

REVUE DE PRESSE SECTORIELLLE ENERGIE ET DEVELOPPEMENT DURABLE

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En bref

Infrastructure:

- Les travaux de la voie rapide entre Delhi et Dehradun, première autoroute indienne équipée de couloirs dédiés à la protection de la biodiversité, vont démarrer
- L'agrandissement du réseau routier indien se poursuit, avec un nouveau rythme record de 30 km construits par jour
- L'Inde accélère le développement des infrastructures dans le Nord-Est

Ferroviaire:

- Le Ministère des Chemins de Fer demande l'approbation du Conseil des ministres pour la mise en place de frais d'utilisation des infrastructures ferroviaires payés par les voyageurs
- Avec l'électrification à 100% des lignes de l'Eastern Railways, les Indian Railways entrevoient l'objectif d'une électrification complète d'ici décembre 2023
- En 2020-21, les investissements dédiés aux projets de corridors de fret ferroviaire ont augmenté de 21% par rapport à l'année fiscale précédente

Développement et transports urbains :

- Le développement de la mobilité à vélo à Mumbai se heurte à la médiocrité des infrastructures cyclables
- Plusieurs villes indiennes ont manifesté leur intérêt pour les technologies de transports urbains « Metro Lite » et « Metro Neo »

Pétrole, gaz et biocarburants:

- Le projet de feuille de route du gouvernement pour le gaz naturel liquéfié (GNL) prévoit d'élargir son usage comme carburant des poids lourds

Electricité et énergies renouvelables :

- Tata Power va être en charge de la distribution d'électricité dans le Nord-Est de l'Odisha

- Dans le Rajasthan, les développeurs éoliens en retard sur le démarrage de leur projet perdent le droit d'utiliser les terrains alloués par le gouvernement
- Le gouvernement indien ambitionne de porter la capacité de production des panneaux solaires de toiture à 40 GW d'ici un an et demi
- Selon le Premier Ministre Narendra Modi, la branche du programme PLI (performance-linked incentive) dédié aux panneaux solaires de nouvelle génération devrait donner lieu à des investissements de 1,6 Mds EUR ces cinq prochaines années
- La première centrale géothermique d'Inde va être développée dans le Ladakh
- L'Alliance Solaire Internationale prévoit le lancement de la Banque Solaire Mondiale lors de la COP-26 de novembre 2021
- Le candidat indien Ajay Mathur a été élu à la tête de l'Alliance Solaire Internationale
- L'Inde publiera des appels d'offres pour le développement de l'hydrogène vert dans les 3-4 prochains mois, annonce le Ministre des Energies Renouvelables

Mobilités électriques :

- Le gouvernement prévoit de subventionner 62 000 voitures et bus électriques, ainsi que 1,5 M de deux- et trois-roues électriques
- Lors de la campagne « Go Electric », le Ministre des Transports encourage le passage des flottes de véhicules gouvernementaux à l'électrique

Environnement et qualité de l'air :

- Les briqueteries alimentées au charbon situées dans la région de Delhi ne seront plus autorisées à opérer lors des pics de pollution
- Selon un rapport de Greenpeace, la pollution de l'air a causé la mort de plus de 120 000 personnes en Inde en 2020
- Le réchauffement climatique est à l'origine de l'accident du glacier dans l'Uttarakhand, selon des experts du GIEC

Revue de presse

1. Infrastructure

First highway with wildlife protection corridor! Delhi-Dehradun Expressway will cut travel time to 2.5 hours

The Financial Express, 19/02/2021

Work on Delhi-Dehradun Expressway to start soon! The work on the upcoming Delhi-Saharanpur-Dehradun Economic corridor is currently underway. This highway project, once completed, will reduce the distance between the two cities from 235 km to 210 km, and travel time from the current 6.5 hours to just 2.5 hours. According to the Ministry of Road Transport and Highways, the Delhi-Dehradun Expressway will be the country's first such highway where there will be a 12 km long elevated corridor for the protection of wildlife. The ministry has decided to execute the Delhi-Dehradun Expressway project under Engineering, Procurement, and Construction (EPC) mode. In a bid to enhance the road user experience, wayside amenities have been provisioned every 25 to 30 km. To enable pay toll, closed toll mechanism would be adopted, only to the extent of highway used, the ministry said. The development of the Delhi-Saharanpur-Dehradun corridor is expected to boost the economy of the region being served by the highway, especially giving a boost to Uttarakhand's tourism industry. For the implementation of project, the entire length from Akshardham to Dehradun will be divided into four different sections:

Section 1 of this expressway project is being developed to six lanes with 6L service road being in built up reach, with full access control. It is divided into two packages, where package 1 falls in Delhi portion in 14.75 km and out of this 6.4 km portion is elevated, while package 2 falls in Uttar Pradesh in 16.85 km of which 11.2 km is elevated. For these two packages, the

tendering process has been completed. This section 1 would start from Akshardham Temple and pass via Geeta colony, Mandola, Khajurikhas, etc. This highway is expected to decongest northeast Delhi as well as enhance the development potential of Tronica city, Mandola Vihar Yojana of Uttar Pradesh government.

Section 2 of this project is planned as six lane fully access controlled and the entire length is Greenfield, passing via Muzaffarnagar, Shamli, Baghpat and Saharanpur districts. The detailed project report is complete and the process of tendering has been initiated in four packages. The process of land acquisition going and is on Environment/Forest clearance proposal have been applied. The project award target March 2021, subject to obtaining environment/forest clearance substantial land acquisition is in place.

Section 3 of this project starts from the Saharanpur bypass and it ends at Ganeshpur. Recently, the entire length has completed to four lanes by the National Highways Authority of India (NHAI). To make it fully access controlled in order to achieve minimum 100 km per hour speed, necessary underpasses and service road are being planned.

Section 4 of this project is planned as six lane with full access controlled. This section passes primarily through Reserve Forest in UP and Uttarakhand. Out of the 20 km length, 15 km is realignment comprising of the elevated wildlife corridor and 5 km is brownfield expansion. Due to wildlife concerns, ROW is restricted to 25 metres in general. Wildlife and Forest clearances have already been obtained. The bids in three packages have been received and is currently under evaluation. To award the project, the target is by March 2021.

NHAI creates record! In a first, road construction touches 30 km per day; details here

The Financial Express, 05/02/2021

Construction of roads has touched record 30 km per day, said Union Minister Nitin Gadkari. While responding to questions raised during Question Hour in the Lok Sabha, the Union Minister of Road Transport and Highways also said the Bharatmala Pariyojana is an important project that will change the country's face. Gadkari said that the construction record came to 29.6 km, which means 30 km per day. According to a PTI report, this is for the first time in the history of the country, the highest record was achieved by the National Highways Authority of India (NHAI). In the next five years, the total construction of roads will match the likes of the United States and the European nations, he said.

The Modi government envisages developing 34,800 km of highways at Rs 5.35 lakh crore cost under the Bharatmala Pariyojna project. So far, the contract has been awarded for a length of 13,521 km roads and DPR for 16,500 km is currently in the pipeline. Apart from this, bids have been invited for 4,800 km. The minister said that a world record has also been made by NHAI for laying down 12,500 cubic meters of concrete on a 2.54 km long stretch.

The Union Minister, regarding the Char Dham project, said the ministry has taken up improvement as well as widening of 825 km (existing 889 km) of National Highways on the route. According to him, this will provide safer and improved road connectivity from Rishikesh to Janki Chati (Yamunotri), Gangotri and Mana (Badrinath), Gaurikund (Kedarnath) including the section from Kailash-Pithoragarh, of Tanakpur to in Mansarovar route the state Uttarakhand at Rs 12,072 crore cost under as many as 53 separate projects. The 94 km long National Highway from Uttarkashi to Gangotri passes through the Bhagirathi Eco-Sensitive Zone. Till date, no work has been sanctioned on this section, he said.

According to the minister, on this section, the development will be carried out in accordance with the guidelines prescribed in Zonal Master Plan, which was approved by the Environment and Forests Ministry on 16

July 2020 and the final recommendation of the SC-appointed panel on road width as well as environmental protection measures suggested based on rapid EIA conducted by the ministry. Gadkari further said initially, the project for the development of road connectivity to Char Dham was targeted for completion by March 2020. However, due to litigation in the NGT and the SC, the schedule date is delayed, he added.

India steps on the gas for infrastructure projects in northeast

Mint, 12/02/2021

With an eye on China, India has been speeding up infrastructure project construction in the strategic northeastern region of the country, which include 1,819 km of roads completed over the last two years.

The other important projects completed over the last two years in the region include, Pakyong Airport in Sikkim, Rupsi Airport in Assam, 300 MW Kameng and 110 MW Pare hydropower projects in Arunachal Pradesh, said Development of North Eastern Region (DoNER) minister Dr. Jitendra Singh in a written reply to Rajya Sabha on Thursday. India and China have sparred over hydropower projects in Arunachal, a state that borders China and has the highest potential for hydropower generation in the country. This comes in the backdrop of China's ambitious \$62 billion south-north water diversion scheme of the rivers that feed downstream into the Brahmaputra, known in China as the Yarlung Tsangpo.

As part of Indian government's strategy of accelerating infrastructure development along the country's frontier and strengthening intra-state transmission and distribution electricity links, the strategic North Eastern Region Power System Improvement Project is also being expedited.

"Dr. Jitendra Singh said that infrastructure projects taken up in the North Eastern Region inter alia include projects of road and rail connectivity; modernization and development of new airports," according to a 11 February statement from Ministry of Development of North-East Region.

The development of infrastructure in India's northeast is key to the nation's so-called Look East policy, focusing on southeast Asia. India has been working on a raft of road and bridge projects to improve connectivity with Bangladesh, Nepal, and Myanmar.

This comes in the backdrop of Japan partnering with India to aggressively develop infrastructure projects in Arunachal Pradesh, Meghalaya, Assam, Manipur, Mizoram, Nagaland, Sikkim and Tripura, in an attempt to contain China's influence. Mint first reported about an India-Japan Coordination Forum for Development of North East being set up to focus on strategic projects such as connectivity and road network electricity disaster development, and management.

"Under North Eastern States Roads Investment Programme (Externally Aided Project), construction/upgradation of three roads (Kalitakuchi to Barpeta-58.5 km, Tamulpur to Paneri-43 km and Paneri to Udalgiri-18.4 km) along with five major bridges in Assam and one road (Garobada to Dalu-93.4 km) in Meghalaya have been completed," the statement added.

Japan' partnership holds special importance for India, given that several multilateral lending agencies have been unwilling to fund projects in the so-called disputed border states in India's northeast - seen as sensitive, as parts of the region are claimed by China. "The projects completed in Tripura include Agartala - Sabroom new Rail line project (112 km); 2-laning with paved shoulder of Udaipur- Sabroom Section of NH-44 from km 55.00 to km 128.712; and strengthening and widening works of NH-8 (old NH-44) from km. 284 to km 318; Waterway on river Gomati (Tripura)," the statement added.

With hydropower set to play a key role in the development and integration of India's northeast region with the mainland, the Union government has been trying to pull out all stops for projects in Arunachal Pradesh to pre-empt threats caused by

Chinese plans, by establishing its prior use claim over the waters.

As part of this playbook, India is working on a North East Water Management Authority (NEWMA) to evolve a consolidated strategy for management of the region's water resources. The apex authority for developing projects related hydropower, all to agriculture, biodiversity conservation, flood control, inland water transport, forestry, fishery, and eco-tourism in the region will spearhead India's efforts to establish prior user rights on water from the rivers that originate in China.

Of the 2,880km length of the river Brahmaputra, 1,625km is in Tibet, 918km in India, and 337km in Bangladesh. Of the eight river basins in Arunachal Pradesh, Subansiri, Lohit, and Siang are of strategic importance as they are closer to the border with China.

2. Ferroviaire

Railway ministry to seek Cabinet nod for user development fee

The Economic Times, 18/02/2021

The Railway ministry will soon seek cabinet approval for determining user development fee to be levied at railway stations that are proposed to be redeveloped by private concessionaires.

The notification, which is expected by the end of this month, will fast track the development of New Delhi and Mumbai's CSMT station for which many corporates have submitted the request for qualification.

Once the user fee is finalised, Railway will call RFP and select the concessionaire.

"While charges will be minimum, there will be different slabs for different classes of passengers - general, sleeper and AC," a person aware of the developments told ET. "Also, passengers arriving at the redeveloped station will have to pay 50% of the user development fee," the person said.

About 5 million sq ft of commercial space will be on offer at these two stations while total investment would be Rs 7,500 crore. "It is correct that the user development fee would be different for different classes of travel," a senior railway ministry official said. "We will go for Cabinet approval in two to three weeks," the official said.

The ministry is however, still contemplating if the user development fee will reflect in platform tickets as well.

"It will be a deterrent for people to pay a fee just to access facilities at the railway station, it's like introducing a mall-entry fee," the official said.

The railway ministry will levy a nominal user development fee on around 700-1,000 railway stations on the basis of an estimated spurt in footfall, irrespective of the fact that whether they have been redeveloped or not, former railway board Chairman Vinod Kumar Yadav had told reporters in September last year.

"There will be some upfront amount, which the concessionaire will have to pay to the executing agency once the tender is awarded. Technical evaluation of the bid is on, and the RFP will be issued soon. We are expecting to start the work at these two stations by the end of this year," said another railway official.

The GMR group, the Adani group and overseas financial investors are among 10 global entities that have submitted initial bids to redevelop the Chhatrapati Shivaji Maharaj Terminus, the iconic UNESCO World Heritage Site that defines India's commercial capital.

The Rs 1,640-crore project will be developed under the public-private partnership model and the government expects to complete it

in the next 4-5 years. Indian Railway Stations Development Corporation (IRSDC), the nodal agency for the project.

For New Delhi railway station, Adani Railways Transport, the GMR Group, Arabian Construction Co, Anchorage Infrastructure and Kalpataru Power Transmission are among nine domestic and international companies that have been shortlisted.

Rail Land Development Authority (RLDA) is executing the New Delhi project.

These projects will also boost the real estate development of the surrounding regions, augment the tourism potential and generate employment opportunities.

New Delhi Railway Station is the largest and second busiest railway station in the country and handles approximately 4.5 lakh passengers daily. The station handles around 400 trains per day which are expected to increase due to higher operational efficiencies resulting from the redevelopment and better yard utilisation.

On lines of NDLS, the redevelopment of CSMT, Mumbai also includes the integration of various modes of transport to make it a multi-modal transport hub.

The railways ministry has undertaken a railway station redevelopment programme that covers 123 locations.

According to current estimates, total investment needed for redevelopment of these 123 stations along with real estate development is about Rs 50,000 crore.

With Eastern Railway becoming 100% electrified, Indian Railways eyes complete electrification by Dec 2023

The Financial Express, 09/02/2021

Piyush Goyal-led Indian Railways is moving towards the goal of complete electrification by December 2023. In the same order, the Eastern Railway zone has become 100 per electrified cent with the electrification of the Nimmita - New Farakka railway section in the state of West Bengal. According to the Railway Ministry, the move will increase the speed of rail as well as reduce the carbon footprint in the environment. Recently, Manoj Joshi, General Manager of Eastern Railways mentioned that there is all round developmental work by the national transporter and fund is constraint for projects' completion in West Bengal.

Joshi said an amount of Rs 19811.7 crores have been invested by Indian Railways on infrastructural works as well as Rs 710.3 crores on passenger amenities in the Eastern Railway zone during 2014-2020. During the period 2014-19, 661 kilometres of new line/double line /triple line/quadruple line was commissioned in West Bengal as compared to 335 kilometres during 2009-14. comparison to 710 kilometres of electrification during 2009-14, 1290 kilometres of electrification work has been completed during the period of 2014-19. A kilometres total of 153 of railway electrification completed in West Bengal during 2019-20, he said.

According to Indian Railways, in the General 2021-22 which was presented by Finance Minister Nirmala Sitharaman in the parliament, the Eastern Railway zone has obtained considerably allocation in various good budgetary developmental railway projects. For the financial year 2021-22, the total plan outlay is 10.86 per cent higher than that of last year's fund allocation. According to the transporter, the budgetary national allocation, last year, was Rs 2273.69 crores for the Eastern Railway zone. For the financial year 2021-22, the fund allocation is Rs 2520.70 crores, the zonal railway stated.

Piyush Goyal reviews Indian Railways DFC; Project's capex utilisation increases by 21% compared to last year

The Financial Express, 17/02/2021

Railway Minister Piyush Goyal recently reviewed the progress of Dedicated Freight Corridor Corporation India Limited (DFCCIL). According to the Railway Ministry, the Capex utilization in the DFC project, which is being seen as a game-changer in India's economic development, increased by 21 per cent as compared to last year. Capital expenditure of Rs 8201 crore has been registered in the first 10 months of the financial year 2020-2021 as compared to the capital expenditure of Rs 6783 crore, registered last year same corresponding period despite the DFC project getting adversely affected due to COVID-19 pandemic induced lockdown.

Minister directed The Railway the management team of DFFCIL and the contractors to take all possible measures to speed up the work pace on all the sections of the 1504 route km long Western DFC and 1856 route km long Eastern DFC. The progress of each individual DFC section was discussed in detail in the review meeting and authorities were given instructions given to ensure smooth progress by resolving all hindrances. During the review meeting of the DFC project, it was decided that strict monitoring of work of all contractors to be conducted. All issues are to be resolved along with coordination with the states on a mission mode. The national transporter is **DFCs** provide exclusive making to movement on fast speeds for freight trains. In 2020-21, 657 km of DFC section has been opened already and over 1000 trains have been run.

In the DFC project's first phase, 1504 Route km Western DFC and 1856 Route km Eastern DFC including Sonnagar-Dankuni PPP section are being constructed. The Eastern

DFC will start from Sahnewal and will pass via Punjab, UP, Haryana, Jharkhand and Bihar. It will terminate at Dankuni in WB. The Western DFC will link Dadri to JNPT in Mumbai. It will pass via UP, Rajasthan, Gujarat, Haryana and Maharashtra of both the DFCs (excluding the PPP section of Sonnagar – Dankuni) i.e. by June 2022, 2800 Route Km will be commissioned.

3. Développement et transports urbains

Poor infra poses a speed bump as Mumbai aims to become bicycle capital of India

Hindustan Times, 18/02/2021

In the aftermath of the global pandemic, city authorities and urban planners are promoting cycling, especially for last-mile connectivity. But given the narrow roads, uneven footpaths, crowding and humid weather, will it be possible for people to adapt to this sustainable mode of transport? Also, apart from the infrastructure, the biggest question is – Where is the space, given the encroachments and hawkers even on pavements that are in bad shape?

In February 2020, while inaugurating a public-bike sharing initiative at the Jagruti Nagar station in Mumbai, Metro metropolitan commissioner RA Rajeev said it was unfortunate that Metro-1 (Versova-Andheri-Ghatkopar) stations were not designed for multi-modal integration. Taking this as an example, he further said all upcoming 225 Metro stations in the Mumbai Metropolitan Region (MMR) will have a dedicated 100-m space in the periphery to enable last-mile connectivity. First- and lastmile refer to the journey from the public transport system to your home/office.

Even as the MMR targets a 337-km Metro network by 2026, a recent study by the World Resources Institute (WRI) said that most Metros in India have not been able to meet their projected ridership as it did not provide last-mile options to the commuters. For a city where 60% of the start and end of public transport journeys are walks, as per the Brihanmumbai Municipal Corporation's (BMC) Development Plan 2034, not much thought was given to enhance or make this journey more comfortable, say experts.

Firoza Suresh, Mumbai's first bicycle mayor, said, "Cycling is the best mode for last-mile connectivity, which is a huge problem in Mumbai. The main focus should be to convert trips between 0-3km into cycling trips. Currently, 22% of these short-distance trips are covered by motorised transport. The other area where authorities need to focus is cycles for the urban poor."

Two years ago, Suresh's Smart Commute Foundation (SCF) provided a GPS device to an Andheri-based incense seller. To their surprise, they found that he covered 30km around the city by cycle for work. "We also found a dabbawala covered 12-15km on his cycle. They don't cycle for recreation, but livelihood. They need to be provided with the right infrastructure and good cycles," Suresh added.

Last week, the Mumbai Metropolitan Region Development Authority (MMRDA) revived its plan to install a cycle track in the Bandra-Kurla Complex (BKC). According to the plan, around 5km in the commercial hub will have cycle tracks along the pavement, Rajeev said. Mumbai's suburban guardian minister Aaditya Thackeray also tweeted in support. MMRDA had experimented with cycle tracks in BKC in 2011, but failed.

Before the cycle track project, the authority launched an e-bike service in and around BKC. In the past five months, more than 78,000 trips were made on these e-bikes. MMRDA has also allocated funds for a 100-meter radius around every upcoming Metro station to have bus-bays, parking area, seating arrangement, and cycle docks.

Apart from this public bike-sharing has also been introduced at four Metro-1 stations – Jagruti Nagar, Versova, DN Nagar, and Azad Nagar.

Arjit Soni, founder of MyByk, which runs the services at Metro stations, said, "In a month, we have seen around 3,800 trips at four stations." The highest number was recorded at Versova Metro station.

In 2018, the BMC had also decided to lay out a 36-km cycle track between Mulund and Sion, along the Tansa pipeline. While the deadline for the ambitious project was 2020, it got delayed owing to the pandemic and less than 30% of the work has been completed till date.

Rajeev said, "Mumbai has tremendous potential to get converted into a cycling capital of India. The MMRDA has initiated the process from BKC and Metro line one stations. The multi modal integration plan at each upcoming metro stations will facilitate non-motorised movement of people by giving priority to pedestrians and cyclists." While a number of initiatives have been rolled out in the city, Mumbai still lacks dedicated cycling infrastructure, which makes it safer to cycle on roads. At a press conference held this month, Somnath Gharge, DCP, traffic, said in 2019, nine cyclists died on the spot and 38 were injured in fatal crashes on the road. "We need a shift in attitude," Gharge said.

Paresh Rawal, a transport planner based in Mumbai, said, "It is not safe to cycle in the city because there is no supporting infrastructure. Cycling can't be an option if one has to travel from Andheri to South Mumbai, but is definitely an option for last-mile connectivity, if the right infrastructure is provided."

Soni, whose company offers commuters to take the cycle home or to their offices, agreed that the city's weather is not conducive for long-distance travel. "This is where public bike-sharing initiatives help. If you want to travel from Borivli to Churchgate, MyByk allows you to travel to Borivli station on the bike and then pick up another bike from Churchgate station. Public bike-sharing, in a way, boosts public transportation," said Soni, who founded the business after struggling to commute in Mumbai.

"Mumbai can never have a seamless cycle network because of the narrow roads and footpaths. There is not enough space for even pedestrians. We agree, but there are solutions to these problems," said Suresh. Her team of 24 bicycle councilors are now looking at creating a cycling network. "We are first looking at two wards – Bandra and Parel. The idea should be to have a mixed cycling infrastructure where some roads can have a dedicated lane, there can be shared mobility spaces on some roads and we could also have a lane along the median in some cases. The important thing is to study these patterns," she added.

However, there are also administrative challenges to be met. With multiple agencies operating in the city, obtaining permissions is complicated. "In Mumbai, the land may belong to the BMC, but the public transport is being built by another. We have been facing a lot of issues with obtaining permissions," Soni said. Obtaining permissions from the traffic police also is a challenge.

Suresh's team, which has started a campaign 'Cycle Chala, City Bacha' (Ride a cycle, save the city), is also demanding a cycling network and cycle docks at 600 locations in the city. Their campaign aims to make Mumbai the bicycle capital of India by 2030.

Many cities now want low-cost Metro Lite, Metro Neo modes of transport, in talks with govt

The Print, 17/02/2021

Metro Lite and Metro Neo — cheaper alternatives to conventional metro rail — have become the new buzzword for smaller cities across India to augment public transport. Nashik, Thane, Gorakhpur, Jammu, Srinagar and Coimbatore administrations are in talks with the Centre to get these modes of transport, ThePrint has learnt.

While it costs Rs 222 crore per km to construct a conventional metro rail, a Metro Lite, which resembles a tramway, costs Rs 140 crore per km, and Metro Neo, which is more like an electric trolleybus, costs Rs 71 crore per km.

With far less cost of conventional metro, the two new technologies also got a thumbs up from Union Finance Minister Nirmala Sitharaman who, in her Budget speech, said Metro Lite and Metro Neo will be deployed to "provide metro rail systems at much lesser cost with same experience, convenience and safety in Tier-2 cities and peripheral areas of Tier-1 cities".

Two senior officials in the Union Ministry of Housing and Urban Affairs told ThePrint they have already received proposals from Gorakhpur and Delhi (Rithala to Narela link) for Metro Lite project, and from Nashik for a Metro Neo project. "We are studying the proposals before taking it to the cabinet for final approval," said one of the officials.

Nashik, for instance, has proposed two Metro Neo lines of total 32 km with an estimated cost of Rs 2,100 crore. Delhi has proposed a Metro Lite project to provide last-mile connectivity in the peripheral areas, the official said.

Besides these three proposals, many other cities, including Thane, Coimbatore, Warangal, Hyderabad, Jammu and Srinagar, have evinced keen interest.

"Some of them like Thane have readied the Detailed Project Report for developing a Metro Lite corridor and are likely to send the proposal to us for approval soon," said the second ministry official who spoke to ThePrint. The Thane Municipal Corporation has already cleared the proposal to develop a 28.8-km corridor at an estimated cost of Rs 6,279 crore.

"Metro projects are capital-intensive and are viable for big cities with very high ridership and 'per hour per direction traffic (PHPDT)'. For smaller cities with lesser traffic, light rail solutions like Metro Lite or a Metro Neo will be more viable and cost-effective," Jaideep, Officer on Special Duty (Urban Transport), MoHUA, told ThePrint.

Both the new technologies will not only complement the conventional metro, but could be good alternatives for providing last-mile connectivity in the peripheral areas of big cities like Delhi, he added.

India already has 717 km of metro rail network and work is under way in another 1,000 km stretch.

Ministry officials said that by 2024-2025, India will have over 1,700 km of metro network, the second highest after China, which has over 7,000 km of metro network. Metro Lite is a light urban rail transit system, which can easily cater to a ridership of 2,000 to 15,000 per-hour-per-direction traffic. Conventional metro caters to traffic of over 15,000 PHPDT. Metro Lite costs 40 per cent less than a conventional metro system.

Ministry officials said the low cost is mainly on account of reduced axle load of 12 tonne as against 17 tonne in case of conventional metro, reduced size of coaches and simple train stations with no concourse. Metro Lite has a passenger capacity of up to 300 for a three-coach train unit.

They can run on standard gauge track with a right of way of 7.6 metres.

"The civil structure is significantly less as compared to conventional metro and they run mostly on elevated lines with a maximum operational speed of 60 kmph," said Jaideep.

Metro Neo resembles an electric bus trolley and can cater to a ridership of upto 8,000 PHPDT, which can be extended upto 10,000. It does not require a standard gauge track. The coaches will have rubber tyres and will run on road slabs, which are either elevated or at grade. They will have dedicated tracks and will draw power supply from overhead traction.

They can have a single coach of around 12-metre length or two articulated coaches of around 18-metre length or three articulated coaches of around 24 metres — catering to upto 250 passengers.

The railway ministry has already finalised the specifications for Metro Lite and Metro Neo. Both the transport systems will be covered under the Metro Act.

"These are technological interventions that will transform public transport. They cost less, and provide a safe and energy-efficient public transport system. Our basic intent is to take the metro to smaller cities across India, which will propel economic development in these areas," Jaideep said. Globally, many cities such as Budapest, Melbourne, Vienna, Zurich, Salzburg, San Francisco, Riyadh and Lyon have these cost and fuel-efficient public transport systems. Union Housing Secretary D.S. Mishra has already met rolling stock manufacturers, including France-based Alstom, Kolkatabased Titagarh Group and Bengaluru-based BEML, to discuss if they have the expertise to develop the new transport systems.

Ministry officials said most of the rolling stock manufacturers are eager to work on these modern transport systems.

Umesh Chowdhary, vice-chairman and managing director, Titagarh Group, which caters to passenger rolling stock including trains and metro coaches, told ThePrint: "In urban mobility, there has to be multiple options like Metro Lite and Metro Neo."

"In many European countries, these systems exist. We have the expertise, technology and willingness to get into this sector and cater to the Indian market."

Titagarh Firema SPA, the wholly-owned Italian subsidiary of Titagarh Group, had won the international bid for supplying 102 coaches for Pune Metro in 2019.

French mobility major Alstom, which has a big presence in India now and manufactured coaches for Chennai Metro, Kochi Metro and Lucknow Metro, said the firm's ambition is to accompany transportation stakeholders globally in meeting tomorrow's mobility challenges.

"We have always been keen to explore suitable sustainable transport solutions and it's encouraging to see India draw up plans to bring in newer technologies like Metro Lite and Metro Neo," Alain Spohr, managing director (India), Alstom, told ThePrint in an email response.

"These technologies can be an optimised solution for medium to small size cities (with lesser passenger density), providing economically viable, safe commute options and address last mile connectivity challenges as well," Spohr added.

With more than 30 tier-2 and tier-3 cities, India could become one of the largest markets for Light Rail solutions, he said.

With the acquisition of Bombardier Transportation, Spohr added, Alstom will now be able to offer a significantly increased range of a comprehensive portfolio of offerings to meet customer-specific needs— from cost-efficient mass-market platforms to high-end technological innovations.

"Alstom is keen to support this new initiative, in alignment with 'Make-in-India' and 'Atma Nirbhar Bharat' mandates and is exploring options that will suit the country's present and future needs," he said.

4. Pétrole, gaz et biocarburants

Draft liquefied natural gas policy aims to run more trucks on LNG

The Financial Express, 18/02/2021

The Union ministry of petroleum and natural gas has prepared a draft liquefied natural gas (LNG) policy which aims to set up a framework for the promotion of gas and find ways for LNG adoption in sectors which currently does not use it as a fuel. To make LNG the fuel of the future for heavy transport, the policy targets to convert 10% of long haul heavy duty trucks to ply on LNG. The timeline to achieve the target has not been specified in the draft document.

The automotive companies will incentivised towards manufacturing LNGbased heavy vehicles and creating ancillary manufacturing units through tax exemptions and green certifications, the draft policy said. There is also a plan to create enabling infrastructure for the operation of a virtual gas pipeline for transporting LNG through railways and trucks. To accommodate this, the policy envisages promotion of dedicated highways with extensive LNG infrastructure. The government has already announced plans to have 1,000 LNG retail outlets, entailing investment of Rs 10,000 crore, in the next five years, and the policy will work towards the target.

On a per-kilometre basis, taking into account engine efficiency and other factors, there is savings of 30-40% for LNG-fuelled transportation vehicles. As the mileage is better, lesser retail outlets for LNG is required to cater to LNG trucks. One fill of LNG can take a loaded LNG truck to around

900 km, while a diesel truck needs a fuel refilling station after every 400-500 km.

The policy aims to create LNG terminals with more than 100 million tonnes per annum (MTPA) along the coastal regions to increase the share of gas in the energy basket to 15% by 2030 from the current level of 6%. Currently, the total capacity of operational LNG import terminals in the country is 42.5 MTPA. The policy also aims to create 70 MTPA of regasification terminals by 2030 and 100 MTPA by 2040. Stakeholders have been asked to furnish their comments on the proposed policy within 15 days.

5. Electricité et énergies renouvelables

Tata Power to operate power distribution in northeastern Odisha

The Economic Times, 01/02/2021

Tata Power said on Monday it has received a letter of intent from the Odisha Electricity Regulatory Commission (OERC) for distribution and retail supply of electricity in five circles of North Eastern Electricity Supply Company of Odisha (NESCO) constituting areas of Balasore, Bhadrak, Baripada, Jajpur and Keonjhar.

Tata Power will hold 51 per cent equity with management control and the state-owned Grid Corporation of Odisha (GRIDCO) will have the remaining 49 per cent equity stake in the company, according to conditions of the bid documentation.

With inclusion of additional distribution utility of Odisha, Tata Power will now serve the entire population of Odisha with nearly 90 lakh consumers experiencing uniform processes and synergies in operations. The expansion will enhance Tata Power's consumer base to nearly 1.2 crore from the present 96 lakh across Mumbai, New Delhi,

Ajmer, central, southern and western parts of Odisha.

"We are committed to provide reliable, affordable and quality power supply along with superior customer service, backed by innovative technology," said CEO and Managing Director Praveer Sinha. "We are thankful to the Odisha government and OERC for giving us this opportunity and reaffirming Tata Power's commitment of 'Lighting up Lives' for the people of Odisha," he said in a statement.

With this takeover, the company's distribution circles will expand to NESCO with geographical spread of more than 27,500 sq km and serve over 19 lakh consumers with annual input energy of 5,450 million units.

It will manage a network of more than 90,000 circuit kilometers for a license period of 25 years.

Rajasthan: Wind power firms to lose government land for not starting projects

The Economic Times, 17/02/2021

The wind power developers who had taken government land and have not been able to execute the projects are set to lose their land. Rajasthan Renewable Energy Corporation Ltd (RRECL) has written a letter to the revenue department to expedite the process for cancellation of the land.

In the letter, RRECL said that more than 3000 big ha has been allotted to about 20 companies which has not developed projects. "The revenue land allotted to the projects in these cases was either not utilized by developers within the permissible period of excess land surrendered by developers had been recommended by RREC for cancellation as per Rajasthan Land Revenue (Allotment of Land for setting up of

Power plant based on Renewable Energy Sources), 2007," said the letter.

When TOI contacted RRECL chairman and managing director Subodh Agarwal, he said, "The state government has set a 30,000 MW target in the solar energy policy. We require land for these projects. If the developers have failed to execute projects, the land should be returned to the government and it can be used for other projects."

Even though the renewable power journey of Rajasthan started with wind in 1999 having 2 MW, focus has now shifted to solar energy due to cheaper rates developers offer. After 2016, there have been no new tenders for wind power following the scrapping of feed-in tariffs and bidding was made mandatory for wind projects like in solar.

The bidding regime discouraged developers as their margins were reduced significantly and there was no policy support to resurrect the sector. In fact, new wind power capacity addition fell to 45 MW in the past four years. "In fact, wind projects could not withstand the competition from solar ones. That's why many people who had taken land could not develop projects. Majorly, the private sector is to blame for itself for the collapse of the sector as it did not want auction. Whereas solar became popular because of auctions as rates started coming down attracting many players. That was the main reason why the land could not be utilized," said a wind power developer.

The letter addressed to the principal secretary, revenue department, said, "The unutilized land areas have great potential for wind or solar energy generation. You are, therefore, requested to expedite the cancellation of allotment of these huge chunks of land allotted to wind developers or power producers, under intimation to this office, so that these land may be considered for allotment to new renewable project developers."

Govt aims to produce 40 GW power through rooftop solar in next 1.5 years: PM Modi

The Economic Times, 18/02/2021

Prime Minister Narendra Modi on Thursday said the government aims to produce 40 gigawatt (GW) of solar power in the next one-and-a-half years through rooftop solar projects.

He added that renewable energy capacity enhanced two-and-a-half times in the past six years, while solar energy capacity increased by 15 times.

"Already, 4-GW solar capacity is installed through rooftop solar projects... 2.5 GW will be added soon. 40 GW solar power is aimed in the next one-and-a-half years through rooftop solar projects," he said while addressing a webinar on implementation of Union Budget provisions in the power sector. PM Modi said that under the PM-KUSUM scheme, farmers were becoming energy entrepreneurs and the goal was to create 30-GW solar capacity through small plants in the farmers' fields.

Referring to the production-linked incentive (PLI) scheme, the Prime Minister said that high efficiency solar PV modules were now part of the PLI scheme and the government was committed to invest Rs 4,500 crore in it. Under the PLI Scheme, 10,000 MW capacity integrated solar PV manufacturing plants will be operationalised with an estimated investment of Rs 14,000 crore, which would increase demand for locally produced materials. "We want to see our companies become global manufacturing champions, not just to fulfil local demands," he added. He said that this year's Budget had shown unprecedented commitment towards investment in infrastructure and that was evident in Mission Hydrogen, domestic manufacturing of solar cells and massive capital infusion in the renewable energy sector.

The government in this Budget had announced additional capital infusion of Rs 1,000 crore in Solar Energy Corporation of India and Rs 1,500 crore in Indian Renewable Energy Development Agency.

PLI scheme for high-efficiency solar PV to lead to investments of more than Rs 14,000 crore: PM Modi

The Economic Times, 18/02/2021

The performance-linked incentive scheme for high-efficiency solar photovoltaic modules will lead to investments of more than Rs 14,000 crore to create a manufacturing capacity of 10,000 MW, Prime Minister Narendra Modi said on Thursday.

Speaking to senior executives from the power sector on a virtual platform, he said that this influx of cash will lead to widespread demand for solar components in the coming future.

"It is expected that in the coming 5 years, demand worth 17,500 crore will be created. This demand will go a long way in giving impetus to the domestic manufacturing setup in the country," Modi said, adding that he wants to make India a global manufacturing hub for renewables.

The Prime Minister also assured the industry stakeholders that the government is taking a look at a solution for problems related to the financial health of the distribution companies.

To that end, the Centre will reduce entry barriers and free the segment from licenses, he said.

"Throughout the country, we are taking a look at electricity supply and the distribution network to allay the problems with them. For this, a discom-related policy and regulatory framework is in the works," Modi said.

Finance minister Nirmala Sitharaman had on Februrary 1 announced that a framework will

be put in place to give electricity consumers alternatives to choose from among more than one distribution company. The government proposes to delicense electricity distribution by amending the Electricity Act 2003.

As per the proposal, any company, association or body of individuals, even non-incorporated, can take up electricity distribution in any area after registering itself with the respective electricity regulatory commission.

Speaking to the industry at a webinar to discuss the Union Budget, Modi requested for suggestions on the matter, and reached out to the power sector to implement the measures in swift and easy manner.

"It's been more than 15 days since the Budget was announced. I'm sure by now, you would have analysed the nuances related to your sector — where there are profits and losses. Now you have to tell us how the government and you together can pave the way forward, how the Budget decisions will be implemented quickly," he said.

India to establish its first geothermal field development project in Leh; free power supply for people

The Financial Express, 08/02/2021

Taking a step further for carbon-neutral Ladakh, the administration of the union territory has signed a tripartite agreement that will help in establishment of the country's first-ever geothermal field development project.

The agreement/ pact was signed between the Oil and Natural Gas Corporation (ONGC) Energy Centre and Union Territory Administration Ladakh, Ladakh Autonomous Hill Development Council (LAHDC)-Leh. Ladakh Lieutenant Governor R K Mathur along with MP Jamyang Tsering Namgyal were also there on the sidelines who termed this development as a step in order to make Ladakh carbon-neutral.

According to a report by PTI, the memorandum of understanding (MoU) was signed between Ladakh Power Development Department Administrative Secretary Ravinder Kumar, LAHDC Chief Executive Officer Sachin Kumar Vaishya and ONGC Energy Centre.

The project will be executed in a phased manner where phase 1 is the pilot project. Under this pilot, power generation capacity of 1 megawatt (MW) will be generated and the general public will get 100 per cent free power supply. The report said that ONGC Energy Centre will put an agency for this pilot project. Under the phase 2 for this project, the officials will dive deep in the "lateral exploration of geothermal reservoir" and this will be done by drilling an optimal number of wells. A high capacity demo plant will also be set up in Ladakh. Depending on the discovered capacity, the plan is to make this a commercial project under phase 3, the report citing the spokesperson According to the lieutenant governor, this memorandum will mark the first geothermal project in India and the project is a promising initiative that will lead to an innovative and sustainable development in Ladakh.

Apart from this, Mathur said that the government is trying to study and learn from countries regarding development as well as greenhouses when it comes to a geo-thermal project. He also urged ONGC Energy Centre to execute the project as early as possible further ramping it up to 200 MW capacity. ONGC Energy Centre Director General Sanjeev S Katti, on the other hand, noted that the energy from this project will provide power supplies at all times and the hot water from the spring will allow some space-heating and it can also lead to establishment of hot swimming pools that will later attract tourists.

ISA to launch World Solar Bank at global climate meet in November

Mint, 18/02/2021

The International Solar Alliance (ISA) plans to launch the World Solar Bank (WSB) at the United Nations Climate Change Conference in Glasgow in November, a top ISA official said, a development that will support India's attempt to secure leadership in the climate arena. The ISA is the first treaty-based international government organization headquartered in India.

The development assumes significance, given that green finance will be among priority themes at the climate meet called COP-26, which comes in the backdrop of US re-joining the Paris climate accord. The ISA was co-founded by India at the 2015 climate change conference in Paris.

"We are trying to launch a Green Grid Initiative (GGI), a Sun Charter, and the World Solar Bank at COP-26 at Glasgow so that COP-26 becomes as important and as farreaching as COP-21 in the past," ISA director general Upendra Tripathy said.

COP-26 president Alok Sharma arrived in Delhi on 15 February, and met Prime Minister Narendra Modi, environment, forest and climate change minister Prakash Javadekar, external affairs minister S. Jaishankar, power and new and renewable energy minister Raj Kumar Singh, and G20 and G7 sherpa Suresh Prabhu.

These plans come in the backdrop of Ajay Mathur, a leading climate expert and advisor to the government, being elected as the next ISA director-general. Leading global efforts to roll out "solarization" as part of the fight against climate change will be Mathur's key task as he takes over the ISA mantle.

Apart from working towards setting up the WSB, which is also expected to be headquartered in India, ISA is the nodal agency for implementing India's global electricity grid plan, One Sun One World One Grid (OSOWOG), that seeks to transfer solar power generated in one region to feed the electricity demands of others.

"GGI is a joint effort of ISA and Climate Parliament to showcase the Green Energy Corridor (GEC) of India as an example to the world and encourage all member countries to emulate India's GEC and integrate them to OSOWOG," Tripathy added.

A consortium led by French state-run power utility firm EDF and comprising France's AETS, and India's The Energy and Resources Institute (Teri) has been tasked with creating the road map for the global grid OSOWOG.

India's nominee Ajay Mathur to head International Solar Alliance

The Times of India, 15/02/2021

India's nominee and current director general of TERI, Ajay Mathur, was on Monday elected as new chief of International Solar Alliance (ISA) – an inter-governmental body, set up in 2015 as a joint initiative of India and France to accelerate use of safe, sustainable, and affordable solar energy for all.

A coalition of 73 member countries, ISA, aims to mobilize over USD 1 trillion of investment into solar projects by 2030 through policy and regulatory support, capacity building, and by overcoming perceived investment barriers. "This is a great honour for me, and I look forward to ISA enabling global solarization," Mathur told TOI after his election at the first special assembly of the Alliance, held virtually. He will replace the incumbent Upendra Tripathy as new director general of this global body on March 15.

Speaking at the ISA's special assembly, Mathur, said, "The ISA has a vital role to help establish the infrastructure and ecosystem for a zero-carbon emission future. With strong foundations already in place, my immediate focus is to identify and mobilize the opportunities and capital to accelerate our solarization goals in the interim and long-term."

Before joining as director general of the new Delhi-based energy and environment thinktank, The Energy and Resources Institute (TERI), Mathur had headed India's Bureau of Energy Efficiency (BEE) and served with the Green Climate Fund.

Mathur will head the global body at a time when the ISA has recently decided to open

its membership to all UN member countries. Its headquarters is located in Gurgaon, Haryana.

Though the ISA was initially conceived as a coalition of only solar-resource-rich countries (which lie either completely or partly between the Tropic of Cancer and the Tropic of Capricorn) to address their special energy needs, its extent has now expanded to cover all UN member countries.

Green hydrogen auctions in 3-4 months: R K Singh

The Economic Times, 19/02/2021

India will conduct auctions for green hydrogen in the next 3-4 months, power and renewable energy minister R K Singh said on Friday. He said the robust electricity demand would help the country in adding green energy to its portfolio without the need to retire coal-based plants.

Singh said his ministries have held discussions with the ministries of oil and gas, fertiliser and steel on the hydrogen mission to work out the bidding framework. He said discussions have been held for specifying mandatory purchase obligations for green hydrogen on fertiliser units, oil refineries and steel units for initial years.

"We import ammonia. Suppose we have a mandate like to begin with 10% of ammonia which fertiliser units are importing will be replaced by green ammonia made in India. We have put it to the ministry of petroleum that you import natural gas and extract hydrogen. Suppose we put a mandate to replace 10% of the hydrogen which is used for refining with green hydrogen made in India," he said at the launch of 'Go-Electric' campaign to promote electric mobility and cooking.

He said if a minimum 10% green hydrogen obligation is imposed on steel, fertiliser and oil refinery units, the fuel will become competitive in three years.

"You have to have an obligation to buy made in India green hydrogen which may be

slightly more expensive. Whatever it is, we need to begin. It depends on the bid. In fact, it may turn out to be not more expensive at all," he said.

Singh said the average increase in demand from October till January was 10.5%. In October, it went up by 13% YoY.

"And we see that increase continuing to happen. In fact the rate of increase is going to be faster. Growth has happened, despite the fact that large parts of our economy, the commercial sector is actually not fully running on all cylinders. When the rest of the economy kicks in, the rate of growth of our energy demand will increase. Therefore, it gives us space to add renewable energy without having to retire our existing coal-fired plants," he said.

Singh said all countries are worried about environmental degradation and the pressures on different countries to reduce emissions are going to grow.

"Currently our energy consumption is about one third of the world average, per capita energy consumption is about one third the world average. So if any country says that, when are you closing your coal plants I say wait till the per capita energy consumption goes up to the world average then we will talk about it. The fact is, the pace of our energy transition is the fastest in the world," he said.

Minister for road transport and highways Nitin Gadkari, who was also present at the event said that electric vehicles should be made mandatory for all government officials in a bid to promote cleaner modes of transportation.

He said the government should give subsidy to buy electric cooking appliances instead of giving support for buying cooking gas to households.

6. Mobilités électriques

Govt aims to support through subsidies 62,000 e-cars, buses; 15 lakh electric two & three wheelers: Gadkari

Times of India, 11/02/2021

To boost electric mobility, the government aims to support through subsidies about 62,000 electric passenger cars and buses, besides 15 lakh electric three and two-wheelers, Parliament was informed on Thursday. The focus is also on creating electric charging infrastructure, road transport and highways minister Nitin Gadkari told the Lok Sabha in a written reply.

Phase-II of Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME India) Scheme is being implemented with a total budgetary support of Rs 10,000 crore, he added. "This phase focusses on supporting electrification of public & shared transportation and aims to support, through subsidies, approx. 7000 e-buses, 5 lakh e-three wheelers, 55,000 efour wheeler passenger cars and 10 lakh etwo wheelers.

"In addition, creation of charging infrastructure is also supported to address range anxiety among users of electric vehicles," the minister said. Stressing that all vehicles will continue to be registered as long as they meet the requisite safety and emission standards, he said as per information from the department of heavy industry (DHI), 98 electric vehicle models (32 two-wheelers, 50 threewheelers and 16 fourwheelers) have been registered under FAME India Scheme Phase-II as on February 8, 2021.

He said presently GST on electric vehicles is 5 per cent and proposal for further reduction of tax on such vehicles is not under consideration. Incentives are being provided to the purchasers of e-vehicles in the form of an upfront reduction in the purchase price.

"Further, the incentive is linked to battery capacity i.e. Rs. 10,000/KWh for e-2W, e-3W and e-4W," he said. Gadkari said his ministry has issued regulations and advisories to promote the use of electric vehicles.

These include retro-fitment of hybrid electric system or electric kit to vehicles,

"registration mark for battery operated vehicles to be in yellow colour on green background for the transport vehicles and, for all other cases, in white colour on green background" and "specifications for the grant of licence to age group of 16-18 years to drive gearless e-scooters/ bikes up to 4.0 KW."

Other initiatives include exemption to battery operated transport vehicles and transport vehicles running on ethanol and methanol fuels from the requirements of permit. He said advisory has been issued to all states and Union Territories to promote use of electric vehicles, besides advisory regarding sale and registration of electric vehicles without batteries.

All govt officials should use EVs: Nitin Gadkari during launch of Go Electric campaign

The Financial Express, 19/02/2020

Transport Minister Nitin Gadkari on Friday made a case for making it mandatory to use electric vehicles for all officials in government ministries and departments. He also suggested that government should give subsidies to buy electric cooking appliances instead of giving support for buying cooking gas to households. Addressing at the launch Go Electric campaign, Gadkari said, "Why don't we provide subsidy on electric cooking appliances. We already provide a subsidy on cooking gas."

He was of the view that electricity cooking is clean and will also reduce import dependence on gas. Gadkari suggested that the use of electric vehicles should be made mandatory for all government officials.

He, further, urged Power Minister R K Singh to make it mandatory to use electric vehicles for officials in his department saying he will do so for his departments.

He said that the use of 10,000 electric vehicles in Delhi can alone save Rs 30 crore per month. On this occasion, Singh also announced that a fuel cell bus service will be

launched from Delhi to Agra and Delhi to Jaipur soon.

On the campaign launch event "Go Electric", Uday Narang, Chairman, Omega Seiki Mobility said: "We are elated to see that the Ministry of Road Transport and Highways and Ministry of Power are equally inclined towards the electrification drive of the nation. From setting up 2,877 charging stations in 68 cities to incentivising the EVs, wholeheartedly the government is supporting the EV stakeholders and players in the country. The "Go Mobility" campaign is designed in such versatile manner that it will benefit both the EV manufacturers and customers."

"The government's vision of initiating Green hydrogen in the commercial vehicle could be a game-changer move which would help in eliminating the crude requirement and imports in all possible ways. India imports around 94 million tonnes of crude oil per year which of course negatively impacts our economy and the environment as well due to such heavy consumption. The Government has shown us the direction today and it is our responsibility to escalate the drive exponentially," Narang further added.

7. Environnement et qualité de l'air

Coal-fired brick kilns cannot be allowed to operate in NCR during severe pollution: NGT

The Economic Times, 18/02/2021

Coal-fired brick kilns cannot be allowed to operate in the NCR even if zig-zag technology is used and improved procedures are followed during 'severe' pollution, the National Green Tribunal has said. Unless there is a change to a cleaner fuel (PNG), brick kilns beyond the number specified cannot be allowed in the NCR, the green panel said.

It said that the Central Pollution Control Board (CPCB) has found that there is no assimilative capacity during the period air quality is 'severe' and only during months of March to June, there is a limited capacity.

"Those brick kilns which switch over to PNG will be entitled to operate even beyond months of March to June and even beyond limited number mentioned, subject to compliance with the law," said a bench headed by NGT Chairperson Adarsh Kumar Goel.

The tribunal said that a distance of at least 500 meters is required to be maintained in the location of brick kilns.

"When brick kilns start, they should not be allowed to start simultaneously but their firing should be staggered to avoid adverse impact on the environment. Other safeguards of fugitive dust emission management need to be adopted," the bench said.

The NGT said since there is the variance of figures given during March to June, only such number can be allowed which can be sustained throughout the period i.e. the minimum figure of a particular month out of the four months which comes to 444 in Haryana (in May) and 200 in UP (in June).

Such shortlisting may be done applying suitable siting criteria taking into account interse distance and distance from sensitive locations and compliance of consent conditions for which the CPCB, State PCB may work out an appropriate mechanism.

Further, the location of brick kilns be scattered on pro-rata basis, in different directions of the concerned area, having regard to background and carrying capacity parameters.

The tribunal had earlier rejected a plea to allow brick kilns running on 'Zig-Zag' technology in NCR saying their operation will have a disastrous effect on the air quality.

It had directed the CPCB to constitute a committee of five experts to suggest ways and means, if any, by which sustenance of brick kilns activities may be viable.

The NGT had said it conscious that brick kilns may be necessary and the object of this order is not to stop any legitimate business activity but to enforce the right to breathe fresh air which is right to file.

The tribunal was hearing a plea by brick kiln owners seeking permission to operate those units which are running on 'Zig-Zag' technology in NCR till level of air pollution becomes normal.

In Zig Zag kilns, bricks are arranged to allow hot air to travel in a zigzag path which results in better mixing of air and fuel allows complete combustion, reducing coal consumption by about 20 per cent.

Other brick kilns (FCBTK) have already been prohibited by the order of the Environment Pollution (Prevention and Control) Authority to enforce Graded Response Action Plan, stipulating shutting of Brick kilns in NCR under severe conditions when particulate matter level is high in the air.

Over 120K died due to air pollution in India in 2020: Greenpeace

Over 120,000 people died in India (at least

Hindustan Times, 18/02/2021

12,000 in Bengaluru alone) in 2020 as a result of air pollution and related problems, according to the Greenpeace Southeast Asia Analysis of IQAir data. The report also stated that air pollution caused economic damages to the tune of ₹2 lakh crore in India, including about ₹12,365 crore in Bengaluru. The report titled "Greenpeace: Cost to Economy Due to Air Pollution Analysis 2021" was released by Greenpeace, a global climate action advisory group, on Thursday. "The cost estimator also estimated air pollution-related economic losses to be about ₹1,23,65,15,40,000 in six Indian cities. The damage is equally worrying in other Indian cities. An estimated 25,000 avoidable deaths in Mumbai in 2020 have been attributed to air pollution. Bengaluru, Chennai, Hyderabad and Delhi estimated an approximate 12,000, 11,000, 11,000, and 54,000 avoidable deaths respectively due to

polluted air," Greenpeace said in a statement on Thursday.

A cost estimator is an online tool that tracks the real-time health impact and economic costs of air pollution in major world cities, Greenpeace said.

Indian urban centres are becoming increasingly congested due to migration for education, employment and better quality of life. But the increasing population has led to a rise in pollution levels due to the use of private cars, felling of trees to widen roads, construction of new housing and public infrastructure to accommodate migrant workers—both white and blue collar.

Bengaluru has 9.4 million vehicles in an area of just around 820 square kilometres.

Vehicular pollution is the single biggest reason for deteriorating air quality in India's IT capital, followed by construction and other reasons, according to the government. While the Covid-19-induced lockdown brought some reprieve to the environment, lifting of restrictions has hastened the deteriorating quality of air, water and overall quality of life.

"Despite recording relatively better air quality this year due to strict lockdown, air pollution continues to be a serious public health issue which also drastically impacts our economy. For the governments of the day, it is crucial that investments are made towards green and sustainable solutions. When we choose fossil fuel over clean energy, our health is put at stake. Polluted air increases the likelihood of deaths due to cancer & stroke, spike in asthma attacks and worsens severity of Covid-19 symptoms," Avinash Chanchal, climate campaigner, Greenpeace India, said in a statement.

Air pollution claimed 160,000 deaths globally in 2020, according to the report.

Climate change behind Uttarakhand glacier burst, experts feel

Times of India, 19/02/2021

The glacier burst at Uttarakhand is an outcome of climate change in the

Himalayan region which is warming up faster than the other mountain regions, say experts.

Incremental use of reinforced concrete cement structures replacing the traditional wood and stone masonry is accelerating a heat-island impact in the mountain region. There are more than 8000 glacial lakes in the Himalayas of which 200 are classified as dangerous. The glacier collapse at Joshimath on Sunday led to a massive flood in the Dhauli Ganga river and caused large-scale devastation in the upper reaches of the ecologically fragile Himalayas.

"Glacier retreat and permafrost thaw are projected to decrease the stability of mountain slopes and increase the number and area of glacier lakes (high confidence). Resulting landslides and floods, cascading events, will also emerge where there is no record of previous events (high confidence)," says the Special Report on Oceans and Cryptosphere (SROCC) by Intergovernmental Panel for Climate Change (IPCC)

"There is high confidence that current global glacier shrinkage caused new lakes to form and existing lakes to grow in most regions, for instance in South America, High mountain Asia and Europe," the report says. "There is also high confidence that the number and area of glacier lakes will continue to increase in most regions in the coming decades, and new lakes will develop closer to steep and potentially unstable mountain walls where lake outbursts can be more easily triggered by the impact of landslides," it adds.

"The IPCC reports that climate change has altered the frequency and magnitude of the natural hazards. The scientist reported with medium confidence that in some regions snow avalanches involving wet snow have increased while the rain on snow floods have also increased at lower elevations in springs. We do not have the data now to give you

information on what has caused the avalanche in the Chamoli district but what we know, prima-facia, is that this looks very much like a climate change event as the glaciers are melting due to global warming," said said Dr. Anjal Prakash, Research Director and Adjunct Associate Professor at the Indian School of Business (ISB), Hyderabad.

The impact of global warming on glacial retreat is well documented. The recent assessment report called the HI-MAP report facilitated by ICIMOD has also pointed these out.

The report shows that temperatures are rising in the Hindu-Kush Himalayan region and the rise in global temperature will have more impact in the Himalayan region due to elevation-dependent warming. If the world can keep the temperature rise to below 1.5 degrees Celsius, in the HKH region it would translate to at least a rise of 1.8 C, and in some places, above 2.2 C," said Prakash who was Coordinating Lead Author of the special report on Oceans and Cryosphere, 2018 and Lead Author of the ongoing 6th Assessment report of IPCC.

Calling it a "very rare incident," Dr Mohd Farooq Azam, Assistant Professor, Glaciology & Hydrology, IIT Indore, said it is unlikely that this was a cloud burst. "Weather reports in Chamoli district show sunny weather till today with no record of precipitation. There is no doubt that global warming has resulted in the warming of the region," says Azam.

"Climate change driven erratic weather patterns like increased snowfall and rainfall, warmer winters has led to the melting point of a lot of snow. The thermal profile of ice is increasing, where earlier the temperature of ice ranged from -6 to -20 degree C, it is now -2, making it more susceptible to melting," Azam said. Prakash wants the government to spend more on monitoring the Himalayan region.

"<mark>Himalayan regions area are also least</mark> monitored region and this event actually shows how vulnerable we could be. Spending more will ensure we have more information about the change process. The result would be that we are more aware and could develop better adaptation practices," he further said.

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