

PROGRESSING A SUSTAINABLE FUTURE

ANNUAL
REVIEW
2022

David Parkin

IGEM President 2022-2023



During the past year, we have seen a big jump in the developments made towards achieving net zero. The development of the hydrogen agenda has continued to gather pace, with real progress on the Energy Security Bill, the Net Zero Hydrogen Fund, industrial fuel switching and cluster sequencing all bringing the deployment of hydrogen at scale much closer.

At the same time, a number of incidents in the industry have continued to remind us that our primary purpose is to ensure safe and reliable operation of the network, keeping domestic customers safe and warm and providing a resilient source of fuel to industry and power generation. The gas industry really does do the heavy lifting for the energy system as a whole, and we should be proud of the role it plays in society.

It's very much been a year of 'back in person' and this was reflected in the number of conferences and events that took place. This saw the return of the IGEM Annual Conference which took place in November. We heard from a variety of different speakers covering some pressing topics and welcomed over 200 attendees. The footage is available on IGEMtv for those who missed out and I would highly encourage you to revisit them.

Earlier in the year, we held the Sir Denis Rooke memorial lecture, the Gas Utilisation Conference in Solihull, the Policy Conference in London and finally the YPPC Final at IGEM House.

IGEM has also released a number of new and revised technical standards over the

past year which is helping to build the foundations of a sustainable future.

The events and training calendar has been busier than ever too, which shows the determination and hard work belonging to the IGEM team in supporting our members in their careers.

It has been a pleasure to serve as IGEM President this year and I want to thank everyone who supported me in my role, our members and volunteers, speakers and so many more. I am looking forward to seeing the new developments being made across the industry both within IGEM and further afield on the path to net zero.



Oliver Lancaster

Chief Executive Officer



I'd like to start by saying thank you. Thank you for all the support and engagement throughout 2022. It's been great to get out and about to experience the challenges and successes across our Sections, and the broad collection of company and individual members, and to immerse myself in the engineering matters of today and in planning for what the future might be.

I'm also grateful for the dedicated efforts of the secretariat in a year with a particularly heavy workload, and of course the continued diligent governance and ship-steering from Council, Executive Board, committees, panels, working groups and other volunteers helping our sector in many different areas. A note of thanks must go to Ben Clarke and David Parkin who have both led IGEM excellently as President over the year.

As a special thank you, I'd like to thank Gordon Davies for his exceptional service to the Institution. Sadly, due to ill health, Gordon has stepped down from his role of Honorary Secretary and Chair of the Membership Committee. He has dedicated a huge amount of time and commitment over the many years for which we are truly grateful and were delighted to bestow on him the Honorary Fellow membership grade. We miss Gordon's contribution dearly and wish him and his family the very best.

As you'll be aware, everyone at IGEM was saddened to hear of the passing of Her Late Majesty Queen Elizabeth II, who chose to be our Patron in 1953. I'm grateful to our resident gas history expert, Russel Thomas, for putting such a lovely Gi article together to celebrate her life and association with the gas industry.

We also mourned the loss of our much-loved colleague, friend and Past President, Chris Bielby. He was much more than a long-standing member and tireless volunteer (to continually improve the sector and develop the next generation), but a part of the IGEM family through and through.

Another unexpected situation in 2022 was Russia's invasion of Ukraine and understanding how IGEM ought to respond, like other Professional Engineering Institutions were also considering. I'm very pleased that we were able to donate £25k to support the supply of critical and urgently needed equipment to the Ukraine gas network operators, which we did in collaboration with the five gas networks in Britain.

There were also a number of highlights throughout the year, and it is with great pleasure that I can share the news that IGEM has passed the Engineering Council's five-yearly licence review. This takes a great deal of effort from the Membership Committee who worked really hard to deliver a very positive outcome.

In other good news, we spent the latter part of the year reviewing our existing vision, mission, aims, objectives, goals, purposes and values, which were found to be somewhat overpopulous and difficult to navigate. Through Council consultation, and a workshop led by Past President Chris Clarke, these have now been rationalised into our new ambition, priorities and values that we look forward to sharing and embedding in 2023.

04 Welcome from the CEO

We have a new secretariat lead for our Equality, Diversity and Inclusion Advisory Group who is diligently working with the group on an active plan and budget for the year ahead to participate in a variety of campaigns and events. At the crossover of 2022 and 2023, we were thrilled to become a partner of WUN (Women's Utilities Network) – so look out for more coming on that one.



It's been a pleasure to speak with our overseas members, in particular the Far East District Section despite still not having been able to make a visit to them in 2022. We look forward to returning in 2023 with another busy schedule of engagements, including meeting with a range of our company members. In 2022 we were delighted to welcome to IGEM House a senior representative of the gas industry in India who is helping us explore how we can develop membership and uptake of our technical standards in that country.

It was brilliant that we were able to return to our full programme of in-person conferences and events this year, with the entertaining and thought-provoking Sir Denis Rooke Memorial Lecture from Lord Deben, a packed-out Gas Utilisation conference in Solihull, an excellent Policy Conference in London, our something-for-everyone Annual Conference in Nottingham and the

talent-rich YPPC Final at IGEM House – all attracting very positive feedback.



Whilst the webinar programme has calmed a little from the days of its necessity, we've held a number of important ones, such as one



with The Department for International Trade aimed at the opportunities for our company members in the emerging hydrogen industry supply chain. We also hosted some webinars for external projects and organisations with our beta testing of an online event service. It was an honour to help develop the gas sector content for Utility Week Live, and to put on two separate IGEM sessions on the Innovation Stage at the event.

The secretariat has had a few changes this year, with notably having said a sad but very fond farewell to Wendy. Our new starters have finished the year having contributed significantly to our efforts, including Elaine in Facilities, Stacey and Jordanne in Corporate Affairs, Dan in Finance, Ben in Membership, and Davina and Andrew in Technical. I'm also grateful for Carl taking on a new role that sees him picking up leadership on operational delivery. It would be remiss of me to not mention that our small team

has had four babies this year that has brought about much excitement! Whilst on the subject of staffing, I'm pleased that after a great deal of planning we were able to make a successful transition back to the office with hybrid working after Easter 2022.

Our training programme has had a busier year than expected with high demand for our bespoke training courses to help meet the need for in-house development for a number of our company members, as well as the courses scheduled for open registration.

Our social media activity has rocketed with much more engagement around our posts, as well as an increasing trajectory of followers on all our platforms – particularly noting LinkedIn that just keeps on growing and developing conversations amongst our members.



As you will have seen, at the turn of 2023 we launched our new website, as well as a new background data information system. This has been over a year in the making, and resource intensive, to deliver an up-to-date solution that we can iteratively build on, that efficiently and intuitively works well for our members, customers and the secretariat. We hope you now experience a marked improvement compared to what we had previously.

At IGEM House, we've been ramping back up with bookings for external hire of the Meetpoint Midlands facilities, had EV chargers fitted and taken some steps from a net zero perspective – including thermal imaging to find heat leaks, making most efficient use of our existing heating/cooling system, exploring the purchase of green gas produced in the local area and considering options for what the long term heating solution could be, as a few key assets in the system are reaching end of life.

Transitioning to **net zero**

Innovation has been running through 2022, with projects including the development of the Hydrogen Downstream Skills and Standards jointly with EU Skills, which is critical for the delivery of trials in the Government's Hydrogen Strategy.

Other projects include working with Celsa Steel on a BEIS funded feasibility study to decarbonise one of their steelworks with hydrogen mills, in addition to their existing electric arc furnace.

We're also part of a project team, working on the retrofit of hydrogen to an unoccupied housing association home in Wales. This is to test its use, the benefit of additional building retrofit and using it as an education source and place to train installers. Another interesting small project involves us working with Cadent on testing whether heritage gas lighting can run on hydrogen to ready these assets for gas grid conversion.

One of the highlights of last year has been taking the Climate Change Committee (CCC) on a hydrogen tour to raise their awareness of all the latest developments, advancements, testing, demonstrations and deployments that brought the emerging sector to life and showed its real opportunity for adopting across a range of energy demands. Having Chris Stark, Chief Executive of



the CCC, cooking and serving up fajitas at the Hydrogen Homes in Gateshead was a favourite point on the journey! Other national groups are also looking to IGEM to support the raising of their awareness of hydrogen developments.

We also got involved in a wide range of engagement, including at Parliamentary and Devolved Administration meetings and events, and with the now Department for Energy Security and Net Zero (DESNZ), academia, networks, projects and importantly, those who have a different view of the future.

As part of our Parliamentary activity, it has been particularly helpful to join the Parliamentary Group for Energy Studies (PGES); however one of our proudest moments with our reach and

engagement has been our invitation to join the Energy Research Partnership, which is a small group set up by the Chancellor of the Exchequer in 2005 to provide high-level leadership on energy research and innovation and is co-chaired by DESNeZ' Chief Scientific Advisor.

I was pleased to put together some opinion pieces that I hope you found an interesting read and were helpful in your own engagement, covering Every kWh Counts, Dunkelflaute Days and another one exposing how solar PV and heat pumps are unhappy bedfellows!

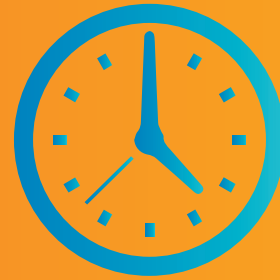
IGEM will have a continuing and increasing role in supporting the transition to net zero, and we look forward to working with you on making progress.

THANK YOU TO OUR VOLUNTEERS



608

Volunteers



8,228

Hours of support

Keeping up to standard

In 2022 there was continued strategic activity on enabling the net zero transformation. This saw the Technical Services & Policy department managing the significant challenge of delivering the annual business plan for the revision of existing standards whilst managing the production of new standards for hydrogen.

IGEM has remained at the forefront of enabling the gas transition, despite the difficult circumstances posed by global events in 2022.

11 Technical Standards

Working with the technical committees, expert panels and working groups, the members and volunteers were involved in 118 meetings, resulting in the department producing 273 technical papers and publishing 14 standards throughout the year.

These were:

IGEM/G/5 Edition 3

Gas in multi-occupancy buildings

IGEM/G/11 Edition 2 with amendments July 2022

Gas industry unsafe situations procedure

IGEM/G/11 Supplement 1

Responding to domestic CO alarm activations/reports of fumes

IGEM/G/13

Domestic supply capacity and operating pressure at the outlet of the meter pressure gas transmission

IGEM/GL/8 Edition 4

Notification, investigation and reporting of gas-related incidents

IGEM/GM/6 Edition 3

Non-domestic meter installations. Standard Designs

IGEM/GM/PRS/3 with amendments July 2019 and July 2022

Meter Regulators for gas flow rates not exceeding 6m³ h⁻¹ and inlet pressures not exceeding 75 mbar

IGEM/H/1 with amendments June 2022

Reference standard for low pressure hydrogen utilisation

IGEM/IG/1 Edition 2 Supplement 2

Domestic training specification

IGEM/SR/25 Edition 2 with amendments 2013: Hydrogen supplement 1

IGEM/TD/3 Edition 5 Supplement 1

Repurposing of Natural Gas (NG) pipelines with MOP not exceeding 7 bar for NG/Hydrogen blends

IGEM/UP/9 Edition 3

Application of natural gas & fuel oil systems to gas turbines and supplementary and auxiliary fired burners

IGEM/UP/11 Edition 3 Supplement 1

Operation and management of gas installations within educational establishments

IGEM/UP/19 Edition 2

Design and application of interlock devices and associated systems used with gas appliance installations in commercial catering establishments

Hydrogen

In response to the UK Government's commitment to achieve net zero carbon emissions by 2050, a range of research and demonstration projects are underway. These investigate the feasibility of using hydrogen in place of natural gas within the national transmission and distribution system. For these projects to achieve their full scope of work, it is recognised that engineering standards will have a critical role.

The Hydrogen Committee, chaired by Keith Owen of Northern Gas Networks (NGN), provided the governance and leadership in the production and the development of seven new hydrogen standards.

This included a mechanism for performing hazardous area classification for hydrogen installations.

11 Technical Standards

The **IGEM/SR/25** - Hazardous area classification of natural gas installations Standard is used to undertake such assessments for natural gas installations and a supplement has been produced to cover the requirements for hydrogen or hydrogen/natural gas blends.

At the end of 2022, work was being finalised with DNV on the production of a new Hazardous Area calculator which will cover hydrogen and blends and is expected in early 2023 for members and the industry. During the year, work was also completed on the **IGEM/TD/3 Edition 5 Supplement 1** - Repurposing of Natural Gas (NG) pipelines with MOP not exceeding 7 bar

for NG/Hydrogen blends for distributions systems using hydrogen blends for new and repurposed networks.

Towards the end of 2021, an agreement was made with BEIS for the funding of hydrogen end user standards and the implementation of a competence framework, working in a consortium with Energy and Utility Skills.

The IGEM working group, chaired by Dr Richard Marrow, was set up to deliver the standards to support the training for engineers working on the Community trials. Members include Global Energy Associates, Blue Flame, Energy Assets,

Simmons Consulting, DNV and Kiwa. The working group oversaw the update to the IGEM/H/1 reference standard for hydrogen utilisation and work began on two new standards for this project:

IGEM/H/2 - Enabling standard (domestic).

IGEM/H/3 - Enabling standard (commercial).

Both standards are currently on the second working draft and on target for the production in Q4 of 2023 once the industry research has been completed in the key gap areas.



Impacting policy



IGEM continued with the focus to drive energy policy for members, and the wider public's benefit, by increasing the content available in IGEM's Policy & Research Hub on the IGEM website.

One of the Policy Papers IGEM published was titled “Resilience in our Energy Mix”. In 2022, the focus on UK energy system security and resilience couldn’t have been higher. This policy paper set out our position on the roles of green gases and electrification in our future energy mix, as part of a balanced, multi-vector approach for a resilient and secure energy system.



A strategic goal is to raise the profile of IGEM as a well-known, trusted, ‘go to’ destination for quality, independent, technical facts and well-informed opinion. As part of the focus to create a series of robust Technical Position Papers, focussing initially on Fundamentals of Gas, but also on alternative gases to methane/natural gas, we published the “Hydrogen Characteristics and Implications” Technical Paper.

The UK Government has recognised the much wider contribution that hydrogen

can make to our net zero targets, committing to a target of 10GW of low carbon hydrogen production capacity by 2030. This paper provides insight in how this will be achieved and the technical characteristics of hydrogen as part of an energy system designed to meet demand.

We also led on a response to government consultations and stakeholder policy activity with the “IGEM response to BEIS Consultation on Industrial Hydrogen Ready Boilers”. In the responses we supported the view that government should require (mandate) industrial boiler equipment to be hydrogen-ready. With the expectation that sites replace their existing boiler with a hydrogen-ready boiler at the end of the asset’s lifecycle, to minimise cost. Any mandate must also take into consideration of certain exemptions for any processes or equipment where conversion is not technically feasible. We also urged government to provide a clear policy direction so that the market will have the confidence to invest and help reduce costs of production.

Working in collaboration with the Royal Academy of Engineering’s National Engineering Policy Centre (NEPC), we supported the

production of the paper on “The role of hydrogen in a net zero energy system”, which is a comprehensive understanding of how low-carbon hydrogen could contribute to achieving net zero.

We continued to be involved in the discussions of the All Party Parliamentary Group for Energy Studies (PGES) and All Party Parliamentary Groups for Carbon Monoxide (APPCOG) and Hydrogen (APPGOH). We also played a key role within several influential groups, including, the BEIS Technical Advisory Group and End User Subgroup, the BEIS Network Safety and Impacts Board, and the Gas Goes Green Advisory Board. These groups see us working directly with industry, academia and government to assess the evidence base and develop informed recommendations on how gas can contribute to a clean energy future.

Other visits included the H21 hydrogen testing facility at the Health & Safety Executive (HSE) Science & Research Centre in Buxton, the Hydrogen Homes and HyDeploy hydrogen blending rig in Gateshead and discovering a future hydrogen system at the DNV Spadeadam Research & Testing Site near Carlisle.

14 Policy and Research

Hydrogen Knowledge Centre

Building on the successful launch of the Hydrogen Knowledge Centre in 2021, the digital repository, dedicated to the advancement of hydrogen learning globally and supporting the transition to a net zero carbon emissions future, continues to go from strength to strength.

At its core, the Hydrogen Knowledge Centre enables learning to be shared with others, through a carefully curated, comprehensive and growing database of information from a wide range of sources.

The repository, managed by a dedicated team at IGEM, has grown to include over 3,800 resources, from 320 credible sources, across 70 countries. By the end of 2022 the platform had been



accessed on average 3,355 times per month with around 240 downloads per month.

IGEM was delighted that this valuable resource was recognised through being shortlisted for awards in 2022.

The EIC nomination for an Energy Innovation Award, the

Heating & Ventilation News Awards for Collaboration of the Year and the prestigious Memcom Excellence Awards where the Hydrogen Knowledge Centre received a highly commended award for the best eLearning / Online Education Initiative.



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31,000

visits



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3,800

resources



from

320

contributors



across

70

countries

Supporting membership

It was an important year for governance in 2022 and we successfully completed a thorough Engineering Council review of our management operations, processes and procedures.

Therefore the Institution's licence for professional registration and recognition of learning programmes being approved for a further five years.

16 Membership

This is an accomplishment we are deeply proud to have achieved.

We're also proud to have helped 109 gas industry professionals gain professional registration. This would not have been possible without the 125 members who generously volunteered their time and expertise as mentors, interviewers, and committee/panel members to support the membership processes and procedures.

In 2022, we have continued our focus to support the technician community and improve the EngTech value proposition. Our EngTech working group has continued to drive this initiative forward which resulted in an overall 3% increase in EngTech membership and retention continued to remain high at 91%. We plan to continue this focus into 2023 and beyond.

We are delighted to have our first Member achieve Chartered Engineering (CEng MIGEM) through the Experiential Learning pathway to professional



registration with others very close and on their way which is a great step forward for the institution. In 2023 we will be working on an Experiential Learning pathway to IEng.

Our annual CPD sampling exercise continued and this was the first year we opened up voluntary CPD submissions. Individual feedback was provided to those who submitted a CPD record to support them with their CPD journey. Those that did not submit a record will be provided with additional support to enable them to

provide a submission for 2023. Only two members had to be removed from the register.

Additionally, we held a number of professional registration webinars open to all those interested in becoming a member or transferring grades as well as inhouse webinars with the support of our Company Members.

The online 1:1 booking system also proved to be popular for those wanting to discuss their individual pathway to membership and professional registration.

Supporting the industry's bright young stars

We had another successful year with our scholarships, grants and awards scheme. The scheme continues to support the engineers of the future, and with such a high standard of applications, three undergraduate scholarships were awarded to:



Sam Storey

For our Company Members (previously known as Industrial Affiliates), if 2021 was 'challenging' then 2022 was another level. Broadly, the perfect storm from the war in Ukraine and the resulting economic woes caused much uncertainty.

However, it did underline the need for nations to have self-sufficiency in energy supply and underlined the opportunities that hydrogen will present as we move forward as part of a whole energy solution.

Overall, in 2022, Company Membership grew by 8 percent, with growth coming from the UK, primarily driven by interest in hydrogen and increased communication.

Our new Housing Partner grade has established itself and is growing nicely, increasing by 87.5 percent.



Sophia Robinson

This unique membership package is aimed at supporting social housing providers to plot a course through changes of legislation gas compliance and health and safety, and is proving popular.

Our standout Company Member focussed event for 2022 was "Delivering Britain's Hydrogen Blending Plan", a webinar which attracted a staggering 549 attendees on the day. This event explained the progress the industry has

made to date with hydrogen and how the UK Blending Plan can be delivered as a first stage.

The event was recorded and members can still access it on IGEM TV, along with many more webinars and events covering a range of topical subjects.



Shafi Maah

Our exclusive members weekly e-newsletter continues to go out weekly to over 700 company contacts, and contains information about current industry developments, events, training, standards, publications and more.

This was all delivered while maintaining vital contact with members, using a hybrid approach of online meetings and onsite visits.

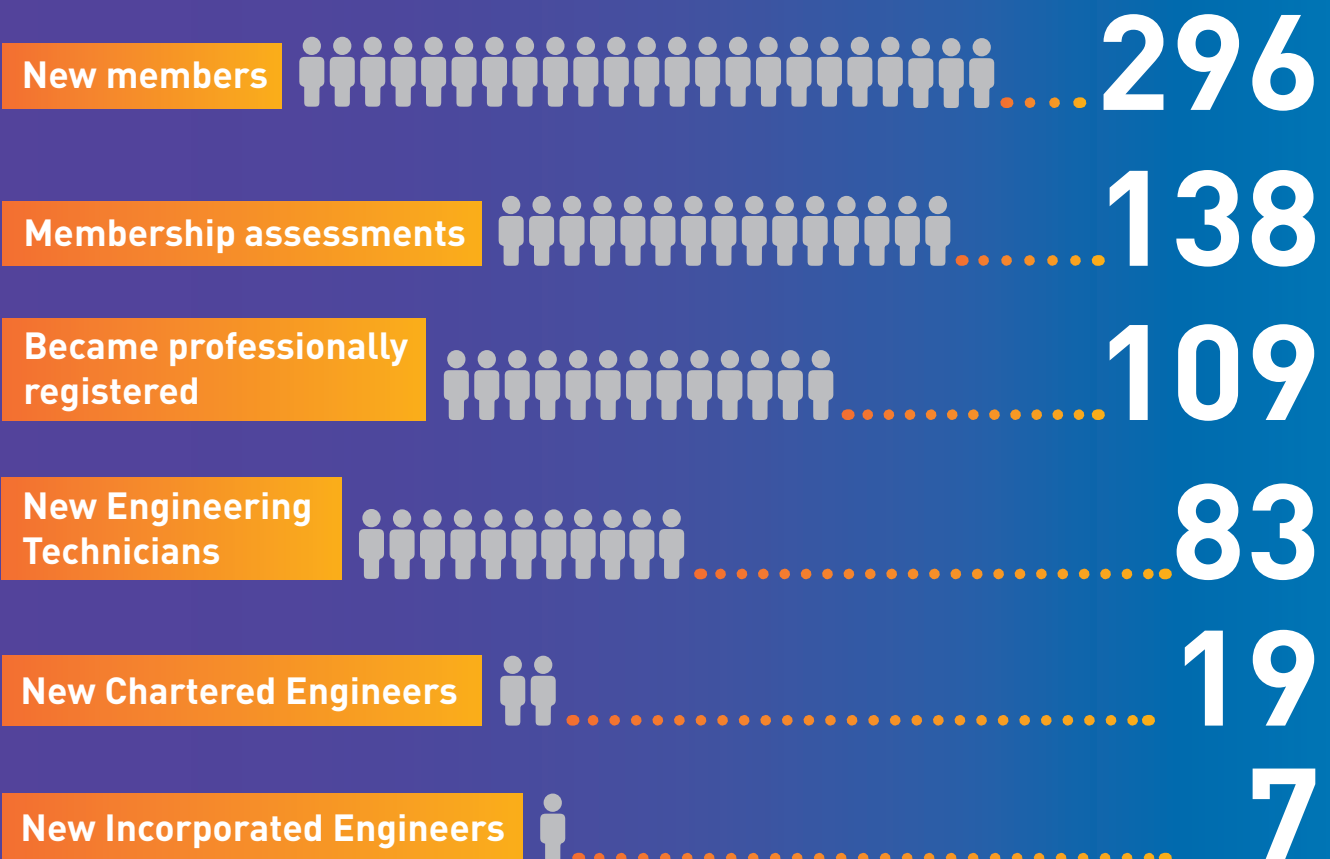
COMPANY MEMBERS

390



INDIVIDUAL MEMBERS

3,346



Staying connected



IGEM's events and training ramp up to meet demand, in person and utilising technology enabled us to remain connected delivering training, webinars, keynotes and conferences to a global audience.

20 Training and Events

Technical Training Courses

27 Public technical training courses with over 300 delegates attending online.

20 In-house technical training courses, some delivered face to face.

New course for 2022:

Introduction to **IGEM/TD/12 Edition 3** - Pipework stress analysis for gas industry plant.

Most popular public courses:

IGEM/G/5: Gas in Multi Occupancy Buildings (x 9)

Hydrogen and the Natural Gas Network (x 8)



Conferences

Sir Denis Rooke Memorial Lecture, this years lecture was delivered by The Rt Hon Lord Deben, Chairman of the Climate Change Committee and the UK's longest ever serving Secretary of State for the Environment (1993-97).

He spoke about the UK's net zero challenge, including the potential role of hydrogen, and argued for a balanced approach to the future energy system.

Gas Utilisation – Today and Tomorrow at the National Conference Centre in March, sponsored by Radius Systems Ltd and supported by the Large Business Forum, focused on key areas in the transition to hydrogen and was aimed at those working in downstream operations to raise awareness of what they need to do to prepare for the future.

With keynote speakers from BEIS and the Climate Change Committee, the Policy Conference in July looked at



the next steps for hydrogen and the evidence gathering to support decision-making on the role of hydrogen in our net zero energy system.

IGEM's Annual Conference brought the latest insights from the front line of the energy transition. With sessions dedicated to the Gas Industry Today; the Iron Mains Risk Reduction Programme; the Safety of the Network and Delivering Hydrogen, this flagship event attracted an audience of over 200 delegates.

The winner was Emily Mulcair, of Fingleton White, whose presentation was on Modelling Grid Stabilisation using Curtailed Wind & Liquid H₂.

The runner up was John Batterson, of Cadent, whose presentation was on Emissions Data Step Change, and third placed was Bobby Janjua, of Baker Hughes, whose presentation was on Pipeline Decommissioning: Clearing an Unexpected Hurdle.



YPPC

The YPPC final was held in December at IGEM House with finalists representing all the IGEM Local Sections based in the UK, as well as finalists from the Far East District Section (FEDS) and the New Zealand Branch.

Hosted Webinars

Although we hosted a lot more in person events in 2022, we still hosted some webinars during 2022. These included one for East Coast Hydrogen on Customer Perceptions of Hydrogen, and for Cadent, National Grid and SGN on the Capital Hydrogen Programme.

Sections

Our Sections have continued to organise events, both virtual and in person, offering our members insight into a variety of areas. Also, our Sections have hosted many social and networking events to raise money for various charities from Help for Heroes to Refuweegee.

Irish Section

The Baldrumman Above Ground Installation (AGI) - improving resilience and flexibility of the gas network webinar was presented by the Irish Section in collaboration with Engineers Ireland.

The webinar covered a recent Gas Networks Ireland (GNI) project that involved installing a new above-ground installation (AGI) at Baldrumman, County Dublin.

London, Southern & Eastern Section

In November, the London, Southern & Eastern Section hosted a webinar on Corrosion. Delivered by Pat Lydon, Director of IACS Corrosion Engineering Ltd, the event focused on distribution issues, covering the principles of CP systems, replacement jobs where steel mains are left unprotected and inspections required for

22 Training and Events



cathodic protection systems. Pat also discussed new steel sections and what should be done regarding cathodic protection and third party threats to cathodic protection systems.

Midlands Section

In August, the Midlands Section hosted a webinar on Ofgem's Role in the Carbon Net Zero Challenge. The webinar was delivered by Vic Tuffen BSc (Hons) IEng FIGEM FCMI MEI. O. Vic is the Acting Head of Technical Analysis & Assurance at Ofgem. His presentation provided background on Ofgem's approach and an outline of the innovation funds available as part of the RIIO-2 price control period.

North East & Yorkshire Section

The North East & Yorkshire Section held their Showcase Innovation event in June. DNV hosted them in November, at its research and testing

centre in Cumbria. The day was spent going over the features of hydrogen and how they compare to natural gas. An actual natural gas chamber explosion and a hydrogen detonation were then demonstrated.

The Section also attended ITM Power's new Gigafactory in Bessemer Park, Sheffield, which is the world's largest electrolyser production factory. Their 'Gigastack' project is seeking to demonstrate the advantages and potential of green hydrogen produced from offshore wind.



North West Section

In Summer, the Section held The Great Northern Summer Fete. The aims of the event were to encourage a deeper level of IGEM engagement, linking into members' families, encouraging career transfer into the sector and producing happy memories for children that may lead to future engagement.

The venue was also the first B Corp Certified venue in the UK, signifying it's been recognised for its sustainability footprint. This feeds into the Environmental Social and Governance (ESG) agenda that the North West Section is promoting this year.

Scottish Section

Earlier this year, Westgass hosted the Scottish Section webinar, Energy Security for Remote Communities.

Westgass Hydrogen are providing solutions hydrogen fuelled fuel cell generator solutions.

The presentation covered how replacing existing assets with their solution can be done and introduced relevant areas of application.

South West Section

In November, the South West Section facilitated a visit to Langage Power Station. The power station is one of the most advanced gas fired power stations in the world.

This two-part event began with a presentation about the power station and its strategic importance to the UK energy system.



taken from the gas network, the amount of electricity produced at maximum, and how the site integrates with total system energy balancing, amongst more.

Welsh Section

Milford Haven: Energy Kingdom (MH:EK) is one of the chosen 'Detailed Design' projects within the prospering

Challenge Fund (ISCF). To fulfil all of the future energy requirements for buildings, power generation, and fuelling transportation, MH:EK is looking into the potential of zero carbon hydrogen in addition to renewable electricity.

The project included setting up two demonstration sites in Milford Haven for the hybrid hydrogen heating system and the hydrogen electrolyser and vehicle refuelling station. The event included visits to both demonstrators as well as an overview of Milford Haven's larger relevance in relation to the energy transition in Wales and the UK.



This included an end-to-end walk-through of what the power station does, the statistics about volumes of gas

from the Energy Revolution (PfER) programme of works funded by Innovate UK as part of the Industrial Strategy

Far East District Section

In February, the Section held a webinar about An Innovative Pressure Regulator Installation for Gas Application with Oxford Flow.

24 Training and Events



The webinar proved popular with 200 attendees and was an introduction for members to IM Series gas products.

There were also some webinars in July and August which were entitled: "Implication for Energy

Future: From ESG, Climate Risks to Carbon Neutrality" and "LNG FSRU (Floating Storage & Refrigeration Unit)".

The attendance of these also had numbers in the hundreds and proved very popular.

Later in the year, they held the FEDS heat for the YPPC at the Towngas headquarters. With over 68 applicants, they narrowed it down to eight to compete in the heat.

Tommy Lau and Janet Cheng were selected to go through to the YPPC final.

YPN

Highlights included visits to DNV Spadeadam, Research & Development in April, Huntingdon Compressor Station in June and ITM Power's Gigafactory in November.

Keeping you in the loop

The Digital Evolution and Engagement Project (DEEP) pulled considerably on the IGEM team's resources throughout 2022 as we navigated our way to providing our members with a much-improved digital platform to manage their membership, benefits and technical standards licenses.

IGEM's journey to improve its digital maturity has helped us not only question what we currently do but also what we wish to improve for the future for the secretariat and IGEM members.

26 Corporate Affairs

The project was set-up to enable us to start small and be in a position to optimise what we have then scale up, while measuring success and further improve processes and the “customer experience”.

The new website and CRM went live on the 11 January 2023 and initial feedback has come quickly and been very positive.

David Parkin, IGEM President, said: *“Huge well done! A real testament to your hard-work and diligence on pushing through all the bumps in the road. Very much appreciated.”*

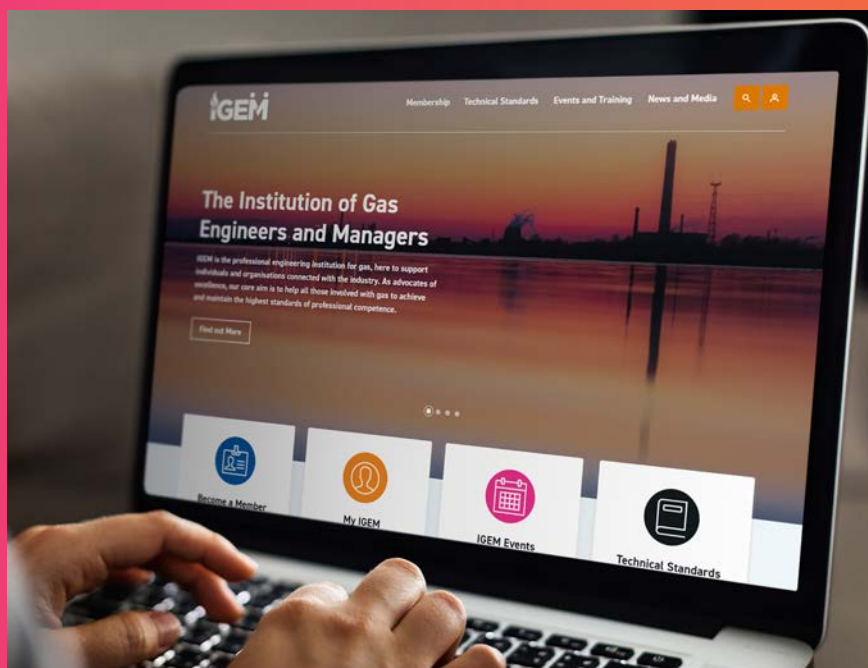
Trevor Smallpiece, IGEM Fellow, said: *“I’ve just logged into the new website and had a quick browse – fabulous and well done!”*

DEEP was truly a team project and a lot was learnt along the way.

Gas International (Gi)

As the leading source of gas news, opinion and technical information from around the industry, IGEM’s official journal Gas International (Gi) continues to serve our members with top quality content.

Published 10 times a year and circulated to all of the institution’s individual and company members of the gas industry’s major corporations,



Gi speaks to the gas industry audience across the areas of transmission, distribution and utilisation.

In 2022, IGEM increased the opportunities for companies to promote their services and products to a dedicated, targeted audience of engineering professionals.

For example, July saw the release of our Net Zero Special Edition, which explored and celebrated all things net zero. Bringing together some of the latest news and research from the frontline of the energy transition, this unique publication came at a time of enormous change for the gas industry as the conflict in Ukraine brought into sharp focus the need to accelerate our green ambitions on a global scale.

Gi Editor Sharon Baker-Hallam said: *“Navigating the amount of information coming out of the climate change debate is difficult for even the most discerning reader, which is why Gi was proud to present this special edition bringing together all the latest news and analysis of the net zero challenge and the work taking place around the industry to tackle it.”*

Meanwhile, our sister publication GU went from strength to strength in 2022. As part of our ongoing efforts to serve the downstream gas community, GU aims to shine a light on the work of gas professionals working on the utilisation side and is available to both members and non-members.

Our Spring 2022 edition explored the government's Heat and Buildings Strategy and took a closer look at IGEM/G/5 Edition 3. And, in our Autumn edition, we brought you all the news from IGEM's Gas Utilisation conference, plus a round-up of IGEM's activities at the InstallerSHOW.

Before the end of 2022, we asked our members to give us their input on Gi, asking them what they like about the current publication and what they would like to see more or less of in the future.

The results have given us some helpful insights, which will allow us to tailor Gi's content for the year ahead to better suit the needs of you – our readers.

Respondents also suggested some areas of the industry they would like to see covered in Gi. These included carbon capture and storage, LPG, international gas markets and LNG. Overall, 83 per cent of respondents rated Gi's content as either good or excellent.

Similarly, 85 per cent of readers rated Gi's design as either good or excellent, which speaks to the dedication and commitment of our talented Art Director, Becca MacDonald.



The survey was completed by just under 10% of our total readership, which gives us a really helpful snapshot of the different kinds of members who read IGEM's journal and what it means to them, so thank you to everyone who took the time to respond.

Sharon added: *"It's great to hear that, for the most part, readers are happy with the areas of the industry we already cover in the journal with a particular emphasis on gas distribution and transmission and the transition to hydrogen as a future energy vector. However, it is extremely helpful to hear that there is room to improve. Finding out about the kinds of content our readers want makes my job a lot easier when it comes to commissioning features for future editions, so thank you to everyone who has shared their feedback."*

Digital

Throughout 2022 we have continued to focus on growing our online social presence and ensuring that there is a broad mix of communication messages to help support our members and the sector, and to promote items of interest, such as our events, conferences, standards, member benefits, and industry news.

Overall, there has been growth across our channels, and we are delighted to see more of our members engage with us through these. In addition to our profile pages, the IGEM Members Group on LinkedIn has started to become a forum where members are sharing their own industry news and providing support to each other.

SOCIAL MEDIA



1,440
page followers

+32%



3,625
followers

+10%



13,417
page followers

+76%



504
followers

+198%



191
subscribers

+62%

WEBSITES

IGEM.org.uk



+12%
users (142k)

642k
pages viewed

2021 vs 2022



Hydrogen Knowledge Centre



+48%
users (31k)

70k
pages viewed

2021 vs 2022



A look ahead

Looking ahead to 2023, we plan to deliver a range of ambition, including adding hydrogen technical expertise and business development capacity within the secretariat, supporting the development of further innovation and growing our membership and adoption of our technical standards.

Our innovation portfolio will continue across technical standards, skills and safety as we help to enable sector-critical hydrogen demonstrators and train and prepare our members for the energy system transformation.

30 Year to Come

This enabling is critical to the hydrogen community trials outlined in the UK Hydrogen Strategy, such as the Neighbourhood and Village trials, and be transferable to planning national hydrogen roll-out and international advancement across counties who share a similar hydrogen ambition.



Our support will extend further into the activity of industrial clusters and the development of foundation infrastructure to meet the scaling needs of business that require a hydrogen supply, and to provide the opportunity for co-benefits to be accessed by energy demand from transport, buildings and flexible power generation.

the transition for hydrogen conversion and in making use of increasing and intermittent renewable electricity generation capacity.

In seeking to bring more service offerings and to help diversify our income streams, we have begun to offer an events service and will formalise this in the near future.

collaboration and reaching out to different parts of the energy system.

We will need to keep building and maintaining our relationships with key stakeholders, which includes helping raise awareness of action that is being taken to decarbonise the gas grid and visits to projects to share developments and see the accelerating progress.



We will be making valuable contributions to key consultations for development of energy policy, including the mandating of hydrogen-ready boilers and the role of hybrid heating systems, to enable

This is while we maintain progress with the Hydrogen Knowledge Centre, grow our Housing Partner initiative as we make the compelling case for gas, and recruit, train and equip more members through

Above all, IGEM is uniquely positioned and focussed on the gas industry's role in the transition to net zero, whilst continuing to articulate the wide benefits and meet the engineering challenges of today's natural gas system. Our service to members and dedication to our sector will continue to provide a place to belong, serve and grow as we collectively deliver a clean energy system and journey our way to end our emissions contribution to climate change.

Financial summary

IGEM had a successful financial year and exceeded budgeted expectations

Take a look at a summary of IGEM's financial activities ending December 2022 and how this compared to the previous year.

32 Finance

Operationally, IGEM overachieved on budgeted expectations for the year, delivering a surplus of £187,213. Total income of £2,447,777, which is 18% greater than the prior year, principally from the growth in charitable activities. Overall expenditure has grown by 22%. This is due to an increase in operational spending and spending from funds. Valuation of investment portfolios have decreased and there are investment losses of £524,352. Total net movement in funds is £857,881.

The total balance carried forward at the end of the year is £5,016,094 of which £1,190,653 is the Restricted Fund balance.

Consolidated Statement of Financial Activities for the year ended 31st December 2022

	2022				Prior year			
	Unrestricted Funds	Designated Funds	Restricted Funds	TOTAL	Unrestricted Funds	Designated Funds	Restricted Funds	TOTAL
Incoming Resources								
Donations & Legacies	-	-	-	-	(52,382)	-	-	(52,382)
Sponsorship Income	-	-	-	-	-	-	-	-
Charitable Activities	2,215,508	77,114	6,591	2,299,213	1,784,040	38,201	183,953	2,006,194
Trading Activities	57,651	-	-	57,651	27,968	-	-	27,968
Investment Income	58,490	872	31,551	90,913	53,839	2,206	28,725	84,770
Total Incoming Resources	2,331,649	77,986	38,142	2,447,777	1,813,465	40,407	212,678	2,066,550
Expenditure On:								
Raising Funds								
Investment Mgr Fees	5,098	-	2,751	7,849	5,191	-	2,775	7,966
Trading Expenditure	18,845	-	-	18,845	3,022	-	-	3,022
Charitable Activities	2,143,019	298,064	313,529	2,754,612	1,735,781	135,319	383,782	2,254,882
Total Resources Expended	2,166,962	298,064	316,280	2,781,306	1,743,994	135,319	386,557	2,265,870
Net gains/(losses) on Investments	(340,742)	-	(183,610)	(524,352)	306,679	1,494	164,062	472,235
Net (Expenditure) / Income	(176,055)	(220,078)	(461,748)	(857,881)	376,150	(93,418)	(9,817)	272,915
Transfer between Funds	148,327	(148,327)	-	-	(372,561)	372,561	-	-
Net Movement in Funds	(27,728)	(368,405)	(461,748)	(857,881)	3,589	279,143	(9,817)	272,915
Total Funds Brought Forward	2,144,347	2,077,227	1,652,401	5,873,975	2,140,758	1,798,084	1,662,218	5,601,060
TOTAL FUNDS CARRIED FORWARD	2,116,619	1,708,822	1,190,653	5,016,094	2,144,347	2,077,227	1,652,401	5,873,975

Consolidated Balance Sheet as at 31st December 2022

	2022	Prior year
Fixed Assets		
Tangible	1,216,619	1,244,347
Investments	3,752,180	4,269,320
	4,968,799	5,513,667
Current Assets		
Debtors	331,388	268,286
Short Term Investments	56,863	756,642
Cash at bank and in Hand	419,547	213,494
	807,798	1,238,422
Creditors	(760,503)	(878,114)
Net Current Assets	47,295	360,308
Total Assets less Current Liabilities	5,016,094	5,873,975
FUNDS		
Unrestricted	2,116,619	2,144,347
Restricted	1,190,653	1,652,401
Designated	1,708,822	2,077,227
	5,016,094	5,873,975

Council Statement on the summarised financial statements:

These summarised financial statements are based on information extracted from the statutory Council's report and consolidated financial statements approved by Council on 16th March 2023. They may not contain sufficient information to allow for a full understanding of the Institution's financial affairs. The full Consolidated Financial Statements, the Trustees Report and the Auditor's Report should also be consulted. Copies can be obtained from our website www.igem.org.uk or from the finance department by email to finance@igem.org.uk.



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