

Addressing the Funding Gap for Electric Vehicle Subsidies in India

Presentation by
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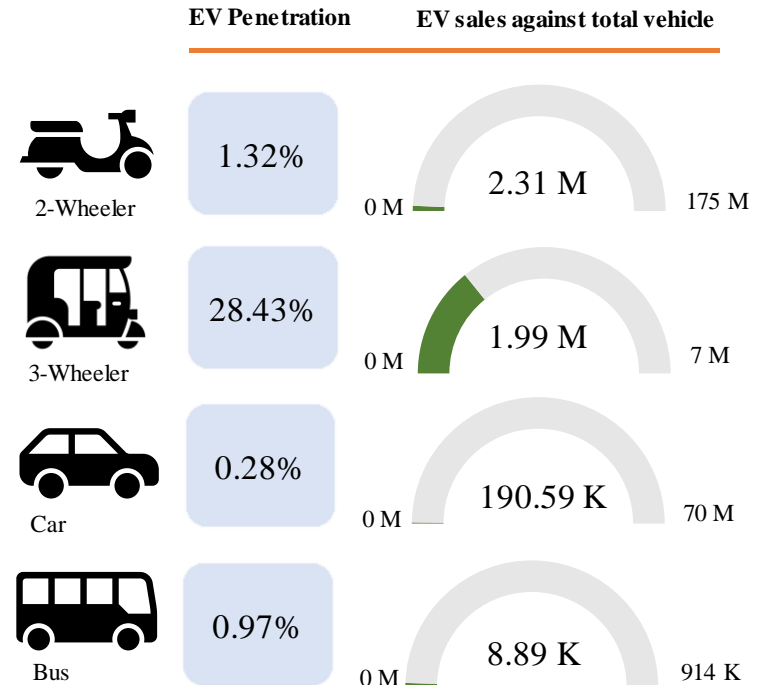
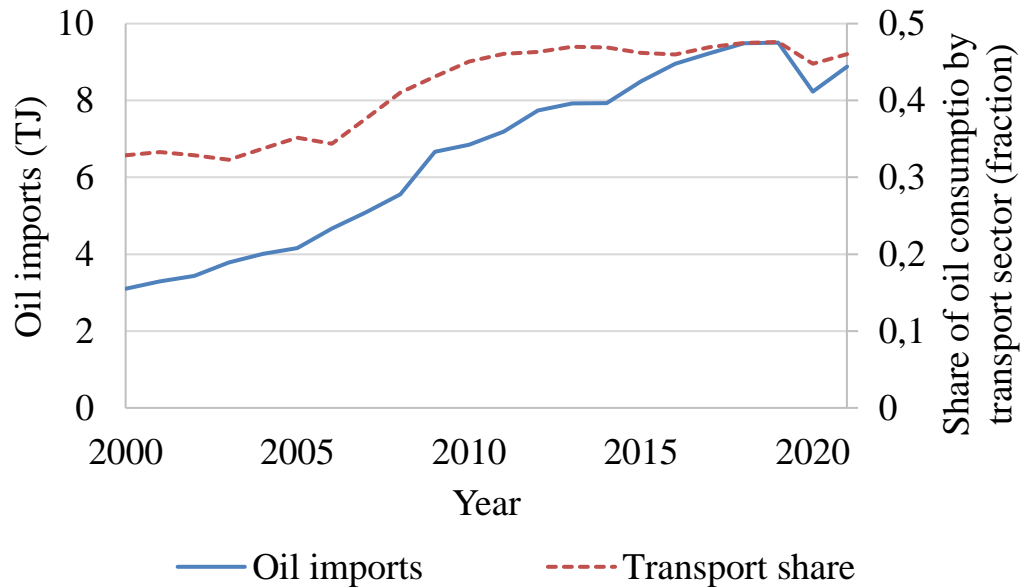
Under the guidance of
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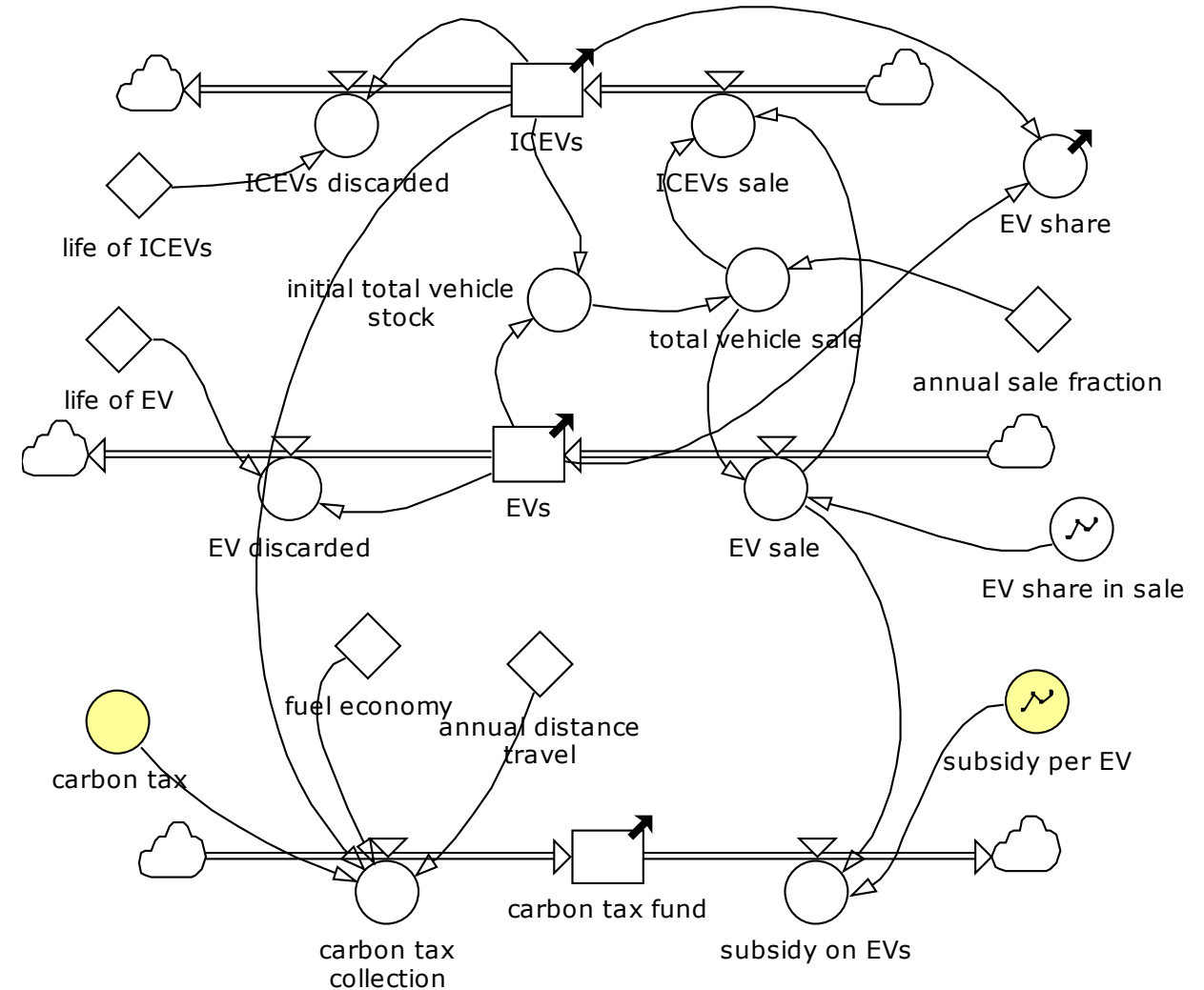
Introduction

- Continuous increase in the oil consumption share of transport sector
- Low electric vehicle (EV) penetration in India (approx. 1% in India while 17% is Asian average)
- Potential solution: Carbon tax to reduce oil consumption and EV subsidy to increase EV penetration



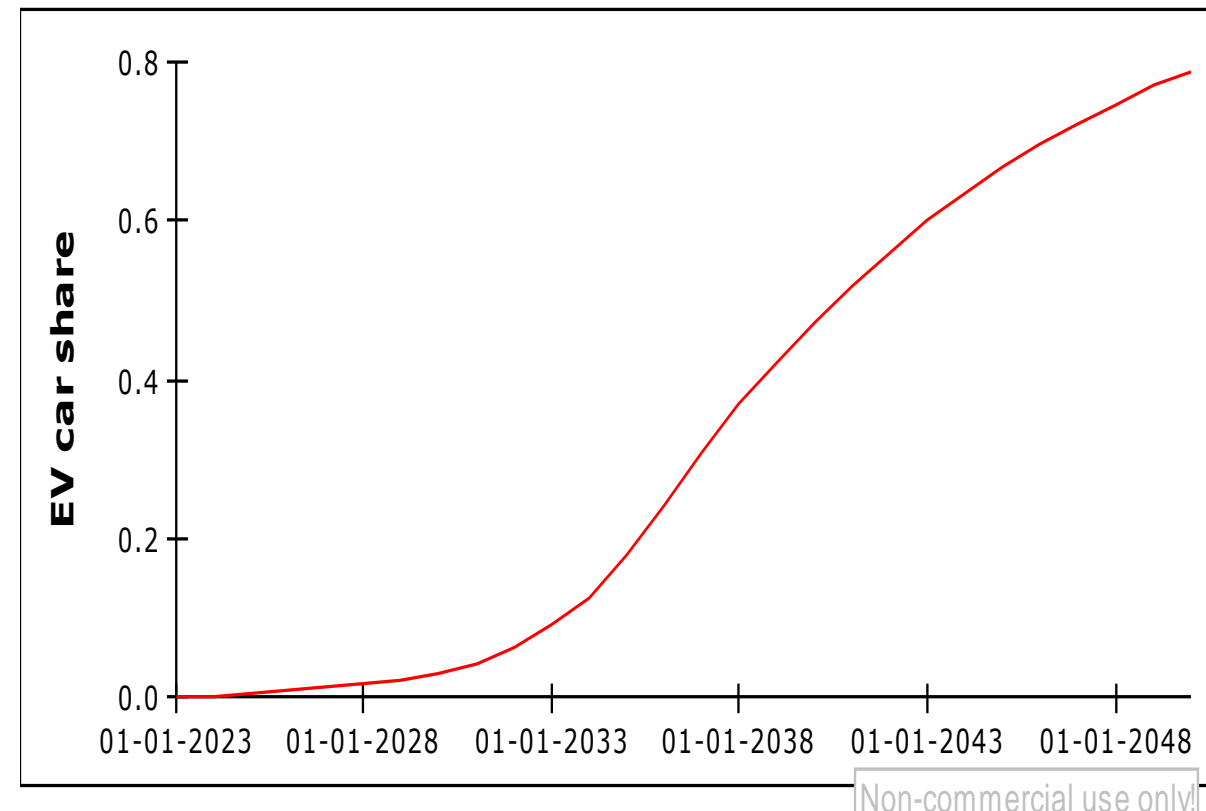
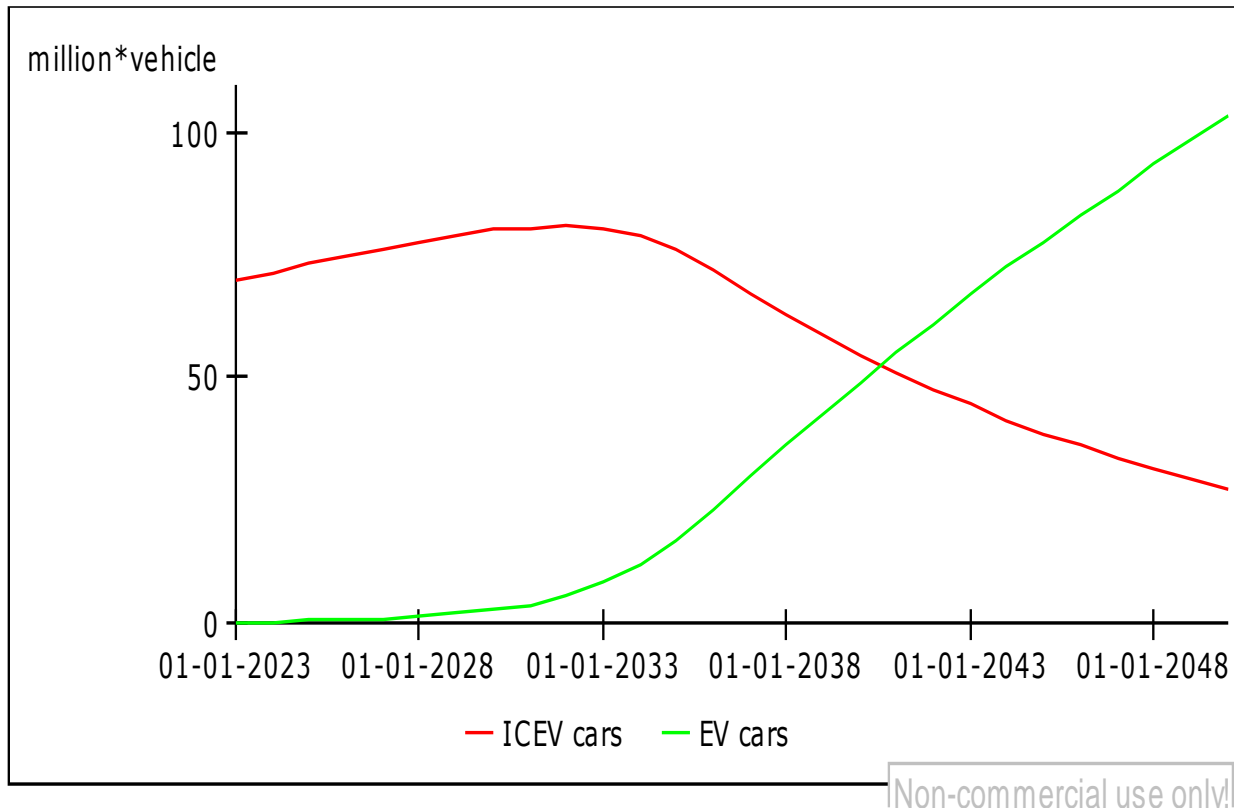
Method

- A system dynamics model is developed to simulate the growth of EV cars
- The model includes three stock variables: EV car population, internal combustion engine vehicle (ICEV) car population, and the carbon tax fund
- The carbon tax collected from ICEV usage is allocated for the EV subsidy

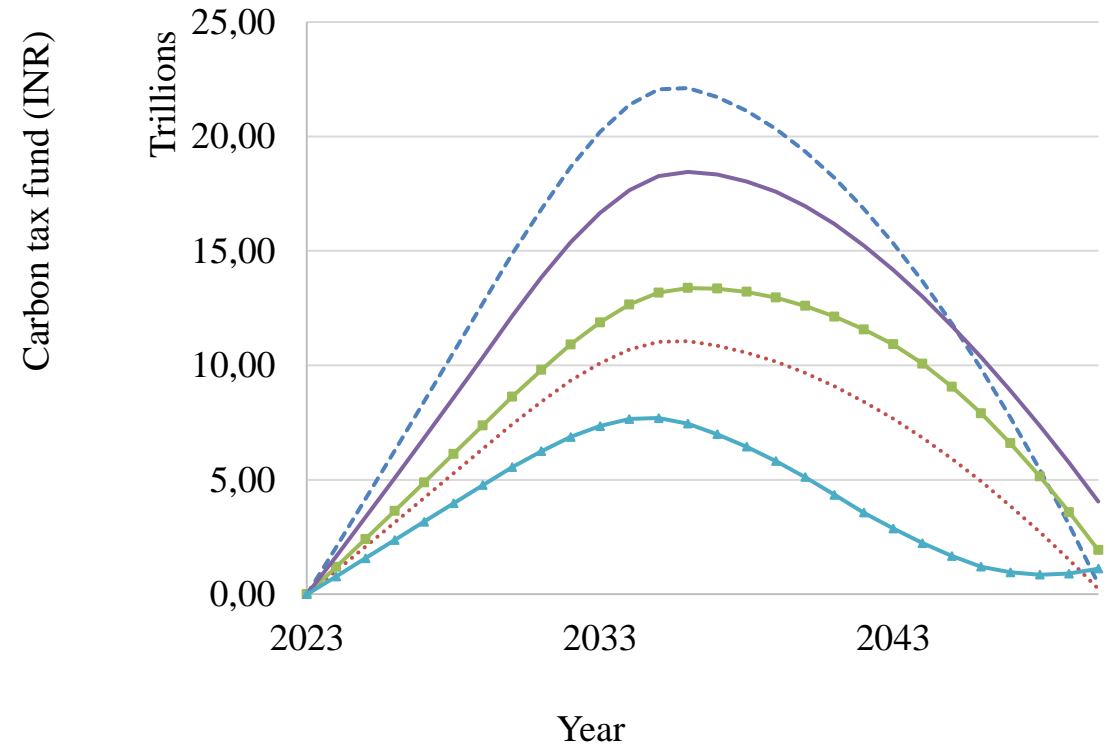


Results

- Based on the model's assumptions, car population is shown below
- The future share of EV cars is anticipated to reach 50% by 2040 and 80% by 2050



- Five different subsidy scenarios were tested to determine the amount of carbon tax required to fund the EV subsidy
- The results suggest that continuing the existing EV subsidy of 150,000 INR for the next 28 years (up to 2050) will necessitate a carbon tax between 18 INR and 25 INR per litre



- (S1): 50; 300k
- (S2): 25; 150k
- (S3): 29 upto 2040 then linear to 0; 150k
- (S4): 40 upto 2030 then linear to 0; 150k
- ▲ (S5): 18; 150k upto 2040 then linear to 0

Thank you