



India Advances Green Hydrogen Mobility with NISE-Toyota Fuel Cell Vehicle Pilot

MoU a Significant Milestone to Accelerate India's Clean Transport Vision Through Real-World Fuel Cell Technology Trials: Shri Pralhad Joshi

Industry-Research-Government Collaboration is Driving India's Hydrogen Future: Shri Shripad Yesso Naik

प्रविष्टि तिथि: 11 DEC 2025 2:46PM by PIB Delhi

Union Minister for New & Renewable Energy, Shri Pralhad Joshi, today launched the Pilot Project for field trails on the Use of Hydrogen in the Mobility Sector, describing it as a major milestone in India's clean energy advancements.

Addressed the MoU Exchange Ceremony for the Pilot Project on the Use of Hydrogen in the Mobility Sector, marking a significant milestone in India's clean energy and green mobility journey.

With the Mirai now being tested on Indian roads, the NISE–Toyota Kirloskar Motor... pic.twitter.com/PVUJIONOa0

— Pralhad Joshi (@JoshiPralhad) December 11, 2025

Green Hydrogen Positioned as the future fuel for India's Energy Systems

The Minister underlined that green hydrogen is emerging globally as the backbone of future energy systems. He said the collaboration, along with the handover of Toyota's Mirai hydrogen fuel cell electric vehicle (FCEV) to NISE for real-world testing, brings innovation, industry expertise and scientific rigour to advance India's clean energy transition. He noted that such collaborations strengthen "Energy Aatma Nirbharta", promote innovative low-emission transportation solutions, and align with India's Panchamrit climate commitments, reaffirming the Government's confidence that green hydrogen will drive India's energy economy in the coming decades.



Calling the introduction of Toyota's 'Mirai' fuel cell electric vehicle (FCEV) "a new chapter for sustainable mobility," the Minister, said the name *Mirai*, meaning "Future" in Japanese, symbolises India's aspiration for a clean, green and sustainable mobility ecosystem.

NISE (National Institute for Solar Energy) to Undertake Comprehensive Real-World Evaluation in Indian conditions

Under the MoU, NISE will conduct an extensive assessment of the FCEV Mirai in India's diverse road conditions, including heat, dust, traffic congestion and varied terrain. The Minister said the testing for next 2 years, will generate critical insights to scale up hydrogen mobility nationwide while building awareness, confidence and technical capability among industry, academia and policymakers. He highlighted that hydrogen fuel cell vehicles are clean, silent and emission-free, emitting only water, and that fuel cell technologies are increasingly powering cars, buses, trucks, trains, ships and stationary power systems worldwide.

Shri Joshi said that by personally driving the hydrogen vehicle, he wish to send a clear message that hydrogen mobility is ready and well-suited for Indian conditions. He commended Toyota Kirloskar Motor (TKM) for its commitment to carbon neutrality and appreciated NISE for its leadership in advancing India's clean energy ambitions. "With this vehicle, we are launching not just an MoU but confidence, cooperation and commitment to a clean and sustainable future" the Minister said.

Speaking at the occasion, Minister of State for New & Renewable Energy, Shri Shripad Yesso Naik said that this initiative marks a significant step towards India's clean, green, and self-reliant energy future. He noted that under the leadership of Prime Minister Shri Narendra Modi, India has made unprecedented progress in Energy Transition, including the launch of the National Green Hydrogen Mission in January 2023. The Minister highlighted that real-world testing of Fuel Cell Electric Vehicle (FCEV) technology such as the 'Toyota Mirai' demonstrates India's rapid movement from policy to experimentation and further towards commercialization of hydrogen-based mobility solutions.

Shri Naik commended the strong partnership between industry, research institutions, and government in advancing hydrogen technologies under the National Green Hydrogen Mission, and emphasized that NISE's assessment of the Mirai vehicle under Indian road and climatic conditions will generate valuable insights for future scale-up. He expressed confidence that the pilot project will contribute to the wider adoption of hydrogen-based clean transportation, improved air quality, and sustainable development

across the country. The Minister congratulated Toyota Kirloskar Motor for its continued trust in India's clean energy ecosystem and appreciated NISE for undertaking this important responsibility, extending his best wishes for the successful implementation of the initiative.

Mr. Vikram Gulati, Country Head and Executive Vice President, Corporate Affairs and Governance, Toyota Kirloskar Motor stated, "This partnership with the National Institute of Solar Energy (NISE) and the handover of the 'Toyota Mirai' for testing & Trails, reaffirm our dedication to supporting India's Green Hydrogen Mission and accelerating the nation's transition toward future mobility that is powered by green & indigenous energy sources. We believe hydrogen fuel-cell technology, alongside other sustainable public technologies, will play a pivotal role in helping India achieve its net-zero commitments and energy independence objectives." Shri Santosh Kumar Sarangi, Secretary MNRE, Dr Mohammad Rihan, Director General, National Institute of Solar Energy and Shri Abhay Bakre, Mission Director, National Green Hydrogen Mission also attended the event.



After the event, Shri Joshi drove the vehicle to the Parliament today and noted that the new Parliament building, designed as a green building, is a fitting venue for showcasing advanced hydrogen mobility.

Drove the Toyota Mirai, powered by Hydrogen, to the Parliament today. MoS Shri @shripadynaik ji was also present. The ride was incredibly smooth, silent and comfortable and with zero emissions, this vehicle demonstrates the transformative potential of hydrogen mobility in... pic.twitter.com/gcmNimpIN4

— Pralhad Joshi (@JoshiPralhad) December 11, 2025



About Toyota Mirai

The Toyota 'Mirai', a second-generation hydrogen fuel-cell electric vehicle (FCEV), produces electricity through a chemical reaction between hydrogen and oxygen, emitting only water vapour as a by-product. With a driving range of approximately 650 km and a refuelling time of under five minutes, it is among the world's most advanced and efficient zero-emission mobility solution

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