



Renewables Summit

Berlin 2023

Thursday 11 May | Berlin-Brandenburg Academy of Sciences

COORDINATING THE GERMAN STATE & MARKET:
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May 2023



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Analysis into the development of European capacity and generation, based on our fundamental modelling

Assessment of the local policy environments, subsidy schemes, and EU initiatives

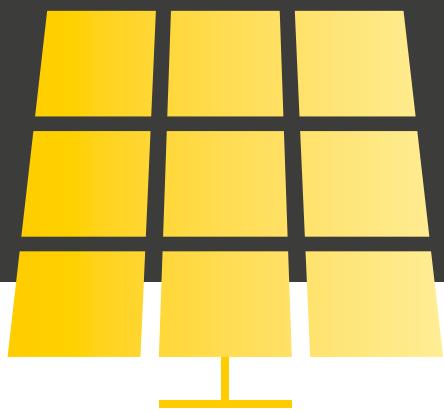
Comprehensive heatmaps showing baseload prices and solar PV capture prices, merchant and PPA-backed solar LCOEs, and attractiveness of co-location

Benchmark IRRs for fully merchant solar PV projects (2025, 2030), by country

Comparative assessment of policy, permitting, and grid connection risks based on local Aurora market knowledge



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Renewables Summit

Berlin 2023

DEAR FRIENDS AND COLLEAGUES

I hope this message finds you well after our gathering at the Aurora Renewables Summit Berlin 2023.

In the wake of last year's energy crisis, this was our first big event in Germany, and it was inspiring to see so many of you there, passionate about and dedicated to the future of renewable energy.

We are pleased by the positive feedback we received after the event. Many of you told us how much you enjoyed catching up with old friends and making new ones and how valuable it was to have the chance to explore the important issues facing our industry.

Our discussions were framed by three key challenges: dealing with climate change, securing Europe's energy supply, and adjusting our industrial policies to cope with higher energy costs and changing supply chains. Renewable technologies are at the heart of the response to these challenges, helping us move towards a low-carbon economy and enabling an affordable and reliable supply of energy.

Ambitions for renewables are high, but I'm glad we managed to do more than just talk about targets. We looked closely at the changes proposed to the power market following last year's energy price crisis. We considered how to manage a system that includes both government-supported and market-driven renewable energy and how this interacts with industrial electricity pricing. We also discussed how to make the most of Power Purchase Agreements (PPAs) for renewables in Germany. To wrap up the day, Secretary of State Jörg Kukies gave us an excellent overview of the government's plans to tackle the challenges of the energy transition.

Meetings like ours are a wonderful opportunity to share ideas and experiences. They help us understand our complex challenges and reveal the different ways we might address them. They also give us a sense of how we're all feeling about our industry, and I got a strong sense of optimism from our discussions. It seems we all believe that the energy transition will speed up after last year's crisis and that we're ready to face any challenges that come our way.

Of course, I want to thank all of you for your lively participation in our discussions, but I also want to say a special thank you to those who played a key role in making our event happen.



We were so lucky to have such a fantastic group of speakers who shared their insightful and engaging thoughts with us. A big thank you to Jörg Kukies, Andre Poschmann, Derk Swider, Roland Merger, Stefanie Alexander, Daniel Breuer, Annkathrin Rabe, David Gohsen, and Gernot Grün. I'm also grateful to our partners. We enjoy working with our premium partner Osborne Clarke and our media partner Tagesspiegel, and they deserve our thanks for helping to make our Summit such a success.

Finally, I want to thank the team at Aurora, including the panel chairs and keynote speakers. Their hard work, dedication, and good humour were invaluable.

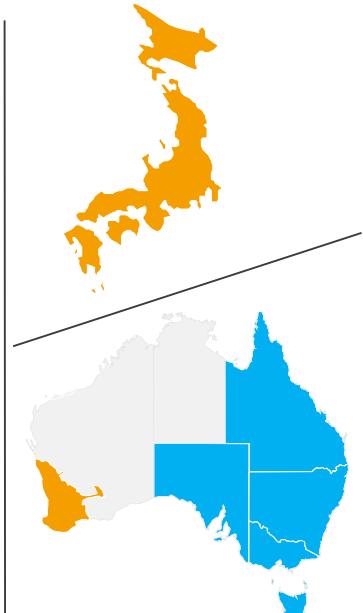
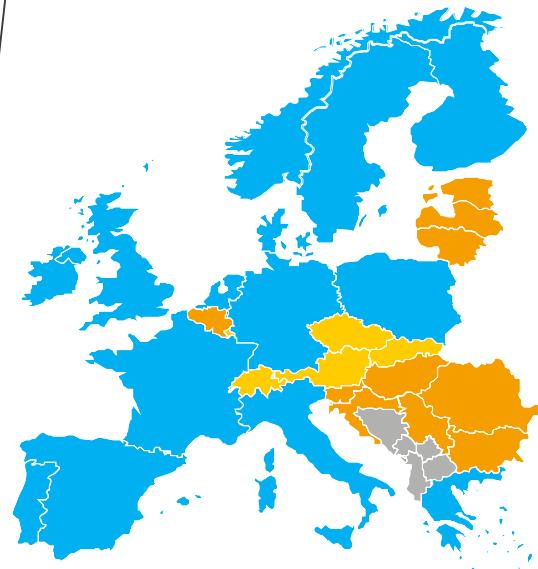
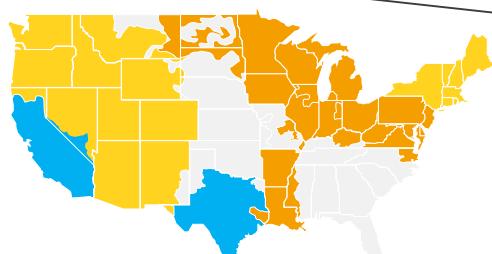
We look forward to seeing you again at future Aurora events, where we can continue these important discussions!

Manuel Koehler, Managing Director EMEA, Aurora

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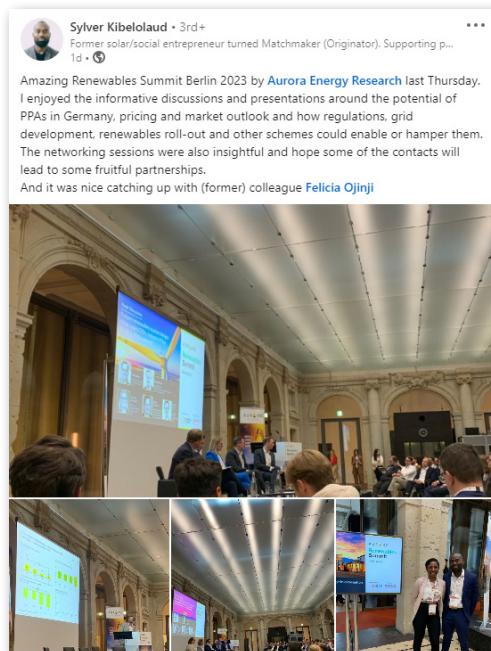


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Sylver Kibelaud • 3rd+
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Amazing Renewables Summit Berlin 2023 by [Aurora Energy Research](#) last Thursday. I enjoyed the informative discussions and presentations around the potential of PPAs in Germany, pricing and market outlook and how regulations, grid development, renewables roll-out and other schemes could enable or hamper them. The networking sessions were also insightful and hope some of the contacts will lead to some fruitful partnerships.

And it was nice catching up with (former) colleague [Felicia Ojini](#)

#auroraresummit #energyconference #renewables #EnergiaDoDzialania #DobraEnergiaPST



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Hanns Koenig @HannsKoenig • 11 May

Second panel of the #auroraresummit Berlin: my colleague [@TheklaBuelow](#) chairing a deep dive on the German PPA market, featuring [@Statkraft](#)'s Annkathrin Rabe, [@Evonik](#)'s David Gohsen, OneSolar's Gernot Grün and [@OsborneClarke](#)'s Daniel Breuer.



Dork Swider • 2nd

Vice President Energy Economics, Policy and Foresight at E.ON

Thank you [Dr. Casimir Lorenz](#) for the great moderation of our panel and the entire [Aurora Energy Research](#) team for the perfect organization.

Like · 6 | Reply



Stefanie Alexander • 3rd+

Head of Regulatory Affairs Renewables Europe & APAC @ RWE

It has been a pleasure to contribute to this very interesting summit. Not sure we have found a clear answer how to best reconcile CDEs, PPAs and the industry power price - discussion to be continued with all stakeholders!

Like · 5 | Reply



Annkathrin Rabe • 2nd

Originator Green Power at Statkraft | FEL-100 World Energy Council - Driv...

it was great fun and very interesting to discuss the interplay of PPAs and regulation especially the new [#industriestrompreis](#) proposal on the panel. Thanks for the great event [Aurora Energy Research](#)

Like · 6 | Reply



Dr. Daniel Breuer • 2nd

Rechtsanwalt/Partner und German Sector Head Energy & Utilities bei Os...

Thanks [Aurora Energy Research](#) for the opportunity, great discussion and insights of key industry speakers [Annkathrin Rabe](#) [Gernot Grün](#) [Dr. David Gohsen](#)

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Projekt Solartechnik

2.180 followers

2d • 5

The most important conclusion from the Aurora Renewables Summit Berlin 2023 is that the intensive development of power purchase agreement [#PPA](#) is crucial to achieve 80% renewable energy in Germany by 2030.

The event organized by [Aurora Energy Research](#) brings together leaders from the energy industry and focuses primarily on developing synergies between the state and the [#RES](#) market.

In addition to the opportunity to exchange knowledge, representatives from [#ProjektSolartechnik](#) ([Marta Rzepecka](#), [Adam Kurowski](#), [Michał Pronobis](#), and our Head of International Development, [Nevres Dabil](#), [BSc, MBA](#)) gained valuable contacts that will certainly pay off in the near future.

[#ProjektSolartechnikGermany](#) [#TeamProjektSolartechnik](#) [#RES](#) [#GoodEnergyPST](#) [#EnergyForAction](#) [#PV](#) [#Photovoltaics](#) [#Expansion](#) [#Germany](#)

[DE]

Die wichtigste Schlussfolgerung des Aurora Renewables Summit Berlin 2023 ist, dass die intensive Entwicklung von Stromlieferverträgen (Power Purchase Agreements, [#PPA](#)) entscheidend ist, um 80% erneuerbare Energien bis 2030 in Deutschland zu erreichen.

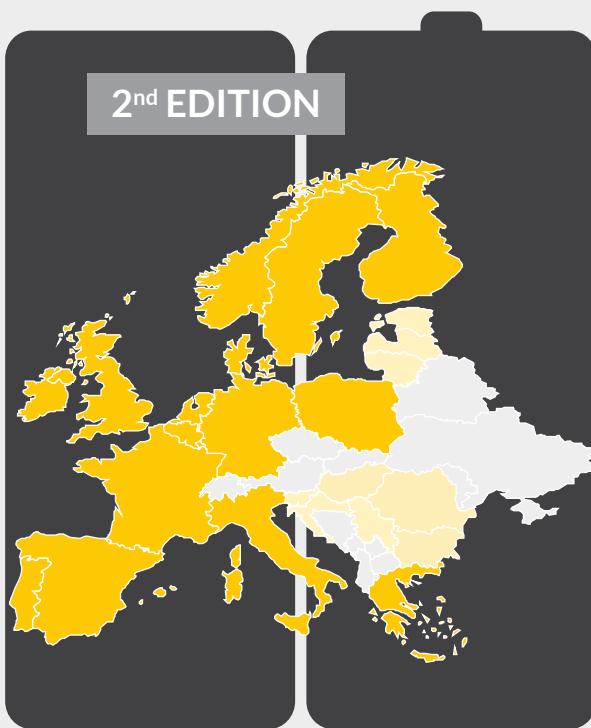
Das von [Aurora Energy Research](#) organisierte Event bringt Führungskräfte der Energiebranche zusammen und konzentriert sich in erster Linie auf die Entwicklung von Synergien zwischen dem Staat und dem Markt für erneuerbare Energien [#EE](#).

Neben der Möglichkeit des Wissensaustauschs knüpften Vertreter von [#ProjektSolartechnik](#) ([Marta Rzepecka](#), [Adam Kurowski](#), [Michał Pronobis](#) und unser Leiter der internationalen Entwicklung, [Nevres Dabil](#), [BSc, MBA](#)) wertvolle Kontakte, die sich in naher Zukunft sicherlich auszahlen werden.

[#ProjektSolartechnikDeutschland](#) [#GuteEnergiePST](#) [#EnergieFürAktion](#) [#PV](#) [#Photovoltaik](#) [#Expansion](#) [#Deutschland](#)



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PROGRAMME HIGHLIGHTS

AURORA KEYNOTE

THE EU'S & GERMANY'S MARKET DESIGN REFORMS: IMPLICATIONS FOR RENEWABLES

Speaker:

Hanns Koenig, Managing Director for Central Europe, Aurora

Summary:

From the start of Russia's invasion of Ukraine to Autumn 2022, gas, and electricity prices rose massively. "This created pressure to fundamentally reform the European power market design", Hanns Koenig stated in his keynote, "and raised the question of whether the current European market design, in which high gas prices feed through to high power prices, needs to be reformed". Countries such as Greece, Spain, or France have proposed approaches to remove or weaken this link via Contracts for Difference (CfD) or by separating so-called "flexible" and "inflexible" technologies to different markets. Due to shortfalls of these approaches and markets slowly normalised after the peaks seen in 2022, the European Commission proposed a less drastic but far-reaching reform in March 2023 to promote long-term markets in particular, more flexibility in the power sector, and more consumer protection from wholesale market price spikes.

Consequently, Germany could see the introduction of a CfD-based renewables support scheme in the future which would replace the current one-sided market premium and could help pass on cheap renewable electricity to consumers, should another crisis lead to high power prices. Regarding flexibility, the Commission is proposing to create a separate support mechanism for demand response, which, in the eyes of Koenig, risks removing liquidity from wholesale markets and could lead to higher overall system costs. The third area in the Commission proposal is consumer protection. Ideas are currently being developed to promote energy sharing, which Koenig stressed needs to be designed in a manner that sets the correct incentives for consumers and gives consumers the right to choose between a flexible and a fixed retail tariff. The latter could raise system costs and be an obstacle to the urgently needed flexibility of demand from electric vehicles and heat pumps.

Click [HERE](#) to view the presentation





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PANEL DISCUSSION

FUTURE RENEWABLES MARKET DESIGN: HOW COULD CfDS, INDUSTRY PRICE POOLS, & PPAs COEXIST?

Chair: Casimir Lorenz, Co-Head of Advisory, Central Europe, Aurora

Speakers:

- Andre Poschmann, Head of Directorate Electricity Strategy & European Energy Transition, BMWK
- Derk Swider, VP Energy Economics, Policy & Foresight, E.ON
- Roland Merger, Vice President of Renewable Power Investments & Projects, BASF Renewable Energy
- Stefanie Alexander, Head of Regulatory Affairs Europe & APAC, RWE

Summary:

This panel discussed if, and how, government sponsored Contracts for Difference (CfDs) could be combined with market-based Power Purchase Agreements (PPAs) and the potential upcoming industry power price.

Whilst CfD schemes for renewable assets could be valuable in allowing developers to implement projects that cannot be financed via PPAs, there was concern that CfDs could remove the incentive for industrial consumers to directly invest in renewables assets and reduce the PPA supply. Roland Merger confirmed this, stating CfDs should only be used as "a measure of last resort". Another important concern with regards to CfDs and PPAs is that a general shift towards untradeable bilateral power contracts could undermine futures markets which are important for retailers to hedge against power price fluctuations. Andre Poschmann confirmed that if a CfD system were to be introduced, the government would ensure that it was "smartly" designed, i.e., that it stimulates system-friendly renewable electricity generation and effects on the futures power markets would be minimised.

In the debate that followed on the proposal for an industry power price, the panel concluded that, in order to not only cure the symptoms of high gas and power prices for German industrial consumers but also solve the underlying problem, everything must be done to increase gas supply and incentivise renewables buildout.



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AURORA KEYNOTE

THE NEW NORMAL: EXPLORING THE FUTURE OF THE GERMAN PPA MARKET IN A SHIFTING ENERGY LANDSCAPE

Speaker:

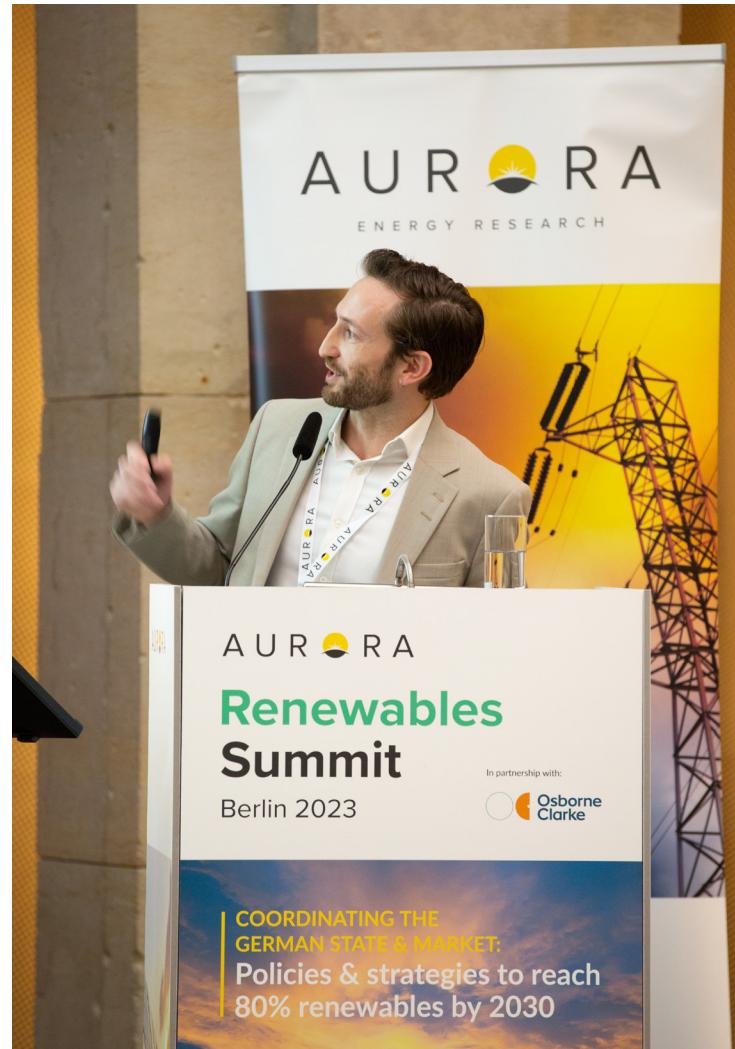
Ryan Alexander, Research Lead, European Power Markets, Aurora

Summary:

This keynote provided an outlook on the status and future evolution of the PPA market in Germany. The German PPA market experienced a constant increase in contracted volumes until 2022, when the increased market volatility slowed down the market, as utilities struggled to take risks in their portfolios due to market volatility. The potential PPA demand in Germany is estimated to rise to approximately 28% of total demand by 2030, while the average tenor of contracts is expected to decrease. The German market is likely to be undersupplied, while other European countries, such as Spain, are likely to be oversupplied. Imminent regulatory developments can support the PPA market by building guarantee schemes, increasing liquidity, and allowing subsidized assets to reserve part of their capacity for PPA contracts.

Having a fundamental view of the long-term evolution of electricity prices mitigates the risk of relying too much on futures prices, provides a more stable view on PPA prices, and increases confidence for developers and off-takers. In our valuation approach, a series of PPA price drivers are combined with a risk analysis and market calibration. The result is a price of ~ 60 €/MWh for a 10-year solar pay-as-produced PPA, starting 1 January 2024 in Germany, which represents a reduction of around 50% on prices at the beginning of the year. Backcasting of the PPA valuation throughout 2022 demonstrates that the volatility of our PPA valuation approach is 90% less than for prices in the future market. Understanding market fundamentals is key to managing price movements during PPA negotiations.

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PANEL DISCUSSION

UNCOVERING OPTIMAL PRICING MECHANISMS & NAVIGATING IMPACTS OF REGULATORY INTERVENTIONS ON THE PPA MARKETS

Chair: **Thekla von Bülow**, Co-Head of Advisory, Central Europe, Aurora

Speakers:

- **Annkathrin Rabe**, Senior Originator, Statkraft
- **Daniel Breuer**, Partner, Osborne Clarke
- **David Gohsen**, Head of Portfolio Management Power, Evonik
- **Gernot Grün**, Managing Director, Co-Head Business Operations, OneSolar

Summary:

This panel discussed the current state of PPA transactions, focusing on the challenges of closing a PPA in Germany in times of high price volatility and regulatory market uncertainties.

The panellists represented the various sides of the market covering the developer, the corporate buyer, the utility, and the legal's perspective.

While many PPA transactions were slowed down in 2022 due to high price fluctuation and short-term market interventions, the PPA market in Germany is expected to further grow. Corporate pressures to decarbonise via PPAs, as well as the interest from developers to secure revenues via market based PPAs in combination or on top of subsidy instruments, spur the market interest. From a utility's perspective, hedging upstream power purchases via long term corporate downstream PPAs is increasingly used as an instrument to overcome low derivatives market liquidity for tenors above 3 years.

High market volatility in the Futures prices, especially in 2022, and a growing interest in PPAs with longer tenors increase the importance for market participants to incorporate a view on long term price projections into PPA price calculations.

The mere announcement or possibility of regulatory interventions, such as the currently discussed industry power price (Industriestrompreis), leads to both sides of PPA transactions to hold off closing a PPA until the regulatory framework is clarified. Comprehensive "Change in Law" clauses in PPA contracts help to close PPA contracts in uncertain market environments.

Introducing Aurora's Japanese Power Market Coverage

New office coming soon!

Continuing on our path to global power market coverage, Aurora is expanding into Asia, with an office coming soon in Tokyo.

The Japanese energy market is set for an opportunity filled 2023:

- Subsidy schemes are being overhauled, with feed-in premiums replacing feed-in tariffs
- The introduction of a 20-year support mechanism for low-carbon assets
- Offshore wind auctions are due in mid-2023
- Interest in storage, hydrogen and ammonia is growing due, in part to the country's long, thin grid

Similar to our European, US and Australian services, the upcoming Japanese Power and Renewables Service will comprise of both quantitative and qualitative analysis of one of Asia's largest markets, spanning the nine major Japanese price regions.

Working with a suite of subscribers, we are building our first Power Market Forecast, due for release in May 2023.



Find out more, contact

William Lewis
Head of Commercial – APAC
william.lewis@auroraer.com

A U R O R A

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KEYNOTE ADDRESS

THE GERMAN STRATEGY FOR THE EXPANSION OF RENEWABLE ENERGIES WITH CLIMATE NEUTRALITY AS A GOAL

Speaker:

Jörg Kukies, State Secretary, Federal Chancellery

Summary:

During his keynote, Jörg Kukies gave an overview of how Germany fared in reducing its reliance on Russian gas and replacing it with LNG—better than almost anyone expected—and outlined the government's priorities in advancing the energy transition. In this regard, he stressed that the acceleration of the energy transition was further helped by the energy crisis over the past year but that the main targets had already been included in the government's 2021 coalition agreement and were therefore a longer-term priority.

In particular, he stressed the need to strengthen the buildout of renewables, where the government has set out highly ambitious targets in its coalition agreement, the achievement of which is being hindered by lengthy and complex planning procedures and lawsuits.

Secondly, Mr. Kukies noted the need for international collaboration: Germany itself will not be able to produce sufficient cheap, green energy to meet its energy needs domestically. It will therefore need to collaborate with other countries, for instance with its neighbours in the North and Baltic Seas regarding offshore wind development, and with countries further afield regarding imports of hydrogen and hydrogen derivatives. In this regard, it would be important to avoid building new dependencies in green energy as there were previously in fossil energies.

Regarding the present hotly debated topic of a subsidised industrial power price, Mr. Kukies was sceptical: while he stated he understands the intention behind it, he sees numerous implementation challenges, for instance making such a price fair from a European state aid perspective but also between larger and smaller companies within Germany.





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London 2023

Wednesday 14 June

A jam-packed half day event, featuring leaders from across the renewable energy sector. Join this unmissable event to hear how key players are pushing the renewables agenda.



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Oxford 2024

Tuesday 26 March

The Aurora Spring Forum will return for its 10th edition in 2024! This is the leading annual gathering of the European energy industry, bringing together thought-leaders from across the globe.

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

Narcisa Danila, Senior Manager, Events, Aurora
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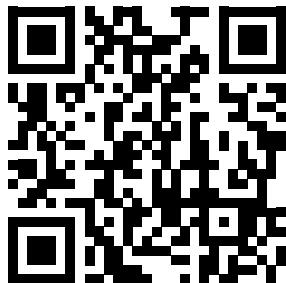
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