

FROM POLICY TO PERFORMANCE: HOW LUBRIZOL ADDITIVES SUPPORTS INDIA’S ACCELERATED E20 JOURNEY

E20: Fueling India’s Clean Energy Transition

India’s energy landscape is entering a defining decade. From ambitious policy frameworks to on-ground adoption, the nation’s journey toward cleaner, self-reliant fuel systems have accelerated dramatically. At the center of this transition stands E20 a 20% ethanol, 80% petrol blend that symbolizes India’s commitment to sustainability, rural empowerment, and reduced carbon dependency

When India first announced its National Biofuel Policy in 2018, the 20% ethanol blending target was set for 2030. Yet, through coordinated policy support, technological readiness, and agricultural integration, the country reached over 18% blending by early 2025 five years ahead of schedule. The accelerated rollout underscores India’s growing ability to execute complex energy reforms while balancing industrial capacity and environmental ambition.

Why Ethanol Matters

Ethanol blending is not merely a technical exercise but a multi-dimensional strategy. Derived from sugarcane, maize, rice, and other biomass, ethanol offers cleaner combustion, lower greenhouse gas emissions, and higher octane levels than conventional petrol. While it carries a slightly lower energy density resulting in marginally lower mileage the trade-off is outweighed by the benefits: import substitution, improved air quality, and better income opportunities for farmers.

By integrating agriculture with energy, ethanol blending brings a unique socio-



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THIS EVOLVING SCENARIO OPENS THE DOOR FOR COMPANIES LIKE LUBRIZOL, A GLOBAL LEADER IN LUBRICANT AND FUEL ADDITIVE TECHNOLOGY

economic advantage turning India’s farmlands into vital contributors to the nation’s fuel security.

Navigating the Technical Challenge

Achieving higher ethanol concentrations introduces new challenges for the automotive and refining ecosystem. Ethanol’s strong solvent properties, its tendency to absorb water, and potential compatibility issues with certain elastomers and metals



necessitate technical innovation in fuel additives, engine oils and lubricant additives system materials. Without proper mitigation, risks like corrosion, phase separation, and deposit formation can affect fuel efficiency, engine performance and durability

Lubrizol’s Leadership in Compatibility Solutions

This evolving scenario opens the door for companies like Lubrizol, a global leader in lubricant and fuel additive technology, to play a pivotal role. With fuel compositions changing, the demand for advanced additive packages that ensure cleanliness, corrosion protection, anti-wear and flow stability has never been higher.

Moreover, modern gasoline vehicles are deploying technology such as gasoline direct injection, gasoline particulate filters, and turbocharging, all resulting in harsher operating conditions within the engine. This can result in restrictive deposit build-up and a decline in performance if not sufficiently protected.

From a fuel additive standpoint, while conventional gasoline additives have supported low-level ethanol blends for years, advanced fuel additive solutions are now critical to ensure fuel stability, engine protection, and consistent performance across India’s diverse climatic and operational conditions.

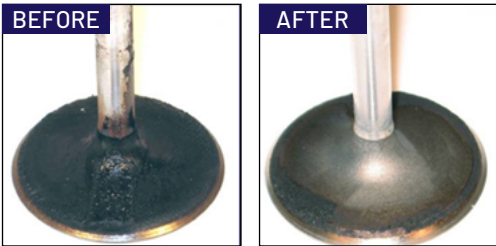
By leveraging cutting-edge additive technology,



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LUBRIZOL’S EXPERTISE IN THE FIELDS OF ENGINE AND FUEL ADDITIVES POSITIONS IT AS A KEY PARTNER IN ENABLING INDIA’S E20 ADOPTION

we can ensure that ethanol-blended fuels deliver consistent performance, safeguard vehicle durability, and meet stringent emission norms—creating a seamless transition toward a cleaner, greener future for India’s mobility ecosystem. From an engine oil standpoint, Top-tier API service categories such API SN Plus, SP & SQ address the water emulsifying capability of engine oil, simulated by higher ethanol blended gasoline thus ensuring compatibility whilst providing the necessary protection to key engine components



Lubrizol’s expertise in the fields of engine and fuel additives positions it as a key partner in enabling India’s E20 adoption. The company’s tailored additive solutions can prevent injector fouling, maintain optimal combustion efficiency, and extend the service life of



ensure that the E20 transition remains smooth and well-supported.

Sustainability as the Unifying Thread

India’s E20 transition aligns perfectly with the global movement towards decarbonization and sustainable energy security. By ensuring the reliability of ethanol-blended fuels,

Lubrizol enables the broader benefits of lower CO₂ emissions, rural economic participation, and reduced import bills to be realized without performance compromise.

A New Era for Indian Mobility

As India accelerates towards its E20 milestone, it marks more than a policy achievement it represents a structural evolution of the nation’s mobility ecosystem. For Lubrizol, this is a moment to demonstrate leadership at the intersection of chemistry, technology, and sustainability.

By ensuring that the country’s cleaner fuels remain efficient, stable, and compatible, Lubrizol stands at the forefront of India’s clean-fuel revolution helping turn ethanol blending from a policy initiative into a practical, long-term success story ■

vehicle components operating in ethanol-blended environments.

Usage of Fuel additives results in substantially less intake valve deposits when used continuously. Lubrizol’s proprietary product provides a range of benefits including flexible treat rates, premium inlet valve deposit and GDI injector deposit protection, low temperature valve sticking performance and wear protection. Scalable treat rates enable performance ranging from economical, for better than base fuel performance, all the way to premium, for rapid deposit removal. Beyond chemistry, Lubrizol is committed to collaboration across the value chain. By engaging with oil marketers, refineries, OEMs, and service networks, the company can help