

# Energy Transition

## INTELLIGENCE BRIEFING

ISSUE 51, MONDAY, JUNE 13<sup>th</sup>

**SCROLL DOWN**

ADNOC SPECIAL REPORT EXCLUSIVE SOUNDINGS INSIGHTS EVENTS THIS WEEK

### *Scaling Tech & Clearer Regulations Key to Hydrogen Market*

**Q&A: Dr. Oliver Weinmann, Managing Director, Vattenfall Innovation GmbH  
& President, German Hydrogen Association**

#### **How can the hydrogen solution journey be accelerated?**

The European Commission recently announced the RePowerEU plan, a €300bn package aimed at decreasing dependence on Russian gas, which includes hydrogen. The plan targets 10mn tons of clean hydrogen to be produced within the EU and 10mn tons to be imported by 2030. But what is still missing are clear regulations and definitions on what is green hydrogen; where do you get credits for green hydrogen; and what needs to be applied. Without these, the industry is hesitating to invest. These issues need to be resolved soon. At the initial stage, we will need government support because clean hydrogen will be more expensive than grey hydrogen. We need about 10 years to get this in place, like renewables, which are now cheaper than coal, gas or nuclear.

#### **What is holding these regulations back?**

We are very much an oil-electric society. Hydrogen is not in everyone's mind yet, but it will be. We learned in recent years that we cannot really develop the energy transition only with clean electrons. We will need green molecules as well and this needs to be done in parallel and very fast to accelerate the development. We do not have the time to wait anymore.



CONTINUED ON PAGE 2



**CLIMATEPENPAL.ORG**



**CONTINUED** Q&A: *Dr Oliver Weinmann*

**What improvements are needed in hydrogen technology and infrastructure?**

Technology is not the biggest bottleneck but with improved and larger scale electrolyzers, costs can come down. We need a cheaper production model where we can scale gigawatt levels. For infrastructure, building pipelines has well-known technologies but they will require licenses to be implemented. Using existing pipelines no longer needed for natural gas is also a viable option. In the steelmaking process, switching from coal to hydrogen can be done but again, we need to scale it up. This is the biggest challenge for technology.

**Can the Middle East be an effective supplier of hydrogen to Europe?**

The Middle East is quite attractive to build low-cost renewables, especially solar. This can help in building hubs to produce green hydrogen which is affordable for the industry. There are already

several initiatives in these areas such as H2 Global, a Euro 1 billion initiative to implement a green hydrogen trading system for production that is outside of Europe and to offtake in Germany. Europe will always be an energy importing area and probably never be self-sufficient with only renewable energy production. The Middle East can not only produce hydrogen, but also sustainable aviation fuels or green methanol and export these products to Europe.

**Can blue and green hydrogen compete?**

We need both blue and green - it is not a question of 'either or'. Eventually, it is the market and the taxonomy which will decide. In Europe, the regulations vary, with some countries only requiring green hydrogen for example because blue is not 100% free of carbon emissions. But a carbon credits system will be critical for all, including blue.

[FULL INTERVIEW HERE](#)

## Unlocking the hydrogen economy – stimulating investment across the hydrogen value chain

The potential of hydrogen and the investment opportunities it represents are clearly recognised by the investment community. Virtually all players consulted through this study are planning or have already made investments in the hydrogen sector. The current momentum for hydrogen is palpable in most investor conversations.

However, significant challenges need to be addressed to create the conditions for the large-scale deployment and financing of hydrogen projects. Economic and regulatory conditions would need to improve further in order to mobilise the full financing needed to meet the ambitious EU targets. In this context, financing risks would need to be appropriately mitigated, while the nature of the hydrogen sector also calls for a coherent value chain approach to ensure coherent development of the various parts of the ecosystem.

This report provides a basis for both financiers and policymakers to assess these challenges as they pursue hydrogen investment opportunities. The European Investment Bank's Advisory

Services, which have authored this study, will continue to work both with their partners at the European Commission and with the project promoters that they advise to ensure hydrogen financing needs are well understood and to help in the development of appropriate instruments that are equal to the challenges of the European Union's ambition.

Source: *European Investment Bank Report*

[FULL REPORT HERE](#)



**OUT NOW**



[CLICK HERE](#)

**Special Report**

**ADNOC's Transformation  
IGNITES**

Global Appetite for UAE Capital Markets

Abu Dhabi's Biggest Ever IPO – Borouge – Listed on ADX June 3<sup>rd</sup>, 2022



## EXCLUSIVE SOUNDINGS



“Energy transition cannot be done without a smart grid between the Middle East, Europe, Asia, and with neighboring countries. This is important to encourage the adoption of renewable energy, whether it is wind, hydropower, waste-to-energy, or solar energy. We should think of comprehensive ways to deal with these things together.”

### **Engr. Mohammed Al Taani**

Secretary General, Arab Renewable Energy Commission

“We would hope that COP28 could support the carbon credit markets, for it to catch up. This can support individuals and businesses make decisions and take their projects forward at a much faster pace.”



### **Faisal Al Raisi**

Chief Operating Officer, Etihad ESCO



“There is no doubt that Europe will need to be importing hydrogen as almost every country’s strategy certainly incorporates this. Whether it is blue or green hydrogen is not a debate right now but everyone wants to get to a place eventually where we are using renewable hydrogen.”

### **Dr. James Henderson**

Director of Energy Transition Research Initiative & Chairman of Gas Research Programme, The Oxford Institute for Energy Studies

Series Supported By:



## INSIGHTS

# And in World News, India too is Roiled



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

**G**lobal and national events are infusing new urgency into climate and energy policies.

I said four months ago that this blog would go local when we plunged into the journey I'm now on in India. This post is an exception. Much has happened globally and on a national scale in India with energy and climate since I began my circuit around the subcontinent.

Those events are shaping what's happening on the ground locally, to the point I thought it's worth telescoping out and focusing on the big picture briefly again. It's the only way to make sense of some of what I'm seeing almost no matter where I stop in India.

The first development is Russia's invasion of Ukraine. Putin's aggression has sent global commodity markets from food to fuel into gyrations, almost without exception in an upward direction. India is a long way from the battlefield, but it has been slammed by the fallout.

India's current account deficit — a key measure of the foreign currency available to purchase the goods and services Indians need from abroad — has widened significantly as it spends more to import commodities like oil, coal, gas and fertilizer. The spike in oil prices has been especially problematic, likely widening the trade deficit for this one product to \$100 billion in the year ending next March, according to one Indian bank's analysis. That compares to \$56 billion last year.



Meanwhile, the government's budget is being strained by a doubling of the amount it must spend on subsidies for fertilizers alone — now looking like about \$20 billion for the fiscal year. That's double what it spent last year. The subsidies are needed to keep already struggling farmers from being hit by skyrocketing global prices.

The war in Ukraine has also threatened global food supplies, since both the perpetrator and victim countries in the war are huge suppliers of wheat. That actually looked like the one benefit the invasion would deliver for India, which is the world's second largest producer of wheat after China.

Until...

The second big development since I arrived in India: a record-breaking heat wave. The soaring spring temperatures, especially across India's northern breadbasket,

scorched enough of what was expected to be a bumper wheat crop that India has wound up limiting exports to make sure it had enough for itself.

That was a huge disappointment for both India and the international community. India could really have used the money from those exports, given the other hits it's taking from the war. For the rest of the world, fears over food shortages only grew.

Beyond the wheat crop damage, the heat wave sharply raised Indians' awareness that climate change is already exacting huge costs, both economically and on their health. Headlines and evening talk shows highlighted the succession of new highs in April. The international press also took notice. I got in on the story with this article for The Atlantic.

**FULL ARTICLE HERE**



# China Renewables in the 14<sup>th</sup> Five-Year Plan: Galloping in the Post-Parity Era

China's progress in renewables has been admirable. With renewables at 1042 GW accounting for 42% of its total installed power generation capacity in 2021, China's ranks number one globally in annual addition of hydropower for 17 consecutive years, in wind power for 12, in solar PV for 7 and in biomass power for 4 consecutive years. Renewables are moving at a faster pace from the edge to the center stage of China's energy/power system, leading the country's transition towards decarbonization.

However, a decade long steadfast scaling has led to a reality that much of the lower hanging fruits have already been harvested. Further development will require existing hurdles be cleared and new breakthroughs achieved on a number of fronts, as outlined in our previous Insight China report *Powering Renewables to New Heights*, for renewables to gallop in the post parity era. It also demands a much closer collaboration among government agencies that involve resource assessment, land and sea surface utilization, meteorological service, ecological protection, financial and fiscal support, among others. That's why China decided to publish a most comprehensive ever 14th FYP for Renewable Energy Development (the FYP), on June 1st, not conventionally by the NDRC/NEA, but jointly by 9 ministries or agencies, that will sync and propel the new phase of scaling renewable energy and turn it a major fuel in the country's energy mix.

This Insight China report provides a summary of key elements of the Five-Year Plan.

## Targets:

China's NDC commitment under the Paris Agreement was, by to have 25% share of its total energy consumption generated from non fossil fuels, i.e. renewables plus nuclear, in which 1 200 GW will be installed wind and solar capacity. By the end of 2021, the country had already reached 636 GW of solar and wind capacity. With solar and wind installation fueling over 100 GW per year, the confidence of overshooting the 2030 target is very high. The major issue therefore is not installed capacity but the energy volume generated from renewables.

To meet the 2030 target of 25% of non-fossil fuel consumption volume, the Energy 14 th FYP has set a 2025 target of 20% total energy consumption from non fossil fuels.

To delivery those targets while taking into consideration resource availability, economic feasibility and project readiness, the FYP has specified a set of quantitative targets as shown in Table 1.

Table 1 Targets for Renewable Energy Development 2021-2025

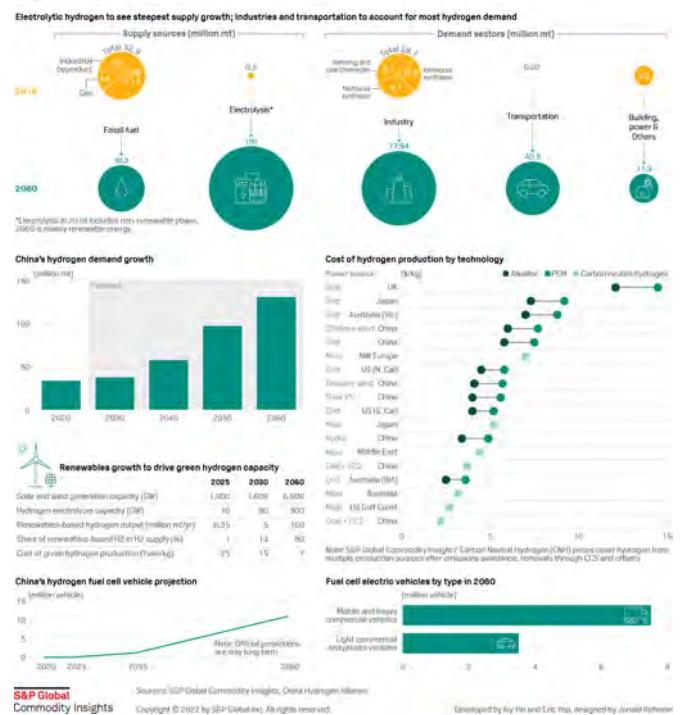
Indicator	Targets
Total renewable energy consumption	- one billion tce (tons of coal equivalent) in 2025 (up from 680 million tce in 2020); - renewable energy: >50% of incremental energy demand, 2020-2025
Renewable power generation	- 330 TWh per year in 2025 (up from 221 TWh in 2020); - Renewable power >50% of incremental electricity demand during 2020-2025; - double the wind and solar power generation, 2020-2025.
Renewable power absorption quota	1) 33% nation-wide of renewables/total electricity demand in 2025 (up from 28.8% in 2020); 2) 18% nation-wide of non-hydro renewables/total electricity demand in 2025 (up from 11.4% in 2020).
Non-power renewable energy production	3) 60 million tce by 2025 (including solar heat, geothermal, biomass heat and biofuels).

Source: © CN Innovation ( www.cn innovation.tech )

[FULL REPORT HERE](#)

## CHINA ADDS HYDROGEN TO ITS DECARBONIZATION ARSENAL

China has published its first ever national hydrogen strategy, setting across sectors and its state-owned firms (ranked as hydrogen to contribute to 20% of final energy consumption by 2050). The plan is focused on boosting supply of renewable-based hydrogen, and making it an economically viable option in the nation's energy transition.



# EVENTS THIS WEEK

## Energy Transition Dialogues



Consultancy  
Intelligence  
Publishing

### HYDROGEN FULL COURT PRESS

**Dr. Roberto F. Aguilera**

Energy Economist  
Curtin University, Oil and Gas Innovation Centre

TUESDAY /// JUNE 14<sup>th</sup> /// 11:00AM (UAE)

Series Supported By:





## Energy Transition Dialogues



Consultancy  
Intelligence  
Publishing

### TWO MINUTE WARNING INTERVIEW SERIES

**Habiba Al Marashi**

Founder & President of the Arabia CSR Network (ACSRN)  
Co-Founder & Chairperson of Emirates Environmental Group (EEG)

WEDNESDAY /// JUNE 15<sup>th</sup> /// 11:00 (UAE)

Series Supported By:



  
المشرق  
mashreq

  
مؤسسة نفط  
الشارقة الوطنية  
SNOC



Series Supported By:



  
المشرق  
mashreq

  
مؤسسة نفط  
الشارقة الوطنية  
SNOC



Consultancy  
Intelligence  
Publishing