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

ENERGY TRANSITION DIALOGUES

INTELLIGENCE BRIEFING

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GI Consultancy Intelligence Publishing

SCROLL DOWN!

H2 CLOCK HASTENS | GAS' 2021 ROLE? | INDIA'S CLIMATE SQUEEZE?

STALLING NOW GUARANTEES HIGHER COSTS!

Nandita Parshad, Managing Director – Sustainable Infrastructure Group, European Bank for Reconstruction and Development (EBRD)

If we lose the momentum now, the financial bill of the energy transition is only going to go one way: up.

The risk is that if we do not move quickly now, no matter how much money we throw in, we will not reach our climate goals as quickly as we need to. The good news is that technology – a wide range supporting many aspects of energy from electrification to green hydrogen – is allowing us to do so much more in the clean energy push with fewer costs. But a lot of the investment momentum and action must happen in developing countries. We need to realize that regardless of the progress in the developed nations, we will not reach climate goals without faster action in the developing world. The capital is there. What investors need is the right opportunity in countries that are making credible long-term commitments to the transition and also setting clear rules and strong regulatory frameworks on the back of these commitments. With COP26 in November, countries, companies, and industries have woken up to the fact that they need to get their net zero pathway sorted now and that they need to start working on concrete actions. We are hopeful that COP26 is beginning to have that galvanizing effect and hopefully gets us from the rhetoric to core actions. The key piece in mobilizing these actions is in the flow of investments and finance.

$1TRN is the potential economic and societal benefit of a green economy in developing nations and regions by 2030. [1]

$300BN was the global amount of clean energy investments in 2020 – up from $33bn in early 2000. [2]

1/ Bain & Company
2/ BloombergNEF

FULL INTERVIEW HERE!

HYDROGEN

We Don't Have 20 Years to Debate!

Dr. Georgios Papaefthymiou, Power System, Operation, and Security Expert, Elia Grid International

Approximately 300 terawatt-hours of hydrogen is needed to decarbonize the EU's hard-to-abate sectors, studies show. Clearly, we do not have 20 years to debate the importance of hydrogen in making this happen.

What's next?

The power system needs to decarbonize other sectors, which is why we need to operate at a faster rate with a high penetration of renewable energy. As one of the top five leading transmission system operators in Europe, we currently operate a 60% penetration rate for renewables and we are working towards 100%. There will be a technological battle between hydrogen and batteries as the best grid storage solution. While batteries seem to be the winning option in the shorter term, hydrogen will take the lead in the long-term.

FULL INTERVIEW HERE!

39,700KM

of the EU's natural gas pipelines could be devoted to hydrogen by 2040 once production and imports of the alternative fuel take off.[1]

1/ TSO2020

TOP 5 NEWS STORIES

- India: Hydrogen to Spearhead ET?
- Biden Backs Path to Net Zero Grid
- UAE: Manufacturing Hub for Hydrogen?
- Chevron, Toyota Explore Hydrogen Businesses
- EU Debuts Hydrogen Passenger Trains

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PODCAST

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THIS WEEK Natural Gas' 2021 Journey Amid Green Push?

Michelle Meineke
Director, Energy Transition Dialogues

How to accelerate the decarbonization of natural gas supply chains? It is a big question, but a starting point is accepting that natural gas will be part of the global energy mix beyond 2050, even if more marginal.
Energy demand forecasts are too demanding and infrastructure costs for new energy types, notably renewables, are too high to bid *au revoir* to gas entirely. But that does not mean the gas market we know today will survive. Gas and LNG must learn some chameleon traits in order to fit the world's newer, cleaner aspirations. And this starts with decarbonizing value chains. Easier said than done...

Trung Ghi
Head of Energy and Utilities Practice in Asia Pacific, Arthur D. Little

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Gas is going to be quite a force to play with in Southeast Asia. There is enough gas production, but the issue lies in methane leakages and a high concentration of CO_2. This is where the question of decarbonization comes into play and what to do with the greenhouse gases (GHG) once you drill and produce gas. There are technologies, like carbon capture, utilization, and storage (CCUS), that are prevalent solutions. A lot of the oil and gas companies are now investing quite heavily. In ten years, we will even have carbon nanotubes. This is where a lot of the players in the region are dedicating their research and innovation (R&D): how to produce gas in a more sustainable way? However, Southeast Asia needs another five to ten years before implementing large-scale projects of this nature.

2060s: Too little too late?

Yes and no. Southeast Asia has a long way to go in its pursuit of decarbonization. The region does not have a carbon tax or credits as we see in Australia, the US, or Europe. Similar to China, the 2060s is a more realistic estimation for the region to become carbon neutral.

FULL PODCAST HERE!

Antoine Mathieu
Senior Project Lead, Elia Grid International

Utilities are not known to be the most agile companies in the world. But now it is time for them to evolve and transform into data-driven entities. We must start looking at the competencies we already possess and rethink the innovation culture and accelerate digital literacy.
This the biggest transformation ever for the power sector and it is critical for it to remain relevant in the future. Historically, the sector has been known as inward thinking. But as customer-centricity becomes more front and center, the sector must broaden its horizons and create a more flexible ecosystem that adapts to what the customer and the future of power generation really needs.

Future trends?

Sector coupling and the use of gas in the power sector will increase in the future – think power to gas, for example. When it comes to storage and transportation, the way of transporting energy today through pipelines or cables is no longer the most efficient route. We must investigate new and improved ways.

30% rise in global natural gas demand is expected by 2040 and will be concentrated in South and East Asia.[1]

1/ IEA

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PODCAST

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Amjad Khashman
Energy Specialist

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The International Energy Agency (IEA) expects the global capacity of gas power plants to increase over the next five years with more than 100GW of capacity – that is tremendous. In fact, it is the only fossil fuel source that will continue to grow in the power sector. However, the main drawback, and why some are sceptical about its role in the long-term energy transition, is methane emissions. If we track the whole cycle, methane leakage is still a threat to climate goals. Addressing this problem will become increasingly pressing for gas and environmental stakeholders.

Gas vs electrification?

Gas has the potential to play a greater role in the mobility sector, especially in applications where electrification cannot be fully utilized, such as in bunkering and shipping. So far, we are seeing some applications for the use of LNG as a fuel for large trucks, mainly in China and Europe.

1.5% per year is the average growth rate anticipated for natural gas between 2019 to 2025.[1]

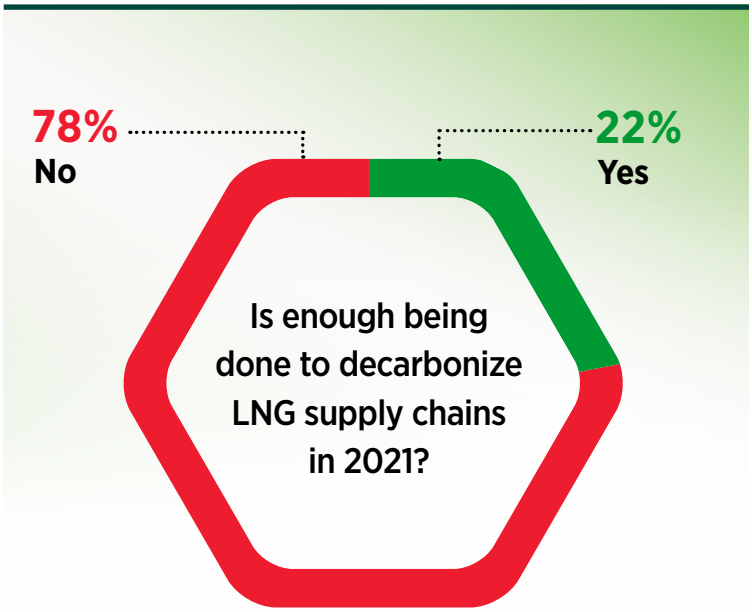
1/IEA

SURVEY ANALYSIS

GREENING LNG: GIANT NEEDS TO CATCH UP!

Before the global heave-ho for decarbonization, gas and LNG were considered the favoured cousin of black gold, the golden child in the global energy mix.

And for a long time, LNG being the 'greenest fossil fuel' was enough to give it and gas some leeway in the broader climate conversation. But no more. Now stakeholders are being asked to share the specifics of how they plan to decarbonize their supply chains, from wellhead to the cargo delivery point. Ticking the ESG box on projects is a good step forward, but not the whole story. Unsurprisingly, the intensity of these questions is growing amid announcements of soaring needs, i.e., South Korea expects its LNG demand to rise by 15.1% by 2034. Some are undeniably trying to make meaningful progress. For one, the US LNG exporter Cheniere plans to give customers emissions tags per cargo at its Sabine Pass terminal and Corpus Christi liquefaction terminal from 2022 to help quantify GHG emissions – a major step forward. But this is still the exception, not the norm. How to accelerate progress?



Survey source – ETD

INSIGHTS INTO INDIA

GI Consultancy Intelligence Publishing

India's Reverberating Climate Challenge

It's not one thing, or even many things, but the combination of things.

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

It is hard to overstate how the world's changing climate and weather patterns are altering the Indian subcontinent. You name it and India is dealing with it. And it will deal with much more of it in the coming years: rising sea levels, floods, drought, heat waves, more frequent and powerful cyclones, erratic monsoons, wildfires, and melting glaciers. The full climate change catalogue, front to back.

Of course, if you are outside India and reading the headlines, you know Indians are not focused on any of this right now. They are trying to manage the planet's most intense outbreak of Covid-19 to date. I would link to an article, but I cannot find one that comes even close to capturing the scale of this horrendous spike. Even after spending the past year in the US – a frequently harrowing experience as Americans endured what to this point were some of the worst spates in the global pandemic – finding words or even photos that convey India's plight is almost impossible.

Covid-19 may not be caused by climate change, but massive public health challenges will be among the side effects of the changing climate, those reverberating from the primary climate impacts I catalogued above.

Nearly every country on earth is now experiencing the fallout from climate change. Large countries, such as the US, China, Russia, and India, are experiencing the whole array of impacts. Some small, low-lying islands are being overwhelmed by one climate

effect, like rising sea levels, or two, if increasing storms are exacerbating the inundation from higher seas. India is the poster child for the big oncoming challenge many countries will face, particularly large and diverse ones. A myriad of serial climate-exacerbated catastrophes that become interlinked, if only in competing against each other for society's resources and will to address them.

Sea level rise leads to more flooding during storms, which wash away more villages, creating more refugees who require more resources from the communities they move to, communities that are themselves susceptible to sea level rise. Heat waves featuring temperatures that threaten human survival cut into productive outdoor working hours, potentially reducing the workday by 40% in some areas by 2050, according to one estimate. In turn, this stunts the economic growth needed to generate the resources to throw at the greening of the energy system.

FULL ARTICLE HERE!

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GLOBAL GREEN RECOVERY: *ARE WE ON TRACK?*

$14.6TRN

HAS BEEN PLEDGED BY THE WORLD'S 50 LARGEST ECONOMIES FOR POST-PANDEMIC RECOVERY.

18%

OF THESE PLEDGES ARE DIRECTED TOWARDS GREEN INITIATIVES.

100%

GREEN RECOVERY INVESTMENT PLANS HAVE ONLY BEEN MADE BY ONE NATION SO FAR: TURKEY.

Source: Oxford University's Global Recovery Observatory

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