

Durham Energy Institute Joint Conference with North of England Institute of Mining and Mechanical Engineers

**Thursday and Friday 15-16 April 2021
09.30-17.00**

Online Zoom Conference

The Transition to NET-ZERO in the North of England

How can the North transition to a net-zero economy by itself, and how can net-zero technologies create jobs in the North.

This event is aimed at showing members of the public, policy makers and an academic audience what is on offer, what can be done and what is being done, here in the North.

Day One Programme:

09.30 – 09.45	Welcome
Professor Jon Gluyas, Executive Director of DEI & Dr Andrew Dobrzanski, NEIMME	
09.45 – 11:15	Panel 1: Geological Record of Climate and Extinctions
Chair: Professor David Harper, Department of Earth Sciences	
Panellists:	
<ul style="list-style-type: none"> • Dr Chris Cleal (National Museums Wales), Formation of the British/North East Coal Measures • Dr Liz Thomas (British Antarctic Survey), Recent Climate Change • Professor Mark Williams (University of Leicester), The legacy of the Anthropocene • Professor Tim Burt (Dept of Geography Emeritus, Durham University), Durham Temperature Record 	
The Great Northern Coalfield gave birth to the Industrial Revolution and set in motion an uptick in carbon emissions from fossil fuel which have paved the way for our modern world. To open our conference this session will explore how those coal fields formed, what effect the increase in carbon emissions may be having on the global climate and what the legacy of our 'Anthropocene' period might be for the Earth.	
11.15 – 11.45	Screen Break

11.45 - 13.15 Panel 2: Geology for the Energy Transition

Chair: Laura Brown, Centre Manager, Centre for Energy Systems Integration, Newcastle University

Panellists:

- Professor Jon Gluyas (Department of Earth sciences, Durham University & DEI Executive Director), Geoenergy in the energy transition
- Dr Charlotte Adams (Coal Authority & DEI Associate Fellow), Minewater Heating in the North East of England
- Steve McDonald (Durham County Council), Louisa Centre Mine Water Heat Project
- Dr Andrew Bloodworth (British Geological Survey), Critical Metals

Much attention on 'green' technologies has focused on developments in materials science, but the problems and opportunities surrounding geological resources are just as important to consider. This session will explore how our local geological resources may provide low-carbon solutions and how we still depend on global supplies of metals for our 'clean' technologies.

13.15 – 14.00 Lunch Break**14.00 – 15.30 Panel 3: Materials for the Northern Energy Transition**

Chair: Dr Douglas Halliday, Department of Physics, Durham University & DEI Co-Director

Panellists:

- Dr Budhika Mendis (Department of Physics, Durham University & DEI Fellow), Solar Power Materials
- Neil Spann (Power Roll), Unlocking unmet demand in the Solar PV Market – Power Roll a unique solution
- Dr Jaren Johnston, (Department of Chemistry, Durham University), Battery Materials
- Charanjeet Singh (CPI), Opportunities in battery materials to accelerate electrification of transport

The North has long been known for its role coal mining, but many new and exciting low-carbon technologies are being developed and manufactured by researchers and industrial companies across our region. This session focuses on the contributions of Northern academia and industry to new solar and battery materials and the opportunities and challenges faced by industry to successful roll-out of new technologies.

15.30 – 16.00 Screen Break**16.00 – 17.30 Panel 4: What do we want from COP26 and how do we get it?**

Chair: Helen Stockton, National Energy Action & DEI Advisory Board

Panellists:

- Dr Petra Minnerop (Law Department Durham University & DEI Fellow)
- Professor Simone Abram (Anthropology Department Durham University & DEI Co-Director)
- Professor Gavin Bridge (Department of Geography & DEI Fellow)
- Alyssa Gilbert (COP 26 Universities Network)
- Henry Carr (President, Student Energy Durham & Ex-Officio Member of DEI Advisory Board)

The UK will host COP26 in 2021. As the crucial arena for global action to cut carbon emissions, the UK as host has a privileged position to influence debate. What should be highlighted, and how can we ensure that debates are informed by research?

17.30 - 17.45 Conclusions and Round-Up

Brian Matthews, Energy Consultant and DEI Advisory Board

Day Two Programme:

10.00 – 10.15 Welcome

Professor Jon Gluyas, Executive Director of Durham Energy Institute & Dr Andrew Dobrzanski, NEIMME

10.15 - 11.45 Panel 5: Local Government

Chair: Dr Joanna Berry, Durham University Business School & DEI Co-Director

Panellists:

- Cllr John D Clare (Durham County Council), Durham Climate Change Plan
- Matt Baker (Northumberland Council), Northumberland Climate Change Action Plan
- Clare Penny Evans (Newcastle Council), Newcastle Council Pathway to Net-0
- Richard Baker (NELEP), Working collaboratively at North East scale

Northern Councils will play an important role of implementing low-carbon technologies at a local level. Our first session showcases how a selection of Councils have gone about developing their climate change plans across the different geographies of the North.

11.45 – 12.45 3MT Competition

Chair: Professor Stuart Corbridge, Vice Chancellor & Warden, Durham University

Judges:

- Dr Adrian Green (Department of History, Durham University & DEI Fellow)
- Dr Sarah Knuth (Department of Geography, Durham University & DEI Fellow)
- Dr Janie Ling-Chin (Department of Engineering, Durham University & DEI Fellow)
- Professor Chris Greenwell (Department of Earth Sciences and NEIMME)

PhD students from Durham and other Universities will be challenged to present a compelling talk on their thesis or energy related research in just three minutes, and with the use of only one background slide.

12.45 – 14.00 Lunch Break

14.00 – 14.15 Keynote Speech

Anne-Marie Trevelyan MP, Minister of State for Business, Energy and Clean Growth

14.15 – 15.45

Panel 6: Clean Energy & Manufacturing Solutions

Chair: Mr Peter Allen, Durham University Business School

Panellists:

- Dr Richard Curry (SUSTAIN Steel), Net Zero carbon steel making
- Paul McKeever (Offshore Renewable Energy Catapult) Offshore wind – addressing the 2050 energy system challenge
- Professor Kevin Anderson (DecarboN8/Manchester University) Decarbonising Northern Transport
- Professor Tony Roskilly (Engineering Department, Durham University & DEI Co Director) Industrial Decarbonisation
- Anne-Marie Trevelyan MP, Minister for Business, Energy and Clean Growth

The North has had a long history of technological innovation but faces different challenges compared to other parts of the UK. This final session looks at how the North could produce greener steel, how our region is a leader in offshore renewables, and the unique challenges the North faces in adopting greener transport technologies.

15.45 – 16.15

Screen Break

16.15 – 16.25

3MT Competition Awards

The awards for 1st, 2nd and 3rd place in the 3MT competition will be presented by Dr Barbara Vest OBE, Independent Special Advisor and member of DEI Advisory Board

16.25 – 16.40

Conclusions and Round-Up

Dr Barbara Vest OBE, Special Advisor to Energy UK & member of DEI Advisory Board