

Energy Transition

❖ Context

- As per projections of Central Electricity Authority, the share of coal based thermal power generation capacity in the year 2030 would be around 32% in the energy mix as against the present share of 52%.

❖ Key Highlights

- The **total projected capacity for 2029-30** is estimated to be **817 GW** against the current installed 396 GW.
- The move is in line with the **government's COP26 pledge** of achieving **500 gigawatts (GW)** of installed capacity based on **non-fossil fuel by 2030**, and also to increase the **share of renewable energy (RE)** sources in power generation to **50 per cent** during the same period.
- The country has seen **record low RE tariffs of Rs 1.99 per KWh** for solar power and **Rs 2.43 per KWh for wind power** which are quite favourable as compared to tariff of electricity produced from non-renewable energy sources.
- The transition from fossil based energy to non-fossil based energy will help reduce the **dependence on imported fuel (85% - oil & 53% - natural gas)**, which will improve trade balance and cut the greenhouse gas (GHG) emissions.
- The energy transition will also **help the economy by creating 3.2 MN jobs by 2050**.
- To further boost and sustain this transition, India is planning to study models deployed by global companies such as Tesla Inc. for setting up **integrated solar roof and battery storage systems**
- The aim is to provide **uninterrupted power supply** to about **250 MN** households.

❖ Challenge: Integration

- The **intermittency** in Renewable Energy (RE) generation which is caused due to variability in availability of natural resources during a day poses a challenge in its integration with the grid.

- In order to ensure smoother integration government has taken measures:

- Setting up of **Renewable Energy Management Centres (REMCs)** for accurate forecasting of renewable power and for assisting grid operators to manage variability.
- **Innovative products** like solar-wind **hybrid projects**, RE projects with **energy storage systems** and supply of **RE power balanced with power from non-RE sources** started to reduce intermittency.
- For sale of renewable energy, implementation of :
 - **Green Term Ahead Market (GTAM)** - a power trading platform launched in 2020 to enable bulk electricity buyers (discoms) to procure energy on short term basis from sellers who have surplus RE beyond their RPOs.

❖ Advantages:

- Discoms and open-access consumers typically procure electricity by signing long-term power purchase agreements (PPAs) for seven years or above.
- Project developers to develop merchant RE capacity without getting tied down by long-term PPAs.
- RE-rich states to expand their renewable capacities beyond their RPO requirements.
- **Green Day Ahead Market (GDAM)** - It was launched in 2021 as a market place for trading of renewable power on a day-ahead basis. Day-Ahead-Market (DAM) caters for delivery of electricity for any/some/all 15 minute time blocks in 24 hours of the next day starting from midnight.

Swachh Bharat Mission

❖ Context

- According to the **parliamentary standing committee report**, **only 12% of the villages** that were supposed to get infrastructure for liquid waste management this year have **achieved their goals under the second phase of the Swachh Bharat Mission (SBM)**.

❖ Key Highlights

- In its **first phase**, the Swachh Bharat Mission aimed to **provide a toilet in every rural household and claimed to have achieved its goal in 2019**.
- However, the **second phase, which involves more complex community-level infrastructure** has not been able to meet targets, with the pandemic also slowing down progress. The implementation of **solid waste management infrastructure** also lagged behind, **with only 22% of target villages covered during 2021-22 until February 7**.

❖ About Swachh Bharat Mission-Urban 2.0 (SBM-U)

- **SBM-U 2.0 makes all cities 'garbage free'** and ensures **gray and black water management** in all cities other than those covered under AMRUT.
- **SBM-U 2.0 makes all urban local bodies ODF+** and those with a population of less than one lakh as **ODF++**.
- To achieve the vision of safe sanitation in urban areas SBM-U 2.0 source segregation of solid waste, utilizing the principles of **3Rs (reduce, reuse, recycle)**.

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- **Scientific processing** of all types of municipal solid waste and remediation of legacy dumpsites for effective solid waste management.
- The second phase, which involves more complex community-level infrastructure :
 - Facilities for **collection and segregation of solid waste**,
 - **Compost pits and biogas plants** for biodegradable waste,
 - **Greywater management**,
 - **Soak pits, and treatment of fecal sludge.**

Artemis Mission

❖ Context

➤ Recently, **NASA** rolled out its **Artemis I moon mission** to the launchpad for testing at the Kennedy Space Center in Florida, United States.

❖ About Artemis Mission

- NASA's Artemis mission is touted as the **next generation of lunar exploration**.
- It is named after the twin sister of Apollo from Greek mythology. Artemis is also the goddess of the moon.
- Artemis I is the **first of NASA's deep space exploration systems**.
- It is an **uncrewed space mission** where the **spacecraft will launch on SLS** — the most powerful rocket in the world.
- It will **travel 2,80,000 miles** from the earth for over four to six weeks during the course of the mission.
- The **Orion spacecraft** is going to remain in space without docking to a space station, longer than any ship for astronauts has ever done before.
- **The Space Launch System (SLS) Rocket:**
 - The SLS rocket has been designed for space missions beyond low-earth orbit and can carry crew or cargo to the moon and beyond.

• Aim of the Mission:

- To **land humans on the moon by 2024**, and it also plans to **land the first woman and first person of color on the moon**.
- To contribute to **scientific discovery** and **economic benefits** and **inspire a new generation of explorers**.
- NASA will **establish an Artemis Base Camp** on the surface and a **gateway in lunar orbit** to aid exploration by robots and astronauts.
- The gateway is a critical component of NASA's sustainable lunar operations and will serve as a **multi-purpose outpost orbiting the moon**.

❖ Other Space Agencies Involved in the Mission

- **Canadian Space Agency:**
 - It will provide advanced robotics for the gateway.
- **European Space Agency:**
 - It will provide the International Habitat and the ESPRIT module, which will deliver additional communications capabilities among other things.
- **Japan Aerospace Exploration Agency:**
 - It plans to contribute habitation components and logistics resupply.

News in Between the Lines

Tax on Lotteries



❖ Context

➤ Recently, the Supreme Court held that a **State legislature has the right to impose tax on lotteries** conducted by other States within its jurisdiction.

❖ Key Highlights

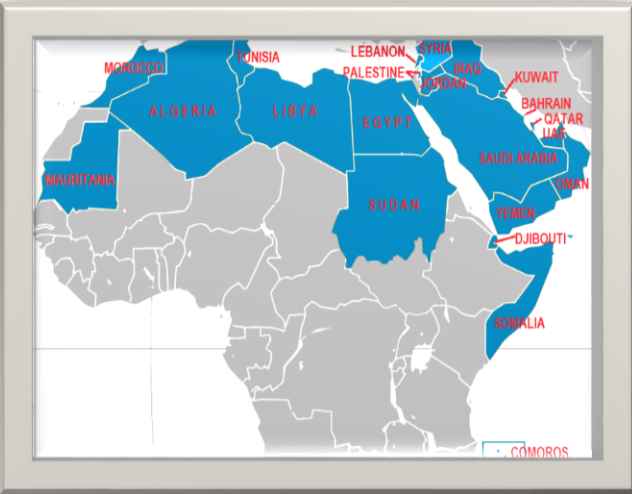
- The judgment came on appeals filed by the **Karnataka and Kerala** governments against the decisions of their respective High Courts.
- The High Courts had found the tax laws enacted by the two States invalid and unconstitutional and had even directed Kerala and Karnataka to refund the money collected as tax.
- **'Lotteries' is a "species of gambling activity"**.
- 'Betting and gambling' is **part of the State List in the Seventh Schedule of the Constitution**. The power to tax is on all activities which are in the nature of **'betting and gambling,' including lotteries**.
- State legislatures have the **power to tax lotteries under Entry 62 of the State List**.

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League of Arab States (LAS)



❖ Context

- Recently, Foreign Secretary Harsh Shringla said India and the Arab world share a “civilisational relationship” speaking at a UNSC meeting on cooperation between the UN and the **League of Arab States (LAS)**.

❖ League of Arab States (LAS)

- League of Arab States (LAS) is a **regional organization of Arab states in the Middle East and North Africa**.
- It was **formed in Cairo on March 22, 1945**, following adoption of the **Alexandria Protocol in 1944**.
- **Administration Center:**
 - Cairo, Egypt.
- **Aims:**
 - To be a regional organization of Arab states with a focus on **developing the economy, resolving disputes and coordinating political aims**.
- The **founding member states** were Egypt, Syria, Lebanon, Iraq, Transjordan (now Jordan), Saudi Arabia, and Yemen.
- Currently, the **League has 22 members**, but Syria's participation has been suspended since November 2011.
- **Each member has one vote** on the League Council, decisions being binding only on those states that have voted for them.

Article 355



❖ Context

- Congress leader in Lok Sabha Adhir Ranjan Chowdhury wrote to President Ram Nath Kovind, urging him to **invoke Article 355** of the Constitution to ensure that the West Bengal state government functions in accordance with the provisions of the Constitution.

❖ About 355

- It states that :
 - “It shall be the duty of the Union to protect every State against external aggression and internal disturbance and to ensure that the Government of every State is carried on in accordance with the provisions of this Constitution.”
- The **Emergency provisions** are contained in **Part XVIII** of the Constitution, from **Articles 352 to 360**.
 - These provisions enable the Central government to **meet any abnormal situation effectively**.

Navroz



❖ Context

- Recently, the Prime Minister of India extended greetings on the occasion of Parsi New Year-Navroz and wished for joy and health for all.

❖ About Navroz

- Nowruz or Navroz, the **Iranian New Year that marks the beginning of the spring season**.
- It is **celebrated** with great fervor and enthusiasm **among various Parsi communities across the world including India**.
- The word 'now' means new and 'ruz' means day, which translates to 'a new day'.
- Nowruz marks the **beginning of Farvardin, the first month of the Solar Hijri calendar** and is usually **celebrated on March 20 or 21 globally**.
- **In India, the festival is observed around August 16-17 by the Parsi community** following the Shahenshahi calendar which **does not account for leap years**, which means the holiday has now moved by 200 days from its original day.
- Nowruz is celebrated in many countries having significant Persian cultural influence like Iran, Iraq, India, Afghanistan and parts of Central Asia, America, Europe.

Grandfathering of Solar Import Duties



❖ Context

- **National Solar Energy** federation of India has asked government to consider grandfathering of basic customs duty for solar projects bid out before 9 March 2021.

❖ Key Highlights

- A grandfather clause/grandfather policy/grandfathering is a provision in which an old rule continues to apply to some existing situations while a new rule will apply to all future cases.
- According to the federation, the levies, effective from 1 April, can jeopardise projects with a combined capacity of 28 GW.
- The **import duties - 40% for modules and 25% for solar cells** - are aimed at encouraging greater domestic manufacturing of solar equipments.
- In an another related development, All India Solar Industries Association has also expressed concerns on **solar equipment units operating at 30% capacity due to massive imports by traders from China**.
- They have urged the Centre (**Power Ministry**) to intervene and introduce structural safeguards, tariff-based barriers and production incentives for 4-5 years.

Pradhan Mantri Jan Vikas Karyakram (PMJVK)



❖ Context

- **Ministry of Minority Affairs** informed Lok Sabha about PMJVK.

❖ Key Highlights

- A **Centrally Sponsored Scheme**, which was restructured (**erstwhile Multi Sectoral Development Programme**) and implemented with effect from May, 2018, in **1300 identified Minority Concentration Areas (MCAs) of the Country**.
- Launched in all districts from 2022-23.
- Objective to **develop socio-economic infrastructure assets and basic amenities** in these areas to lessen the gap between the national average and the minority communities with regard to backwardness parameters.
- The communities notified as **minority communities under Section 2 (c) of the National Commission for Minorities Act, 1992** would be taken as Minority Communities.
- At present 6 (six) communities namely **Muslims, Sikhs, Christians, Buddhists, Zoroastrians (Parsis) and Jains** have been notified as Minority Communities under Section 2 (c) of the National Commission for Minorities Act, 1992.
- Implemented through the State Governments/ Union Territory Governments. Projects under PMJVK are proposed by the States/ UTs where land is already available with the State/ UT.
- The Central Government does not acquire land for construction under the scheme. **The land cost or land acquisition costs are not covered under this programme.**
- **80%** of the resources under the PMJVK would be **earmarked for projects related to education, health and skill development.**
- **33 to 40%** of resources under the PMJVK would be specifically **allocated for women centric projects.**

PLI scheme

❖ Context

- According to an analysis by Crisil Research, **India is likely to see an incremental revenue addition of Rs. 35-40 lakh crores** over the next 3-4 years.

❖ Key Highlights

- The Central government's flagship was announced in March 2020, is operational for **15 sectors**. The **potential capital expenditure is estimated to be Rs. 2.5-3 lakh crores** and will account for **13-15% of the annual average investment for next 3-4 years.**

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- Of these, capital investment in sectors such as mobile, pharmaceuticals and telecom manufacturing has already started.
- **Nearly 55% of the investment is expected to be in green sector.**
- As per the PLI scheme, the government encouraged domestic companies and establishments to set up or expand on manufacturing units to increase production, to which the **government provides incentives on incremental sales.**
- They could come in the form of **tax rebates, lowered import and export duties or easier land acquisition norms.**
- The benefits of a PLI scheme are **generally passed on to the end consumers of goods in the form of lower costs.**

Hot Poles



❖ Context

- **EARTH'S POLES** are undergoing simultaneous extreme heat with parts of **Antarctica** more than **40 degrees Celsius** warmer than average and areas of the **Arctic** more than **30 degrees Celsius** warmer than average.

❖ Key Highlights

- At this time of year, the **Antarctic should be rapidly cooling after its summer**, and the Arctic only slowly emerging from its winter, as days lengthen.
- Scientists warned that the events unfolding including for both poles to show such heating were **“historic”, “unprecedented” and “dramatic”.**
- However, some scientists say it **may be a random weather event** but if it reappears then it will be part of global warming.

Surajkund International Crafts Mela



❖ Context

- The Governor of Haryana, **Bandaru Dattatraya** and Chief Minister of Haryana, **Manohar Lal Khattar** formally inaugurated the **35th edition** of the world-famous **Surajkund International Crafts Mela** at Surajkund. After a two-year hiatus, Surajkund mela to be organized.
- The event is organized jointly by the **Surajkund Mela Authority & Haryana Tourism** in collaboration with **Union Ministries of Tourism, Textiles, Culture and External Affairs.**

❖ Key Highlights

- In 2022, the 'Theme State' is **Jammu & Kashmir** and **Uzbekistan** is the partner nation. Jammu & Kashmir, is presenting its rich legacy and distinct culture via handicrafts and art forms. Hundreds of artists from Jammu and Kashmiri will perform various indigenous performances to enchant the audience, ranging from exquisite crafts to traditional dances.
- **More than a million visitors** throng the Mela during the fortnight including thousands of foreign tourists.
- The Surajkund Mela is unique as it showcases the richness and diversity of the handicrafts, handlooms and cultural fabric of India, & **is the largest crafts fair in the world.**
- A large number of renowned national and international folk artistes and cultural groups present day performances at both the Chaupals, the open-air theatres, located in the Mela premises. Also enthralling cultural evening programmes are held at the main Chaupal during each of the Mela evening.
- **The Surajkund Mela first took place in 1987** and ever since then, Haryana has been organising the festival with **great pomp and fervour.** With time the festival has gained great importance and has become the **world's largest International Craft Festival**, as it allows people to showcase their **talents and culture from across the globe.**
- The Surajkund Mela didn't kick-start as international fair it was only in 2013, it was upgraded at international level and was called '**28th Surajkund International Crafts Mela**'. So far more than **15 SAARC countries** and **some from Africa and Europe** have participated in the Fair.

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