

Getting to India's Electric Vehicle Targets Cost-Effectively

In the context of India's ambitious electric vehicle targets of 30% by 2030, we examine two related questions: Based on lifetime costs, which electric vehicles need to be subsidized? Based on lifetime subsidies, which subsidy option would be the most cost-effective? We find that electric two-wheelers, three-wheelers, (four-wheeler) taxis, and buses do not need to be subsidized given that they are already cost competitive with comparable vehicles using internal combustion engines. We also find that that personal cars and trucks need to be subsidized significantly, by one-third to one-half of the upfront costs. Finally, we find that an upfront subsidy is the most cost-effective option; followed by a per kilometer subsidy, which is effectively 19-31% costlier; whereas financing subsidies are found to be the least cost effective. Our results suggest that a cost-effective policy in India would be to subsidize only personal cars and trucks, using the upfront subsidies