DAILY CURRENT AFFAIRS ANALYSIS Lякзнуя Лсядему

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1 - Employer Rating Survey by EPFO:

GS II

Government Policies and Interventions

• What is an organisation that manages employee provident funds?

- It is a government agency that oversees pension plans and provident funds for Indian workers in the organised sector.
- The Employees' Provident Fund and Miscellaneous Provisions Act of 1952 are put into effect by it.
- Employee provident funds are established for workers in factories and other establishments by the Employees' Provident Fund and Miscellaneous Provisions Act of 1952.
- The Indian government's Ministry of Labour & Employment is in charge of overseeing it.
- In terms of clients and the amount of money exchanged, it is among the biggest social security organisations in the world.
- What Elements Make Up the Employer Rating Survey's Core?
- Regarding:
- The Ministry of Labour and Employment's (EPFO) and the MoWCD's "Women in the Workforce for Viksit Bharat" event marked the launch of the employer rating survey.
- The survey's results and female employees' comments are intended to provide insightful information for well-informed policies regarding women's participation in the workforce.
- The survey's main goal is to assess and rank firms according to how much they value and encourage women to enter the workforce. This entails evaluating the policies and resources companies offer to foster an atmosphere that supports women in the workforce.

• Employers' rating:

• Employers are rated in the poll according to how supportive they are of women entering the workforce. It is a technique for evaluating how well employers are doing their part to create an inclusive workplace.

• Survey:

- The survey comprises an extensive questionnaire that requests information about the organisation, such as if the business has late-night transportation, child care centres, and an Internal Complaints Committee to handle Prevention of Sexual Harassment (POSH) procedures.
- The questionnaire has been given by the EPFO to over 300 million of its customers nationally, indicating a thorough attempt to collect data on a broad scale.

• Equitable Compensation for Equitable Work:

- In addition, the survey asked whether women can work remotely or with flexible hours, and whether male and female employees receive "equal pay for equal work."
- Take note
- The retirement fund agency oversees 21.23 lakh establishments with 29.88 crore members, according to the EPFO's Annual Report for 2022–2023.

• What is the current status of women's participation in the Indian labour force?

- Over the past few years, there has been improvement in the labour force participation rate (LFPR) for women; nevertheless, the majority of this rise has been in the unpaid labour category.
- The working-age population (those who are 15 years of age and older) that is either employed or jobless but willing to look for work is known as the labour force participation rate, or LFPR.
- The female participation rate increased to 27.8% in 2022–2023 from 17.5% in 2017–18, according to the Periodic Labour Force Survey (PLFS). However, a significant portion of this increase can be attributed to the women classified as "helpers in household enterprises," who do not receive a regular salary for their job.
- In India, the labour force participation rate (LFPR) for men climbed from 75.8% in 2017–18 to 78.5% in 2022–23; the similar increase for women was from 23.3% to 37.0%.
- Why Do Women Participate in the Labour Force at Lower Rates?
- The Social Norms of Patriarchy:
- Traditional gender roles and deeply ingrained patriarchal conventions frequently prevent women from pursuing higher education and career prospects.
- Women's responsibilities as homemakers and carers may be prioritised by society, which discourages them from actively participating in the workforce.
- Wage disparity by gender:
- In India, women are frequently paid less for doing same job than men are.
- The World Inequality Report, 2022 states that women in India only make up 18% of the labour force, while men earn 82% of it.
- Women may be deterred from looking for formal career possibilities by this wage discrepancy.
- Unpaid Care Labour:
- Women are disproportionately responsible for unpaid caregiving and household chores, which takes up time and energy that could be spent working for pay.

- In India, married women devote more than seven hours a day to unpaid caregiving and household chores, compared to fewer than three hours for males.
- ender disparity in family tasks is large, and this trend is present across caste and income levels.
- Women's participation in the labour field may be seriously hampered by this unequal division of domestic duties.
- Cultural and Social Shame:
- Women who work outside the home may face shame or opposition in some areas, which lowers their rates of labour force participation.
- What are the potential societal implications of increased female labour participation?
- Economic Development:
- Economic growth and women's labour force participation are positively correlated. There is a loss of potential productivity and economic production when a sizable segment of the female population is underutilised.
- Growing the number of women in the labour force can boost GDP (Gross Domestic Product) and general economic success.
- **Reducing Poverty:**
- Access to possibilities for women to generate income can help raise households out of poverty and enhance living standards and family well-being.
- Development of Human Capital:
- There are benefits that span generations when educated and employed mothers have a favourable impact on their children's health and education.
- Gender Parity and Self-Determination:
- Increased female labour force involvement can promote gender equality by challenging conventional gender roles and norms.
- Women who are economically empowered are able to exercise more autonomy, control, and decision-making ability over their life.
- Women who are economically empowered have more negotiating power and are less likely to be victims of abusive relationships and gender-based violence.

• Growth in Population and Fertility:

- Research indicates that there is a positive correlation between women's labour force involvement and a drop in fertility rates.
- This phenomenon, referred to as the "fertility transition," is linked to more sustainable population increase through better access to family planning, healthcare, and education.

• The Talent Pool and Labour Market:

• Raising the proportion of women in the workforce can aid in addressing inequities in the labour market and skill gaps, resulting in a more effective distribution of talent and resources.

• The Way Ahead:

- Talks about gender equality should go beyond dividing women's lives into work and living domains and acknowledge the full value of all forms of work, both formal and informal, performed by women.
- Women's discussions within their cultural contexts must inform policy solutions, with an emphasis on enhancing autonomy and providing flexible work arrangements.
- In addition to being an issue of gender equality, encouraging and assisting greater female labour force participation is also a vital component of societal advancement.
- Source \rightarrow The Hindu

2 - UGC's Proposed De-reservation Guidelines:

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Government Policies and Interventions

• What Are Included in the UGC Draft Guidelines?

- A team headed by Dr. H. S. Rana, the director of the Institute of Public Administration, was assigned by the UGC to create new draft guidelines for implementing reservations in higher education, taking into account the modifications made by the government since the 2006 guidelines.
- The objective was to amend Department of Personnel and Training (DoPT) circulars in accordance with court rulings and make clear the rules that were already in place.

- The draft includes multiple chapters that address topics such as faculty post quotas, roster preparation for reservations, de-reservation, caste claim verification, and student admissions reservations.
- The de-reservation chapter, which proposes that reserved professor posts may be dereserved in "exceptional cases" with sufficient justification from the affected university, is at the core of the controversy.
- According to the norms, if there are insufficient candidates from the SC/ST or OBC categories, a vacancy earmarked for them may be declared unreserved.
- Group C and D level positions need clearance from the university's Executive Council, while proposals for de-reservation of Group A and B level positions must be filed to the Education Ministry.
- Why was there an outcry about this De-reservation Chapter?

• Justifications for the Protest:

- The draft guidelines looked to open the door for de-reservation in faculty jobs, which sparked a public outrage. This is in contrast to current academic standards, which state that reserved faculty positions are not converted for general candidates.
- This clause expanded Group A positions to cover Group B, C, and D, which is where the argument started.
- Officially, the de-reservation of reserved positions for OBC, SC, and ST in direct recruitment is prohibited by the Education Ministry.
- Traditionally, quota posts that remain empty are re-advertised and special recruiting drives are held until qualified applicants are found.
- This was viewed as a danger to the representation and empowerment of underprivileged populations in higher education as well as a breach of the constitutional mandate of reservation.

• Government Response and UGC:

- The Ministry of Education and UGC quickly released clarifications in reaction to the public outcry, stressing that there is no new order allowing de-reservation.
- The Ministry reaffirmed that all openings must be filled in accordance with the Central Educational Institutions (CEI) Act, 2019, which forbids the de-reservation of reserved positions.
- The UGC Chairman made it clear that the guidelines were still in draft form and promised that no de-reservation-related clause would be included in the final version.
- The University Grants Commission: What is it?
- The University Grants Commission (UGC) was established on December 28, 1953, and in 1956, an Act of Parliament made it a statutory organisation of the Indian government. Its purpose is to coordinate, determine, and uphold standards for teaching, research, and examination in higher education.

- The Chairman, Vice-Chairman, and ten additional members are appointed by the Central Government to the UGC, which is housed within the Ministry of Education.
- Those who are not employees of the federal government or any state government are chosen to serve as the Chairman.
- In addition to giving grants to qualified schools and universities, the Commission counsels the Federal and State Governments on matters pertaining to the advancement of Higher Education.
- Along with its six regional offices in Bangalore, Bhopal, Guwahati, Hyderabad, Kolkata, and Pune, it operates out of New Delhi.
- Additionally, it controls the acceptance of fraudulent universities, independent colleges that are mistaken for universities, and remote learning establishments.
- Source \rightarrow The Hindu

3 - IEA Report on Energy 2024:

GS II

International Issues

- Which aspects of the Electricity Report 2024 stand out the most?
- Persistent Dependency on Coal:
- Through 2026, India is expected to rely primarily on coal to meet its growing electricity needs.
- Despite a decline from 74% in 2023, coal-fired power is predicted to supply 68% of India's electricity needs by 2026.
- An annual increase of 2.5% is anticipated in the generation of power from coal (2024–2026).
- Even with India aiming to be net-zero by 2070, 68% of demand is anticipated to be met by coal.
- Renewable Energy Production:
- In 2023, the percentage of power generated that came from renewable energy (RE) stayed comparatively constant at 21%. The decrease in hydropower output more than offset the increase in solar and wind power.
- In 2023, almost 21 GW of new renewable energy capacity were added, making up nearly 44% of all installed capacity.

• Dynamics of Electricity Demand:

- India's need for energy increased by 7% in 2023 as a result of the country's fast economic expansion and growing need for space cooling.
- 6.5% yearly average growth is anticipated between 2024 and 2026.
- By 2026, India's electricity demand is expected to surpass that of China, growing at the highest rate in the world.
- Comparing the world and developing economies:
- China is predicted to increase at the fastest rate. In the next three years, India's electricity demand may almost match that of the UK.
- Developed economies reported high inflation and significant declines in manufacturing and industrial output.
- China and India are likely to lead the growing economies in South Asia, which account for around 85% of the projected additional power capacity.
- Challenges and Mandates for Hydropower:
- The amount of hydropower generated in 2023 fell by 15% as a result of altered weather patterns.
- Up until March 2024, the government required a minimum of 6% of domestic coal to be blended with imported coal in order to guarantee a continuous supply of electricity.
- Attempts at Diversification:
- Large-scale nuclear and hydropower projects, as well as increased wind and solar power capacity, are being built in the nation.

• Nuclear Power Explosion:

- China and India will host the majority of the nuclear power plants under construction in the world between 2024 and 2026.
- According to IEA predictions, nuclear generation worldwide will increase by nearly 10% between 2023 and 2026.
- In 2022, India declared its intention to triple its nuclear capacity by 2032, with a target of adding 13 GW, of which 6 GW are presently being built.
- Currently, 23 nuclear reactors in operation in India provide 2% of the nation's electricity.
- According to the report, the 700 MWe Kakrapar Unit 3 reactor, the largest nuclear power plant ever built in the country, started operating in Gujarat in June 2023 and reached its maximum capacity in August 2023.

• According to the nation's project schedule, nuclear power generation is anticipated to rise sharply between 2024 and 2026, when new facilities with a combined capacity of about 4 GW are expected to start up for business.

• Global Nuclear Environment:

- As of November 2023, 68 GW of nuclear capacity is estimated to be under construction, 9 GW is currently planned, and 353 GW is proposed, according to estimates from the World Nuclear Association.
- By 2026, nuclear power growth in Asia is predicted to overtake that of North America, accounting for 30% of global nuclear generation.

• Small Modular Reactor (SMR) Technology:

- The report highlighted that momentum is growing behind small modular reactor (SMR) technology.
- SMRs are advanced nuclear reactors that have a power capacity of up to 300 MW(e) per unit, which is about one-third of the generating capacity of traditional nuclear power reactors.
- SMRs, which can produce a large amount of low-carbon electricity, are:
- Small: physically a fraction of the size of a conventional nuclear power reactor.
- Modular: making it possible for systems and components to be factory-assembled and transported as a unit to a location for installation.
- Reactors: harnessing nuclear fission to generate heat to produce energy.
- The SMR Technology development and deployment are progressing, but not without challenges. R&D is starting to accelerate.
- Source \rightarrow The Hindu

4 - Hybrid Vehicles as Alternative to EVs:

GS III

Environmental Conservation

• How is India Faring in Adopting Electric Vehicles (EVs)?

• India is actively pursuing electrification in its automotive sector, with significant investments and focus on EVs. While many automobile industries in the country are heavily investing in EVs, some are prioritising hybrid vehicles.

- The government is providing clear tax incentives primarily for a specific category of cars. Other technological platforms in the automotive industry are grouped together in the upper end of the tax bracket, suggesting a tax structure that may not be equally favourable for all types of vehicular technologies.
- India's electric mobility plan is prominently focused on the widespread adoption of BEVs to replace traditional internal combustion engine (ICE) vehicles.
- In this context lithium-ion (Li-ion) batteries are currently considered the most viable option. This indicates a strategic emphasis on BEVs and a preference for specific battery technologies to drive the electric mobility transition in the country.

• What are Battery Electric Vehicles (BEVs)?

- BEVs are a type of electric vehicle that runs solely on electric power stored in high-capacity batteries.
- They do not have an Internal Combustion Engine (ICE) and produce zero tailpipe emissions.
- BEVs use electric motors to drive the wheels, providing instant torque and smooth acceleration.

• Battery Technology:

- BEVs rely on advanced battery technology, primarily Lithium-ion (Li-ion) Batteries.
- Li-ion batteries offer high energy density, longer range, and improved performance.
- Charging Infrastructure:
- BEVs require a network of charging stations for recharging their batteries. Charging infrastructure includes various types of chargers:
- Level 1 (household outlets)
- Level 2 (dedicated charging stations)
- Level 3 (DC fast chargers).
- Public charging stations, workplaces, and residential buildings play a crucial role in expanding the charging infrastructure.
- What are the Challenges in Adoption of Battery Electric Vehicles?
- Upfront Cost:
- The experience in markets from Norway to the US and China shows that the electric push works only if it is backed by state subsidies.
- Norway's EV policy has fostered the world's most advanced EV market. So, the government waives the high taxes on EVs, which it imposes on sales of non-electrics; it lets electric cars run in bus lanes; toll roads are free for electric vehicles; and parking lots offer a free charge.

- However, in India, subsidies, particularly in the form of tax breaks, often benefit the middle or upper middle classes, who are the primary purchasers of electric four-wheelers.
- This distribution pattern poses a hurdle in ensuring that subsidies effectively reach a broader demographic.

• Charging Infrastructure:

- Countries like Norway and China, leaders in EV adoption, attribute their success to sustained efforts in expanding public charging infrastructure.
- China, particularly dominant in charger numbers, boasts 85% of global fast chargers and 55% of slow chargers.
- Norway has 99% hydroelectric power. In India, the grid is still fed largely by coal-fired thermal plants.
- However, India faces a unique challenge with only about 2,000 operational charging stations for its growing EV market. This challenge is intensified by the dominance of two- and three-wheelers, each with distinct charging requirements.
- An analysis by the World Bank (WB) has found that investing in charging infrastructure is between four and seven times more effective in ensuring EV adoption compared with providing upfront purchase subsidies.

• Supply Chain Issues:

- The global supply chain for key components like lithium-ion batteries is concentrated in a few countries, leading to concerns about supply chain stability and dependence on specific nations for crucial materials.
- More than 90% of the global Li production is concentrated in Chile, Argentina, and Bolivia, alongside Australia and China, and other key inputs such as cobalt and nickel are mined in the Congo and Indonesia.
- India would, therefore, be almost entirely dependent on imports from a small pool of countries to cater to its demand.
- The demand for Li-ion batteries from India is projected to grow at a CAGR of more than 30% by volume up to 2030, which translates to more than 50,000 tonnes of lithium requirement for the country to manufacture EV batteries alone.

• Consumer Awareness and Education:

- Many consumers may still lack awareness of the benefits of BEVs, and misconceptions about their capabilities, charging infrastructure, and overall cost-effectiveness can impede adoption.
- Consumer preference for ICE vehicles based on brand loyalty, resale value, and comfort and limited knowledge of potential buyers regarding EV benefits and features further adds to the problem.

• What are Hybrid Vehicles?

- Hybrid vehicles combine a traditional Internal Combustion Engine (ICE) with an Electric Propulsion system, allowing the vehicle to operate using either or both power sources.
- There are different types of hybrid systems, but the most common ones include parallel hybrids (both the engine and electric motor can power the vehicle independently) and series hybrids (only the electric motor drives the wheels, while the engine generates electricity).
- Significance:
- Practicality in the Medium Term (5-10 years):
- Hybrids are seen as a practical and viable option for the medium term as India gradually moves towards full electrification of its vehicle fleet. This transition is expected to take 5-10 years.
- Cost of Ownership Perspective:
- Hybrids are considered cost-effective, making them an attractive option for consumers.
- Hybrid cars use both fuel and electric power to run, resulting in better fuel economy compared to conventional fuel cars. This translates to cost savings for drivers over time.
- Critical for Decarbonization Drive:
- Hybrid vehicles play a role in India's Decarbonization efforts. Hybrid vehicles have lower total (well-to-wheel, or WTW) carbon emissions than both electric and traditional ICE vehicles for similarly sized vehicles.
- Hybrids emit 133 grams per kilometre (g/km) of CO2, while EVs emit 158 g/km. This translates to hybrids being 16% less polluting than the corresponding EV.
- Total (well-to-wheel, or WTW) carbon emissions does not focus only on tailpipe emissions, but includes vehicle emissions (tank-to-wheel, or TTW) and emissions from crude mining, refining, and power generation as well.
- Hybrids are also critical for India's decarbonization drive. The cheaper upfront cost of hybrids will encourage many more people to adopt low-emission vehicles.
- What are the Other Possible Alternative Technologies to BEVs?
- Ethanol & Flex Fuel:
- Flex fuel vehicles can run on various fuel types, including ethanol, reducing reliance on fossil fuels.
- Fuel Cell Electric Vehicles (FCEVs) & Hydrogen ICE:

- FCEVs run on hydrogen fuel cells, which produce electricity and water as the only by-products offering a clean and efficient alternative to BEVs.
- Hydrogen ICE vehicles use hydrogen as a fuel in ICEs offering a simpler and cheaper alternative to BEVs.
- However, both FCEVs and Hydrogen ICEs have their own shortcomings in terms of infrastructure and zero emissions.

• Synthetic Fuels:

- Porsche is developing synthetic fuels that make ICEs CO2-neutral, potentially extending the life of ICE vehicles.
- These fuels, produced from carbon dioxide and hydrogen using renewable energy, could have broader applications.
- What are Some Government Initiatives to Promote EV Adoption?
- Faster Adoption and Manufacturing of Electric Vehicles (FAME) Scheme II
- National Electric Mobility Mission Plan (NEMMP)
- National Mission on Transformative Mobility and Battery Storage
- Go Electric campaign
- Production Linked Incentive (PLI) scheme:
- Incentives for the manufacturing of EVs and components
- Ministry of Power's Revised Guidelines on Charging Infrastructure:
- At least one charging station to be present in a grid of 3 km and at every 25 km on both sides of the highways.

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- Amendment to Model Building Bye-laws, 2016 (MBBL):
- Mandatory to set aside 20% of the parking space for EV charging facilities in residential and commercial buildings.
- India's support to the global EV30@30 campaign
- The Way Ahead:
- Prioritize substantial investment in building a robust and widespread charging infrastructure network. Increasing the number of charging stations, especially in urban areas and along highways, is crucial for easing range anxiety and encouraging EV adoption.
- Implement consistent and supportive government policies and incentives to make EVs more affordable. This may include tax breaks, subsidies, and other financial incentives to both manufacturers and consumers.

- Conduct public awareness campaigns to educate consumers about the benefits of EVs, dispel myths, and promote their environmental advantages. Enhancing public knowledge can positively influence consumer attitudes and choices.
- Source \rightarrow The Hindu

