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Recalibrating INDIA Clean cooking strategy

SOURCE: TH

GS 3

WHY IN NEWS: For the first time LPG consumption in Indian households saw an absolute reduction in FY23.

According to the India Residential Energy Consumption Survey (IRES) conducted by the Council on

Energy, Environment, and Water (CEEW), the proportion of Indian households using LPG as their main cooking fuel increased from 33% in 2011 to 71% in 2020.

PRELIMS SPECIFIC:

PRADHAN MANTRI UJJWALA YOJANA:

- PMUY was launched on May 01, 2016. Ujjwala 2.0 was launched on August 10, 2021.
- ➤ AIM: To safeguard the health of women and children by providing them with clean cooking fuel, so that they don't have to compromise their health in smoky kitchens.
- ➤ **SCHEME**: Deposit-free LPG connection is given to the eligible household with the financial assistance of Rs 1,600 per connection to cover the cost of a cylinder, pressure regulator, LPG hose and consumer card and installation charges.
- ➤ ON MARCH 24, 2023 Union Cabinet approved a subsidy of Rs.200 per 14.2 kg cylinder for up to 12 refills per year for the beneficiaries of Pradhan Mantri Ujjwala Yojana (PMUY).

SOURCE: PIB

ACHIEVEMENTS OF LPG PROGRAMME

- IN FY21 3 free cylinders were provided to all PMUY Consumers as part of Pradhan mantra garib kalyan yojana.
- Annual refill rates for LPG rose to highest level of 4.55 cylinders per active connection.
- Nominal subsidy of rs.200 per Cylinder was reinstated for PMUY Consumers in September 2022.













ADVANTAGES OF LPG PROGRAMME

- Clean and Efficient Fuel: LPG (Liquefied Petroleum Gas) is a clean-burning fuel that produces fewer emissions compared to traditional fuels like coal and wood.
 For example, using LPG for cooking reduces indoor air pollution and respiratory problems caused by traditional solid fuels.
- ➤ **Convenience**: It eliminates the need for collecting firewood or charcoal, saving time and effort.
- Versatility: LPG can be used for various applications such as cooking, heating, water heating, and in commercial and industrial processes. Its versatility makes it a widely used energy source across different sectors.
- ➤ Energy Security: LPG provides a reliable energy supply in areas where electricity or other fuel sources may be intermittent or unavailable.
- ➤ Backup Power: LPG can be used for backup power generation during electricity outages. This is particularly valuable in regions with unreliable power supply.

CHALLENGES IN LPG STRATEGY

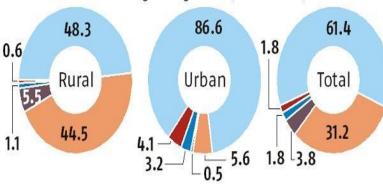
- Imports of LPG: India dependence on imported LPG has steadily increased to over 64% in FY 23.
- Subsidy management: Identifying and targeting the right beneficiaries for LPG subsidies can be challenging, and it might lead to ineligible recipients receiving subsidies or eligible ones being left out.
- Pricing and Affordability: Given the volatile international prices, particularly after the Russian war against Ukraine, and India's dependence on petroleum taxation in its domestic budget, it is improbable for the country to revert to a low price.

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HOW INDIANS COOK

Percentage of households with different types of fuel (%)

■ LPG ■ Firewood, chips and crop residue ■ Dung cake ■ Others ■ No cooking arrangement (do not cook)



Note: The survey was conducted between July and December 2018 Source: National Statistical Office's 76th round survey on drinking water, sanitation, hygiene and housing condition in India





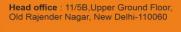
- LPG vs. Alternative Fuels: Example: <u>The promotion of LPG cylinders may impact the adoption of cleaner and sustainable energy sources, such as biogas, solar, or electric cooking options.</u>
- Accessibility in Remote Areas: In remote and hilly regions, transportation infrastructure may be inadequate, making it difficult to deliver LPG cylinders promptly.

WAY FORWARD:

- India's clean cooking policy should proactively shift its focus from relying solely on LPG to embracing a range of clean-cooking technologies.
 - E.g.: Electric cooking, Induction cook-tops
- Need to move towards electric cooking as observed in other parts of the world and it is comparatively cheaper.
 - EG: According to a study by CEEW, even with a high tariff of ₹8 per unit of electricity, ecooking would remain more cost-effective than using LPG at current prices.
- Research and Development: Invest in research to identify and develop diverse clean cooking technologies and fuels.
 - EG: <u>Support research on biogas, improved biomass stoves, electric induction cooktops, and solar-powered cookers.</u>
- ➤ Tailored Solutions for Different Regions: Customize clean cooking programs to suit regional cooking habits and fuel availability.
 - EG: <u>Promote the use of improved biomass stoves in areas with abundant agricultural</u> residues.
- Financial Access: Facilitate access to affordable financing options for clean cooking technologies.
 - EG: <u>Establish microfinance schemes for households to purchase biogas plants or electric cookers without financial burden.</u>







THE HYBRID EV IMPERATIVE

GS₃

SOURCE: TH

WHY IN NEWS: HOW HYBRID EVS OFFER A WAY TO BEGIN THE TRANSITION FOR ECONOMICALLY DEVELOPING COUNTRIES

An electric vehicle (EV) is an automobile powered by one or more electric motors using electricity

stored in rechargeable batteries. Unlike traditional internal combustion engine vehicles, electric vehicles do not require gasoline or diesel fuel and produce zero tailpipe emissions, making them an environmentally friendly transportation option.

PRELIMS SPECIFIC:

FOUR MAIN TYPES OF EVs:

Battery Electric Vehicles (BEVs) are powered solely by an electric battery, with no gas engine parts.

Plug-in Hybrid Electric Vehicles (PHEVs) have both an electric motor and a gasoline engine. The electric motor can power the vehicle on its own for a limited distance, and the gasoline engine kicks in when the battery is depleted.

Hybrid Electric Vehicles (HEVs) also have both an electric motor and a gasoline engine, but the electric motor is used only to assist the gasoline engine. HEVs do not have a plug-in port, and the battery is not designed to be recharged from an external source.

Fuel Cell Electric Vehicles (FCEVs) use hydrogen fuel cells to generate electricity, which powers the vehicle's electric motor. FCEVs are still in the early stages of development, but they have the potential to offer longer ranges and faster refueling times than BEVs.

ADVANTAGES OF ELECTRIC VEHICLES

- **Zero Emissions**: Electric vehicles produce no tailpipe emissions, reducing air pollution and contributing to improved air quality.
 - EG: According to the International Energy Agency (IEA) Global EV Outlook 2021, the global electric car stock surpassed 10 million units in 2020, preventing the release of approximately 40 million tonnes of CO2 emissions annually.
- Cost Savings: Electric vehicles generally have lower maintenance and operational costs compared to traditional vehicles, as they have fewer moving parts and do not require regular oil changes.









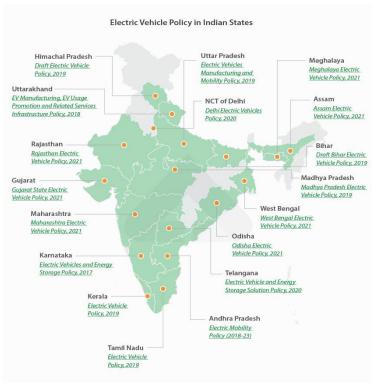




- EG: A study by Consumer Reports in 2021 found that EVs cost significantly less to maintain over time than gasoline-powered cars, saving owners an average of 50% on maintenance expenses.
- Renewable Energy Integration: EVs can be charged using electricity from renewable sources, such as solar or wind power, further reducing their carbon footprint.
 EG: In 2021, the U.S. state of Texas set a record for wind power generation, highlighting the potential to charge EVs with clean energy in regions with a strong renewable energy infrastructure.
- Reduced Dependence on Fossil Fuels: Widespread adoption of EVs can decrease reliance on imported oil and enhance energy security.
 EG: China, the world's largest electric vehicle market, has implemented policies to promote EV adoption and reduce its dependence on foreign oil imports.
- ➤ Energy Efficiency: EVs are more energy-efficient compared to internal combustion engine vehicles, resulting in lower energy consumption and reduced operating costs.

CHALLENGES IN TRANSITIONING TO ELECTRIC MOBILITY

- Limited Charging Infrastructure: Achieving a successful shift to full electric vehicles necessitates the presence of rapid-charging networks along highways. EG: 50 – 350 kW for cars and upto 1000 kW for heavy duty vehicles.
- Grid Capacity and Demand Management: Limited access to a reliable grid, especially in economically developing nations, combined with significant power requirements for slow and fast charging, poses challenges to the transition to electric vehicles.
- High Initial Cost of EVs: Electric vehicles can have higher upfront



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costs compared to traditional vehicles, discouraging some consumers from making the switch.

- Policy and Regulatory Hurdles: Inconsistent policies or lack of incentives and subsidies may discourage manufacturers and consumers from embracing electric mobility.
- **Limited Driving Range**: Some EV models have limited driving ranges, making them less suitable for long-distance travel without frequent charging.

GOVERNMENT INITIATIVES TO PROMOTE ELECTRIC VEHICLE IN INDIA

- 1. Faster Adoption and Manufacturing of Electric Vehicles in India (FAME India): This scheme provides subsidies for the purchase of EVs, as well as for the development of charging infrastructure.
- 2. Production Linked Incentive (PLI) Scheme for Automobile and Auto Component Industry: This scheme provides incentives for the manufacturing of EVs and their components in India.
- 3. **Go Electric Campaign**: This campaign aims to raise awareness about EVs and to encourage people to switch to EVs.
- 4. **National Electric Mobility Mission Plan (NEMMP):** This plan outlines the government's vision for the development of EVs in India.

CONCLUSION

The transition to electric mobility is a challenge, but it is also an opportunity. EVs have the potential to reduce air pollution, improve public health, and create jobs. With the right policies and investments, the transition to electric mobility can be a success.

VALUE ADDITION: PIB

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COMMUNAL VIOLENCE IN INDIA

GS 1

SOURCE: TH

WHY IN NEWS: VIOLENT INCIDENTS HAPPENED IN NUH DISTRICT OF HARYANA

Communalism is a form of political ideology that emphasizes the importance of religious and ethnic identities. It is often used to divide people into separate groups and to incite conflict between them.

EG: The Gujarat riots of 2002: These riots were sparked by the burning of a train carrying Hindu pilgrims. The riots resulted in the deaths of over 1,000 people, most of whom were Muslims.

COMMUNAL INCIDENTS ■ Injured ■ Killed YEAR Incidents 1,921 2014 644 95 | 2,264 2015 751 97 2,321 2016 703 86 2,384 2017 822 111

The ideology of communalism has three elements:

Belief- People who follow the same religion have same political, economic, social interests. So here socio-political communalities arise.

Notion- A multi-religious society like India, the interest of one religion differs from another religion.

Interest- Differs in different communities and are seen to be completely incompatible, antagonist and hostile.

CAUSES OF COMMUNALISM IN INDIA

Historical Factors:

- **Legacy of Partition**: The traumatic events of the Partition of India in 1947, leading to mass migration and communal violence, left deep scars and contributed to communal tensions.
- **Historical grievances and communal clashes** in the past have left lasting imprints on community relations, affecting trust and understanding.

Economic Disparities:

• Unequal distribution of resources and opportunities among different religious communities can create a sense of competition and animosity.





Social Fragmentation:

 Social isolation and lack of intermingling between different religious communities can lead to misunderstandings and stereotypes.

Example: Residential segregation, where communities live in separate localities, can limit interactions and perpetuate prejudices.

Religious Fundamentalism:

 The rise of religious fundamentalism can promote intolerance and radicalization, leading to communal conflicts.

Caste System:

• The caste system in India, which is intertwined with religion, can reinforce social divisions and contribute to communalism.

Example: <u>Caste-based discrimination and conflicts may lead to communal tensions in some areas.</u>

CONSEQUENCES OF COMMUNALISM IN INDIA

- ➤ **Violence and instability**: Communalism can lead to violence, riots, and even wars. This can destabilize the country and make it difficult to achieve economic and social development.
- Loss of life and property: Communal violence can result in the loss of life and property. This can have a devastating impact on individuals, families, and communities.
- ➤ Damage to social fabric: Communalism can damage the social fabric of a country. It can divide people into separate groups and make it difficult for them to work together for the common good.
- Threat to national unity: Communalism can be a threat to national unity. It can divide people into separate groups and make it difficult for them to feel like they belong to the same country.
- ➤ Intolerance and discrimination: Communalism can lead to intolerance and discrimination against people of different religions or ethnicities. This can make it difficult for people to live together in peace and harmony.
- Loss of economic opportunities: Communal violence can damage the economy. This can lead to job losses, businesses closing down, and a decline in investment.





MAJOR SC JUDGEMENTS ON COMMUNALISM

- 1. **R.K. Dalmia v State of Bihar**: This judgment, delivered in 1958, held that the state has a duty to protect its citizens from communal violence. The judgment also held that the state can take preventive measures to prevent communal violence.
- 2. **M.C. Mehta v Union of India**: This judgment, delivered in 1997, held that the state has a duty to provide relief to victims of communal violence. The judgment also held that the state can take steps to rehabilitate victims of communal violence.
- **3.** Ramesh Yeshwant Prabhoo v. Prabhakar K. Kunte (1996): In this judgment, the court reiterated that politicians seeking votes should not appeal to religion, caste, or language, as it is against the secular ethos of the Constitution.
- **4. Sri Adi Visheshwara of Kashi Vishwanath Temple v. State of U.P. (1997):**The court held that no religious denomination or section of a religious group can claim exclusive ownership or control over a religious place based on past usage, and such places must be open to all, irrespective of religious affiliations.

WAY FORWARD:

- Prohibiting communal speeches and publications: The state should prohibit communal speeches and publications that incite violence.
- > **Deploying security forces**: The state should deploy security forces to areas where there is a risk of communal violence.
- Providing relief to victims: The state should provide relief to victims of communal violence, including compensation for property damage and medical assistance.
- ➤ **Rehabilitating victims**: The state should rehabilitate victims of communal violence, including by providing them with housing and employment.







