



Hydrogen
Technical Section

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Newsletter

Society of Petroleum Engineers

Hydrogen Technical Section

Issue 02

September 2025

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SPE H2TS Mission

Our mission is to engage and collaborate partnerships between academia, industry, and SPE, and proactively engage students' interests through diverse educational activities, introduce continuing education programs, facilitate knowledge sharing and best practices, collaborate with other technical sections within SPE and improve H2TS visibility and influence.

The H2TS has grown under the leadership of founding chair Prof. Chris Kalli and Technical Director Hamad Marri, for the last two years and we continue to forge closer links between the energy industry and academia, help the industry by sharing knowledge and creating networking opportunities to all oil and gas and energy transition professionals through various activities in 2025.



About the SPE Hydrogen Technical Section

Started in 2022, H2TS is one of the latest technical sections championed by Bob Pearson, serving SPE members in enhancing their interest in the growing adaptation of Hydrogen as a clean renewable energy.

The Hydrogen Technical Section (H2TS) brings together technical professionals and academia who are active, or have a deep interest, in the use of hydrogen as an energy carrier. The new technical section aims to share knowledge, experiences, leading practice, promote industry awareness, and enhance technical competencies.

SPE H2 Technical Section - [LinkedIn](#)

MENA H2TS Work Group - [LinkedIn](#)

SPE H2TS Technical Excellence Awards

We are excited to announce the **SPE Hydrogen Technical Section** has been awarded one of the two Technical Section Excellence Awards for 2025!.

This prestigious award is the second highest honor a technical section may receive and is awarded to only 20% of eligible technical sections around the world. The award is in recognition of the section's hard work and strong programs in technical dissemination, professional development, member engagement, community involvement, and operations.

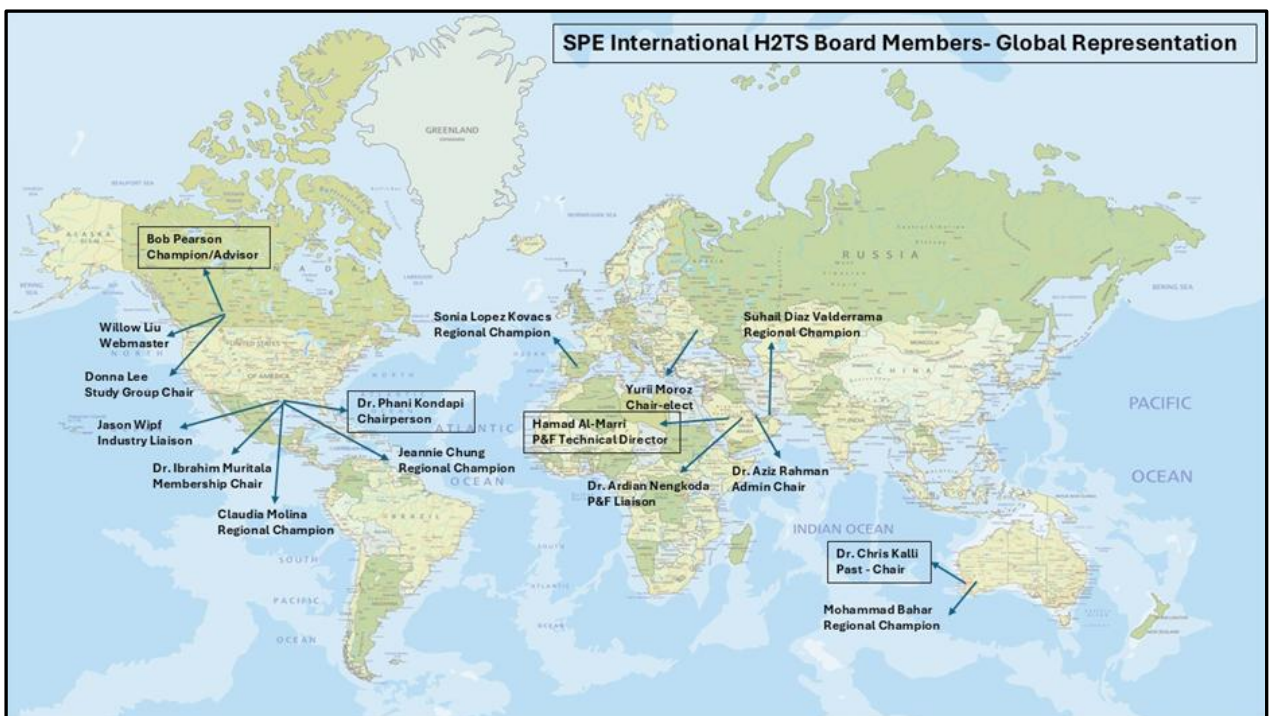


SPE H2TS Roles & Initiatives

Oil and gas as a bridge for the development and implementation of H2 strategy and technologies

- Leveraging existing infrastructure, with asset utilization and operational expertise.
- Bridging the technology gap, with transitional (blending traditional and emerging) solutions and rich existing carbon management experience.
- MENA H2TS Work Group

SPE H2TS Representation



SPE H2TS : Meet our team

Leadership Team



Dr. Phaneendra Kondapi
Chairperson



Yurii Moroz
Chairperson elect



Christopher J Kalli
Past Chairperson

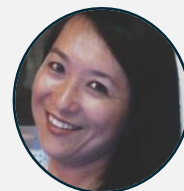
Administrative Team



Dr. Aziz Rahman
Admin Chair



Dr. Ibrahim Muritala
Membersgip Chair



Willow Liu
Webmaster

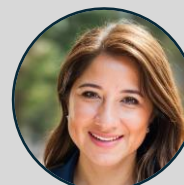
Engagement Team



Donna Lee
Study Group Chair



Jeannie Chung
Western Hemisphere



Claudia Molina
Western hemisphere



Suhail Diaz Valderrama
MENA

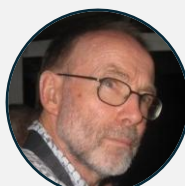


Sonia López Kovács
European Union



Mohammad Bahar
Eastern Hemisphere

Liaisons



Bob Pearson
Champion / Advisor



Dr. Adrian Nengkoda
SPE P&F Liaison



Jason Wipf
Industry Liaison

SPE H2TS Deliverables

- Capability development through on-line events, online networking, workshops, and conferences.
- Transfer of knowledge and best practices through meetings, events, communications, articles in SPE publications; technical papers and presentations; and SPE Connect.
- Close ties with other SPE Sections and regions that complement and enhance current energy transition initiatives within our industry.
- Closer links between the energy industry and academia.
- Promotion of professionalism, certification, and Distinguished Lecturer programming applicable and nomination of worthy candidates for SPE Awards in the domain.
- Engagement of young professionals seeking to make a career contribution to the development of a sustainable energy future.
- Collaborations with other professional organizations working on Hydrogen R&D, Commercialization, Transportation and Delivery to the end-users.

SPE H2TS Vision 2030



SPE H2TS Past Events

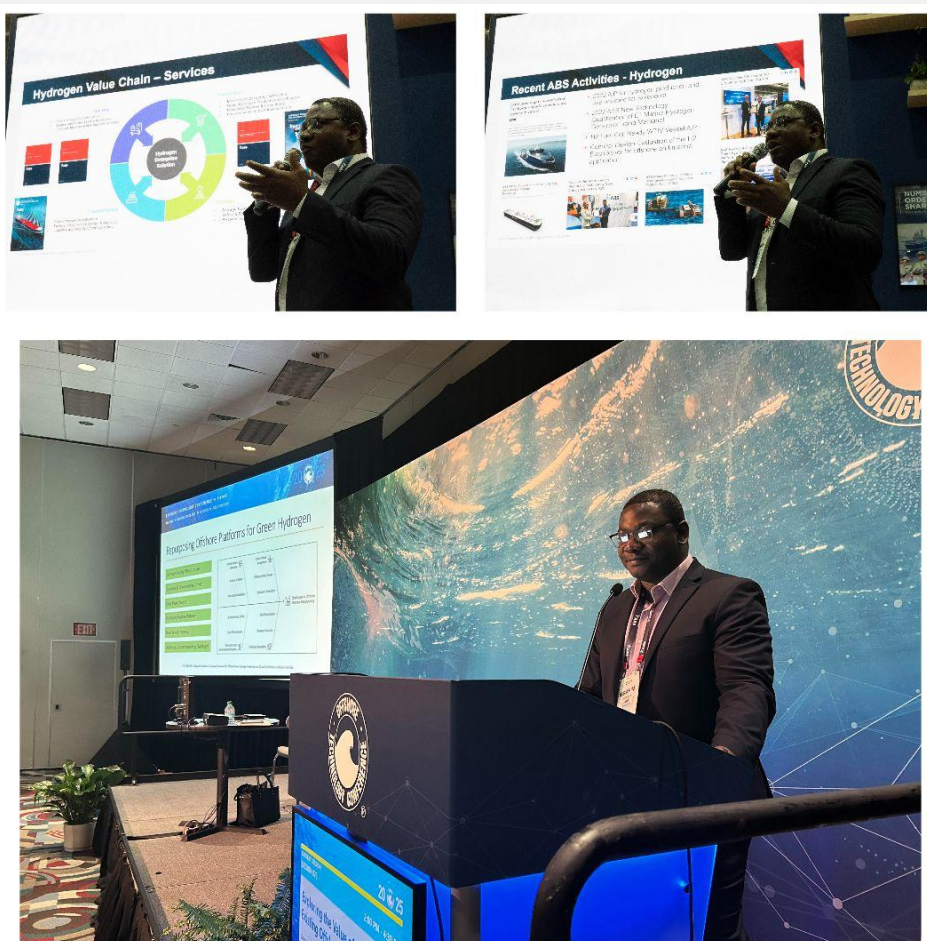
Offshore Technology Conference (OTC) May 2025, Houston, Texas,

Dr. Ibrahim K. Muritala ABS Global Hydrogen Leader, contributed to the event as speaker

Paper Title: Guiding the Transition: A Conceptual Framework for Offshore Green Hydrogen Production on Oil and Gas Platforms

Paper Number: OTC-35801-MS

DOI: <https://lnkd.in/gGYeuuvG>



SPE H2TS Past Events

Offshore Technology Conference (OTC) May 2025, Houston, Texas,

Keynote Speaker Session:

Impact of Hydrogen in the Energy Transition and its Role in Carbon Neutrality

Speakers:

Rich Voorberg, President of Siemens Energy NA
Josh McMorrow, Executive Chairman of GenH2

Moderator:

Phaneendra Kondapi, SPE H2TS Chair



OTC 2025 KEYNOTE SPEAKER SERIES
IMPACT OF HYDROGEN IN THE ENERGY TRANSITION AND
IT'S ROLE IN CARBON NEUTRALITY
WEDNESDAY, 7 MAY | 0800–0900 CDT (UTC-5)

 PHANEENDRA KONDAPI AFFILIATE PROFESSOR COLORADO SCHOOL OF MINES	 RICHARD VOORBERG PRESIDENT, NORTH AMERICA SIEMENS ENERGY	 JOSH MCMORROW EXECUTIVE CHAIRMAN GENH2
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5–8 MAY 2025 » NRG PARK » HOUSTON, TEXAS, USA | #OTC2025 [Register Now](#)

It was a great sharing of insights with Josh McMorrow and Rich Voorberg on how the U.S. needs all forms of fuel to meet its energy needs during this significant energy expansion and how to integrate all these energy sources—gas, nuclear, renewables, and hydrogen.



SPE H2TS Past Events

SPE Hydrogen Symposium held in Jakarta, Indonesia, 11–12 June 2025

The second edition of the **SPE Symposium: Hydrogen and Hydrogen-Based Fuels**, themed “*Unleashing the Potential of Low-Carbon Hydrogen: Innovation, Infrastructure, and Implementation*,” took place in Jakarta, Indonesia.

Dr. Ibrahim K. Muritala, significantly contributed to the event by serving as both a panelist and session chair.



In Strategic Session 5, he presented “***Emerging Developments on Hydrogen and Derivatives Shipping***,” offering critical insights into global trade projections, logistics challenges, and safety in hydrogen transport.

He also chaired Strategic Session 6, leading a dynamic discussion on building a cohesive global hydrogen economy through policy alignment, technology pathways, and international benchmarks.



SPE H2TS Past Events

SPE Hydrogen Symposium held in Jakarta, Indonesia, 11–12 June 2025

The **SPE Hydrogen Technical Section (SPE H2TS)**, are proud to support and participate in this important milestone event advancing the hydrogen energy landscape.

A special congratulations as well to our esteemed member **Dr. Ibrahim K. Muritala**, who contributed to the event with their latest research on hydrogen.



SPE H2TS Past Webinars

Dear colleagues!

We are pleased to invite you to an online meeting!



UNLOCKING THE GCC HYDROGEN ECONOMY: OMAN'S VISION AND REGIONAL BEST PRACTICES

Rumaitha Al Busaidi

Business Development and In-Country Value Manager
Hydrom, Oman



Rumaitha Al Busaidi is a leading strategist in Oman's green hydrogen transition, working at the intersection of energy policy, climate diplomacy, and sustainable development. She currently serves as Business Development and In-Country Value Manager at Hydrom, the orchestrator of green hydrogen development in Oman.

Abstract: The development of hydrogen in the GCC region is gaining momentum as countries seek to diversify their economies and lead in the global energy transition. Regulatory frameworks, community engagement, and innovative business models are emerging as critical enablers for scaling both green and blue hydrogen. With abundant solar resources, existing infrastructure, and strategic export positioning, the GCC is uniquely placed to become a global hydrogen hub. However, realizing this potential requires cohesive policies, transparent market mechanisms, and inclusive stakeholder collaboration to ensure long-term viability and social acceptance.

Moderator: **Talal Al Aulaqi**,
SPE Oman Committee Member



Wednesday 23rd July



5 pm (GMT+4)

"Unlocking the GCC Hydrogen Economy: Oman's Vision and Regional Best Practices"

Presented by **Rumaitha Al Busaidi**

Moderated by **Talal Al-Aulaqi**.

SPE H2TS Past Events

SPE Gaia Masterclass: Natural vs Artificial Hydrogen Production: Real-World Success Stories and Applications

As the global energy sector accelerates toward decarbonization, hydrogen is emerging as a critical enabler of the low-carbon economy. This Masterclass explores the evolving landscape of hydrogen production, comparing natural sources—such as geologic hydrogen—with artificial methods including electrolysis and reforming with carbon capture.



GAIA MASTERCLASS

Natural vs Artificial Hydrogen Production Successful Case Studies for Its Application

Key topics include the scalability of natural hydrogen extraction, the role of renewables in green hydrogen production, and innovations driving down the cost of clean hydrogen. Attendees will leave with a deeper understanding of where these technologies are being successfully deployed today—and what lessons they offer for future hydrogen strategies in the upstream and broader energy sectors.

Presentation by:

- **Yurii Moroz**, SPE H2TS Program Chair and Chair of the Board, SPE Central Ukraine Section and
- **Dr. Ibrahim Muritala**, SPE H2TS Membership Chair



In case you missed it, here's the link:

<https://streaming.spe.org/spe-gaia-masterclass-natural-vs-artificial-hydrogen-production-successful-case-studies-for-its-application>

SPE H2TS Past Events

SPE Live: Hydrogen in Action - Today's Use Cases and What We Might See by 2050

Hydrogen is no longer just a future promise — it's already being deployed in real-world projects today. In this SPE Live, we will highlight key current applications of hydrogen and ammonia, particularly in industry, shipping, and power. We will then explore what is realistically expected by 2050, based on project trends, policy shifts, and market developments.

The conversation will also touch on the importance of policy support, full life-cycle emissions tracking, and the evolving global trade in low-carbon hydrogen derivatives like ammonia and e-fuels.

As the value chain evolves, a parallel effort is urgently needed to build the future workforce — equipping today's professionals and preparing new talent with the right technical and commercial skills to support and scale low-carbon hydrogen solutions.

The goal is to give participants a clear, grounded view of where we are now — and where we could go next.

Moderated by **Ibrahim Muritala**, SPE H2TS Membership Chair

Speakers:

Magdy Mohamed, Technical Development Manager at XRG

Cullen Hall, Vice President of Product Development at GenH2



In case you missed it, here's the link :

[SPE Live: Hydrogen in Action – Today's Use Cases and What We Might See by 2050 – SPE Energy Stream](#)

SPE Upcoming Events

► **SPE Workshop: Hydrogen Exploration and Production and Carbon Capture** in Western Canada, Calgary, 7–9 October 2025

SPE H2TS committee members: **Willow Liu and Januar Wirawan**

<https://www.spe-events.org/workshop/hydrogen-exploration-production-carbon-capture-western-canada>



SPE Workshop: Hydrogen Exploration and Production and Carbon Capture in Western Canada
7-9 October 2025 | Calgary, Alberta Canada

This workshop aims to explore Hydrogen Exploration & Production (H2E&P) and Carbon Capture, Utilization & Storage (CCS/CCUS) in Western Canada, focusing on technical challenges, R&D advancements, and industry collaboration.

Network with industry experts, researchers, and policymakers. Explore business opportunities and emerging markets in the hydrogen economy.

REGISTER NOW

See the preliminary program at:
go.spe.org/CanadaHydrogen

► **SPE Annual Technical Conference and Exhibition (ATCE)**

20–22 October 2025 | Houston, Texas, USA.

SPE H2TS Committee Members: **Phaneendra Kondapi, Aziz Rehman and Willow Liu**

<https://www.atce.org/>



SPE ATCE
20–22 OCTOBER 2025
GEORGE R. BROWN CONVENTION CENTER
HOUSTON, TX, USA

ABOUT PROGRAM ATTEND REGISTRATION & HOUSING SPECIAL EVENTS OUR SPONSORS EXHIBITORS AND SPONSORSHIPS

SPE Annual Technical Conference and Exhibition (ATCE)

SOLUTIONS » PEOPLE » ENERGY

20–22 October 2025 | George R. Brown Convention Center | Houston, Texas, USA

REGISTRATION IS NOW OPEN – SECURE YOUR SPOT TODAY

REGISTER NOW

SPE Upcoming Events

SPE ATCE 2025 Special Session:

SS01 - Powering the Energy Transition and Decarbonization: The Role of Evolving Production and Facilities Skills and Technologies

Speakers: Dr. Aziz Rahman and Dr. Ardian Nengkoda from H2TS

[Special Sessions at ATCE 2025 | Key Insights & Trends](#)

SPE >> ATCE

20–22 October 2025 | George R. Brown Convention Center | Houston, TX, USA



ABOUT

PROGRAM

ATTEND

REGISTRATION & HOUSING

SPECIAL EVENTS

OUR SPONSORS

REGISTER NOW

TUESDAY, 21 OCTOBER

SS01 - Powering the Energy Transition and Decarbonization: The Role of Evolving Production and Facilities Skills and Technologies

Time: 0845-0945

Location: Special Session Room 1

Panelists:



Aziz Rahman
Associate Professor
Hamad Bin Khalifa
University



Drew Pomeranz
Technology Director
SLB



Brandon Smith
Founder & CEO
SeekOps



Kevin Supak
Program Manager
Southwest Research
Institute

Moderators:



Phaneendra B. Kondapi
Affiliate Professor
Colorado School of Mines

Dr. Phani Kondapi is chairing two technical sessions at **SPE ATCE 2025**:

[11 Operations](#)

[21 Flow Assurance](#)

SPE Hydrogen News

THEWAYAHEAD™
WRITTEN BY AND FOR YOUNG PROFESSIONALS

Hydrogen's Role in Industrial Decarbonization: Transforming Refineries, Fertilizer Production, and Energy Operations



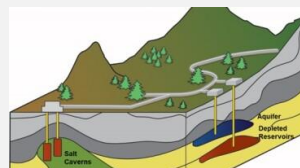
UT Austin Wins Inaugural Blue Hydrogen Student Design Competition



USGS and Colorado School of Mines Partner to Explore Potential of Geologic Hydrogen



Beyond the Pore Space: A Holistic Framework for Underground Hydrogen Storage and Generation



White/Gold May Be the New Black—Exploring for Natural Hydrogen



University of Alberta Launches Major Hydrogen Research and Innovation Center



Hydrogen Integration Into Existing Natural Gas Infrastructure: Opportunities, Challenges, and Industry Pathways



Hydrogen 2025: Reading

Technical Papers:

[Workflow Enables Technoeconomic Optimization of Underground Hydrogen Storage in Aquifers](#)

[Porous Underground Gas Storage Can Rapidly Provide Multiple Services to the Grid](#)

[SPE 220865 Optimizing Hydrogen Storage in the Subsurface Using a Reservoir-Simulation-Based and Deep-Learning-Accelerated Optimization Method](#) by *Esmail Eltahan, The University of Texas at Austin, et al.*



JPT JOURNAL OF
PETROLEUM
TECHNOLOGY

Additional Reading:

[Establishing the supply chain for hydrogen shipping](#)

[Coupling electrolyzers with offshore wind turbines to unlock green energy potential](#)

[An offshore wind and hydrogen marriage comes with big and expensive choices](#)

[An offshore wind and hydrogen marriage comes with big and expensive choices](#)

[Unlocking Offshore Hydrogen](#)

Global Hydrogen Review 2025

The Global Hydrogen Review is an annual publication by the International Energy Agency that tracks hydrogen production and demand worldwide, shedding light on the latest developments on policy, infrastructure, trade, investments and innovation.

This fifth edition of the Global Hydrogen Review takes stock of the progress to date and explores the challenges ahead, in order to provide a thorough assessment of the level of hydrogen adoption that could be achieved by 2030.

This report includes a special chapter on Southeast Asia, exploring the region's potential for the production and use of low-emissions hydrogen and hydrogen-based fuels and products in the near term.

Global Hydrogen Review 2025

12 September 2025

International
Energy Agency

Explore the analysis → <https://iea.li/4peU9H7>

Explore the press release → <https://iea.li/4pdEaJ7>

SPE H2TS Editorial Message

We are proud to share some exciting news with our community, the **SPE Hydrogen Technical Section (H2TS)** has been selected as one of the recipients of the **2025 Technical Section Excellence Award!**

This prestigious recognition is the **second-highest honor** a technical section can receive and is awarded to only **20% of eligible sections globally**. It reflects the remarkable dedication, innovation, and collaboration demonstrated by our members and leadership team throughout the year.



The award acknowledges our continued commitment to:

- Technical knowledge dissemination
- Professional development opportunities
- Member engagement and community building
- Active participation in industry and academic events
- Educational outreach and awareness of hydrogen technologies



Sonia López Kovács

SPE H2TS European Union

We are especially proud of the growing presence of the Hydrogen Technical Section at key industry events and conferences, and of our collective efforts to promote hydrogen as a critical pillar in the future energy mix.

To all our contributors, volunteers, and members, **thank you** for making this achievement possible. Let's continue working together to advance the role of hydrogen and elevate the technical excellence of our community.

Hydrogen Resources



The Future of Hydrogen – Analysis - IEA

<https://iea.blob.core.windows.net/assets/5bd46d7b-906a-4429-abda-e9c507a62341/GlobalHydrogenReview2021.pdf>



The Department of Energy Hydrogen Program Plan | Hydrogen Program
U.S. Department of Energy (DOE) Hydrogen Program and National Clean
Hydrogen Strategy

- <https://www.energy.gov/eere/fuelcells/h2scale>
- <https://www.energy.gov/eere/fuelcells/hydrogen-storage>
- <https://www.energy.gov/sites/prod/files/2018/12/f58/fcto-webinarslides-hydrogen-carriers-120618.pdf>
- <https://www.energy.gov/sites/default/files/2021-12/h2iq-12082021.pdf>
- <https://www.hydrogen.energy.gov/pdfs/hydrogen-program-plan-2020.pdf>



ACS Executive Summary

MIT's Drake Hernandez sees a future with hydrogen solutions |
ExxonMobil



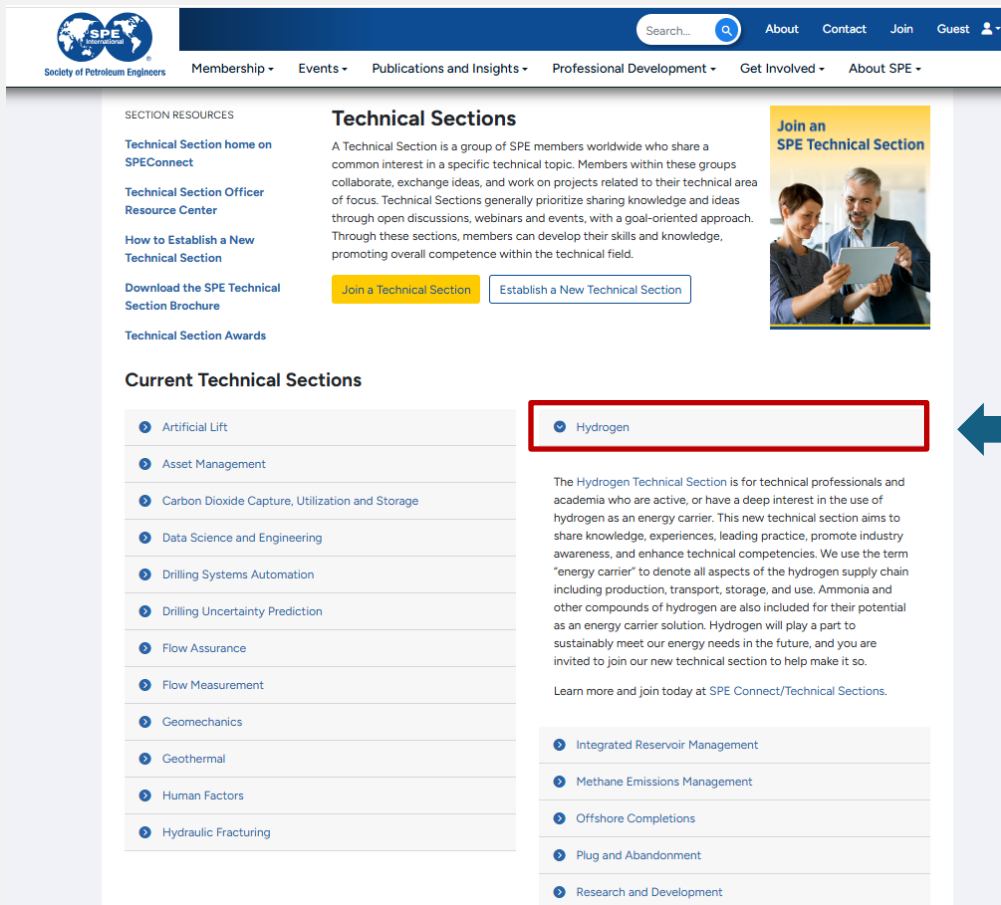
Explainer: harnessing the power of hydrogen — Chevron



BrightLoop™ Low-Carbon Hydrogen Production » Babcock & Wilcox

Connect with SPE H2TS

If you are a professional SPE member and you wish to engage in our Hydrogen Technical Section discussion posts, please [click here](#) to join our community.



The screenshot shows the SPE Connect website. The top navigation bar includes links for Search, About, Contact, Join, and Guest. The main content area is titled 'Technical Sections' and describes the purpose of these sections. A list of 'Current Technical Sections' is provided, with 'Hydrogen' highlighted in a red box. A blue arrow points to this box. To the right of the list, there is a description of the Hydrogen Technical Section and a 'Join a Technical Section' button.

SECTION RESOURCES

- Technical Section home on SPEConnect
- Technical Section Officer Resource Center
- How to Establish a New Technical Section
- Download the SPE Technical Section Brochure
- Technical Section Awards

Technical Sections

A Technical Section is a group of SPE members worldwide who share a common interest in a specific technical topic. Members within these groups collaborate, exchange ideas, and work on projects related to their technical area of focus. Technical Sections generally prioritize sharing knowledge and ideas through open discussions, webinars and events, with a goal-oriented approach. Through these sections, members can develop their skills and knowledge, promoting overall competence within the technical field.

[Join a Technical Section](#) [Establish a New Technical Section](#)

Join an SPE Technical Section

Current Technical Sections

- Artificial Lift
- Asset Management
- Carbon Dioxide Capture, Utilization and Storage
- Data Science and Engineering
- Drilling Systems Automation
- Drilling Uncertainty Prediction
- Flow Assurance
- Flow Measurement
- Geomechanics
- Geothermal
- Human Factors
- Hydraulic Fracturing
- Hydrogen**
- Integrated Reservoir Management
- Methane Emissions Management
- Offshore Completions
- Plug and Abandonment
- Research and Development

The Hydrogen Technical Section is for technical professionals and academia who are active, or have a deep interest in the use of hydrogen as an energy carrier. This new technical section aims to share knowledge, experiences, leading practice, promote industry awareness, and enhance technical competencies. We use the term "energy carrier" to denote all aspects of the hydrogen supply chain including production, transport, storage, and use. Ammonia and other compounds of hydrogen are also included for their potential as an energy carrier solution. Hydrogen will play a part to sustainably meet our energy needs in the future, and you are invited to join our new technical section to help make it so.

Learn more and join today at [SPE Connect/Technical Sections](#).

For more information, you can also:

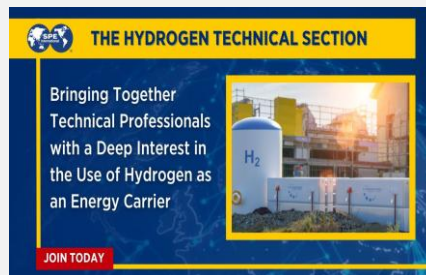


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THE HYDROGEN TECHNICAL SECTION

Bringing Together Technical Professionals with a Deep Interest in the Use of Hydrogen as an Energy Carrier

[JOIN TODAY](#)