

EXCLUSIVE INSIGHTS /// ACTIONABLE INTELLIGENCE /// EXCLUSIVE SURVEY ANALYSIS

# ENERGY TRANSITION DIALOGUES INTELLIGENCE BRIEFING

ISSUE 9, WEDNESDAY, MAY 19<sup>th</sup>

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**SCROLL DOWN!**

**SAUDI'S H2 RAMP UP** | **GREEN FINANCE LEAP?** | **3 POINTS TO WATCH?** | **NEXT WEEK'S EVENTS?**

## HYDROGEN & LNG: ALLIES IN ENERGY TRANSITION!

**Niek den Hollander, Chief Commercial Officer, Uniper SE**

**The buzz and excitement surrounding hydrogen creates a change in mindset and stimulates policy changes that are very much required to enable investments.**

Looking ahead at the roles of LNG and hydrogen, they are simply complementary – at least for the time being. For the future acceptance of LNG, it is crucial to continue work on decarbonizing aspects of the value chain. We need to make sure that we put in place solutions for measuring, verifying, reducing, and potentially offsetting CO<sub>2</sub> emissions. Over time, hydrogen will also step into the energy mix. To pick up the pace, we must make sure that we get the economics at the right level – it must be viable from an investment point of view. Much of the hydrogen conversation still focuses on the supply side. We should be mindful of the demand side – that is crucial for a true hydrogen economy to emerge. Furthermore, the importance of partnerships cannot be overlooked. Looking at the projections in Germany, apart from 10%-20% of domestic hydrogen production, the country will have to rely on imports to fulfill its demand. The potential of the Middle East as a long-term exporter to Europe, or elsewhere on the globe, is huge, especially given the geographical advantages and the number of hydrogen projects being announced. The Middle East can be one of the world's largest exporters of hydrogen in the future, as it currently is with hydrocarbons.



**CONTINUED ON PAGE 2**

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# TWO MINUTE WARNING INTERVIEW SERIES

CONTINUED FROM PAGE 1

## Niek den Hollander, Chief Commercial Officer, Uniper SE

**ETD:** The lion's share of Europe's energy system is still based on fossil fuels. But the EU expects to radically change this with the large-scale electrification of the energy system. What are some of the policy measures and infrastructure developments required to achieve this?

**Niek den Hollander:** Integrating a large percentage of renewable energy into the power system is not something that can be done overnight. This transition can only be affordable when we have sufficient interconnection and sufficiently flexible grids. Interconnection capacity is one of the key instruments that the EU has been working on, but we cannot lose sight of other complementary solutions. An example is demand response, which is reducing consumption in times of oversupply, and battery storage. It is increasingly on the radar of policymakers and investors.

**ETD:** How important is carbon pricing as a contributor to the EU and global climate action?

**Niek den Hollander:** Within the European energy landscape, carbon pricing is an extremely crucial and effective policy instrument. The rise in carbon prices – now at above €50/ton – illustrates that carbon abatement solutions are starting to pay-off, despite the criticism received years ago. The next step is to look beyond the EU and look for a global carbon pricing system.

**“THE MIDDLE EAST CAN BE ONE OF THE WORLD'S LARGEST EXPORTERS OF HYDROGEN IN THE FUTURE, AS IT CURRENTLY IS WITH HYDROCARBONS.”**

**30GW** per year from a renewable energy market, an annual building renovation rate of 1.75%, and a rapid ramp-up of hydrogen technology is required to achieve Germany's net zero goal.<sup>2</sup>

2/ Agora Energiewende

**ETD:** Is digitalization happening fast enough to support the accelerated transition in the EU?

**Niek den Hollander:** The energy transition is unable to occur without a digital transformation. Looking at the vast amount of available data as well as technology advancements, there is so much more that can be done at a greater pace, to holistically integrate renewable energy sources into our ecosystem and deliver on the decarbonization ambitions.

**ETD:** What impact has Covid-19 had on LNG and gas demand?

**Niek den Hollander:** The pandemic triggered a very sudden and unprecedented slump in energy demand in Europe and across the globe. Currently, the demand is back to pre-pandemic levels, but supply has been deferred. At the start of the pandemic, supply adjusted relatively quickly, and we managed to keep supply and demand balanced. Through this, the LNG market has shown how quickly it can correct and adapt to very sudden demand shocks. However, investments in liquefaction have been put on hold. In the medium-term, we will see a lower supply in the market than we would have seen had the pandemic not happened.

**2045** is when Germany aims to be net zero – this has been brought forward from 2050. Germany also wants to achieve a 65% emissions reduction by 2030 and an 85-90% reduction by 2040.<sup>1</sup>

1/ Reuters

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## HYDROGEN



# Largest Exporter of Green Hydrogen? Watch KSA!

Cornelius Matthes, CEO, Dii Desert Energy

The mindset shift over the last few years in the Middle East and North Africa region (MENA) has, most prominently, seen Saudi Arabia placed on the global hydrogen map. Major project announcements and record low electricity costs of \$1.04/kWh in the Kingdom indicates that it will become a major player in the low carbon world in the short term. The other regional players to look out for? The UAE, Oman, Egypt, and Morocco.

## Time to move fast – and boldly!

If we lose the opportunity to massively accelerate the energy transition in this decade, we will lose the battle against climate change altogether. This is one of the reasons why we must start a green hydrogen market as fast as possible. If you look at the revenues of oil-reliant countries in the Middle East, hydrogen will not have the potential to match these revenues. Nonetheless, there is a multi-hundred-billion-US-dollar market potential. This is not only a massive opportunity, but also a necessity to move to diversify economies and accelerate job creation, greater stability, and more socio-economic development. The shift to a low carbon world is inevitable; the MENA has no choice but to get on board.

**“THE OTHER REGIONAL PLAYERS TO LOOK OUT FOR? THE UAE, OMAN, EGYPT, AND MOROCCO.”**



**FULL INTERVIEW HERE!**

**\$5BN**

production facility in Saudi's NEOM will supply 650 tons per day of carbon-free hydrogen for transportation globally.<sup>1</sup>

**\$3MN**

tons per year of CO<sub>2</sub> will be saved globally by NEOM, the world's largest green hydrogen project.<sup>2</sup>

1/ Bloomberg  
2/ Bloomberg

## TOP 5 NEWS STORIES

[Hydrogen Adoption: Game Changer for UAE?](#)

[Shipping Hydrogen: Race Is On](#)

[Indian Oil Doubles Down on Hydrogen](#)

[Hydrogen: Aviation Fuel of the Future?](#)

[Hydrogen Fuel & Risk of Reliance on Fossil Fuels](#)

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## PODCAST

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## THIS WEEK Climate Finance: A Leapfrog Moment?

FULL PODCAST HERE!



Tim Buckley

Director of Energy Finance Studies, The Institute for Energy Economics and Financial Analysis (IEEFA)

The carbon border adjustment mechanism, led by the European Union (EU), is a phenomenal opportunity that could put the same pressures and climate impulses that the EU has implemented regionally on the rest of the world.

The mechanism is about dragging the laggards forward so that they become part of the global climate solution. It is believed that China, Japan, and the US are seriously thinking about joining the EU in this effort. If this comes to fruition, it is going to be a major game changer. It could help deliver climate action at a scale that the world initially deemed impossible to deliver.

## The tipping point?

For the first time in history, we have global leaders in consensus about the urgency of climate change. Now, it is all about the technology race and when finance sees this inevitability, it will move faster. We must remember that finance is driven by self-interest. Still, the shift over the last year has been staggering. Financial markets tend to ignore an issue until they realize they have hit a tipping point and then they move at full force. We are now at that tipping point; nobody wants to be left behind with so many opportunities to be seized.

15X

or more is the estimated increase in demand for carbon credits by 2030. The demand could rise by 100x by 2050.<sup>1</sup>

1/ Taskforce on Scaling Voluntary Carbon Markets

FULL PODCAST HERE!

Dr. Sascha Lafeld

Head of Carbon Offset &amp; Green Energy Services, ClimatePartner



European carbon prices have hit a record high. They are now above €50/ton – a massive hike from a couple of years ago when they were around €5/ton.

On one hand, this reflects the anticipated stricter climate legislations, both in Europe and globally. On the other hand, we are seeing a lot of speculation on liquidity from hedge funds coming into the market. It is wonderful to see the compliance carbon market picking up, with early development failures that were built into the system being solved. On a smaller scale, the voluntary carbon market is on the rise; it is robust, having gone through two decades of development.

## One to watch?

Tools like carbon border adjustments have much more potential to drive change, as opposed to UN-level initiatives that fail to put adequate pressure on laggards. Recently, the federal constitutional court in Germany ruled that the climate policy in the country is not sufficient. Consequently, the government is mandated to have stricter climate policies – the first such ruling in an industrialized country! There are similar cases emerging in other countries, all demonstrating the power of national efforts to drive change.

FULL PODCAST HERE!

Dr. Andreas M. Rickert  
CEO, Phineo

The market for impact investing is developing very rapidly. It is an investment strategy that started 12 years ago with the G7 Task Force and was mainly driven by high net-worth individuals or private investors. Now institutional investors see huge opportunities in this area.

The global climate issue cannot be solved by philanthropy and government spending. We must mobilize the finance industry – therein lies the benefit of impact investing. It helps solve global issues with market instruments and it is becoming more mainstream. For example, the Impact Management Project has more than one thousand organizations and companies coming together to establish a general framework for impact investing.

## Upsides abound

Reducing CO<sub>2</sub> levels will not destroy energy jobs; it will transform them. We must finance changing industries, instead of seeing the transition as a threat. We must believe in market powers, which are picking up pace and aligning with climate efforts. And we need governments to help provide the direction that markets need.

\$50BN

could be the total worth of the global market for carbon credits by 2030.<sup>2</sup>

2/McKinsey &amp; Company

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# SURVEY ANALYSIS

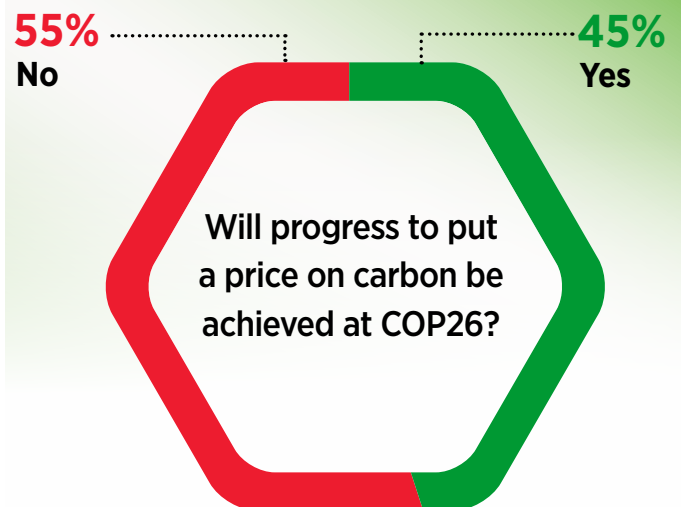
## CARBON PRICING: STILL OUT OF REACH!



**Michelle Meineke**  
Director, Energy Transition Dialogues

**W**hat will it take to finally instigate a globally interconnected mechanism to price carbon? This decades-old conversation has never been more pressing.

How can countries and companies' bold plans for net zero be accurately designed and responsibly monitored without pricing carbon in some way across the board? Within this, how to identify and mitigate scope 3 emissions if measuring the environmental impact in supply chains differs wildly? And how to give investors – especially those new to the low carbon push, which is the vast majority – confidence to support cleaner energy without clearer economic indicators in place? This applies to the more tested markets, like solar power generation, and to more embryonic markets, like green hydrogen – all would benefit. In recent weeks, executives from oil companies, utilities and some of the world's biggest companies have met with US senators to push a carbon-fee-and-dividend proposal. But this is far from the first time. Industry has spoken (sometimes shouted) for more than a decade, asking for clearer goalposts. One of the key hurdles is the complexity of the task. A global price on carbon is highly unlikely, but regional systems (including those well-established and others emerging) need better regional and global coherency. If 55% of the survey respondents are right about Glasgow, then expect the volume of discontent to rise in 2022 – from all sectors, not just energy. And if it does not, then the engine of the '2020s being a transformational decade for climate' will start to splutter.



Survey source – ETD



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## OPINION EDITORIAL

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## Policy Makers Need to Get 3 Things Right in the Energy Transition



Dr Aldo Flores-Quiroga

Former Deputy Secretary of Energy for Hydrocarbons, Mexico's Ministry of Energy

**Investors value at least three attributes in public policy and regulation: consistency, stability, and credibility. If the investment regime is unable to provide them, even if the ideological orientation of the government or the economic system varies, it will be very difficult for them to know what to expect. Faced with uncertainty, they will prefer to wait before risking resources on projects that will recover costs after many years of operation.**

Autonomous regulatory commissions emerged around the world during the wave of market reforms of the 1980s and 1990s as one way to turn these attributes into reality. Until then, most ministries established policy and regulation of economic sectors at their discretion. This did not prevent them from offering long-term guarantees, but it did leave open the question of the sustainability of the investment regime should a different party take control of the government. The question was especially acute in times of change in the economic model: would the new rules endure the test of time or would they be abandoned as soon as political winds changed?

To solve this insufficiency, the idea surfaced to separate technique from politics and delegate to these autonomous bodies the authority to regulate economic sectors under criteria of competition and efficiency. If a public monopoly passed into private hands or was disintegrated into several companies, as happened with the opening of energy or telecommunications, the autonomous agency would be the new one in charge of establishing the rules for participating in the market.

A core principle in the design of these institutions was to create conditions to ensure their impartiality. In addition to their autonomy, the model proposed that the mandate of managers should not be synchronous with the electoral cycles and that teams be made up of qualified officials. It also included standards of behavior to avoid capture of regulators by companies.

For entrepreneurs and society, the advantage of this arrangement would be that the risk of investments being stranded by arbitrary changes in the rules - changes brought about by new governments or political pressure - would decrease considerably.

For politicians, part of the loss of control over key instruments would be offset by the opportunity to locate responsibility in the autonomous commissions in case things went wrong. They could also use them to signal their commitment to stable investment rules.

It sounded good in theory, but in practice the relationship between regulators and governments has been, to say the least, complex. Thirty years after the beginning of the wave that created these organizations, leaders and legislators still find it difficult to accept the loss of control over instruments on whose management depends part of their popularity.

An autonomous regulator can technically rule that a company close to the government is undermining competition, or it can set fuel prices above the government's preferred level just before an election, among many other decisions. If this resolution goes against the government's preference, the stage for conflict is set.

Furthermore, there is still the valid questioning regarding the democratic representation of the autonomous commissions, led by officials that no one elected, even if they were selected by legislators in legitimate voting processes. If a new government interprets its mandate at the polls as a license to turn policy towards a new direction, what legitimacy does an autonomous commission have to prevent it?

Faced with situations like these, rulers exert all kinds of pressure to shift the resolutions of the autonomous commissions in their favor. In Europe, Latin America, and the US - which popularized this institutional figure -

there have been multiple attempts by politicians to try to control or subdue them. They seek to appoint officials that share their political views. If they do not succeed, they try to replace them, promote a reduction in the commission's budget, or propose its restructuring. In most cases, these attacks fail given the difficulty of changing statutes of constitutional rank.

Ultimately, the rulers' dilemma is to choose between delegating or directly controlling policy decisions that affect the fate of their party and an entire country. Delegating to autonomous commissions takes away flexibility but increases the long-term certainty of the rules.

For the energy sector, this institutional capacity to look to the future and resist public or private pressure is essential. Weakening autonomous commissions rather than continually improving their performance would result in a costly loss of credibility and energy security.

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# NEXT WEEK'S EVENTS

## ENERGY TRANSITION DIALOGUES

PODCAST THURSDAY /// MAY 20<sup>th</sup> /// 13:00 (UAE)



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### Water-Energy: Fixing the Squeeze?



**Edoardo Borgomeo**  
Water Specialist  
World Bank



**Prof. Peng Wang**  
Professor  
King Abdullah University of Science  
and Technology (KAUST)



**Dr. Muhammad Shahzad**  
Research Scientist  
Northumbria University (NU)



**Michelle Meineke**  
Director  
Energy Transition Dialogues

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**Zoom Meeting ID: 872 7404 6993**  
**Password: 12345**

## ENERGY TRANSITION DIALOGUES



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### HYDROGEN FULL COURT PRESS

#### Camilla Palladino

Executive Vice President - Corporate Strategy  
& Investor Relations, Snam

Monday /// May 24<sup>th</sup> /// 12:00 (UAE)

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## ENERGY TRANSITION DIALOGUES



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### TWO MINUTE WARNING INTERVIEW SERIES

Tuesday /// May 25<sup>th</sup> /// 12:00 (UAE)

#### *"India in Focus"*

#### Arunabha Ghosh

CEO, Council on Energy, Environment and Water (CEEW)

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