

# Decoding the CO2 Credit & Debt Model: Lessons for India's ZEV Transition

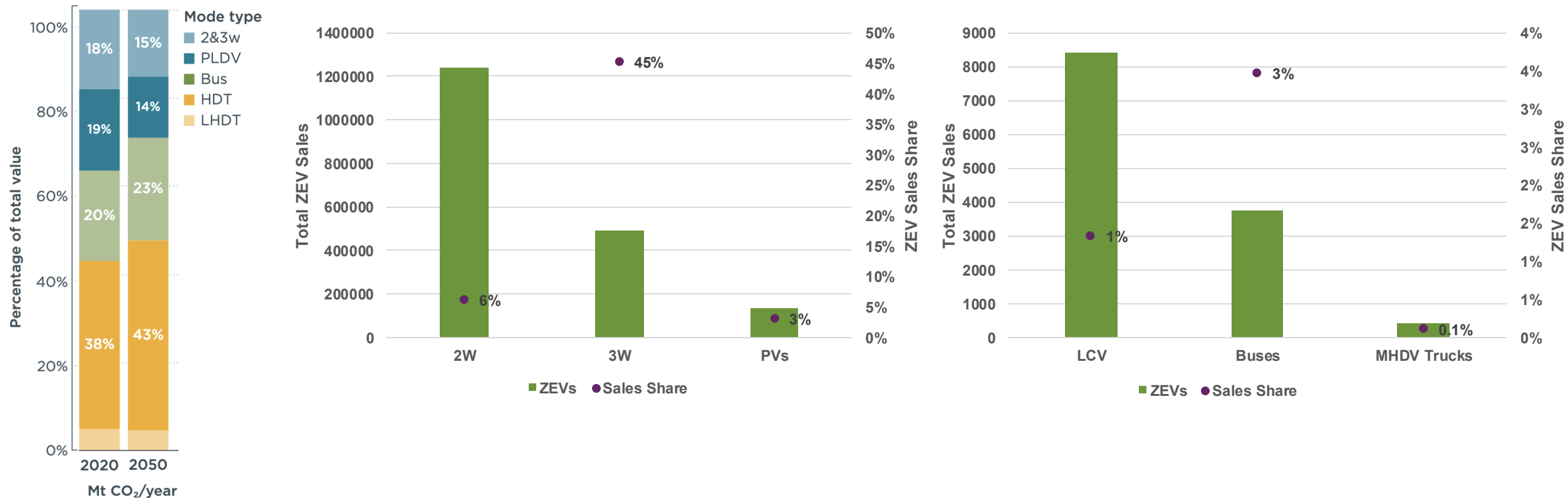
Aviral Yadav

26<sup>th</sup> October 2025

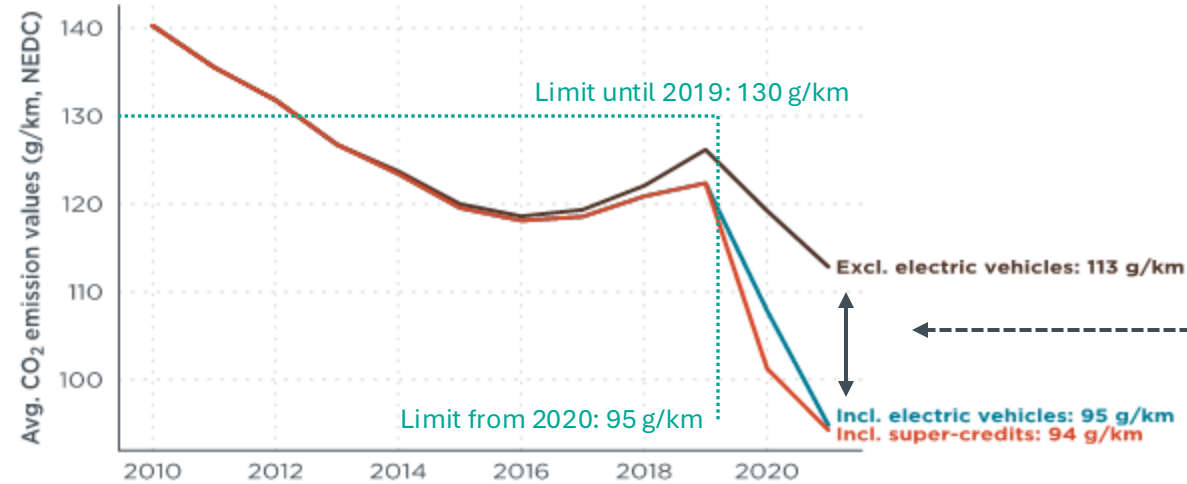
Delhi, India

# The Current ZEV Landscape in India

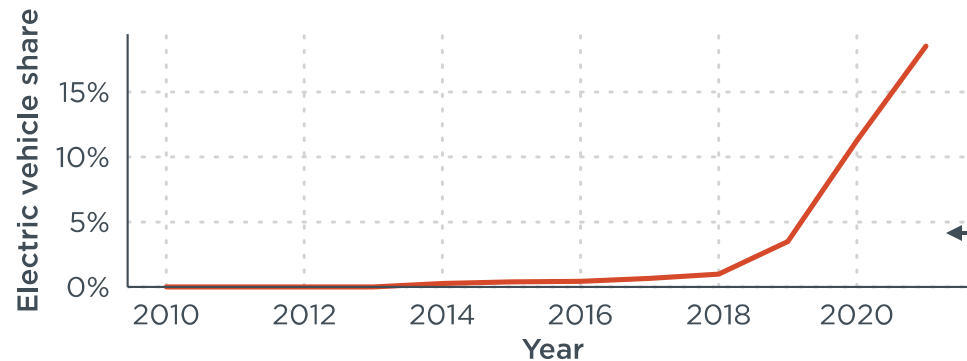
~12% of Energy Related Emissions in India are from Road Transport. Emissions to double by 2050 - IEA



# CO<sub>2</sub>/ Fuel Economy standards pushed the market towards EVs in Europe



On average, manufacturers only met the 2020 CO<sub>2</sub> target because of large sales share of electric vehicles (EV).



Tightened CO<sub>2</sub> limits applying from 2020 substantially accelerated the EV market penetration in the EU.

# Fuel consumption norms across vehicle segments in India

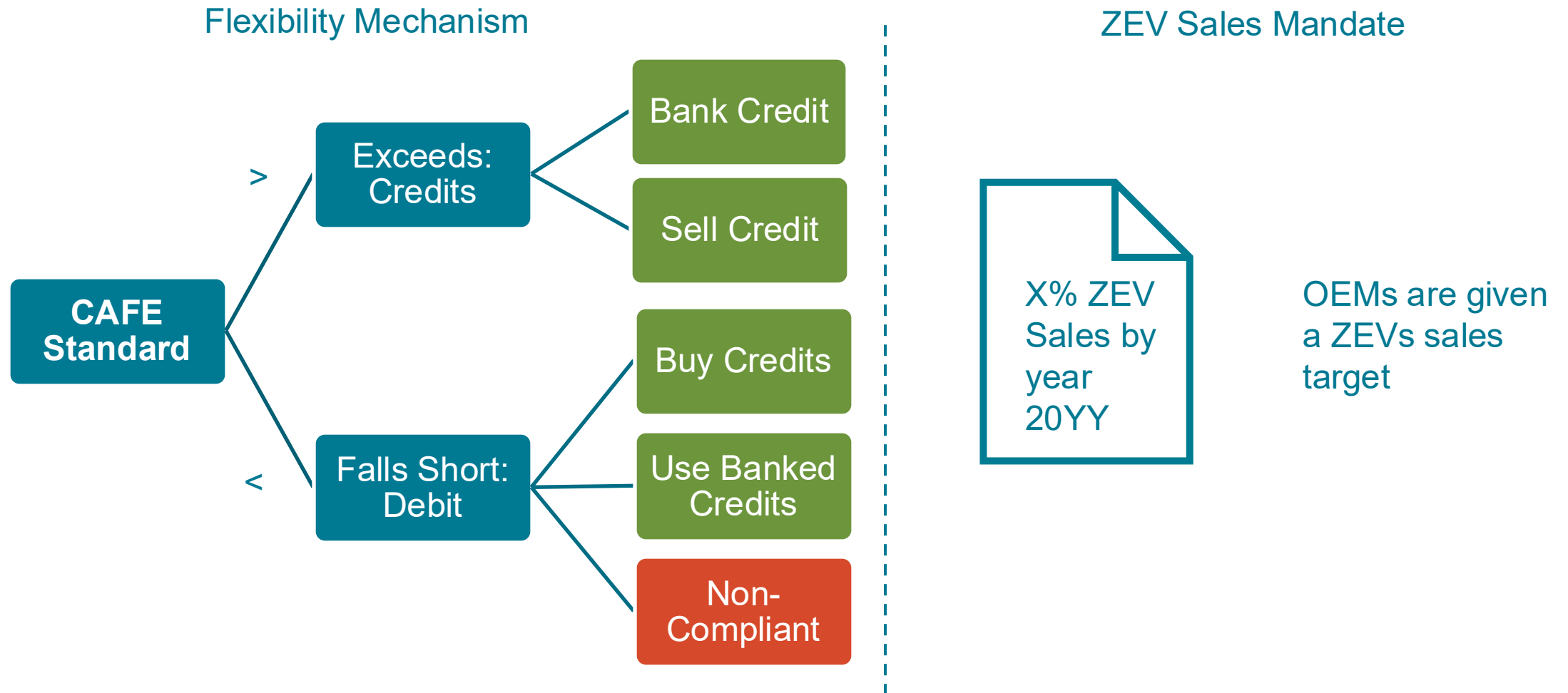
Vehicle segment	Present	Proposed norms	Super credits/Flexibilities
PC	CAFE phase 2	CAFE phase 3	Yes
HDV	MEP phase 1	CAFE phase 2	Yes
LCV	-	CAFE phase 1	Yes
2W	-	-	-

MEP= Minimum Efficiency Performance  
CAFE= Corporate Average Fuel Economy

# Regulatory Tools to Increase EV Uptake



# EV Uptake Regulatory Pathways



# Elements of Flexibility Mechanism

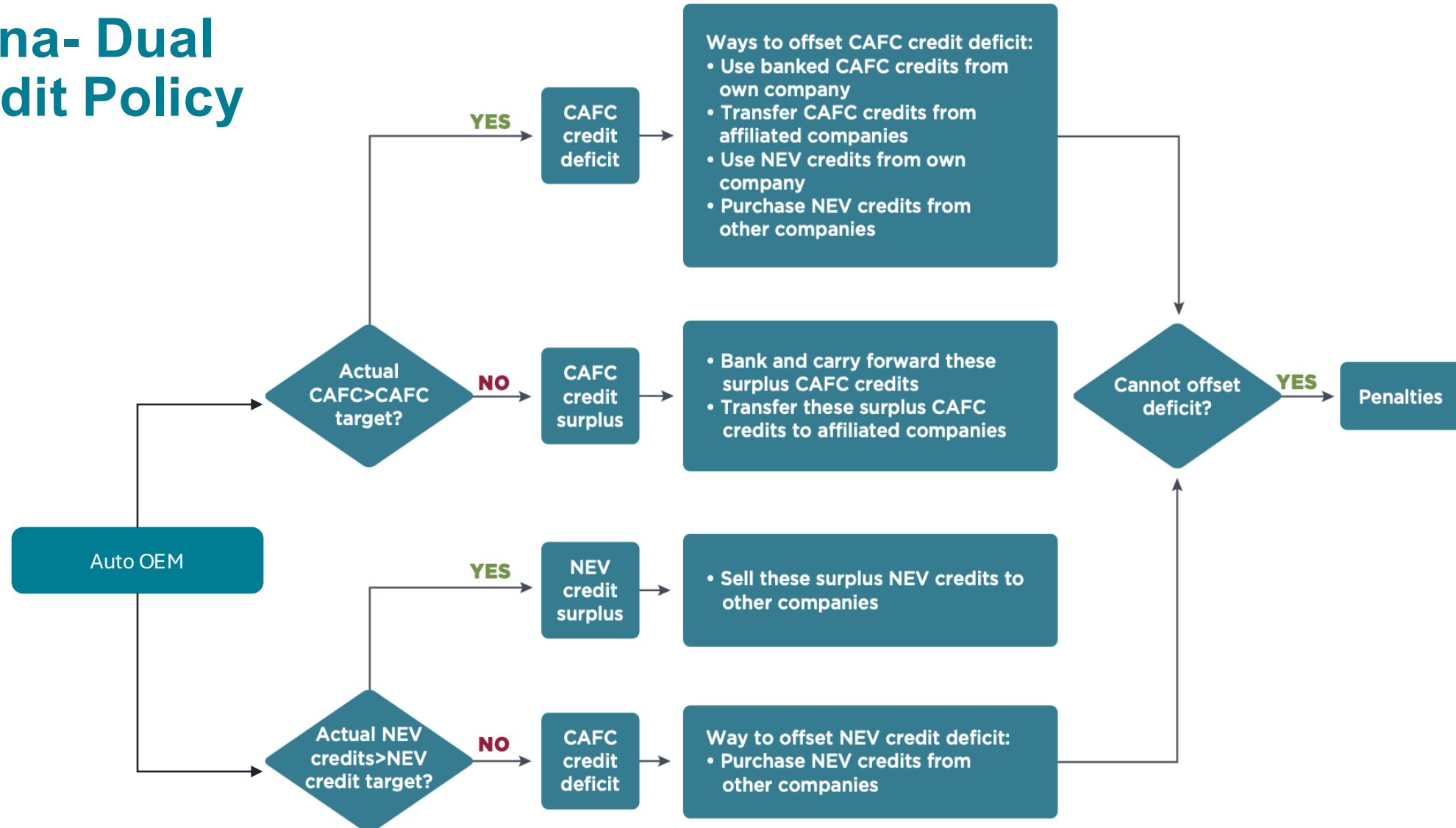
Averaging	The efficiency performance is averaged across the OEMs vehicles portfolio
Banking	Credits can be banked to offset possible future shortfalls or carried backward to cover deficits in earlier years
Pooling	Forming pools to combine emissions of multiple manufacturers- Mostly Subsidiaries
Trading	Buying and selling credits between manufacturers
Super Credits	Offering more credits for ZEVs for early adoption

# Example Case: China





# China- Dual Credit Policy



# Including flexibility mechanism in CAFE norms can increase ZEV uptake

Mechanism	India	China	Europe	US (California)
Pooling	✓	✓	✓	✓
Super Credits	✓	✓	✓	✗
Averaging	✓	✓	✓	✓
Banking	?	✓	✓	✓
Trading	?	✓	✗	✓
ZEV Mandate	?	✓	Non-Binding Target	✓
Penalty	?	✓	✓	✓

**Thank You**  
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# China- Dual Credit Policy

- MIIT sets **annual mandatory blended CAFC credits and NEV credit requirements** for automakers, achieved by producing/importing enough new energy vehicles (NEVs)
- Allows **surplus NEV credits** to offset deficits in corporate average fuel consumption (CAFC) credits, providing compliance flexibility.

## Coverage

- **Large manufacturers** (≥30,000 conventional passenger cars/year): Must meet both **CAFC** and **NEV** credit targets.
- **Small-volume manufacturers**: Only required to meet **CAFC** targets

## Credit Mechanism

- **Surplus Credits:**
  - **NEV credits:** Can be sold to other companies.
  - **CAFC credits:** Can be banked for future use or transferred to affiliated companies.
- **Deficit Credits:**
  - **NEV deficit:** Must purchase NEV credits from others.
  - **CAFC deficit:** Options include using banked CAFC credits, transferring from affiliates, using own NEV credits, or purchasing NEV credits

## Compliance & Enforcement

- **Failure to meet credit targets:** Ministry of Industry and Information Technology (MIIT) will deny type approval for new models that do not meet fuel consumption standards until deficits are resolved

Source: [https://theicct.org/wp-content/uploads/2021/06/China\\_NEV\\_mandate\\_PolicyUpdate-20180525.pdf](https://theicct.org/wp-content/uploads/2021/06/China_NEV_mandate_PolicyUpdate-20180525.pdf) , <https://theicct.org/wp-content/uploads/2021/06/china-new-energy-vehicle-mandate-phase2-may2021.pdf>