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Energy Transition INTELLIGENCE BRIEFING

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SCROLL DOWN

GREEN HYDROGEN CLIMATE CHANGE RENEWABLE ENERGY COAL

NEOM Green Hydrogen is a Great Case Study for Scaling Up Hydrogen Production.

Cornelius Matthes
Chief Executive Officer
Dii Desert Energy

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Scaling up green hydrogen production in the region

We started the energy transition 14 years ago in the region with the development of solar and wind. The focus on hydrogen production began seven years ago, but the last two to three years have been revolutionary. The energy transition with the development of low-emission molecules has merged various sectors. From the power sector to the big industrial consumers, heating, cooling, etc. We are just at the very start of scaling up hydrogen production. NEOM Green Hydrogen is a great case study for scaling up hydrogen production.

WEEKLY SOUNDING

"When we mention climate change, we always talk about negative consequences. What we fail to mention are the huge business cases for clean energy technologies and investments."

Hanan Bakr
Resilience Finance Lead
The Climate Change High-Level Champions

Source: The Microsoft MEA Forum for Sustainability Leaders

Cornelius Matthes
Chief Executive Officer
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They have gotten through the development phase and are now focusing on attracting financial flows. It is a great case study as we are tracking around 59 projects in the region, which are still in the early stages. It is about scaling up electrolyzers, developing country-wide hydrogen strategies, and establishing the conditions to make projects bankable with off-takers as the most important stakeholders. These will be some of the biggest challenges. Still, seeing the developments over the last two to three years, I have no doubt we will witness exciting disruptions and innovations in the region.

Local versus export markets for hydrogen and ammonia

It is essential to recognize the different opportunities in local versus export markets. The local use of hydrogen and ammonia in various applications should not be underestimated. But, in countries like Oman, for example, there is a massive potential to use record low-cost wind and solar to reindustrialize and attract industries, as was announced in December. At the same time, the UAE, for example, has announced using hydrogen for mobility.

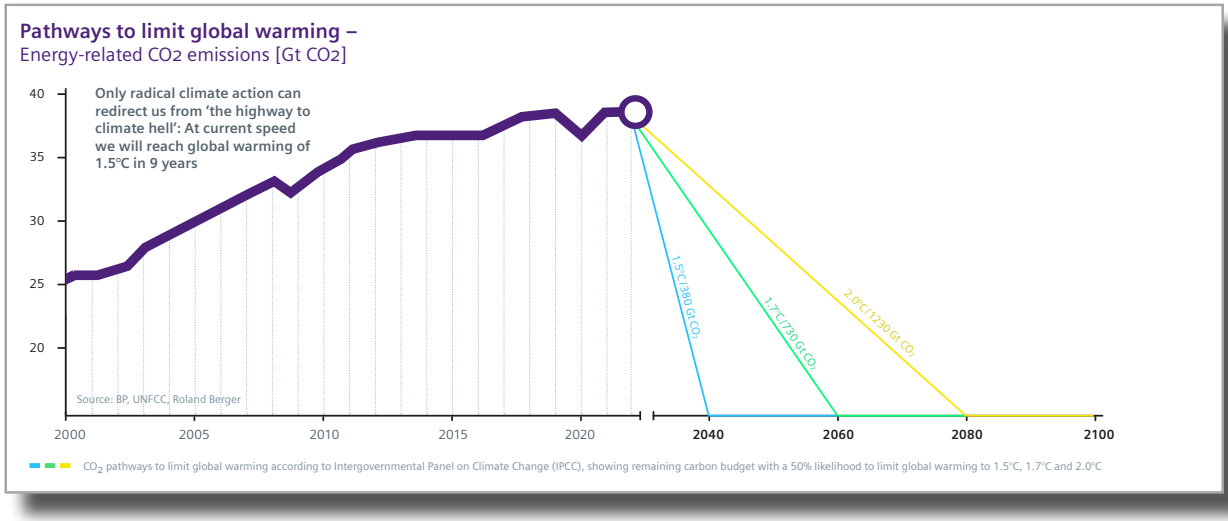
The importance of launching hydrogen initiatives and partnerships

There are many possibilities for developing hydrogen and ammonia production and converting to other molecules. It still needs to be determined where we are going. But as a recent example, we launched the Eastern Mediterranean hydrogen pipeline initiative in partnership with the Hydrogen Council of the German government. So, pipelines already exist in the Mediterranean and will play a key role in supplying hydrogen to Europe at the lowest cost and in the immediate term.

Source: The Microsoft MEA Forum for Sustainability Leaders

REPORT

Radical climate action is needed now



CO2 emissions are a major contributor to climate change, and reducing them is a crucial goal of global efforts. Several factors affect CO2 emissions, including economic growth, population expansion, changes in the energy mix, new consumption patterns and the adoption of technologies and policies aimed at reducing emissions.

Decarbonization is successfully underway but still not moving quickly enough in regions where emission levels have fallen since 2005, thanks to the deployment of renewable energy and energy efficiency measures. Advances in technology have helped speed up the decarbonization process. But despite similar efforts in developing regions, strong economic growth has led to a net increase in emissions, resulting in discord between perceptions and reality. The key going forward will be to meet emission reduction targets while ensuring simultaneous growth of the economy and welfare.

The reduction in greenhouse gas emissions during the pandemic was a temporary downtick in the upward trajectory. Only radical climate action can redirect us from our current path at a global level. To limit global warming to 1.5°C, the Intergovernmental Panel on Climate Change (IPCC) believes that global carbon emissions must fall to zero. Action must be taken – urgently, systemically and cooperatively. There is no time to hesitate.

Source: Siemens Energy - Global Energy Transition Readiness Index Report

READ THE FULL REPORT HERE

INSIGHTS

Of Coal and Kings

Bill Spindle
Fomer International Affairs Fellow in India
Council on Foreign Relations

The coal economy is problematic enough, but what happens when coal is gone?

There are few winners in the kingdom of coal. We've looked at the burdens India's heavy coal use places on its people, here and here. Now we look at coal-dependent communities themselves, where the challenge is not just coal today but also what happens when coal goes away. For the eastern Indian district of Angul, among India's first and most productive coal mining regions, that day admittedly may be far the future. The district's five mining operations unearthed almost 100 million metric tons of coal last year, more than a tenth of India's total. Last summer my travels took me to Talcher, where the first underground mine in the area was dug more than a century ago. It's the biggest city in the Angul district. The roads were chock-a-block with trucks ferrying coal from mines to rail cars, from mines to electric power generation plants, from mines to steel mills — all desperately trying to keep up with the country's growing demand for energy. Demand is even higher this year, the scramble for coal even more intense. India's electricity consumption has climbed at a double digit pace so far this spring. It's turning out to be even warmer, even earlier than last year, when India experienced the hottest spring in a century. But it's not just the heat waves, which boost air conditioning use, that are driving up consumption. India has a growing population that will become the world's largest this year, and an expanding industrial base. Both have Indian authorities hustling, year after year, to find more fuel. By short-term necessity and long-term habit, they lean heavily on coal. And yet, coal use must wind down if India and the world are to meet their decarbonization goals. The only viable, long-term solution is continuing to accelerate the use of renewable energy, particularly solar, which luckily is already cheaper than coal almost everywhere in India. That doesn't mean coal can be gotten rid of overnight, or even in decades if you ask the Indian government. But as renewables continue gaining momentum, especially when partnered with

energy storage systems, coal will wind down. The stage is being set with India's target of drawing half its electricity from renewable sources by 2030. The upshot: If some long term planning for coal's demise isn't undertaken, then coal country — concentrated in the eastern states of Odisha, Jharkhand, Chhattisgarh and West Bengal — will be plagued as much by the disappearance of coal as by the presence of it now. Caught in this paradox are communities such as those in Angul. Like many mining dependent regions globally, compared to the rest of the country locals receive disproportionately few benefits from the coal that's unearthed here. Nearly all of it is shipped elsewhere in India, along with the profits and economic growth it helps deliver. Coal mining states are among the least developed in India. Their communities suffer from diseases and environmental contamination, and from the social fallout caused by dislocation. And yet, what little they do have comes largely from the coal industry — from white collar jobs right down to scavengers who gather lumps fallen from trucks and trains and sell them for cooking fuel.

Source: The Adventure (r)

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