

Advanced Hydrogen On-Demand System
Enabling Clean, Efficient, Affordable
Decarbonization



Company Overview

AHODS Technologies India Pvt. Ltd. is a Deep-Tech ESG startup founded in 2017, delivering a patented safe hydrogen on-demand generation technology. Recognized by Agnii (Startup India) and NASSCOM as one of India's major clean-tech innovations.

Its core innovation—a patented safe hydrogen technology—aims to eliminate the challenges associated with hydrogen storage by generating hydrogen precisely when needed, directly at the point of use.



To make India a **global hydrogen technology leader**, enabling a zero-emission ecosystem.



To achieve **1 million fuel reduction devices** in automotive and industrial applications profitably by **FY26**.



Our Philosophy is to Fostering and promoting use of science & technology to bring health and happiness in the lives of people.



Our Strategy is to Collaborate and build partnership.

Recognition & Awards



Hydrogen Association
of India





Global & Indian challenges

- Fossil-fuel dependency in automotive & industrial sectors
- High emissions from diesel generators & engines
- Hydrogen adoption hindered by **storage, safety & infrastructure** limitations
- Industries under pressure to meet **Net-Zero & ESG mandates**



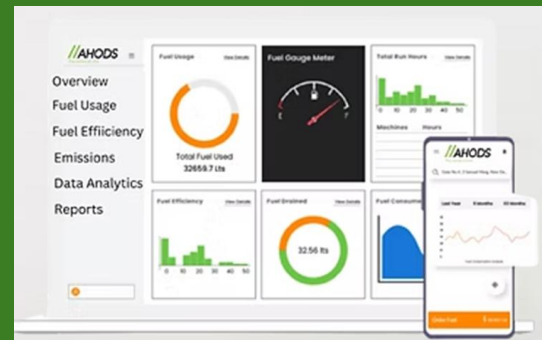
Our Solution To The Problem

A globally patented system that generates hydrogen in real-time, eliminating the need for high-pressure hydrogen storage.

- Hydrogen produced on-demand (no cylinders / no storage risk)
- Safe, compact, retrofittable design
- Applicable to automotive engines & industrial DG sets
- Increases combustion efficiency & reduces emissions

AHODS differentiators

- ~70% reduction in emissions
- ~25% reduction in fuel consumption
- Reduces operational cost immediately
- Suitable for automotive + industrial +DG sets
- TRL-7 Certified → commercially deployable
- Zero-storage approach differentiates AHODS
- Validated by IITs, NASSCOM, and global programs
- Engine decarbonization and improved combustion health
- Patented safe Hydrogen generated *on-demand* → **no storage hazards**
- Works with existing diesel engines (retrofit friendly)
- Smart Monitoring through AI Based Analytics & Dynamic Dashboard



Happy
Customers





Key Features & Capabilities

Patented Safe Hydrogen On-Demand Technology	AHODS uses a globally novel patented system to generate hydrogen only when needed, eliminating the risks associated with storage and high-pressure cylinders.	
Eliminates Hydrogen Storage Challenges	Its on-demand design removes the common barriers of hydrogen adoption—no need for bulky, high-pressure storage tanks.	
Enhances Internal Combustion Engine Efficiency	AHODS integrates with existing diesel/petrol engines without fundamental modifications to the engine block	Improving: • Combustion quality • Thermal efficiency • Power output stability
Massive Environmental Impact Potential	AHODS solutions contribute directly to environmental well being	• Reducing greenhouse gas emissions • Lowering particulate matter in urban/industrial areas • Supporting India's net-zero ambitions
Strong Technical & Research Backing	The company works closely with leading Indian institutes and hydrogen experts	IIT Delhi
Supports India's Green Hydrogen & Net-Zero Mission	AHODS aligns directly with national priorities	Focusing on: • Emission reduction at source • Fuel efficiency improvement • Indigenous hydrogen technology development
Scalable Solution	Scalable Across Automotive & Industrial Applications	Solution scale across: • Two-wheelers, passenger cars, and commercial vehicles • Diesel gensets (DG sets) • Industrial machinery



Top 10 Use Cases

Diesel Generator (DG Set) Fuel Reduction & Decarbonization	AHODS' TRL-7-validated ADFK is already deployed across power generators , delivering ~70% emission reduction and ~25% fuel savings.
Industrial Manufacturing (Textile, Food & Beverage, Automotive, Marine, Construction)	AHODS systems are installed across multiple industrial sectors, enabling lower emissions and reduced diesel dependency.
IT & Data Center Backup Power Optimization	Data centers rely heavily on DG sets; AHODS significantly reduces emissions and running costs with its retrofit-friendly hydrogen solution.
Defence Applications (Vehicles, Generators, Field Installations)	AHODS ADFK has been successfully deployed in defense scenarios, improving fuel efficiency and reducing heat signatures.
Automotive Fleet Fuel Reduction (Commercial & Private Fleets)	AHODS offers hydrogen-assisted cleaner combustion for diesel vehicles, improving efficiency and reducing pollutants.
Marine Vessels & Inland Water Transport	Vessels using diesel engines can retrofit AHODS kits to cut emissions and improve fuel economy.
Construction & Heavy Machinery (Excavators, Cranes, Loaders)	Retrofit-friendly ADFK technology helps reduce emissions from heavy-duty diesel machinery used on construction sites.
Sustainability & ESG Compliance for Corporates	AHODS helps organizations meet ESG goals through measurable fuel savings and carbon reduction initiatives. Recognized by global ESG programs such as Uber Sustainovate, UN FLCTD, Walmart Global Tech.
Industrial Decarbonization Programs & Clean Mobility Missions	Supported by IIT Delhi and guided by hydrogen experts (Dr. L.M. Das, Dr. K.K. Pant), AHODS contributes to India's hydrogen transition & clean mobility ecosystem.
Emerging Hydrogen Ecosystem & Net-Zero Transition	The AHODS hydrogen-on-demand platform directly supports India's mission to deploy 1 million hydrogen-based devices and enable a zero-emission ecosystem

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