



**2022 MINE WATER  
ENERGY SYMPOSIUM**  
Mine water heating, cooling  
and thermal storage:  
towards widespread deployment

Wednesday, 16 March 2022  
Thursday, 17 March 2022  
09:00 - 13:00 GMT



## Programme

Following on from the 2021 symposium, we are pleased to host Mine Water Energy 2022.

Given the urgency required to decarbonise heat to meet net zero targets, the theme of this conference will be to explore the steps we can take to enable enhanced deployment of mine water geothermal energy.

There will be a focus on practitioners – industry and heat users – providing exemplars and highlighting their needs to break down barriers to enhanced deployment, and on the research and innovation being undertaken to meet such needs. Emphasis will be placed on future collaboration to improve sharing of good practice and reduce cost and risk.

## Symposium organisers

[The British Geological Survey](#) is a national geological survey providing underpinning geoscience data, information and research for mine water energy. BGS operates a mine water thermal energy research and innovation at-scale infrastructure, the [UK Geoenergy Observatory in Glasgow](#).

[The Coal Authority](#) is a non-departmental public body that works to make a better future for people and the environment on the coalfields. Working with a range of stakeholders to facilitate mine water heat projects across Great Britain, the Coal Authority hopes to realise mine water as a strategic low carbon heat resource that could contribute to NetZero, energy security and mitigate fuel poverty.

[IEA Geothermal](#) is about collaboration in geothermal energy research, development and deployment. It runs a global Technology Collaboration Programme through a series of working groups.

## Wednesday 16 March 2022

09:00	Introduction		
09:05	BEIS introductory keynote		
Case studies, operational feasibility and investigation			
	<b>Speaker</b>	<b>Organisation</b>	<b>Presentation</b>
09:20	Yago Somoano	HUNOSA (Hulleras del Norte SA SME)	HUNOSA: From coal extraction to energy services in a mining region
09:40	Florian Hahn	Fraunhofer IEG	Status quo of the Mine Thermal Energy Storage project in Bochum, Germany
10:00	Bobo Ng	North East LEP	Hebburn mine water project – case study
10:20	John Gordon	The Coal Authority	Developing the Gateshead Mine Energy Scheme. Lessons learned
10:40	Break		
Mines and modelling			
11:00	Billy Andrews	University of Plymouth	The components and uncertainties of groundwater reservoirs in abandoned coal mines
11:15	Jeroen van Hunen	Durham University	Modelling of mine water heating
11:30	Fiona Todd	University of Edinburgh	Modelling stability issues in mine water cooling and storage systems
11:45	Jesus Perez Silva	University of Edinburgh	Hydrogeological and heat flow modelling of mine water systems
12:00	Mylène Receveur	University of Edinburgh	Why is mine water hot? Getting insights from data and numerical analysis
12:15	Break		
12:20	Discussion panel – research for deployment		
12:50	Thanks		
13:00	Close		

## Thursday 17 March 2022

09:00	Introduction from IEA		
Monitoring and operations for mine water geothermal			
	<b>Speaker</b>	<b>Organisation</b>	<b>Presentation</b>
09:05	Sarah Scott	Environment Agency	Regulation from the EA perspective
09:20	Jake Diamond	TownRock Energy	Designing and Implementing the UK's First Mine water Energy System Operations & Maintenance (O&M) Programme
09:35	Industry talk	TBC	Industry perspective

09:50	Elma Charalampidou	Heriot-Watt University	Fluid migration within different lithology samples from the UKGEOS-Glasgow
10:05	Alison Monaghan	British Geological Survey	At-scale, advanced monitoring capability for mine water energy
10:20	Belinda Humphrey	Gateshead Council	Engaging the public with mine water heat
10:35	Break		
UK resource and studies – mine heat, transport and storage			
10:55	Neil Burnside	University of Strathclyde	Mine water projects at University of Strathclyde
11:10	Jon Gluyas	Durham Energy Institute, Durham University	Underground thermal energy storage
11:25	Andrew Fraser-Harris	University of Edinburgh	Geo-battery concept
11:40	Zoe Shipton	University of Strathclyde	Lessons learned from project appraisal at the Barony and Killoch Collieries, East Ayrshire, UK
11:55	Charlotte Adams	Coal Authority	Sunderland mine water energy appraisal process
12:10	David Walls	University of Strathclyde	Mine water resources of Scotland
12:25	Break		
12:30	Discussion panel – IEA expert group for mine water geothermal (a group is being set up, feedback on topic to be covered and outcomes to be generated)		
12:50	Thanks		
13:00	Close		

Please note: the programme may be subject to some small changes

## Registration

You can register for this conference at: <https://iea-gia.org/2022-mine-water-energy-symposium/>

Please note there are separate registration links for each day – please register for each day separately. You will receive an email straight away from 'BGS Event Bookings' containing the Zoom link and calendar invite to join the symposium. Registration is free.

Talks will each be around 10 minutes long, with 5 minutes for questions.

## Symposium supporters

This event is supported by the Department for Business, Energy and Industrial Strategy (BEIS).

