

Partner with the fastest growing network, in the fastest growing market

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Partner with the fastest growing network, in the fastest-growing market

Exclusive Sponsor



Platinum Partners





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For more information, please get in touch



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Stay up to speed with multiple, fast growing markets

Hydrogen markets are growing rapidly, simultaneously and across multiple geographies. Each region requires its own hydrogen strategy and roadmap, as markets are defined by multiple factors:

- Local fossil fuel resources and renewable energy resource maps
- 2. Domestic policy and regulatory support
- 3. Access to capital, financial market maturity
- 4. Heavy industry sectors and demand nodes
- 5. Renewable electricity penetration and transportation needs.
- How do you build a robust hydrogen business case?
- How can you keep up with your competitors?
- How do you meet new people, contacts and prospects?
- How do you find out about new projects or opportunities first?

At **World Hydrogen Leaders** we bring our clients both intensively researched **conference** programmes, indepth **live training** programmes and the most **influential networks**.

The World Hydrogen Leaders platform is neutral and we seek to separate hype from real, genuine facts and providing our customers with the right knowledge, learning and social opportunities to quickly stimulate business growth effectively.

III know if there is a World Hydrogen Leaders conference, they are going to be the best speakers for that particularly topic... These are people speaking with tremendous insight and authority...I'm happy to pay as I know that I am get something really valuable and my time will not be wasted" Stephen Harrison, SBH4

World Hydrogen Leaders: A One Stop Shop Global Solution

WHL network and events cover the hydrogen economy's entire value chain, from production to usage, across multiple geographies.

Our unique global reach already extends to over **420,000 clean energy and hydrogen executives** who receive our messages. **Over 50,000+ executives** based in **56 different countries** have expressed an interest in a WHL product or services in the past 2 years.

Imprint your company's solution set into the minds of senior hydrogen executives



2 Access personal pathways into projects and initiatives



Boost your company's hydrogen profile by meeting targeted prospects and holding private networking and focus groups



420,000

Clean energy and Hydrogen professionals

3,500

messages sent through the platform

1,750

Meetings from over 800 members

750

Hours' worth of content over 12 months

350

speakers over the past 12 months

56

countries reached

platform: the World Hydrogen Leaders

MOST COMMON JOB TITLES

CEOS

CHIEF FINANCIAL OFFICER

DEVELOPMENT & TECHNOLOGY

HEADS OF DEPARTMENT



800

Total Members & Growing



5 %

GOVERNMENT AND MUNICIPALITES



9 %

ENGINEERING PROCUREMENT CONSTRUCTION



7 %

H2 TECHNOLOGY SUPPLIERS



9 %

TRANSPORT OPERATORS



10 %

INFRASTRUCTURE OWNERS / PROVIDERS



11 %

PROJECT DEVELOPERS



11 %

MINING, CHEMICAL & INDUSTRIALS



13 %

GAS MAJORS AND OIL REFINERIES

Europe & Middle East North America

Asia

South America

Australasia

Africa



13 % **FINANCE & INVESTMENT**

52%

21%

18%

6%

2%

1%

Everything you need to Lead in Hydrogen in One Place



800

Members and growing



365

Networking & Messaging Platform



20

Online Conferences



40 Live Interactive Training Courses in the World Hydrogen Academy



Quarterly Intelligence Reports & Weekly News Analysis Service



12 Monthly Hydrogen Intelligence Services

■ Great information shared about what is ongoing in the global H2"

Monica Johnasson, Volvo, Sweden

Become a World Hydrogen Premium Member

for just

€1,990

One year annual membership to the WHL platform includes

70+ Events:

20 Multi-speaker Online Conferences, 40+ Online Interactive Training Courses

Quarterly hydrogen updates from Europe, LATAM & USAwith our regular intelligence service

Monthly access to our China Hydrogen Intelligence Service a 2 hour, live analyst presentation and interactive Q&A session covering the key market sectors, direct from Shenzhen.

Plus full access to:

The **365 Online Networking** & Messaging Platform

Virtual Member MeetUps & Networking

Interactive Polling Results - to find out what's hot

Hydrogen **Mastermind Interviews** & Project of the Month

Pecha Kucha Hydrogen Innovation Sessions for start-up & tech companies

4 Quarterly World Hydrogen Reports

"This Week in Hydrogen" **News Analysis Service**

Single Event Attendance

Access a 1 day Multi Speaker
Online Conference
€399

Access a 3 day Online
Interactive Training Course
€799

To get your **Premium Annual Membership** now, contact



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The Conferences



Gain access to all of the following online World Hydrogen conferences with a premium World Hydrogen Leaders membership! All previously delivered conferences are stored in the WHL TV Video Vault giving you access to everything you've missed!

January

- 20 World Hydrogen France
- 27 World Hydrogen Storage

February

- **10** World Hydrogen The Netherlands
- 17 World Hydrogen & Wind Projects

March

- 24 World Hydrogen Iberia
- 31 World Hydrogen Fuelcells

April

- 21 World Hydrogen MENA
- **28** World Hydrogen Large-Scale Electrolysis

May

- 12 World Hydrogen Asia
- **26** World Hydrogen Blue, CCS
- & Turquoise

June

- 09 World Hydrogen Chile
- 30 World Hydrogen Projects

July

28 - World Hydrogen Policy

August

25 - World Hydrogen Finance & Investment

September

15 - World Hydrogen USA

October

04-06 – The World Hydrogen Congress*

27 - Decarbonising the Gas Grids

November

24 - World Hydrogen & Solar Projects

December

- 8 World Hydrogen UK
- **15** World Hydrogen & Ammonia Shipping

*The World Hydrogen Congress will be taking place in Amsterdam and is not included in the World Hydrogen Leaders Membership.

To find out more about the World Hydrogen Congress please go to page 19

The Courses



Gain access to all of the following online World Hydrogen courses with a premium World Hydrogen Leaders membership! All previously delivered conferences are stored in the WHL TV Video Vault giving you access to everything you've missed! Unless otherwise stated, our courses run from 14:00 CET – 17:00 CET.

January

26-28 - Zero Carbon Fuels: Ammonia & Hydrogen

26-28 - Hydrogen Markets & Demand

February

01-03 - Geopolitics of Hydrogen

18 - China Hydrogen Intelligence*

23-25 - Green Hydrogen Projects

March

16-18 - Power to Liquids, Powerfuels & Electrofuels

18 - China Hydrogen Intelligence*

22-31 - Hydrogen Hero Programme**

April

06-08 - Wind & Hydrogen

20-22 - Blue, CCS & Turquoise Hydrogen

22 - China Hydrogen Intelligence*

May

04-06 - Clean Hydrogen 101 - En Espanol

11-13 - Hydrogen Storage, Transport, Distribution

18-20 - Hydrogen Markets & Demand

June

08-10 - Investment Case for Hydrogen

14-23 - Hydrogen Hero Programme**

29-01_{Jul} - Green Hydrogen Projects

July

06 - Tech for Turquoise Hydrogen

13 - Waste to Hydrogen

August

24-26 - Geopolitics of Hydrogen

September

07-09 - Green Hydrogen Projects

14-16 - Zero Carbon Fuels: Ammonia & Hydrogen

28 - 30 - Investment Case for Hydrogen

28 - Hydrogen Safety Essentials

29 - Hydrogen Safety Masterclass

October

11-20 - Hydrogen Hero Programme*

12 - High Capacity Underground Storage

11-20 - Clean Hydrogen Sector Briefings

26 - On Purpose Blue Hydrogen Production

November

09 - 11 - Wind & Hydrogen

23 - Giga-scale Pathways for Low-Carbon Hydrogen

December

07-09 - Green Hydrogen Projects

*For more information on the China Hydrogen Inteligence services please go to page 22

**The Zero to Hydrogen Hero programme consists of 6 individual workshops. For more information on the programme please go to page 12

Join World Hydrogen Leaders and be amongst the very best!























































































































































































20

World Hydrogen France Conference

France's ambitious Hydrogen strategy focuses on three priorities; industry, transport and research. With public support funding at €7 billion, the highest electrolyser capacity in Europe to 2030 and a focus on removing current regulatory obstacles and financial barriers, it is a very exciting time for Hydrogen in France.

Join industry leaders, stakeholders and regulators across the value chain at France Hydrogen to discuss and debate how these impressive targets will be met through a series of case studies, panel discussions and networking sessions.

27

World Hydrogen Storage Conference

France's ambitious Hydrogen strategy focuses on three priorities; industry, transport and research. With public support funding at €7 billion, the highest electrolyser capacity in Europe to 2030 and a focus on removing current regulatory obstacles and financial barriers, it is a very exciting time for Hydrogen in France.

Join industry leaders, stakeholders and regulators across the value chain at France Hydrogen to discuss and debate how these impressive targets will be met through a series of case studies, panel discussions and networking sessions.



Zero Carbon Fuels: Ammonia & Hydrogen

Training Course

There is no single solution to the enormity of the challenge of saying farewell to fossil fuels.

This course sets out the scale of the challenges facing us over the next three decades and beyond. Wind and solar may provide sufficient green and clean future energy but there is no single solution about what to do with this renewable energy when demand and supply are out of register in both time and location.

Advocating a single approach, be it batteries alone or a purely hydrogen economy, will not succeed. And moving into the future recognising hydrogen as the only zero-carbon fuel denies the complementarity of hydrogen and ammonia. Indeed, ammonia and hydrogen are the two complementary zero-carbon fuels that only together can replicate the immense fuel reserves and fuel usage that fossil fuels provide us with today.



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Hydrogen Markets & Demand Training Course

This examples-focused course is intended for those seeking a comprehensive, hype-free and independent perspective on the market segments which will (and won't) drive demand for hydrogen.

You need to have a clearly explained, business-focused perspective on the competitive context of hydrogen across its various use cases. You want to separate what is actually happening in the market from the headlines and hype, and to identify the drivers and credible near-term opportunities for your business. You want to evaluate barriers to hydrogen within certain market segments and its competitive advantages in others, illustrated by examples taken from a global perspective.



February 2021 All recordings and slides accessible through the World Hydrogen Leaders platform with a premium membership





World Hydrogen The Netherlands

Conference

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SMARTENERG'

The Netherlands published its hydrogen strategy in the form of the "Government's vision on hydrogen" letter in March 2020. The nation anticipates using its "unique position" to develop a strong standing in the Hydrogen market. With an international outlook on Hydrogen, the country is well on its way to building Europe's first hydrogen valley in the North with one of Europe's largest green hydrogen projects already under development in Groningen. It plans on using the extensive gas network already in place and geographical location to capitalise on the molecule.

Discover what strategies are being put in place for blending, debate the region's biggest challenges and opportunities and uncover the plans for ports such as Rotterdam at this insightful conference. We will be taking a deep dive into case studies, debating future regulatory standards and consider what the future will bring. An event not to be missed!



World Hydrogen & Wind Projects

Conference

The wind industry has enjoyed a decade of dramatic growth with both capital and opex costs falling fast and is set to continue a CAGR of 8%+. This conference will examine the potential for the wind and hydrogen industry to grow equally fast, or even eventually exceed the wind for electricity industry. Both onshore and offshore will be covered by a panel of thought leaders and examine how wind can be effectively married to hydrogen.

How will wind adapt for hydrogen production? What innovative pathways exist? Will we see the reuse of oil and gas platforms for offshore electrolysis? Could we see the development of artificial islands and other novel concepts?



Geopolitics of Hydrogen Training Course

The course first sets the scene on the new international hydrogen policy landscape. It consequently explores how new hydrogen strategies and policies have been developed, promoted and negotiated since the Paris Agreement on Climate Change five years ago, and how the dynamics at play today differ from the ones at play in the hydrogen industry beforehand.

An in-depth analysis of the existing international hydrogen institutions and for a will give the participants a clear view of how companies, NGOs and regulators interact with one another at the global and regional levels. Finally, a comparative study of emerging pro- and anti-hydrogen public relations campaigning efforts will provide the participants with the right tools to identify and anticipate possible future PR and investors relations hardships.



Green Hydrogen Projects *Training Course*

This course is intended for those seeking a time-effective, wide-ranging and independent perspective on opportunities within the rapidly growing market for clean hydrogen production from renewable power.

You will leave with a clearly explained, business-focused perspective on electrolysis technology and its cost determinants. You want to separate what is actually happening in the market from some of the headlines and hype, and to identify credible near-term opportunities for your business. You want to evaluate barriers to longer-term scalability along with project planning and delivery considerations, illustrated by examples taken from a global perspective.





World Hydrogen Iberia Conference

Arguably the sunshine capital of Europe, Iberia has some of the most reliable sources of renewable energy, which positions the region a strong competitor for the development of green hydrogen. Both Portuguese and Spanish governments have advocated substantial funding to the sector (€7 billion plus) and they look to take advantage of the untapped potential in wind and solar over the next 10 years.

Could Iberia become the Hydrogen Hub for Europe? We will be taking an in-depth investigation into the Iberian Hydrogen market, focusing on the big questions – what is the future for mobility? What could the regulatory framework look like? How and when will the costs come down? Join us in March for this one-day interactive conference to tackle these challenges and discover the ample opportunities ahead.

This online conference will be taking part alongside **Iber-REN** which will be taking place from **23 - 24 March**.





World Hydrogen Fuelcells Conference

This online conference will examine the major innovations around fuel cell technologies both from the different platforms (alkaline, PEM, solid fuel) to production, manufacturing, components and materials. The event will look at both fuel cells for mobile applications and also for opportunities in static storage and applications such as buildings. Learn from fuel cell experts leading the pace of change and take the opportunity to pose your questions in the interactive Q&A sessions.



Power to Liquids, Powerfuels & Electrofuels

Training Course

Power-to-liquids technologies enable liquid fuels meeting specifications for road, aviation and/or shipping to be produced from electricity, via the electrolytic production of hydrogen. Variously referred to as powerfuels, electrofuels, e-fuels and 'renewable fuels of non-biological origin, power-to liquids technologies have been identified as a scalable way to provide low carbon alternative fuels for applications that cannot readily be directly electrified.

Zero to Hydrogen Hero programme 22 – 31 March 2021 | 14 - 23 June 2021 | 11-20 October 2021



6 Interactive Workshops



3 International Hydrogen Experts

Hydrogen is critical for the deep decarbonisation of heat, power, mobility and industry. That's why we have called this programme of unique hydrogen masterclasses the Zero to Hydrogen Hero programme. Throughout March we will be delivering **6 different live, online, interactive workshops** to take you from Zero to Hydrogen Hero in understanding both the technology and commercial business opportunities in the growing hydrogen industry.

The same workshop will run live twice in one day, at 09:00 CET and 14:00CET.

22nd March: Clean Hydrogen: the Key Concepts

Terminology is explained and demystified, covering the value chain from production to transport to end-use. Providing a comprehensible explanation of the core technological features and variables within the hydrogen landscape, one which is immediately accessible and relevant to business-focused people.

24th March: Hydrogen New Business Models, Regulation

An invaluable introduction into how hydrogen can be introduced into the current energy system, looking specifically at the substitution of natural gas. What are the emerging business models shaping the hydrogen economy, the role that regulation plays in this development and the changes needed, as well as the role that existing natural gas infrastructure can play in this new economy.

30th March: Business Opportunities for the Hydrogen Economy

This is an essential deep dive into those wishing to understand how hydrogen could fit into the future energy system and within the business model of their companies. Ideal for those of a nontechnical background, seeking to better understand both new business opportunities and risks.

23rd March: Green Hydrogen from Renewable Power

This session provides a techno-economic look at the pathways to green hydrogen at large scale. It reviews competing electrolysis technologies and their development, before examining some of the key variables and numbers which will determine whether renewable electricity is available in the quantities and at the costs which are often assumed.

29th March: Hydrogen and the Natural Gas Industry

This session examines the players who are active in hydrogen, with particular focus on those from the natural gas value chain and the projects they are promoting and investing into. It describes some of the opportunities and challenges that exist in transitioning from natural gas towards hydrogen blends; or, eventually, 100% hydrogen.

31st March: Wind & Hydrogen

This course explores the synergies between the production of hydrogen and the existing - and future - use of onshore and offshore wind. Both the onshore and offshore wind industries have grown significantly globally.

Attending the Zero to Hydrogen Hero Programme

OPTION 1

The Zero to Hydrogen Hero programme is included in our World Hydrogen Leaders premium membership

€1,990

OPTION 2

You can purchase a pass to the Zero to Hydrogen Hero programme ONLY for just

€899







World Hydrogen MENA Conference

Co-hosted by



Heavily reliant on fossil fuels, there is huge potential for the MENA region to supply both blue and green hydrogen through the natural gas reserves, solar

and wind power. As commitments to Net Zero ramp up can MENA retain a competitive advantage?

Proudly co-hosted by WHL, MENA Hydrogen Alliance and Dii Desert Energy, this conference will bring together local and international industry leaders to uncover the region's potential for hydrogen.

28

World Hydrogen Large-Scale Electrolysis Conference

As the mobilisation and acceleration of electrolyte production remains insufficient to meet rapid decarbonisation goals for the energy sector, World Hydrogen Leaders returns to this hot debate for the 2nd year.

How can the hydrogen sector ramp up the rollout of largescale electrolysis plants in order? Should we prioritise PEMor Alkaline technologies? Could efficiencies be greater with Solide Oxide? How and when will we unlock the cost curve? Will grid infrastructure or transportation be ready to cope with large quantities of hydrogen?

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Wind & Hydrogen Training Course

This course is to provide participants with a clear understanding of the key issues around Wind and Hydrogen and further investigates possible scenarios and its pivotal role in decarbonisation and reaching et zero. Participants will be equipped with the necessary insight and skills to face future challenges in the wind, offshore wind and hydrogen industries.

20 22

Blue, CCS & Turquoise Hydrogen Training Course

This time-efficient course is intended for those seeking a comprehensive, hype-free and independent perspective on the production of clean (low-carbon) hydrogen from hydrocarbon feedstocks, including natural gas, coal and biomass.

You will leave with a clearly explained, business-focused perspectives on the various technologies and processes in both hydrogen production and carbon abatement.





World Hydrogen Asia Conference

Japan is one of the pioneers of the hydrogen transition with the first basic strategy being published in 2017. South Korea followed closely behind uncovering its roadmap to developing a hydrogen society with a solid focus on transport.







China is the largest hydrogen producer in the world and is also focusing on hydrogen to decarbonise transportation with Wuhan being styled as a hydrogen city. Singapore and India are also building interest so there is definitely an electrifying momentum across the continent as the hydrogen potential develops.



World Hydrogen Blue, CCS & Turquoise Conference

As the world rapidly moves to decarbonise the entire energy system, how can blue hydrogen play a vital role and build off the platform of the highly successful existing natural gas industry? What are the blue hydrogen projects?









What is the experience and opportunity for CCS? How can leakages both throughout the distribution chain and at CCS sites be minimised? What are the opportunities for Turquoise Hydrogen? What is the value of the solid carbon by products?

04 06

Clean Hydrogen 101 - En Espanol Training Course

Este curso tiene un alcance introductorio sobre el hidrogeno y sus posibles aplicaciones. El foco estará en desarrollar los conocimientos básicos para entender las tecnologías involucradas, aplicaciones y el impacto que tendrá en la transición energetica.

La primera parte dará un panorama de la transición energetica, su importancia, su desarrollo y sobre todo, cual es el rol del hidrogeno en esta transición.



Hydrogen Storage, Transport, Distribution

Training Course

This course is intended for those seeking a thorough understanding of how hydrogen fuel can be stored, transported and distributed from production to end-use – and why this is of central importance in determining how the hydrogen landscape will develop.



Hydrogen Markets & Demand Training Course

This examples-focused course is intended for those seeking a comprehensive, hype-free and independent perspective on the market segments which will (and won't) drive demand for hydrogen. You need to have a clearly explained, business-focused perspective on the competitive context of hydrogen across its various use cases.





World Hydrogen Chile Conference

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Hydrogen is exploding in Chile! The South American nation is well and truly on its way to building a hydrogen society with more than 20 pilot projects already being considered. The nation hopes to take advantage of its unexploited solar and wind capacity with the potential to produce 35 million tonnes per year of green hydrogen by 2050. Although Chile might have higher costs in exports due to the location it could be amongst the world's cheapest export. It is even looking into hydrogen explosives! Find out the true potential of the market by joining us in June to debate, discuss and challenge industry leaders, government officials and hydrogen experts.

Find out where investment opportunities lie, determine transportation and mobility solutions and discover projects being developed in the region.



World Hydrogen Projects Conference

World Hydrogen projects offers an update on the latest in hydrogen deployment achievements around the globe. This conference will review how national-level policies are being implemented at sub-national and regional levels, looking at what approaches have been most effective to date. It will reveal what is being done to attract sector coupling and overcome the supply/demand issues. The event will also debate what is required to accelerate deployments and achieve scale.

Listen, learn from and question experts on new cluster and value chain developments as they share insights on recent and potential future project pipelines. What's more, review well known case studies and learn from early adopters as they share their progress and important lessons learnt over the last year.

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Investment Case for Hydrogen Training Course

This course is intended for those seeking a time-effective, wide-ranging and independent perspective on the investment case for opportunities within the rapidly growing market for clean hydrogen.

You will leave with a clearly explained, business-focused perspective on clean hydrogen investment opportunities. Over three information-packed sessions, this online course will provide attendees with a solid grounding in preparing and presenting an investment case for hydrogen taking account of the key technology, business, and organisational issues. The fundamentals of investment analysis will be explained and will be illustrated using practical stories and a basic economic evaluation model. The market opportunities and differing approaches and challenges to delivering hydrogen projects will be discussed with reference to project examples and hands on examination using a basic investment model.



Green Hydrogen Projects Training Course

This course is intended for those seeking a time-effective, wide-ranging and independent perspective on opportunities within the rapidly growing market for clean hydrogen production from renewable power.

You will leave with a clearly explained, business-focused perspective on electrolysis technology and its cost determinants. You want to separate what is actually happening in the market from some of the headlines and hype, and to identify credible near-term opportunities for your business. You want to evaluate barriers to longer-term scalability along with project planning and delivery considerations, illustrated by examples taken from a global perspective.







All recordings and slides accessible through the World Hydrogen Leaders platform with a premium membership

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World Hydrogen Policy Conference

Now in its second year, World Hydrogen Policy Conference will reflect on national and international strides towards adopting policy frameworks that are enabling the deployment of clean hydrogen. Which governments have announced national hydrogen strategies? What financial support are they securing? How has the COVID-19 crisis impacted policies to tackle the climate crisis and what does this mean for the hydrogen sector?

This event will delve deep into the policy landscape and toolkit that is being used and proposed by different governments across the world. Join debates on which toolkits have been or will be the most effective in scaling hydrogen and driving down its cost curve. Learn how policy will continue to evolve in 2021 and beyond, in the light of challenging economic conditions and political pressure for job creation and domestic GDP development.



Tech for Turquoise Hydrogen Training Course

Hydrogen production will scale up by several orders of magnitude in the coming decades. Blue hydrogen will be produced using CCS retrofits to existing plant. And to generate the additional hydrogen capacity, new onpurpose blue hydrogen plants will be built.

This course will explain how thermochemical hydrogen production technologies such as SMR, ATR and POX fit with integrated carbon capture.



Waste to Hydrogen Training Course

Hydrogen enables 'sector-coupling'. Simply put, we can turn garbage into zero-emission bus fleets with the use of hydrogen to join the links in this value chain.

This course will provide tangible examples of how sector coupling works. Some of the value chains covered are in place today; others are plans or pipedreams for the future. Some, but perhaps not all the technologies covered in this course will become mainstream decarbonisation routes in future decades.



World Hydrogen Finance & Investment Conference



Lead Sponsor

Large-scale financial investments are undoubtedly critical in the transition to an emissions-free economy. Whilst promising projections for the cost-competitiveness of hydrogen exist down the line, fossil fuels remain cheaper today. How do we tilt the scales and unlock the cost curve for clean hydrogen?

Industry experts will join the second annual World Hydrogen Finance & Investment Conference to demystify the investment opportunities and bottlenecks of 2021. Explore smarter financing and alternative investments to support the delivery of some of the key net-zero targets. This event will benefit investors, companies, issuers and project promoters as they navigate the transition to a low-carbon, resource efficient economy.

You will leave with a clearly explained, business-focused perspectives on the various technologies and processes in both hydrogen production and carbon abatement.



Geopolitics of Hydrogen Training Course

The course first sets the scene on the new international hydrogen policy landscape. It consequently explores how new hydrogen strategies and policies have been developed, promoted and negotiated since the Paris Agreement on Climate Change five years ago, and how the dynamics at play today differ from the ones at play in the hydrogen industry beforehand.

An in-depth analysis of the existing international hydrogen institutions and fora will give the participants a clear view of how companies, NGOs and regulators interact with one another at the global and regional levels. Finally, a comparative study of emerging pro- and anti-hydrogen public relations campaigning efforts will provide the participants with the right tools to identify and anticipate possible future PR and investors relations hardships.



September 2021

All recordings and slides accessible through the World Hydrogen Leaders platform with a premium membership



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World Hydrogen USA Conference

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Over the last four years, the Trump administration has taken a notoriously controversial stance on the USA's clean energy industry, hindering its advancement. With the Biden administration poised to reignite the green flame as 2021 begins, how will the nation be engaging in clean hydrogen by October? Will a national hydrogen strategy be announced and could this close the gap between the strides already taken by its European counterparts? Join this event to discover how the world's largest economy is investing in hydrogen and assess commercial opportunities in the country.

Hear from federal and regional governments, regulators, project developers and hydrogen pilot pioneers as they share the opportunities and challenges facing the sector nationally. This event will showcase discussions on export/import ambitions, successful case studies, financing mechanisms and forecasts for sector growth.



Green Hydrogen Projects Training Course

This course is intended for those seeking a time-effective, wide-ranging and independent perspective on opportunities within the rapidly growing market for clean hydrogen production from renewable power. You will leave with a clearly explained, business-focused perspective on electrolysis technology and its cost determinants. You want to separate what is actually happening in the market from some of the headlines and hype, and to identify credible near-term opportunities for your business.



Zero Carbon Fuels: Ammonia & Hydrogen

Training Course

There is no single solution to the enormity of the challenge of saying farewell to fossil fuels. This course sets out the scale of the challenges facing us over the next three decades and beyond. Wind and solar may provide sufficient green and clean future energy but there is no single solution about what to do with this renewable energy when demand and supply are out of register in both time and location. Advocating a single approach, be it batteries alone or a purely hydrogen economy, will not succeed. And moving into the future recognising hydrogen as the only zero-carbon fuel denies the complementarity of hydrogen and ammonia.



Investment Case for Hydrogen *Training Course*

This course is intended for those seeking a time-effective, wide-ranging and independent perspective on the investment case for opportunities within the rapidly growing market for clean hydrogen.

You will leave with a clearly explained, business-focused perspective on clean hydrogen investment opportunities. Over three information-packed sessions, this online course will provide attendees with a solid grounding in preparing and presenting an investment case for hydrogen taking account of the key technology, business, and organisational issues.

28

Hydrogen Safety Essentials Training Course

Perhaps you are financing an investment in hydrogen or will be processing this gas in the future as an operator. Or you may be curious about how the public at large will react to hydrogen hazards, based on what they have heard about the Hindenburg airship explosion.

This short course will put the risks of hydrogen into context with real facts and clear examples. You will have the chance to ask questions or raise concerns that you might have about hydrogen safety in a friendly environment.

As a follow-on course, you might also be interested to join the "Hydrogen safety master-class" which will run two weeks after this course on the 29th September.

29

Hydrogen Safety Masterclass Training Course

Perhaps you are making an investment in hydrogen or will be responsible for this gas on your site as an operator. Or you may be interested to know more about hydrogen hazards as a user of this gas in industrial or domestic settings.

This short course will clarify the risks of hydrogen and how these can be mitigated with reliable technological solutions and best operating practices. You will have the chance to ask questions or raise concerns that you might have about hydrogen safety in a friendly environment.



All recordings and slides accessible through the World Hydrogen Leaders platform with a premium membership



27

World Hydrogen Decarbonising the Gas Grids *Conference*

A fundamental shift in how the gas industry operates, plans and designs its market is already in the making. As gas networks seek rapid solutions to achieving net-zero emissions, the associated costs and disruption are key concerns for all stakeholders involved. So what is the best pathway to redesigning and implementing a clean gas grid?

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World Hydrogen Decarbonising the Gas Grid will gather TSOs from around the world to share their plans and priorities for future gas infrastructure. Discussions between transmission and distribution companies, storage, compressor and engineering firms will evaluate the industry's current opportunities and challenges.



Clean Hydrogen Sector Briefings

Training Course

3 x 3-hour briefings focused on hydrogen project development and demand creation:

If you seek to better understand where hydrogen demand will come from, to grasp new business development and growth opportunities, these briefings are not to be missed!

- #1. Clean Hydrogen in Industrial Decarbonisation
- #2. Clean Hydrogen in Transport
- #3. Clean Hydrogen in Power & Heat



High Capacity Underground Storage Training

Course

When hydrogen replaces natural gas for heating, the demand profile will be highly seasonal according to how warm or cold the weather is. Hydrogen production from hydroelectric power can also be highly seasonal according to how much rainfall or snowmelt is entering the river system. High-capacity storage is required to ensure cost-effective hydrogen production or utilisation in seasonal situations. Underground hydrogen storage in manmade salt caverns is one of the most cost-effective solutions, where the underground geography permits. Other high-capacity storage options exist.

This course will cover some of the high-capacity storage options and explain in which situations each may be suitable. The seasonality of some production and use-cases will also be covered to underline the importance of high-capacity hydrogen storage.

If you are investing in hydrogen value chains or considering the most appropriate technologies to implement for your projects, this course will provide insights to support your decision making. Future operators and owners of high-capacity underground hydrogen storage will also gain exposure to the technique.



On-purpose blue hydrogen production

Training Course

Hydrogen production will scale up by several orders of magnitude in the coming decades. Blue hydrogen will be produced using CCS retrofits to existing plant. And to generate the additional hydrogen capacity, new onpurpose blue hydrogen plants will be built.

This course will explain how thermochemical hydrogen production technologies such as SMR, ATR and POX fit with integrated carbon capture. The optimum solution for on-purpose blue hydrogen production is very different to the optimum solutions that have been implemented in the past for grey. Value stacking to profitably utilise all the available process streams is also key to competitive success in the international energy market. Up to date project case studies will be used to provide real life examples.



4 - 6 October 2021
PTA Congress Centre
Amsterdam, The Netherlands



200+ thought leaders



800+ attendees



40+ countries

Towards a Zero Emission World

The 2nd Annual World Hydrogen Congress is the leading senior executive, content rich, networking congress for the hydrogen production, distribution and storage of the Clean Hydrogen industry. Over **800 attendees** are due to attend **3 days** of high quality, curated content and panel debates.

A number of networking functions will augment **3 days** of high quality, curated content from **200+ thought leaders** addressing the detail and granularity of hydrogen best practice across hydrogen policy, financing, investment, roll out strategies & national plans, hydrogen case studies & lessons learnt, demand from the markets, technology innovation and cost curves.

You'll meet the entire hydrogen ecosystem; developers, project sponsors, investors, EPC contractors, technology manufacturers, consultants, government stakeholders, gas & power infrastructure owners, integrators and industrial offtakers.



For more information on the World Hydrogen Congress please visit www.worldhydrogencongress.com



November 2021

All recordings and slides accessible through the World Hydrogen Leaders platform with a premium membership



World Hydrogen & Solar Projects

Conference

The second annual World Hydrogen + Solar Conference is returning after 12 months of new projects, policies and market Gold Sponsor insights have been revealed. Discover how the solar industry has ramped up its collaboration with the green hydrogen sector and what lessons have been learned to date.

This event will showcase new case studies from high-solar resource destinations from around the world. Hear from solar experts who will analyse and evaluate methods of optimizing hydrogen production from solar energy. Equally, hydrogen experts will share their views on the technical challenges and adaptions required for integrating solar technology with electrolysis on both small and large-scale projects. Learn about how LCOE pathways for solar could impact the cost of hydrogen.











Wind & Hydrogen Training Course

This course is to provide participants with a clear understanding of the key issues around Wind and Hydrogen and further investigates possible scenarios and its pivotal role in decarbonisation and reaching et zero. Participants will be equipped with the necessary insight and skills to face future challenges in the wind, offshore wind and hydrogen industries and to put in place effective strategies for quantum growth in the interconnected industries as they move from a regional to global decarbonisation solution.

Join this course as we discover the dramatic growth of the wind, especially offshore wind, and the pivotal role to be played across the globe by wind in all its forms and hydrogen. It consequently explores in-depth fundamental aspects of seabed characteristics, availability of supply chain, infrastructure, hybrid project design effects and integration of electrolysers on or offshore.

Giga-scale Pathways for Low-Carbon Hydrogen Training Course

Hydrogen production will scale up by several orders of magnitude in the coming decades. Electrolysers are currently operating at 10 to 20MW and already we have plans for GW schemes. Similar scaleup leaps are proposed for thermal hydrogen production processes.

This course will explain the current and proposed low-carbon Giga-scale thermal hydrogen production technologies such as ATR, POX and pyrolysis. The best-fit criteria to apply each of these technologies will be discussed. Some, but perhaps not all the technology options will become mainstream routes for hydrogen production in future decades.

Spotting the right technologies early can mean the difference between a good and an excellent project. If you are investing in the hydrogen economy or considering technologies to implement, thinking through the pros and cons of various options will be fundamental to your decision making. This course will provide some insights support that process.



December 2021

All recordings and slides accessible through the World Hydrogen Leaders platform with a premium membership



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World Hydrogen UK Conference

In 2020, the UK's Hydrogen Strategy Now campaign saw private businesses committing to invest £1.5bninto clean hydrogen projects for the country to urge the government to act. Since then, confirmation that a national hydrogen Strategy would be published before COP26 was announced. With ambitions to be a global leader in hydrogen development evidenced in its commitment to a £100m low-carbon hydrogen fund, the UK has significant commercial opportunities for hydrogen production and investment.



Lead Sponsor

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Lead Sponsor

This one-day conference will explore the progress of leading hydrogen consortium projects such as HyNet, as well as shining light on new emerging business opportunities and innovations. Learn from British policymakers, regulators, grid operators, project developers, financiers and technology manufacturers to discover the key priorities, challenges and ambitions of this emerging hydrogen economy.



World Hydrogen & Ammonia Shipping

Conference

A year on from the inaugural World Hydrogen + Ammonia
Shipping Forum, we are returning to the virtual stage to evaluate progress towards decarbonizing the sector. What new strategies by governments and ports are successfully ramping up the hydrogen and ammonia transition to meet the EU's 2050 targets? How are leading shipping stakeholders around the world approaching the transition to a zero-emission maritime economy?

This event's focus on hydrogen and ammonia will allow you to have meaningful, in-depth discussions on the economics, supply and technology issues specific to these fuels. Learn more about the nuances between a broad range of vessel segments including cargo ships, container ships, ferries, cruise ships, superyachts, offshore support vessels and tugboats.



Green Hydrogen Projects Training Course

This course is intended for those seeking a time-effective, wide-ranging and independent perspective on opportunities within the rapidly growing market for clean hydrogen production from renewable power.

You will leave with a clearly explained, business-focused perspective on electrolysis technology and its cost determinants. You want to separate what is actually happening in the market from some of the headlines and hype, and to identify credible near-term opportunities for your business. You want to evaluate barriers to longer-term scalability along with project planning and delivery considerations, illustrated by examples taken from a global perspective.

China Hydrogen Intelligence Service



The China Hydrogen Intelligence Service is a **monthly 2 hour, live analyst presentation and interactive Q&A** session covering the key market sectors, direct from Shenzhen.

Why is it important?

Hydrogen has the potential to become one of the global economy's largest commodities. China is the largest global market and in December 2020 announced a target of decarbonising 25% of the entire energy system by 2030 and achieving Net Zero by 2060. So what happens in China can have a dramatic impact on the growth of hydrogen, due to the potential to move hydrogen technologies faster down their cost and learning curve.

Meet the Analyst



This monthly service is led by leading Shenzhen-based hydrogen and fuel cell expert, **Hack Heyward.** A China resident for over a decade and fluent Mandarin speaker, Hack has closely followed the Chinese hydrogen market, consulting for a variety of foreign companies looking to develop Chinese partners and for Chinese hydrogen firms looking to export to Europe.

Hack maintains his own proprietary database and analysis of the monthly releases of the China Government's official New Energy Vehicle index. He will share insight from this, his extensive

network, regular meetings, site visits and knowledge that can only be built up from years of being on the ground.

2021 Confirmed Dates

- **18** February
- 18 March
- 22 April
- **28** May

June - December dates coming soon

Secure your place

Sign up to the full series for the next year, giving you access to 12 sessions for only

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World Hydrogen Intelligence Service

Prepare yourself for the competitive future of hydrogen

The World Hydrogen Intelligence Service consists of live analyst presentation and interactive Q&A session covering the key projects, policy changes and analysis of key market sectors across Europe, North America and LATAM.

Europe Hydrogen Intelligence

The European Hydrogen Intelligence Service is a quarterly 2 hour, live analyst presentation and interactive Q&A session covering the key projects, policy changes and analysis of key market sectors.

Why is it important?

Hydrogen has the potential to become one of the global economy's largest commodities. Europe, led by strong political support from the EC Commission is looking to replace natural gas with hydrogen as it seeks to decarbonise to net zero by 2050. Given the high percentage of natural gas that is currently imported into the continent, what happens in Europe can have a dramatic impact on the global production for hydrogen.

John Massey

Dr Massey is Managing Director of Grey Cells Energy Ltd., where he conducts independent market assessment and opportunity/risk analysis for clean energy technologies. He delivers market briefings, oneto- one coaching and training courses worldwide, both online and in-person, along with strategy and business plan consulting to help companies (particularly SMEs) position themselves to best grasp new low-carbon market opportunities

Europe Intelligence Service Bundle

Access 4 individual sessions taking place throughout the year:

€899.00

24 May

19 July

27 September

28 December

USA Hydrogen Intelligence

The American Hydrogen Intelligence Service is a quarterly 2 hour, live analyst presentation and interactive Q&A session covering the key projects, policy changes and analysis of key market sectors.

Why is it important?

Interest in hydrogen is developing in both the USA and Canada. Canada has a number of strong hydrogen players led by Ballard, the pioneering PEM fuelcell company. In the USA has large proven reserves of cheap methane from multiple reserves extracted through fracking and is looking to both implement CCS technology for a blue pathway and exploit it's considerable solar and wind resources to produce green hydrogen.

The Biden administration huge \$3tn COVID response infrastructure plan including both grid enhancements and CCS should help the USA upgrade it's entire energy system. The recent Texas brownout has further fuelled the appetite for strong public investment into energy.

Diane Moss

Diane Moss is a Founder and Director of the Renewables 100 Policy Institute and an independent consultant focused on energy policy, government relations, and sustainability related communications and campaigns for a broad range of entities, including non-profits, clean tech companies, and utilities, among others.

USA Intelligence Service Bundle

Access 4 individual sessions taking place throughout the year:

€ 899.00

29 June

28 September

14 December

LATAM Hydrogen Intelligence

The Latam Hydrogen Intelligence Service is a quarterly 2 hour, live analyst presentation and interactive Q&A session covering the key projects, policy changes and analysis of key market sectors across the Latin American markets.

Why is it important?

Interest in hydrogen is developing at a pace across the continent of Latin America with Chile leading and followed by Mexico. Chile has a strong energy intensive mining sector but poor domestic fossil fuel resources. It has world leading renewable energy resources with the wind of Patagonia and the sun of the Atacama Desert. With a history of pioneering utility scale solar the country is used to taking a lead in the continents energy transition and the hydrogen project pipelines are building strongly.

Massimiliano Cervo

Massimiliano Cervo brings together the theory from chemistry with the business approach from valuation and modelling. He has undertaken considerable work in financial modelling and strategic planning on the pathway to achieving a worldwide hydrogen economy. Currently based in Buenos Aires he will be covering the intersection of policy, projects and players as the hydrogen economy begins to ramp up across the continent.

LATAM Intelligence Service Bundle

Access 4 individual sessions taking place throughout the year:

€ 899.00

12 July

11 October

13 December

MENA Hydrogen Intelligence

The MENA Hydrogen Intelligence Service is a quarterly 2 hour, live analyst presentation and interactive Q&A session covering the key projects, policy changes and analysis of key market sectors.

Why is it important?

There is huge potential for the MENA region to supply both blue and green hydrogen through the natural gas reserves, solar and wind power. Interest is building rapidly across the region as a huge swathe of the global economy commits to Net Zero and decarbonisation becomes ubiquitous can MENA retain a competitive advantage? Uncover the potential for hydrogen across the MENA region and discover the biggest challenges and opportunities..

Cornelius Matthes

Cornelius is Chief Executive Officer at Dii Desert Energy. A well-respected leader and investor in the renewable energy industry and built several successful clean energy businesses and start-ups within Middle East and Africa. He has extensive board level experience from 10 years in Deutsche Bank (among others, youngest board member in Deutsche Bank Italy Group) and several leading renewable energy organisations and associations via pro bono work as well as different startup companies.

Mena Intelligence Service Bundle

Access 4 individual sessions taking place throughout the year:

€899.00

28 June

20 September

07 December

Quarterly Intelligence Service Bundle:

Gain access to the Europe, North America and LATAM hydrogen intelligence service for only

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World Hydrogen Intelligence Reports

Navigate the Hydrogen Pathway with the Latest Insights

Read independent analysis and implement actionable intelligence with World Hydrogen Leaders expert reports.

A Complete Guide To Hydrogen



€999 What's

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- Hydrogen: the key concepts
- Green hydrogen and renewable power
- Wind and hydrogen
- Hydrogen and the natural gas industry
- Hydrogen business opportunities and new hydrogen business models

World Hydrogen Insights & Hydrogen 101 Report



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What's Covered:

- The colourful world of hydrogen production
- Think small to get clean hydrogen moving
- Hydrogen and the natural gas sector: expertise, assets & existential threats
- Innovations in the clean hydrogen sector
- Hydrogen storage in a world of wind & solar
- Hydrogen policy & strategy

World Hydrogen Policy Reports



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- Local practice and policy in a hydrogen economy
- Smartenergy case study
- National hydrogen policies - approaches, comparative analysis and tools

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- Regulatory
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 Decarbonisation
- Decarbonised
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 Models
- Recommendations on business models
- Case Studies

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- Hydrogen
- Solar Power
- Biofuels, Biogas and Bioenergy
- Onshore Wind Power

Investment Case for Hydrogen



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- Fundamentals of Investment Analysis
- Exemplars of Hydrogen Investment









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