MINISTÈRE
DE L'ÉCONOMIE,
DES FINANCES
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REVUE DE PRESSE SECTORIELLE ENERGIE ET DEVELOPPEMENT DURABLE

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G En bref

Infrastructure :

- Dans l'Etat du Jammu-et-Cachemire, les Indian Railways finalisent la construction du plus grand pont en arc ferroviaire du monde
- L'Inde poursuit l'expansion de son réseau autoroutier, avec un rythme de construction record pour l'année fiscale 2020-2021 (36,4 km/jour)
- Le Ministre du Transport routier et des autoroutes annonce poursuivre l'ouverture du secteur autoroutier à des sociétés concessionnaires

Ferroviaire :

- Avec l'électrification à 100% des lignes de la West Central Railway, les *Indian Railways* entrevoient l'objectif d'une électrification complète d'ici décembre 2023
- Le ministre des Chemins de Fer Piyush Goyal annonce la monétisation des actifs des *Indian Railways* pour financer la construction de nouvelles infrastructures
- Les revenus des *Indian Railways* liés aux activités de fret ont augmenté de 3% sur l'année fiscale 2020-2021, pour un volume transporté en croissance de 2%

Développement et transports urbains :

- Alstom remporte un contrat de 220 millions d'euros pour la fourniture du materiel roulant des lignes 4 et 4A du metro de Mumbai
- Le Comité technique de *Chandigarh Smart City Limited* approuve l'offre unique pour le projet pilote de mise en place d'un système d'approvisionnement en eau 24x7 à Manimajra

Pétrole, gaz et biocarburants

- L'Inde se dit prête à reprendre les importations de pétrole iranien dès la levée des sanctions américaines

Electricité et énergies renouvelables

- Le conseil des Ministres de l'Inde a approuvé le programme *Production Linked Incentive* doté d'un budget de 500 M€ pour soutenir la fabrication domestique de panneaux solaires
- Des industriels et des énergéticiens menés par Reliance Industries constituent une coalition intitulée « India H2 Alliance (IH2A) » pour travailler à l'émergence de l'hydrogène en Inde
- Le premier producteur d'énergie renouvelable indien, ReNew Power, s'engage à atteindre la neutralité carbone d'ici 2050
- Porté par la politique de développement des capacités de fabrication domestiques, *Tata Power Solar System Ltd.* double les capacités de production de son usine de Bangalore
- L'Etat du Karnataka annonce cesser d'investir dans le développement des centrales thermiques
- Une étude américaine souligne le potentiel de développement du secteur des énergies renouvelables en Inde

Mobilités électriques

- Delhi annonce la construction de 100 stations de recharge de véhicules électriques, dont 70 à proximité de stations de métro
- La première usine de production de composants de batterie d'Inde ambitionne de fournir 10% de la demande mondiale d'anodes en graphite synthétique d'ici 2030

Environnement et qualité de l'air

- Selon une enquête de Deloitte, les entreprises indiennes sont de plus en plus conscientes de l'impact du changement climatique sur leurs activités
- Le gouvernement central annonce une extension des délais pour l'entrée en vigueur des standards d'émissions des centrales électriques au charbon

Revue de presse

1. Infrastructure

Indian Railways creates history! Arch of world's highest rail bridge on Chenab river completed; see features

Financial Express, 05/04/2021

Historic day for Indian Railways! Taking a major leap towards the completion of the 111 kilometre long winding stretch from Katra to Banihal, today the Northern Railway zone has completed the Arch closure of the world's highest railway bridge, Chenab Bridge in Jammu and Kashmir. The iconic Chenab Bridge is a part of the Udhampur-Srinagar-Baramulla rail link (USBRL) project and the completion of the steel arch was one of the most difficult parts of the bridge over Chenab. Today, the last piece of metal of 5.6 metres was fitted at the highest point and joined the arch's two arms that stretch towards each other currently from both the river banks. This completed the arch shape that will then loom over the treacherous Chenab river, flowing below some 359 metres. Here are some salient features of the Arch of the Chenab Bridge:

- The iconic Arch Bridge on River Chenab is being constructed by Indian Railways as a part of the USBRL project to link the Kashmir valley to the rest of India.
- The iconic bridge is 1315 metres long and is the world's highest railway bridge being 359 metres above the river bed level.
- The Arch of the Chenab Bridge will be 35 meters higher than the Eiffel Tower in Paris.
- Bridge construction involved the fabrication of 28,660 million tonnes steel, 10 lakh cum earthwork, 66,000 cum concrete as well as 26 kilometres motorable roads.
- The Arch comprises of steel boxes. In order to improve stability, concrete will be filled in boxes of the Arch.
- The overall weight of Arch is 10,619 million tonnes.
- For the first time, erection of the members of the arch by overhead cable cranes done on the Indian Railways network.
- For structural detailing, the most sophisticated 'Tekla' software was used.
- Structural steel is suitable for temperature from -10°C to 40°C.

Record highway build pace result of govt's industry-friendly steps: Analysts

Financial Express, 02/04/2021

The record-breaking pace of highway construction in FY21– it touched an all-time high of 36.4 km/day in the year – is the result of a slew of industry-friendly measures that the government has taken during the pandemic year to ensure better cash flow to the contractors, analysts say.

Even though there was no construction in the first 20 days of April 2020 due to the Covid-induced lockdown, all executing agencies, including the National Highways Authority of India (NHAI), together constructed a record of 13,298 km highways in 2020-21, up from 10,237 km in 2019-20.

Jagannarayan Padmanabhan, director, Crisil Infrastructure Advisory, said, "Measures like reducing the performance guarantee and releasing the excess money helped contractors in their cash flows. The government also released all pending payments and in fact, nudged companies to achieve their milestone and get the payments in accelerated manner. These brought in confidence to the market participants, which led to an accelerated development."

Over the years, the ministry has evolved a robust project monitoring system to track progress of construction and pro-actively engage in solving issues. Availability of land and lesser movement of public also helped in speeding up of construction, Padmanabhan said.

Icra's Rajeshwar Burla said that relief measures like shift from milestone-based billing (typically ranging between 45-75 days) to monthly billing and release of retention money or performance security in proportion to the work already executed among others had immensely

supported the road contractors by reducing the cash conversion cycle.

"Due to improved cash conversion cycle from MoRTH/ NHAI projects, many road contractors made special arrangements to facilitate return of labour notwithstanding the high cost of re-mobilising labour. As a result, the execution witnessed sharp increase, ably supported by the liquidity boosting measures," Burla said.

Kushal Singh, partner, Deloitte India, said, "MoRTH and its agencies have brought out a comprehensive Covid relief package, including policy measures to resolve cash flow problems and contractual relief to contractors. The roads sector has also emerged as a preferred investment destination for investors looking for low risk, long-term returns."

Others said if the liquidity boosting measures are continued; this along with relaxation in qualifications for bidders could result in steep rise in execution – more than 40 km/day going forward. At the end of March 2021, projects worth Rs 9,22,404 crore are ongoing on a length of 64,010 km.

Over the last seven years, country's national highway length has increased by 50% from 91,287 km, as of April 2014 to 1,37,625 km, as on March 20, 2021, the road ministry said. Average annual project award during FY15-21 has increased by 85% compared to FY10-14. During 2020-21, 10,467 km highway project has been awarded, up from 8,948 km a year earlier.

Providing the highest-ever Rs 1.18-lakh-crore capital outlay for the ministry of road transport and highways for 2021-22 in the Budget, finance minister Nirmala Sitharaman said more than 13,000 km length of roads, at a cost of Rs 3.3 lakh crore, has already been awarded under the Rs 5.35-lakh-crore Bharatmala Pariyojana project. Of this, 3,800 km of the roads have been constructed. By March 2022, another 8,500 km projects would be awarded and an additional 11,000 km of national highway corridor would be completed.

While the construction speed has been accelerated with mostly government funds – read EPC contracts – and the hybrid annuity model projects (where little risk is taken by the private developers), there have lately been signs of nascent recovery of the BOT-toll model, which is pure-play public-private partnership model.

5-year plan: To raise Rs 1 lakh crore via TOT, says Gadkari

The Financial Express, 13/04/2021

The government was planning to raise Rs 1 lakh crore in the next five years through monetisation of state-funded highway stretches through the toll-operate-transfer (TOT) route, minister of road transport and highways Nitin Gadkari said on Thursday.

Under the TOT model, the NHAI transfers operational highway projects to private entities under long-term lease (15-30 years) against upfront payments. During the concession period, the TOT operator collects user fee on the stretches in line with the rates set by the NHAI to recoup investments. The entity, of course, is required to operate and maintain the stretches.

Addressing a CII event, the minister said the monetisation programme is a win-win situation for both the private sector and the government. While it offers very exciting business and investment opportunities for the private sectors to invest in operating infrastructure that yield returns right from the very start, it also helps the government to unlock the value of investment made, repay debt and re-invest.

Through the TOT route, NHAI has already monetised two highway bundles totaling 1,247 km that fetched the authority Rs 14,692 crore. It, however, had to annul two other monetisation attempts (the second and the fourth rounds) as investors failed to match the floor prices set.

NHAI had invited bids for the two bundles under the fifth round of TOT last September. Adani Group has quoted the highest Rs 1,011-crore bid for the first bundle of 53.6 km national highway stretch under the fifth TOT round, while Nagpur-based DP Jain has offered to pay the highest Rs 1,251 crore to take on a long-term lease for the second bundle of 106 km.

The proceeds from the asset monetisation programme are also used to repay NHAI's debt, which mounted to Rs 2.72 lakh crore, as on November 2020, and to develop highways.

Talking about the National Infrastructure Pipeline, Gadkari said that it has been expanded to cover more than 7,300 projects with a revised investment of Rs 111 lakh crore by 2025. Out of this, projects worth Rs 44 lakh crore are under implementation and projects worth Rs 34 lakh crore are at conceptualisation stage and projects worth Rs 22 lakh crore are under development.

2. Ferroviaire

Despite COVID-19 challenges, Indian Railways logs highest-ever route electrification; details

Financial Express, 05/04/2021

Electrification of Indian Railways Network: Indian Railways' another incredible feat and step towards Green Railway! Piyush Goyal chaired Railway Ministry is marching towards its mission of 100 per cent electrification of the entire Indian Railways network by the year 2023. In this direction, the national transporter has logged the highest-ever route electrification despite unforeseen challenges of the COVID-19 pandemic, registering a 37 per cent jump in one year. According to the Railway Ministry, electrification of 6,015 Route Kilometre (RKM) has been carried out in the financial year 2020-21, surpassing the previous highest electrification of 5,276 RKM in the year 2018-19.

According to details shared by the Railway Ministry, out of the Indian Railways' broad gauge network of 64,689 RKM, a length of 45,881 RKM (71 per cent) have been electrified by 31 March 2021. In total, 34 per cent of rail electrification has been completed in the last three years. The ministry further stated that a record 24,080 RKM (37 per cent of Indian Railways' broad gauge routes) has been electrified since the year 2014 against electrification of 4,337 RKM (7 per cent broad gauge railway routes) during the period 2007-2014.

A few days ago, the West Central Railway zone completed its electrification. After Chief Commissioner of Railway Safety (CCRS) inspection and commissioning of electrification of Kota – Chittaurgarh rail section (Srinagar – Jalindri) in Rajasthan on 30 March 2021, the West Central Railway zone has become the nation's first fully electrified zonal railway. Now, the zonal railway boasts a 3012 RKM electrified rail network. Now, trains running over this rail section can be operated at a faster speed, according to Railway Minister Piyush Goyal. With the completion of electrification on this railway section, there are various benefits for the national transporter such as reduction in travel time, fuel saving, as well as environmental protection.

Indian Railways' infrastructure will never be privatised, assets to be monetised, says Piyush Goyal

Financial Express, 19/03/2021

Railway Minister Piyush Goyal said that Indian Railways' infrastructure will never be privatized. However, the ministry plans to monetize its assets in order to generate resources to boost growth. Also, operations of passenger trains taken up through PPP are targeted to bring a total investment of approximately Rs 30,000 crore, according to a PTI report. The Railway Ministry eyes to monetize assets including through Eastern and Western Dedicated Freight Corridors (DFCs) after commissioning, station redevelopment through PPP, railway land parcels, induction of 150 modern rakes through PPP, multi-functional complexes (MFC), railway colonies, hill railways as well as stadiums, the Railway Minister said during the Question Hour in Rajya Sabha.

According to Goyal, asset monetization would help in generating more resources towards infra creation. The Railways Minister further said that the dedicated freight corridors are a separate corporate entity and the national transporter is supporting them. Indian Railways is supporting but is not the owner of freight rail tracks that are being laid under the DFC project, he said. If the ministry raises funds by leasing them, handing them over to the private sector to utilize in the interim period, the government is doing a service to the nation, the Railway Minister said.

The Railway Ministry, according to the Union Minister, is committed to enhance the pace of infra development, which is vital for the nation's economy as a whole. The national transporter would always be a key economic driver in the strategy of economic growth led by investment, Goyal further said. He said monetization of assets involves various processes of transaction,

and the expected investment depends on the outcome of the bidding process open to the public and private sectors. Therefore, as of now, the actual investment that is expected from private and public sectors cannot be ascertained, the Railway Minister added.

Indian Railways freight revenue in FY21 grows by 3%, loading up 2%

The Economic Times, 31/03/2021

The Indian Railways clocked a 3% increase in freight revenue in FY 21, while the quantum of goods loaded grew by 2%, as per official data shared by the railway ministry.

Loading and revenue of account of freight carried saw a significant growth in the month of March.

The National transporter carried 1,224.45 million tonne of freight this year, compared to 1,205.04 million tonne of goods carried last in FY 20. Revenue on account of goods loaded in FY 21 stood at Rs. 116,634.9 crore, up 3% compared to RS 113,477.9 crore generated last year.

For the month of March this year, loading stood at 122.19 million tonne, 24% more than loading in March 2020, when India announced a nationwide lockdown to control the spread of Covid-19.

While passenger operations of the Indian Railways came to a complete halt in the last week of March 2020, its freight trains were running as usual, even as the share of commodities like cement-- which make up for a significant chunk of the National transporter's freight basket-- came down.

The Indian Railways' freight revenue in March also saw a 24% increase compared to March 2020, with revenue at Rs 12,137.22 crore.

The railway ministry has used the lockdown period last year to upgrade pending infrastructure projects which added to increased speed of goods trains, which are usually lagging because of the priority given to passenger trains to run on the constrained network of the Indian Railways.

The ministry also set up business development units on various divisional, zonal and board levels to attract more freight customers, and identify new areas of freight loading.

3. Développement et transports urbains

'Make in India' push in Mumbai Metro! Alstom wins contract to design, manufacture 234 coaches for Lines 4 and 4A

Financial Express, 30/03/2021

Mumbai Metro: Boost to 'Make in India'! A contract worth €220 million (Rs 1,854 crore) has been awarded to Alstom by Mumbai Metropolitan Region Development Authority (MMRDA) to design, manufacture, test, supply and commission a total of 234 metro cars, including personnel training for Mumbai Metro Line 4 and Wadala-Kasarvardavali-Gaimukh extension corridor. According to a statement issued by Alstom, new products have been added to the company's portfolio as part of Bombardier Transportation's acquisition on 29 January 2021. The combined portfolio of signalling, products, engineering as well as services permits a significantly increased offering for customers across India and the Asia Pacific Region.

According to Alstom, the Line is a 35.3 km long elevated corridor with a total of 32 stations. The line will offer inter connectivity among the existing Eastern Express Roadway, Mono Rail, the ongoing Metro Line 2B between D N Nagar and Mandale, the proposed Metro Line 5 between Thane and Kalyan, Metro Line 6 between Swami Samarth Nagar and Vikhroli. It is expected that Mumbai Metro Line 4 and 4A will reduce the current travel time by 50 per cent to 75 per cent, depending on road conditions.

Ling Fang, Region President, Alstom Asia Pacific said that the company is glad to have been awarded this prestigious project by MMRDA and it looks forward to commencing work on this. The company is proud to play a part in strengthening India's infrastructure as well as

providing world-class mobility solutions to the commercial capital of the nation.

Supporting the modernization initiatives of the Modi government, Alstom has introduced several breakthrough technologies in India with world-class rolling stock, infrastructure, rail equipment, signalling and services. Alstom has delivered metro trains for the cities of Delhi, Lucknow, Chennai, Kochi and at present, the company is executing the Mumbai Metro Line 3 project. Currently, nearly 8000 people are employed by Alstom in India. The firm has six industrial sites across the country- Madhepura in Bihar, SriCity in Andhra Pradesh, Coimbatore in Tamil Nadu, Savli & Maneja in Gujarat and Kolkata in West Bengal.

Single bid for Manimajra 24x7 water project okayed

The Times of India, 06/04/2021

CHANDIGARH: The technical committee of Chandigarh Smart City Limited (CSCL) on Monday approved the single bid for the pilot project of laying a 24x7 water supply system in Manimajra.

The CSCL will now open the financial bid of the eligible company and place it before the board of directors for formal approval to initiate the work on the ground. It was the sixth tender and yet only a single bid was received for the second time. The technical committee found it fit to open.

A source who knows about the contract said: "Since the Manimajra project is worth Rs 160 crore, which includes its maintenance for 10 years, the financial bid is a crucial component but since the technical committee has given the green light, this project moves ahead." In the six rounds of bidding, the companies had presented lengthy documents of financial, audit, and other details, so it took time to scrutinise the and cross-check the papers and match the specifications with the terms and conditions.

This project has two components—capital work and installation of water meters. The CSCL records shows 13,700-odd water connections in Manimajra, to be covered under the pilot project. Decreasing the non-revenue water (NRW) or leakage from 50 to 15% will be the biggest challenge.

The allotment rules binds the contractor to finish the work in 18 months. Besides the pipelines of the outer areas, it will all have to replace the pipelines laid inside the houses in order to stop frequent water contamination.

4. Pétrole, gaz et biocarburants

India to resume buying oil from Iran once US sanctions ease

The Times of India, 08/04/2021

NEW DELHI: India will look to resume buying crude oil from Iran the moment US sanctions are eased, helping it diversify its import basket, a senior government official said.

India stopped importing oil from Iran in mid-2019 following sanctions on the Persian Gulf nation by the Trump administration.

The US and other world powers are meeting in Vienna to revive the Iran nuclear deal. "Once the sanctions are lifted, we can look to resume oil imports from Iran," the official, who did not wish to be identified, said.

Indian refiners have begun preparatory work and can swiftly enter into contracts once the sanctions are lifted, he said.

"We already have a template for commercial terms and we can very quickly enter into contracts the moment Iran is cleared for exporting oil," the official said.

Iranian oil coming into the market will not just cool prices but also help India diversify its import basket.

In 2020-21, Iraq was India's biggest oil supplier, followed by Saudi Arabia and the UAE. Nigeria was fourth-largest supplier and the US was the fifth.

"We have been advocating for oil producers to pump in more oil by easing output caps," the official said. "Rising oil prices are a threat to the fragile economic recovery around the globe including in India."

India, he said, did not advocate for such output increases when prices were within a certain reasonable limit.

"We voiced our concerns when oil crossed $63-64 on a sustained basis," he said. "We want prices that are reasonable for producers and affordable for consumers."

India -- once Iran's second-biggest customer -- imports more than 85 per cent of its oil needs. Iranian crude will bring a number of benefits, including a longer credit cycle and shorter voyage savings on freight costs.

Iranian exports tumbled after former US President Donald Trump tightened sanctions in 2018 and ended waivers for some countries in 2019, including India.

Iran and world powers this week began their most serious attempt yet to resurrect a nuclear deal.

Iran re-started banned nuclear programme after Trump pulled out of the deal and re-imposed sanctions on Iran. Even though new US President Joe Biden wants to rejoin, both sides say the other must make the first move.

India was second-biggest buyer of Iranian oil after China before sanctions halted supplies in May 2019.

Iran in 2017-18 was its third-largest supplier after Iraq and Saudi Arabia and met about 10 per cent of total needs.

Till 2010-11, Iran was India's second-biggest supplier of crude oil after Saudi Arabia but Western sanctions over its suspected nuclear programme relegated it to the seventh spot in the subsequent years. In 2013-14 and 2014-15, India bought 11 million tonnes and 10.95 million tonnes, respectively from it.

Sourcing from Iran increased to 12.7 million tonnes in 2015-16, giving it the sixth spot. In the following year, the Iranian supplies jumped to 27.2 million tonnes to catapult it to the third spot.

Iranian oil is a lucrative buy for refiners as the Persian Gulf nation provides 60 days of credit for purchases, terms not available from suppliers of substitute crudes -- Saudi Arabia, Kuwait, Iraq, Nigeria and the US.

5. Electricité et énergies renouvelables

Cabinet okays Rs 4,500 crore PLI scheme to boost solar equipment manufacturing

Energy World, 07/04/2021

New Delhi: The Union Cabinet on Wednesday approved a Rs 4,500 crore production-linked incentive (PLI) scheme to boost domestic manufacturing capacity of solar PV modules. The PLI scheme is aimed at adding 10,000 MW manufacturing capacity of integrated solar PV modules entailing direct investment of Rs 17,200 crore.

The PLI scheme is likely to create direct employment of around 30,000 and indirect employment of 1.2 lakh, according to the government.

The Cabinet, headed by Prime Minister Narendra Modi, has approved the Ministry of New & Renewable Energy's proposal for implementation of the PLI scheme 'National Programme on High Efficiency Solar PV (Photo Voltic) Modules' for achieving manufacturing capacity of Giga Watt (GW) scale in high efficiency solar PV modules with an outlay of Rs 4,500 crore, an official statement said.

Solar energy capacity addition presently depends largely upon imported solar PV cells and modules as the domestic manufacturing industry has limited operational capacities of solar PV cells and modules, it added.

The National Programme on High Efficiency Solar PV Modules will reduce import dependence in a strategic sector like electricity, the statement said adding it will also support the Aatmanirbhar Bharat initiative.

Solar PV manufacturers will be selected through a transparent competitive bidding process. The PLI will be disbursed for 5 years post commissioning of solar PV manufacturing plants, on sales of high efficiency solar PV modules.

Manufacturers will be rewarded for higher efficiencies of solar PV modules and also for sourcing their material from the domestic market. Thus, the PLI amount will increase with increased module efficiency and increased local value addition.

The government said the scheme is aimed at additional 10,000 MW capacity of integrated solar PV manufacturing plants.

This PLI scheme will see a direct investment of around Rs 17,200 crore in solar PV manufacturing projects and demand of Rs 17,500 crore over five years for "Balance of Materials", the statement said.

It will also help generate direct employment of about 30,000 and indirect employment for about 1,20,000 persons.

Besides, the scheme will also help in import substitution of around Rs 17,500 crore every year, and will give impetus to R&D to achieve higher efficiency in solar PV modules, the government said.

Reliance, other energy majors form hydrogen coalition

Energy World, 07/04/2021

Mumbai: Led by domestic energy giant Reliance Industries, many global energy and industrial players on Tuesday came together to form a new energy transition coalition, called the India H2 Alliance (IH2A), to help commercialise hydrogen technologies in their bid to build net-zero carbon energy pathways in the country. The alliance will work together to build the hydrogen economy and supply-chain here and also help develop blue and green hydrogen production and storage apart from building hydrogen-use industrial clusters and transport use-cases with hydrogen-powered fuel cells, a statement from the alliance said.

However, the statement did not name other founding members in the coalition. The alliance will focus on industrial clusters, specifically steel, refineries, fertilisers, cement, ports and logistics as well as heavy-duty transport use-cases and help establish standards for storing and transporting hydrogen in pressurized and liquefied form, the statement added.

To achieve the objectives, the alliance will work with the government on five areas: to develop a national hydrogen policy and roadmap 2021-30; to create a national H2 taskforce and mission in a public-private partnership format; to identify nationally large H2 demonstration-stage projects; too help create a national India H2 fund; and to create hydrogen-linked capacity covering hydrogen production, storage and distribution, industrial use-cases, transport use-cases and standards, the alliance said.

This alliance seeks to bring in best-in-class hydrogen technology, equipment and know-how to create a hydrogen supply chain in the country. By prioritizing national hydrogen demonstration projects, innovations to further reduce the cost of hydrogen will become prominent, locally.

Anurag Pandey, R&D team lead at Reliance Industries said, "We need to identify and execute large-scale hydrogen demonstration projects if we want to be part of the global hydrogen supply chain. Beyond R&D pilots, we need a 'hydrogen-valley' style national initiatives across a region like a high-traffic industrial freight corridor, with multiple use-cases and the alliance will take the lead in this."

The alliance will have a panel of hydrogen experts and a secretariat to support member companies.

On the India alliance launch, Jillian Evanko, of Chart Industries, which is founding-member of the global alliance, said proactive private-public collaboration is the key to creating a hydrogen economy in the country.

The alliance will bring in best-in-class hydrogen technology, equipment and know-how to create a hydrogen supply chain here so that it helps reduce the cost of hydrogen.

The alliance is an industry coalition of global and domestic companies committed to the creation of a hydrogen value-chain and economy.

ReNew Power pledges to achieve net zero emissions by 2050

The Economic Times, 08/04/2021

The country's biggest renewable energy power producer ReNew Power has committed to

become a net zero emissions by 2050, the company said in a statement on Thursday. It became the first renewable energy company in India to announce such plans. ReNew said that they hope to stabalise global emissions by 2050, and lead the transition to a low-carbon economy. "As one of India's leading renewable energy companies, ReNew Power is committed to tackling climate change by identifying, assessing and managing climate related risks and opportunities," said Sumant Sinha, founder, chairman and chief executive oicer of ReNew Power. "We endeavour to embed sustainability in the ethos, strategies and practices of our organization, as well as in product design, to secure sustainable economic growth and prosperity for all," the first-generation entrepreneur added. Achieving net zero emissions would require the harmful emissions to be offset by increasing forest coverage, among other green initiatives, thus resulting in carbon neutrality.

Having a total capacity of 10 GW, the Goldman Sachs-backed ReNew will list in the US using a special purpose acquisition company (SPAC), at a valuation of $8 billion.

ReNew's net zero emissions announcement comes in the midst of US Climate Envoy John Kerry's 3-day visit to New Delhi. India is the only major greenhouse gas emitter not to commit to any such targets. There was speculation that Kerry's visit might lead Prime Minister Narendra Modi to announce an initiative at the Major Economies Forum, hosted by President Joe Biden on April 22, which happens to be Earth Day. The US hopes to achieve net zero emissions by 2050, while China has set the same target by 2060.

Tata Power Solar doubles its manufacturing capacity of Cells, Modules to 1100 MW

Mint, 07/04/2021

Tata Power Solar Systems Limited, has doubled its solar cell and module manufacturing capacity to 1100 MW, the company said today.

The expansion is based on the significant increase in demand that the company has seen for its solar modules, as well as the expected increase in demand.

"We are happy to expand our production capacity to meet the increased demand for our products. Our 31 years of strong experience in providing high quality solar products with continuous involvement in new technology has helped us to maintain leadership position in both solar manufacturing and EPC services," said Praveer Sinha, CEO & MD, Tata Power.

Tata Power Solar has seen an increase in demand for its products. The expansion comes amid the positive intent of the Government of India towards making this country a manufacturing hub and lessen its dependency on other countries as far as import of solar cells and modules are concerned, the company said.

Tata Power Solar's manufacturing plant in Bengaluru is India's premier integrated cell and module manufacturing facility that meets the highest industry standards. The plant is ISO certified with over 25 years of production experience.

"Tata Power Solar is also India's largest specialized EPC player. It has a successful background of executing large projects such as the 150 MW Ayana at Ananthapur, 50 MW Kasargod at Kerala, 56 MW Greenko, 30 MWp Solar Power Plant in Lapanga, Odisha, 105 MWp of Floating solar at Kayamkulam," the company said.

For year till date, Dec '20, Tata Power Solar revenue was ₹ 2353 crore as per the Q3 audited financials and has a pending order book of 10,000 crore as on 1st April'21.

Karnataka not to invest in thermal power plants going forward: KPCL MD

Energy World, 06/04/2021

The state government has decided to cap thermal power production and not invest in such plants henceforth.

"Karnataka Power Corporation Limited has decided to stop investing in thermal power plants any more. The existing plants will keep running and meet the state's demands," said KPCL managing director V Ponnuraj.

However, according to sources in the energy department, the state is going a step further and considering phasing out thermal power plants in three to five years.

"With the thermal power sector being a dying market and more research being undertaken on power storage vis-a-vis renewable energy, Karnataka will consider the possibility of phasing out the plants," said a senior government official.

But Ponnuraj said existing thermal plants will continue to provide stability to the state's energy demands, given the uncertainty in the renewable energy sector.

"As per Government of India's energy policy, power generation has been divided into three categories - base-load power, round-the-clock power and peak-load power. In Karnataka, we expect thermal power plants to continue providing base-load power until there are some kind of energy storage devices, which may be developed and utilised," said Ponnuraj.

According to the IAS officer, the three major thermal power plants are functioning in the range of 95 to 105 per cent of the unit capacity. Of their 13 units, 12 are functioning; a technical issue is being sorted out at the second unit at Yeramarus (Raichur).

Government officials say Raichur legislators are anxious over the possibility of thermal plants being phased out. "The economy of Raichur, which is likely to be the worst hit as two of the three major power stations are located in the district, will face a crisis. In fact, legislators from the district have been making rounds of the energy department, seeking some concrete responses," said a senior government official.

According to KPCL, the oldest units are located in Raichur Thermal Power Station. All eight units are between 25 and 32 years old. The average lifespan of a thermal power unit, from setting to recovering the value of the capital-intensive unit, is 30 to 40 years.

India can increase renewable target of 2030: Researchers

The Economic Times, 26/03/2021

Researchers at UC Santa Barbara have just released a study that demonstrates why India should double down on renewables. The study examines electricity and carbon mitigation costs associated with achieving aggressive renewable energy targets in India's electricity grid in 2030, and finds that wind-majority or balanced wind-solar targets have the most cost-effective potential for power in India. Researcher Ranjit Deshmukh, and co-authors Duncan Callaway and Amol Phadke, reveal in a paper published in the Proceedings of the National Academy of Sciences that building significant numbers of wind and solar plants (600 GW) will reduce how often fossil fuel power plants must run. This will hold India's 2030 electricity emissions at its 2018 level, at costs comparable to a fossil fuel-dominated grid while nearly doubling the supply of electricity.

As costs decrease, battery storage can cost-effectively avert the need for new fossil fuel power plants. These findings stem from an exhaustive analysis of India's power usage, weather patterns and energy infrastructure. The Indian government set a target of 450 gigawatts of renewable energy capacity by 2030. For comparison, the country's total energy generation capacity today is about 380 gigawatts, out of which 90 gigawatts are of renewable energy, not including large hydropower stations. According to the Council on Energy, Environment and Water (CEEW), India would need to generate at least 83 per cent of its electricity from (non-hydropower) renewable energy sources in order to reach net-zero by 2050. However, mitigating carbon emissions is only one concern when it comes to developing countries like India. "Most of these countries have low historical carbon emissions compared to more industrialized countries," said Deshmukh, an assistant professor in the Environmental Studies Program who leads the Clean Energy Transformation Lab. "So, the approach we take is that if renewable energy makes economic sense, then those countries should deploy more of it." Because the costs of wind and solar, as well as battery storage, are dropping so rapidly, Deshmukh explained, it's actually cost-effective to install these technologies instead of conventional fossil fuel technologies, like coal and natural gas, regardless of environmental considerations. Renewable energy has become cheaper than conventional energy sources simply by avoiding the cost of

fuel that would otherwise need to be mined or, in the case of natural gas, imported to generate the same electricity. Based on his simulation of a few hundred scenarios, Deshmukh and his colleagues contend that India could increase its target to 600 GW of renewable capacity by 2030 and increase the cost to its consumers by only a small amount -- or in many cases actually decrease the cost. Batteries are becoming a cost-effective tool for smoothing differences between energy supply and demand. They can store clean energy for times of peak demand, averting the need to call on conventional power plants, especially the expensive ones that will be operated infrequently. Without this ability to store and shift energy, renewables may not be able to prevent the need for building new coal and natural gas power plants if India hopes to meet peak demand. Fortunately, prices are already becoming so low that it will soon be less expensive to install batteries to store energy when demand is low compared to increasing power production when demand is high. This will shift economic factors even more toward renewable energy.

6. Mobilités électriques

In Delhi, 100 EV charging bays to be set up at 70 Metro stations and 30 other areas with high traffic; details

Financial Express, 17/03/2021

As part of Delhi's push to make a transition away from petrol and diesel vehicles, as many as 100 electric vehicles (EV) charging bays are going to be set up across 70 metro stations as well as 30 other areas which get high traffic. Also, building bye-laws will be amended, making it mandatory for commercial areas with a capacity to park over 100 cars to reserve 5% of their space for charging bays, according to an IE report. For this, malls, associations and others will receive government subsidy. Delhi's power department, on March 12, had announced that to promote the EV policy of Delhi and build infrastructure for it, a total of 500 charging points or 100 charging bays with each having the capacity to charge five vehicles will be set up across the city.

The key objective of this policy is to offer accessible public charging facilities within a distance of 3 km from anywhere in Delhi. Jasmin Shah, vice-chairperson of the Dialogue and Development Commission, was quoted in the report saying that the tender to the firm that will set up charging points will be awarded in the month of April. To ensure the electricity network is in place as well as connected to the grid with an adequate load, the government will foot around Rs 10 crore. As per the PPP model, the other party will establish charging stations as well as recover the cost of it via the service fees they will charge. For the award, the firm offering the lowest service fee will be preferred, Shah said. The calculation of the fee will be done on a per kilowatt-hour basis.

The nodal agency for the project is Delhi Transco Limited. In the tender document, it states that for installation, operation as well as maintenance of PCS / BSF for the designated lease period, the concessionaire shall be responsible. According to Shah, for the project, various authorities were asked to pool land. As many as 250 land parcels were received but they will begin with 100. Shah further added that these areas are well connected and receive traffic.

Most of the charging stations will be for cars. However, there would be slow chargers for two or three-wheelers. Soon, building bye-laws will be amended as well as bodies will be given time until the month of December to comply, Shah said. As per the EV policy, 100% subsidy will be given for the first 30,000 charging points at workplaces, homes or other commercial areas for the purchase of charging equipment worth up to Rs 6,000 per charging point.

India EV battery plant takes shape to cut China dependence

The Times of India, 09/04/2021

NEW DELHI: The son-in-law of India's biggest steel tycoon is betting big on converting coal tar into graphite anodes for electric-car batteries in a bid to test China's monopoly in the sector.

Vikram Handa set up Epsilon Advanced Materials Pvt -- India's first manufacturer of lithium-ion battery parts -- in the southern state of Karnataka in August, sourcing the raw material from the largest steel mill in the country that's owned by his father-in-law, Sajjan Jindal.

Handa plans to invest Rs 6,000 crore ($807 million) to produce 100,000 tons of synthetic graphite anode by 2030, or about 10% of estimated global demand.

Anode materials are the negative electrode in lithium-ion batteries and account for a quarter of a cell's components. China has been producing more than 80% of the world's supply of these anodes, importing raw materials from countries including India.

By producing the anodes in India, Handa aims to transition the South Asian nation from a battery minerals center to a battery materials hub.

India has great scope for the production of electric-vehicle batteries locally because it has access to the raw materials, a $20 billion manufacturing incentive plan, a proposed battery materials policy and improving prospects for demand, Handa, 40, said.

"I'm quite optimistic on the outlook for India's battery space over the next decade," he said. "It's going to take another two to three years for really serious money to go into this space but after, you'll see a lot of money pouring into it. India is such a big auto market that one cannot ignore it."

Several automakers in the country have started producing or have announced plans to make EVs. The latest is Bhavish Aggarwal's Ola Electric Mobility Pvt.

Aggarwal has said he expects the startup will be making 15% of the world's e-scooters by the summer of 2022. Then there's Tesla Inc, which has picked Karnataka, the same state where Epsilon has its factory, for its first plant, according to the state's chief minister.

One prime motivator for this pivot toward new-energy vehicles: cleaning up India's choking toxic air. The adoption of EVs has been slow, crippled by a lack of charging infrastructure and technology, higher costs of the cars and a delayed flow of funds into development and production of batteries and other technologies.

India currently has some battery assembly plants but no cell manufacturers. EVs account for about 5% of China's annual car sales, according to BloombergNEF, compared to less than 1% in India.

"You're so dependent on cells from China that your cost structure can never really come down," Handa said. India has the expertise needed to make the cells, and it has plentiful raw materials like aluminum, copper, electrolytes and nickel, the key elements for batteries, he said, adding that "while everybody keeps talking about lithium, it's a very small part of the whole raw material that goes into the cell."

Epsilon's parent company processes coal tar, mainly sourced from JSW Steel Ltd., into thick black pellets or liquid to be used in everything from automobile tires to fuels and paints. The switch to battery materials would require the company to further process the coal tar.

In addition, Epsilon has secured a patent for the furnace design and expects to file another three patents this year. Currently, it's exporting precursor anode material to China, Japan and Europe.

Handa's ambitions are also getting a push from Prime Minister Narendra Modi's goal to lure manufacturers from China.

Transport minister Nitin Gadkari in March promised to announce a comprehensive battery policy "soon". Epsilon has been in talks with about eight firms that are planning to bid under the government's project to supply the anode, Handa said.

That domestic supply will become critical with EV sales forecast to overtake gas guzzlers in India by the end of the decade as prices become more aligned and infrastructure and technology improves, according to Mahindra & Mahindra Ltd, one of the country's biggest automakers.

"If adoption of EVs picks up in India and tomorrow Tesla comes and sets up a factory, then a big chunk of the anodes will be utilized in the domestic market," Handa said. "We're confident that the Indian market will develop and we will have first mover advantage."

7. Environnement et qualité de l'air

India Inc is getting serious about climate change: Deloitte survey

The Economic Times, 01/04/2021

Climate change and its impacts has emerged as a concern for Indian industry and business. The findings of the 2021 Climate Check: Business Views on Environmental Sustainability, a pulse survey conducted by Deloitte show a growing awareness of the risk that climate change poses to business. However, the gap between awareness and action is still considerable. This is partly the impact of the pandemic and its economic fallout on environmental sustainability efforts. The survey is global in its scope, and business executives in India reflect the global trends. Nearly 75 per cent of executives surveyed in India expressed concern about climate change and recognise that business actions need to reflect a sense of urgency. Introducing the survey results, Michele Parmelee, Deputy CEO and Chief People and Purpose Officer, Deloitte Global said, "businesses have increasingly started to prioritize sustainability initiatives over the last few years, as a series of climate-related disasters—from blazing wildfires to severe droughts to "once-in-a-lifetime" blizzards—consistently demonstrate the seriousness of this crisis".

Parmalee says that the impact of the pandemic and corresponding economic downturn have on the environmental sustainability efforts has been "mixed"—"On the one hand, the pandemic has slowed some of the momentum toward combatting the climate crisis that has been building over the last couple of years. On the other hand, there has emerged a newfound sense of determination that if we act now, we can alter the course of climate change and avoid worst-case scenarios down the line."

The findings of Deloitte's pulse survey about a growing recognition by companies of the risk that climate change poses are in keeping with the findings of the annual report of the CDP, a global environmental disclosure platform. The CDP report released in early March found that over the next five years Indian companies are likely to see a financial impact to the tune of ₹7,138 billion (approximately $100 billion) due to climate risks. "Most businesses have been impacted in some way due to climate change and have therefore set stringent goals to mitigate these risks. Organisations must recognise that dynamic environmental and sustainability policies are now key to their financial growth and competitiveness," said Viral Thakker, Partner, Deloitte Touche Tohmatsu India LLP. What is clear from the survey that at least a third of the respondents globally are of the view that their businesses are experiencing the operational impacts of climate-related disasters and a quarter are experiencing the scarcity of resources due to climate change. In other words, the adverse impact of climate change is no longer a thing of the future but affecting businesses and their activities and revenues. In India, 27 per cent of executives are also concerned about the climate-related reputational damages that already impact or are threatening to impact their organisation. The acknowledgement of climate change and its impacts as a factor that impacts businesses is still however nascent. The survey also found that despite a sizeable majority (75 per cent) identifying climate change as an issue, an almost equal number (70 per cent) said that given the pandemic's adverse economic impact many companies would cut back their sustainability efforts over the next 12 months. Thakker said, "businesses must introduce responsible measures to create long-term value and to achieve customer and employee satisfaction. This requires organisations to collaborate with all stakeholders in their ecosystem and continue to invest in sustainability efforts."

The survey results from India found that two factors that would lead to businesses stepping up their sustainability efforts are societal and employee activism (42 per cent) and new regulatory standards (38 per cent). The survey also found that stepping up on sustainability efforts would yield benefits for companies such as improvement in customer satisfaction (52 per cent) and employee recruitment and retention (55 per cent) and financial health (49 per cent).

Deadlines for coal-based power plants to meet new emission norms extended, environmentalists fume

The Times of India, 02/04/2021

NEW DELHI: The Centre has extended deadlines for coal-based power plants to adopt new emission standards by up to three year and even allowed the defaulters to continue their operations after paying penalty if they miss the new timelines.

Thermal power plants (TPPs) located in different regions will, however, have different deadlines with maximum three years being given to those in comparatively lesser polluting areas. New deadlines were issued by the the environment ministry on Wednesday.

As it will be the third deadline since notification of new emission norms for the coal-fired TPPs, the move drew criticism from environmentalists who said the extension will have grave repercussions for fight against air pollution.

Though TPPs located within 10 km radius of the national capital region (NCR) or the cities having more than one million population will have to adhere to the December 31, 2022 deadline, others including retiring units will have graded deadlines up to December 31, 2025.

The TPPs will have to install pollution control equipment such as flue gas desulphurization (FGD) units within the extended deadline to meet the new emission norms of sulphur dioxide.

"Given that this is the third deadline, the environment ministry needs to clarify what commitments they have received from power companies and ministry of power, which ensures the implementation at least this time around," said Sunil Dahiya, analyst, Centre for Research on Energy and Clean Air (CREA).

According to the notification, a task force will be constituted by the Central Pollution Control Board (CPCB) to categorize thermal power plants in three categories on the basis of their location to comply with the emission norms within the different time limit.

In case of non-compliance, the defaulter units will have to pay a penalty of up to 0.20 rupees per unit electricity generated for continuing the operations beyond the new deadlines.

"Unless the environment ministry has got a commitment from the power companies to award the contracts for construction for pollution control equipment in the next few months and start penalising those who miss to do so, this will turn into an interim milestone for dirty power plants to seek more extension after 2025 at the cost of the public health," said Dahiya.

The environment ministry has issued the notification after getting request for it from the power ministry. The extension of deadline was sought for 448 operational power generating units, citing uncertainties and delays due to the Covid-19 pandemic, and other issues including import restrictions and liquidity crunch in the power sector.

"Extending the deadline once again will have grave repercussions for the fight against air pollution. It will also mean a complete mockery of the Supreme Court and Indian regulators' efforts to control pollution from the coal-based thermal power sector over the last five years," Sunita Narain, director general of the Central for Science and Environment (CSE), had said ahead of the extension. She had made this remark in February while cautioning against extending the deadline.

Narain had then said, "The power ministry's move seems to have been influenced by the industry's consistent efforts to dilute and delay the norms. The industry is obviously not bothered about the health risks posed by pollution from these coal-based power plants."

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Rédacteurs : Dimitri Canton, Marie Bourbon, Thomas Salez, Maxime Du Bois

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