

A U R Ⓛ R A

# Renewables Summit

London 2022

## EVENT HIGHLIGHTS

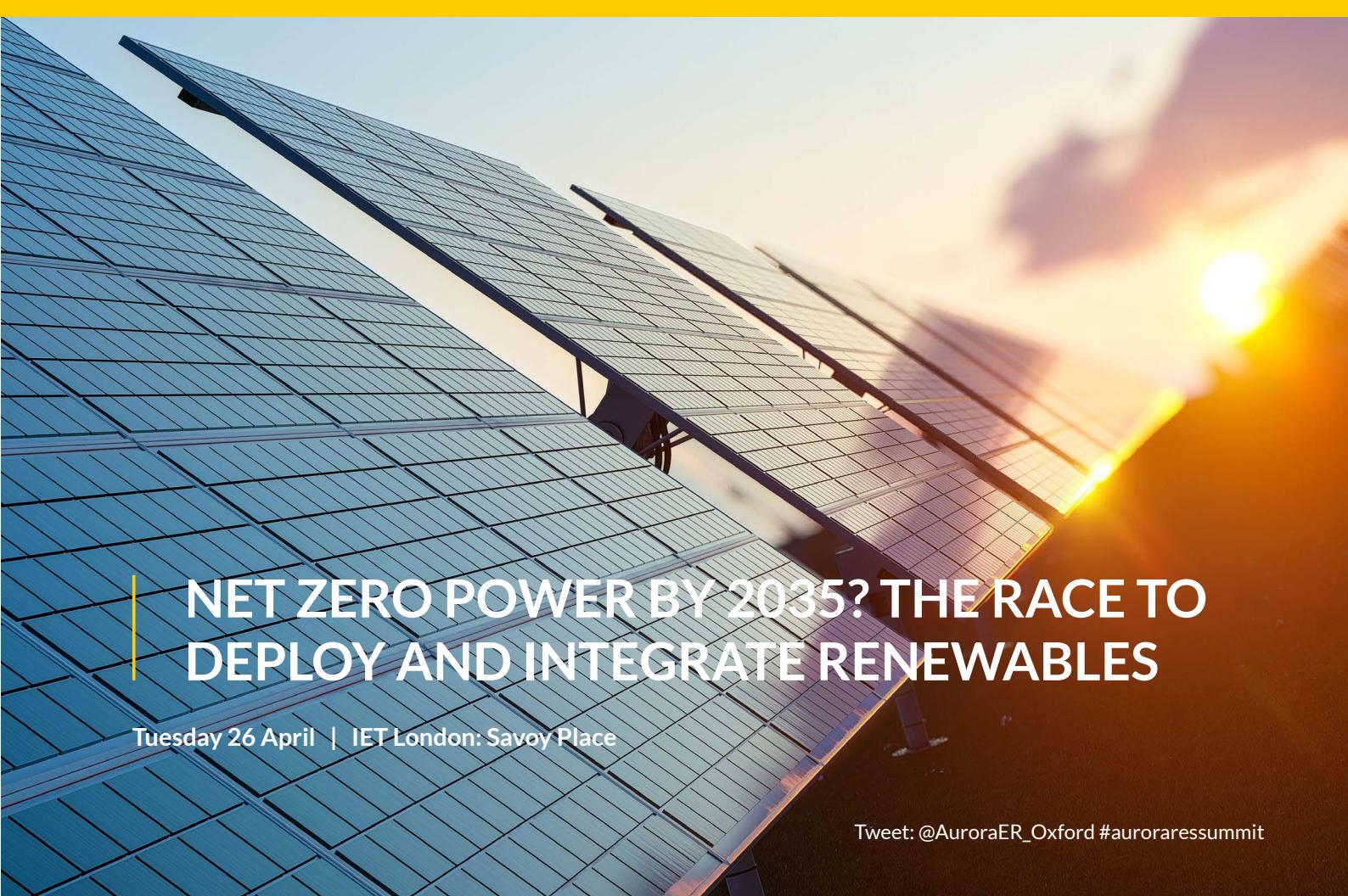
Premium  
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NET ZERO POWER BY 2035? THE RACE TO  
DEPLOY AND INTEGRATE RENEWABLES

Tuesday 26 April | IET London: Savoy Place

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# Renewables Summit

London 2022



## DEAR FRIENDS AND COLLEAGUES

It was my great pleasure to welcome you to London this year for the 2022 Aurora Renewables Summit. I hope you enjoyed participating as much as we enjoyed the vigour and energy which you brought throughout the day.

Above all, it was great to meet up in person with so many friends and colleagues, both new and old, and engage seriously on the issues facing the renewables sector today.

We met to discuss energy under the most challenging of contexts: the geopolitical consequences of the war in Ukraine and the climate crisis. Renewables will have to be a central part of the strategy both to reduce dependence on Russian gas and to decarbonise the economy. Our aim was to look beyond ambitious targets and ask challenging questions about how the sector can respond to a new geopolitical landscape, what needs to happen to deploy renewables at the necessary pace, and how to integrate renewables, for example through investing in electrolytic hydrogen.

I won't attempt to summarise the various sessions here, but I hope this pack helps to distil our main takeaways from the day. It is obviously impossible to do justice to the experience of being there, and the richness of the questions and challenges in the room but we hope this is a useful synopsis. My over-riding sense of the day, however, was the optimism in the room on two dimensions: firstly, unlike previous affordability crises, public support for rapid deployment of renewables will be reinforced, not undermined by current events; secondly, that – for all the formidable practical planning, grid and integration challenges – there is a degree of consensus on what needs to be done.

*My over-riding sense of the day was the optimism in the room: firstly, public support for rapid deployment of renewables will be reinforced not undermined by current events; secondly, that – for all the formidable practical planning, grid and integration challenges – there is a degree of consensus on what needs to be done*

Many people deserve thanks for the critical role that they played in delivering the 2022 Aurora Renewables Summit.

All of our guest speakers were brilliant, insightful and engaging. A big thank you to Amber Rudd, Chin Ratnayake, Danielle Lane, Duncan Clark, Jonas Persson, Nicola Higgins, Julius Baghdadi, Louise Kingham and Stef Murphy.

Our generous partners deserve particular appreciation. It was a pleasure to work with our premium partners bp and Lloyds Bank and our supporting partner Clarke Energy. We would like to thank them for helping to make a success of the Summit and enabling us to make it an open event.

Finally, thank you to the team at Aurora, including the panel chairs and keynote speakers, but especially to Narcisa-Camelia Danila – the driving organisational force behind all our large events – for their collective diligence, commitment, and good humour.

We look forward to welcoming you again at other Aurora events throughout the year to continue the discussion!

DAN MONZANI  
MANAGING DIRECTOR,  
UK & IRELAND  
AURORA



# Renewables Summit

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## SOCIAL MEDIA & FEEDBACK



**Jonas Persson** • 2nd  
Head of Sustainability and ESG Finance at Lloyds Bank  
2w • 15

One week until the Aurora Renewables Summit London! I'm hoping to see many of you there!

I'm delighted to have been invited to contribute at the event again. This year we will discuss many topics including the role of offshore wind to lead the race to Net Zero power, and investing in hydrogen as a complement to renewables.

Aurora Energy Research #auroraressummit

**Panel discussion:** Beyond 2030: what is the role of offshore wind in driving towards Net Zero power?

**I'm speaking at the Aurora Renewables Summit London 2022 on Tuesday 26 April**

**Jonas Persson**  
Managing Director, Sustainability & ESG Finance  
Lloyds Bank Commercial Banking

2 comments • 1 share

Reactions

You and 85 others

**Ajai Ahluwalia** • 3rd+

Principal Strategy and Business Developer at Equinor  
1w • Edited • 1

Thanks to [Aurora Energy Research](#) for hosting an informative and thought provoking Renewables summit yesterday. Highlights for me were the Beyond 2030 discussion with brilliant offshore wind advocates Danielle Lane and [Duncan Clark](#) making key points and consenting and grid. In a later sessions I raised a reflection of the curtailment data presented and asked the question why the same amount of air time was being given to electrification (grid reinforcement, decarbonisation of heat through electricity and electrical storage).



Many congratulations on a very successful Renewables Summit.

I thoroughly enjoyed the event!

Well done for pulling off such a packed and successful event!

It was very informative, useful & important.  
Thanks for your help through the registration & seamless event running!

Thanks again for a thoroughly thought-provoking afternoon of presentations & discussion

**John Feddersen** • 1st  
@JFedd1

.@UKenergywonk kicking off our session on offshore wind's role in achieving net zero. Opens by remarking "When the targets change between when you print the event programme and the actual event you know things are moving quickly!" #auroraressummit @AuroraER\_Oxford

3:11 pm - 26 Apr 2022 - Twitter for Android

Great location, great team of Aurora, it was such a pleasure to be there yesterday!

Dan Monzani was in conversation with former Secretary of State Energy and Climate Change Amber Rudd who was just brilliant, sharing candid insights from her time in office. My favourite quote from the session was.

"Politicians know what to do. They don't know how to get re-elected after they do it."

Central to discussions was the issue of public perception and acceptance of onshore wind. How do we make it possible for politicians to lead public opinion rather than follow it?

It was great to catch up and hear from Danielle Lane who shared insights into the challenges of grid coordination and stressed the importance of a collective approach to resolving the challenges to meet the ambitious #offshorewind #floatingoffshorewind deployment targets.

On the topic of the planning process [Duncan Clark](#) commented "we go around the loop so many times trying to do the right thing". National policy statement being clearer about the #netzero and energy security contribution of a project will be essential.

It was great attending with fellow [RenewableUK Shadow Board](#) members [Alwyn Poulter](#) and [Ajai Ahluwalia](#).

#renewables #energy #power #energysecuritystrategy #energytransition #netzero #onshorewind #hydrogen #research #project #planning



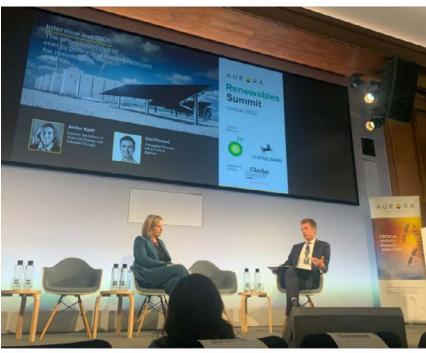
**Narmeen R.** • 2nd  
Head of Strategy at Open Energi |CEng MIMechE |Battery Storage |WPSE Risi...  
1w • 1

Thanks to [Aurora Energy Research](#) for bringing together different aspects of the energy industry from policy and regulation to finance at the Renewables Summit yesterday. I enjoyed the series of insightful discussions around the challenges to deploy and integrate renewables for net zero and particularly the challenges around the planning process and the role of the end users in adopting the necessary changes. #planning

Highlight for me was the q&a with the former Secretary of State Energy and Climate policy, Amber Rudd, hosted by [Dan Monzani](#) and her confidence in the government to lead the transition.

Great to bump into familiar faces after two years too. [Matt Levenston](#) [Ana Isabel Barillas](#)

#renewables #energy #netzero



Reactions

Enilio Alvarez Navarro and 35 others

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## PROGRAMME HIGHLIGHTS

### INTERVIEW AND Q&A

#### THE NEW GEOPOLITICS OF ENERGY POLICY AND THE IMPLICATIONS FOR RENEWABLES

Speakers:

**Amber Rudd**, former Secretary of State for Energy and Climate Change

**Dan Monzani**, Managing Director, UK & Ireland, Aurora



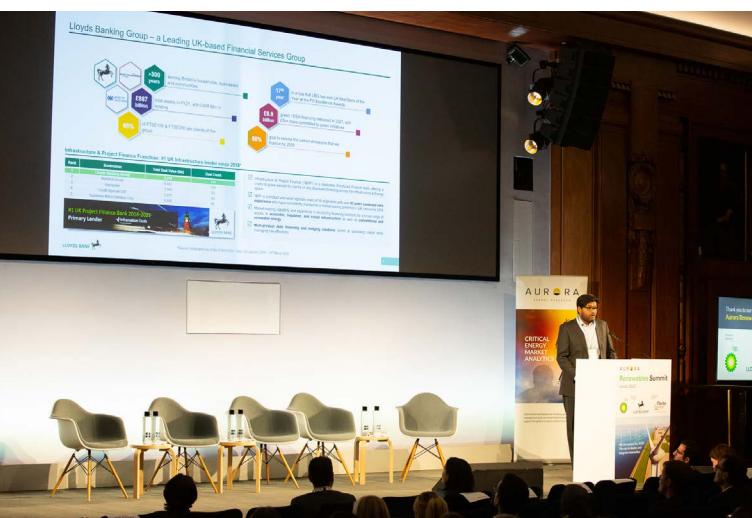
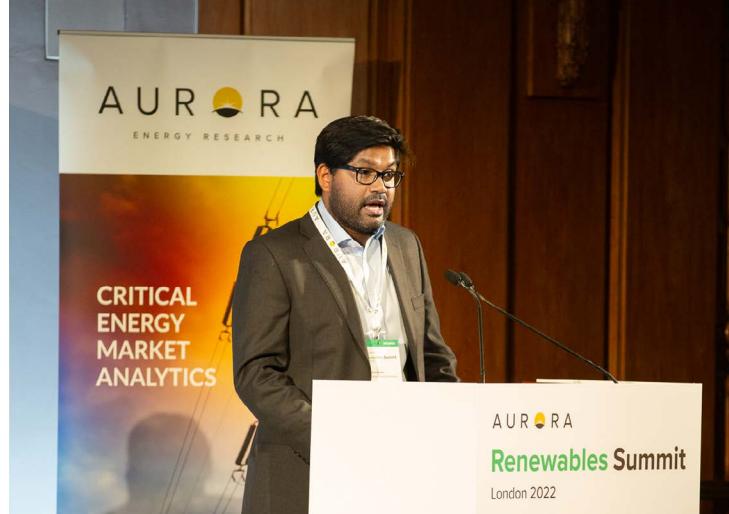
Amber Rudd, formerly both Secretary of State for Energy and Climate Change and Home Secretary, joined Aurora's UK & Ireland Managing Director, Dan Monzani, for a conversation about the implications of the war in Ukraine for energy geopolitics and domestic energy policy.

They discussed the potential for lasting changes to international gas markets and trade; the depth of public support for investment in renewables as a way to reduce gas use as well as for decarbonisation; the need for greater Government action on energy affordability; and potential market reforms such as the creation of local energy markets.



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## PRESENTATION

### FINANCING OFFSHORE WIND AND INNOVATIVE STRUCTURES

Speaker:

**Chin Ratnayake**, Director, Infrastructure & Project Finance, Lloyds Bank Commercial Banking

#### Brief summary:

In the coming decade c.30 new offshore wind projects or extensions are scheduled to enter construction, bringing almost 34GW of new capacity online once fully commissioned, enough to power more than 40 million homes with green energy. The capex ask to 2030 is around £55bn. This would mean potential debt financing requirement of between £38 and £44bn.

The offshore wind sector enjoys the deepest pool of liquidity for any project finance sector in the UK with over 50 banks and institutional investors currently active.

The sector is largely funded via long-term project finance debt from banks with only a handful of offshore wind projects with any meaningful debt investments from the institutional investor market. At Lloyds Bank, we believe there ought to be more involvement from these investors going forward.

The lending market will need to evolve to support the expected growth of this sector. This would mean recognising the maturity of the sector and appreciating that financing structures are likely to tighten in certain areas.

The most significant evolution required is how the lenders approach Merchant or Power Price Risk, recognising that going forward the offshore wind revenue stack is likely to be made up of a subsidy/CFD, Corporate PPAs and merchant.

The challenge has been set; the UK offshore wind sector will require significant balance sheet commitments from debt investors over the next few years. At Lloyds Bank, we remain very keen to play our part and help shape the market going forward as we have done for over the last 15 years.

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## AURORA KEYNOTE

### THE RACE TO DEPLOY AND INTEGRATE OFFSHORE WIND IN GREAT BRITAIN

Speaker:

Marlon Dey, Research Lead, Great Britain, Aurora

#### Brief summary:

Great Britain has the largest active offshore wind development pipeline in the world, and the UK Government aims to install up to 50GW of operational capacity by 2030.

Both the Government and industry have made progress towards reducing the development timescales for new offshore wind projects, however current lead times look to be ten years or greater which presents a risk to meeting government targets.

Aurora's April 2022 Central forecast sees GB reaching 33GW of installed offshore wind capacity by 2030, however concludes it can be increased if planning consent timescales can be shortened as outlined in the Government's recently announced Energy Security Strategy.

Analysis from Aurora shows that the impact of the European gas crisis has increased GB wholesale power prices over the next five years, which in turn will reduce the total cost of offshore wind CfD payments by 45%.

Further analysis from Aurora demonstrates how flexible electrification of the wider economy through the use of smart systems and hydrogen is critical for connecting offshore wind power to the end user, and maximising its decarbonisation potential.

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## PANEL DISCUSSION

### BEYOND 2030: WHAT IS THE ROLE OF OFFSHORE WIND IN DRIVING TOWARDS NET ZERO POWER?

Chair: Richard Howard, Research Director, Aurora

Panellists:

Danielle Lane, UK Country Manager, Vattenfall

Duncan Clark, Head of Region UK, Ørsted

Jonas Persson, Managing Director, Sustainability & ESG Finance, Lloyds Bank Commercial Banking

Nicola Higgins, Deputy Director for Offshore Wind, BEIS

## Brief summary:

The panel considered the deliverability of the Government's targets to reach the increased target of 50 GW of operating offshore wind capacity by 2030 and a Net Zero power system by 2035.

Panellists from Government and industry discussed the key challenges to scaling up offshore wind deployment – such as economics, finance, planning, supply chains, and networks – and how they could be overcome.

In particular, they focussed on the technological and financing challenges of moving further offshore and towards a next generation of floating offshore wind farms.



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## AURORA KEYNOTE

### PRODUCING HYDROGEN ON RENEWABLES SITES: WHAT WILL IT TAKE TO COMPETE?

Speaker:

Benjamin Collie, Principal, Aurora

#### Brief summary:

As the capacity of renewable generation deployed across the country increases, developers and investors will face increasing grid constraints as well as downward pressure on capture prices. In this context, growing numbers of developers are considering adding hydrogen electrolyzers at their sites to make better use of the electricity they generate.

To make this approach economical, projects will need off-takers for the hydrogen they produce, and they'll need to have a cost structure that enables them to compete against the off-takers' alternatives.

In this session we presented Aurora's analysis of the production, transport and storage costs that would contribute to the delivered levelised cost of hydrogen from an electrolyser co-located with renewables. Crucially, for a flexible electrolyser with variable output, compensating flexibility is needed somewhere in the supply chain. For a case where this flexibility is provided by on-site storage, we examined the way that different approaches to running the electrolyser could affect both the cost of input power and the amount of storage capacity required for the hydrogen produced. We also discussed how different project configurations and assumptions would affect the competitiveness of an electrolyser co-located with renewables compared with a grid-connected electrolyser on a consumer's own site.

Even today, a range of projects are in development that will combine renewables generation with hydrogen production and different forms of storage. Green hydrogen is not only an important part of the puzzle for decarbonising the economy in the decades ahead, but represents a commercial opportunity within the next few years.

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## PANEL DISCUSSION

### INVESTING IN HYDROGEN AS A COMPLEMENT FOR RENEWABLES

Chair: Dilara Caglayan, Senior Associate, Aurora

Panellists:

Julius Baghadi, CCO & Co-Founder, Octopus Hydrogen

Louise Kingham, Senior VP for Europe & UK Country Chair, bp

Stef Murphy, Director of Industrial Energy, BEIS

#### Brief summary:

As a result of the existing gas crisis, governments have increased their ambitions on renewables and low-carbon hydrogen. With EU and British governments new pledges, it has become evident that hydrogen will play a key role in decarbonising the European economy, especially when it is produced by using renewable energy. Focusing on the UK government's twin track approach, does blue hydrogen remain as the low-cost and low-carbon hydrogen? If green will achieve the cost parity with its alternative, why do we still go for blue hydrogen?

The panel discussed hydrogen's role as a source of flexibility to complement renewable power. What it would require making green hydrogen projects bankable and whether the existing and planned incentives suffice were argued. Additionally, an overview on the existing hydrogen projects, which are generally located near the demand centre, and when to expect these projects being operations was provided from an industrial point of view.

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## PHOTO GALLERY



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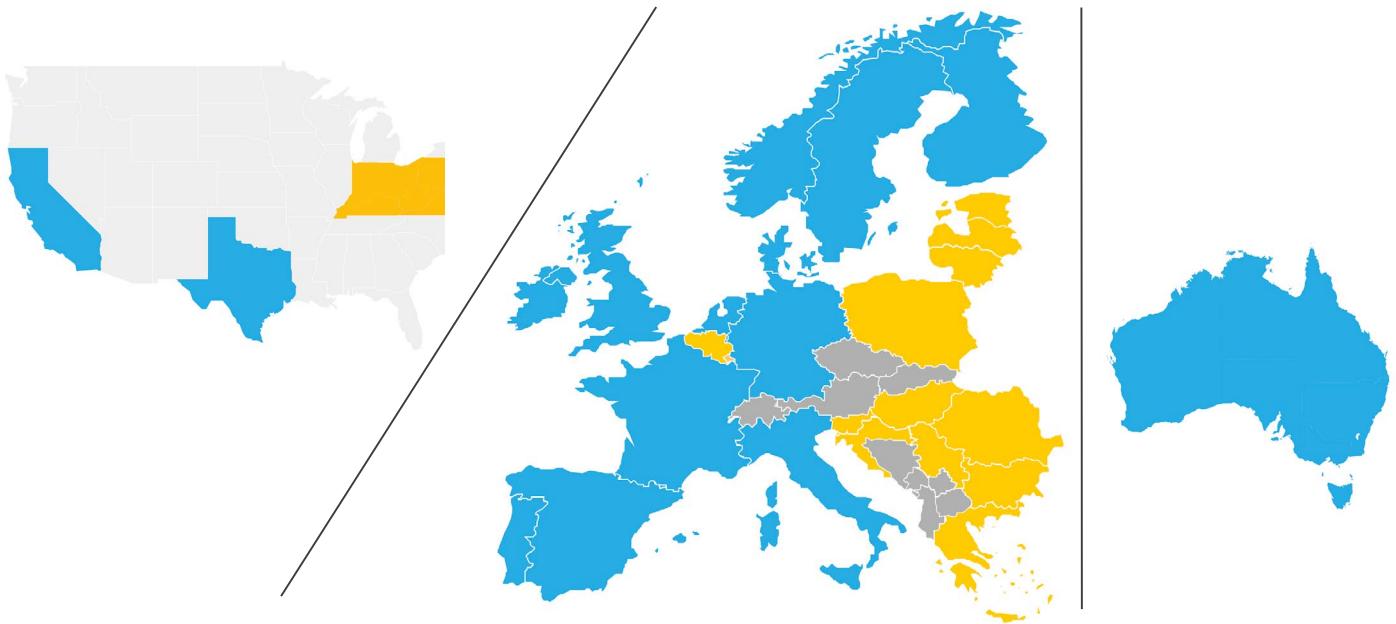
**WATCH THE HIGHLIGHTS VIDEO**



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**Tom Wilson, Commercial Manager**  
[tom.wilson@auroraer.com](mailto:tom.wilson@auroraer.com)



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Our clients are at the heart of the drive to Net Zero whether developing renewable generation in offshore wind and flexible electricity storage, reinforcing the grid to support the switch to electric vehicles, converting existing gas networks to greener hydrogen or conserving, delivering and recycling our water. With a Power & Utilities franchise spanning the length and breadth of the United Kingdom, we aim to support businesses both domestically and internationally as they deploy their market leading capabilities worldwide.

**For more information please contact our specialist team:**

**Alex Barrack**  
**Director, Power & Utilities**  
**Lloyds Bank Commercial Banking**  
**[alexander.barrack@lloydsbanking.com](mailto:alexander.barrack@lloydsbanking.com)**  
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Berlin 2022



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## **Spring Forum**

Oxford 2022

For more information about our events, please get in touch:

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