

AHRN Town Hall

Speakers:

Dr Fiona Simon, CEO, Australian Hydrogen Council - Current status of the Australian Hydrogen Industry

Dr Andrew Dicks, CEO, AHRN - Hydrogen Research Collaboration in Australia

Facilitator:

Dr Patrick Hartley, Leader Hydrogen Industry Mission, CSIRO

H2 Research Collaboration in Australia

- The National Hydrogen Materials Alliance (2006-2009)
- AHRN History Networking, Seminars and Conferences
- HyResearch
- International Program, IEA Hydrogen TCP, MoU etc.
- Oiling the wheels
- Plans for next half-year

National Hydrogen Materials Alliance

Partners:

The University of Queensland, Australian National University, Curtin University of Technology, Griffith University, Monash University, Newcastle University, The University of New South Wales, Queensland University of Technology, RMIT University, Sydney University, ANSTO

Original proposals:

- (a) Hydrogen storage*
- (b) Hydrogen production and utilisation*

CSIRO Energy Transformed Flagship

Director: Dr John Wright

NHMA Director: Dr Andrew Dicks (The University of Queensland)

Management Committee

Dr Andrew Dicks, UQ; Assoc. Prof Evan Gray, Griffith University; Assoc.Prof Craig Buckley, Curtin University of Technology, Dr John Andrews, RMIT University; Dr Sammy Chan, The University of New South Wales; Dr Ian Plumb, CSIRO

Hydrogen Storage Stream

Project 1. Hydrogen Storage in Materials based on Li
Leader: Prof Evan Gray (Griffith)

Project 2. Hydrogen Storage in Materials based on Mg
Leader: Prof Arne Dahle (UQ)

Project 3. Hydrogen Storage in Carbons
Leader: Prof Paul Webley (Monash)

Project 4. Hydrogen Storage in Porous Materials
Leader: Prof Craig Buckley (Curtin)

Hydrogen Production and Utilisation Stream

Project 5. Development of new catalyst materials for hydrogen generation from hydrocarbon fuels
Leader: Dr Andrew Dicks (UQ)

Project 6. Development of materials for electrolysis systems
Leader: Dr John Andrews (RMIT)

Project 7. Development of photocatalytic materials for hydrogen production by water splitting
Leader: Dr Geoffrey Will (QUT)

Project 8. Development of materials for advanced hydrogen fuel cells
Leader: Dr Andrew Dicks (UQ)

AHRN history

- Brought together by CSIRO and AAHE in 2021, becoming an independent non-profit company in July 2023 (after our first conference in February 2023).
- AHRN Ltd represents the community of researchers and interested stakeholders supporting the emerging hydrogen industry. We foster excellence in hydrogen-related research through an ongoing program of seminars and knowledge-sharing activities. By providing thought leadership, advocacy, and research tools, the AHRN offers its members domestic networking opportunities as well as access to international collaborations.

Output

- HyResearch
- Online research seminars approx. every 2 months during 2022-23
- In-person seminar – September 2022
- First Conference in February 2023 at ANU, Canberra

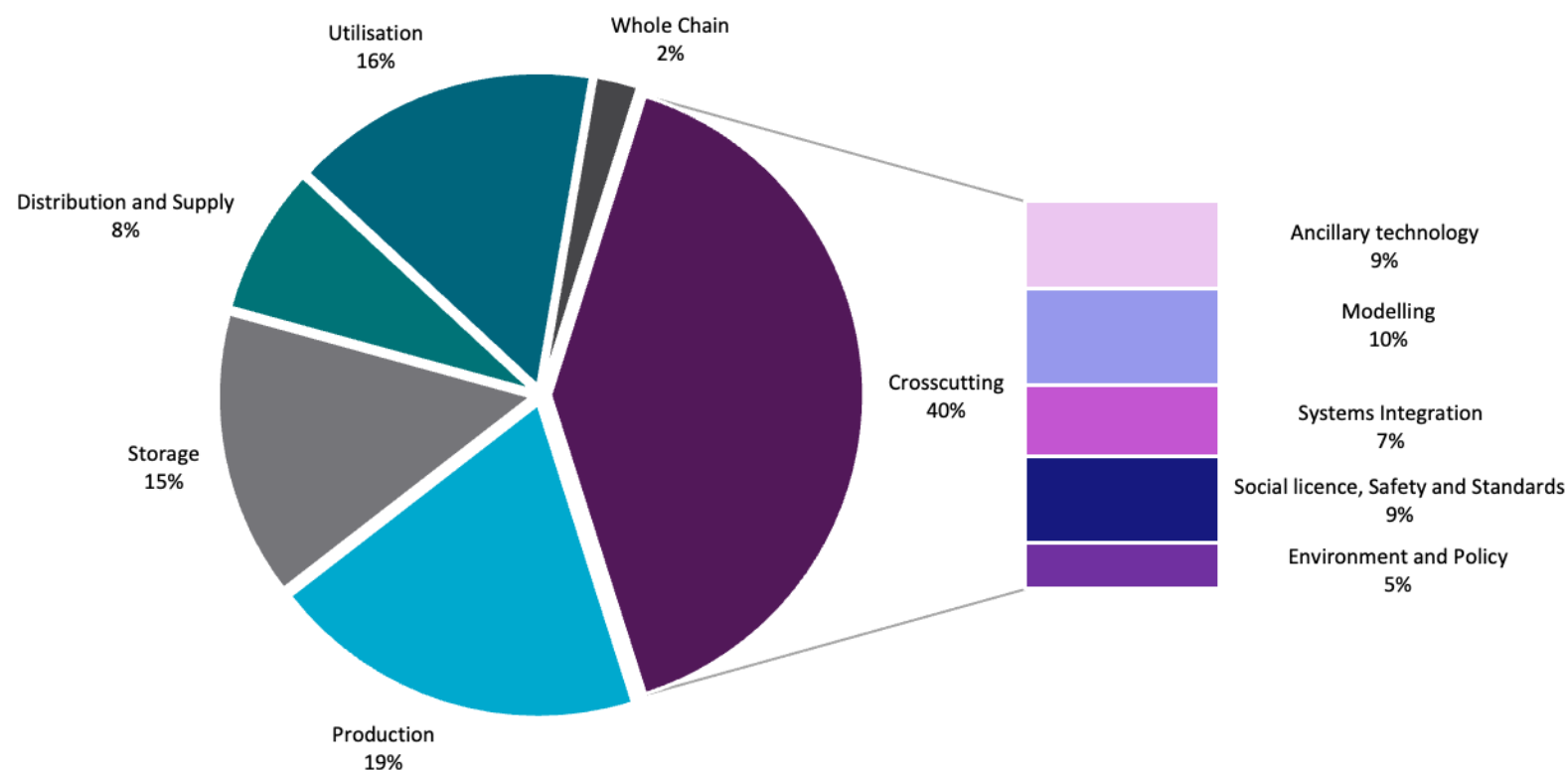
Hyresearch

<https://research.csiro.au/hyresearch>

- HyResearch launched in December 2021 – readily accessible hub where stakeholders interested in hydrogen-related work in Australia can find information on R&D projects and connections
- April 2024 – growth to 380 projects (Active & Completed)
- June 2025 – now 462 projects and 25,000 page visits
- Proved especially useful in recent work in understanding the hydrogen-related R&D ecosystem in Australia Aggregated information well supported by projects-based capability measures (heatmaps/infographics)
- Case Studies (currently 9 projects) launched May 2024
- A series of case studies is presented whose purpose is to increase the visibility of Australian hydrogen-related R&D efforts to local and global audiences. Working with the federal Department Climate Change, Energy, the Environment and Water (DCCEEW) and the organisations involved, several case studies highlighting various elements of the hydrogen supply chain are presented in non-technical language. It is planned that sets of case studies will be published on an ongoing basis.
- Hyresearch is currently maintained by CSIRO (Peter Grubnic, Program Manager HyResearch and HyResource).

Mapping of 'research intensity'

Australian R&D Focus Areas



	Apr-24	Jun-25
Production	19	21
Storage	15	15
Distribution and Supply	8	7
Crosscutting	40	40
Utilisation	16	15
Whole Chain	2	2
Cross cutting		
Ancillary technology (advanced manufacturing)	9	3
Modelling	10	7
Systems Integration	7	8
social Licence, Safety and Standards	9	11
environment and Policy	5	12

AHRN Seminar - Hydrogen Research in Queensland

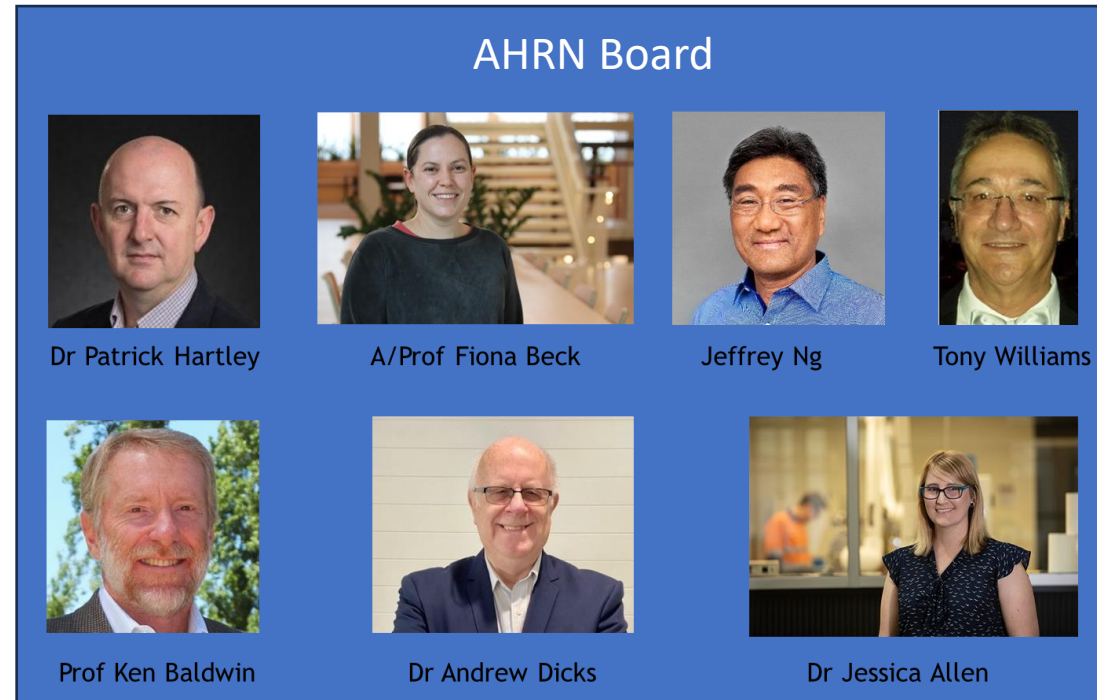
6th September 2022, Room N78_1.19

Sir Samuel Griffith Building, Griffith University



- 10.00 Greeting of Kim Richards MP to Dr Peter Binks, Dr Andrew Dicks, Prof Evan Gray, Ian Mackinnon, and Dr Peta Ashworth
- 10.15 Acknowledgement of Country and welcome to all Dr Andrew Dicks (MC), who will introduce Peter Binks, Kim Richards MP
- 10.18 Dr Peter Binks welcome to Griffith University
- 10.21 Kim Richards short address to audience on behalf of QLD Government
- 10.26 Short presentations from leading researchers Ian Mackinnon, Peta Ashworth, Evan Gray, John Bell,
- 11.00 Short technical presentations from hydrogen researchers
- *Methane Pyrolysis: the alternative blue hydrogen?* Prof Simon Smart, The University of Queensland
 - *Biological hydrogen generation.* Prof Ben Hankamer, The University of Queensland
 - *Pyrolysis of fuels to hydrogen.* Prof Prasad Kaparaju, Griffith University
 - *Degradation of hydrogen compressor alloys with cycling.* Fatema Tuz Zohra, Griffith University
 - *Hydrogen from Biomass - Present Scenario and Future Prospects.* Prof Jorge Beltramini, QUT
 - *Building public acceptance of the hydrogen export industry: is any publicity, good?* Dr Ellen Tyquin, QUT
 - *Mg-based alloys for hydrogen storage systems.* Dr Manjin Kim, UQ
 - *Hydrogen embrittlement in alloys and related advanced characterisation techniques.* Dr Eason Chen, University of Sydney
 - *A future solid state hydrogen compressor.* Dr Sandy Edwards, CSIRO Pullenvale
 - *The CSIRO Hydrogen future Science Platform.* Dr Nikolai Kinaev, CSIRO Pullenvale
- 13.30 Free Networking Lunch
- 14.30 Visit to the Sir Samuel Griffith Centre hydrogen micro-grid and hydrogen Labs

AHRN Ltd. Governance



Hydrogen Production

Leader - Professor Jonathan Love, CQU University

Hydrogen Storage and Distribution

Leader - Professor Evan Gray, Griffith University

Hydrogen Utilisation

Leader - Professor Bahman Shabani, RMIT

Cross-Cutting Activities

Leader - Ailiche Goddard-Clegg, Deakin University

International Activities

Leader - Dan O'Sullivan

Working Groups,
production, storage,
distribution, cross-cutting,
international

Administration

International Program

<https://www.csiro.au/en/about/challenges-missions/Hydrogen/International-hydrogen-collaboration>

Global Scan for Research Collaborations

Reports cover Australia, Canada, China, France, Germany, India, Japan, Republic of Korea, Singapore, UK, USA

International Delegations

During 2022-2024 CSIRO led delegations to 10 overseas destinations to learn more about hydrogen activities in other countries and lift our international collaborative research efforts.

- 2022 Research delegations visited Germany, France, Japan, UK, and the USA.
The 2022 delegation report is a combined report for the year across these countries.
- 2023 Research delegations travelled to Singapore, South Korea, and India.
- 2024 Research delegations visited the Netherlands and the People's Republic of China.

A group of research delegates to the World Hydrogen Summit in Rotterdam.

The 2023 and 2024 reports became more targeted separate reports for each country after stakeholder feedback received on the 2022 reporting.

International Research Fellowships

Three rounds of 10, 10, 15

IPHE Early Career Network



International Partnership for Hydrogen
and Fuel Cells in the Economy

[Home](#) [What we do](#) [Strategies](#) [Deployments](#) [Resources](#) [Events](#) [News](#) [H2 BtA](#) [IPHE Members Area](#)

✓ Background

To better facilitate hydrogen and fuel cell education and increase the general public's exposure to the hydrogen economy, the E&O WG is establishing an IPHE E&O WG Early Career Network, intended to promote international H2FC awareness, connect members with peers, mentors and potential employers and launch a collaborative platform for the next generation of H2FC scientific researchers, industry experts and government leaders.

The IPHE E&O WG Early Career Network is envisioned as a voluntary, non-binding extracurricular activity and does not represent the views of the international government members of the IPHE.

✓ Membership

Membership is open to undergraduate and graduate students, post-docs, and early-career professionals from all IPHE member countries. Member Benefits Include:

- **Opportunities for leadership and career development for members**
- **Connecting with other young professionals interested in hydrogen**
- **Becoming a part of a network of members and professionals in the field**

✓ Objectives

- Promoting awareness of hydrogen and fuel cell technologies
- Sharing information on current research and activities related to hydrogen
- Increasing international exposure and creating awareness of hydrogen research and opportunities
- Sharing information on hydrogen and fuel cells curricula and educational resources through collaborations with other organizations
- Providing feedback to the Education & Outreach Working Group on outreach efforts conducted through the chapter
- Partnering with university centers on educational hydrogen and fuel cell initiatives and programs
- Establishing a social community of young professionals to meet regularly

✓ Activities

The E&O WG identifies the following areas of activity as potential focuses for the Early Career Network:

- Meeting regularly to discuss and share information about hydrogen and fuel activities
- Introducing chapter members to high-level officials and partners in the hydrogen and fuel cell economy through formal events, conferences and summits
- Connecting chapter members with IPHE member country officials, scientists, researchers, industry professionals and policymakers through ongoing mentorship programs

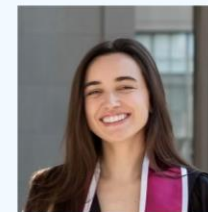
Leadership Team

The Leadership Team is composed of 11 members



Co-Vice Chair
Neethu Varghese

India, PhD in Italy



Co-Vice Chair
Ebbly Brennan

USA



Regional Director Asia
Gopichand Anumolu

India



Co-Regional Director Africa
Ishak Zakaria Madani

Algeria, PhD in USA



Co-Regional Director Africa, Regional
Director USA
Olumide Adeoye

USA



Co-Regional Director Europe
Thilo Krechtak

Germany



Co-Regional Director Europe
Hyung Ahn

Germany



Regional Director Oceania
Eason Chen

Singapore, PhD in Australia



Education & Outreach Co-Director
Felix Rothhagen

Germany



Education & Outreach Co-Director
Isiaka Alani

Ghana



Education & Outreach Co-Director
Francis Dunne

USA

H2TCP IN A NUTSHELL



33

Members

25 Member Countries
+ European Commission
7 Sponsors

50+

Tasks

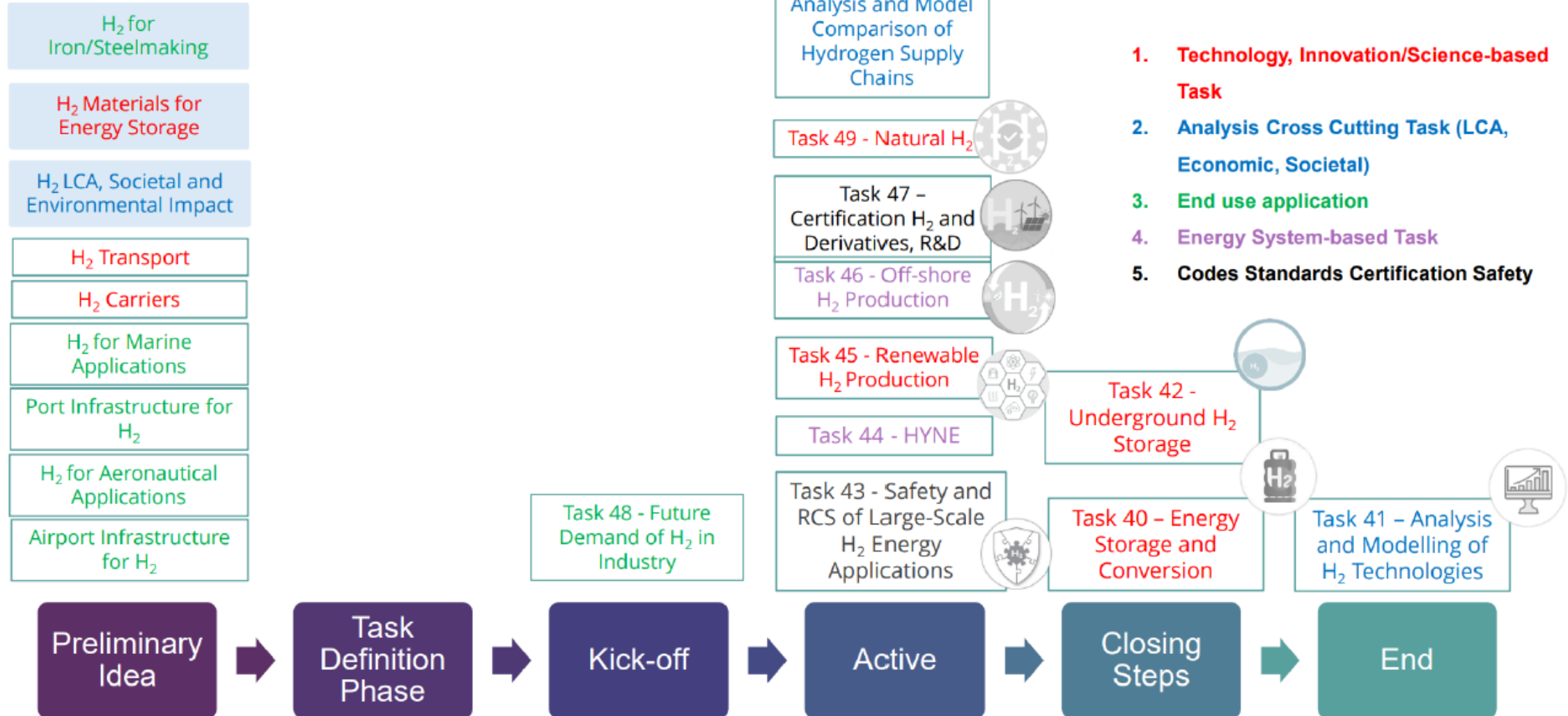
10 Open
40 Finished
3 Preliminary
Proposals

500+

Experts involved

In collaborative research on
hydrogen technologies

Task portfolio status



Current activities in the IEA Hydrogen TCP

Open Tasks:

- Task 43 – Safety and RCS of Large Scale Hydrogen Energy Applications (2022 – 2025)
- Task 44 – Hydrogen from Nuclear Energy (2023 -2025)
- Task 45 – Renewable Hydrogen Production (2023 – 2026)
- Task 46 – Offshore Hydrogen Production (2023 – 2025)
- Task 47 – Certification of Hydrogen and Derivatives – R&D (2023-25)
- Task 48 – Future Demand of Hydrogen in Industry (2024 – 2027)
- **Task 49 – Natural Hydrogen (2024 – 2026)**
- **Task 50 – Cost and Carbon Intensity Analysis and Model Comparison of Hydrogen Supply Chains (2024-2026)**
- **Task 51 – Hydrogen Materials for Energy Storage – from Materials to System Design, Testing and Demonstration**

Proposals:

- LCA, Society and environmental impacts
- Hydrogen for Iron/Steelmaking
- Subsurface Measuring Monitoring & Verification (MMV) Programs



TRL ASSESSMENT

Background

- The **Hydrogen TCP** has set among its **goals to reinforce its position as the main source of hydrogen technical knowledge**. To achieve this, one of its Strategic Activities has been the **TRL assessment of hydrogen-related technologies** that feed **IEA's strategic reports**:
 - **ETP Clean Energy Technology Guide (CETG)**
 - **Global Hydrogen Review (GHR)**
 - **DEMOs database**.
- Nearly **120 experts and 130 technologies** are involved in the assessment.

The way this advisory was carried out **during 2023 and 2024** was by **contracting the services of the Consulting Department of Ariema Energía y Medioambiente**.

Hydrogen TCP Awards of Excellence

- ✓ To recognize excellence in international collaboration in research, development, and application of H₂ technologies.
- ✓ To leverage innovation in H₂ technologies and applications.
- ✓ To promote and increase the outreach for winning and finalist projects.
- ✓ Public/private energy companies, start-ups, universities, and research institutions can participate



IEA Hydrogen TCP

Awards of Excellence 2025

2025's EDITION TOPIC:

Hydrogen Innovations and Technologies for
Hard-to-Decarbonize Sectors and Sustainable Fuels

The submission period closed on May 26th!

Thank you all for your participation.

🔔 Stay tuned: More updates coming soon!

[2025 Guidelines](#)

[Submit Your Project](#)

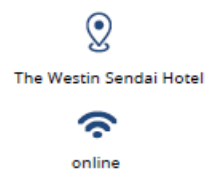


Exco meetings



Australian ExCo Reps

100th Meeting
5-7th November 2025
Dr. Fatih Birol is attending

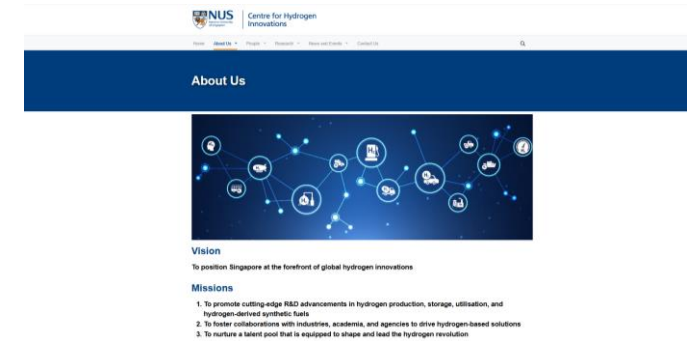
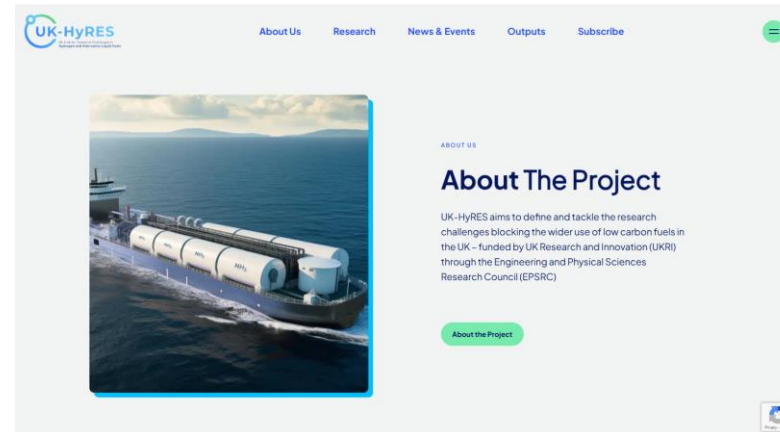


DAY 1 - APRIL 23RD, 9:00 - 18:00 UTC+9

09:00 - 09:30	1. GENERAL BUSINESS
09:30 - 10:00	2. RESEARCH AND DEVELOPMENT 20 (RD20) PRESENTATION
10:00 - 10:45	3. POTENTIAL NEW MEMBER PRESENTATION - SINGAPORE (TBC)
10:45 - 11:15	Coffee break
11:15 - 11:45	4. WORKPLAN PRESENTATIONS
	PP Subsurface Measuring, Monitoring & Verification Programs
11:45 - 12:25	5. STATE OF THE ART IN PHOTONS-TO-HYDROGEN - <i>Expert presentation</i>
12:25 - 13:00	6. TASK UPDATES
	Task 52: Intertask Hydrogen for Iron and Steel making
13:00 - 14:30	Lunch
14:30 - 14:55	7. EXTERNAL COLLABORATION
	International Partnership for Hydrogen and Fuel Cells in the Economy (IPHE)
14:55 - 15:55	6. TASK UPDATES
	14:55 - 15:25 Task 45: Renewable Hydrogen Production 15:25 - 15:55 Task 46: Offshore Hydrogen Production
15:55 - 16:30	Coffee break
16:30 - 17:00	8. IEA: UPCOMING GLOBAL HYDROGEN REVIEW 2025, SOUTHEAST ASIA FOCUS
17:00 - 17:25	7. EXTERNAL COLLABORATION
	Mission Innovation - Clean Hydrogen Mission
17:25 - 17:55	6. TASK UPDATES
	Task 44: Hydrogen for Nuclear Energy
17:55 - 18:00	9. RECAP AND NEXT DAY'S AGENDA



Other international collaborations



NON-BINDING MEMORANDUM OF UNDERSTANDING

This Non-Binding Memorandum of Understanding (MOU) is entered into on __04 September __2024, by and between:

AHRN	Name	Australian Hydrogen Research Network Ltd (AHRN)
	ACN	669 894 115
	Address	4, Tomasi Street, Augustine Heights QLD 4300, Australia
	Email	a.dicks@ahrn.org.au
	Attention	Andrew Dicks
HRI	Name	Université du Québec à Trois-Rivières (UQTR)
	Address	3351 boulevard des Forges, Trois-Rivières, Québec G9A 5H7, Canada
	Email	Hugues.Doucet@uqtr.ca
	Attention	Hugues Doucet
	Attention	

Background

- AHRN is a not-for-profit public company limited by guarantee and registered charity in Australia, which represents a community of researchers and interested stakeholders supporting the emerging hydrogen industry. AHRN fosters excellence in hydrogen-related research through an ongoing program of seminars and knowledge-sharing activities.
- Hydrogen Research Institute (HRI) is UQTR not-for-profit research centre working in the R&D hydrogen value chain from production, storage, mobility and stationary applications as well as safety.

Purpose

- This non-binding MOU outlines the intention of the parties to collaborate in good faith to conceptualise and jointly implement Projects (as defined below).

Term

- This MOU commences on 04 September 2024 and will remain in effect for 3 years (Term) and may be extended by written agreement of the parties.

Understanding of the parties

- During the Term, AHRN and HRI agree to collaborate together on:
 - writing and submitting joint call proposals;
 - joint research projects;



Oiling the wheels

- Benefit from involvement with Networking groups
- Discussions on further activities building on International Linkages
 - Set up a task force on expanding the use of the network
- Further training / masterclasses / summer school
- Industry Partners (Corporate Membership)
- New board members for 2025/26
- Industry / academia linkages
- Better use of IT – Group – volunteers and interns



2025-26

3 July, Online Seminar – Photons to Molecules, Prof Greg Metha, University of Adelaide

22-23 July, Hydrogen Industry Masterclass, Brisbane (co-promoted with Engineers Australia and AIE)

29 July, Online Seminar – Fuel cell testing, Dr Michael Pereira, Deakin University

7 August, Online Seminar - Linking Africa and Australia for Clean Hydrogen Developments

TBC September, Online Seminar – Women in the Gas sector, A/Prof Carol Bond, RMIT

TBC October, AGM and Seminar

7-9 November, IEA ExCo Meeting – Paris and online

TBC November, Online Seminar – Hydrogen Safety, Standards and Reliability, A/Prof Fatemeh Salehi (Macquarie) and Prof Paul Medwell (University of Adelaide)

16-19 February 2026, AHRC – Melbourne, Sofitel

22-26 June 2026, WHEC – Singapore