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Accelerating Thailand's E-mobility Transition: Sustainable Transport Bus Electrification Project

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Transportation development strategy for 20 years (2018 - 2037)

Conceptual framework for developing transportation systems

Safe transportation and environmentally friendly

Green & Safe Transport

Innovation & Management

Accessible transportation and equitably

Inclusive Transport

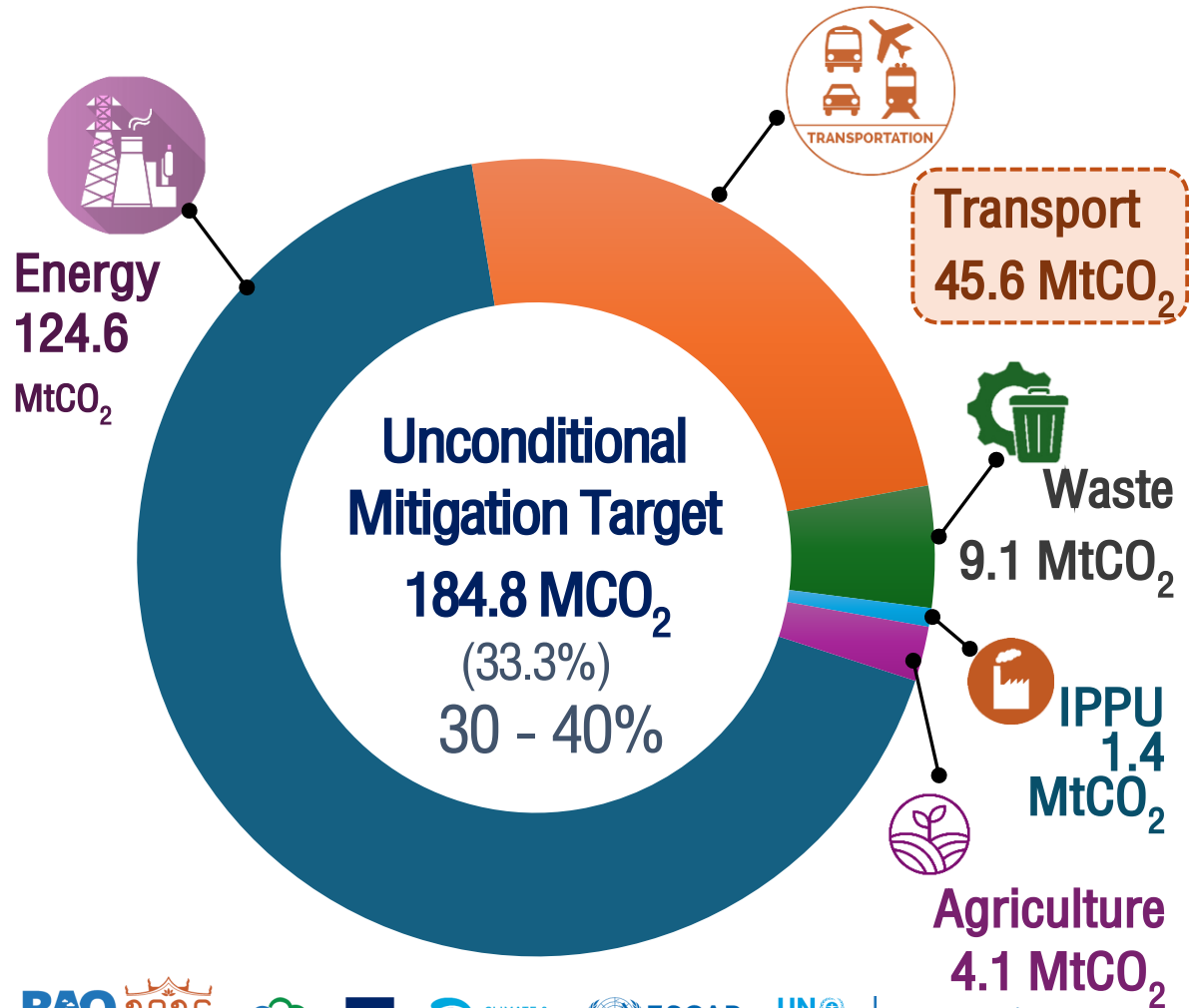
Efficient Transport

Affordable and Efficient transportation



Thailand CO₂ Emission Reduction Target

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

ADB's Sustainable Transport Bus Electrification Project



Bangkok Buses (Urban)

(Bangkok Mass Transit Authority: BMTA)



Highly Viable

- 2nd Phase of 800 buses
(Targeting diesel buses more than 21 years old)
- 10 Bus Terminal / Depot upgradation
- Strategy: System Redesign required
(Overnight Charging)
- Financial: TCO 7% lower than CNG
Break - even in 11 years
- Estimated Project Cost 236.5 million USD



Intercity Buses

(Transport Company Limited: TCL)



Viable (Route < 300 km)

- 60 intercity buses (< 200 km)
- 150 intercity buses (> 300 km)
- Financial mechanism for private operator fleet
- 3 Bus Terminal / Depot upgradation
- Strategy: Route - based requirement
- Financial: Break - even in 5 years
(Owned charging)
- Estimated Project Cost 77.8 million USD

EV buses emit ~95% less PM compared to existing buses

Bangkok bus PM emission factors vs speed (source: 10–90 km/h)

