

Thailand's Journey: Building the Foundation for Vehicle Efficiency Regulations

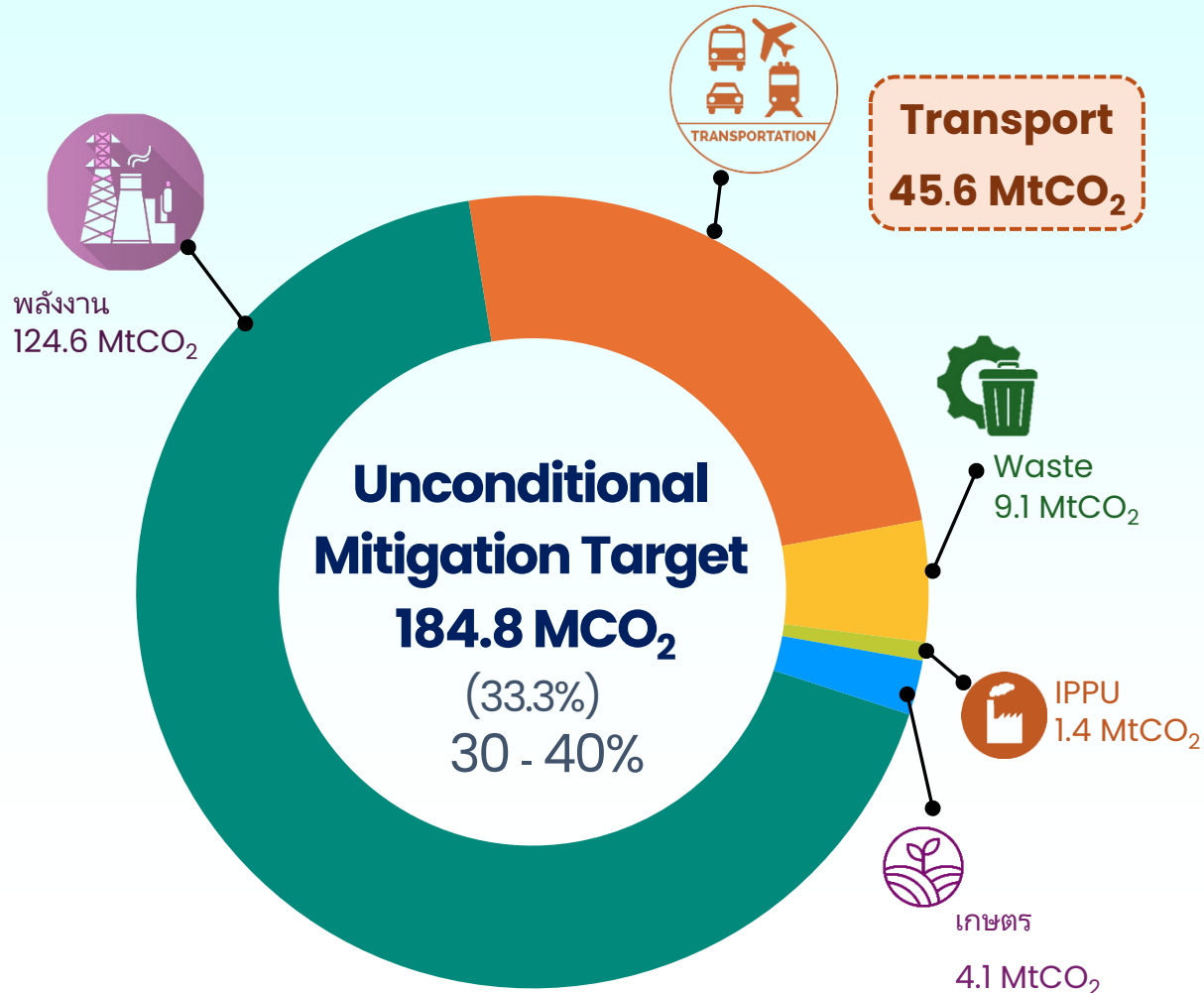
Mrs. Chutinthorn Mankhong
Director, Bureau of Safety Planning

Office of Transport and Traffic Policy and Planning (OTP)



► NDC in Transport Sector, Thailand

Thailand CO2 Reduction Target by 2030



NDC in Transport: COP 26

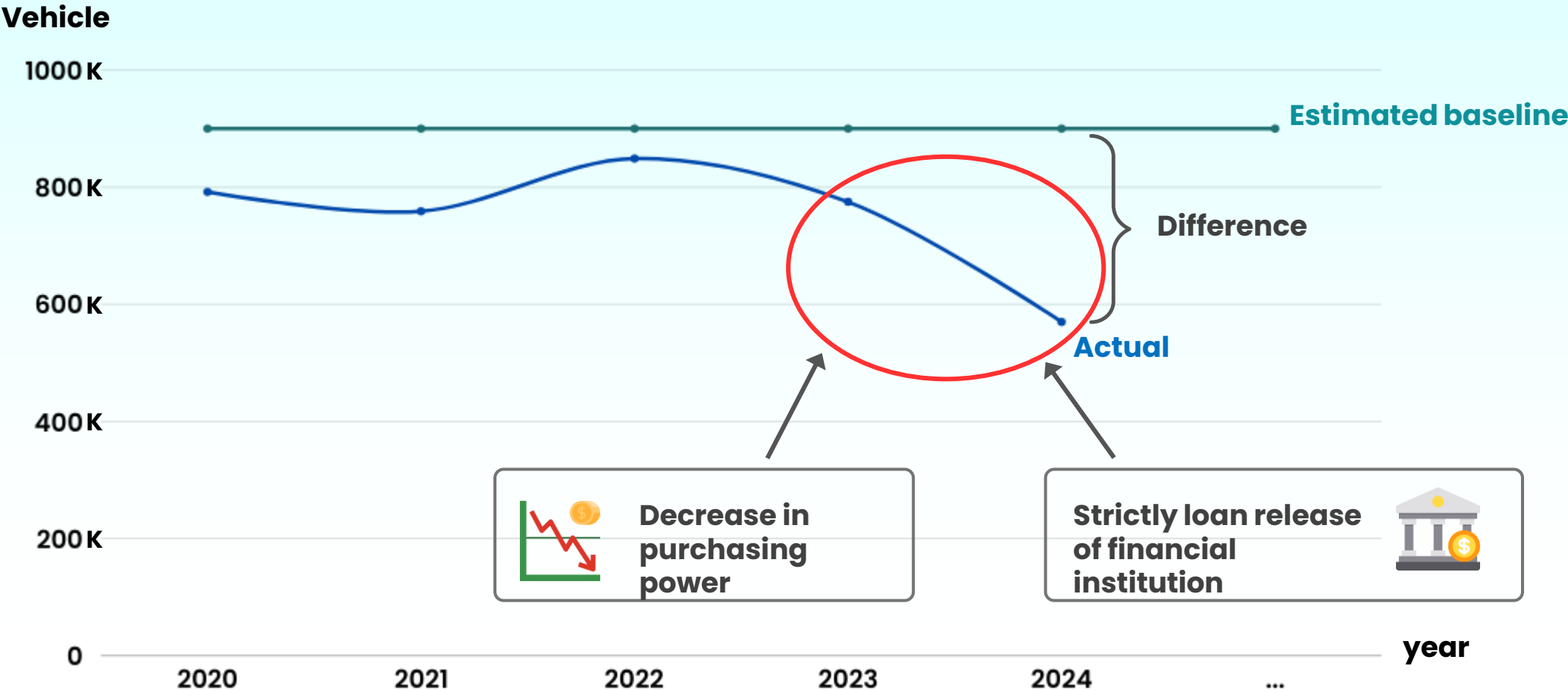
- Electrification of Transport 28.29 MtCO₂e
- Urban Mobility 1.78 MtCO₂e
- Inter - urban Transport and Green Logistics 1.60 MtCO₂e
- Energy Efficiency Improvement 13.94 MtCO₂e

CO₂ Reduction
45.61 MtCO₂e
By 2030

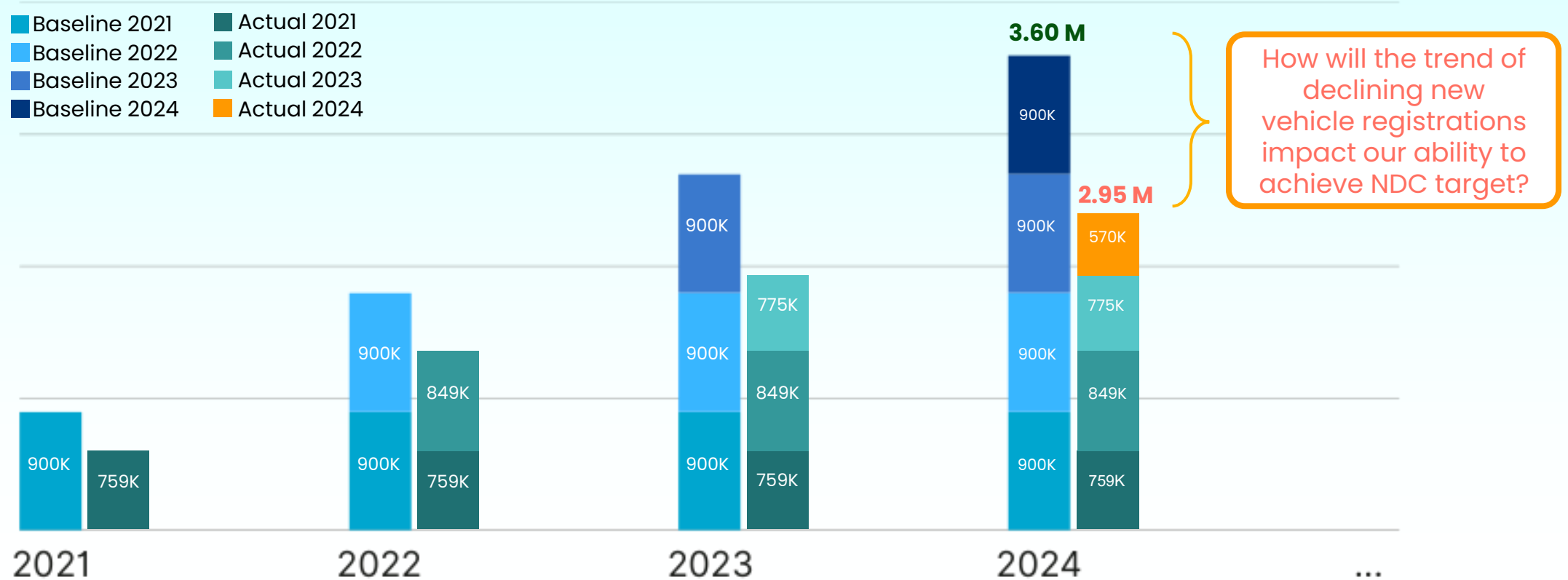
Supportive Mitigation

- Transport Infrastructure and Support
- Future Energy for Transport

Given Thailand's economic conditions over the past two years (2023–2024) and the recommendations from the working group committee, the FE policy options should align with the current economic circumstances



Actual New Vehicle Registration (2021–2024) Compared to Baseline estimation



THAILAND'S VEHICLE FUEL ECONOMY POLICY INITIATIVE

Transport sector CO₂ reduction target by 2030

45.61 million tons CO₂

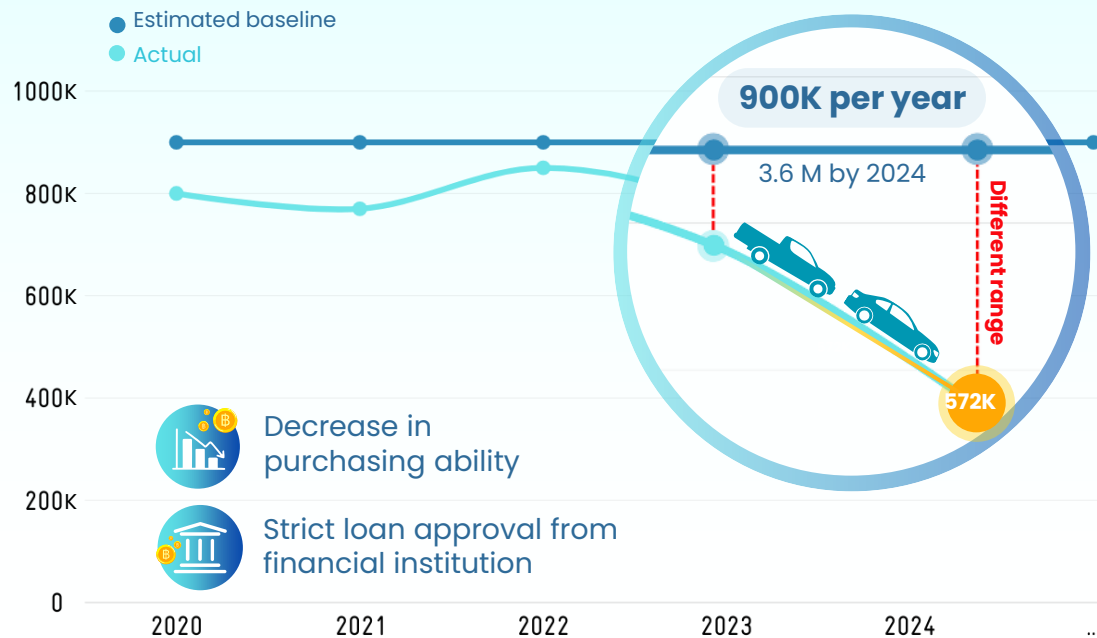
The amount of CO₂ Thailand needs to cut from transport by 2030, by using more electric vehicles and improving fuel efficiency of vehicles.

CO₂ reduction required from light-duty vehicles

27.58 million tons CO₂

The share of the transport target that passenger cars and pick-up must help achieve so Thailand can meet its NDC target in 2030.

DECLINING NEW CAR SALES ARE SLOWING EMISSIONS REDUCTION



Vehicle sales have **fallen** approximately below **36%** in 2024.



Fewer new vehicle sales keep older, high-emission vehicles on the road, resulting in continued high CO₂ emissions and slow progress toward Thailand's NDC target

↓ **572,675** units. In 2024, **new vehicle registrations dropped to 572,675 units.** This is far below the baseline estimate of 900,000 units per year.



Passenger cars

Passenger cars in Thailand average 91 gCO₂/km, while many markets move to lower emission standards.



Pickup

Thailand faces export pressure as pickups emit 189 gCO₂/km, while Australia, Thailand's top pickup export market, targets 99 gCO₂/km by 2029

» FUEL ECONOMY POLICY OPTIONS

CO₂



Low Carbon Pickup Truck

promote production and adoption of fuel-efficient, low-emission pick up models in Thailand



Trade-in Program

incentivize replacement of old vehicles with cleaners, more efficient and low-carbon pickups



CAFE Standard

introduce "Corporate Average Fuel Economy Standard" to improve overall vehicle efficiency

Policy Option 1

Low Carbon Pickup Truck



Objective

Accelerate adoption of more efficient pickup technologies.



Key Feature

Reduces excise tax for **HEV pickups;**



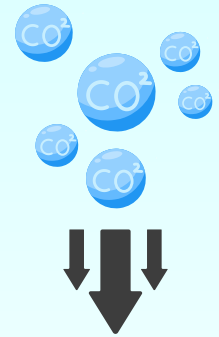
encourages manufacturers to introduce **cleaner models.**

Impact

Reduce pickup emissions to

133 gCO₂/k

By 2030



Considerations

Requires fiscal budget;

effectiveness depends on manufacturer participation.



Policy Option 2

Scrappage Scheme



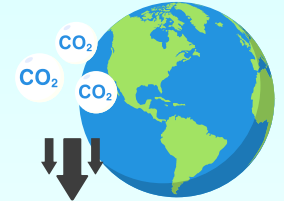
Objective

Remove old, high-emission vehicles from the fleet.



Impact

Largest reduction potential among options.



Key Feature



Provides **THB 100,000 incentive** to scrap old vehicles and **purchase a new efficient pickup.**



Considerations



Requires end-of-life vehicle ecosystem; builds on policy option 1 and involves substantial government spending.

Policy Option 3

Corporate Average Fuel Economy Standard



Objective

Set mandatory fleet-wide CO₂ targets for manufacturers.



Key Feature

Each automaker gets an annual CO₂ target based on its sales mix



credits from low-emission models can offset higher-emission ones.

penalties apply if the fleet average exceeds the target.

Impact

Ensures long-term,

Cuts LDV emissions to 92 gCO₂/km by 2030



Considerations

Most cost-effective option;

requires new regulatory framework and data system.





Office of Transport and Traffic Policy and Planning

Thank you