Green Hydrogen Value Chain



ATTENDEES



2000+ Delegates

490+ National & International Companies



GHSO 2022

OVERVIEW

Visitors
5000+

Gross SQM
10,000

Exhibiting
Companies
39

Countries
Represented
102

Conference
Delegates
2000+

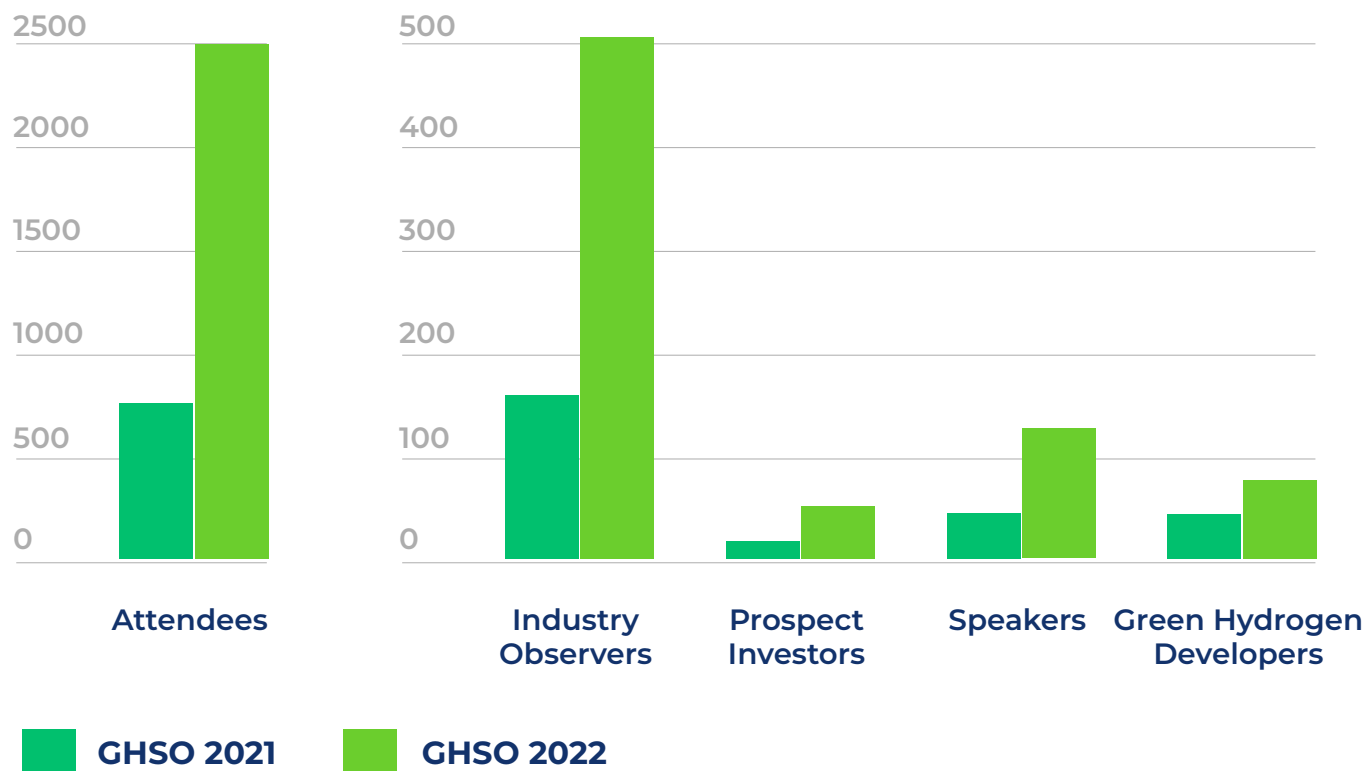
Conference
Speakers
92

Conference
Sessions
20

Online
Viewers
1486

GROWTH CHART

The chart illustrates the growth by comparing the previous event (GHSO-2021) with the latest event (GHSO-2022) with the data below.



| | ATTENDEES | INDUSTRY OBSERVERS | PROSPECT INVESTORS | CONFERENCE SPEAKERS | MASTERCLASS SPEAKERS | GREEN HYDROGEN DEVELOPERS |
|------|-----------|--------------------|--------------------|---------------------|----------------------|---------------------------|
| 2021 | 751 | 169 | 11 | 41 | 4 | 42 |
| 2022 | 2000+ | 500+ | 52 | 92 | 15 | 66 |



**ENERGY EXECUTIVES'
CIRCLE**



2 CONFERENCES



4 MASTERCLASSES



EXHIBITION



**ENERGY
FUTURE LEADERS'
PROGRAMME**



**5 MoU SIGNING
CEREMONIES**



**KOREA-OMAN
GREEN HYDROGEN
STRATEGIC FORUM**



**5TH DECEMBER 2022
KEMPINSKI HOTEL**

Session Theme: Energy Security and Green Hydrogen

The opening event of GHSO was the Energy Executives' Circle a high-level discussion on hydrogen and decarbonization was held on 5th December 2022, in collaboration with International Energy Agency (IEA). Dr. Manal Shehabi moderated the session with esteemed panelists:



HE SALIM BIN NASSER AL-AUFI
Minister of Energy and Minerals
Sultanate of Oman



H.E. M.G. MICHEL HEIJDRA
Deputy Vice Minister for Climate
and Energy at the Ministry of
Economic Affairs and Climate Policy,
Netherlands



MR. HIROHIDE HIRAI
Vice Minister for International
Affairs at the Ministry of Economy,
Trade and Industry (METI), Japan



H.E. JOÃO GALAMBA
Secretary of State for the
Environment and Energy, Portugal



H.E. M.G. MICHEL HEIJDRA
Deputy Vice Minister for Climate
and Energy at the Ministry of
Economic Affairs and Climate Policy,
Netherlands



DR. MANAL SHEHABI
Oxford University,
SHEER Research & Advisory Ltd and
IEA Consultant



CONFERENCE

Under the patronage of the Ministry of Energy and Minerals, GHSO was held into 2 conferences



1. STRATEGIC CONFERENCE

Strategic conference in 10 sessions and panel discussion covered the following topics:

- Oman Green Hydrogen Economy and Strategy
- Global Hydrogen review
- Oman as a green hydrogen hub
- Panel Discussion: Oman Green Hydrogen Hub – Infrastructure
- Green Hydrogen Value Chain - Global & Local Perspective
- Panel Discussion: Green Hydrogen Value Chain
- Investment and Partnership
- Panel Discussion: Green Hydrogen Investment
- Green Hydrogen Projects Finance and Bankability
- Panel Discussion: Green Hydrogen Finance and Bankability
- Spotlight on the Green Hydrogen Projects in Oman

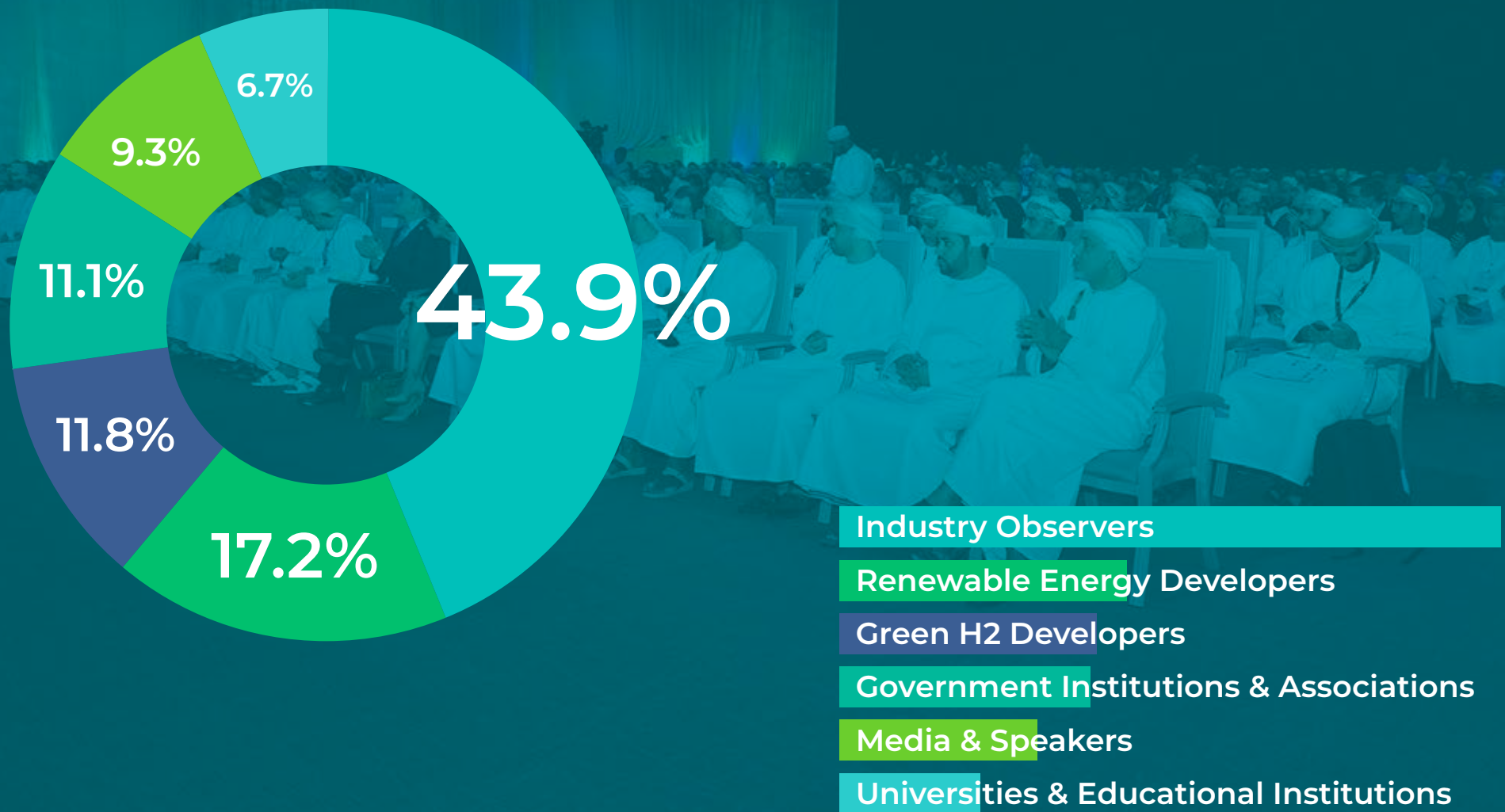
2. TECHNICAL CONFERENCE




Technical Conference in 5 sessions covered the following topics:


- Green Hydrogen Production
- Green Hydrogen Deployment
- Transportation and Storage
- Certification and Regulation

CONFERENCE ATTENDANCE DISTRIBUTION





Dr. Hans Dieter Hermes
Vice President Hydrogen,
Worley



“I had a fantastic three days at the Green Hydrogen Summit Oman last week. What an energetic experience!”

Monica Trench
Head of Hydrogen Oman at bp



STRATEGIC CONFERENCE PANELISTS



H.E. ENG. SALIM AL AUFİ
Minister of Energy and Minerals,
Sultanate of Oman



H.E. DR. M.G. MICHEL HEIJDRÄ
Deputy Vice Minister for Climate and Energy at the Ministry of Economic Affairs and Climate Policy, Netherlands



ELLEN VON ZITZEWITZ
Deputy Director Energy Cooperation with North Africa, the Near and Middle East, German Federal Ministry for Economic Affairs and Climate Action (BMWK)



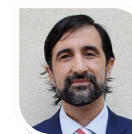
STEVE PHIMISTER
Managing Director,
Petroleum Development Oman (PDO)



DR. FATİH BIROL (VIRTUAL)
Executive Director,
International Energy Agency (IEA)



TOM CLARKE
GM Commercial and New Business Development Oman, Oman Shell



JAVIER LOPEZ CARVAJAL
Vice President of Clean Energy, OQ Alternative Energy



REGGY VERMEULEN
Chief Executive Officer,
Port of Duqm



ALEJANDRO LONGUEIRA
Senior Project Manager,
Roland Berger



KHALIL AL BALUSHI
Vice President Marine
Asyad Shipping



DR. ANDREA LOVATO
EVP - Global Head of Hydrogen
(Acting Head of Renewable Development), ACWA Power



WERNER PONIKWAR
Chief Executive Officer,
thyssenkrupp nucera



MONICA TRENCH
Head of Hydrogen,
bp Oman



DR. HANS DIETER HERMES
Vice President Hydrogen,
Worley



DAMIEN EYRIÈS
Vice President - Green Hydrogen Value Chain Business Unit,
Technip Energies



MATTEO TRASCINELLI
Vice President - Global Business Development Manager,
ABB Energy Industries



TOM COSTA
Technical Advisor,
Hydrom



NICOLAS BRAHY
Co-founder of FiveT Hydrogen
General Counsel, ESG and Public Affairs Director of Hy24



VIKRAM KAPUR
Chief Growth Officer,
ReNew Power



JOSH CARMICHAEL
Vice President - Hydrogen,
Wood PLC



KHALID AL BARWANI
Deputy General Manager and Head of Wholesale Banking Group, Bank Nizwa SAOG



KENICHIRO KITAMURA
Chief Representative for the Middle East, Dubai Representative Office,
Japan Bank for Intl Cooperation (JBIC)



THOMAS VAN LITH
Vice President Middle East, Africa and Turkey,
Deutsche Bank



OLIVER PHILLIPS
Middle East & Africa Lead,
Sustainable Finance,
Standard Chartered Bank



TONCI BAKOVIC
Chief Energy Specialist,
International Finance Corporation (IFC)



PAUL SMITH
Vice President, Sales
Energy Dome



NIMA ABU WARDEH
Former BBC anchor



MATTHIAS SCHIMMEL
Project Manager Energy Cooperation with the Gulf region,
Associate Director,
Guidehouse



PAUL WALLACE
Team Leader for Middle East Energy & Commodities,
Bloomberg



DR. YOUSUF HAMED AL BALUSHI
Founder,
SIG



JAVIER DOBLAS
Partner at Boston Consulting Group (BCG)

STRATEGIC CONFERENCE SPEAKERS



ENG. ABDULAZIZ AL SHIDHANI
Director General of
Green Hydrogen and Renewable,
Ministry of Energy and Minerals,
Sultanate of Oman



DR. FIRAS AL-ABDUWANI
Acting Managing Director,
Hydrom



ENG. NAJLA AL JAMALI
Chief Executive Alternative Energy, Energy & Investment Consultant
OQ



DR. ABDULLAH AL ABRI
Energy & Investment Consultant
IEA



DR. KHALIL AL HANASHI
Energy Renewal
HY-FLY
(National Hydrogen Alliance)



JULIE SHUTTLEWORTH
Global Growth,
Fortescue Future Industries



AHAD AL GHAITHI
Mechanical Engineer –
Hydrogen Team,
Petroleum Development Oman
(PDO)



HARSSHA SHETTY
Chief Executive Officer,
Jindal Shaded Iron & Steel



JOSE BERMUDEZ MENENDEZ
Energy Technology Analyst,
IEA



PAUL BOGERS
Vice President – Hydrogen
Shell



AHMED HABABOU
Vice President of Green Hydrogen,
Air Products



NICO VAN DOOREN
Head of Business
Development,
Port of Rotterdam



EMILE HOOGSTEDEN
Chief Executive Officer,
SOHAR Port



ESSAM AL SHEBANY
Vice President – Sustainability,
ASYAD



AHMED ALI AKAAK
Acting CEO,
Duqm Special Economic Zone



NIKHIL AGRAWAL
Vice President of Business
Development,
TAQA Group



AHMED ALI SALIM AL-NADABI
Acting Chief Regulatory Officer,
OETC



ERIK SOLHEIM
Chairman of the green Hydrogen
Development Plan (GHDP),
Green Hydrogen Organisation



ELISA ASMELASH
Renewable Energy
Technology Analyst,
IEA



CÉDRIC ROUX
Green Hydrogen
Technical Manager,
Total Energies



ZAHRAN AL ABRI
ICV Development Manager,
Petroleum Development Oman
(PDO)



AHMED OSMAN
Regional Business
Development Manager,
Equinor



KAZUYA MIYAZAKI
Director,
Yamanashi-Hydrogen
Company, Inc.



BASIL ELZEIN
Integration Manager,
Oman Shell



MANSUR ZHAKUPOV
Vice President – Hydrogen;
Total Energies



KAMAL ABI-SALLOUM
Vice President
Hydrogen MENA,
BP



SANAA HICHAMI
Senior regional investment
advisor to Power Africa Program,
Tony Blair Institute for Global change



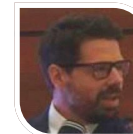
GHALIB AL MAAMARI
Vice President–
Low Carbon Molecules,
OQ



SULE ERKOC
Senior Lead Project Developer,
Marubeni



DR. KERRY-ANN ADAMSON
Global Strategic
Advisor – Hydrogen,
Worley



DANIEL RATHWELL
Head of UK Export Finance for
Oman & Qatar



DAVID LIVINGSTON
Senior Advisor, Office of the
Special Presidential Envoy for Climate
U.S. Department of State



KISHOR RAJHANSA
Chief Operations Officer
Global Carbon Council,
Gulf Carbon Council



AHMED SALIM ABDULLAH AL RAWAS
GEO Project Lead – Low Carbon
Molecules Department,
OQ



JONATHAN O'TOOLE
Project Manager,
Mechanical Engineer,
Worley



HAMMAD MASOOD
Director Business
Development–Green Hydrogen,
ACWA Power



RAJAT SEKSARIA
Chief Executive Officer,
ACME Group

TECHNICAL CONFERENCE SPEAKERS



PROF. MICHAEL MODIGELL
Independent Consultant/
Advisor



ERIKA NIINO-ESSER
Business Developer & Technical
Specialist for Hydrogen &
Green Chemicals, Thyssenkrupp nucera



DEVON HYVER
Director Sales &
Market Development
EMEAI, Plug Power



DR. JUERGEN MEINHARDT
Project Manager
Fraunhofer (ISC)



DR. MARTIN PETERS
Head of Department
Materials Chemistry
Fraunhofer (ISC)



PATRIC FARKAS
Market Development
Manager
Wartsila Energy



MARTIN WENG
Managing Director
Aixprocess GmbH



KHALID OUMEJJLOUD
Managing Director
PSM Thomassen Gulf



JOCHEN BARD
Director of Energy Process
Technology Division
Fraunhofer (IEE)



NAHLA ABID
Vice President, Sales &
Strategy Middle East & Caspian
Sea Region, Bureau Veritas



DR. PETER GLESS
Senior Business
Development Manager
Hydrogenious LOHC
Technologies GmbH



PHILIPPE LAVAGNA
Product Account Manager
for New Energies Terminals
SBM Offshore Group



NASSER AL RIZEIQI
Director of Hydrogen Policies &
Strategies Department
Ministry of Energy and Renewals,
Sultanate of Oman



RENÉ SEJER LAURSEN
Director-Fuels &
Technology
Eagle ABS



DR. SAIF AL GHAFRI
University of Western Australia;
Future Energy Exports
Cooperative Research Centre



GIOVANNI SARTI
Strategic DTI Manager for Hydrogen
fueled Gas Turbines and Systems,
Baker Hughes



YASSER TAQI
Partner,
Dentons



JÉRÉMIE ESQUIER
Power-to-X Market Director,
Technip Energies



MARIYA AL TOUBI
Researcher,
Sultan Qaboos University



DR. AHMED AL HATROOSHI
Project Manager,
Sur Hydrogen Cluster
Pre-feasability Study,
HY-FLY(National Hydrogen Alliance)

MASTERCLASSES

4 categories Masterclasses each category included 3 classes with over 35 attendees in each class and discussed the following:

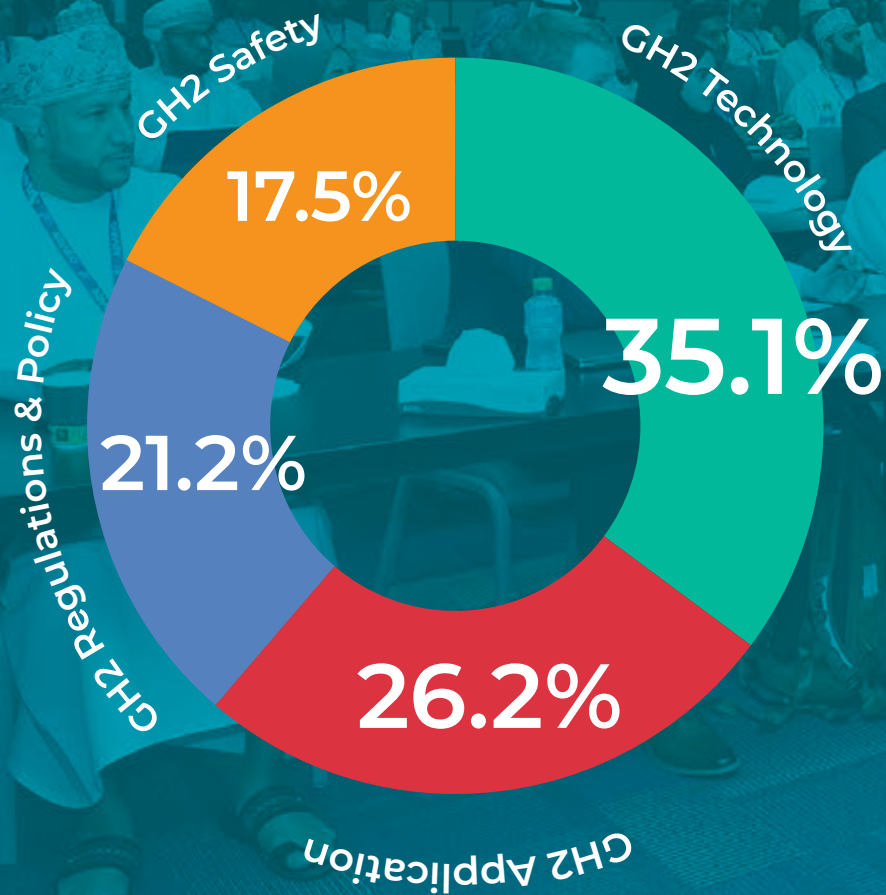
- Green Hydrogen Technology
- Green Hydrogen Application
- Green Hydrogen Regulations & Policy
- Green Hydrogen Safety



15
SPEAKERS



MASTERCLASSES ATTENDANCE DISTRIBUTION



The masterclasses managed to host

326 INDUSTRY
OBSERVERS

interested in the development of
Green Hydrogen Technology in Oman

MASTERCLASS SPEAKERS



Simon Little
Director, Clean Energy Sales
Middle East, Africa and India,
Chart Industries



Peter Gerstl
Director of Hydrogen
Sales EMEA,
Chart Industries



Dr. Jauad El Kharraz
Executive Director
Regional Center for
Renewable Energy and
Energy Efficiency (RCREEE)



Andrea Dertinger
Consultant
Guidehouse



Muthana Shirzad
CEO and Founder
Protium Technologies



Devon Hyver
Director Sales and Market
Development EMEA,
Plug Power



Joop Daamen
Tender Manager,
Plug Power



Nabil Nachi
Head of Fuel Cell
Electric Commercial
Vehicle Development,
Hyundai Motor Company



Nahla Abid
Vice President, Sales &
Strategy, Middle East and
Caspian Sea Region
Bureau Veritas



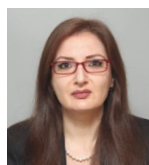
Florian Michl
Principal Engineer Hydrogen
Safety and Performance,
TÜV SÜD



Alan Zhao
Director
New Power Business
Cummins - Africa &
Middle East Region



Jeffrey Beyer
Jeffrey Beyer
Managing Director
Zest Associates



Julieta Nikova
Methodologies Manager
Global Carbon Council,
Doha-Qatar



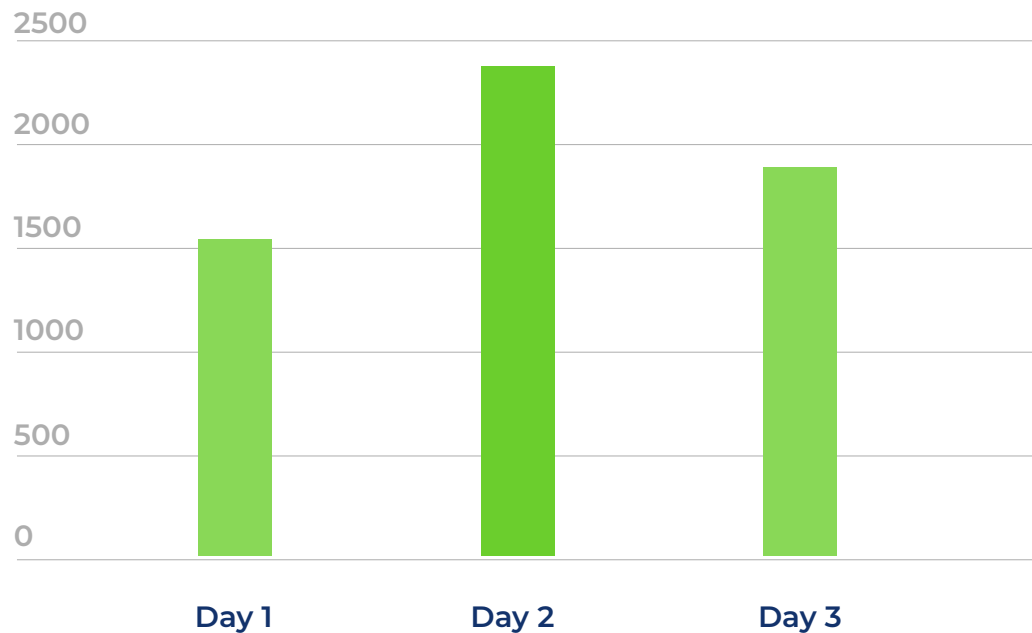
Subhendu Biswas
Director,
Climate Action
Global Carbon Council



Frank Yu
Global Vice President,
Power to X Business,
Envision Group

EXHIBITION

On space of 10.000 sqm, The First edition of the Green Hydrogen Exhibition had 39 Local and International Exhibiting companies and over 5000+ visitors throughout the 3 days. The exhibition featured the Toyota Mirai Car the world's first mass-produced hydrogen fuel cell vehicle for the first time in Oman.



39
Booths

5000+
Visitors over the span of 3 days

782
Pre-registered exhibition visitors
from the website



EXHIBITION HIGHLIGHT

The Toyota Mirai automobile made its debut in Oman at the Green hydrogen Summit and Exhibition Oman.

The Toyota Mirai is a four-door saloon and the world's first mass-produced hydrogen fuel cell vehicle. Its performance is comparable to that of conventional internal combustion engines. Electricity produced by a chemical reaction between airborne oxygen and hydrogen in an onboard fuel cell powers the Mirai's motor.



ENERGY FUTURE LEADERS' PROGRAMME

A sub-program targeted to encourage future generations into energy research, the program reached 120 local and international universities. 50 research received, 10 research qualified as finalists and 3 were chosen as the top research.



to large scale
plants

support H₂ and increase pressure to
feed turbine

- High pressure ratio technology to
reduce number of compressors

80% (Combined Heat and Po

- Hydrogen start up capab
- Burn gas blends up to 10
- Fuel blending system ma

Hy carrier for renewables...enabled by Turbomachinery



“It was a pleasure to speak at the technical conference Green Hydrogen Summit & Exhibition Oman. I learned a lot from several sessions at the conference and exhibition, some of which I had to attend online due to other commitments during the conference. It was great to meet so many colleagues in the field of clean hydrogen.”

Dr. Ahmed Al Hatrooshi

Project Manager, Sur Hydrogen Cluster Pre-feasibility Study,
HY-FLY (National Hydrogen Alliance)

MoU SIGNINGS

GHSO brought together expertise and international companies and opened collaboration opportunities in order to enhance the local Hydrogen seen. On the Side of the summit, 5 MOUs were signed and a number of G2G and B2B Bilateral meetings were held:

1

OQ – Oman's global integrated energy group – has signed a memorandum of cooperation with global shipping giant AP Moller-Maersk, Japan's Sumitomo Corporation, and Oman's Asyad Group to study the feasibility of producing and supplying green fuels at Salalah and Duqm ports.



MAERSK

Sumitomo Corporation Middle East FZE



2

Sohar International has inked a Memorandum of Understanding (MoU) with Fortescue Future Industries (FFI), a global leader in developing green energy and renewable energy projects across the world.



3

Sohar International signed an agreement with the International Finance Corporation (IFC), a member of the World Bank Group, to further expand the partnership offering financing facilities to the Bank to finance green projects in Oman.



4

Asyad and Hyundai Motor Group



5

OQ's Alternative Energy Business Unit signed a memorandum of understanding (MoU) with Oman Indian Fertilizer Company (OMIFCO) to study a plan to achieve a carbon cycling economy.





“I had great pleasure in taking part of the Green Hydrogen Summit in Muscat. A very well organized and well attended conference in one of my favorite cities. The amount of energy and enthusiasm about the role of hydrogen in the energy transition was amazing.”

Ahmed Osman

Regional Business Development Manager,
Equinor



KOREA-OMAN GREEN HYDROGEN STRATEGIC FORUM

On the sidelines of GHSO The Korean Embassy and the H2KOREA (Hydrogen Convergence Alliance of Korea) co-hosted the Korea-Oman Green Hydrogen Strategy Forum 2022.

The Participants reached a common perception as the following:

- Agreed the Green Hydrogen Economy represents huge industrial and environmental opportunities.
- Recognized the collective progress in pursuing solutions for creating and enabling the environment to realize the green hydrogen industry while addressing the challenge.

Acknowledged that the shared priorities and commitments of Korea and Oman to the development of the green hydrogen industry would open up yet other promising opportunities.





BENCHMARK ACHIEVEMENTS



Highlighted Oman
on the map of the
green hydrogen
industry



Showcased investment and
partnership opportunities in
Oman and encouraged
investors



Connected regulators,
experts, and industry
leaders

Governmental bilateral meetings were held during the conference



MEDIA COVERAGE



Strategic Conference Panelists

Panel Moderators

Strategic Conference Speakers

GREEN HYDROGEN SUMMIT OMAN

GLOBAL SUMMIT & EXHIBITION

DEC 5-7, 2022

BE A PART OF OMAN'S ENERGY TRANSITION EVENT

www.greenhydrogensummitoman.com

AT OMAN CONVENTION & EXHIBITION CENTRE



SOCIAL MEDIA & MARKETING

786,915

Social media activities

315,828

Ad impressions

9770

Followers across all platforms

253,000+ Website views

Post Event Report 2022

DIGITAL MEDIA



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It was a great pleasure to see many colleagues and friends. We had a rich discussion and Q&A that covered many areas. Thanks to the organizers for the invite.

Dr. Manal Shehabi

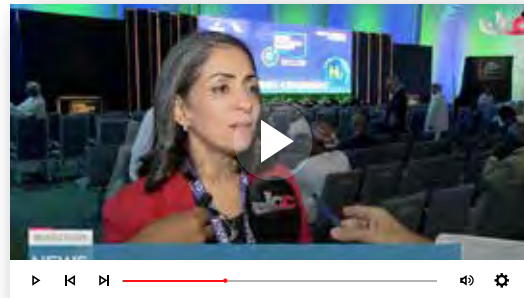
Oxford University,

SHEER Research & Advisory Ltd and IEA Consultant



Post Event Report 2022

NEWS COVERAGES

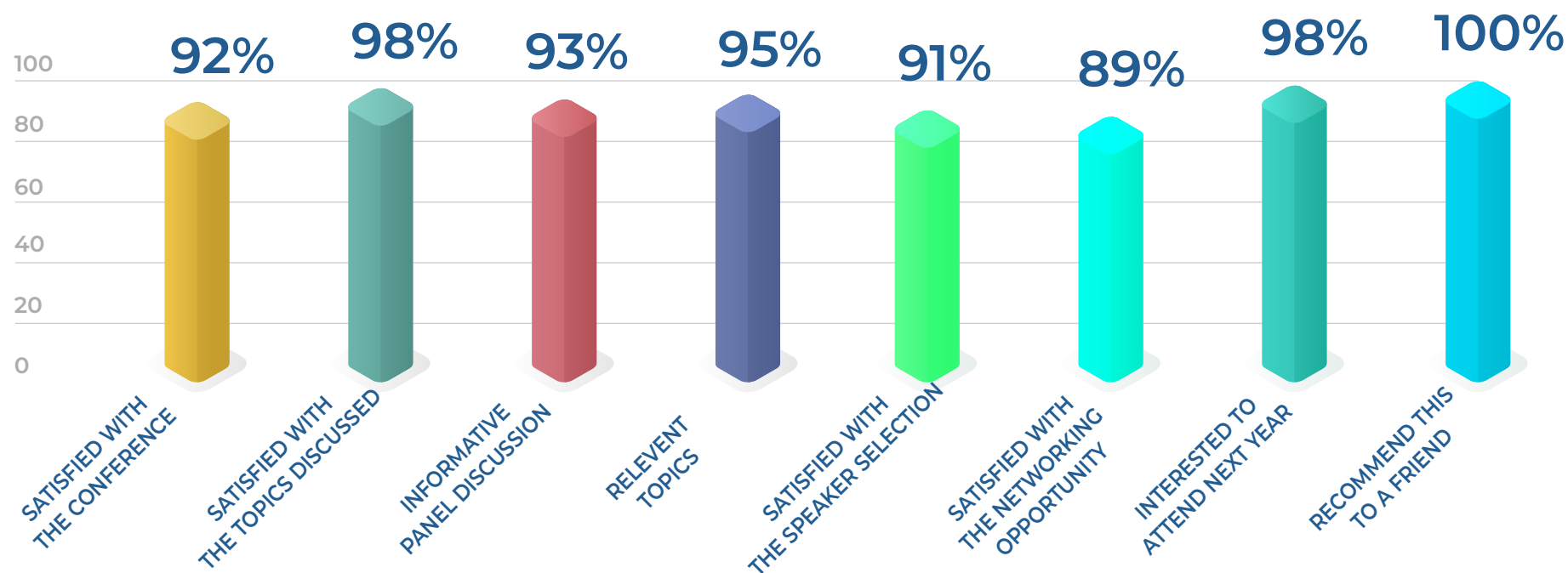


“It was a pleasure to participate as the principal sponsor in the 2nd Green Hydrogen Summit Oman. At Oman Shell, we see this summit as a platform for pivotal discussions for sustainable development and to pave the way to achieve Oman and Shell’s 2050 Net Zero ambitions.”

Walid Hadi

Senior Vice President, Country Chair, Oman Shell

FEEDBACK SURVEY CHART



“Great opportunity to meet everybody again, it was in my opinion a successful summit in all aspects. Thanks for the organizers of Green Hydrogen Summit Oman”.

Mr. Nasser Al Rizeiqi

Hydrogen/ New Energies Specialist,
Ministry of Energy and Minerals, Sultanate of Oman

“Proud moment for Oman, witnessing the accelerated ambition to achieve the net zero target by 2050 as set forth by H.M Sultan Haitham bin Tariq. The Green Hydrogen Summit & Exhibition Oman is a clear testimony to that. Oman will be a global hub and investment opportunities are open and will be supported by the Ministry of Energy and Minerals.”

Ali Al Lawati
SLB

“It was great to participate and join such an intensive and interest event. The launch of Green Hydrogen Summit & Exhibition Oman was under the auspices of the Ministry of Energy and Minerals at Oman Convention and Exhibition Center from 5-7 December 2022. It was great to meet with key players in Hydrogen sector and exchange opportunities for corporation”

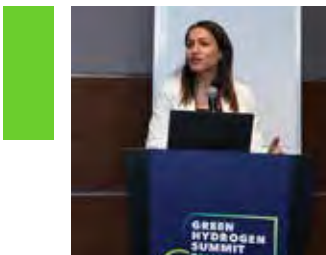
Sausan Al-Riyami
Director of Oman Hydrogen Centre

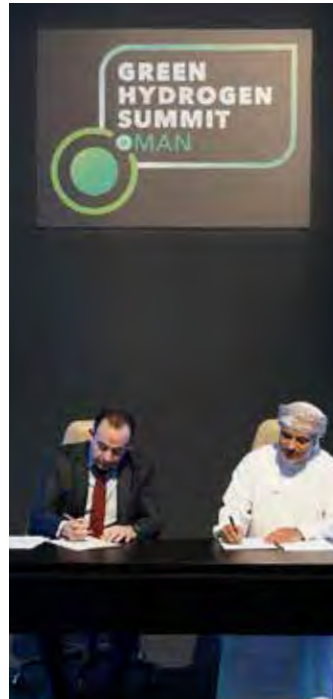
“Exhibition of Green Hydrogen! Attending this event was a fantastic experience because most of the world's largest energy companies were present, as were all those interested in green hydrogen. It is, indeed, This is a significant step toward embracing green energy in our beloved country”

“At the outset, I congratulate you for arranging the Green Hydrogen Summit last week. Appreciate the arrangements and efforts put in by you and your team!”

“The conference was well-organized and fruitful”

GHSO INSIGHTS





THANK YOU SPONSORS FOR SUPPORTING THE GREEN HYDROGEN SUMMIT & EXHIBITION OMAN - 2022

HOST SPONSOR



CO-HOST SPONSOR



PRINCIPAL SPONSOR



MAIN SPONSORS



DIAMOND SPONSORS



PREMIUM ISLAMIC BANKING PARTNER



CONFERENCE BAG SPONSOR



LANYARD SPONSOR



PLATINUM SPONSORS



GOLD SPONSORS



SILVER SPONSORS



SESSION SPONSORS



“

Building on the success of the GHSO brand, Birba Energy is now preparing to launch a series of similar events across the Middle East to strengthen networking across the clean energy industry.

Abdullah Salim Al Harthy
Chairman,
Birba Energy Services LLC

”



May 30-31, 2023
Oman Convention & Exhibition Center,
Muscat, Sultanate of Oman



Conference - Middle East & Africa
June 22-23, 2023 *(subject to change)*
Marrakkech, Morocco

ABOUT THE ORGANIZER

Founded in 2015, Birba Energy Services LLC has emerged as a key player in the SME energy market in the Sultanate of Oman and is backed by a team of internationally experienced individuals, bringing an accumulated 54 years of experience in business investment and development, technical support, project financing, management, events and brand management.



MISSION

To strengthen the awareness and investment of green energy in the MENA region .



VISION

To position Oman as a country of immense potential and opportunity for creating more investors in the energy sector.



VALUES

To be the industry leader in energy event management and business intelligence in the MENA region.

www.birbaenergy.com



FLAGSHIP EVENT

GREEN HYDROGEN SUMMIT OMAN

CONFERENCE AND EXHIBITION,
MUSCAT, SULTANATE OF OMAN



UPCOMING EVENTS

CCUS FORUM-OMAN

CARBON CAPTURE UTILIZATION AND STORAGE FORUM,
MUSCAT, SULTANATE OF OMAN



GREEN HYDROGEN SUMMIT MEA

CONFERENCE MIDDLE EAST & AFRICA,
MARRAKKECH, MOROCCO



PUBLICATION

ENERGY OMAN MAGAZINE

