

# Electric vehicle demand incentives in India: The FAME II scheme and considerations for a potential next phase


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# Objectives

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Progress of  
the FAME II  
scheme

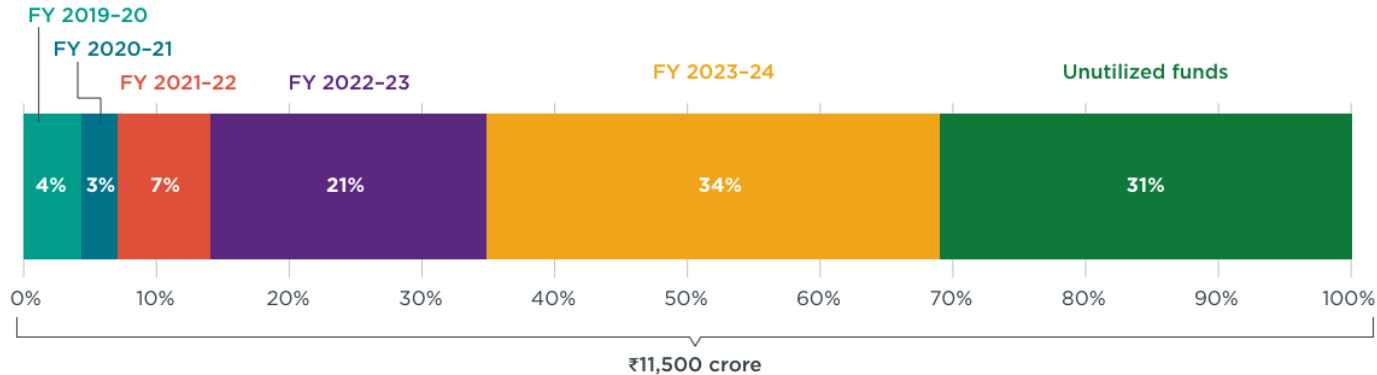
Analysis of  
demand  
incentives

Policy  
considerations for  
FAME III





# 69% of the FAME II scheme's funds were utilized

- The FAME II scheme was launched in April 2019 with an initial funding outlay of **INR 10,000 crore** and a duration of **3 years**
- In 2021, the scheme's duration was **extended by 2 years**, i.e., March 2024, while keeping the scheme's funding unchanged
- In February 2024, the funding was enhanced to **INR 11,500 crore**

Status of FAME II fund utilization from fiscal years 2019-20 to 2023-24



# 76% of the target number of vehicles under the scheme were supported under FAME II

Vehicle segment	Target number of vehicles to be supported per original outlay	Target number of vehicles to be supported per revised outlay	Number of vehicles supported	Vehicles incentivized as a percentage of revised targets
Two-wheelers	1,000,000	1,550,225	1,170,241	 75%
Three-wheelers	500,000	155,536	130,283	 84%
Four-wheelers	55,000	30,461	16,631	 55%
Bus	7,090	7,262	4,766	 66%

# **Demand Incentives Analysis and Recommendations**

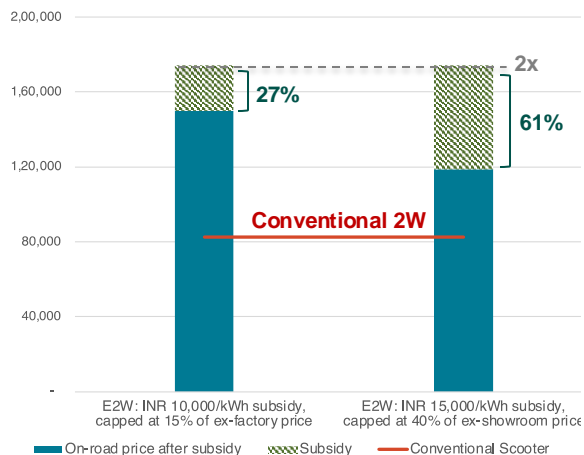


# Two-wheeler Segment

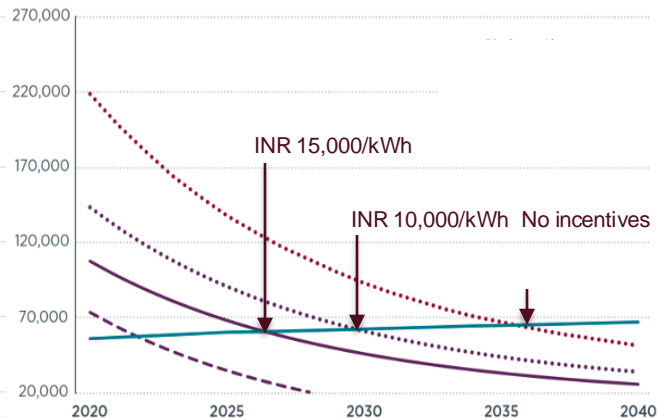


# Subsidies to E2Ws could be offered till 2025–2027, beginning with a higher subsidy of ₹15,000/kWh, capped at 40% of the ex-showroom price, and gradually phasing down the subsidy amount

Upfront cost



Upfront cost parity timeline



## Subsidy scenarios

INR 10,000/kWh, capped at 15% of ex-factory price

INR 15,000/kWh, capped at 40% of ex-showroom price

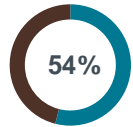
- TCO parity has already been achieved
- The Indian E2W consumer is highly price-sensitive and gives significant importance to upfront cost.
- INR 15,000/kWh subsidy - upfront cost parity for E2Ws is expected to emerge in 2025-2027 timeframe
- However, under a scenario of subsidy of INR 10,000/kWh, the attainment of upfront cost parity is delayed by 4 to 5 years.

# Three-wheeler Segment

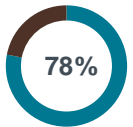




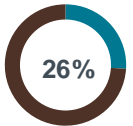
# High EV uptake in the E3W segment is driven primarily by e-rickshaws



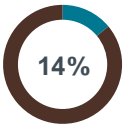
EV uptake in the overall three-wheeler segment



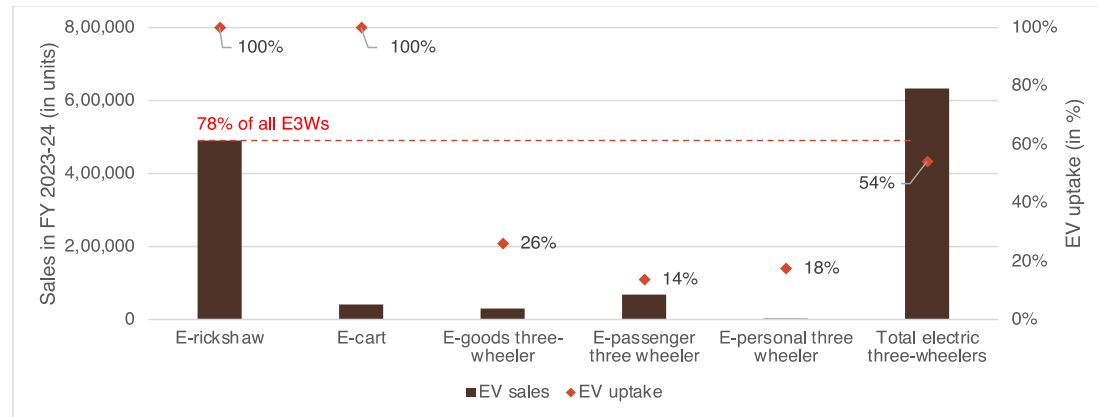
Share of e-rickshaw registrations in total E3W registrations



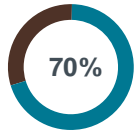
EV uptake in goods three-wheeler segment



EV uptake in passenger three-wheeler segment

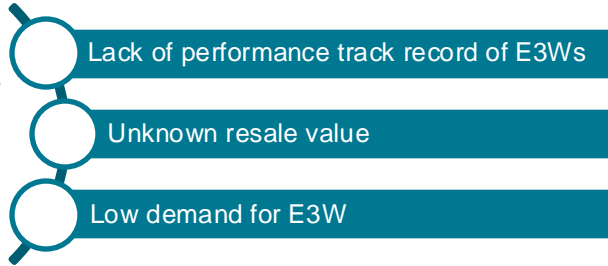


# Consider measures to facilitate lower interest rates, longer payback periods, and credit guarantees to address financing-related barriers



Passenger 3W owners rely on financing

Uncertainty of investment returns for financiers

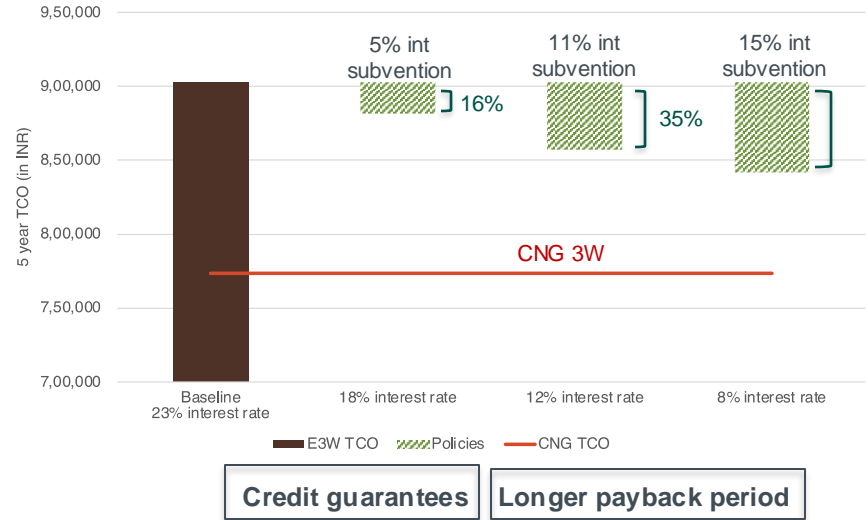


Limited availability of finance

High interest rate

Shorter payback period

Interest subvention for passenger three-wheelers



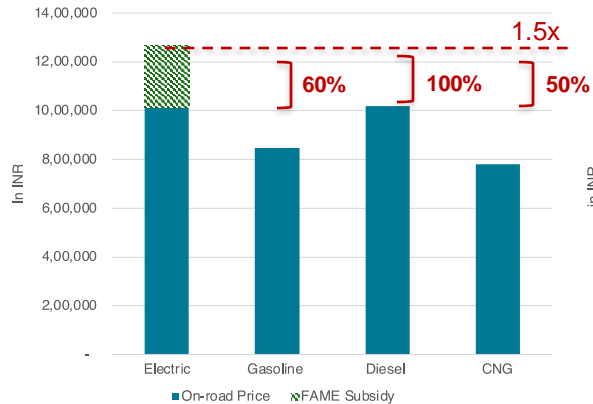
# Passenger Car Segment



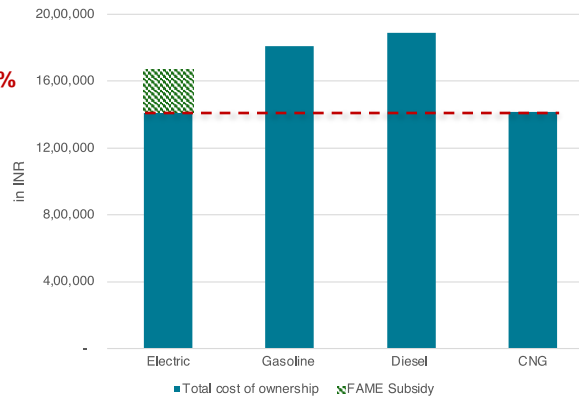
# Consider offering purchase subsidy to private electric passenger cars of at least ₹10,000/kWh, capped at 20% of ex-showroom price

## Sedan

### Upfront cost



### Total cost of ownership



Incentives

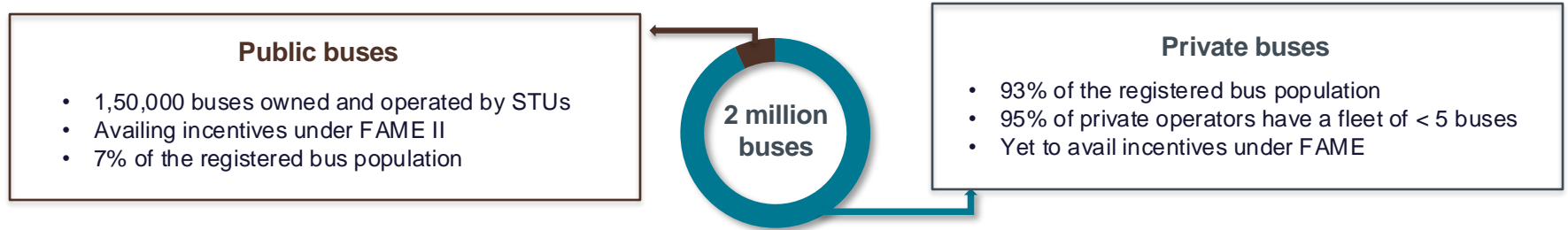
INR 10,000/kWh of battery capacity

- With **rising living standards** and desire for **enhanced travel safety**, demand for personal PCs is expected to rise
- Commercial PCs – 4% of car sales in India
- PC batteries are 10 to 20 times larger than E2W batteries - greater uptake of electric PCs can create a large demand for battery cells in a short span of time

# Bus Segment



# Electrification of private buses could help create scale and drive down electric bus costs



## Large private operators



Give significant importance to **fuel efficiency**



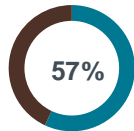
Have the **necessary resources** to invest in fuel efficiency improvements and do undertake such investments



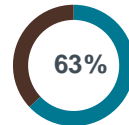
Are concerned about **rising fuel prices**

**Willing to invest in electric bus technology**

## Private inter-city buses



Of all bus trips in India



Of total bus kms travelled in India

40%



Of all inter-city bus travel in India is in the range of 250-300 km

Electric bus models with the the mentioned range are already present in the Indian market

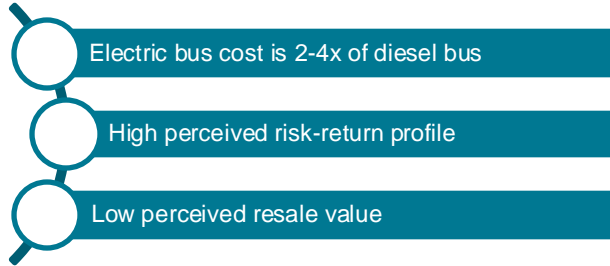


High utilization has the potential to offer attractive TCO with electric buses

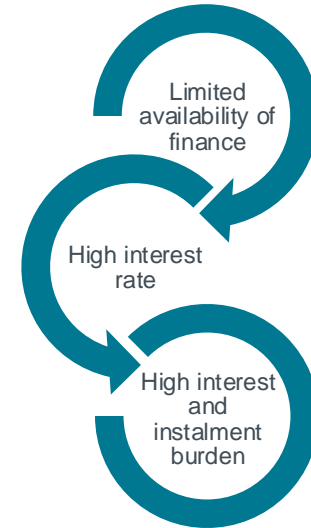
**Prioritize electrification of private inter-city buses**

# Facilitating access to favourable financing through interest subvention, longer loan tenures, and credit guarantees could expand e-bus adoption

## Uncertainty of investment returns for financiers



- » Average profits for electric bus in intercity operations are higher than that of diesel buses over the service life of the bus.
- » However, under current financing landscape, yearly profits earned during loan tenure are lower than that of diesel buses.
- » Significant losses are also suffered during certain years of loan tenure.



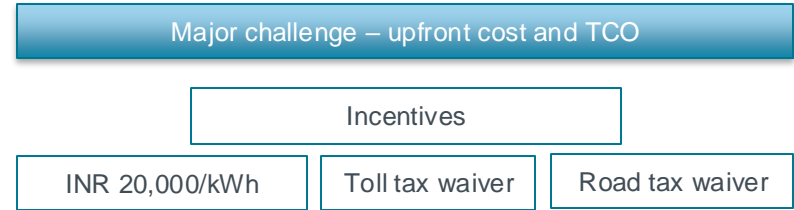
# Truck Segment



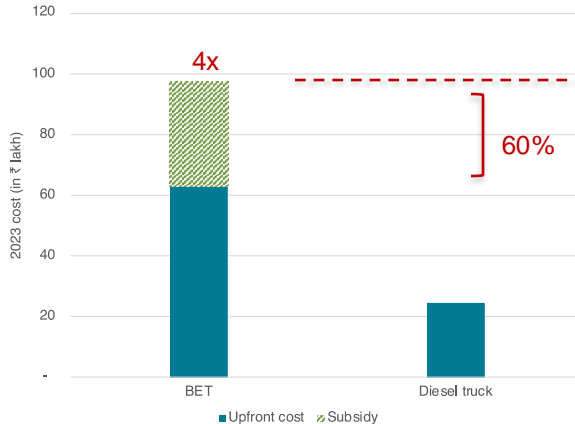


# Consider offering a purchase subsidy of ₹20,000 per kWh of battery capacity, capped at 40% of ex-showroom price

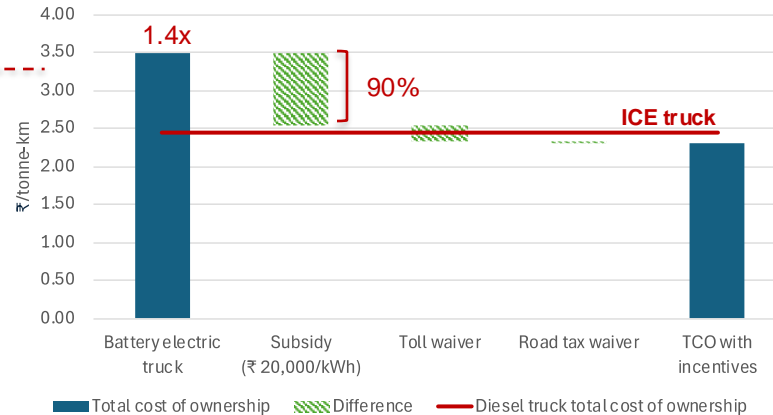
- Medium & Heavy-Duty Trucks account for **19% of India's total crude oil demand, 4x by 2070**
- ICCT research finds that India must achieve
  - 100% zero-emission truck sales by **2045 to meet 2°C climate commitment** and, at the latest, by **2050 to meet the 2070 Net-Zero target**



16 tonne truck upfront cost



16 tonne truck total cost of ownership



# Targeted purchase subsidy programs, initially focusing on trucks deployed in government operations, could help kickstart BET adoption

Principles to identify easy to electrify trucking applications

- ➡ Low route variability
- ➡ Sufficient idle time
- ➡ Adequate duty cycle
- ➡ Predictable payload

Deployed in Government operations

Water tankers

Anti-smog gun trucks

Garbage trucks

Construction waste trucks

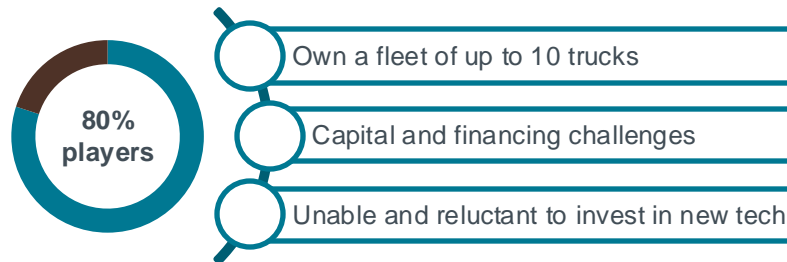
Easy to electrify private truck applications

Drayage trucks

Trucks in cement industry

Fruits & vegetables trucks

Dairy trucks



**Electric truck uptake is going to be spearheaded by large operators, but smaller operators will require support in BET uptake**

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