

# 'Renewable Energy capacity to rise to **170 GW** by March 2025'

NEW DELHI, Feb 23 (PTI)

INDIA'S installed Renewable Energy (RE) capacity, excluding large hydro plants, is estimated to increase to 170 GW by March 2025 from a level of 135 GW in December 2023, rating agency ICRA said on Friday.

"ICRA estimates that the rise in the RE capacity over the next five-six years is estimated to enhance the share of RE plus large hydro in the all-India electricity generation from about 23 per cent in FY24 to around 40 per cent in FY30," ICRA said in a statement.

Given the intermittency associated with RE generation, the availability of Round The Clock (RTC) supply from RE sources remains important, it stated. This can be made possible through the use of wind and solar power projects com-

plemented with energy storage systems, it suggested.

According to the statement, ICRA expects the installed RE capacity, excluding hydro energy, in India to increase to about 170 GW by March 2025 from 135 GW as of December 2023.

Thereafter, the capacity addition is likely to be supported by the significant improvement in tendering activity in the current fiscal with over 16 GW projects bid so far, and another 17 GW bids underway by central nodal agencies, it stated.

Nonetheless, the supply chain challenges in the wind energy segment could pose challenges for execution of RTC projects, it said. As per ICRA, sharp decline in solar PV cell and module prices, abeyance of the Approved List of Module Manufacturers (ALMM) order till March 2024.

# Aditya-L1 mission detects solar wind impact of CME

BENGALURU, Feb 23 (PTI)

ADVANCED sensors of a payload on board India's maiden solar mission Aditya-L1 have successfully detected the impact of coronal mass ejections (CMEs).

The payload -- Plasma Analyser Package for Aditya (PAPA) -- is an energy and mass analyser designed for in-situ measurements of solar wind electrons and ions in the low energy range, the space agency noted. It has two sensors: The Solar Wind Electron Energy Probe (SWEEP, measuring electrons in the energy range of 10 eV to 3 keV) and the Solar Wind Ion Composition Analyser (SWICAR, measuring ions in the energy range of 10 eV to 25 keV and mass range of 1-60 amu). The sensors are also

equipped to measure the direction of arrival of solar wind particles.

The data collected by PAPA, developed by the Space Physics Laboratory and Avionics Entity of the Vikram Sarabhai Space Centre, revealed the occurrence of CME events, notably on December 15, 2023, and during February 10-11, 2024. "The CME on December 15, 2023, was a single event. PAPA observations during this period showed an abrupt increase in total electron and ion counts and the time variations align with the solar wind parameters and magnetic field measurements obtained from the Deep Space Climate Observatory and Advanced Composition Explorer satellites at the L1 point," an ISRO statement said.

In contrast, the observed

variations in electron and ion counts during February 10-11, 2024, are the result of multiple minor events.

with differences in the time variations of electrons and ions, it was noted. The SWEEP and SWICAR sensors on PAPA-Aditya-L1, ISRO said, are currently making continuous observations of solar wind electrons and ions in the default mode, demonstrating that they are performing as per the design in all modes of operations. The observations made by PAPA emphasise its effectiveness in monitoring space weather conditions and its capability to detect and analyse solar phenomena, it said. The launch of Aditya-L1 by PSLV-C57 rocket was successfully accomplished by ISRO on September 2.



# D E F E N C E T I M E S

## D Rajnath holds talks with Dutch Minister

NEW DELHI, Feb 23 (PTI)

DEFENCE Minister Rajnath Singh on Friday held talks with his Dutch counterpart Kaja Ollongren with a focus on boosting industrial defence cooperation.

In the meeting, Singh said Dutch original equipment manufacturers could be encouraged to integrate Indian vendors into their supply chains.

"Both ministers discussed the possibilities for expanding their bilateral defence cooperation, particularly in maritime and industrial domains," the Defence Ministry said.

"They noted the increased interaction between the two navies and expressed keenness to work together to enhance maritime security in the Indian Ocean Region," it said in a statement.

It said Singh suggested that Dutch original equipment manufacturers could be encouraged to integrate Indian vendors into their supply chains.



Union Defence Minister Rajnath Singh with Netherlands Defence Minister Kaja Ollongren prior to a bilateral meeting, in New Delhi. (PTI)



# Russia is a power with enormous tradition of statecraft: Jaishankar



Union External Affairs Minister S Jaishankar with President of the Observer Research Foundation (ORF) (R) Samir Saran, (L) Bruce Jones, (2nd L) Eghosa E Osaghae, (3rd R) Leslie Vinjamuri and (2nd R) Michael Fullilove at the Raisina Dialogue 2024 in New Delhi. (PTI)

NEW DELHI, Feb 23 (PTI)

RUSSIA is a power with an enormous tradition of statecraft and it is turning more towards Asia or non-West parts of the world, External Affairs Minister S Jaishankar said on Friday, delving into current geopolitical developments and their fall-outs. In an interactive session at the Raisina Dialogue, Jaishankar, replying to a question on Moscow's growing proximity with Beijing, said it makes sense to give Russia multiple options and that rail-roading it into a single option and criticising it for that would be like a self-fulfilling prophecy. "I think it makes sense to give Russia multiple options. If we railroad Russia into a single option and say that's really bad because that's the out-

come, then you are making it a self-fulfilling prophecy," he said. "Today it is important for other countries, especially in Asia to engage Russia," Jaishankar said.

**MIND GAMES WOULD BE PLAYED: JAISHANKAR ON CHINA'S APPROACH TOWARDS BILATERAL TIES:** EXTERNAL Affairs Minister S Jaishankar on Friday cautioned against Beijing's "mind game" to restrict India-China issues under the bilateral framework and said New Delhi must not forgo its rights to harness other factors in the world to get better terms on an "equilibrium" in the relations.

Jaishankar also said that arriving at an equilibrium and maintaining it is going to be one of the "biggest challenges" for the two countries even as

he asserted that the immediate issue at hand was Beijing's departure from laid down norms triggering the border row in eastern Ladakh.

On the economic front, he said there would be a period when the Chinese economy will be flattening out and India will be growing and referred to projections by Goldman Sachs that suggested that by 2075, both countries could end up as USD 50 trillion plus economies.

## Looking at dealing with long-term challenges: CDS

NEW DELHI, Feb 23 (PTI)

CHIEF of Defence Staff General Anil Chauhan on Friday said India is looking at dealing with long-term challenges that may emanate from China besides focusing on the current situation along the Line of Actual Control (LAC). The Chief of Defence Staff, especially spoke about bridging any technological deficiencies.

"(We are looking at) not only what is happening along the northern borders, but also long-term challenges so that we do not have a technological kind of a deficiency," he said.

On the challenge of various geographies in the world facing "informal wars", he said the enemy has many more options than the defender in such scenarios.

In informal wars, the enemy has many more options than the defender, the CDS said.



# EAM: Reaching & maintaining China equilibrium a challenge

TIMES NEWS NETWORK

**New Delhi:** Cautioning against "mind games" by China, foreign minister **S Jaishankar** said Chinese violation of border agreements is the immediate issue for India and that arriving at an equilibrium and maintaining it will be one of the biggest challenges for the two countries.

Warning against mind games to restrict issues as "just between two of us", he said India should "leverage" international system to create "best possible outcome".

"Here is the immediate issue, which is: From late 1980s, we had an understand-



ing on the border precisely because it suited both of us. Now there was a departure after almost 30 years. A departure on their side in terms of how they behaved on the border. And there was

a pushback from our side," he said at Raisina Dialogue. "I think arriving at an equilibrium, then maintaining it and refreshing it is going to be one of the biggest challenges for both countries," he added.

"The other 190-odd countries do not exist in our relationship. That will be the mind game which will be played. I do not think we should play it," he said, adding, "Because if there are oth-

er factors out there in the world which can be harnessed by me to get better terms on an equilibrium, then why should I forgo that right?" He also said, "When I say think through your own solution, do not give another country, which is clearly a competitive country, a veto over our policy choices. Unfortunately, in the past that has happened from time-to-time."

Talking about the two economies, Jaishankar said the Chinese started off "earlier and much more intensively" than India did. "But it is in nature of things that at some stage everybody flattens out. So there will be a period when they will be flattening out and we will be growing," he said.



# 'Pak govt likely by March 2; prez poll before March 9'

**Islamabad:** With a power-sharing deal already inked, Pakistan Muslim League-Nawaz and Pakistan Peoples Party are moving ahead with plans to form a coalition govt by March 2 and hold the presidential election before March 9, according to a media report on Friday. PML-N and PPP agreed to form a new govt after the Feb 8 polls resulted in a hung Parliament.

Former PM **Shehbaz Sharif**, 72, is set to return to the top post after his elder brother Nawaz decided to nominate the PML-N president for premiership.

Both parties won fewer seats than candidates backed by jailed former PM Imran Khan.

Quoting sources, News International reported that serious consideration is being given to the proposal to hold the presidential election before March 9 as the newly elec-

ted assemblies across the country will take oath by Feb 29 and a new govt will be in place by March 2. PML-N, PPP, and their allied parties want the presidential election to be held by March 8 before the completion of the current tenure of the Senate and for the Senate elections to be held after the president is elected.

When contacted, PPP senior leader Senator Farooq H Naek said that according to Article 41, read with the second schedule of the Constitution, the presidential election has to be held within 30 days of the general elections. "This means that the presidential election is to be held before March 9," he was quoted as saying by the report.

PPP co-chairperson Asif Ali Zardari, 68, will likely return to the presidency as per the party's deal with PML-N. PTI





# World Bank needs to reinvent: N K Singh

**New Delhi:** The World Bank needs to reinvent and restructure itself to become 'better, bolder and bigger' and harness



private capital on the strength of its own balance sheet, said N K Singh, co-convenor, expert group on MDB (multilateral development banks) Reforms.

The World Bank should also look at the possibility of tapping pension funds to increase its capital base and its capacity to fund development projects in developing nations. "Bretton Woods was the first one, it certainly needs to be reinvented, restructured and recreated. But there is no substitute for multilateral cooperation. and that's why better, bolder and bigger," Singh said at a panel discussion at the Raisina Dialogue, 2024.

A high-level expert group, led by N K Singh and former US Treasury Secretary Larry Summers, was set up by the G20 under India's presidency. In its report, the group had proposed a 30-point roadmap to reform MDBs and triple their lending by 2030, which includes attracting private investors and introducing pooled portfolio guarantees. Currently, there are 17 MDBs, including ADB, African Development Bank, European Bank for Reconstruction and Development and Inter-American Development Bank. Bretton Woods institutions, including the World Bank and IMF, were set up for funding reconstruction activities after WWII.

# Bibi presents first official post-Gaza war plan

## To Keep Security Control Over Palestinian Areas, Links Reconstruction To Demilitarisation

**Jerusalem:** Israeli PM Benjamin Netanyahu has presented his first official "day after" plan for the Gaza Strip once the war there ends, saying Israel will keep security control over all Palestinian areas and make reconstruction of Gaza dependent on its demilitarisation. The document proposes Israel would maintain security control over all land west of Jordan, including the occupied West Bank and Gaza — territories where the Palestinians hope to establish an independent state.

Netanyahu presented the plan on Thursday to the security cabinet, which could still demand amendments. In the lo-

ng-term goals listed, Netanyahu rejects the "unilateral recognition" of a Palestinian state. He says a settlement with the Palestinians will only be achieved through direct negotiations between the two sides — without naming who the Palestinian party would be.

In Gaza, Netanyahu outlines demilitarisation and deradicalisation as goals to be achieved in the medium term. He does not elaborate on when that intermediary stage would begin or how long it would last. But he conditions the rehabilitation of the Gaza Strip on its complete demilitarisation.

Netanyahu proposes Israel

have a presence on Gaza-Egypt border in the south of the enclave and cooperates with Egypt and the US in that area to prevent smuggling attempts, including at the Rafah crossing.

To replace Hamas rule in Gaza while maintaining public order, Netanyahu suggests working with local representatives "who are not affiliated with terrorist countries or groups and are not financially supported by them". He calls for shutting down the UN Palestinian refugees agency UNRWA and replacing it with other international aid groups. "The prime minister's document of principles reflects broad public consensus over the goals of the war and

for replacing Hamas rule in Gaza with a civilian alternative," a statement by the PM's office said. The document was distributed to security cabinet members to start a discussion on the issue.

The spokesman for Palestinian President Mahmoud Abbas, Nabil Abu Rudeineh, said that Netanyahu's proposal was doomed to fail, as were any Israeli plans to change the geographic and demographic realities in Gaza. "If the world is genuinely interested in having security and stability in the region, it must end Israel's occupation of Palestinian land and recognise an independent Palestinian state with Jerusalem as its capital," he said. REUTERS





# As Ukraine marks 2<sup>nd</sup> anniv of war, US piles new sanctions on Russia

## Also Targets Entities From China, UAE & Turkiye For Helping Moscow

**Washington:** The US on Friday imposed extensive sanctions against Russia, targeting more than 500 people and entities to mark the second anniversary of Moscow's invasion of Ukraine and retaliate for the death of Russian opposition leader Alexei Navalny.

President Biden said the measures aim to ensure President Putin "pays an even steeper price for his aggression abroad and repression at home". The

**US official said treasury plans to level additional sanctions over G7's price cap on Russian oil. He said the measures will increase costs for Russia to use an aging fleet of tankers to get oil to markets, mainly in India and China**

sanctions targeted Russia's Mir payment system, financial institutions and its military industrial base, sanctions evasion, future energy production and other areas. They also hit prison officials the US says are linked to Navalny's death.

The RIA news agency quoted Russian ambassador to the US Anatoly Antonov as saying that the new sanctions are an attack on Russia's core interests but Moscow will keep protecting them. The EU, Britain and

Canada also took action against Russia on Friday.

The US treasury department targeted nearly 300 people and entities on Friday, while the state department hit over 250 people and entities and the commerce department added over 90 companies to the Entity List.

The US treasury imposed sanctions on state-owned National Payment Card System, the operator of the Mir payment system. Mir payments cards have become more important since its US rivals suspended operations in Russia after Moscow's invasion of Ukraine, and their payment cards which were issued in the country stopped working abroad. It also targeted over a dozen Russian banks, investment firms, venture capital funds, and fintech firms.

The US also targeted Russia's future energy production and exports, taking further aim at Arctic LNG 2 project in Siberia.

US deputy treasury secretary Wally Adeyemo told reporters that treasury plans to level additional sanctions later on Friday over the G7's price cap on Russian oil. He said the measures will increase costs for Russia to use an aging fleet of tankers to get oil to markets, mainly in India and China. The US also imposed sanctions on entities based in China, Turkiye, the UAE, Kazakhstan and Liechtenstein over the evasion of Western sanctions on Russia and backfilling. REUTERS

## US campaign to isolate Russia shows limits

**Brasilia:** When Russia launched its full-scale invasion of Ukraine on Feb 24, 2022, Biden administration activated a diplomatic offensive that was as important as its scramble to ship weapons to the Ukrainian military. Wielding economic sanctions and calling for a collective defence of international order, the US sought to punish Russia with economic pain and political exile. The goal was to see companies and countries cut ties with Moscow.

But two years later, Russian President Putin is not nearly as isolated as US officials had hoped. Russia's inherent strength, rooted in its vast supplies of oil and natural gas, has powered a financial and political resilience that threatens to outlast Western opposition. In parts of Asia, Africa and South America, his influence is as strong as ever or even growing. And his grip on power at home appears as strong as ever.

The war has undoubtedly taken a toll on Russia. It has wrecked the country's standing with much of Europe. International Criminal Court has issued a warrant for Putin's arrest. UN has repeatedly condemned the invasion.

And to hear Biden administration officials tell it, Russia has suffered a major strategic failure. "Today, Russia is more isolated on the world stage



Biden had a private and emotional meeting with Alexei Navalny's widow Yulia Navalnaya and daughter Dashain in California on Friday. 'He was a man of incredible courage and it's amazing how his wife and daughter are emulating that,' Biden said after the meeting

than ever," secretary of state Antony Blinken said in June. Putin's war, he added, "has diminished Russian influence on every continent."

Beyond North America and Europe, however, there is evidence to the contrary.

China, India and Brazil are buying Russian oil in record quantities, feasting on the steep discounts Putin now offers to countries willing to replace his lost European customers. With those growing economic relationships have come strong diplomatic ties, including with some close US partners. To some Russia experts, American and European leaders have not fully reckoned with this reality. NVT



# US back on moon after 52 yrs, this time on pvt rocket, lander

Only Five Countries Have Made Soft-Landings So Far. Pvt Firms' Success Will Open Door To More Frequent Lunar Exploration

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Soft-landing on Moon is hard, as Nasa learnt when its commercial partner Astrobotic's Peregrine mission failed in Jan. But weeks later, early on Friday, another Nasa commercial partner, Intuitive Machines (IM), made history with the first American lunar soft-landing in half a century. In the process, it became the first private firm to land on Moon.

IM's Nova-C lander, named Odysseus and nicknamed Odie, is "upright and sending data" after some tense moments just before landing.

Odie lifted off Feb 15 (US time) on a SpaceX Falcon 9. It performed two trajectory correction manoeuvres before entering a low lunar orbit Feb 21 and landing on Feb 22.

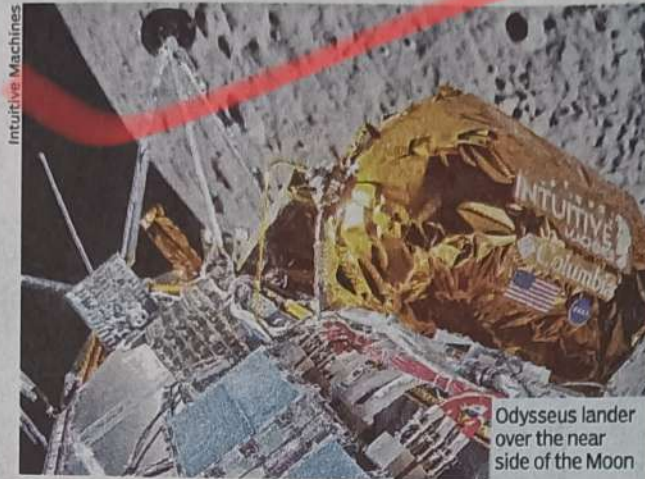
The IM-1 mission carried six Nasa payloads through the latter's Commercial Lunar Payload Services (CLPS) programme. The Nasa contract is valued at \$118 million but the overall mission cost - including launch - is estimated to be close to \$200 million.

India's Chandrayaan-3 took 40 days from launch to landing last year, as India used a less powerful launch rocket, but the project cost also came to around \$72 million. While India's Vikram lander weighed 1,752kg, the phone-booth-sized Odie weighed 675kg as it wasn't carrying a rover.

## 2nd American Moonrush

Odie is a milestone because it's returned the US to Moon after 1972's Apollo 17 mission. More important, it "opens the door" to future lunar exploration, especially in the south polar region. So, the name Odysseus - hero of the Greek epic *Odyssey* - is apt.

During the space race of the 1960s, Soviet Union's Luna 9 was the first to soft-land on Moon in Feb 1966, followed by Luna 10 in March. Surveyor 1, which landed in May 1966, was America's first soft-landing and paved the way for the famous Apollo programme



Odysseus lander over the near side of the Moon

## BUSY ROAD TO MOON

Mission	Country	Launch	Type
Trailblazer	US	2023	Orbiter
Beresheet 2	Israel	2024-25	Orbiter & Lander
VIPER#	US	2024	Rover
Artemis II	US	2025	Lander
Chang'e 6, 7, 8	China	2024-27	Lunar Robotic Research Station
Hakuto-II & III	Japan	2024-25	Orbiter/Lander
Lunar Polar Exploration Mission (Lupex)	India-Japan	Post 2024	Orbiter, Lander & Rover

Source: Isro | \*Commercial Lunar Payload Services | #Volatiles Investigating Polar Exploration Rover

that took astronauts to the lunar surface. The US is still the only country to have sent humans to Moon.

Only three other countries - China, India and Japan - have made soft-landings since. In 2018, US declared Moon of strategic interest and refocused Nasa on returning sustainably under its Artemis programme. Then, CLPS was launched, and in 2019 Nasa awarded IM its first task order to land a suite of payloads on Moon.

## Mission Charter

IM-1 was aimed at creating a commercial lunar economy, delivering commercial payloads and Nasa science and technology payloads that will pave the way for a sustainable human presence on and around Moon.

Payloads on Odie are ex-

pected to operate for roughly seven days before night sets on Moon's south pole.



The lander at the Intuitive Machines HQ

## FROM NAPKIN TO MOON

In 2012, Steve Altemus, future founder and CEO of Intuitive Machines, jotted down a blueprint for IM on a napkin at dinner with co-founder Kam Ghaffarian.

IM named its 130kg payload capacity lander 'Nova-C' - Nova means new, and C is Roman numeral for 100. The final name Odysseus (Odie) was chosen from a list, including Archimedes (Archie), Geraldyn Cobb (Molly, Jerrie, Cobby) and Odysseus (Odie), suggested by staff

## Landing Site

The region around Malapert A crater was chosen for landing as it is believed to be made of lunar highland material, similar to Apollo 16's landing site. Also, the nearby Malapert Massif is one of the 13 candidate regions being considered for Nasa's Artemis III mission.

The knowledge and experience gained from this mission will be invaluable in shaping future space missions, just like learnings from India's Chandrayaan-3, and recent missions by Japan and China.

## Future Missions

At the time Russia's failed Luna-25 and India's Chandrayaan-3 were heading to Moon, they were the first among at least 10 other lunar missions planned between 2023 and 2025.

While missions by Israel, China, Japan and India dominated 2023, this year will see multiple US missions. India's joint mission with Japan (Lunar Polar Exploration Mission or Lupex), initially targeted for 2024-25, is most likely to get postponed.

The US has CLPS, Trailblazer, VIPER (Volatiles Investigating Polar Exploration Rover) and Artemis-II, China has multiple missions under its Lunar Exploration Programme, Israel is planning Beresheet-2 and Japan will launch Hakuto-II & III.

## TOI Explains

Nasa payloads on Odie include a navigation Doppler lidar, a navigation beacon, a radiofrequency fuel tank gauge, a camera to study dust plumes kicked up by the lander's engine, a laser retroreflector and a radio astronomy instrument for technology demonstrations. There are six other non-Nasa payloads.