



**NNWI**  
New Nuclear Watch Institute

14 MAY 2026

# POWERING INDUSTRIAL DECARBONISATION

SMRS FOR MATERIALS PROCESSING INDUSTRIES

PARTNER



Materials  
Processing  
Institute

HOST AND SPONSOR



HERBERT SMITH  
FREEHILLS  
KRAMER

# CONFERENCE

14 MAY  
2026

POWERING INDUSTRIAL  
DECARBONISATION: SMRS FOR  
MATERIALS PROCESSING INDUSTRIES

8:30 – 18:00

08:30

Registration and Refreshments

09:00

Welcome and Opening Remarks

09:15

Keynote Address

**Nicola Rega**

Executive Director, Climate Change and Energy, **Cefic**

Chair, Technical Working Group on Industrial Applications, **European Industrial Alliance on SMRs**

09:45

**Panel 1: Technological Innovations in SMRs for Materials Processing**

**Chaired by** Nicola Rega, **Cefic / European Industrial Alliance on SMRs**

- Ed Hawkes, Engineering Director – Fusion and Modular Nuclear, **Assystem**
- Mark Allan, Green Metals & Green Steel Centre Leader, **Materials Processing Institute**
- Rob Mossop, Consultant, **Equilibrion**

11:00

 Coffee Break

11:15

**Panel 2: Decarbonisation Strategies and Industrial Applications**

**Chaired by** Shiva Sundaram, Commercial Director, **Materials Processing Institute**

- Stuart Broadley, Chief Executive Officer, **Energy Industries Council (EIC)**
- Will Pearson, Nuclear Commercial Director, **Tarmac**
- Dr Edwin Basson, Director General, **World Steel Association**

12:30

 Lunch Break

13:30

**Panel 3: Policy, Economics, and Regulatory Frameworks for Industrial SMRs**

**Chaired by** Tim Yeo, Chairman, **New Nuclear Watch Institute**

- Keisuke Sadamori, Director, Energy Markets and Security, **International Energy Agency**
- Diane Cameron, Head of the Nuclear Technology Development and Economics Division, **OECD Nuclear Energy Agency**
- Raquel Heredia Silva, Senior Programme Lead, Strategic Partnerships, **World Nuclear Association**
- Patrick Matthewson, Head of Energy and Net Zero Policy, **Make UK**

14:45

 Coffee Break

15:00

**Panel 4: Supply Chain and Infrastructure for Industrial SMR Deployment**

**Chaired by** David Appleyard, Chief Editor, **Nuclear Engineering International**

- Lincoln Hill, Director of Policy and External Affairs, **Nuclear Industry Association**
- Mike Crawforth, Lead Strategy & Business Development Manager, **Rolls-Royce SMR**
- Sue Ferns OBE, Senior Deputy General Secretary, **Prospect**

16:15

 Closing Remarks

16:30

 Drinks Reception

18:00

 End

# ORGANISER

## NEW NUCLEAR WATCH INSTITUTE (NNWI)

**NNWI is an industry-supported think tank** dedicated to the international advancement of nuclear energy as a key solution for governments to secure their long-term sustainable energy needs. We strongly believe that achieving the binding objectives of the Paris Climate Agreement is unattainable without the contribution of nuclear power, making it an essential component in the global response to climate change.

To foster widespread recognition of the benefits of nuclear energy, NNWI encourages informed, open discussions surrounding energy and climate change. These debates highlight not only the advantages of nuclear power in providing low-carbon electricity but also its extensive applications, including decarbonising transport, heating, and industrial processes, while delivering high-value solutions in agriculture and medicine.



SPEAKER

**TIM YEO**  
CHAIRMAN

**Tim has a longstanding commitment to the nuclear energy industry dating back three decades to when he was Minister of State for the Environment with responsibility for climate change policy in the UK Government. He later served in the Shadow Cabinet as Shadow Secretary of State for Trade and Industry before being elected as chairman of the UK Parliament Energy and Climate Change Select Committee.**

Tim is Chairman of ElecLink Limited, a subsidiary of Getlink SE, which owns and operates a 1GW electricity interconnector between France and Britain. He is a consultant and former Executive Chairman of Powerhouse Energy Group plc, a listed UK company developing technology to convert plastic waste into hydrogen. Tim is the Honorary Ambassador of Foreign Investment Promotion for South Korea and has worked in China on climate related projects including the design of China's carbon trading markets and on carbon capture utilisation and storage with the UK-China (Guangdong) CCUS Centre.

## WELCOME ADDRESS

**Halfway through 2026, the outlook for the nuclear energy industry is better than at any time since the last century. Recognition of the essential contribution of nuclear energy in preventing dangerous and potentially irreversible climate change is now wider than ever before. Opposition to nuclear energy is steadily declining all around the world.**

Ever since the pandemic in 2020, global events have underscored the urgent need for greater security of international energy supply. Industrial and domestic consumers alike want price shocks to be replaced by more stable energy markets. The transition away from dependence on fossil fuels towards low-carbon energy must accelerate. Increased investment in nuclear energy capacity helps to achieve each of these three goals.

In the next decade, small modular reactors will begin to deliver clean electricity to communities in places that have never previously enjoyed the benefits of nuclear energy. This background of growing optimism and confidence in the industry's long-term future makes today's conference very timely.

This is the first event that the New Nuclear Watch Institute has held in partnership with the Materials Processing Institute. Among the topics it will examine are technological innovations in SMRs for materials processing, decarbonisation strategies, industrial applications, regulatory frameworks for industrial SMRs, and infrastructure for industrial SMR deployment.

**I look forward to welcoming you all to the conference today.**

# PARTNER

## MATERIALS PROCESSING INSTITUTE (MPI)

The **Materials Processing Institute (MPI)** is an independent innovation/commercialisation company with a unique portfolio of pilot plants for steelmaking, metal melting and refining, critical materials recovery, energy decarbonisation, and cement testing, underpinned by world class characterisation laboratories and expert staff. Based in the north of England, we work with global clients in materials processing and supply chains, including materials development for next generation nuclear power plants, and greener ironmaking.



SPEAKER

### SHIVA SUNDARAM

COMMERCIAL DIRECTOR

Shiva Sundaram has a multifaceted career in materials innovation leadership, starting out as a Chemical Engineer with a specialism in polymers with AMRITA in India, studying further and working in the Netherlands and Denmark with Philips Research and Pera, and moving to the UK in 2010 to develop and lead high level collaborative projects teams with The Welding Institute.

She has been with the UK's Materials Processing Institute since 2021, first as lead for Collaborative and Strategic Projects and business growth within the Advanced Materials arena, and since 2025 as Commercial Director.

## WELCOME ADDRESS

**Welcome to this event!** It was a great pleasure to take part in last year's NNWI seminars on non-electric uses for SMR energy, and to feel the enthusiasm in the sector for marrying the high energy outputs from modular reactors with the needs of a decarbonising foundation materials sector, particularly for steelmaking where high temperature electrolysis for hydrogen is a perfect match for ultra-low emission 'direct' ironmaking.

Direct use of heat for processing metal or calcining materials for construction use is also a clear synergy. So it seemed like a great opportunity to partner with NNWI in hosting this year's event and broadening the discussion and focusing our minds on action to rapidly decarbonise essential energy intensive industry sectors at scale.



# HOST AND SPONSOR

## HERBERT SMITH FREEHILLS KRAMER LLP

**Herbert Smith Freehills Kramer** is one of the world's leading global law firms with a stellar reputation across energy and infrastructure. We are one of a very small number of firms with proven capability to advise on the full range of issues that can arise in a nuclear new build project.

We understand the UK nuclear industry, its regulation and revenue support structures, with deep experience from projects like Hinkley Point C, Sizewell C and Thames Tideway Tunnel (the forerunner of the RAB based revenue model), most recently advising La Caisse on its 20% stake in Sizewell C – the first institutional equity investment in a greenfield nuclear project. Outside the UK, we have advised on nuclear projects in Abu Dhabi, Canada, Finland, France, Hungary, Jordan, Lithuania, Poland, Romania, Russia and Turkey.

## WELCOME ADDRESS

**It is a pleasure to welcome you to Herbert Smith Freehills Kramer for Powering Industrial Decarbonisation: SMRs for Materials Processing Industries.**

Today's conversation takes place against the backdrop of the most sustained global rethink of nuclear power in a generation and the moment that, after more than twenty years of advising through nuclear's fits and starts, Herbert Smith Freehills Kramer believes may finally represent the real turning point.

Four forces are converging to drive it. First, grid stability and system costs as renewables scale: the physics of electricity systems increasingly dominated by variable generation places an increasing premium on what nuclear can deliver. Second, the electricity demands of AI: gigawatt-scale campuses that need clean, uninterrupted power delivered in one place, and the hyperscaler contracts now reshaping the nuclear market. Third, the decarbonisation of

heavy industry: the focus of today's event. And fourth, the return of energy security as a hard strategic priority, sharpened by Russia's invasion of Ukraine and, more recently, by disruption in the Strait of Hormuz.

It is the third of those forces – industrial applications and decarbonisation – that brings us together today. Steel, cement and chemicals account for nearly 40% of global CO<sub>2</sub> emissions, and most of the process heat above 500°C that renewables alone cannot solve. SMRs, and advanced reactors, offer one of the few credible routes to firm low-carbon power, high-temperature heat and clean hydrogen at industrial scale.

**We look forward to today's discussions.**

# KEYNOTE

## ADDRESS



### NICOLA REGA

EXECUTIVE DIRECTOR, CLIMATE CHANGE AND ENERGY, CEFIC  
CHAIR, TECHNICAL WORKING GROUP ON INDUSTRIAL APPLICATIONS, EUROPEAN  
INDUSTRIAL ALLIANCE ON SMRS

**Nicola was appointed Executive Director Climate Change and Energy of Cefic in April 2023. Nicola has more than 20 years of experience in public affairs and stakeholder engagement in Brussels. He started his career in Brussels leading a European youth organization promoting European integration.**

Ever since, his path has been linked to climate change and energy topics: among others, Nicola has advised Eurelectric for several years on Environment and Sustainable Development Policy, and then served for over five years as Energy and Climate Director at CEPI, the Confederation of European Paper Industries.

Nicola joined Cefic in December 2020 as the new Energy Director. In April 2023, he has been appointed Executive Director Climate Change and Energy of Cefic. In his role, Nicola represents the industry's interests to European institutions, international organisations and relevant stakeholders. Since May 2024, Nicola has been serving as Chair of the European Commission's Technical Working Group on industrial applications, as part of the EU Commission's Industrial Alliance on SMRs.

### ARTICLE

## SMR DEPLOYMENT FOR THE INDUSTRIAL AND ENERGY TRANSITION: WHAT WILL IT TAKE?

**Europe's energy-intensive industries face a dual challenge: delivering deep emissions reductions while remaining globally competitive. Sectors such as chemicals, steel and cement rely on large volumes of reliable electricity and heat, available at predictable and affordable cost. In this context, Small Modular Reactors (SMRs) are increasingly seen not as a distant solution, but as a serious candidate to support industrial transition while safeguarding competitiveness.**

This is the rationale behind the European Industrial Alliance on Small Modular Reactors, which brings together technology vendors, utilities, industrial end-users, regulators and policymakers. The Alliance's objective is straightforward: accelerate the development and future deployment of SMRs in Europe, with a particular focus on non-electric and industrial applications. Within this structure, the Technical Working Group on Industrial Applications, which I have the privilege to chair, provides a dedicated forum for end-users to express their needs, constraints and expectations.

A central feature of the TWG's work is the deliberate shift from a technology-centric to an end-user-centric perspective. Discussions begin with industrial realities: continuous processes, high-temperature heat requirements, space and safety integration on industrial sites, licensing complexity, and bankability. Recent work has explored concrete use cases such as process heat, combined heat and power, hydrogen production and integration within industrial clusters.

Looking ahead, the priority is to convert these use cases into projects that can be built by identifying suitable locations, clarifying regulatory requirements and putting in place business models and financing conditions that give industrial investors clarity.

From the chemical industry's perspective, several strategic dimensions stand out. First, on-site or near-site energy generation can be transformational. SMRs have the potential to reduce dependence on increasingly constrained grids, limit exposure to volatile wholesale electricity markets and provide long-term price and supply certainty: key preconditions for capital-intensive investments in globally exposed sectors.

Second, SMRs can fundamentally change how large industrial sites interact with the energy system. Many industrial facilities already operate significant backup or self-generation capacity to guarantee operational continuity. With the right regulatory and market frameworks, this capacity could support system flexibility, balance and resilience. Industrial sites could evolve from being perceived as inflexible baseload consumers to becoming active contributors to network stability.

Realising this potential requires close cooperation across the value chain. The nuclear sector has a strong tradition of long-term partnerships, but industrial transformation will only succeed if energy suppliers and energy users are fully aligned from the outset. SMRs offer a unique opportunity to strengthen that partnership and place end-users at the centre of Europe's energy transition.

# TECHNOLOGICAL INNOVATIONS IN SMRS FOR MATERIALS PROCESSING

CHAired BY



**NICOLA REGA**

CEPIC / EUROPEAN INDUSTRIAL  
ALLIANCE ON SMRS

# 01 PANEL



## ED HAWKES

ENGINEERING DIRECTOR  
- FUSION AND MODULAR  
NUCLEAR

ASSYSTEM UK

A Chartered Engineer and Fellow of the Institution of Mechanical Engineers, Ed has over 15 years' experience in the nuclear sector spanning both defence and civil nuclear projects. His career has spanned several major nuclear projects, including in the client teams leading regeneration of the reactor core manufacturing facilities for the Royal Navy's nuclear submarine fleet and the development of the PWR3 reactor plant for the Dreadnought-class submarines. Following a period in nuclear safety assurance, Ed was most recently the Head of Engineering and Design Authority lead for liquid lead-cooled reactor developer newcleo. He is currently Engineering Director in Assystem's Fusion and Modular Nuclear business unit, supporting a range of clients delivering new nuclear programmes in the UK.



### ARTICLE

[NET ZERO NEEDS NUCLEAR - THE ROLE OF  
ADVANCED MODULAR REACTORS IN  
DECARBONISING INDUSTRY](#)



## MARK ALLAN

GREEN METALS & GREEN  
STEEL CENTRE LEADER

MATERIALS PROCESSING  
INSTITUTE

Mark Allan MSc BSc MIMMM leads the Materials Processing Institute's flagship Green Steel Centre, which works internationally with the steel industry and supply chain, to develop and perfect technologies, materials, processes, and knowledge to decarbonise iron and steel. A Materials Chemist and Renewable Energy Engineer by training, his experience is in multi-disciplinary industrial and community research and organizational leadership, in the UK and abroad. His team recently delivered the Primary Steelmaking Review for the UK Department of Business and Trade's Steel Strategy which launched in March 2026.



### ARTICLE

[SYNERGY AND OPPORTUNITIES FOR STEEL AND  
ALLIED FOUNDATION INDUSTRIES, MODULAR  
ENERGY SOURCES AND INTELLIGENCE](#)



## ROB MOSSOP

CONSULTANT

EQUILIBRION

Equilibrion is a nuclear consultancy and project developer progressing the opportunity for nuclear energy to deliver a step change in climate mitigation. Rob joined Equilibrion in June 2025 as an accomplished reactor physicist with academic and industrial experience in Gen IV and advanced reactor design and analysis. He specialises in the application of high-temperature gas reactors to industrial applications.



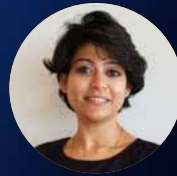
### ARTICLES

[EXPLORE ADDITIONAL CONFERENCE  
ARTICLES HERE.](#)



# DECARBONISATION STRATEGIES AND INDUSTRIAL APPLICATIONS

CHAired BY



**SHIVA SUNDARAM**

COMMERCIAL DIRECTOR

MATERIALS PROCESSING INSTITUTE

# 02

PANEL



## STUART BROADLEY

CHIEF EXECUTIVE OFFICER

ENERGY INDUSTRIES COUNCIL (EIC)

Stuart has been CEO of Energy Industries Council (EIC) for ten years, after a 25-year career leading global businesses in oil & gas, power, renewables and defence. Winner of the 2023 King's Award for International Trade, EIC is energy agnostic and one of the world's largest energy trade associations with 950 member companies. Stuart is architect of World Energy Supply Chain Awards, the world's largest energy awards programme, and the Energy Exports Conference, which brings 20 international delegations to the UK. He authors the Survive & Thrive annual report, which analyses 150 supply chain growth strategies annually, and hosts 100 C-level podcasts annually.



ARTICLE

STUART BROADLEY CELEBRATES 10 YEARS LEADING THE EIC (ENERGY INDUSTRIES COUNCIL)



## WILL PEARSON

NUCLEAR COMMERCIAL DIRECTOR

TARMAC

Will Pearson is a Fellow of the Institute of Mechanical Engineering. He brings over 25 years of experience working in the nuclear sector across a range of disciplines and industry sectors including decommissioning, operational plant, defence, and new build. His experience includes roles working across the UK nuclear industry as well as in Eastern Europe and Asia.

Having held senior positions focusing on strategic development in consulting, engineering, and manufacturing business, Will joined Tarmac in 2025 and is responsible for their development in the nuclear sector, working with clients in support of the delivery of nuclear programs through efficient and reliable provision of construction materials and associated services. With a strong focus on nuclear safety principles, Will's focus is on ensuring quality is embedded in material supply for nuclear projects at the quarry, through production and transport to the site.



ARTICLE

TARMAC: POWERING INDUSTRIAL DECARBONISATION



## DR EDWIN BASSON

DIRECTOR GENERAL

WORLD STEEL ASSOCIATION

After a few years in the banking industry, Edwin joined the steel industry in 1994 as Chief Economist at Iscor Ltd. in South Africa. In 1996 he became Business Unit Manager for coated steel products and flat steel products. He later headed Strategic Initiatives at the company. Edwin was transferred to Europe when Iscor became a part of Mittal Steel (now ArcelorMittal) in 2004 as a General Manager responsible for Marketing Strategy and was part of the Merger & Acquisition team in Mittal steel. From 2006 until he joined worldsteel, he was Vice President, Commercial Coordination, Marketing and Trade Policy at ArcelorMittal. Edwin joined the World Steel Association in August 2011 as Director General.



ARTICLE

SMRS FOR MATERIAL PROCESSING INDUSTRIES

# POLICY, ECONOMICS, AND REGULATORY FRAMEWORKS FOR INDUSTRIAL SMRS

CHAired BY



**TIM YEO**  
CHAIRMAN

NEW NUCLEAR WATCH INSTITUTE

# 03 PANEL



## KEISUKE SADAMORI

DIRECTOR, ENERGY MARKETS AND SECURITY

INTERNATIONAL ENERGY AGENCY

Keisuke Sadamori took up his duties as Director of the Office for Energy Markets and Security at the International Energy Agency in October 2012. Previously, he held the post of Deputy Director General for Policy Co-ordination at the Ministry of Economy, Trade and Industry (METI) in Japan. He had been involved with the IEA for a number of years as IEA Governing Board Representative for Japan and as Co-Chair of the Standing Group on Long Term Co-operation. Over the years, Mr Sadamori has served in the Cabinet of the Prime Minister of Japan and has co-ordinated numerous important projects, including work following the Fukushima-Daiichi accident in March 2011.



## DIANE CAMERON

HEAD OF THE NUCLEAR TECHNOLOGY DEVELOPMENT AND ECONOMICS DIVISION

OECD NUCLEAR ENERGY AGENCY

Diane Cameron is Head of Nuclear Technology Development and Economics at the OECD Nuclear Energy Agency (NEA). She leads an expert team of economists and scientists that supports energy policy and nuclear energy policy development by advancing evidence-based, authoritative assessments and analyses in the areas of nuclear economics, financing, and cost reduction, as well as nuclear technology, innovation, and the fuel cycle.

From 2007 to 2021, Diane held various positions within the Government of Canada, including Director of Nuclear Energy, Deputy Director of Trade Controls, and foreign affairs negotiator. Prior to her public service, she worked in the private sector, in management consulting, engineering, operations and logistics.



### ARTICLE

AMID A NUCLEAR ENERGY COMEBACK, SMRS OFFER A PROMISING PATH TO SECURE, LOW-EMISSION ENERGY SUPPLY



### ARTICLE

SMALL MODULAR REACTORS: THE POTENTIAL TO POWER INDUSTRIAL DECARBONISATION IN RAPIDLY CHANGING TIMES



## RAQUEL HEREDIA SILVA

SENIOR PROGRAMME LEAD, STRATEGIC PARTNERSHIPS

WORLD NUCLEAR ASSOCIATION

Raquel Heredia is Senior Programme Lead for Strategic Partnerships at World Nuclear Association, where she leads engagement across end energy users, the nuclear industry, and multilateral organisations to translate energy demand into nuclear deployment strategies and inform policy development.

Her work sits at the intersection of policy, strategy, and stakeholder engagement, focusing on how nuclear technologies can enable equitable and practical low-carbon transitions across the global economy.



## PATRICK MATTHEWSON

HEAD OF ENERGY AND NET ZERO POLICY

MAKE UK

Patrick is senior policy manager on energy and net zero at Make UK and has led the organisations work on a wide-ranging sustainability brief including reports on tackling high industrial energy costs and green technology. He has previously worked in numerous climate facing roles within the Civil Service at DESNZ. This has included working on the EU ETS, UN negotiations on aviation carbon offsetting measures and most recently on the Review of Electricity Market Arrangements



### ARTICLE

BEYOND ELECTRICITY: NUCLEAR AS THE BACKBONE OF INDUSTRIAL DECARBONISATION AND ENERGY SECURITY



### ARTICLE

IMPACTS OF HIGH ELECTRICITY PRICES ON MANUFACTURING AND THE ROLE NUCLEAR CAN PLAY TO BREAK THIS DOWN

# SUPPLY CHAIN AND INFRASTRUCTURE FOR INDUSTRIAL SMR DEPLOYMENT

CHAired BY



**DAVID APPLEYARD**

CHIEF EDITOR

NUCLEAR ENGINEERING INTERNATIONAL

# 04 PANEL



## LINCOLN HILL

**DIRECTOR OF POLICY  
AND EXTERNAL AFFAIRS**

NUCLEAR INDUSTRY  
ASSOCIATION

**Lincoln Hill has been the Director of Policy and External Affairs for the Nuclear Industry Association, the trade body representing the UK civil nuclear industry, since August 2020. He leads a team responsible for advocating for nuclear investment to Government, Parliament, media and to third-party stakeholders, and for creating industry-wide messages around the importance of nuclear to energy security, net zero, and economic growth shared across the country. He also leads the NIA's work on regulatory reforms, including its work with the recent Nuclear Regulatory Taskforce.**

Before joining the nuclear industry, he spent seven years in public affairs at international PR agency Weber Shandwick, supporting clients in infrastructure, manufacturing, energy, construction and other sectors. Lincoln also advised sovereign governments in Ukraine and Nigeria on international communications around reform and investment programmes.



ARTICLE

**UK HAS TO MAKE ITS OWN LUCK ON SMRS  
AND REINDUSTRIALISATION**



## MIKE CRAWFORTH

**LEAD STRATEGY &  
BUSINESS DEVELOPMENT  
MANAGER**

ROLLS-ROYCE SMR

**Mike is the Lead Strategy & Business Development Manager for Rolls-Royce SMR, utilising a wealth of experience in the nuclear industry to help meet the twin challenges of decarbonisation and energy security. Specialising in technology introduction programmes, Mike has worked across the breadth of the nuclear industry. Now with Rolls-Royce SMR, Mike is working with utilities, energy users and policy makers to develop new scalable models to deploy nuclear solutions into the industrial energy ecosystems of tomorrow, driving down the system costs of the energy transition.**



ARTICLE

**ROLLS-ROYCE SMR: DELIVERING A NEW  
APPROACH TO DEPLOYING PROVEN  
NUCLEAR TECHNOLOGY**



## SUE FERNS OBE

**SENIOR DEPUTY GENERAL  
SECRETARY**

PROSPECT

**Sue is Senior Deputy General Secretary at Prospect, the union for professionals. Her responsibilities in Prospect include leading the union's work across the energy and defence; climate and environment; and gender equality.**

Sue is a member of the TUC Executive Committee and the General Council's lead on energy, environment and sustainability. She is a non executive board member for the Department of Energy Security and Net Zero and a member of the Net Zero Council.

Sue is a Fellow of the Chartered Institute of Personnel and Development.



ARTICLE

**SUPPLY CHAIN AND INFRASTRUCTURE FOR  
INDUSTRIAL SMR DEPLOYMENT**





[www.newnuclearwatchinstitute.org](http://www.newnuclearwatchinstitute.org)