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# Government Approves Legal Use of 100% Ethanol Fuel to Reduce Fossil Fuel Imports

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Union Minister for Road Transport and Highways Nitin Gadkari announced that the Government has granted legal approval for the use of 100% ethanol fuel (E100) in vehicles. The move is aimed at reducing India's dependence on imported fossil fuels, promoting alternative fuels, and strengthening energy security. Gadkari stated that he signed the regulations on 13 June 2026, paving the way for the introduction of fully ethanol-powered vehicles in India.?

## Key Highlights

Legal recognition granted for 100% ethanol (E100) fuel in vehicles.

Intended to reduce dependence on imported crude oil and petroleum products.

Several automobile manufacturers are preparing to launch ethanol-compatible vehicles.

Supports India's transition towards cleaner and indigenous energy sources.

Complements the Ethanol Blending Programme (EBP) and flex-fuel vehicle ecosystem.

## What is E100 Fuel?

E100 refers to fuel containing 100% ethanol without blending with petrol.

## Common Ethanol Fuel Blends

E10 ? 10% ethanol + 90% petrol

E20 ? 20% ethanol + 80% petrol

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E85 ? 85% ethanol + 15% petrol

E100 ? 100% ethanol

Vehicles designed for E100 require specialized engines and fuel systems to handle the properties of ethanol.

### **Additional Key Facts**

Ethanol Blending Programme (EBP)

Launched in 2003.

Implemented by Oil Marketing Companies (OMCs).

### **Objective:**

Reduce crude oil imports.

Lower carbon emissions.

Promote renewable fuels.

Increase farmers' income.

India achieved the 20% ethanol blending target ahead of schedule, a milestone highlighted by the Ministry of Petroleum and Natural Gas.

### **National Policy on Biofuels, 2018**

Nodal Ministry: Ministry of Petroleum and Natural Gas

Encourages production and use of biofuels.

Supports use of agricultural residues, sugarcane, and surplus food grains for ethanol production.

### **Global Biofuels Alliance (GBA)**

Launched during India's G20 Presidency (2023).

Aims to promote international cooperation in biofuels.

India is a founding member.

### **Flex-Fuel Vehicles (FFVs)**

Can operate on varying blends of petrol and ethanol.

Widely used in countries such as Brazil.

India has begun introducing FFVs in both two-wheelers and passenger vehicles.

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## **Ethanol Infrastructure Expansion**

India plans to establish around 5,000 ethanol dispensing stations by the end of 2027 to support the growing adoption of ethanol-powered vehicles.

### **Challenges Associated with Ethanol Expansion:**

High water consumption in sugarcane cultivation.

Requirement of dedicated flex-fuel vehicle infrastructure.

Storage and transportation challenges.

Balancing food security with fuel production.

Need for large-scale ethanol production capacity.

### **Why is this Development Significant?**

Enhancing India's Energy Security

India imports about 85% of its crude oil requirements. Increasing the use of domestically produced ethanol can reduce vulnerability to global oil price fluctuations and geopolitical disruptions.

### **Boosting Farmers' Income**

#### **Ethanol production creates additional demand for:**

Sugarcane

Molasses

Maize

Damaged food grains

This can provide farmers with new income opportunities and strengthen the rural economy.

### **Promoting Green Mobility**

Ethanol is a renewable biofuel that emits lower levels of greenhouse gases compared to conventional fossil fuels, contributing to India's climate goals and cleaner transportation.

### **Encouraging Flex-Fuel Vehicles**

The approval is expected to accelerate the adoption of Flex-Fuel Vehicles (FFVs) capable of operating on ethanol blends such as E20, E85, and E100.

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## **Exam Focus Points (Quick Revision Notes)**

Minister in News ? Nitin Gadkari

Development ? Legal Approval for E100 Fuel

Fuel Type ? Ethanol (Biofuel)

Objective ? Reduce Fossil Fuel Imports

Import Bill Mentioned ? ₹22 Lakh Crore Annually

Related Programme ? Ethanol Blending Programme (EBP)

Related Policy ? National Policy on Biofuels, 2018

Vehicle Type ? Flex-Fuel Vehicles (FFVs)

Global Initiative ? Global Biofuels Alliance (GBA)

Key Benefit ? Energy Security and Reduced Carbon Emissions