

DAILY PT POINTERS

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The Hindu-Energy(GSIII)-Page 8

The 'import restrictions' on solar PV cells

What is the Approved List of Models and Manufacturers of Solar Photovoltaic Modules? Why was it re-implemented after being 'kept in abeyance' for two years? How did China become a dominant player in the import of solar PV modules?

EXPLAINER

Kunal Shankar
Saptarshi Ghosh

The story so far: Recent government orders on attempts to increase local sourcing of solar modules to support India's renewables manufacturing ecosystem has been widely reported in the media as 'import restrictions'. This follows the Ministry of New and Renewable Energy's (MNRE), March 29 order to re-implement its 2021 notification of an 'Approved List of Models and Manufacturers of Solar Photovoltaic (PV) Modules', also called the ALMM list.

What is the ALMM list? Why is it being re-implemented? This list consists of manufacturers who 'are eligible for use in Government Projects/Government assisted projects/projects under Government schemes & programmes... including projects set up for sale of electricity to the Central and State Governments.' However, this notification was 'kept in abeyance' two years after it was issued, for the past financial year. While the government did not give an explicit reason for this, it has been reported that it stems from concerns and demands of renewable power producers who had secured sale contracts with the government before these rules were issued, when solar modules and cells were overwhelmingly imported from China at highly competitive rates. India's domestic renewables sector, at the time, was unable to meet the spike in demand for solar power production equipment at rates offered by Chinese manufacturers. The government's re-introduction of this rule has been premised on the estimation that following measures, such as the Production Linked Incentive (PLI) scheme, India's domestic sector has boosted its production capacities and bettered price competitiveness to meet local demand. This is an import



Towards the sun: Solar panels in Paugada Solar Park in Kyatagarachur, Karnataka. GETTY IMAGES

substitution effort, and not an attempt to restrict imports.

Does India rely on solar PV imports?

India is overwhelmingly import dependent to meet its demand for solar cells and modules – with China and Vietnam being the country's major suppliers. According to a reply by the Minister for New and Renewable Energy in Parliament in February last year, India imported about \$11.17 billion worth solar cells and modules in the past five years. This is worth 0.4% of India's total exports in the same period. And until January of 2023-24, data from the Ministry of Commerce's Import Export showed that China accounted for 57% of India's solar cell imports, and 63% of solar PV modules. Ratings agency ICRA estimates that China commands more than 80% share of the manufacturing capacity across polysilicon, wafer, cell and

modules. "In comparison, the manufacturing capacity in India is relatively low and is largely restricted to the last manufacturing stage," ICRA stated in its November 2023 report, adding that the PLI scheme is expected to change this, with integrated module units expected to come up in India over the next 2-3 years.

How have our policies responded?

To address this over dependence, India made three significant efforts over the past five years. It began with the notification of the ALMM order in January 2021. But the issue attained centre stage in the wake of severe global supply chain disruptions during the COVID-19 pandemic. Finance Minister Nirmala Sitharaman proposed the ₹19,500 crore PLI scheme in the Union Budget of 2022-23. This was to scale domestic manufacturing of the entire solar supply

chain – from polysilicon to solar modules. The government also introduced a steep 40% customs duty on PV modules and 25% on PV cells. These duties were halved as solar capacity additions slowed and as lenders had reported, developers had quoted "aggressively low tariffs" to win power purchase contracts based on imports of Chinese equipment that put cost pressure on about 30 GW capacity worth projects.

Why is China a leading exporter?

In a July 2022 report, the International Energy Agency (IEA) noted that China was the most cost competitive location to manufacture all components of the solar PV supply chains. This is mainly because of the lower cost of power supplied to the industry, the agency observed, as electricity accounts for more than 40% of production costs for polysilicon and almost 20% for ingots and wafers. The IEA also observed that 'Chinese government policies prioritised solar PV as a strategic sector, and growing domestic demand enabled economies of scale and supported continuous innovation throughout the supply chain.'

What is the scope for solar in India?

The government's ambitious target of 500 GW of installed capacity from non-fossil fuels by 2030 is the main driver to scale solar power in India. India also accounts for the fastest rate of growth for demand of electricity through 2040 among major economies, according to the IEA. This is because of strong economic activity and expanding consumption of products to mitigate extreme weather. Solar power accounted for about one-third of all energy generated from renewables between April last year and February this year. "The country has an estimated solar power potential of 748.96 GW. Hence, the potential of solar energy is not fully tapped, so far. The government is making efforts to harness the available potential through various schemes & programs," MNRE Minister R.K. Singh said in Parliament last year.

THE GIST

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The Hindu-IR(GSII)

Taiwan to simulate exercises repelling Chinese drills in case of surprise attack

Reuters
TAIPEI

Taiwan's annual war games this year will practice "kill" zones at sea to break a blockade and simulate a scenario where China suddenly turns one of its regular drills around the island into an actual attack, the Defence Ministry said on Tuesday.

China, which views democratically governed Taiwan as its territory, has been staging regular exercises around the island for the past four years, to pressure Taipei to accept Beijing's claim of sovereignty, despite Taiwan's strong objections.

Taiwan starts its main annual Han Kuang exercises this month with table top drills, extended from a more usual five days to eight given the number of scenarios to be included, followed in July by actual combat exercises, the Ministry said.



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Tung Chih-hsing, head of the Ministry's joint combat planning department, told a news briefing that the drills would practice how to speedily respond to one of China's drills suddenly turning into an attack, something military planners have begun to worry about, considering their regularity.

How different branches of the armed forces can mount a coordinated res-

ponse to a Chinese blockade will be another focus, Mr. Tung said.

The drills will integrate naval, air and coast guard forces, shore-mounted anti-ship weapons and drones to establish a maritime "attack and kill chain", he added.

"In addition, (we will) use naval and air forces and coast guard ships to jointly carry out escort operations" to ensure sea and

air links to the outside world remain open, Mr. Tung said.

During one major round of war games around Taiwan in April of last year, China practised precision strikes and blockading the island.

Since Russia's invasion of Ukraine two years ago, Taiwan has been looking to see what lessons it can learn and integrate into its own exercises, especially how the much smaller Ukrainian forces have been able to fend off the larger Russian military.

Mr. Tung said those would again feature this year, along with the lessons learned from the war in Gaza.

For both of those conflicts, Mr. Tung said officials were looking at the use of psychological warfare and asymmetric operations in particular, though without explaining exactly how they would figure in the drills.

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HEADLINES OF THE DAY



Indian Express-S&T(GSIII)

Nobel physicist Higgs, who proposed 'God particle' existence, dies

ASSOCIATED PRESS
LONDON, APRIL 9

NOBEL PRIZE-WINNING physicist Peter Higgs, who proposed the existence of the so-called "god particle" that helped explain how matter formed after the Big Bang, has died at age 94, the University of Edinburgh said Tuesday. The university, where Higgs was emeritus professor, said he died Monday "peacefully at home following a short illness."

Higgs predicted the existence of a new particle — the so-called Higgs boson — in 1964. But it would be almost 50 years before the particle's existence could be confirmed at the Large Hadron Collider. Higgs' theory related to how subatomic particles that are the building blocks of matter get their mass.



Peter Higgs won the 2013 Nobel Prize in Physics

Edinburgh University said his groundbreaking 1964 paper demonstrated how "elemental particles achieved mass through the existence of a new subatomic particle which became known as the Higgs boson."

In 2012, in one of the biggest breakthroughs in physics in decades, scientists at CERN, the European Organization for Nuclear Research, announced that they had finally found a Higgs boson using the \$10 billion particle collider built in a 17-mile tunnel under the Swiss-French border.

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- Higgs' theory related to how subatomic particles that are the building blocks of matter get their mass. This theoretical understanding is a central part of the so-called Standard Model, which describes the physics of how the world is constructed.
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HEADLINES OF THE DAY

Indian Express-Defence (GSIII)-Page 1

Strategic military infra upgrade in the works for Andaman & Nicobar Islands

Longer runways, jetty, road expansion



The Andaman and Nicobar Command (ANC) is the only Joint-services Command in India and serves as a model for the country's planned theaterisation of Army, Navy, and Air Force capabilities.

Do you know ?

The Andaman & Nicobar Islands is a union territory of India. This territory is known as A & N Islands, or ANI. It is located in the Indian Ocean, in the southern reaches of the Bay of Bengal, nearer to Indonesia and Thailand. This comprises of two island groups - the Andaman Islands and the Nicobar Islands - which separates the Andaman Sea to the east from the Indian Ocean.

The Andaman and Nicobar Islands are of great strategic importance since they straddle one of the busiest sea lanes in the world and give India the reach to monitor the flow of traffic from the South China Sea (Pacific Ocean) to the Andaman Sea (Indian Ocean) via the Strait of Malacca that's key to trade and oil shipments in the Indo-Pacific.

. The Andamans and Nicobars are separated by a channel (the Ten Degree Channel) some 150 km wide

Indian Express-Health (GSII)-Page 1

India has 2nd highest hepatitis cases, 11% of global burden: WHO

ANONNA DUTT
NEW DELHI, APRIL 9

INDIA HAS the world's second highest prevalence of viral hepatitis cases, accounting for over 11 per cent of the global burden in 2022, according to the Global Hepatitis Report 2024 released by the World Health Organisation (WHO) on Tuesday.

According to the report, there were 254 million people living with Hepatitis B and 50 million with Hepatitis C across the world in 2022. Of these, India accounted for 29 million Hepatitis B cases, second only to China at 79 million; and 5.5 million Hepatitis C cases, after Pakistan at 8.8 million.

An estimated 1.23 lakh people died due to hepatitis in India, while over 50,000 new Hepatitis B cases and 1.4 lakh new Hepatitis C cases were reported in 2022.

Globally, with an estimated 1.3 million deaths per year, viral hepatitis kills as many people as tuberculosis.

INDIA NUMBERS

Hepatitis B (Total) 2.97 cr

Infection load* 11.7%

Incidence 50,083

Deaths 98,305

Diagnosis 2.4%

Hepatitis C (Total) 0.55 cr

Infection load 11.2%

Incidence 1,44,187

Deaths 26,206

Diagnosis 28%

Treatment** 21%

Source: Global Hepatitis Report 2024 (figures pertain to 2022);

*Proportion of global infections;

**Hep B treatment coverage: 0%

In India, while the tuberculosis toll remains higher — 3.31 lakh people are reported to have died due to TB in 2022 — what is concerning is that hepatitis diagnosis and treatment remains very low. According to the report,

CONTINUED ON PAGE 2

2024 Global Hepatitis Report

- This is the first consolidated WHO report on viral hepatitis epidemiology, service coverage and product access, with improved data for action. This report presents the latest estimates on the disease burden and the coverage of essential viral hepatitis services from 187 countries across the world.
- According to the World Health Organization (WHO) 2024 Global Hepatitis Report, the number of lives lost due to viral hepatitis is increasing. The disease is the second leading infectious cause of death globally -- with 1.3 million deaths per year, the same as tuberculosis, a top infectious killer.
- Bangladesh, China, Ethiopia, India, Indonesia, Nigeria, Pakistan, the Philippines, the Russian Federation and Viet Nam, collectively shoulder nearly two-thirds of the global burden of hepatitis B and C.

HEADLINES OF THE DAY

PIB-IR (GSII)

Ministry of Commerce & Industry

Indo-Pacific Economic Framework for Prosperity (IPEF) to organise Clean Economy Investor Forum in Singapore

IPEF Forum aims to mobilize investments into sustainable infrastructure, climate technology and renewable energy projects

IPEF Forum calls for applications from tech companies, startups; to showcase Indian investible sustainable infra projects on EV, solar



- The Indo-Pacific Economic Framework for Prosperity (IPEF) was launched in May 2022 and currently includes 14 partners – Australia, Brunei Darussalam, Fiji, India, Indonesia, Japan, the Republic of Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand, United States and Vietnam
- It provides a platform for countries in the region to collaborate on advancing resilient, sustainable, and inclusive economic growth, and aims to contribute to cooperation, stability and prosperity in the region. The IPEF comprises four pillars of cooperation namely: Trade, Supply Chain, Clean Economy and Fair Economy.

HEADLINES OF THE DAY

PIB-Welfare Schemes (GSII)

Ministry of Power

NTPC launches new edition of Girl Empowerment Mission

Posted On: 09 APR 2024 4:38PM by PIB Delhi



- NTPC Limited, India's largest integrated power company, is gearing up to launch the latest edition of Girl Empowerment Mission (GEM), its flagship Corporate Social Responsibility initiative.
- The program aligns with the Government of India's *Beti Bachao, Beti Padhao* initiative and aims to tackle gender inequality by nurturing girls' imaginations and fostering their ability to explore opportunities. GEM does this through a 1-month workshop for young girls during summer holidays, by offering them a platform for their all-round upliftment and development.
- The GEM Mission, initiated as a pilot project in 2018 with just three locations and 392 participants, has flourished into a nationwide movement.
- The Mission focuses on the empowerment of girls through various interventions and aims to identify and nurture their leadership qualities, so that they can be future-ready. The workshop focuses on health, hygiene, safety, fitness, sports and yoga.

HEADLINES OF THE DAY

PIB-IR (GSII)/Environment(GSIII)

Office of Principal Scientific Advisor to Govt

EU-India join forces to promote start-up collaboration on Recycling of E-Vehicles Batteries under Trade and Technology Council

Posted On: 09 APR 2024 5:03PM by PIB Delhi



- The European Union (EU) and India today launched an Expression of Interest (EoI) for startups working in Battery Recycling Technologies for Electric Vehicles (EVs) for a matchmaking event.
- The matchmaking aims to enhance the cooperation between European and Indian Small and Medium-sized Enterprises (SMEs) and startups in the clean and green technologies sector. The intended exchange of knowledge and expertise will be instrumental in advancing the circularity of rare materials and transitioning towards carbon neutrality in both India and the EU. This initiative takes place under the India-EU Trade & Technology Council (TTC),
 - The India-EU Trade and Technology Council (TTC) was first announced by the European Commission and India in April 2022. Established on 6 February 2023, this strategic coordination mechanism allows both sides to tackle challenges at the nexus of trade, trusted technology, security and deepens cooperation in these fields. Establishing India-EU TTC is a key step towards a strengthened strategic partnership for people in India and the EU.