

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

# ENERGY TRANSITION DIALOGUES

# INTELLIGENCE BRIEFING

ISSUE 14, MONDAY, JUNE 28<sup>th</sup>

**GI** Consultancy  
Intelligence  
Publishing

**SCROLL DOWN!**

**H<sub>2</sub>'S TRANSPORT**

**NET ZERO HYPE?**

**GCC'S H<sub>2</sub> PUSH**

**COP PRELUDE**

## BIG OIL & GAS MUST DRIVE THE ENERGY TRANSITION

Gavin Sanderson, Global Energy, Utilities & Resources Advisory Leader, PwC

If you just take a couple of the integrated majors like BP and Shell, they had \$40bn in losses between the two of them last year. These are big numbers. There is no denying that there is a huge risk of stranded assets, first and foremost for coal assets.

However, the industry is very familiar with these cycles and where we see these impairments. In the UK alone, \$40bn per year is required for the energy transition and net zero infrastructure in the next ten years. What must the energy industry do to stay afloat? Firstly, it must understand the change and start to work out the role each party plays when it comes to the energy transition. What can people do? The oil and gas sector has a lot of the skills that are needed for the energy transition. People say this sector is a major contributor to climate change, but it is more important to realize that it is a big part of the solution if we want to successfully drive the transition.

### Early movers' advantage

There are major advantages in being an early mover in the net zero journey. Companies need roadmaps at a corporate level to be able to back up the changes they are making. Early movers are setting out the roadmaps that others cannot. We still need to see markets fully pricing in and valuing the companies that are transitioning in a different way, not just a binary valuation of clean and non-clean companies. We need more sophistication in the way transitioning companies are supported and valued.



**FULL INTERVIEW HERE!**

## TOP TAKEAWAYS

- Carbon prices are only going one way: up. Expect a \$100/t of carbon this decade and \$200/t in the 2030s.
- More net zero roadmaps will emerge in the next 12 months - but not necessarily actions. Actions to fund the transition take much more operating cash from existing business models.
- We need to see markets pricing in and valuing transitioning companies in a different way - not just a binary valuation of green or non-green.

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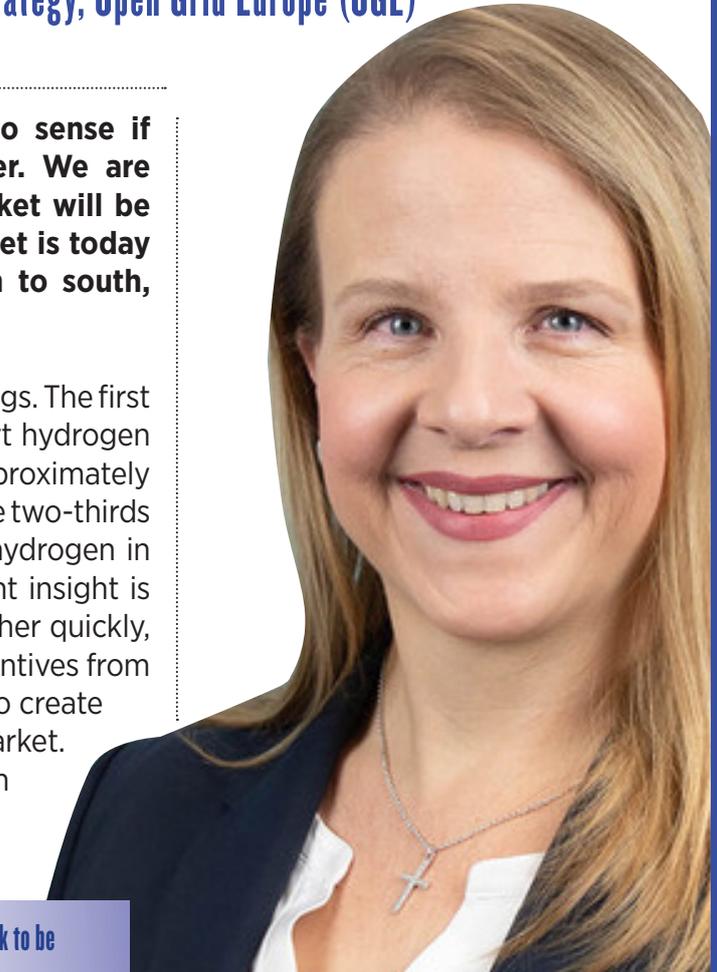
# “Really Cheap” To Move Across Big Distances

## HYDROGEN

Sabine Augustin, Head of Corporate Development & Strategy, Open Grid Europe (OGE)

**A**ll the hype and ambitious projects make no sense if you cannot bring hydrogen to the customer. We are absolutely convinced that the hydrogen market will be a pan-European market, just as the natural gas market is today with hydrogen transport across Europe from north to south, from east to west, and the other way around.

There are a few key insights to highlight from OGE’s findings. The first important takeaway is that it is quite cheap to transport hydrogen across long distances – OGE estimates the cost to be approximately €15/kg per 1,000km. The second is that it is possible to use two-thirds of the existing natural gas infrastructure to transport hydrogen in a speedy cost-efficient fashion. And the third important insight is that it is possible to create a pan-European network rather quickly, provided that we have the right framework in place. Incentives from governments that include stable and robust measures to create the demand-side is a vital element of scaling-up this market. We are quite bullish. After observing the sentiment from partners on the industry-side, as well as policymakers, it is clear that they realize the advantages.



**2.7GW** of operational hydrogen electrolyzer capacity for Europe is on track to be achieved by 2025.<sup>1</sup>

**3.2%** reduction in US’ greenhouse gas (GHG) emissions can be achieved by replacing just 10% of the nation’s natural gas supply with hydrogen.<sup>2</sup>

**4%** global success rate for sustainability initiatives means many business leaders know they must do substantially more.<sup>3</sup>

[FULL INTERVIEW HERE!](#)

## TOP 5 NEWS STORIES

[Fertiglobe Joins ADNOC’s Blue Ammonia Facility in Ruwais](#)

[Arab Economies Jostle for Position in Hydrogen Race](#)

[India’s Path to a Hydrogen Economy](#)

[New Tech to Slash Hydrogen Costs](#)

[Cheapest Hydrogen Pathway?](#)

<sup>1/</sup> Delta <sup>2/</sup> Oil & Gas Journal <sup>3/</sup> Bain & Company

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## PODCAST

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## THIS WEEK NET ZERO: NAVIGATING TROUBLE SPOTS?

Thierry Lepercq, President and Co-founder  
DH2 Energy

FULL PODCAST HERE!

**We are just about to go to the tipping point of competitive green hydrogen. When green hydrogen becomes competitive with fossil fuels, it is no longer a climate or a policy play. It is a commodity play with very big volumes.**

To make this a reality, we need the market forces to take the lead, not the politicians. The US shale revolution was done by technology companies, entrepreneurs in the Permian Basin, and Wall Street. This is exactly the kind of full-court press from the market forces that we are going to see with green hydrogen.

**Arab Gulf's message?**

When it comes to climate action, there are two streams: talk and action. The talk aspect has been abundant in the last six years since the Paris Agreement – we need more action! The good news is that now we have industry moving seriously into what is an absolute game-changer. The fact that countries in the Arab Gulf, who have historically been wedded to fossil fuels, are waking up to the absolute emergency, and seeking opportunities in green alternatives is a great message to the world.

FULL PODCAST HERE!

Robin Mills, CEO  
Qamar Energy

**The sheer scale and pace of deployment required is the big challenge with the energy transition. Even with the technologies that have become highly competitive, like solar PVs, the pace of deployment is still below what is needed to fight climate change.**

This is where the late 20<sup>th</sup> century electricity market structure must adapt to a completely different situation from what it was designed for. Most major renewable markets in Europe, the US, or elsewhere are still struggling with how to properly accommodate a system that is dominated by variable renewables.

**US' wake-up call?**

European companies are well ahead of their US counterparts when it comes to decarbonization policies. But we are increasingly

seeing that US companies are realizing the level of shareholder pressure – that influence is getting stronger. Therefore, we will see big international companies coming out with more detailed plans for their decarbonization targets in the second half of 2021.

**Is the Middle East catching up?**

When it comes to the Middle East's net zero path, like any other region, it is not so much about setting the target, but concrete actions. We will see a sharp distinction between the Gulf countries – between those that are doing something serious about decarbonization, even though they have a very long road to go, and those that have not even woken up to it as an issue. This will be especially critical when it comes to their access to export markets, access to finance, and their attractiveness to international investors.

FULL PODCAST HERE!

Ali Zerouali, Director of Cooperation & International Development  
Masen

**Renewable energy does not need subsidies, but it still needs incentives from the government to transform the economy in favor of the energy transition.**

While the market is driving the scale-up of green energy sources – especially green hydrogen – politicians still have a role to play. Incentives are really important in achieving this positive disruption and making the shift away from fossil fuels a reality.

**Hydrogen politics**

We have the technologies available – mature R&D is not an issue. The issue is having at-scale projects and global dynamics that will push towards the green hydrogen market towards optimization. For this to work, we need two things to happen – and fast. Firstly, we need to continue to improve the renewable energy sector. And secondly, we must optimize the process of electrolysis and all the related infrastructure. Against this backdrop, keep in mind that green electricity contributes to more than 60–70% of the total cost of green hydrogen. Electrolyzers and related infrastructure contribute 30–40%.

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# SURVEY ANALYSIS

## ARAB GULF: CONFIDENCE IS HIGH – AND RIGHTLY SO?



**Michelle Meineke**  
Director, Energy Transition Dialogues

**C**reating a \$200bn industry for a market that is bursting with potential – “the new oil of the 21st century” – in three decades in global epicenter of the world’s biggest existing energy commodity market does not seem like a stretch. So, I also vote yes, along with 67% of the respondents to the Energy Transition Dialogues’ latest market survey. But why did a third say no?

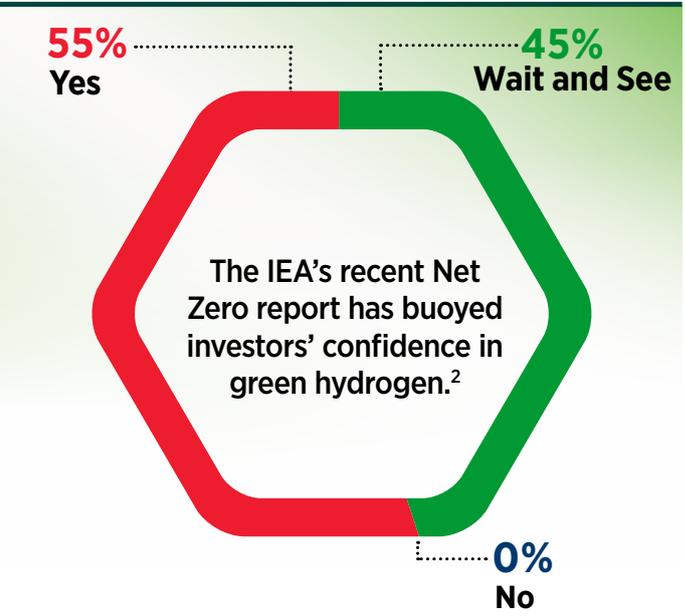
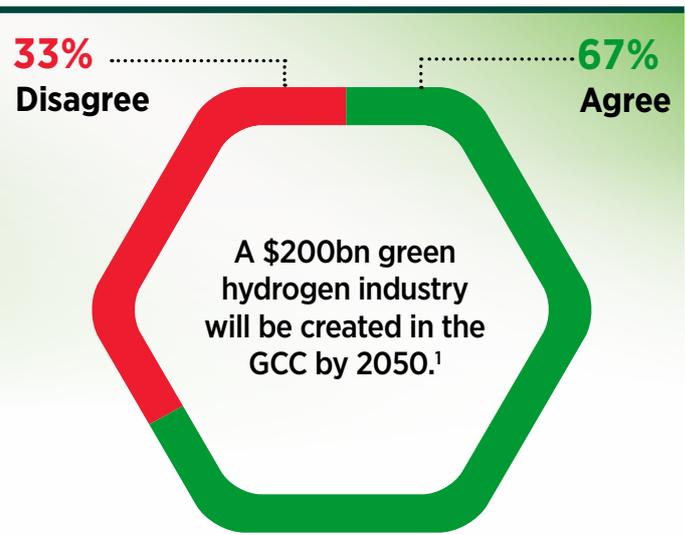
Regional leaders’ statements about a blue and green hydrogen-oriented future are bursting with superlatives; a gradual changing of the guard in a region where wealth has been borne from black gold.

And pen is hitting paper to back it up, such as the recently established Abu Dhabi Hydrogen Alliance, formed by Mubadala, ADNOC, and ADQ with the aim of establishing Abu Dhabi as a trusted leader of low-carbon green and blue hydrogen in emerging international markets.

They also plan to build a substantial green hydrogen economy in the UAE. And there is the \$5bn hydrogen project in Saudi Arabia between Air Products, ACWA Power, and NEOM, plus Saudi Arabia’s talks with Moscow and Germany gaining momentum, and many other examples.

But perhaps it is the lack of sizeable, scalable blue and green hydrogen projects casting doubt? Or the lack of carbon capture and storage (CCS) projects existing, or under construction?

Or that a few investors are still treading more cautiously, seeing hydrogen in the region as a “step too far” in the diversifying energy portfolio of the world’s historical epicenter of fossil fuels? Or perhaps the view that localized hydrogen efforts should be prioritized over export ambitions – due to potentially expensive transport costs and importers, like Germany, having suitors closer to home – means the outlook feels a little gung-ho?



1/ Dii Desert Energy and Roland Berger  
2/ETD Webinar

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# INSIGHTS INTO INDIA

## From Kyoto to Glasgow

***If tensions are rising between rich and poor, developed and developing nations, a COP can't be far off...***



**Bill Spindle**

**Council on Foreign Relations, International Affairs Fellow, India**

**I**nternational climate diplomacy is driving towards a critical inflection point this November. This is when delegates from around the world gather in Glasgow to hold what is known in climate diplo-speak as the Conference of the Parties (COP). The 26<sup>th</sup> meeting since 1995, Glasgow is thus dubbed COP26. The conferees, one from each country, are the top decision-makers in a United Nations-sponsored diplomatic process known as — warning: more incoming climate diplo-speak! — the UNFCCC.

That would be the United Nations Framework Convention on Climate Change. The UNFCCC's COP talkshop (and if you got through that alphabet soup, congratulations — you've successfully completed Climate Diplomacy Acronyms 101) has wound its way through nearly three decades of meetings in 25 cities, from Berlin all the way around the world and back to Madrid, without slowing the build-up of GHG in the atmosphere, much less reversing it. However, the peripatetic gathering had a remarkable kumbaya moment of clarity at COP21 in 2015. This resulted in what's known to UNFCCC non-initiates as the Paris Accords.

### COP26

Every country — even the US — officially agreed there is a huge climate problem

that it is caused by man-made emissions of gasses and that each country had to do...something...of its own choosing... even if all those somethings added up wouldn't be nearly enough to really solve the problem. We can hope. Glasgow is where the rubber hits the road — before it's truly, honestly-this-time, no kidding, we-really-mean-it too late. GHG levels are fast approaching alarming levels and climate warming is measurably gaining momentum. Countries, particularly the biggest GHG emitters, must scale their “somethings” up drastically, so the sum of the efforts results in actual, real emissions cuts.

These efforts, Nationally Determined Contributions (NDCs), will need to be measured and accounted for in easy-to-compare ways so that everyone, everywhere can assess how we're doing overall and as countries. We can then, soon enough, redouble these efforts yet again with confidence that every country is pulling its weight. That's what it will take, and more. This is what Glasgow is all about. And India plays a critical part

### India's quandary

Going into Glasgow, India now straddles a divide that has shaped global climate negotiations from the beginning: the chasm between rich, economically developed countries and poor developing ones. What's not in dispute is that rich countries filled the atmosphere

with carbon dioxide, methane, and other GHGs as they went about getting rich, arguably knowing full well that's what was happening for at least a generation. Also undisputed: however much richer nations take the rap for creating this mess, the problem can't be solved without developing countries cutting emissions, too.

The first major global climate agreement, the Kyoto Protocol forged at COP3 in 1997, grudgingly settled on a formula imposing a schedule of GHG emissions cuts on the developed world while providing developing countries what was essentially a pass to pollute while they caught up. That's fair, China and India argued, noting they had no intention of remaining poor and didn't see any way to get wealthy without burning fossil fuels. Forget it, the US Congress argued in rejecting the idea. No cuts from us unless China and the developing world also cut. The treaty was never signed by the US.

In a reminder that the developing-developed world rift could complicate upcoming talks in Glasgow, India's Energy Minister, R.K. Singh, recently dismissed net zero promises as “pie in the sky”, arguing that by rights they ought to aim for “negative emissions”, not just net zero, to make up for their historic overindulgence. Hard to see American leaders taking that challenge up any more than they were keen joining Kyoto way back when. Glasgow will be interesting.

**FULL ARTICLE HERE!**

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# THIS WEEK'S EVENTS

## ENERGY TRANSITION DIALOGUES Consultancy Intelligence Publishing

### TWO MINUTE WARNING INTERVIEW SERIES

Tuesday /// June 29<sup>th</sup> /// 12:00 (UAE)

#### Ibrahim Al-Zu'bi

Chief Sustainability Officer, Majid Al Futtaim Holding &  
Senior Associate, Cambridge Institute for Sustainability Leadership (CISL)



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## ENERGY TRANSITION DIALOGUES Consultancy Intelligence Publishing

### HYDROGEN FULL COURT PRESS

#### Dr. Faye Al Hersh

Technology Specialist - Strategy & Corporate Development  
Masdar

Wednesday /// June 30<sup>th</sup> /// 11:00 (UAE)

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# HYDROGEN

## *State of Play in the GCC?*

A large, stylized blue logo for hydrogen, featuring a large 'H' with a '2' to its right, and the word 'Hydrogen' written below it in a blue sans-serif font. The logo is centered within a white circular area that has a blue border and a slight 3D effect.

**H<sub>2</sub>**  
Hydrogen

**May 2021**



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