



**MINISTÈRE  
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**REVUE DE PRESSE SECTORIELLE**

**ENERGIE ET DEVELOPPEMENT DURABLE**

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**DE NEW DELHI**

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## En bref

### Infrastructures

- Le projet de méga-port en eau profonde porté par Adani dans le Kerala devrait entrer en service en décembre 2023 et faire concurrence aux ports à conteneurs sri-lankais dans la zone.
- Le gouvernement central encourage les Etats indiens à adopter une approche intégrée pour la construction des infrastructures routières et des réseaux.

### Ferroviaire

- Les Indian Railways ont enregistré en 2021-22 un record de volume de fret transporté et d'électrification du réseau ferré.
- Selon un rapport du Contrôleur Général des Comptes indien (CAG), le seuil de vitesse moyenne de circulation des trains « super rapides » fixé à 55 km/h, bien que bas, n'est majoritairement pas atteint sur les lignes concernées.
- Les entreprises publiques SJVN, BHEL et REMC signent un accord pour développer des projets renouvelables pour le compte des Indian Railways.

### Développement et transports urbains

- La Banque Asiatique de Développement accorde un prêt de 2 millions de dollars pour soutenir le développement urbain durable dans l'Etat du Nagaland.

### Energies fossiles et biocarburants

- La Banque Mondiale et le gouvernement indien vont collaborer sur une feuille de route pour la fermeture des mines de charbon.
- La demande de carburant atteint son plus haut niveau depuis trois ans.


### Electricité et énergies renouvelables

- IndianOil, L&T et ReNew forment une co-entreprise pour développer leurs activités dans le domaine de l'hydrogène vert.
- Les développeurs de projets éoliens plaident en faveur du réexamen de la politique tarifaire indienne afin d'améliorer la rentabilité des projets.
- Du fait des nombreux changements réglementaires et des retards de mise en service engendrés par la pandémie, l'Inde risque de rater son objectif de 175 GW de capacité d'énergie renouvelable installés d'ici la fin 2022.
- Le Ministère de l'Electricité annonce la publication prochaine d'appels d'offre pour le développement de 2 GW de champs éoliens offshore au large du Gujarat et du Tamil Nadu.

### Mobilités électriques

- Le nombre limité de modèles commercialisés en Inde restreint la capacité des administrations publiques à acquérir des véhicules électriques.
- Le déploiement des véhicules électriques en Inde reste étroitement corrélé à leur coût d'usage par rapport aux véhicules thermiques selon un rapport du Crisil.

### Environnement et qualité de l'air

- Le gouvernement central incite le gouvernement de Delhi à prendre ses responsabilités pour réduire la pollution de l'air dans la capitale.
  - Le GIEC urge l'Inde à réduire ses consommations d'énergies fossiles et à développer sa finance climatique pour enrayer la croissance de ses émissions de gaz à effet de serre.
  - L'Inde produit 3.5 millions de tonnes de déchets plastique par an selon les données officielles.
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# Revue de presse

## 1. Infrastructures

Adani Vizhinjal port: Strategic boost to India's maritime credentials

*The Hindu Business Line, 03/04/2022*

Given the lack of adequate port infrastructure in the country, this project could be a gamechanger for ports.

The ₹7,525-crore deep-water, multipurpose, international seaport and container transshipment terminal at Vizhinjam, near Thiruvananthapuram — being constructed by Adani Vizhinjam Ports Pvt Ltd (AVPPL) — will go to entrench India's position in the maritime world.

The project has acquired significant geopolitical credentials, given the growing influence of Chinese and Pakistan interests in the neighbourhood. It also goes to address India's glaring lack of a massive seaport with the required draft for Mother Ships — large ships — to call in the south. And, it is just 10 nautical miles (NM) from the international sea route, linking the Far-East with both the Middle-East and Suez Canal. Colombo is 28 NM away from this route.

### Competition

Vizhinjam could offer significant competition to the transshipment ports of Colombo, Singapore and Dubai that annually divert 5 million TEUs (twenty-foot boxes) of cargo for lack of a comparable port infrastructure in India. Being able to handle the traffic in Vizhinjam can prevent

huge time and cost overruns for businesses here, as one can move containers to the destination the same day by rail or road. Indian ports annually lose nearly \$220 million of potential revenue on transshipment handling of cargo originating/destined for India.

The mega project is nearly 80 per cent complete after a series of force majeure events delayed work past the original commissioning in December 2019. Construction started on December 5, 2015, but cyclone Ockhi in 2017 followed by the century's worst floods in 2018, a near-encore in 2019, and the Covid pandemic in 2020 forced developers to go back to the drawing board several times. "The AVPPL and implementing agency Vizhinjam International Seaport Ltd are trying their best to expedite the project," says Rajesh Jha, CEO, AVPPL.

A narrow corridor of five to six months from October to May is all they get for work, after two disruptive monsoons. But AVPPL is pushing itself with a target to commission the first phase by December 2023 and the second by December 2024, he said. For Mother Ships sailing on the international sea route, the natural draft of 18-20 metres at Vizhinjam is a godsend. They can now hope to berth and find an adequate turning radius in the tranquil waters, bounded by what will be a nearly 3,000-metre-long breakwater.

### Advantage Vizhinjam

If the current capacity of Mother Ships ranges between 18,000-22,000 TEUs, trade and logistics circles are animatedly discussing those of 24,000-28,000 TEUs. The nearby Thiruvananthapuram International Airport too has come under Adani

management. The international airport and the domestic and international seaport are so close to each other; a unique feature which Vizhinjam boasts.

AVPPL hopes to give a superior value proposition to customers. The port will have an initial capacity of 0.6 million TEUs and progressively 1 million TEUs. The capacity is sought to be raised by adding berths which will entail further environment clearance.

Nanoo Vishwanadhan, a Dubai-based expert in maritime law, says that Vizhinjam has the potential to take on rivals, subject to development of a niche ecosystem across related domains. The timing could not have been better too, with India emerging as a credible alternative to China as a manufacturing and logistics hub. The flip side is that it could eat into the business of the Vallarpadam International Container Transshipment Terminal, 176 NM to the North along the same coast.

Centre proposes integrated development of highway infrastructure

*Mint, 05/04/2022*

With an impetus on infrastructure creation, Centre has now asked states to undertake an integrated approach for construction of roads so that all other associated infrastructure are installed simultaneously including power transmission lines, water pipelines among others and the roads do not have to be dug frequently for further installation projects in the future, said union minister of state for housing and urban affairs, Kaushal Kishore.

In an interview to Mint, Kishore said that he recently held a meeting with representatives

of few states, wherein he gave the proposal to adopt a coherent and integrated approach and all agencies of respective states including the Public Works Department (PWD), department of power, department of water among others meet and plan laying down all the required infrastructure, including power and water pipelines simultaneously during the construction of a particular road. "At present, PWD constructs a road, then comes the power department which digs that road and lays power lines, then the water department lays water pipelines and so on, digging the road every now and then, causing much inconvenience to the public," the minister said.

"We have proposed that whenever a road is constructed, people of all departments should sit together and decide on which infrastructure would be laid down under the road and it should be ensured that those are laid down before or simultaneously along with the construction of the road, rather than later, so that the roads are not dug again, this will help in saving money and time," he added.

The development comes at a time when the government is giving a major emphasis on infrastructure development. The Union Budget for FY23 also announced that the infrastructure development in the country would be guided by the PM GatiShakti initiative.

Further, in this year's budget, Finance Minister Nirmala Sitharaman also stressed on urban planning and announced the constitution of a high-level committee of urban planners, urban economists and institutions to make recommendations on



urban sector policies, capacity building, planning, implementation and governance.

Speaking on the flagship 'Smart Cities Mission', Kishore said that the mission would be completed by the extended timeline of 2023. On the delay in its implementation and completion, he said that the delay was largely on the back of alleged lacklustre attitude of the non-BJP states.

He said that during the inception of the scheme in 2015, the then Samajwadi Party government in Uttar Pradesh delayed the process of selection of cities in the state.

"The state government under Akhilesh Yadav took around three years from 2015 to 2018 to select just 10 cities, and such delays by several non-BJP governments delayed the overall process as the work could not start till all the 100 cities were not selected," Kishore, who is a Lok Sabha member from Mohanlalganj constituency in Uttar Pradesh said.

## 2. Ferroviaire

From record electrification to massive freight loading, see major achievements of Indian Railways in 2021-22

*Financial Express, 04/04/2022*

During fiscal 2021-22, the national transporter has achieved milestones in various categories including electrification, freight loading, new line, doubling, gauge conversion, locomotive production as well as integration of technology for ensuring safety, according to the Railway Ministry. From freight loading of 1418.10 Million Tonnes during 2021-22 to electrification of 6,366 Route Kilometres during 2021-22, the following are some major highlights of the

achievements made by the Indian Railways network in the financial year 2021-22:

-Freight Loading: Indian Railways, during the year 2021-22, has loaded 1418.10 Million Tonnes of freight as compared to 1233.24 Million Tonnes of freight in the financial year 2020-21, which is 184.99 MT (15 per cent) more. According to the ministry, this is the highest ever freight loading for Indian Railways in a financial year and Indian Railways has achieved the highest ever monthly loadings in consecutive respective 19 months from September 2020 to March 2022.

-Electrification: Record electrification of 6,366 Route Kilometres has been achieved in the history of Indian Railways during the financial year 2021-22. Previously, the highest electrification was 6,015 Route Kilometres during 2020-21. As on 31 March 2022, out of 65,141 Route Kilometres of the Broad Gauge network of Indian Railways (including KRCL), 52,247 Broad Gauge Route Kilometres has been electrified, which is 80.20 per cent of the total Broad Gauge network.

-New Line/ Doubling/ Gauge Conversion: In New Line, Doubling and Gauge Conversion, 2904 Kilometres were achieved against the target of 2400 Kilometres, and 2361 Kilometres for fiscal 2020-21. It is 23 per cent more than that of last year. Also, it is the highest commissioning ever (excluding DFC)

-The highest ever electric Locomotive Production and Induction of 1,110 locomotives was achieved in fiscal 2021-22

-The highest ever Scrap Sale achieved an amount of Rs 5316.1 Crore in 2021-22, as

compared to Rs 4571.4 Crore in the year 2020-21 (Target: Rs 4100 Crore)

-The total Panel or Electronic Interlocking of railway stations achieved 444 and Kavach commissioned at 850 Route Kilometres. 55-kmph benchmark to classify trains as 'superfast' quite 'low', says CAG report.

*The Economic Times, 07/04/2022*

The 55-kmph benchmark is quite "low" for classifying trains as "superfast", the CAG has said while highlighting that many such trains run below the minimum speed. In May 2007, the Indian Railway decided that if the average speed of a train, in both up and down directions, is a minimum of 55 kmph on broad gauge and 45 kmph on metre gauge, it would be treated as a 'superfast'.

In November last year, the Railways had stated the extant policy for categorisation of services into 'superfast' stipulates that such trains should have an average end-to-end speed of above 55 kmph.

"The reply is silent on the fact that 123 trains categorised as superfast were actually scheduled for running at an average speed less than 55 kmph fixed under the extant policy," the Comptroller and Auditor General of India stated.

It noted that the "benchmark of 55 kmph for classifying a train as superfast is itself low, given the MPS of rolling stock and sectional speed".

The criteria for classifying trains as 'superfast' has not been changed since 2007, the CAG stated.

"Audit found that out of 478 'superfast' trains of the Indian Railway, the scheduled speed of 123 'superfast' trains was less than 55 kmph," it mentioned in its report submitted on Wednesday.

The CAG audit also found that amid little improvement in average speeds, the travel time of trains has increased over the past few years and that overall punctuality has declined.

A review of the Complaint Management System by the CAG revealed there was a sharp increase in the number of complaints about punctuality in the Indian Railway.

During the periods 2015-16, 2016-17 and 2017-18 the number of complaints lodged in the system for late running of trains was 9,112, 20,025 and 35,793, respectively.

The complaints increased to 40,077 in 2018-19, a 340 per cent rise since 2015-16.

The audit also found that for mail and express trains for 2016-17, 2017-18 and 2018-19 an average of 13,15,456 trains were reported through the integrated coaching management system each year. Of these, only 29.64 per cent (3,89,877 trains) reached on time and 20.17 per cent (2,65,391 trains) arrived before time. The remaining 50.19 per cent (6,60,188 trains) were delayed.

Before-time cases indicate poor timetabling by the provision of extra running time."The audit is of the view that punctuality measured on terminating basis does not conform to global best practices. It noticed that by computerized timetabling, the grouping of trains, conflict resolution and integrated maintenance, punctuality of trains can be improved," the CAG report noted.

SJVN signs pact with BHEL, REMC to develop renewable projects for Indian Railways

*The Economic Times, 14/04/2022*

State-owned SJVN has inked a memorandum of understanding with engineering firm BHEL and REMC Limited to develop renewable energy projects. SJVN CMD Nand Lal Sharma in a statement on Monday said that the company has entered into a landmark agreement with REMC Limited and BHEL for the development of renewable energy projects for Indian Railways.

The signing of the MoU would usher in a new era of more efficient consumption of power in the Indian Railways, while also leading to more competitive tariffs for the overall benefit of consumers, according to the statement.

Sharma said that under the MoU signed today, all the parties will work together to leverage their core strength in project development for the establishment of renewable energy projects for use by Indian Railways.

This pact will be a step toward meeting SJVN's target of renewable energy as well as Indian Railways' target of becoming a net-zero carbon emission mission by 2030.

SJVN is adding significant capacities to its portfolio to pursue this vision. At present, the company has twelve solar power projects of 3,065 MW capacity under various stages of development with a total portfolio of more than 16,900 MW. The MoU was signed by RK Gupta, CGM, BDE SJVN

Limited, REMC GM Rupesh Kumar and Sudripto De, AGM, BHEL.

This gigantic portfolio expansion has led to SJVN's new shared vision - 5,000 MW by 2023, 25,000 MW by 2030 and 50,000 MW installed capacity by 2040. The company is striding ahead to achieve its shared vision and to be a partner in the sustainable development of the Nation, the statement said.

### 3. Développement et transports urbains

Asian Development Bank to provide \$2 million loan to support urban development in Nagaland

*The Hindu, 12/04/2022*

The Asian Development Bank (ADB) will provide a \$2 million loan for designing climate resilient urban infrastructure, strengthening institutional capacity and improving municipal resource mobilisation in Nagaland.

Government of India and ADB on Tuesday signed the \$2 million Project Readiness Financing (PRF) loan, the Manila-headquartered lender said in a release.

Nagaland's towns and cities face the long-term challenges of climate change, lack of basic amenities, poor connectivity.

Major transport routes around urban areas are severely affected by landslides during the monsoon season. Urban roads are in poor condition without proper stormwater drainage, ADB said.



The PRF loan will help design water supply, sanitation, solid waste management and urban roads in 16 district headquarter towns (DHTs) with climate resilient features and improved access to poor and vulnerable.

Capacity building of state agencies will help augment own-resource mobilisation by urban local bodies, improve their readiness for implementing the ensuing project and initiating sector and institutional reforms, ADB said.

#### 4. Energies fossiles et biocarburants

Govt in discussion with World Bank for collaboration on coal mine closure framework

*Financial express, 13/04/2022*

The coal ministry is in discussions with the World Bank for collaboration on the mine closure framework, a government official said on Wednesday.

Coal Additional Secretary M Nagaraju said the government is committed to ensuring that mines are properly and scientifically closed for the benefit of the society.

"We are now actually collaborating with the World Bank to develop a coal mine closure framework," Nagaraju said during a webinar. Vast experience of the World Bank in handling mine closure cases in different countries will be highly beneficial and facilitate the adoption of the best practices and standards in handling mine closure cases.

The additional secretary also said both renewable energy (RE) and coal will go hand in hand complementing each other for some

more time and then RE will take over the energy security of the country.

The ministry had earlier said it is in the process of finalising a robust mine closure framework on three major aspects – institutional governance; people and communities; and environmental reclamation and land re-purposing on the principles of just transition.

The ministry had earlier said that as of now, the Indian coal sector is doing its best to fulfill the country's energy demand by augmenting coal production. At the same time, it is also taking various initiatives towards adopting the path of sustainable development with an emphasis on care for the environment and the host community.

However, the Indian coal sector, the ministry had said, is relatively new to the concept of systematic mine closure. Mine closure guidelines were first introduced in 2009, re-issued in 2013 and are still evolving.

"As coal mining in India had started long ago, our coalfields are replete with several legacy mines remaining unused for long. In addition, mines are closing and will close in future also due to reasons such as exhaustion of reserves, adverse geo-mining conditions, safety issues, etc," the ministry had said.

These mine sites should not only be made safe and environmentally stable but the continuity of livelihood should also be ensured for those who were directly or indirectly dependent on the mines, it had said.

Reclaimed lands will also be repurposed for economic use of the community and state,



including tourism, sports, forestry, agriculture, horticulture and townships.

The coal ministry has, therefore, envisaged building an all-inclusive comprehensive nationwide mine closure framework to cover legacy mines, recently closed mines and mine closures scheduled to happen in the short term, the statement had said.

Fuel demand hits 3-year high in March, petrol sales at all-time peak.

*The Times of India, 11/04/2022*

NEW DELHI: Fuel demand rose to a three-year high in March, with petrol sales hitting an all-time peak, as the market accumulated supplies foreseeing price spikes, despite which the outlook for the country's post pandemic economic recovery remains promising.

Consumption of fuel, a proxy for oil demand, rose 4.2% from the same month last year to 19.41 million tonnes, its highest since March 2019, according to the country's oil ministry's Petroleum Planning and Analysis Cell data as on April 9.

"March oil demand was strongly supported by stockpiling activity/hoarding in anticipation of a rise in petrol and diesel prices in the later part of the month," UBS analyst Giovanni Staunovo said.

Preliminary data this month showed state refiners' gasoil and gasoline sales in March surged on increased demand from dealers and consumers ahead of an expected sharp rise in retail prices after elections in key states. "So this (higher prices) likely will weigh on demand prospects in the near term, but with the economy still expanding,

oil demand is likely to continue recovering over the coming months," Staunovo said.

Sales of gasoline, or petrol, were 6.2% higher from a year earlier at 2.91 million tonnes, their highest ever as per data going back to 1998.

To mitigate the rising cost of oil imports, India has turned to Russian barrels that are available at a deep discount citing "national interests".

Indian refiners have bought at least 16 million barrels of cheaper Russian oil for May loading on a delivered basis, similar to purchases for the whole of 2021, according to Reuters calculations as of last week.

While imports of Russian oil have kept India's economy, emerging from its pandemic slowdown, on track, "India is also needing to tread carefully politically," said Jeffrey Halley, chief market analyst at OANDA

## 5. Electricité et énergies renouvelables

IndianOil, L&T and ReNew join hands for green hydrogen business.

*The Hindu Business Line, 04/04/2022*

Indian Oil Corporation Ltd (IndianOil), Larsen & Toubro (L&T) and ReNew Power have agreed to form a joint venture to develop the nascent green hydrogen sector in India.

The tripartite venture is a synergistic alliance that brings together the strong credentials of L&T in designing, executing, and

delivering EPC projects, IndianOil's established expertise in petroleum refining along with its presence across the energy spectrum, and the expertise of ReNew in offering and developing utility-scale renewable energy solutions.

Additionally, IndianOil and L&T have signed a binding term sheet to form a JV with equity participation to manufacture and sell electrolyzers used in the production of green hydrogen.

Speaking about the joint venture, SN Subrahmanyam, CEO & MD, L&T, said, "India plans to rapidly march ahead in its decarbonisation efforts and production of green hydrogen is key in this endeavour. The IndianOil-L&T-ReNew JV will focus on developing green hydrogen projects in a time-bound manner to supply green hydrogen at an industrial scale. While L&T will bring its strong EPC credentials to the table, IOC being India's premier oil refiner with extensive capabilities in chemical processes and refining has established deep R&D capabilities in many aspects of green hydrogen value chain, and ReNew Power has in a short time established itself as a leading renewable energy supplier and has built itself a very strong reputation. We consider this partnership as a significant step in India's quest for alternative energy."

On the JV, Shrikant Madhav Vaidya, Chairman, IndianOil, said, "To start with, this partnership will focus on green hydrogen projects at our Mathura and Panipat refineries. Alongside, other green hydrogen projects in India will also be evaluated. While the usage of hydrogen in the mobility sector will take its due time, the refineries, however, will be the pivot around which

India's green hydrogen revolution will materialise in a substantial way."

Sumant Sinha, Chairman and CEO of ReNew Power said, "In alignment with the government's broader strategic climate goals for 2030 and 2070 set by honourable Prime Minister Narendra Modi, ReNew looks forward to working with L&T and IndianOil to build the green hydrogen business in India. ReNew, as a leader in intelligent energy solutions and with advanced capability across renewable energy technologies, is well poised to complement the capabilities of our partners."

The planned JVs aim to enable India's transition from a grey hydrogen economy to a greener economy that increasingly manufactures hydrogen via electrolysis powered by renewable energy.

The Centre in February notified the Green Hydrogen Policy aimed at boosting production of green hydrogen and green ammonia to help the nation become a global hub for the environmentally friendly version of the element.

For countries like India, with its ever-increasing oil and gas import bill, green hydrogen can also help provide crucial energy security by reducing the overall dependence on imported fossil fuels.

While nearly all hydrogen produced in India today is grey, it is estimated that demand for Hydrogen will be 12 MMT by 2030 and around 40 per cent of the element produced in the country (around 5 MMT) will be green, as per the guidelines in the Draft National Hydrogen Mission.

By 2050, nearly 80 per cent of India's hydrogen is projected to be 'green' —

produced by renewable electricity and electrolysis. Green hydrogen may become the most competitive route for hydrogen production by around 2030. This may be driven by potential cost declines in key production technologies and in clean energy technologies such as solar PV and wind turbines.

Today, hydrogen is mainly used in the refining, steel and fertiliser sectors, which will be the focus of the JV's initial efforts. The country's refining sector consumes approximately 2 MMT of grey hydrogen every year, with IndianOil owning one of the largest shares of its refining output.

Wind industry makes a case for rethink on tariff discovery.

*The Hindu Business Line, 04/04/2022*

**The wind energy industry wants the government to help it sell directly to customers**

Ahead of the long-awaited international wind energy conference and expo Windergy India 2022 (scheduled for April 27-29), the Indian industry has made a case for a rethink on tariff discovery.

Its pitch is simple. Back in 2017, when the central government brought in capacity auctions — the entity that offered to sell power cheapest would get a power purchase contract — it was well understood that the tariffs would fall because of competition.

Until then, wind energy companies sold electricity under fixed 'feed-in tariffs' determined by the respective state electricity regulator. The lowest feed-in tariff at that time was ₹4.16 a kWhr, in Tamil Nadu. But after the first capacity auction in

February 2017, the tariff fell to ₹3.46 a kWhr. This would fall further to ₹2.44 in subsequent auctions.

The broad understanding was that the industry would be compensated for the low prices by higher volumes — but this never happened.

Here is a telling statistic: Total capacity tendered out (by the government-owned company SECI) is 16,300 MW, of which 12,470 MW has been awarded. But only 3,196 MW has been commissioned.

"It is true that getting land and connection to the grid have been issues," says DV Giri, Secretary General of the Indian Wind Turbine Manufacturers' Association (IWTMA), a leading voice in the industry, "but one big reason for the poor execution of projects is that the aggressive bidding does not have any cushion for uncertainties."

Of the awarded capacity, about 1,520 MW has been surrendered and another 1,000 MW is likely to be surrendered too, according to industry sources.

Competitive tariff bidding had another fallout. Earlier, companies that were in other businesses such as textiles or engineering would put up small capacities, say 5-10 MW, for depreciation benefits or as a green effort.

Competitive bidding, however, set the minimum at 50 MW. The small-capacity guys could not compete with the biggies. Nor could they sell to the electricity distribution utilities, which preferred the cheaper power that SECI had bought through auctions.

The bottom line is this: the competitive bidding mechanism, though well-intentioned, has not delivered.



## What next?

A return to fixed feed-in tariffs seems unfeasible, for reasons of both economics and politics, given the poor health of the state-owned electricity distribution utilities (discoms), which are the major buyers of wind power.

The industry is clear that it has to move away from discoms. Fortunately, there are options. Selling directly to customers, particularly in the 'commercial and industry (C&I)' category, is lucrative because they pay the utilities far more than what the wind industry would charge them.

Another option is to sell through the energy exchange IEX for a remunerative price.

The industry, therefore, has one ask of the government: make it easier and cheaper for us to sell directly to customers. This essentially entails two things — waiver of inter-state transmission charges (which could be as high as ₹2 a kWhr) and allowing wind companies to bank their power with the grid for (say) three months. Currently, inter-state transmission charges are waived until 2025; IWTMA wants it extended up to 2030. Banking would enable the wind company to park its electricity in the grid and draw it later, when there is demand.

## Looking up

While on one hand the annual wind power installation numbers are dismal, on the other, one senses a revival of optimism in the industry — not in the least because two big business houses with deep pockets, Adani and ReNew, are getting into the wind energy sector.

Both are opting for an integrated, manufacture-and-supply model. Adani (perhaps through Adani Green Power) is readying to put up a 5.2 MW prototype in-house, with technology from W2E Wind Energy of Germany. The machine is likely to be manufactured by a company set up by the promoters of the Adani group; the turbine will be set up at Mundra, a windy coastal town. Once proven, Adani will proceed to mass manufacture the turbines, self-consume and also export.

ReNew is in the process of taking over the insolvent turbine manufacturer Regen Powertech. It is also talking to the Chinese turbine maker Goldwind to buy 3.4 MW machines; it has placed an order for 600 MW from another Chinese company, Envision (which, incidentally, has bagged 1,900 MW worth of orders from India).

Talk to wind industry insiders and you will find that the despondency of a year ago has lifted now. More clarity on the future is likely to emerge at Windergy 2022.

With the pandemic halting work and projects hitting logistics snags, India is on track to miss its goal of increasing renewable energy capacity to 175 gigawatts by the end of 2022.

*Mint, 01/04/2022*

From curbing emissions to increasing forest cover, India has often boasted about making progress toward its pledges under the 2015 Paris climate change accord. But officials have kept quiet about one target lately: boosting renewable energy.

That may be intentional. With the pandemic halting work and projects hitting logistics snags, India is on track to miss its goal of increasing renewable energy capacity to 175 gigawatts by the end of 2022. Solar and wind alone account for 160 gigawatts and the country could fall 36% short of that figure, Bloomberg NEF estimates.

The potentially disappointing numbers offer insight into structural problems facing India on its journey to decarbonization. Domestic power suppliers, which control nearly 90% of electricity transactions, are struggling to stem losses and shrink a pile of debt. That crimps their ability to buy enough power to service customers, resulting in delayed payments to power producers and stifling growth across the industry.

Financial distress in state retailers is a major reason why this year's target seems out of reach. Many projects auctioned by the federal government have struggled to find buyers, people familiar with the matter said. About a quarter of wind projects awarded in auctions so far have failed to take off due to problems related to distribution utilities, according to BloombergNEF.

"We need to stop depending on state power distribution companies to expand green capacity," said Debasish Mishra, a Mumbai-based partner at Deloitte Touche Tohmatsu. "As long as we keep depending on these utilities, our climate targets will be at risk." The country's renewable energy ministry didn't respond to emailed questions.

India is seeking to revamp its fossil fuels-driven economy by expanding renewable energy and embracing new technologies like green hydrogen and green ammonia. Some parts of the country have been driven to

extremes in the quest to provide affordable energy to citizens.

In 2019, the southern state of Andhra Pradesh decided that it was paying too high a price for clean energy. After years of litigation, the local high court recently ruled in favor of power developers. The state's decision was a setback for investors, though it has helped restore faith that they're shielded from retroactive tariff changes, said Shantanu Jaiswal, the head of BNEF in India.

"The main reason that we have fallen behind the target is that there have been too many policy changes," said Pinaki Bhattacharyya, the chief executive officer of Amp Energy India, a solar power developer. "This is a business where you have to make most of the investment upfront. If there's a policy change that impacts the cost, that is something that will slow down the sector."

Confusion over taxes is common. A recent increase in India's national sales rates, as well as the imposition of import tariffs, have created uncertainty about costs. Last September, the country raised the goods and services tax on renewable energy equipment from 5% to 12%, causing an unexpected headache for developers.

In 2019, India started imposing tariff barriers to protect domestic makers of cells and modules, levying a safeguard tax on imports. The renewable energy ministry said a new customs tax would take effect as soon as the safeguard duty expired in July 2020. But companies including the Adani Group sought an extension of the duty.

For weeks, developers remained in doubt about new import tax rates. Earlier this year, Scatec ASA said it had put on hold 900

megawatts of solar projects in India due to low domestic module supplies and a 40% customs duty which will be imposed starting in April. The Norwegian power company had partnered with India's Acme Solar Holdings to build the projects.

To finesse its renewables numbers, India's government has started counting hydropower projects bigger than 25 megawatts, though the original target only accounted for solar, wind, smaller hydropower projects and biomass.

The country had 152.9 gigawatts of renewable power capacity at the end of February, including 46.5 gigawatts from large hydroelectric plants, the power minister, R.K. Singh, told lawmakers in March. He said another 72.6 gigawatts were at different phases of implementation.

Still, that doesn't change the distance India needs to cover, especially if it wants to meet another goal of 500 gigawatts of non-fossil power generation by the end of the decade. Prime Minister Narendra Modi set that stretch target at the COP26 climate summit in Glasgow, UK, in November.

Govt to invite bids for 2 GW offshore wind energy projects soon.

*Mint, 07/04/2022*

**NEW DELHI:** Union Minister for Power R.K. Singh on Thursday said that government will soon invite bids for 2 GW of offshore wind energy projects.

Addressing the Clean Energy Ministerial Meeting here, the minister invited global investors to bid in the upcoming tenders.

"Our journey is incomplete without offshore wind energy. We will bring bids for 1,000 MW in Gujarat and after that 1,000 MW in Tamil Nadu," he said.

On Thursday, the minister also said that the government plans to invite bids for a nine-gigawatt electrolyzer manufacturing capacity to boost the domestic production of green hydrogen.

The minister also urged the international investors' community to create a fund to finance clean energy and storage projects.

Green energy has come to the forefront of the Centre's policy making process with Prime Minister Narendra Modi's commitment at the COP-26 Summit at Glasgow of turning India carbon neutral by the 2070.

The Union Budget this year gave a blueprint of the government's major emphasis on energy transition and renewable energy.

Singh, who also holds the portfolio for new and renewable energy, noted that India's present clean energy capacity is at 160 GW, and it would have been 10 to 15 GW more if the pandemic had not occurred.

## 6. Mobilités électriques

Choice a hurdle for centre, State bid to go electric

*The economic Times, 08/04/2022*

The central and state governments are likely to trade more than half a million diesel and petrol cars with electric vehicles, but a lack of choice with just one model that fits the



bill is posing a constraint to the plan, a senior government official said.

Electric versions of the Tata Tigor and Tata Nexon are the only India-made EVs that come within the price range that the government targets. Among these two, only one meets the requirements of the government currently.

The government would want to see a choice of models before floating a tender, said Mahua Acharya, managing director of Convergence Energy Services Ltd (CESL), the state-run company that handles the acquisition of EVs for central and state government departments.

"We want to induct more (electric) cars because governments (state and central) are changing their fleet. There is only one car in the range that is generally affordable by government, and this one too has a waiting period," she said, adding that there were more than 600,000 government (Centre and states combined) vehicles.

"(In) four wheelers, we do not have enough models right now. I am looking forward to this new set of models coming along, as they (carmakers) have promised to launch in the next 12 months or earlier," Acharya said.

The shift to electric cars and SUVs by government departments could generate a business of Rs 65,000-70,000 crore in the next three years for the EV industry, according to an ETIG analysis.

In fact, the Centre is aiming for a transition to electric across automobile segments, right from two-wheelers to trucks, and its plans include setting up charging infrastructure and even incentivising vehicle

makers to produce EVs locally. CESL has created an online marketplace for two wheelers, called MyEV.com.

A tender for 5,580 electric buses that CESL has floated is set to generate close The shift to electric cars and SUVs by government departments could generate a business of ₹65,000-70,000 crore in the next three years for the EV industry, according to an ETIG analysis. Agencies Industry English Edition | 08 April, 2022, 02:25 PM IST | E-Paper to Rs 5,500 crore of business. Another for 100,000 three-wheelers is expected to be worth about Rs 3,000 crore. But the biggest pie will come from passenger vehicles.

Manufacturers are also gearing up for the opportunity, as public adoption of EVs is also growing. In the coming three-four years, about a dozen new locally manufactured electric passenger vehicles are expected to hit the roads, from the likes of Tata Motors, Mahindra & Mahindra, MG Motor, Hyundai Motor and Kia.

Tata Motors will be bringing EVs below its existing range of Tigor and Nexon, including an all-new Tiago, Punch and Altroz EVs. Also, it will launch the Nexon EV with a 400-km range in less than a week's time.

On the electric buses front, all the bids have been already submitted and will be opened any time soon, said Acharya.

Suppliers of electric buses to state transport undertakings under the latest tender need to ensure the quality and efficient operation of the buses. These buses will be deployed in Delhi, Bengaluru, Surat, Hyderabad and Kolkata.

On three-wheelers, Acharya said the government was able to secure the fleet with a price reduction of 18-25%, based on the variety of goods and payload requirements.

"We have been working to enable those vehicles to come on the road. Nearly 50% of the demand has come from public agencies, and the rest from private aggregators," she said.

The company also attempted the aggregation exercise for two-wheelers, but due to the wide variety of options available, it decided to create a marketplace.

"Governments are using MyEV.org to make purchases. And there are a number of financial institutions which have been empanelled. So, government employees can choose their bike," she said.

Acharya said the government was moving very rapidly to mobility as a service.

"The market for public mobility is going to be electric. It is just cheaper. Of course, from the climate point of view, it is an absolute imperative," she added.

A milestone's been spied for a switchover to EV's.

*Mint, 13/04/2022*

Time and again, road transport and highways minister Nitin Gadkari has expressed confidence that electric vehicles (EVs) will achieve price parity with conventional petrol burners in India within two years. Governments under climate pressure are given to mixing projections with wishful thinking, and unless the Centre amps

up subsidies, that looks unlikely in most market segments.

Since electric and fuel-burning engines differ so much, however, the bigger question is their relative cost of ownership. On this, prospects of convergence have been outlined by a Crisil Research report. On a broad average, it forecasts the premium paid on owning a sport utility vehicle (SUV) that draws power from a battery over an SUV that runs on petrol at only 11% in 2025-26, down from 23% at the end of 2021-22.

By Crisil's estimates, while an electric SUV that logs 12,000km over four years would cost its owner at least ₹35.2 per km by 2025-26 end, a little more than last year, petrol users will face a steeper rise and have to shell out ₹31.8 per km. All vehicles get increasingly economical with greater use, but since EVs are seen to do this better, the gap would close sooner for those covering longer distances.

Any cost trend that favours EV adoption is good news from a climate perspective, although electricity generation would also have to go mostly clean for a mass switchover to do its bit. Even then, our green path may not prove as smooth as we hope. The outgo on a petrol SUV is projected to go up faster than an EV equivalent for reasons that include higher fuel expenses, input costs and a heavier regulatory burden, but oil-price volatility weakens all forecasts of a big factor in that mix. In general, though, crude seems likely to get dearer over the years even if it eases from today's war-driven level. As for input inflation, supply snarls of the sort that disrupt the assembly of fossil-fuel cars could impact EVs too. For example, the price of nickel, a key battery input, has

soared as Russian supplies got squeezed after Russia's invasion of Ukraine.

Meanwhile, China's dominance of battery-making is another source of anxiety for the global EV industry. The US recently invoked a defence-production law to secure its own lithium, graphite and other materials for that task. With world trade in a state of flux, a major EV shift has begun to look trickier globally than it did two months ago.

To be sure, state incentives could plug cost-of-ownership gaps in India, even make EVs more attractive. But other deterrents remain. While talk of battery swapping for energy refills has been in the air, most four-wheeler EV users will probably have to routinely recharge their power-tank, watch its efficiency slide over time and then replace it after a few thousand plug-ins, which could set them back by a big lump sum.

Also, as charging networks sprout, these would have to prove their reliability on ease of access and speed of recharge before EVs can nudge more than just early adopters out of their inertia. The pace at which EV stations fan out from big cities across the country will matter too. In some ways, two-wheelers are a test case for EV adoption. These are already financially lighter on users than fossil-fuel alternatives, notes the Crisil study. While their safety has been a concern—currently being probed by the Centre after a string of fire mishaps—sales have seen an uptick in recent months. If quality bugs are fixed and this market takes off, a wider EV shift would look less distant.

## 7. Environnement et qualité de l'air

AAP govt has to solve bad air problem in Delhi: Centre

*The Times of India, 05/04/2022*

NEW DELHI: Environment minister Bhupender Yadav on Monday said in Lok Sabha that the Arvind Kejriwal-led AAP government has a responsibility for reducing pollution in the national capital even as he maintained that the Commission on Air Quality Management (CAQM) in the national capital region (NCR) and adjoining areas has adopted a participative and collaborative approach towards dealing with the issues of air pollution in the region.

"The local government has a responsibility to reduce the pollution," he said during Question Hour.

Yadav was responding to a question raised by Delhi BJP MP Parvesh Sahib Singh, who slammed the Aam Aadmi Party government for its alleged lackadaisical attitude towards solving Delhi's pollution problem. Singh claimed the city government has been offering only lip service rather than taking any concrete action.

Referring to the CAQM, the minister said following a Supreme Court order, the commission had invited suggestions from stakeholders including general public for medium and long term solutions for prevention and control of air pollution in the NCR. "A good number of multi-sectoral issues and suggestions related to control of air pollution have been received from different stakeholders and general public. An expert committee constituted to examine the suggestions has been



interacting with stakeholders and experts on a regular basis for adoption of measures for control of air pollution in the region," he said.

Incidentally, Congress protested over Singh being allowed to ask a lengthy question. As Singh took a few minutes in asking the question, Congress leader in the House Adhir Ranjan Chowdhury and his party colleague Gaurav Gogoi protested saying that the chair has given him more than the usual time to ask a supplementary question.

IPCC makes cases for halving global emissions by 2030

*Mint, 05/04/2022*

**NEW DELHI:** Average annual greenhouse gas (GHG) emissions in the past decade were higher than any previous decade, the Intergovernmental Panel on Climate Change (IPCC) said on Monday. Limiting global warming to 1.5 degrees C above pre-industrial levels will now require global greenhouse gas (GHG) emissions to peak before 2025 at the latest and be reduced by 43% by 2030.

Emissions between 2010-and 2019 were around 12% and 54% higher than in 2010 and 1990, respectively, despite the IPCC repeatedly cautioning that the time to limit dangerous global warming is running out. The rate of growth of GHG emissions, however, has slowed in the past decade, the report said.

GHG emissions are projected to rise beyond 2025, leading to median global warming of 3.2 degrees C above pre-industrial levels by the end of the century, without an overhaul

of policies beyond those that were implemented till now, IPCC has warned.

For India, some findings are particularly significant. These include the depleting carbon budget to keep global warming under 1.5 degrees C, lack of climate finance for energy transition and IPCC's stress on moving away from fossil fuel-driven infrastructure. This means that India has a very small pie of the global carbon budget to grow.

Global financial flows from developed countries are a factor of three to six times lower than levels needed by 2030 to meet the Paris Agreement goal of keeping global warming less than 2 degrees C above pre-industrial levels. IPCC, however, states that there is sufficient global capital and liquidity to close investment gaps. Access to global capital will depend on clear signalling from governments on their efforts to transition to a low carbon economy, the report said. If global CO2 emissions continue at current rates, the remaining carbon budget for keeping global warming to 1.5 degrees C above pre-industrial levels will likely be exhausted before 2030.

"The next few years will be critical in scaling up mitigation action. That's one of the key takeaways from the report. The focus should now be on limiting damage and doing as much as we can in the short run," said Navroz Dubash, professor at the Centre for Policy Research, a think tank, and coordinating lead author of the IPCC report. GHG emissions in 2030, based on the implementation of nationally determined contribution (NDCs) announced before COP 26 last year, is unlikely to limit global warming to 1.5 degrees C, the report has said.

"The jury has reached a verdict, and it is damning. This report of the Intergovernmental Panel on Climate Change is a litany of broken climate promises. It is a file of shame, cataloguing the empty pledges that put us firmly on track towards an unliveable world. We are on a fast track to climate disaster: Major cities underwater. Unprecedented heatwaves. Terrifying storms. Widespread water shortages. The extinction of a million species of plants and animals. This is not fiction or exaggeration," said UN Secretary-General António Guterres during the launch of the report. "It is what science tells us will result from our current energy policies. We are on a pathway to global warming of more than double the 1.5-degree limit agreed in Paris," he said.

The report is not all doom and gloom. Since 2010, there has been a sustained decrease of up to 85% in the costs of solar and wind energy and batteries. Deployment of electric vehicles (EVs) has also increased sharply. An increasing range of policies and laws have enhanced energy efficiency, reduced rates of deforestation and increased the deployment of renewable energy, IPCC highlighted. "We are at a crossroads. The decisions we make now can secure a liveable future. We have the tools and know-how required to limit warming," said IPCC chair Hoesung Lee.

Reducing GHG emissions requires major transitions, including a substantial reduction in fossil fuel use, IPCC stressed. "The continued installation of unabated fossil fuel infrastructure will 'lock-in' GHG emissions," it said. Both the messages on the lower costs of renewable energy and moving away from fossil fuels are important for India. India's non-fossil energy capacity will reach 500 GW by 2030, meeting 50% of the country's energy requirements by then, Prime Minister

Narendra Modi had said at the Glasgow climate summit on 1 November. India will reduce its total projected carbon emissions by one billion tonnes by 2030, reduce the carbon intensity of its economy by 45% by 2030 over 2005 levels, and achieve net-zero emissions by 2070.

India generates 3.5 million tonnes plastic waste annually: Union Environment Minister Bhupender Yadav

*The New Indian Express, 05/04/2022*

DELHI: India is generating 3.5 million tonnes of plastic waste annually, Union Environment Minister Bhupender Yadav said on Tuesday as he launched several green initiatives for plastic waste management.

Speaking at the launch of mascot 'Prakriti' to spread awareness among masses about small changes that can be sustainably adopted in lifestyle for a better environment, Yadav urged everyone to join the efforts to beat plastic pollution and work towards a better future.

"Plastic has become one of the most pressing environmental issues that we are facing today. India is generating about 3.5 million tonnes of plastic waste annually and the per capita plastic waste generation has almost doubled over the last five years.

"Plastic pollution adversely affects our ecosystems and is also linked to air pollution," he said.

The minister also launched several initiatives like National Dashboard on Elimination of Single Use Plastic and Plastic Waste Management to bring all stakeholders, including central ministries, departments, states and Union Territories,

at one place and track the progress made for elimination of single-use plastic (SUP) and effective management of such waste.

Another initiative that was launched was Extended Producer Responsibility (EPR) Portal for plastic Packaging for improving accountability, traceability, transparency and facilitating ease of reporting compliance to EPR obligations by producers, importers and brand-owners.

A mobile app for Single Use Plastics Grievance Redressal was also launched to empower citizens to check sale/usage/manufacturing of SUP in their area and tackle the plastic menace.

The various green initiatives taken by Ministry of Environment and Central Pollution Control Board (CPCB) to ensure effective Plastic Waste Management (PWM) in the country, were launched at the event, which was also attended by Minister of State Ashwini Kumar Choubey and senior officials of the government.

To tackle the challenge of plastic pollution, Prime Minister Narendra Modi announced India's pledge to phase out single-use plastics by 2022.

"Taking the momentum forward" and stressing on the need for active public participation, Yadav also administered

'Swachh Bharat Harit Bharat Green Pledge' to the gathering.

He appreciated the innovative solutions developed by start-ups, entrepreneurs and students in the India Plastic Challenge-Hackathon 2021, highlighting the immense talent and potential of India's youth.

Yadav said India sends a message of hope and optimism that humanity can meet the challenges posed by climate change and will be a part of the solution to climate change.

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