



GLOBAL NATIONAL LABORATORIES
ENERGY SUMMIT 22

Overview and agenda

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INTRODUCTION

National laboratories exist around the world to deliver cutting edge science to solve some of society's most complex challenges. Discoveries made in these laboratories have already improved the lives of billions of people.

In November 2021, the UN Climate Change Conference (COP26) brought together almost every country in the world to decide how best to mitigate and adapt to the effects of climate change, to accelerate action towards the goals of the Paris Agreement and the UN Framework Convention on Climate Change. The event was not just about seeking a global agreement, it was an important moment to recognise our global interdependency.

But to become the truly pivotal moment in history the planet needs, COP26 must be followed by action. In the year of the UK's presidency of COP26, National Nuclear Laboratory (NNL) - as the UK's national laboratory for nuclear fission - is therefore convening the Global National Laboratories Energy Summit 22, the world's first event of its kind.

This Summit brings together national laboratories from across the energy space, encompassing nuclear, renewables and other low carbon solutions, to create a long term legacy for COP26 in the form of international co-ordination and collaboration towards decarbonisation efforts.

AN INTEGRATED ENERGY SYSTEMS APPROACH

The transition to net zero is driving fundamental changes to energy supply, demand, transmission, distribution, storage and use. Research and innovation - much of which is driven and supported by national laboratories - is required to develop, design and operate net zero integrated energy systems.

Energy is used to power our homes, transport and industry, as well to heat and cool our buildings. An integrated energy systems approach optimises the operation and planning of energy systems to deliver reliable, low cost energy with minimal impact on the environment. An integrated energy system can combine low carbon energy sources, such as nuclear and renewables.

Ultimately, and importantly, this approach would allow countries to leverage the benefits of each form of technology and their mode of operation to provide reliable, sustainable and affordable low carbon energy for their citizens.

This summit is therefore the starting point of a global collaboration initiative between national laboratories to help progress a holistic understanding of what the future integrated energy system will look like, in order to evolve technologies to be fit and ready to deliver - and to work together to support the delivery of this.

AGENDA

The summit will convene virtually on 26th January 2022. As part of the two hour event, each national laboratory will have an opportunity to present, with delegates invited to commit their own actions towards an integrated energy system approach.

KEYNOTE SPEAKERS



Sir Patrick Vallance
Government Chief Scientific Adviser, UK

“With this meeting, it’s important that it is international in scope, it’s important that it is national laboratories coming together with all the resources and insights they can bring and it’s important that it reflects the urgency of the work ahead.”



The Rt Hon Greg Hands MP
Minister for Energy, Clean Growth and Climate Change, UK

WELCOME REMARKS



Dr Paul Howarth
Chief Executive Officer,
National Nuclear Laboratory



Dr Keith Franklin
Head of International Engagement,
National Nuclear Laboratory

CO-CHAIRS



Dr Tim Gregory
Analytical Nuclear Chemist,
National Nuclear Laboratory



8 DELEGATES FROM ACROSS 5 COUNTRIES

CANADA

Canadian Nuclear Laboratories (CNL)



Representative:
Dr Jeff Griffin
Vice-President, Science & Technology,
Advanced Reactors

FRANCE

French Alternative Energies and Atomic Energy Commission (CEA)



Representative:
Dr Stéphane Sarrade
Director of Programmes, Energy Division

JAPAN

Institute of Energy Economics of Japan (IEEJ)



Representative:
Tomoko Murakami
Group Manager, Nuclear Energy Group,
Strategy Research Unit

Japan Atomic Energy Agency (JAEA)



Representative:
Kentaro Funaki
Executive Director for International Affairs

UNITED KINGDOM

Energy Systems Catapult



Representative:
Guy Newey
Director of Strategy and Performance

National Nuclear Laboratory (NNL)



Representative:
Dr Fiona Rayment
Chief Science and Technology Officer

USA

Idaho National Laboratory (INL)



Representative:
Dr Marianne Walck
Deputy Laboratory Director for Science and
Technology and Chief Research Officer

National Renewable Energy Laboratory (NREL)



Representative:
Dr Peter Green
Deputy Laboratory Director, Science
and Technology

FUTURE COLLABORATION

The summit will conclude with a document signifying delegates' intention to collaborate on an international approach towards integrated energy systems.

This will include sharing each national laboratory's vision of such systems, and best practice in research and innovation in areas such as:

- Enabling and preparing for flexibility in the way energy can be used
- Identifying energy needs across industry sectors, and optimising existing and new infrastructure to deliver energy in the most efficient ways
- Demonstrating the maturity of the specific technological building blocks required for proof of concept, demonstrators, or the 'First of a Kind' of future integrated energy systems

The concluding document also confirms that delegates agree to meet at least annually to review progress and continue to set the agenda for this decisive next decade of the global energy transition.



LEARN MORE

A recording of the **#GlobalLabSummit22** will be made available to watch in full after the event.

More information, including future updates on collaboration initiatives leading from the summit, can be found here:

nnl.co.uk/energysummit





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