Preliminary Announcement

Call for Papers

2023 IERE-CSIRO Brisbane Hydrogen Workshop

Hydrogen in Clean Energy Transition

Abstract Submission Deadline Extended until March 17, 2023.
(Refer to Page 5)

Registration Fee Fixed. Registration to Open in Early March.
(Refer to Page 6)

IERE Members:	***AUD 900.-***
Non-IERE Members:	***AUD 1,350.-***
Academic Participants:	***AUD 900.-***
Students:	***AUD 675.-***

The Story Bridge in Brisbane, Queensland, Australia

May 22–25, 2023

Brisbane, Australia

Organized by IERE and CSIRO

Hydrogen in Clean Energy Transition

About the theme

The world is seeking for various technological pathways to support the decarbonisation of electricity, transport, and industrial sectors. Hydrogen has emerged as a real opportunity in this context: it can be used as a transport fuel, as a long-term energy storage medium, and as a vector for distribution of renewable energy from those countries with significant resources to those with fewer resources, as well as it can be utilised as a chemical reagent and reductant in various industries. While hydrogen can play a role in supporting electricity grids with greater penetration of variable renewable energy it also offers the opportunity for the electricity sector to be coupled more closely with transport and industry to support significant decarbonisation around the globe.

Who should attend?

The workshop is intended for experts actively involved in the selected themes, from IERE members and non-members, as well as all those interested in the evolution of the electrical power industry and the technology development and business development opportunities associated to this evolution. IERE will invite prominent speakers for keynote speeches.

Who is IERE

IERE is a worldwide, non-profit organisation—established in 1968 as International Electric Research Exchange—serving executives, senior managers, engineers, and researchers who are responsible for electricity and energy related R&D and solutions.

Who is CSIRO

The Commonwealth Scientific and Industrial Research Organisation (CSIRO) is an Australian Government agency responsible for scientific research. CSIRO addresses major scientific and technology challenges across a number of fields, including energy and heavy industry.

Outline Schedule:

Monday, May 22, 2023	Welcome Reception
Tuesday, May 23, 2023	2023 IERE-CSIRO Brisbane Hydrogen Workshop
	Official Dinner
Wednesday, May 24, 2023	2023 IERE-CSIRO Brisbane Hydrogen Workshop
Thursday, May 25, 2023	Technical Visit (Optional)
	Social Event (Optional)

Opening Session:

Opening Address:	Details to be announced
Welcome Address:	Details to be announced
Keynote Addresses:	Details to be announced

Technical Session 1: Hydrogen Supply

As hydrogen is an integral part of the transition to clean energy, the reliable supply of hydrogen at scale required to support this transition is critical. The hydrogen supply chain should address not only the scale issues, but also should be sustainable (with low carbon footprint) and commercially affordable. This session will address the topics related to ensuring the hydrogen supply for clean energy transition.

Potential topics include:

1. Biological hydrogen production
2. Biomass and waste conversion
3. Direct hydrogen carrier production
4. Electrolysis
5. Fossil fuel conversion
6. Natural hydrogen
7. Photochemical and photocatalytic processes
8. Thermal water splitting
9. Separation materials and technologies

Technical Session 2: Hydrogen Storage and Distribution

Establishing large-scale hydrogen energy value chains depends on the cost and efficiency of hydrogen storage and transport. This session will explore technological solutions for storage of hydrogen at various scales and applications, such as for grid stabilisation, seasonal energy storage, or long-distance transportation.

Potential topics include:

1. Liquid hydrogen
2. Ammonia
3. LOHCs

4. Underground storage
5. Pipeline storage
6. Pipeline materials and performance
7. Pipeline design and integrity management
8. Pipeline and network operations
9. Hydrogen embrittlement
10. Hydrogen compression

Technical Session 3: Hydrogen Utilization

A feature of the emergence of hydrogen energy systems is the diversity of potential application pathways and industrial sectors. Commonly described as 'Power-to-X', there are also opportunities for industrial sectors not traditionally associated with hydrogen to play a role in production (such as the waste sector) or utilization for decarbonization (such as agriculture). This session will explore the different ways that various industry sectors can come together to both support 'hydrogen at scale' as well as decarbonization of industries such as metals production.

Potential topics include:

1. Electricity—grid balancing & stability, grid integration, stationary fuel cells, distributed power generation, engines & turbines
2. Export potential—shipping technology development, loading/offloading, infrastructure optimisation from production site to port loading site
3. Gas networks and appliances—appliance testing, metering, hydrogen gas separation
4. Heat storage—covers thermal batteries based on metal hydrides
5. Industrial heat processes—steel, cement, metals refining, etc.
6. Industrial feedstock processes—ammonia, synthetic fuels, and methanol production
7. Mobility—mobile fuel cells; onboard storage; refuelling stations; bunkering: land, sea, air mobility forms; vehicle/engine improvements

Technical Session 4: Cross-Cutting Areas

Emerging of hydrogen industry also results in several questions to be addressed to support this industry. Understanding the environmental impact of large-scale hydrogen production and transport, as well as ensuring that this new industry will have a social acceptance is very important for the deployment of hydrogen-base technologies. The appropriate policies and regulations, as well as safety standards and certification processes will ensure the smooth transition. It also requires good understanding of the socio-technical risks and techno-economic evaluation of various options.

Potential topics include:

1. Environmental impacts
2. Safety and standards
3. Public acceptance
4. Socio-technical risks
5. Techno-economic evaluation
6. Energy systems integration
7. Sector coupling

8. Supply chain integration
9. Policy and Regulations
10. Hydrogen certification schemes

Panel Session

Details to be announced

Special Session

Details to be announced

Poster Session

Details to be announced

Technical Visit (Optional)

Details to be announced

Social Event (Optional)

Details to be announced

Program

Session structure and speakers are subject to change according to the submission of contributions.

Call for Papers

~~<<Abstract Submission: No later than February 17, 2023>>~~

<<Abstract Submission Deadline Extended until March 17, 2023>>

You are kindly invited to submit abstracts for the Oral Session or Poster Session for the 2023 Brisbane Hydrogen Workshop by e-mail by ~~February 17, 2023~~ **March 17, 2023.**

to: **register (at) iere.jp** [Please substitute " (at) " with "@"]

IERE Central Office

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As for the **format of the abstract**, please refer to "Events" page on IERE website.

https://www.iere.jp/events/workshop/2023-brisbane/forspeakers.html

- You may be asked to change your Oral/Poster depending on the number of abstracts registered.
- Abstract and presentation material will be uploaded to IERE's website and open to the public.
- The official language of the IERE Workshop is English.

Note: This workshop has been postponed three times due to COVID-19. Those who have submitted abstracts in the past are required to submit new ones again according to the new session theme.

Registration

Registration will open in early March. Detailed information on Registration will be announced in the First and Second Announcements, which will be delivered later.

Registration Fee

The Registration fee will cover attendance at both workshop days (include lunches & refreshments at coffee breaks), welcome reception on May 22, official dinner on May 23 and conference package:

IERE Members:	**AUD 900.-**
Non-IERE Members:	**AUD 1,350.-**
Academic Participants:	**AUD 900.-**
Students:	**AUD 675.-**

- Accommodation and travel costs will be borne by the participants.

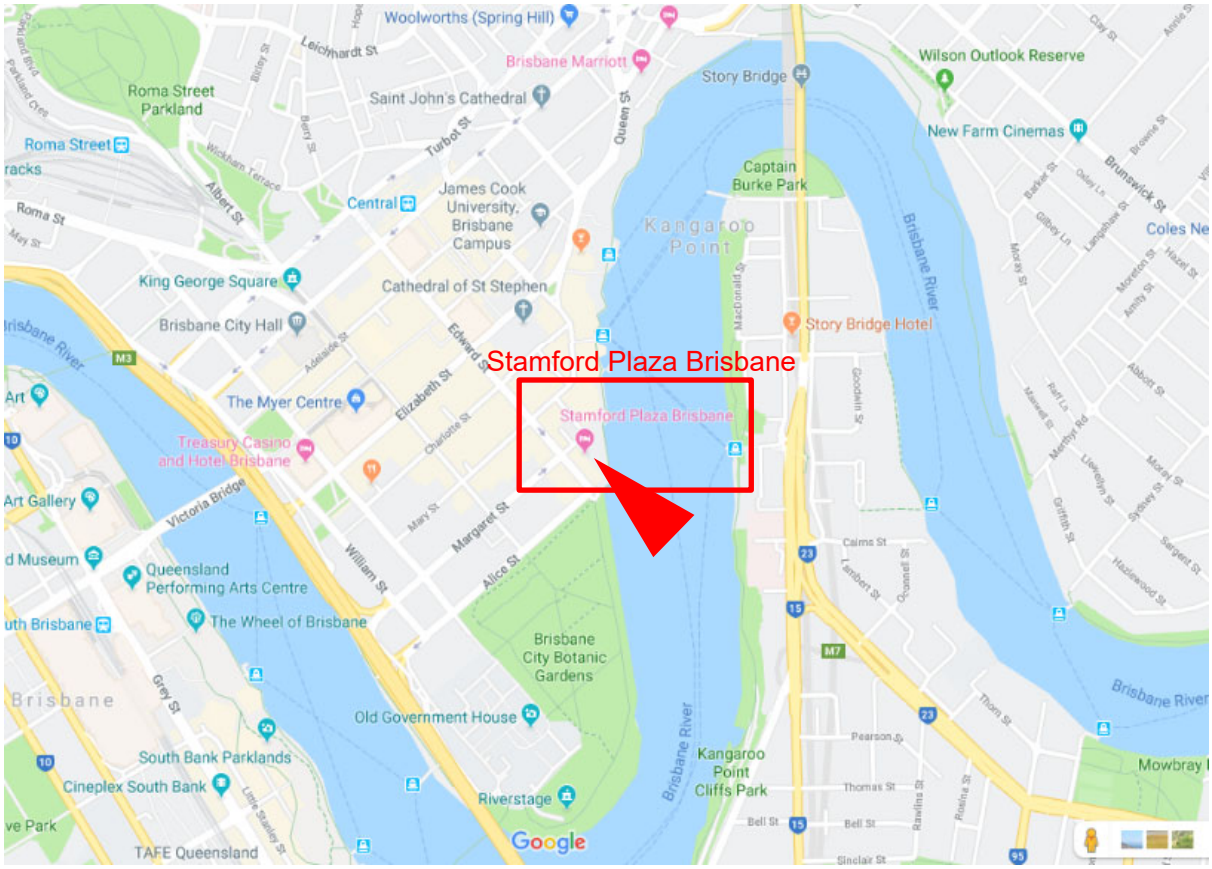
Details including cancellation policy will be announced in the First and Second Announcements.

Conference Venue

Stamford Plaza Brisbane, Queensland

Location: Edward St, Brisbane City, Queensland, Australia

Website: https://www.stamford.com.au



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About IERE

IERE is an organization for exchanging electricity and energy related cutting-edge technologies and R&D information among its members from the electricity and energy supply industry, equipment provider businesses, academic research, government, etc. This unique platform is of great help for executives, senior managers, engineers, and researchers who are responsible for R&D and solutions. It is a worldwide, non-profit organization, established as “International Electric Research Exchange” in 1968.

https://www.iere.jp

About CSIRO

CSIRO is Australia's national science agency, undertaking research in support of Australian industry and the wider community. CSIRO’s purpose is to solve the greatest challenges through innovative science and technology. This is done through our impact science lines of business: Agriculture and Food, Health and Biosecurity, Data61, Energy, Land and Water, Manufacturing, Mineral Resources, and Oceans and Atmosphere, as well as through our National Facilities and Collections lines of business where we manage infrastructure and biological collections for the benefit of research and industry. CSIRO maintains more than 50 sites across Australia and in France, Chile and the United States, employing about 5500 people. We collaborate with research institutes from around the world, and we partner with industry to solve problems and commercialize new technologies.

CSIRO’s Energy research is supporting a transition to a net zero emissions energy future. We do this by focusing on new and emerging renewable energy technologies, including hydrogen energy systems, while supporting the use of gas as a key transition fuel. We develop technologies to help our electricity grid evolve to support these low emissions technologies, and we explore the environmental and economic implications of the energy transition.

https://www.csiro.au/

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