














National Hydrogen Industry Technical Masterclass Program






13th - 15th of February 2024, Perth, WA





Session	Session Time	Session Title	No.	Key Topics	Speaker – Affiliation - State	Bio
Tuesday, 13 February 2024 08:30 – 09:00 Registration/ Coffee						
Session 1	09:00-10:30	Introductory Session Opening and MC Katie McKenzie	1.1	Hydrogen in WA	Katie Cook - Director Director Energy Transition Strategies, Resources and Project Facilitation Department of Jobs, Tourism, Science and Innovation (JTSI), WA Government	<p>Katie Cook is an experienced project manager, advisor and engineer in the energy industry. Katie is currently a Director of Renewable Hydrogen, in the Energy Transition Strategies Division at the Department of Jobs, Tourism, Science and Innovation. Her responsibilities include coordination and managing the implementation of the Western Australian Renewable Hydrogen Strategy, supporting the State Government's commitment to transition towards renewable energy sources.</p> <p>Prior to joining the government, Katie worked around the globe with Arup, a multinational consulting firm, for over 12 years. She was the Australasian Energy Skills Manager, responsible for skills management, research and learning. She has worked on large multidisciplinary projects involving numerous client and contractor interfaces such as Optus Stadium, Gladstone Liquefied Natural Gas Jetty, Gravitas Offshore Wind Ltd and Malampaya Phase 3 Depletion Compression Platform and has worked closely with multiple parties to achieve innovative, efficient solutions while minimising project risk and achieving deadlines.</p> <p>Katie holds Bachelor of Engineering, Bachelor of Commerce and a Postgraduate Award in Energy Futures and Transitions.</p> 
			1.2	Social, legal, governance and regulations	Diane Hinson - Senior Advisor - Renewable Gas Development, Australian Gas Infrastructure Group (AGIG) - QLD	<p>Diane Hinson Diane is a senior leader and chartered engineer with 20 plus years of experience in oil and gas, petrochemical, chemical and alternative energy industries. During her career she has led engineering and safety studies, process safety and operational improvement programs and has a strong commitment to safety and risk management. Her recent experiences involve working with project and commercial developments for hydrogen and hydrogen derivatives.</p>  
10:30 – 11:00 Coffee/ Networking						
Session 2	11:00-12:30	Electrolytic hydrogen MC and facilitator Adam Osseiran	2.1	Electrolysers: Balance of Plant, and auxiliary systems	Deepak Mistry - General Manager Engineering & Projects in ENGV Pty Ltd (Group of Pacific Energy) – VIC	<p>Chartered Professional Engineer and RPEQ. IPMA Level C Certified Project Manager with more than 22 years of experience in Engineering & Project Management. International and Domestic experience in managing Hydrogen and Oil & Gas projects. Active working group member in Standard Australia ME-093 TC197 committee. Collaborating and sharing industry experience with Regulatory bodies, Engineers Australia and others to support building safe hydrogen economy.</p> <p>Currently working as General Manager – Engineering & Projects in ENGV Pty Ltd (Group of Pacific Energy). Responsible in managing engineering and project management activities for Hydrogen generation, compression, storage, refuelling, micro grid, gas blending & metal hydride application projects starting from concept to handover. Key involvements in most exciting Hydrogen projects with Viva Energy, Woodside, Horizon Power, Marubeni, CSIRO, Hyundai, APA, HYZON, and Frontier Energy etc. Working with leading technology partner in Hydrogen such as nel. (electrolyser), PDC/IVYS (compression & refuelling), storage (Hexagon & EKC), Powercell (Fuelcell), and Wystrach (Storage & Refuelling).</p>  





Session	Session Time	Session Title	No.	Key Topics	Speaker – Affiliation - State	Bio
			2.2	Balance of Plant, auxiliary systems, process, safety, and relevant standards	ENGV as a nel representative will present on behalf of nel. Deepak Mistry - General Manager Engineering & Projects in ENGV Pty Ltd (Group of Pacific Energy) – VIC	<p>Marcoen has been based in Southeast Asia for the last eight years. He is Nel Hydrogen Electrolyser Division's Sales Director – Asia Pacific, assisting in the development of renewable energy projects in combination with hydrogen from electrolysis, as well as for industrial customers who require hydrogen in their processes. Previously, he has been active within the hydrogen industry in a more technical role, as on-site engineer starting up electrolyzers and giving training related to instrumentation, automation, safety, and operating principals for the end user.</p> <p>Marcoen is a Belgian citizen and holds a degree as an Industrial Engineer and undertook post graduate courses including automation, process technology, and several languages such as Indonesian, at the Atma Jaya University of Jakarta.</p>  
12:30 – 13:30 Lunch/ Networking						
Session 3	13:30-15:00	Gaseous hydrogen MC and facilitator Brian Haggerty	3.1	Hydrogen gas compressors, BOP Process, safety and relevant standards	Tim Meyers - Australian Country Manager - PDC Machines - QLD	<p>Tim Meyers BEng (Manufacturing Engineering) BBus (Marketing) Australian Country Manager – PDC Machines Tim has spent his entire career combining engineering with business and projects. He started his career as a manufacturing engineer for industrial valves, before working for several years in the drilling industry as a site project engineer and bid manager.</p> <p>For 11 years up to 2022, Tim worked in the power plant industry for MAN, a German OEM in both tendering and sales roles. He lived in Germany for 10 years and worked on projects in five continents including four years leading the Caribbean sales team.</p> <p>Since 2018, Tim has been back in Australia and become involved in the power and hydrogen industries locally. Since joining PDC in 2022, He has been involved in the development, execution and operation of hydrogen refuelling stations in Australia.</p>  
			3.2	Compressed gas transport: storage vessels and pipelines, tracks and ships Process, safety and relevant standards	Jason Amiri - Senior Engineering Manager - Nacap Pty Ltd -VIC	<p>With a wealth of experience spanning 25 years, Jason has worked with Fortune 500 companies, specialising in Mechanical, Piping, Pipeline and Facilities engineering and construction projects. Jason's expertise lies in oil and gas, renewable energy, hydrogen transport, and storage. He has a proven track record of developing and implementing sustainable energy solutions. Jason has experience across the construction life cycle from the bid and estimation stage until handover to clients. As such, he has been involved in design and field activities.</p>  
15:00 – 15:30 Coffee/ Networking						
Session 4	15:30-17:00	Liquid hydrogen MC and facilitator Luigi Bonadio	4.1	Water treatment for electrolyzers	Mat Francis – General Manager, Moerk Water - WA	<p>DR MAT FRANCIS FHEA DIRECTOR OF WATER CHEMISTRY Mat Francis is the Director of Water Chemistry at Moerk Water Solutions, Asia-Pacific. He has a PhD in Chemistry and has worked for more than a decade designing water treatment solutions for the water, mining, energy and food sectors, both locally and internationally.</p> <p>As well as designing water treatment systems, he is an enthusiastic educator of stakeholders and the public. In 2019, he was presented with an award for his work in promoting public understanding of water treatment. He has also been awarded a Fellowship in the Higher Education Academy for his work developing online learning environments.</p>  

Session	Session Time	Session Title	No.	Key Topics	Speaker – Affiliation - State	Bio
			4.2	Hydrogen liquefaction process Storage vessels Liquid hydrogen–vaporisation Process, safety and relevant standards	Saif Al Ghafri - Future Energy Exports CRC - WA	<p>Dr. Al Ghafri is a Senior Research Fellow at the University of Western Australia (UWA) with diverse knowledge and experience across different fields, including hydrogen, thermo-physical property measurements, process design & simulation, cryogenic fluids, CCUS, LNG, Boil-off, and industrial refrigerants, involving partnerships and collaborations with organisations such as Imperial College London (ICL), NIST, NASA, Eta Space, INPEX, Woodside, Mitsubishi, and Samsung Heavy Industries. He worked as a Researcher at ICL before joining UWA, and he is currently associated with the Future Energy Exports Cooperative Research Centre (FEnEx CRC) as a Foundation Fellow since 2021. He is leading the “Propellant and Cryogenic Fluids” group within the UWA International Space Centre and is currently a member of various research advisory committees, including the "Access to Space" technical advisory group (TAG) of the Australian Space Agency and the “Production and Facilities” advisory committee of the Society of Petroleum Engineers.</p> <p>He completed his Ph.D. in 2014 from ICL, where his doctoral thesis received a few awards, including the prestigious Dudley Newitt Prize for Experimental Excellence, the Qatar Petroleum Medal for Ph.D. Research Excellence in Clean Fossil Fuels, and the ADIPEC Award for the best Ph.D. dissertation of the year. Prior to his Ph.D., Dr. Al Ghafri worked as a Process Engineer for Shell and Petroleum Development Oman. He obtained his MSc in chemical and process engineering from ICL and his chemical engineering degree from Nottingham University.</p> <p>He is currently leading a research team focusing on the emerging hydrogen economy, in particular, the production, storage, and transportation of liquid hydrogen. Dr Al Ghafri currently leads a few hydrogen-relevant industrial projects, including Boil-off gas management, ortho-para conversion, new hydrogen liquefaction technologies, and the development of web-based tools to allow for the evaluation of hydrogen supply chain options predominately in an Australian context.</p>
Wednesday, 14 February 2024 08:30 – 09:00 Registration/ Coffee						
Session 5	09:00-10:30	Hydrogen pressure regulation, and Hydrogen/NG blend MC and facilitator Lorie Jones	5.1	Hydrogen-NG-Blend process safety and relevant standards	Alhoush Elshahomi Senior Engineer - Renewable Gas Planning & Assessment - Gas Distribution Jemena	<p>Alhoush Elshahomi Dynamic professional engineer with comprehensive experience in managing the integrity of natural gas, oil and water pipelines including academic and research activities. Leading R&D facility for green hydrogen production using PEM electrolyzer and managing the storage of hydrogen and blending with natural gas. Strong ability to lead and direct multiple engineering projects and lecturers designed to drive academic enrichment, scholastic performance, and student engagement. Highly-adaptive critical thinker equipped with advanced management, interpersonal, and communication skills. Fluent in English and Arabic. Proficient in Microsoft Office Suite, MATLAB, Origin, EndNote, 3D CAD Software, Mesh, CFX, Fluent and SAP. Strong education professional with BSc, MSc and Doctor of Philosophy (PhD) in Mechanical Engineering from University Of Wollongong Australia.</p>



Session	Session Time	Session Title	No.	Key Topics	Speaker – Affiliation - State	Bio
			5.2	Pressure regulators and reduction skids	Shane O'Neill – PAC – Manager, Pipeline Actuation Control (PAC) – WA	<p>Shane O'Neill Working with PAC, part of the Australian-owned HIFraser Group, for over 10 years, Shane has worked on design, installation maintenance and defect investigation on a variety of different systems.</p> <p>Shane has extensive hands-on experience with working on live systems, including system isolation, drain down & tag out, replacement of pipe/hose/tube/valves/fittings/seals, commissioning & testing of lines after completion of work, as well as certifying the completed work.</p> <p>One of PAC's key focus points for the future is playing our part in the Hydrogen industry. We are engaged in a partnership with French technology provider, Elogen, to manufacture hydrogen electrolyzers locally in Australia utilising Elogen manufactured stacks. We have strong relationships with OEMs for storage, compression and dispensing components, which we offer independently or as part of a complete hydrogen system. Shane is currently working with his Engineering team on multiple projects throughout Australia assisting key end users to deliver hydrogen solutions.</p>  
10:30 – 11:00 Coffee/ Networking						
Session 6	11:00-12:30	Fuel cells MC and facilitator Luigi Bonadio	6.1	Fuel cells - general operation, pressure reduction skids, process, safety and relevant standards	Noel Dunlop - Vice President at Energys Australia - VIC	<p>Noel Dunlop, VP and Founder Noel's career has been dedicated to the energy, chemical and industrial sectors for more than 20 years. During this time, he has successfully developed and driven a number of new companies, commercial programs and products with a strong focus on chemicals, energy systems and technology development. For the past decade Noel has contributed to the emergence of renewable hydrogen as an energy solution through the founding of Energys Australia.</p> <p>Noel's vision for the future of energy and the role of hydrogen was well ahead of its time when he founded Energys. His foresight and dedication to that vision now places Energys in a world leading position as a manufacturer of hydrogen power product. In the past two years the company has grown from a hand full of people to over 60 and it continues to grow in scale, revenue and global reach. Noel is a member of on the Australian Stanadard ME093 hydrogen standards committee representing the Australian Hydrogen Council and he is the convenor of TC105 - AHG14 for maritime fuel cells and member of the international TC105/WG30</p>  
			6.2	Fuel cells applications: BOP, stationary and mobile	Victoria Munro – F CEV Expert - VIC	<p>Victoria is a passionate member of the transition to renewable and sustainable energy and mobility. After undertaking several research and development activities at some of Australia's leading research institutions, she has joined H2X to support the resurgence of Australian automotive engineering in fuel cell vehicles and stationary power units. Her experience in R&D lends her great expertise in product development, project management and technology innovation.</p> 
12:30 – 13:30 Lunch/ Networking						

Session	Session Time	Session Title	No.	Key Topics	Speaker – Affiliation - State	Bio
Session 7	13:30-15:00	H2 Fuelling Stations BOP Safety and handling MC and facilitator Furat Dawood	7.1	Hydrogen dispensation, H2 Fuelling Stations BOP	Sean Blyth - Managing Director, in ENGV Pty Ltd (Group of Pacific Energy) – VIC	<p>Sean is Founder, Director and Chief Executive Officer of ENGV. Sean oversees operations, business development activities and strategic growth. Sean has:</p> <ul style="list-style-type: none"> Over 25 years' experience in the gaseous fuels and renewables infrastructure industry with a focus on technology deployment & implementation. Extensive Australian and international experience holding previous senior roles in Boral/Origin Energy, Global Sales and Operations Manager for Gardner Denver in the UK, start-up business experience in Australia and in international markets. Bachelor of Science (Analytical Chemistry), Master of Management (Finance) and Grad Dip Environmental Studies. 
			7.2	Safety and handling, and detection	Derek Cross - Team Lead at Gexcon Australia - WA	<p><i>Derek is the Team Lead for Gexcon Australia. He is a professional mechanical engineer and has been working in Process Safety Risk Management for over 20 years. Derek has worked in greenfields Process Safety for companies such as Worley and has managed brownfields Process Safety for companies such as ConocoPhillips and Santos. Derek currently leads a team of engineers in the Australian office of Gexcon. At Gexcon Derek assists companies understand and manage their Process Safety risks in a range of different industries, but primarily hydrogen and new energy.</i></p> 
15:00 – 15:30 Coffee/ Networking						
Session 8	15:30-17:00	Hydrogen conversions, carriers and green industries MC and facilitator Luigi Bonadio	8.1	Ammonia / Methanation / Methanol	Adrian Hansen – Senior Process Safety Engineer at Yara Pilbara - WA	<p>Adrian is currently the Process Safety Lead for Yara Pilbara in Australia's northwest, responsible for two major hazard facilities including Australia's largest Ammonia plant. Adrian applies Yara's best practice in process safety from its vast history of process safety successes and learnings. Yara Pilbara's operations in Western Australia include hydrogen, ammonia, nitric acid, ammonium nitrate and recently started the construction on a renewable hydrogen facility in partnership with Engie partly funded by ARENA. Before Process Safety, Adrian was a process engineer in ammonia plants. Adrian is passionate about process safety and its important role to play in the advancement of green hydrogen and green ammonia in the coming years.</p> 
			8.2	Green industries e.g., Green Steel	Stephanie Moroz - Davanz – QLD	<p>Stephanie Moroz Affiliation: Davanz Bio: Stephanie Moroz is a Chartered Mechanical Engineer and a Fellow of Engineers Australia and Australian Institute of Energy. Her hydrogen experience dates back to the mid 1990s when she was developing hydrogen fuel cells at Ballard Power Systems in Canada and Germany, and she was later Chief Technology Officer at Hydrexia developing solid state hydrogen storage. Other roles have included research and development of combustion engines, lithium ion battery materials, decarbonisation technologies and renewable fuels.</p> <p>Stephanie was the inaugural Chair of the Renewable Hydrogen and Decarbonisation Directorate for the Clean Energy Council from 2020 to 2023, is an Industry Assessor for a number of government innovation grant programs and is an active Angel Investor in early stage technology companies.</p> 
Thursday, 15 February 2024 08:30 – 09:00 Registration/ Coffee						
Session 9	09:00-10:30	Hydrogen combustion	9.1	Hydrogen combustion and flame propagation	Derek Cross - Team Lead at Gexcon Australia - WA	AS ABOVE

Session	Session Time	Session Title	No.	Key Topics	Speaker – Affiliation - State	Bio
		MC and facilitator Kylah Morrison (TBC)	9.2	Hydrogen turbines and ICE	Sara Khoo – Project Director, Siemens Energy - WA	<p>Sara Khoo is responsible for developing relationships among stakeholders for green energy, green energy export and decarbonisation including the public sector, research sector, private companies and potential investors. She has an MBA in Finance from the University of Southern Queensland, Australia and Bachelors Degree (Honours) in Electrical and Electronic Engineering double major from Universiti Tenaga Nasional, Malaysia. She has more than 15 years experience in the fossil utility generation on both sides of the industry in power plant commissioning, the asset operation and maintenance, in Electrical, Instrumentation and Control, and as well on the OEM side for Siemens Energy in tendering. In the past 5 years, Sara has dedicated her focus on the energy transition, with project development using Artificial Intelligence and Digitalisation tech to move the needle for efficiency. Presently in Australia, she works with Power-to-X market participants on the emerging need for fuel shift and hopes to see these efforts through to deep decarbonisation. Sara is a member of various initiatives in Siemens Energy, including the Inclusion & Diversity Council, a change driver in the Transformation Accelerators network and a volunteer career coach in the Grow2Glow community.</p>  
10:30 – 11:00 Coffee/ Networking						
Session 10	11:00-12:30	Hydrogen plants MC and facilitator Susan Kreemer	10.1	H2 plant Licensing	Steve Emery- General Manager Hydrogen and Alternate Fuels, WorkSafe Petroleum Safety and Dangerous Goods Directorate, Department of Energy, Mines, Industry Regulation and Safety (DMIRS), WA Gov - WA	<p><i>Steve Emery</i> Steve Emery is involved in energy transition from a regulatory perspective, he wants new and existing projects to be safe. The Safety Regulator has requirements that affect everything from engineering design to the people involved over the whole life of a plant, Steve is able to provide practical advice and guidance on what this can look like. Gaining - and then keeping - a safety approval is often a complex, time consuming and confusing process to the uninitiated. If done incorrectly, it can cause cost hikes, schedule delays and reputation damage, hear him talk about how to succeed with this.</p> 
			10.2	Hydrogen Standards (AS ME-093)	Rachelle Doyle – Chair of ME-093 Committee - WA	<p>Rachelle Doyle Chair, ME-093 Hydrogen Technologies Committee, Standards Australia</p> <p><i>Rachelle is a passionate energy transition champion and clean energy leader. She is an experienced professional with over 20 years' experience working in the energy and minerals processing with significant experience in provision of technology and engineering solutions for complex projects and operating environments. She believes building long-term meaningful relationships is critical to enable sustainability and energy transition to net zero emissions.</i></p> <p><i>Rachelle is Manager, Research and Development for Rio Tinto Iron Ore, the current chair of the Standards Australia ME-093 Hydrogen Technologies committee and a Fellow of the Institution of Chemical Engineers.</i></p> 
12:30 – 13:30 Lunch/ Networking						

Site Visits

Travel	13:30 - 14:00	Start	
Site Visit	14:00 - 15:00	ATCO	
Site Visit	14:00 - 15:00	Hazer Group	
	15:30 – 16:30	WA based companies site visits	
Travel	16:30 – 17:00	Return to EA, Perth Office	