

NEWS TODAY

CABINET APPROVES VIABILITY GAP FUNDING (VGF) FOR DEVELOPMENT OF BATTERY ENERGY STORAGE SYSTEMS (BESS) SCHEME

- BESS enables energy from renewables to be stored and then released when needed the most.
 - **Some BESS are:** lithium-ion batteries, lead-acid batteries, flow batteries etc.
- **Plan for a 4,000 MWh VGF for battery storage was first announced in Union Budget 2023-2024.**
- **Key Features of the Scheme**
 - **Development of 4,000 MWh of BESS projects by 2030-31.**
 - **A financial support of up to 40% of the capital cost as budgetary support in form of VGF.**
 - **Minimum of 85% of BESS project capacity to Distribution Companies (Discoms).**
 - **Achieving a Levelized Cost of Storage** ranging from Rs. 5.50-6.60 per kilowatt-hour (kWh), making **stored renewable energy (RE) a viable option** for managing peak power demand.
 - **Ministry:** Ministry of Power
- BESS will help in **bringing down variability of generation in RE sources**, improving **grid stability**, enabling larger RE integration, **reduction of carbon emissions**, bringing down peak deficits etc.
- **Initiative taken by India:**
 - **National Framework For Promoting Energy Storage Systems.**
 - **Legal status for ESS** which are now considered **as a part of power system.**
 - **Waiver of Inter-State Transmission System charges** to ESS.

NATIONAL PAYMENTS CORPORATION OF INDIA (NPCI) LAUNCHES NEW FEATURES FOR UPI

- **Unified Payments Interface (UPI)** powers **multiple bank accounts** into a **single mobile application** (of any participating bank), merging **several banking features** e.g., transfer of funds, etc.
- **New Features**
 - **Credit Line on UPI:** It enables **pre-sanctioned credit lines** from banks via **UPI**. Earlier **only the deposited amount** could be **transacted** through the **UPI System**.
 - **Other features under this are:** creation of **digital credit products** by banks, the establishment of **interest-free credit periods**, **customer engagement channels for credit requests**, etc.
 - **UPI Lite X:** Users can both send and receive money offline through any compatible device that supports **Near Field Communication (NFC)**.
 - **UPI Tap & Pay:** It allows the **NFC-enabled QR codes** at merchants to **complete payments, with a single tap** without entering the PIN.
 - **Conversational Payments:**
 - **Hello! UPI:** Users can simply give voice commands to transfer funds and **input a UPI PIN** to complete the transaction.
 - **BillPay Connect:** Customers can fetch and pay their bills by sending a **simple 'Hi'** message or by giving a missed call.
- The new features **will catapult UPI to achieve 100 billion transactions** a month and aim at **creating an inclusive and resilient** digital payments ecosystem.

ABOUT NPCI AND NFC

- **NPCI, an initiative of the RBI and the Indian Banks' Association (IBA)** is an umbrella organization for operating retail payments and settlement systems in India.
 - It has launched payment products such as RuPay card, IMPS, UPI, BHIM, BHIM Aadhaar, and Bharat BillPay.
- **NFC is a short-range wireless connectivity technology that transmits data through electromagnetic radio fields** to enable two devices to communicate with each other.

CONFERENCE ON TRANSNATIONAL GRID INTERCONNECTIONS FOR ONE SUN, ONE WORLD, ONE GRID (OSOWOG) HELD IN NEW DELHI

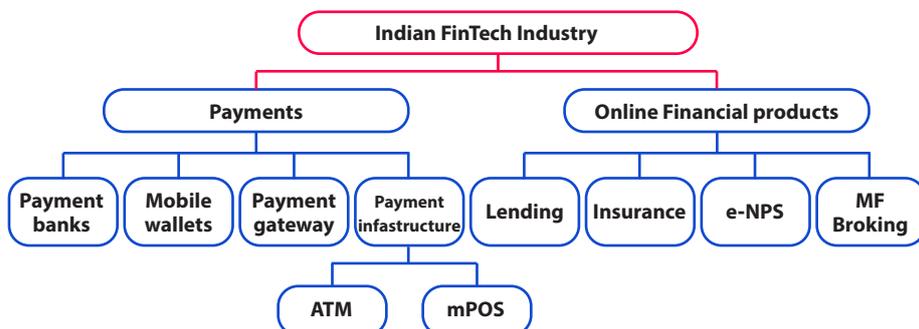
- Speaking at the conference, Union **Minister for Power** stated that **OSOWOG** will make **round-the-clock Renewable Energy (RE) much cheaper** and will also **reduce the necessity for energy storage**.
- OSOWOG initiative **aims to connect different regional grids** through a common grid that will be used to **transfer RE power** and, thus, **realize potential of RE sources**, especially solar energy.
 - It is led by **India** and **UK** in collaboration with **International Solar Alliance (ISA)** and **World Bank Group**.
- **OSOWOG is divided into 3 phases:**
 - **Phase 1:** Indian Grid interconnection with Middle East, South Asia and South East Asian grids.
 - **Phase 2:** Would connect the functional first phase to the pool of renewable resources in Africa.
 - **Phase 3:** Final step of global interconnection.
- **Challenges in Transnational Grid Interconnections:** Maintaining a stable grid over a large geographical area, mechanism of cost-sharing as participating countries are both rich and poor nations etc.
- India has **already established cross-border interconnections** with its neighbours through which **electricity is exported to Nepal, Bangladesh, and Myanmar** and **imported from Bhutan**.
 - A **MoU on BIMSTEC Grid Interconnection** was also signed in 2018.

ABOUT INTERNATIONAL SOLAR ALLIANCE (ISA)

- **Joint effort by India and France** to mobilize efforts against climate change through deployment of solar energy solutions.
- **Conceptualized on sidelines of the 21st Conference of Parties (COP21) in Paris in 2015.**
- **At present, 116 countries** are signatories to the ISA Framework Agreement.
- **All member states of UN** are eligible to join ISA.

RBI GOVERNOR URGES FINTECH COMPANIES TO FORM SELF-REGULATORY BODY

- **FinTech** is broadly used to describe an industry that uses **information technology** to make **innovations in financial systems** and **delivery** of financial services more efficient.
 - **By 2030, India's FinTech industry could generate \$200 billion**, contributing **13% to global FinTech revenue**.
- **Most prominent FinTech innovations can be categorized** into Payments, Clearing and settlement, Deposits, Lending & capital raising, Market provisioning, Investment Management Data Analytics, and Risk Management.
- **Need for Regulation**
 - To address **arbitrage**, ensure **compliance with existing laws**, and adapt regulations to technological advancements.
 - **There are no clear-cut international regulatory standards/bodies** on the lines of bodies such as Financial Stability Board, etc.
 - **Rapidly changing technology:** the difficulty of regulating an evolving technology amidst cryptocurrency, machine learning, AI, etc.
 - **Data security and privacy risk:** Platform downtimes or information theft can impact financial services.
 - **Finance products:** the practice of **charging exorbitant rates of interest**.
 - **Divides:** FinTech platforms are **largely concentrated in the urban segment** while the rural area still faces financial literacy issues.
- **Significance:** Promote ethical conduct and proper risk management, promote a customer-centric approach, **ensure legal compliance, etc.**



UNEP MARINE SAND WATCH REVEALS MASSIVE EXTRACTION IN THE WORLD'S OCEANS

- Marine Sand Watch is the **first-ever global data platform on sand and other sediment extraction in marine environment**, including hotspots like the North Sea, Southeast Asia.
 - Platform is developed by **GRID-Geneva** a Centre for Analytics **within the UN Environment Programme (UNEP)**.
- **Key Findings**
 - Some **6 billion tonnes of sand** is being **extracted annually** from oceans
 - Marine sand extraction **expected to rise to 10 to 16 billion tonnes per year**, the **natural replenishment rate** to maintain coastal and marine ecosystem.
- **Sand, gravels and aggregates** are **second most-exploited natural resources after water**. Sand is used as **raw material** in concrete, asphalt and glass, and **for land reclamation** as well as **flood protection in coastal areas**.
- **Impact of marine sea mining**
 - **Puts coastal and seabed ecosystems at risk**, including marine biodiversity affected by **water turbidity** and changes in **nutrient availability** and **noise pollution**.
 - Poses a threat to coastal communities in the face of rising sea levels and storms.
 - Threat to **offshore energy infrastructure** such as wind or waves turbines.
 - **Can affect salinisation of aquifers**.
- Earlier, a **UNEP report recommended to establish an international standard** on sand extraction in the marine environment.

INDIA TO COUNTER CHINA DAM WITH BARRAGE IN SIANG RIVER

- India proposed to **construct a barrage** on **Siang River** to save it from **hazards posed by Chinese dam** being built in Tibet region.
 - **Siang River**, known as Yarlung Zangbo in China, is **principal constituent** river of Brahmaputra.
 - It enters **Arunachal Pradesh after the Great Bend** (curving around Namcha Barwa peak) joins **Lohit and Dibang** to form Brahmaputra, and **empties** into Bay of **Bengal** via Assam and Bangladesh.
- **Impact of China's mega dam on India:**
 - Huge dams **can hold back massive amounts** of silt carried by rivers **affecting fertility** in downstream areas.
 - Potential **reduction in water flow downstream**, especially **during dry season**.
 - Likely **release of excess water** during monsoon can result in **water-induced risks of flash flooding**.
 - This may increase **seismic vulnerability** of the Himalayan region.
- There is **no bilateral or multilateral treaty** for water cooperation between India and China.
- Both countries **have signed:**
 - **MoU for Hydrological Information of the River Brahmaputra** in 2002 and in 2010, MoU on Hydrological Data Sharing on River Sutlej / Langqen Zangbo (**renewed in 2015**).
 - **Expert Level Mechanism** to cooperate in emergency management (e.g., flood), trans-border Rivers issues, etc.



ALSO IN NEWS



Parliament Sessions

- **Constitution of India does not mention** the term "Special Session".
 - Term sometimes refers to **sessions government has convened for specific occasions**.
- **Article 85 mandates** that **Parliament should meet at least twice a year** (gap between two sessions should not exceed six months).
 - By **convention**, Parliament meets for **three sessions** in a year.
 - However, provision **does not prevent summoning of Parliament** more often and these **extra sessions are referred to as special sessions**.
- **Cabinet Committee on Parliamentary Affairs** determines date and duration of **parliamentary sessions**.
 - **President then summons MPs** for the session.



Poll Expenditure

- **Declaring Candidates** for assembly election **weeks before polls announcement** has exposed **gaps in Election Commission (EC) poll expenditure monitoring** rules.
- Rules stipulate **accounting of candidates' spending from date of their nomination** and not even announcement of polls.
- According to Section 77 (1) of **Representation of the People Act (RPA), 1951**, candidates are expected to keep an account of expenditure **from date on which he/she has been nominated** till date of declaration of result.
 - **Spending more than maximum limit** of election expenses is regarded as a **corrupt practice under section 123(6) of RPA, 1951**.



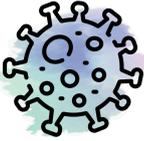
AYUSH Public Health Programmes

- Union Ayush Minister has called for **strengthening of existing Ayush health programs** namely:
 - **AYURVIDYA:** It aims to **promote Healthy Lifestyle through AYUSH for School Children** in 75000 Schools.
 - **SUPRAJA:** It aims to **provide maternal & neonatal Intervention** for both the foetus and mother.
 - **VAYO MITRA:** It aims to **provide Geriatric Healthcare Services** to the elderly.
 - **KARUNYA:** It aims to **provide palliative services**.



Honeybee

- Study showed that Honeybees can be used as **biomonitors** (organisms that **signify the quality of environment around them**) to trace Antimicrobial Resistance.
- **About Honeybee**
 - **Society:** live in colonies headed by a queen.
 - **Types:**
 - **Queen bee** (heads the swarm and is the largest),
 - **Worker bee** (female bee and has stings)
 - **Drone bee** (Male bee and has no stings)
 - Perform **'Waggle dance'** to communicate between worker bees.
 - **Royal jelly, also called 'bee milk'** secreted by worker bees, exclusively for feeding to develop a new queen bee.

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|  <p>Gatekeepers</p> | <ul style="list-style-type: none">• 6 Big Tech companies namely Apple, Amazon, Alphabet, ByteDance, Meta, and Microsoft were named as Gatekeepers by the EU.• Gatekeepers are the companies to face the highest level of scrutiny under the Digital Markets Act (DMA) of the EU.• Criteria:<ul style="list-style-type: none">➢ A strong economic position in multiple markets of EU; and➢ Large user base for the last 3 financial years.• The DMA act aims to address the digital market imbalances in the EU and is applicable only to providers of core platform services. |
|  <p>Japanese encephalitis (JE) virus</p> | <ul style="list-style-type: none">• According to a new study by ICMR, efficacy of JE vaccine (SA 14-14-2) is around 86.7%.• JE is a flavivirus related to dengue, yellow fever and West Nile viruses, and is spread by Culex mosquitoes.<ul style="list-style-type: none">➢ Virus exists in a transmission cycle between mosquitoes, pigs and/or water birds (enzootic cycle). Humans are incidental or dead-end hosts.➢ JE is the main cause of acute encephalitis syndrome in South Asia, including India.➢ There is no cure for the disease. |
|  <p>Excavations at Purana Qila</p> | <ul style="list-style-type: none">• Latest excavations indicate that an “elite” class of citizens were staying there.• Major Findings<ul style="list-style-type: none">➢ Brick platform and potter’s kiln, Gold foil embedded in a wooden object, engraved lotus symbol on red sandstone from Kushan period.➢ Brick jelly floor from Gupta period.• Purana Qila was built by Mughal Emperor Humayun as a part of his new city of Dinpanah in 16th century.<ul style="list-style-type: none">➢ Major architectural features: Qila-e-Kuhna mosque, Sher Mandal, Lal Darwaza and Khairul Manazil etc.• Excavations here have provided evidence that Delhi has a continuous history for almost 3,000 years. |
|  <p>Places in News</p> | <ul style="list-style-type: none">• Sudan (Capital: Khartoum)• UNHCR appealed for \$1 billion to support Sudan (facing civil war).• Political Boundaries<ul style="list-style-type: none">➢ Situated in north-eastern Africa.➢ Bordered with Egypt, Libya, Chad, Central African Republic, South Sudan, Ethiopia and Eritrea.➢ South Sudan was bifurcated from it in 2011.➢ Sudan shares its maritime border with Saudi Arabia in Red Sea.• Geographical Features:<ul style="list-style-type: none">➢ Highest Peak: Deriba Caldera (Jabel marra Mountain).➢ Major River: Nile River (White Nile and Blue Nile merge in Khartoum).➢ Major lakes: Kundi, Abyad and Turdat el-Rahad.  <p>The map shows Sudan in yellow, bordered by Egypt to the north, Saudi Arabia to the east, Eritrea to the northeast, Ethiopia to the south, and Chad to the west. Key locations marked include Khartoum, the Abyei Area, and the Hala'ib Triangle (disputed). The flag of Sudan is shown in the bottom right corner of the map area.</p> |