





# Nuclear in the Midlands

Enterprise Center, Derby

29<sup>th</sup> September 2022



## Acknowledgements

**Main Sponsors** 





**Drinks Sponsor** 









#### **Nuclear Manufacturing Summit**

16–17 November 2022

Magna Science Adventure Centre, Rotherham

UK capabilities + Global opportunities

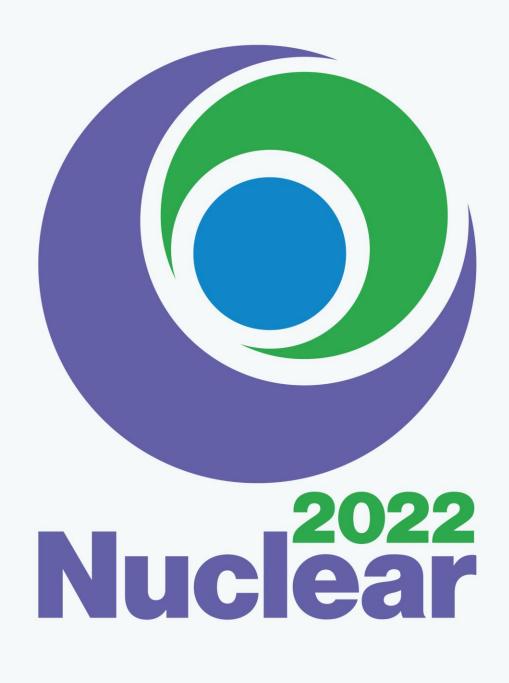
Discover the latest opportunities and meet the industry leaders:

- New build
- SMRs & AMRs
- Decommissioning
- Defence

nuclearmanufacturingsummit.co.uk

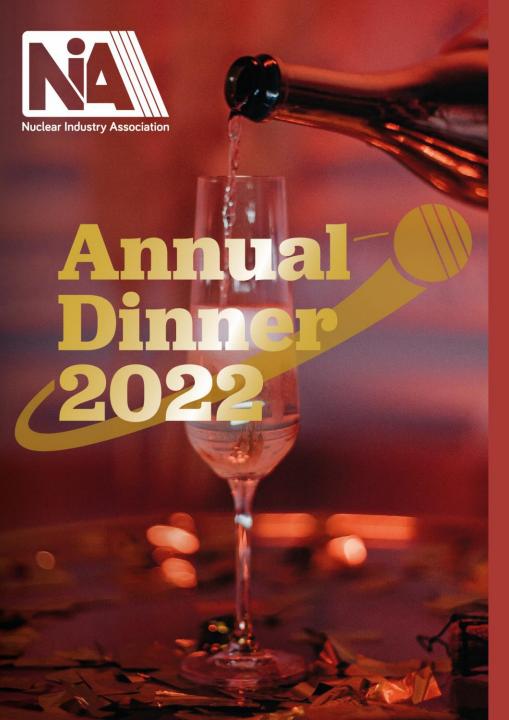






Sponsor | Exhibit | Register Thursday 1 December etc.venues County Hall nuclear 2022.co.uk







# BOOK NOW Thursday 1 December Grosvenor House Hotel Park Lane, London W1K 7TN

Sponsorship Tables/Tickets

stephanie.mckenna@niauk.org events@nuclearinst.com

#### **Agenda**

- 12:00 Welcome & Lunch
- 13:00 Manufacturing in the Midlands

Nuclear AMRC, Sheffield Forgemasters & Ansaldo Nuclear

14:00 Nuclear Skills

University of Derby, Rolls-Royce Submarines, National College for Nuclear, Derby City Council & Nuclear AMRC

- 14:30 Coffee Break
- 15:00 Opportunities in the Midlands
  Rolls-Royce Submarines, Rolls-Royce SMR & UKAEA
- 16:00 Wrap up & Drinks reception
- 17:30 Close







Manufacturing in the Midlands

Facilitator Michael Cartwright, Frazer-Nash Consultancy

Nuclear AMRC

**Sheffield Forgemasters** 

**Ansaldo Nuclear** 

**Kevin Shepherd** 

Martin Kearney

Allan Bevan

















Helping UK manufacturers win work in nuclear





# Ansaldo Nuclear - key markets



#### **New nuclear power plants**

- Technological developments for new nuclear power plants
- EPC for plants & systems
- Components & equipment, design & supply
- SMR /AMR and fusion design, engineering & supply



#### **Services to power plants**

- Safety checks & upgrading
- Plant life assessment & extension (PLEX)
- Operational services



#### **Decommissioning & waste management**

- Decommissioning of nuclear power plant & facilities
- Radioactive waste management
- Temporary & national storage facilities
- Gloveboxes, shield doors, handling systems and cranes

#### **Defence**



UK submarine enterprise

- Build/support infrastructure
- Safety-critical handling
- Specialist manufacture
- Heat exchangers (OEM)
- In-service support

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Martin Kearney

Allan Bevan













**Nuclear Skills** 

Facilitator Dr Louise Pigden, University of Derby

University of Derby

Rolls-Royce Submarines Ltd

National College for Nuclear

**Derby City Council** 

**Nuclear AMRC** 

Robin Webber-Jones



Tim Bagshaw

Sean Eley























# Nuclear in the Midlands

# Coffee Break

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Opportunities in the Midlands

Facilitator Andrew Storer, Nuclear AMRC

Rolls-Royce SMR Rachel Bennett

UK Atomic Energy Authority Chris Peters













# Fusion Opportunities – UKAEA & Elsewhere

#### UKAEA STEP

- Mission statement
- Deliver a UK prototype fusion energy plant, targeting 2040, and a path to commercial viability of fusion
- Concept Design
- CML4 review happening this week the outcome of this review is the first integrated concept design
- Siting
- Announcement expected before the end of this year
- Whole Plant Partners
- Tenders to be issued in the coming months PINs recently issued about an upcoming webinar
- T/SP049/22 STEP Engineering Partner: Whole Plant Engineering Design and Delivery PIN 1 Find a Tender (find-tender.service.gov.uk)
- T/SP050/22 STEP Construction Partner Site, Plant, and Infrastructure Delivery PIN 1 Find a Tender (find-tender.service.gov.uk)
- Continued UKAEA Research Oxford & Yorkshire
- Private Fusion Huge private investment to develop a range of fusion concepts globally





## Rolls-Royce SMR is a totally new way of building nuclear to meet Net Zero needs

~470 MWe net output

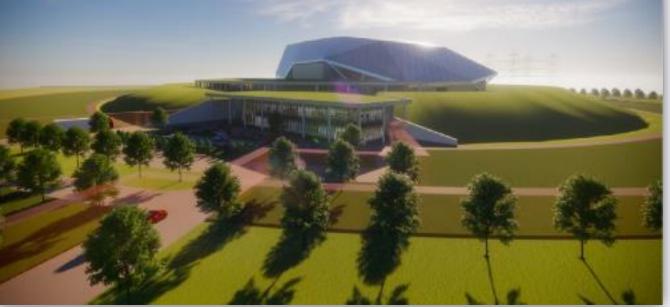
50 Hz design

Proven PWR Technology & Standard Fuel

Power station turnkey delivery

4 yr on-site Construction (Fleet unit)





Deliverable



**Enhanced safety and security** 

1<sup>st</sup> unit on grid early 2030s

**Capital cost under €2.3bn\*** 

Adaptable, multi-use power & heat output

LCOE range €39-€56 per MWh\*\*





\*\* 2021 economics, 2 unit plant, range dependent on financing mechanism



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# Wrap up and Thanks

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# Nuclear in the Midlands

# **Drinks Reception**

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