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How India Can Meet Its Glasgow Promise

From reforming discoms to recruiting skilled energy managers, the list of reforms is formidable

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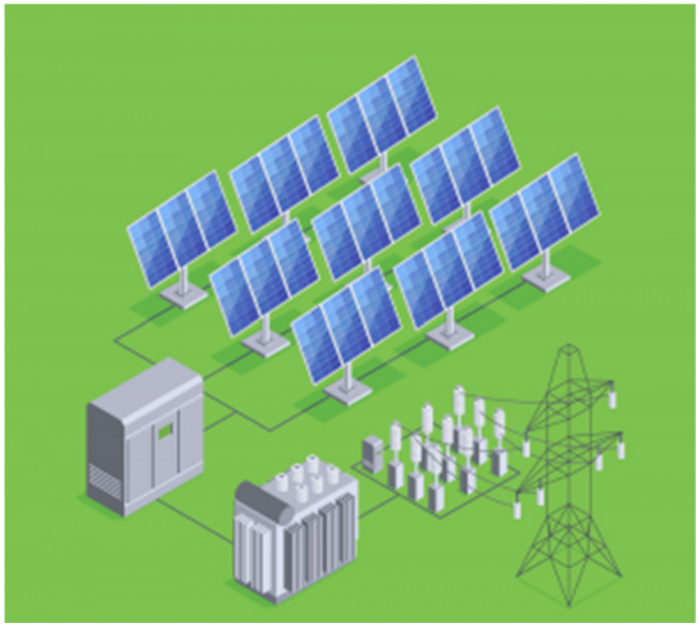

On the first day of the Glasgow climate conference – COP26 – the biggest announcement came from India. Ending speculations on whether India 'will' or 'can' make a net-zero pledge, Prime Minister Narendra Modi announced that the country will reach net-zero emissions by 2070. He also announced four major nearer-term targets exhibiting India's will and ambition on climate action.

The targets, all of which are to be met by 2030, include an installed renewable energy capacity of 500 GW (up from 450 GW target); meeting 50% of the electricity requirement through renewable sources; reducing total projected cumulative carbon emissions by 1 billion tonnes between 2020 and 2030; and reducing the carbon intensity of GDP by 45% from 2005 levels (up from the 33-35% target).

So how ambitious are these new targets?

India's renewable energy targets mean that coal power will peak before 2030, when about 70% of India's electricity installations will be renewable-based, battery and smart grid will dominate the market. This would be one of the most rapid decarbonisations of electricity sector anywhere in the world.

India's net-zero target is equally ambitious, but few more details are required to understand what it means. There is confusion on whether the target is for all greenhouse gases (GHGs) or only for carbon dioxide (CO_2). If it is for all GHGs, then India's target is compliant with1.5°C warming. If it is only for CO_2, it is 2.0°C compliant. However, even if only for CO_2, it is still a strong signal to decarbonise the economy. As zero-carbon technologies become more accessible, India will update this target to attract massive global investments.

What domestic reforms do they demand?

In nutshell, these announcements have put India in a leadership role on climate mitigation action. The question now is, what are some of the major steps that must be taken domestically to steer the course of action in the coming years? There are three 'make or break' factors for realising India's ambitious targets.

Firstly, if 500 GW of power-generation capacity must be achieved, India must create an enabling environment for attracting global investments. Reforming the distribution companies (discoms) is most important to create that environment.

Secondly, for meeting 50% of electricity supply through renewables, India's grid infrastructure will have to be strengthened and battery storage capacity will have to be massively increased. Investing in smart grid and battery infrastructure is crucial for this.

Third, a huge skilled workforce will be required to run the new electricity infrastructure. This means investments must start in reskilling of existing and skilling of new workforce to meet the future requirements.

Finally, all of these changes in the energy and industrial systems must be paralleled by a plan of just transition, to ensure that we do not carry forward the legacy of unequal development challenges of the coal era, into the new era of renewable energy and a greener economy.

In fact, while energy transition has been a hot topic on the policy and business front, just transition has not got the due attention. However, as coal power will peak before 2030, it is time for India to start policy deliberations, develop plans for, and consider investing in it. And this is why it is crucial.

Could renewables mean unequal development?

India's energy geography will change because of massive investments in renewables. Today's coalproducing states will not be renewable superpowers. The renewable energy will be generated in western and southern states.

Therefore, as the share of non-fossil fuel energy grows, the coal regions can spiral into a poverty trap, which many of the districts here are already saddled with. There can also be huge social instability triggered by job losses and uncertainty of income opportunities. An estimated 20 million plus workers will be impacted countrywide by the transition. In fact, the disproportionately high number of informal workers in our key economic sectors such as coal mining, transportation, steel, cement etc adds to the challenge. But all this can be avoided through a well-planned and well-managed just transition over the next decades.

Planning a 'just' energy transition will be a smart move by the government to further a development agenda that benefits all. We have the next 30 years to complete the transition, but the process must start now.

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Coal consolation

TOI Editorials

An ironic sidelight of the ongoing COP26 climate conference is that financial investors in coal, the largest source of CO2 emissions from fuel combustion, haven't experienced better returns in a long time. A report in this paper pointed out that Coal (Australia) delivered returns of 188% since last Diwali, on the back of a surge in demand. This peculiar phenomenon is in the spotlight as on November 4, a number of COP26 participants issued a statement identifying coal power generation as the single biggest cause of global temperature increases and pledged to help in an orderly transition to other sources of electricity generation.

Coal remains the bedrock of global electricity generation. The International Energy Agency says that it fires up almost 37% of global electricity generation. A dirty fallout of it and other uses of coal is that it comprised 44% of all CO2 emissions from fuel combustion in 2019, the single largest source. That begs the question: Will our coal dependence undermine the net-zero visions laid out at COP26?

Very unlikely. Coal's current surge in demand is an outcome of disruptions catalysed by Covid-19. Global coal production fell by 4.8% in 2020. Since then, the fast-paced return to normalcy has exacerbated shortages. It's the rise in the contribution of renewables to power supply that underpins net-zero visions. IEA data shows that renewables contributed 29% of global power supply in 2020 and are the source that's growing fast. The coal sidelight may not be anything more than a blip.

THE ECONOMIC TIMES

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Starting From Here To Reach Net Zero

ET Editorials

Now that Narendra Modi has announced a net-zero target for India by 2070, India needs to boost energy efficiency across the economy, and reduce carbon emissions at power plants for focused climate action. The way ahead is to induce ultra-low emissions at thermal plants, even as India steps up integration of renewables into the electric grid. The PM also set a target for 500 GW of installed non-fossil fuel power-generation capacity by 2030. And, India would meet half its energy requirements from renewable sources within a decade. Note that both small and large hydroelectric capacity now comes under the renewable energy (RE) label. And that large solar and wind power capacities are slated to produce green hydrogen (GH), the environmentally benign fuel of the future. Energy planners also need to boost resource allocation for advanced biogas plants that use farm and municipal wastes as feedstock to shore up RE.

In tandem, India has to speed up diffusion of the indigenously developed advanced ultra-super critical boiler technology to rev up thermal efficiency at conventional power plants, and adopt integrated

gasification combined cycle (IGCC) technology for domestic fuel, for enhanced efficiency. Alongside, we need to fast-forward indigenous technology for gainful carbon capture at power plants. Power major NTPC and engineering specialist L&T have joined hands to commercialise methanol plants at the former's thermalstations. And methanol can be blended with automotive fuel, so as to reduceemissions.

In the foreseeable future, there would be ample scope for new fibres and materials via carbon capture - perhaps building material, too. What's required is technology forecasting and attendant follow-through policy action to actualise India's potential as a hub for subsequent carbon innovation. Besides these, India must urge its energy partners like the US to rapidly commercialise carbon capture, sequester and use technologies, which can then be quickly and suitably adopted for Indian conditions and resource endowments.

THE HINDU

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Keeping the faith

Following WHO approval, Bharat Biotech must prioritise global supply

Editorial

Following months of speculation, the World Health Organization (WHO) has granted Emergency Use Listing (EUL) to Covaxin, manufactured by Bharat Biotech. This now allows the vaccine's better availability in many more countries, particularly via global groupings such as Covax. One of WHO's key aims is to have at least 40% of people in all countries vaccinated by the year-end — a tall order as the latest estimates suggest that only around 1% of people in low-income countries have received their jabs. Seventy countries are yet to vaccinate 10% of their populations, and 30 countries — including much of Africa — have vaccinated fewer than 2%. In Latin America, only one in four of the population has received a vaccine dose, according to The British Medical Journal. Covaxin is an indigenous, inactivated whole-virion vaccine that has been developed based on well-established protocols. This has meant that it was put on the regulatory speed belt at nearly every stage, the most significant being its emergency approval by India's drug regulators without any published phase-3 efficacy data. The ostensible reason for the haste was that India needed a low-cost indigenous vaccine that could be quickly administered to many.

Though Bharat Biotech has years of experience in producing crores of vaccines, the scale of quickly ramping up Covaxin supply has so far been beyond its capacity. In no month, since July, has Bharat Biotech actually delivered on its promised supply of vaccine, and even after over 107 crore shots have been administered, only around 12% have received Covaxin; many in India have been vaccinated with Covishield. Moreover, before the Centre agreed to take over 75% of the public supply, Covaxin offered no cost advantage — and in some instances was costlier — than Covishield. Bharat Biotech however moved to quickly get WHO's approval for its vaccine under its emergency listing process, in July. But unlike the

rapid-fire clearance by India's Central Drugs Standard Control Organization, WHO's evaluation process has turned out to be considerably more involved. WHO cleared the AstraZeneca (Covishield) vaccine in four weeks but that Covaxin has required over 20 weeks — especially in a climate where much of the world is desperate — raises several questions. Bharat Biotech is no novice to WHO's clearance process and would surely be aware of all the requirements. While Covaxin's EUL may now ease foreign travel for a fraction of Indians, there is a real need to know why, in spite of Bharat Biotech's claims that it had furnished the required data whenever demanded, this approval took the time it did. With Covaxin close to being approved for children there will be significant demand now for this population segment; however, the company must work to improve its manufacturing supply and contribute to a larger share of the vaccines globally administered.

जनसत्ता

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कोवैक्सीन को मान्यता

संपादकीय

आखिरकार लंबे इंतजार के बाद विश्व स्वास्थ्य संगठन (डब्ल्यूएचओ) ने भारत के स्वदेशी टीके कोवैक्सीन को आपात इस्तेमाल के लिए मंजूरी दे दी। भारत के लिए यह उपलब्धि ज्यादा बड़ी इसलिए है कि डब्ल्यूएचओ ने इस टीके को मंजूरी देकर कोरोना महामारी से निपटने में भारत के प्रयासों पर मुहर लगाई है। कोवैक्सीन से पहले डब्ल्यूएचओ दुनिया के जिन टीकों को मंजूरी दे चुका है, उनमें फाइजर-बायोएनटेक, आक्सफोर्ड ऐस्ट्राजेनेका, जानसन एंड जानसन, माडर्ना और सिनोफार्म के टीके शामिल हैं।कोवैक्सीन को भारत बायोटेक ने भारतीय आयुर्विज्ञान अनुसंधान परिषद (आइसीएमआर) के साथ मिल कर बनाया है। इसे मंजूरी के लिए भारत बायोटेक काफी समय से प्रयास कर रही थी। पर डब्ल्यूएचओ ने परीक्षण संबंधी आंकड़ों को लेकर कुछ सवाल उठाए थे। भारत ने कोवैक्सीन को मंजूरी नहीं देने का मामला हाल में इटली में हुई समूह-20 देशों की बैठक में भी उठाया था।भारत का कहना था कि अगर कोवैक्सीन को मंजूरी मिल जाती है तो वह दूसरे देशों को भी जल्द ही टीकों का निर्यात बढ़ा सकेगा और महामारी से निपटने में अपना योगदान दे सकेगा। जाहिर है, डब्ल्यूएचओ पर प्रधानमंत्री की अपील का दबाव बना और उसने महामारी से लड़ाई में भारत के योगदान को भी स्वीकार किया।

भारत को दुनिया में टीका निर्माण के प्रमुख केंद्र के रूप में देखा जाता है। कई तरह के टीके यहां बनते हैं और दूसरे देशों को भेजे जाते हैं। इसीलिए कोरोनारोधी टीकों के मामले में भी दुनिया को सबसे ज्यादा उम्मीद भारत से ही रही है। कोविशील्ड को आक्सफोर्ड-ऐस्ट्रेजेनिका ने विकसित किया था, पर उसका उत्पादन भारतीय कंपनी सीरम इंस्टीट्यूट आफ इंडिया कर रही है।इसी तरह हैदराबाद की भारत बायोटेक ने कोवैक्सीन पर काम शुरू किया था। कोवैक्सीन को लेकर शुरू से यह दावा भी किया जाता रहा है कि यह दुनिया के कई टीकों को टक्कर देने वाला साबित होगा। इसे निष्क्रिय विषाणु से तैयार किया गया है, इसलिए दूसरे कोरोना रोधी टीकों की तुलना में इसके निर्माण की प्रक्रिया कहीं जटिल है।इसलिए परीक्षण से लेकर इसके उत्पादन तक में बाधाएं भी आईं। इस कारण भारत में टीकाकरण अभियान में कोविशील्ड की भागीदारी काफी ज्यादा देखने को मिली। हालांकि अब कोवैक्सीन का उत्पादन भी बढ़ रहा है और वैश्विक निकाय की मंजूरी के बाद इसके निर्यात का भी रास्ता साफ हो गया है।

कोवैक्सीन को डब्ल्यूएचओ की मंजूरी नहीं मिलने को इस आशंका के तौर भी देखा जा रहा था कि कहीं यह टीका और टीकों के मुकाबले कम प्रभावी या खामियों भरा तो नहीं है। इसलिए अब इसे डब्ल्यूएचओ की मंजूरी मिलने से इस तरह की किसी भी आशंका या डर पर विराम लग गया है। डब्ल्यूएचओ ने साफ कहा है कि उसके वैज्ञानिकों ने इसे जांच में पूरी तरह से मानकों पर खरा और प्रभावी पाया है। कोवैक्सीन को मान्यता मिलने का सबसे बड़ा लाभ यह हुआ है कि इसे लगवाने वाले अब बेरोकटोक विदेश यात्रा कर सकेंगे। अभी तक कई देशों ने कोवैक्सीन लगवाने वालों के लिए एकांतवास जैसी शर्त को अनिवार्य कर रखा था।हालांकि आस्ट्रेलिया, एस्तोनिया, किर्गिस्तान, फिलस्तीन, मारीशस, मंगोलिया और ओमान जैसे देश अपने यहां कोवैक्सीन को पहले ही मान्यता दे चुके हैं। पर डब्ल्यूएचओ की मंजूरी मिलने के बाद अब कोई भी देश इसे खरीदने में हिचकिचाएगा नहीं। कोवैक्सीन को मंजूरी टीकाकरण की रफ्तार और उपलब्धता दोनों में वृद्धि होगी। इससे जल्द टीकाकरण और टीका समानता के भारत और डब्ल्यूएचओ के साझा लक्ष्यों को आसानी से हासिल किया जा सकेगा।