

Need for a graduated approach: Why ICE and electric vehicles can co-exist in India

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India's transition to electric mobility is not only about fighting air pollution, it's about creating the necessary infrastructure for supporting ICE and BS-VI and creating an enabling environment for ICE and EVs to coexist while allowing for a phased transition to EVs.

Prime Minister Narendra Modi's recent assertion that Internal Combustion Engine (ICE)-based automobiles and Electric Vehicles (EV) can coexist is a clarion call India needs right now. Even as India prepares for a sustainable future by increasing its reliance on renewable energy and reducing its carbon footprint, we must continue to grow and retain our competitive edge globally in the mobility sector. India has the unique opportunity to show the world how to truly leverage the strengths of its world-class auto industry to embrace the emerging paradigms of mobility - shared, connected, and electric.

It is important to also understand and appreciate the great contribution made by India's automobile sector which is worth Rs 4.8 lakh crores - provides employment to 37 million Indians, and contributes to 7.5% of the country's GDP and 49% of the manufacturing GDP. The industry, with a turnover of \$ 57 billion has also mastered the science and art of designing, customizing and selling compact vehicles for personal use - a success in India and elsewhere. As many as 25 million units of two-wheelers a year are sold by Indian manufacturers the world over.

Overall, the auto industry grossed \$15 billion in exports last fiscal, and international sales are only expected to grow. As a nation, while we appreciate all of this, there is also a realisation amongst thinkers that oil and gas that powers our mobility needs may not be there forever and may no longer be the business of the future. This, coupled with the government's pan-India efforts to improve the livability of cities, warrants a unique, an indigenous approach to decarbonising the transport sector. Therefore, what India needs today is a strategic transition plan that does not situate EVs as the only immediate future and also a competitor to ICE today, but rather positions a way forward plan that is complementary to the ICE automobile industry.

Through such a plan, we can move towards a clean transport system for over a billion Indians in a graduated manner. In this process we will innovate and usher in an era of self-sufficiency in renewable energy. India has an installed renewable energy capacity of 80 gigawatts (GW) and is running the world's largest renewable energy programme with plans to achieve 175GW by 2022, 500GW by 2030, and a projected capacity of over 830 GW in the coming decades as part of its climate commitments. Hence, the path to move towards a truly clean and zero-emission mobility ecosystem is beginning to fall in place. The promise of e-mobility to ICE vehicle sector, the auto industry and the country are varied and cannot be overlooked. A strategic transition plan will allow phased implementation of electric mobility milestones in India, and thereby create an opportunity for ICE and electric vehicles to coexist for the next 30-40 years. A symbiotic relationship between the former's industry experience and market legacy, and the latter's cutting edge technological work and unbridled optimism can prove very beneficial for the automobile industry. India's EV opportunity is a chance to reskill, retool, and reorient a sector that is a major contributor to the nation's GDP but the implementation of the same must be undertaken in a collaborative and time specified manner with regulatory, technological and economic clarity to ensure the sector also transitions in the process and livelihoods continue to be maintained and created. Through coexistence as traditional and new-age actors start manufacturing EVs, we see the seamless integration of the wisdom of old financial principles with new business models, where integral parts of the vehicle such as the battery, and mobility as a whole, is imagined to be a service.

We need not look too far to know the relevance of such an idea - Indian industry leaders like Hero, Mahindra, Tata, TVS, and Kinetic have long taken the leap of faith to go electric, with some of them also starting e-mobility services. Globally, the acquisition of the on-demand and discovery platforms, MyTaxi and RideScout by Daimler or the recent Hyundai-Kia's investment in Ola are but a few instances where new techno-centric solutions and traditional manufacturers have come together to innovate for the future.

ICE vehicles are well-rooted in our existing ecosystem and bring affordable convenience to millions of Indians. The ICE vehicles sector too is innovating and getting a step closer to offering safe and sustainable transport solutions via its BS-VI compliant fleet. Further improvements in engine and fuel efficiencies and a supportive scrappage policy for old and highly-polluting vehicles will allow the ICE automobiles to continue, even as a market for zero-emission battery-operated vehicles develops and the auto industry adapts in phases. To enhance adoption among consumers, a phased approach with vehicle segment prioritisation, city-wise staggering measures, incentivising the usage of EVs by creating EV zones or corridors, etc. are helpful besides the existing manufacturing ecosystem of the ICE industry can be adapted to enable EV manufacturing. Overall, India's transition to electric mobility is not only about fighting air pollution and reducing our dependence on import-dependent fossil fuel, it's also about augmenting jobs, growing the economy, creating the necessary infrastructure for supporting ICE and BS VI and retaining a competitive global advantage by creating an enabling environment for ICE and electric vehicles to coexist while allowing for a phased transition to EVs, a milestone India should aspire to achieve by its 100th year of Independence.