

Assessment of NDCs and Long-Term Strategies

Vision

- To achieve the national NDCs targets and in-line with the 2-degree pathways (Thailand, Taiwan, Nepal, etc...)

Goals

- Publications/policies recommendation

Methodology

- Using both end-use and computable general equilibrium (CGE) models (AIM/Enduse and AIM/CGE)

Enhancement of NDC Scenarios in Thailand

ORIGINAL ARTICLE

Open Access

The impact of different GHG reduction scenarios on the economy and social welfare of Thailand using a computable general equilibrium (CGE) model



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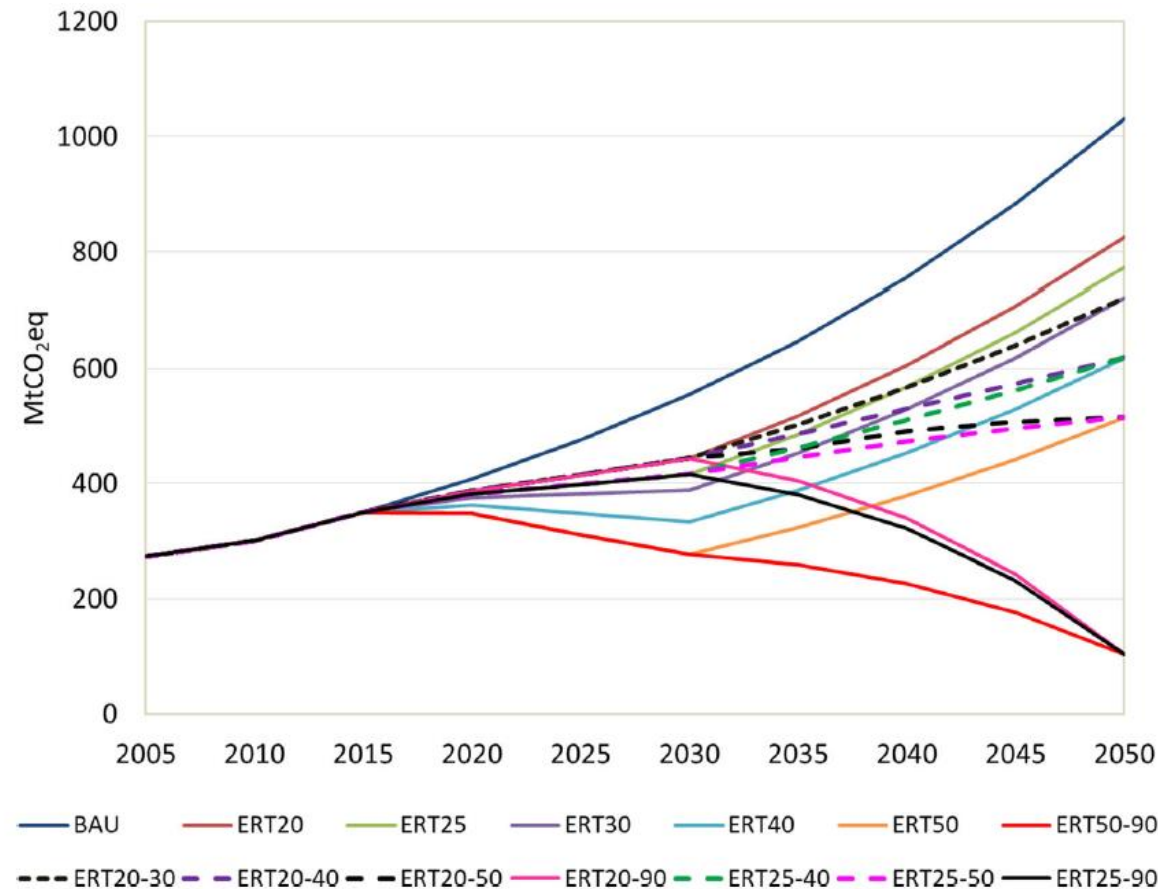
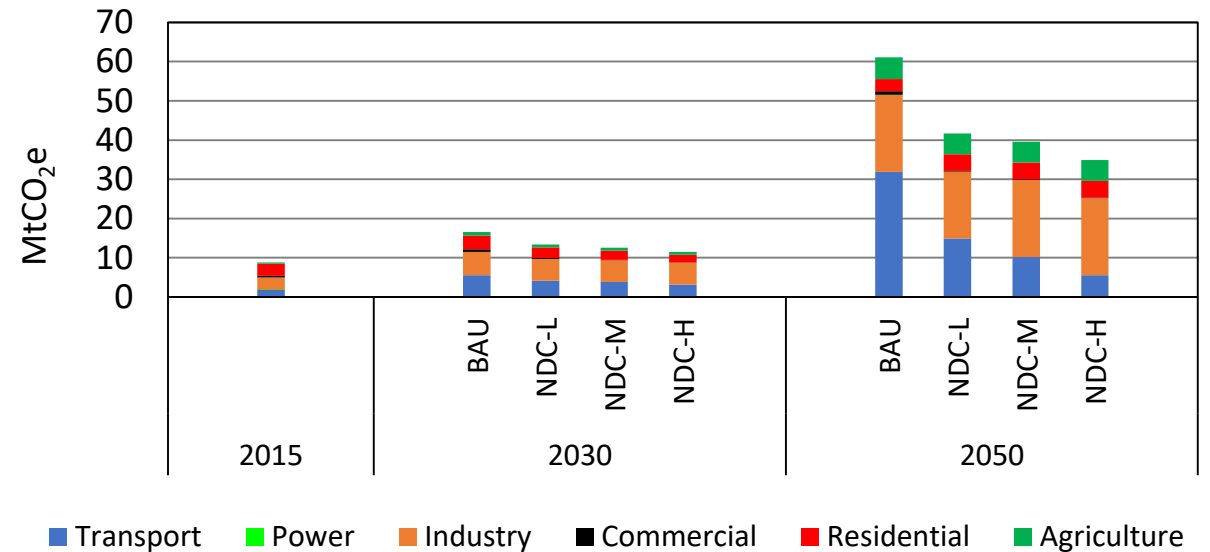
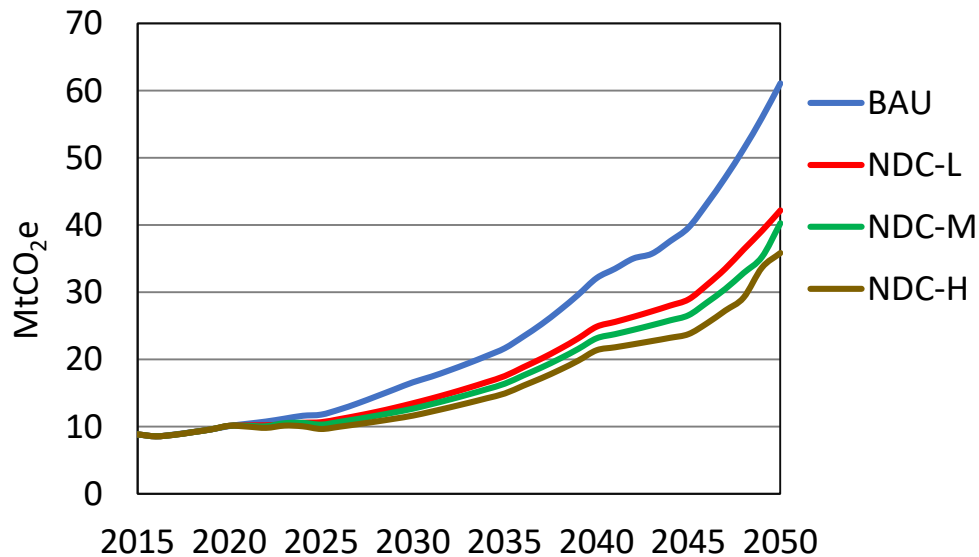


Fig. 5 GHG emission trajectories in all scenarios

Enhancement of NDC Scenarios in Nepal

Shares (%) in NDC Scenarios

Scenarios	Electric Passenger transport		Electric Freight transport		Electric Cooking	
	2030	2050	2030	2050	2030	2050
NDC-Low (NDC-L)	20	50	10	30	50	100
NDC-Medium (NDC-M)	30	75	20	50	70	100
NDC-High (NDC-H)	50	100	30	70	100	100



- In 2030, GHG emissions reduced by
 - 19% in NDC-L, 24% in NDC-M, 30% in NDC-H

- In 2050, GHG emissions reduced by
 - 31% in NDC-L, 34% in NDC-M, 41% in NDC-H

The Scenario for Taiwan to NDC Target

1. Targets

- The CO₂ emissions reduce from 357 to 226 MtCO₂ in 2035

2. Evaluation tools

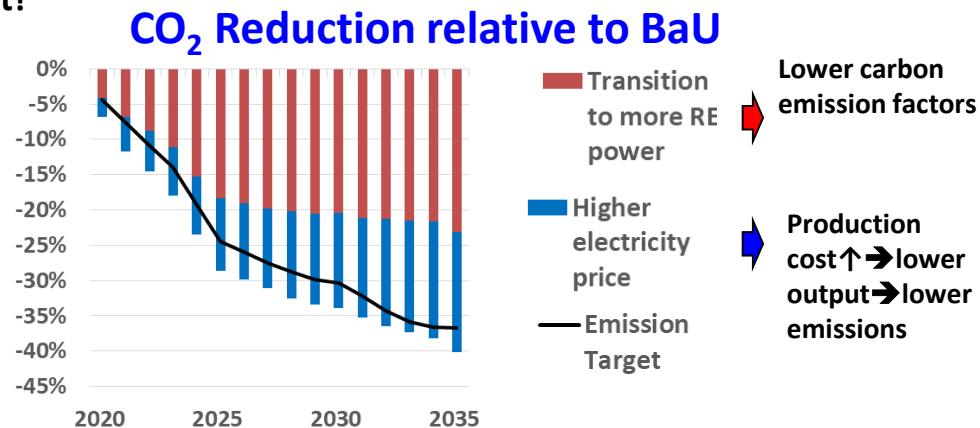
- AIM-CGE for Taiwan
- Information from Taiwan TIMES model: carbon emission factors, electricity price adjustments.

3. Policy

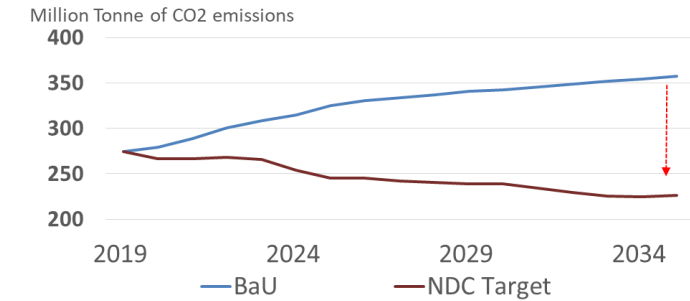
- **Supply side:** transition to renewables energy for power generation: 5% of power generated from RE in 2018, increasing gradually to 30% in 2035.
 - High electricity Price (negative effect on GDP): due to more RE for electricity generation.
 - Investments in RE (positive effect on GDP): parts of electricity payments are paid for RE investments.

4. Preliminary Results:

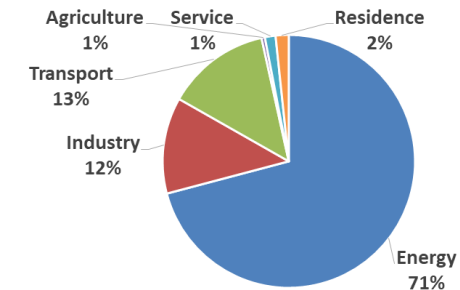
- Transition to more RE power results in lower CO₂ emission than the target!



CO₂ Emission Target



Source of CO₂ Emission in 2018



Effects on GDP

