Exclusive Insights /// Actionable Intelligence /// Exclusive Survey Analysis

Energy Transition Dialogues

Consultancy Intelligence Publishing

INTELLIGENCE BRIEFING

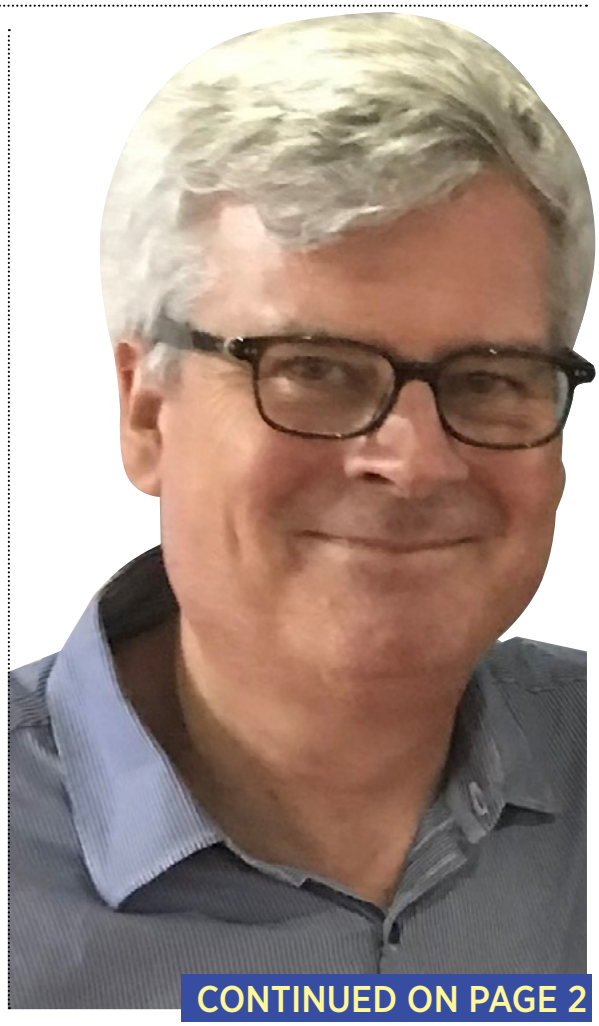
ISSUE 41, MONDAY, MARCH 14th

SCROLL DOWN

RAISING H2 CAPITAL? CHINA'S GREEN BUIDLINGS? THIS WEEK'S EVENTS

Climate and Geopolitics: Rapidly Rising to the Fore

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



The bigger issue lurking behind a lot of things we are seeing in geopolitics – and it is not always that obvious – is the role of climate change. This will increasingly drive many things worldwide, politically speaking. I was in Syria prior to the Arab uprisings and I went to the suburbs of Damascus. Thousands and thousands of people had poured in from northern parts of Syria, which was suffering a massive drought, mainly caused by mismanagement [in part, climate refugees]. And it was those very suburbs that erupted and caused Syria's big uprising.

New Delhi's balancing act

India is finding is that renewable energy is getting cheaper and sometimes cheaper than coal. It has made it clear that it will not hold back its national development to satisfy the world's needs for renewable energy. And that has put them in real conflict before. But incentives are increasingly aligned now. They can save money by moving towards renewable energy and be more energy secure. India knows that is the way they are going to move as fast as possible and that they need coal and oil to support that transition. They will increasingly find ways to push this forward faster, particularly after 2030, as opposed to developed economies that have the capability to really reduce their reliance on fossil fuels early and soon. It is really a matter of political will and we will see India really accelerating in a decade. They have plans and incentives, such as trying to build solar panel manufacturing. Historically, India has not been terribly successful in this realm, but we will see how they do. They have also just introduced a big, big national hydrogen development plant in an effort to become one of the major global players in the hydrogen market. It seems to be getting pretty decent reviews from people looking at it.

CONTINUED ON PAGE 2

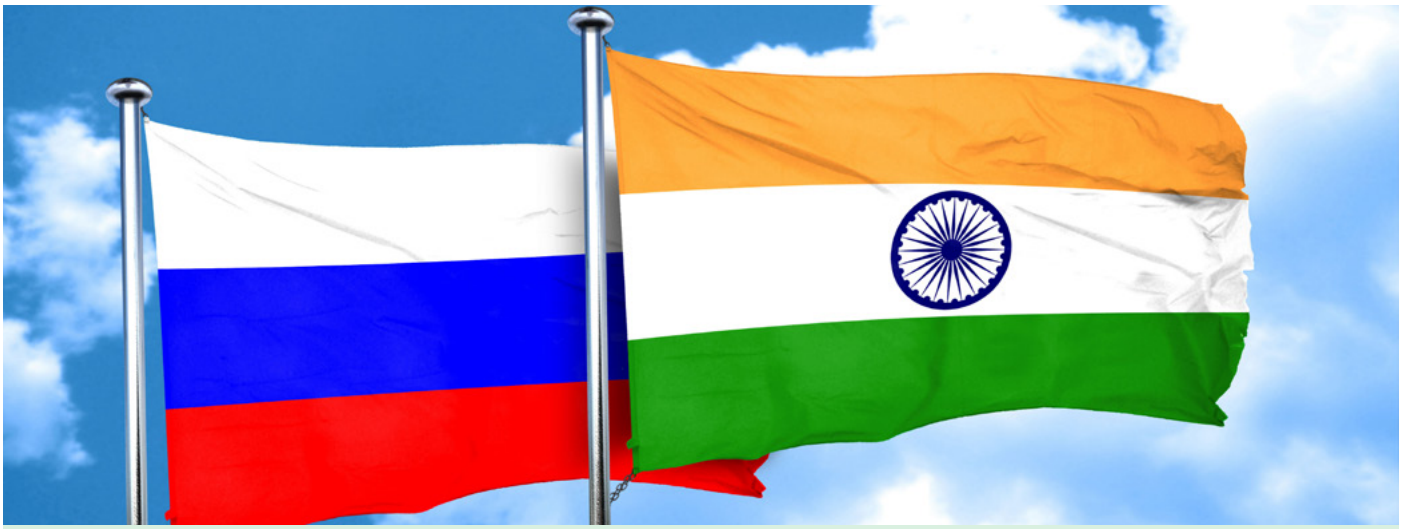
"India, like many countries, is seriously worried about its dependance on China for renewable energy technology, particularly solar. Almost all the solar panels in India are made in China, as they are around the rest of the world. So, they're trying to remedy that."

– Bill Spindle, Council on Foreign Relations, International Affairs Fellow in India

CONTINUED FROM PAGE 1

$75bn
could be spent over the next decade by India's Reliance on building greener energy, including solar power plants and infrastructure for clean hydrogen.

2070
is when India aims to achieve net zero.



Russia-India-West dynamics

India has a huge opportunity to become a leader in this new transition. Currently, India is dependent on fossil fuels, including coal, and the decision to sustain that probably has more to do with overall security than energy security per se. It has a long relationship with Russia, which it very much wants to retain for several reasons. Russia is a significant investor in India and the latter has bought many weapons systems from them that need maintenance, repairs and upgrading, for example. India also sees Russia as a counterbalance to China, which probably explains India's reluctance to go against Russia [regarding its invasion of Ukraine]. However, India may find itself boxed in at some point and having to choose, in which case they would undoubtedly choose the US and the West. India's relationship with the US is expanding by leaps and bounds – far faster than it is with Russia. Still, India will resist having to choose. It will do everything it can to maintain its relationship with Russia. India sees its future as a democracy, as an open liberal economy, which lies with the West. It is cultivating those ties increasingly in the security realm with the quad arrangement they've got with Australia, Japan, and the US. So, they are going to move in that direction. Amid all this, it has a huge opportunity to become a leader in the energy transition.

FULL INTERVIEW HERE

GI Consultancy Intelligence Publishing

Financing Hydrogen in 2022?

Orhan Tanriverdi
Director, Cranmore Partners

FULL PODCAST HERE

We often hear how countries in the region are trying to become players in the emerging green hydrogen market – trying to get a piece of the pie. But they lack strategies to decarbonize local industries and to become part of the global decarbonized economy. In the Middle East, the focus is more on building a green hydrogen ecosystem and becoming a green hydrogen exporter, rather than focusing on the end user. We believe that countries in the Arab Gulf can gain more by focusing or developing strategies for the end products, which can then be exported to Europe. In turn, this will benefit their domestic economies.

$9trn
worth of green investments are needed every year to reach net zero by 2050 – this includes clean hydrogen.*

*Source: *Mckinsey*

Money matters

All hydrogen projects must be economically viable. We saw how governments provided support schemes to encourage the renewables sector over the last decade, but they became too dependent on such initiatives. This also burdens governments. The green hydrogen industry must not repeat these mistakes. Obviously support from governments is key to kick-start that process in the early years, but economic viability must be the absolute focus of projects and stakeholders.

Realistic lift-off

The announcement by Airbus to directly use hydrogen as a fuel is groundbreaking news for the whole aviation industry – if this can be achieved within 10-15 years. Considering the whole development cycle of the aviation industry, it is an extremely ambitious target.

Oliver Phillips, Associate Director, Sustainable Finance, Africa and Middle East, Standard Chartered Bank

FULL PODCAST HERE

The private sector will participate in hydrogen projects once missing pieces of the puzzle are tied down. Both elements of supply and demand must be clear for any banking scheme to take place. When offtakes and demand start to be more contextualized, this will help bring the private sector in and move us along at the speed that is required to achieve market growth.

Green bonds to boom...

Many issuers are spending time putting their sustainable finance frameworks in place, so they can be ready when the market is right. There is a pent-up supply of Environmental, Social, and Governance (ESG) issuances in the pipeline. But the bond markets have been disrupted this year, in part due to the uncertainty around the US Federal Reserve Bank's moves – not a welcomed environment for issuers. Still, we have seen deals in the Middle East.

Financing changes pace

The finance sector has moved so far beyond its status quo, into a new world where banks are setting net zero commitments for their financings. We are going to see an acceleration of renewable energy projects, as developers do not want to invest in coal, oil, and gas anymore. Renewables are where they see growth and this is the area where long-term assets will keep generating value. In the next 10-15 years, hydrogen and renewables will take center stage. The risk of stranded assets is a huge problem.

"Many issuers are spending time putting their sustainable finance frameworks in place, so they can be ready when the market is right."

Series Supported By:

uniper
المشرق mashreq
مؤسسة نفط الشارقة الوطنية SNOC

Valentina Dedi
Lead Economist,
Consulting International, KBR

FULL PODCAST HERE

More clarity equals more investors. Investors cannot really understand the scale of the opportunities that hydrogen might offer as demand is unclear, for example. We must reassure them. We also need to make sure that the market is sustainable with new technologies. Many technology providers we have been speaking to are ready, but key questions remain about the readiness of the market, the status of demand, and where the funds will come from. This includes the private sector. Also, it needs to be clearer what investors can gain in terms of returns on investment (ROI) to give them confidence.

A national hydrogen strategy?

There must be more collaboration in research and development (R&D) between the private sector-governments and industry-academia, as there are still many unknowns about hydrogen. There is an opportunity for governments to step up and take a multi-nation role under a common strategy, so that all parties are aligned and there is more clarity. We work with clients who are really confused about demand, for example.

Focus on CI, not colors

What if we just forget about the colors of hydrogen and we just focus on the carbon intensity (CI), because we want to get the balance right. Eventually, we will get to green hydrogen. Right now, we must give producers, stakeholders, and markets the chance to work out things out. We will get there.

"We need more clarity about the real level of demand for hydrogen – many are still confused."

SNAPSHOT:
Growth of Hydrogen

$1trn
in global green investment is expected for the first time by the end of 2022.[1]

25%
of the global hydrogen market has been targeted by the UAE.[2]

#1
Hydrogen is the most abundant element in the universe. Now, we just need to figure out how to fully leverage it in an environmentally and economically viable manner.[3]

20%
of global carbon abatement by mid-century could be achieved by developing large, competitive clean hydrogen markets.[4]

Sources: [1] Mckinsey [2] Climate Bonds; [3] The UAE's Energy and Infrastructure Minister; [4] Hydrogen Council

CHINA: GREEN BUILDINGS

EXTRACT: CN Innovation – Insight China

Greening and Transforming Buildings

The building sector is a major economic pillar for China, spanning the broadest-ever industrial landscape.

For a long time, nearly one-fifth of the country's annual GDP comes from the real estate industry, though the ratio has started to decline. It employed nearly 54mn people by the end of 2020.
It is also one of the largest sources of carbon emissions: one third of China's energy is consumed to power construction and operation of buildings, and nearly half (48%) of the country's total carbon emissions come from the life cycle of buildings. To achieve the duo targets of peaking the emission and zeroing out carbon, transforming the sector offers one of the biggest opportunities.

The goals are clearly set and the pathway chosen. On January 19, the Ministry of Housing, and Urban and Rural Development (MHURD) officially released the 14th Five-Year Plan of Construction and Building Sector (the Plan). It eyes on two "historic, pivotal moments" to transform the sector.

The first is its unprecedented convergence with advanced manufacturing and new generation of ICT/communication technology; and the second is the pivot from large-scale new construction to parallel importance attached to both uplift the quality of existing building stock and adjust the structure of the newly added stock.

54mn
people are employed within China's real estate industry.

Goals

The Plan is "benchmarked" against the China Vision 2035. The Vision paints a blueprint of a high quality-centered development systemic framework that, on one hand, guides and regulates sound market operation mechanisms and safety assurance, as well as optimized sector structure, and on the other, is enabled by the converging new industrialization, digitalization and intelligence that transforms how buildings are constructed and operated.

Decarbonizing value chains

As sectorally expansive, geographically, and climatically diverse and technically complex as it can be, the buildings sector covers a rather long value chain. To decarbonize it relies on enactment of mandates, incentives, legislation, and standards. While the Plan itself acts as the guiding and integrator document, the Chinese policy makers have taken a holistic value-chain and life-cycle approach.

33%
of China's energy is consumed by the construction and operation of buildings.

1. Drawing the upstream boundary to save energy and reduce carbon emissions in materials production: On January 22, the National Development and Reform Commission (NDRC), Ministry of Industry and Information Technology (MIIT), Ministry of Ecology and Environment (MEE), and National Energy Administration (NEA) jointly released the 2022 Implementation Guidelines of Retrofitting and Upgrading to Save Energy and Reduce Carbon Emissions of High-Energy Consuming Industries (the Guidelines). It covers 17 industrial sectors, many of which are building- and appliances-related. Specifics are given in the Guidelines. (We will publish a separate paper deep-diving into a framework of energy efficiency.)

2. Mandating energy conservation, renewable energy use in buildings: On October 13 of 2021, the MHURD issued National Standards for Energy Conservation and Renewable Energy Use in Buildings. Mandatory and to be effective on April 1 of 2022, the clauses represent China's first compulsory national standards covering carbon emissions from buildings.

3. Connecting with green consumption and embedding circularity in the value chain: Two additional interventions – green consumption and circular economy (construction wastes) – are also deeply embedded in the sector's transformation plans, and some analyses of which have already been shared in some of our previous Insight China reports, and many more to come.

Five goals and priorities of the 14th Five-Year Plan for Buildings

goal	example target
further consolidated and stabilized economic pillar	1. sector value add to GDP: about **6%** every year
further consolidated and stabilized economic pillar	2. strengthened new economic pillar: new products, services, and business models from deepest-ever integration of new ICT technology and building industry
much modernized industry value chain	1. prefabricated buildings ratio in all newly built: above **30%** 2. policy framework and industrial system in place that support advanced manufacturing and industrialized construction
green and low-carbon production	1. control of on-site construction wastes in newly built construction: less than **300 tons per 10,000 square meters** 2. policy, technology and implementation system in place for green buildings and construction, as well as forming market mechanism for disposal and reuse of wastes
improved construction and building market mechanism	1. amending the Law of Construction and Buildings, and enhancing sector management mechanisms, such as industrial certification and professional accreditation 2. more than **10 million professionals** accredited at and above mid-level
strengthened engineering quality and safety	1. prevention and control of major safety accidents 2. improved **emergency response to disasters**

THIS WEEK EVENTS

Energy Transition Dialogues

GI Consultancy Intelligence Publishing

TWO MINUTE WARNING
INTERVIEW SERIES

Rasso Bartenschlager
General Manager
Al Masaood Power Division

TUESDAY /// MAR 15th /// 12:00 (UAE)

Series Supported By:

uniper | المشرق mashreq | مؤسسة نفط الشارقة الوطنية SNOC

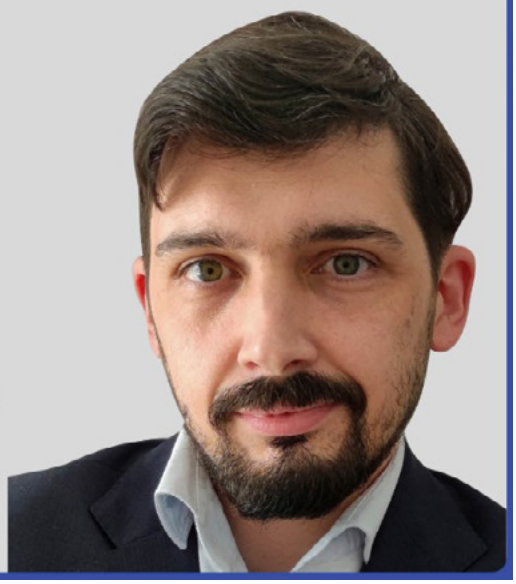
Energy Transition Dialogues

GI Consultancy Intelligence Publishing

H_2 HYDROGEN
FULL COURT PRESS

Emanuele Bianco
Associate Programme Officer
IRENA

WEDNESDAY /// MARCH 16th /// 11:00AM (UAE)



Series Supported By:

uniper

Series Supported By:

uniper | المشرق mashreq | مؤسسة نفط الشارقة الوطنية SNOC


GI
Consultancy
Intelligence
Publishing