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CURRENT AFFAIRS

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E20 AND GLOBAL BIOFUEL ALLIANCE

This article covers "Daily Current Affairs" and the topic details "E20 and Global Biofuel Alliance". The topic "E20 and Global Biofuel Alliance" has relevance in the "Science and Technology and Environment" section of the UPSC CSE exam.

For Prelims:

What is E20? What is the Global Biofuel Alliance?

For Mains:

GS3: Development of new technology and Environmental Pollution

Why in the news?

During an industry event, the Petroleum Minister announced that E20 petrol, which contains 20 percent ethanol, is currently accessible at 1,350 fuel retail outlets. Furthermore, he stated that the availability of E20 petrol will expand nationwide by 2025.



What is E20?

- **E20 is a fuel blend of 20% ethanol + 80% gasoline.** It is a cleaner-burning fuel than gasoline, and it can help to reduce emissions of pollutants such as carbon monoxide, hydrocarbons, and nitrogen oxides.
- **Ethanol**, a dehydrated form of ethyl alcohol (C₂H₅OH), can be derived from high-starch crops such as sugarcane, maize, and wheat. In India, the primary source of ethanol production is sugarcane molasses through fermentation.
- Blending ethanol with gasoline yields various fuel mixtures. **Due to the oxygen content in ethanol molecules, they facilitate more thorough combustion of the fuel in engines, leading to reduced emissions and a decrease in environmental pollution.**
- Furthermore, since ethanol is derived from plants that utilise solar energy, it is recognized as a renewable fuel.
- Ethanol and ethanol-gasoline blends offer cleaner burning characteristics and boast higher octane levels compared to non-ethanol gasoline.

Ethanol Blended Petrol (EBP)

- The Ethanol Blended Petrol (EBP) program was initiated in January 2003 with the **aim of encouraging the adoption of eco-friendly and alternative fuels while reducing the reliance on imports for energy needs.**
- The objective of the Ethanol Blending Programme (EBP) is **to promote the blending of Ethanol with motor spirit**, aiming to reduce pollution, save foreign exchange, and enhance the value generated within the sugar industry.
- This initiative empowers the industry to address outstanding cane price payments to farmers while simultaneously benefiting the environment and the economy.

Benefits of Ethanol Blending

- **Saving Rs 30,000 crore of foreign exchange per year:** By blending 20% ethanol with petrol, the country can reduce imports, saving a significant amount of foreign currency.
- **Energy security:** Ethanol blending promotes reliance on domestic renewable resources, reducing dependence on fossil fuels.
- **Lower carbon emissions:** Ethanol's cleaner combustion leads to reduced greenhouse gas emissions, contributing to mitigating climate change.
- **Better air quality:** Ethanol blending results in fewer pollutants, leading to improved air quality and reduced health risks.
- **Self-reliance:** Increased ethanol production enhances the country's independence in meeting its fuel demands.
- **Use of damaged foodgrains:** Ethanol production can utilize damaged or surplus foodgrains, reducing waste and supporting food security.
- **Increasing farmers' incomes:** Ethanol production provides an additional market for farmers' crops, enhancing their income and livelihoods.
- **Employment generation:** Expanding the ethanol sector creates job opportunities in agriculture, manufacturing, and related industries.
- **Greater investment opportunities:** Ethanol blending encourages investments in ethanol production, fostering economic growth and development.

Challenges to Ethanol Blending:

- **Availability of sufficient feedstock** on a sustainable basis viz., sugarcane, food grains
- **Inter-state movement of ethanol**
- **Weather related issues affecting the crop**
- **Prices of feed-stock and ethanol**
- **Need for additional storage tanks** for ethanol at marketing terminals / depots
- **Need for ethanol compliant dispensing units**
- **Handhold vendors to develop ethanol compatible parts**
- **Optimization of engine for higher ethanol blends**
- **Conduct of durability studies on engines and field trials before introducing E20 compliant vehicles**

Timeline

Year	Event
January 2003	5% Ethanol Blended Petrol (EBP) Programme launched in 9 states and 4 Union Territories.
November 2006	Sale of 5% Ethanol Blended Petrol begins in additional 10 states.

April 2019	The EBP Program extended to all of India except Andaman Nicobar and Lakshadweep islands, with OMCs selling petrol blended with ethanol up to 10% .
By 2022	Government target of 10% blending of ethanol with petrol.
By 2025 (Earlier 2030)	Government target of 20% blending of ethanol with petrol.

What is the Global Biofuel Alliance?

The Global Biofuel Alliance is an initiative by **India, Brazil, and the United States**, as **leading biofuel producers and consumers**, to work together towards the development of a Global Biofuels Alliance along with other interested countries.

Aims and Objectives:

- The primary focus is to promote collaboration and enhance the adoption of sustainable biofuels, particularly in the transportation sector.
- This includes placing importance on bolstering markets, facilitating international trade of biofuels, sharing concrete policy lessons, and providing technical assistance for biofuels programs at a global scale.
- Furthermore, there is an emphasis on highlighting the best practices and successful instances that have already been implemented.

The Alliance will cooperate with the Clean Energy Ministerial Biofuture Platform, the Mission Innovation Bioenergy initiatives, and the Global Bioenergy Partnership (GBEP).

The Global Biofuel Alliance is **one of the key initiatives under India's G20 Presidency**. It was **announced by the Minister of Petroleum & Natural Gas during India Energy Week 2023**.

India Energy Week 2023 was held from February 27 to March 1, 2023 at Vigyan Bhawan in New Delhi, India.

Source:

E20 petrol already available at 1,350 fuel outlets, on track for pan-India rollout by 2025: Puri | Business News, The Indian Express

Global Biofuel Alliance: One of the priorities under India's G20 Presidency (pib.gov.in)

Q1. With reference to Ethanol, consider the following statements:

1. Ethanol can be derived from crops such as sugarcane, maize, and wheat.
2. Blending of ethanol in the gasoline leads to reduced emissions due to cleaner combustion.
3. Ethanol blended petrol has lower octane number than non-blended petrol.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

Answer: (b)

Q2. Consider the following statements:

1. Increasing farmers' incomes
2. Highly enhanced engine performance
3. Lower carbon emissions
4. Use of damaged foodgrains

How many of the above-mentioned statements are benefits of ethanol blending?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All Four

Answer: (d)

Q3. Discuss the significance and challenges of the ethanol blending program in India.

Gaurav Nikumbh



Yojna IAS
योजना है तो सफलता है