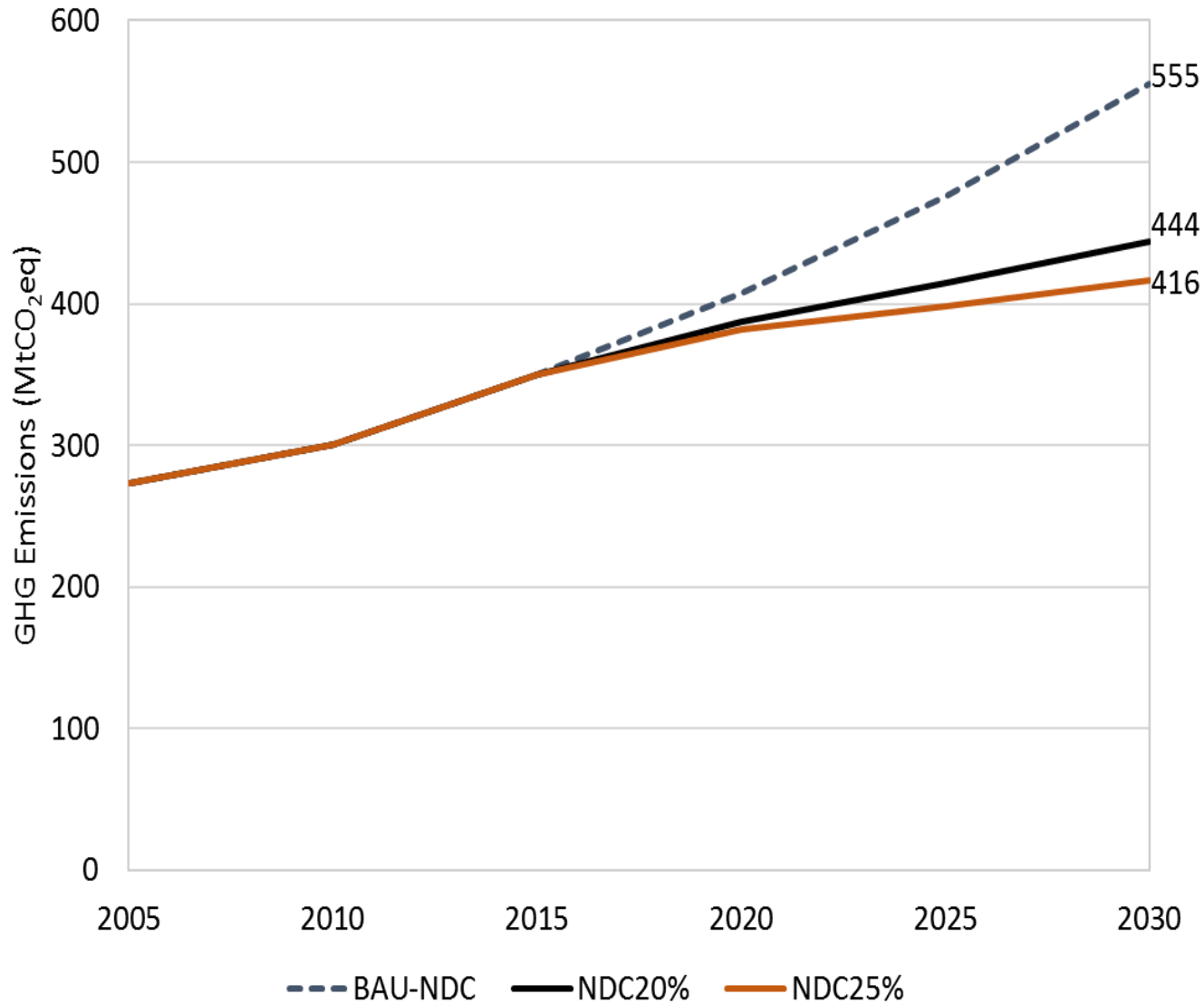


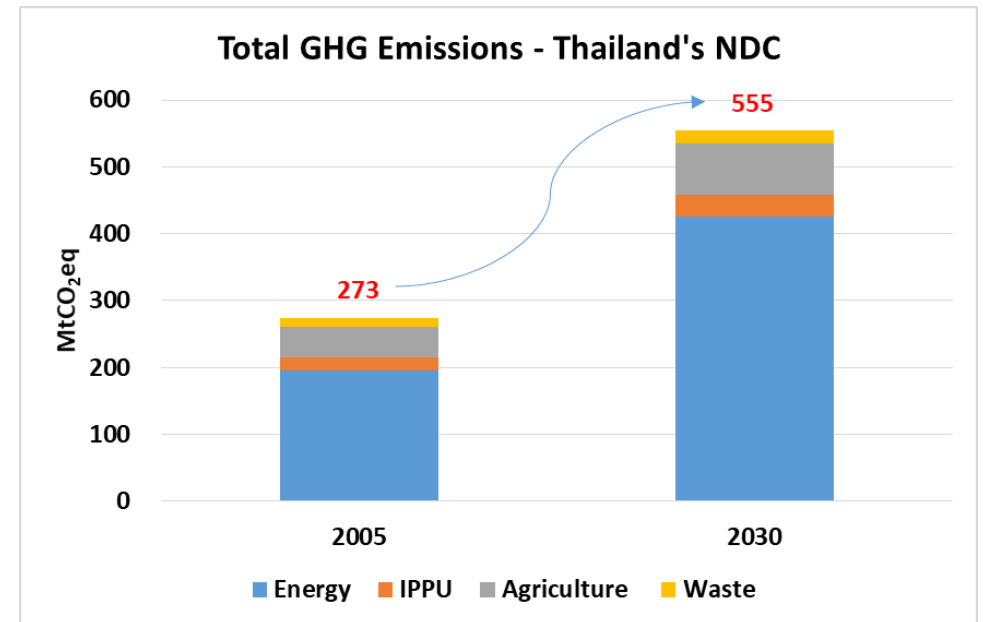


Thailand's Accelerated NDC 2030 and 2-degree 2050 scenarios

Thailand's NDC Targets 2030



Thailand's NDC GHG reduction target: the country intends to reduce its GHG emissions by 20 to 25% from the projected BAU-NDC level by 2030



Scenarios

Business-as-usual (BAU)

- ❖ Without any climate policy
- ❖ An NDC extended scenario that considers the same GHG emission pathway as that in Thailand's NDC 2030 but extended till 2050

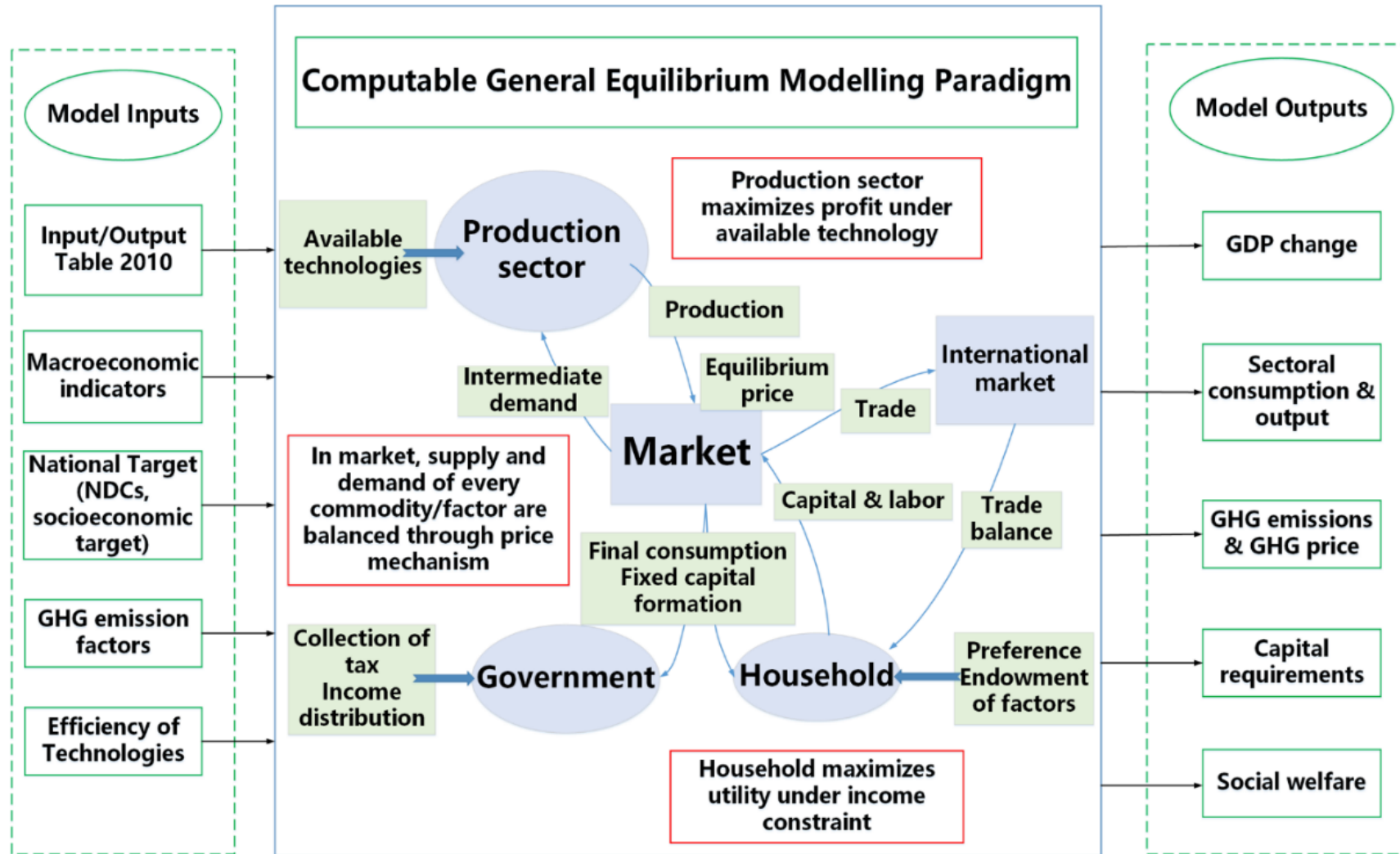
Extended NDC 2-degree

- ❖ Two scenarios assuming GHG reductions of 20% & 25% in 2030, then declining to meet Thailand 2°C target in 2050, namely:
 - ❖ 2D-NDC20 & 2D-NDC25

Accelerated NDC 2-degree

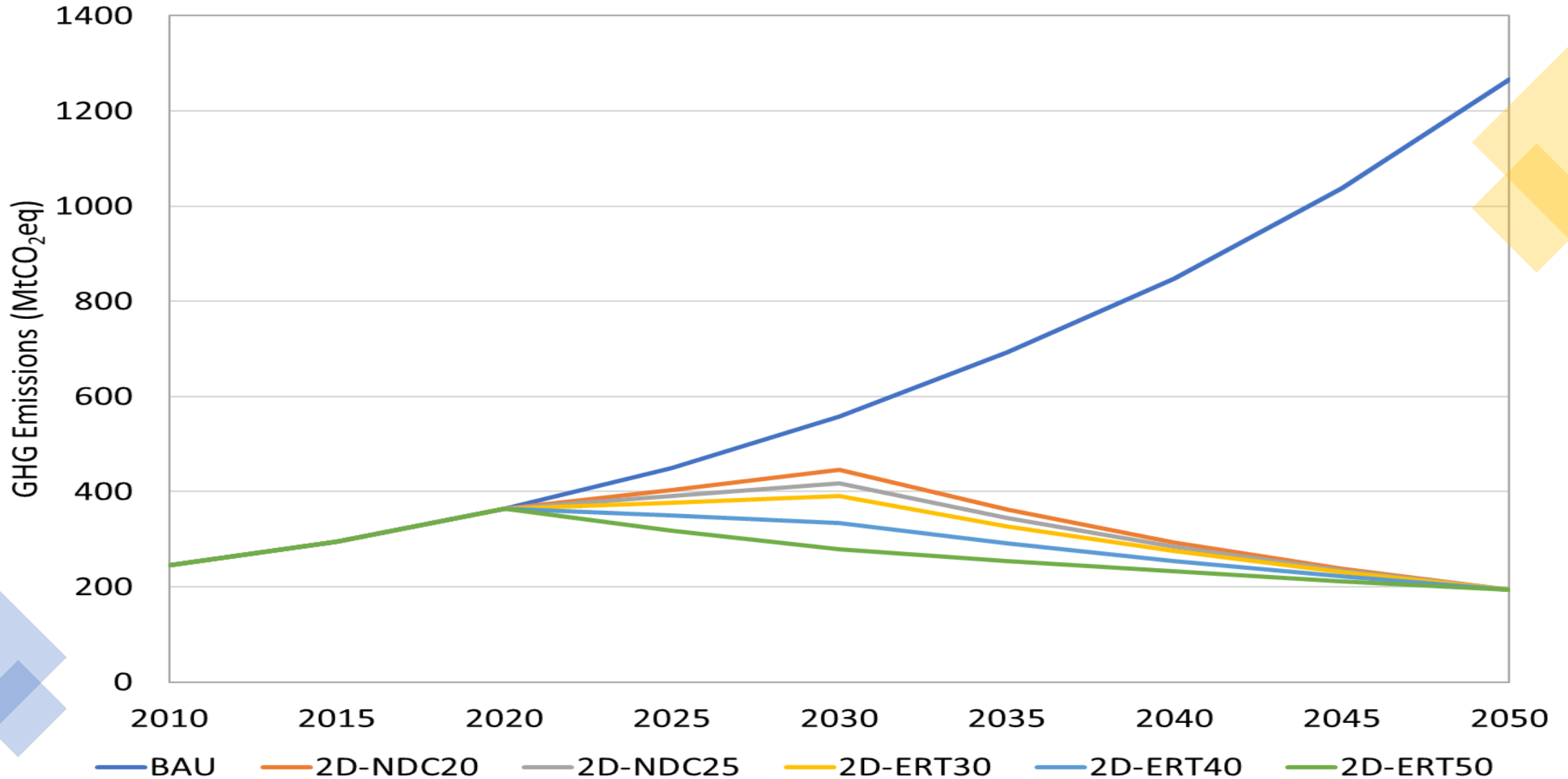
- Three scenarios assuming an accelerated GHG reduction targets of 30%, 40% and 50% in 2030, then declining to meet Thailand 2°C target in 2050, namely:
 - 2D-ERT30
 - 2D-ERT40 & 2D-ERT50

Methodology Framework of AIM/CGE*



*Note: National Institute for Environmental Studies (NIES), Japan

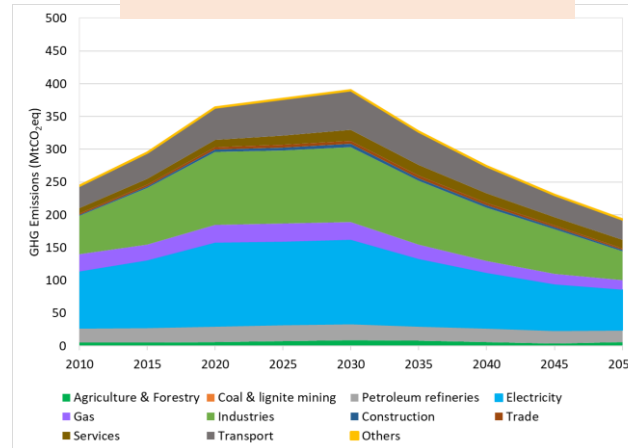
Emission Pathways in BAU and 2-degree Scenarios



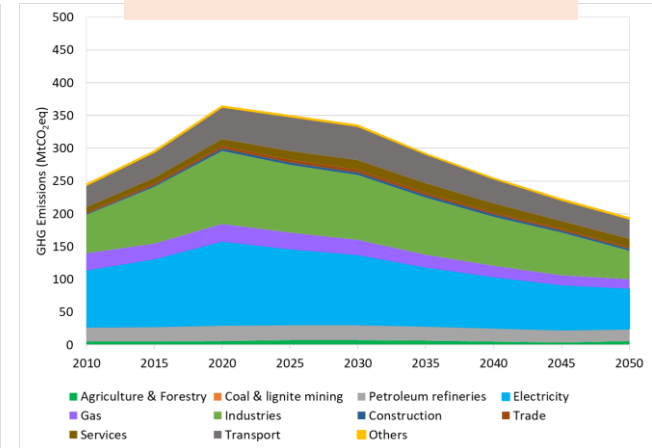
Sectoral Emissions in the Accelerated NDC 2-degree Scenarios

- The electricity, industries, transport, lignite mining, gas industries, trade, construction, & service sectors could be the major contributors to GHG emission reductions.
- However, large sectoral GHG emission reductions is required in the accelerated NDC scenarios in 2030, when compared to the extended NDC 2-degree scenarios.
- Thailand needs to put more efforts in energy system transformation to achieve the peak emissions by 2030 or even sooner to contribute towards the long-term goal of 2°C.

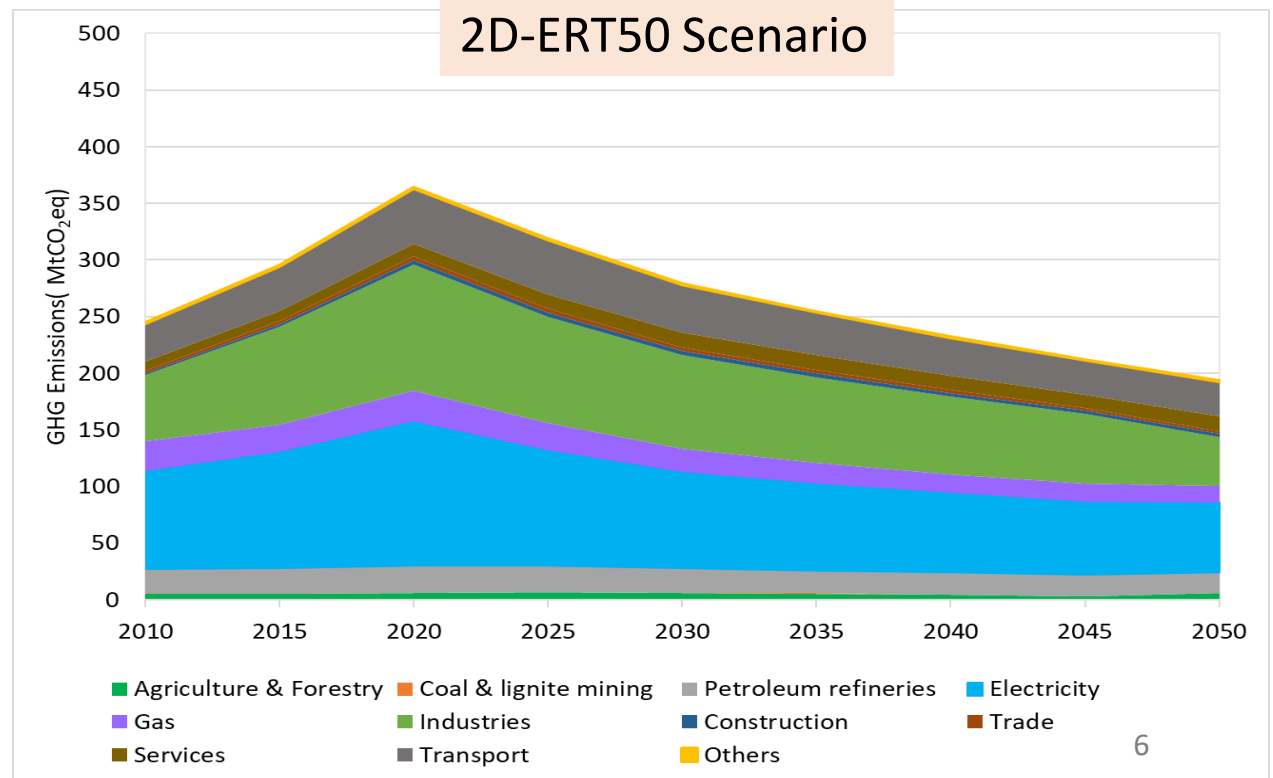
2D-ERT30 Scenario



2D-ERT40 Scenario



2D-ERT50 Scenario



Policy Package for 2°C Scenario

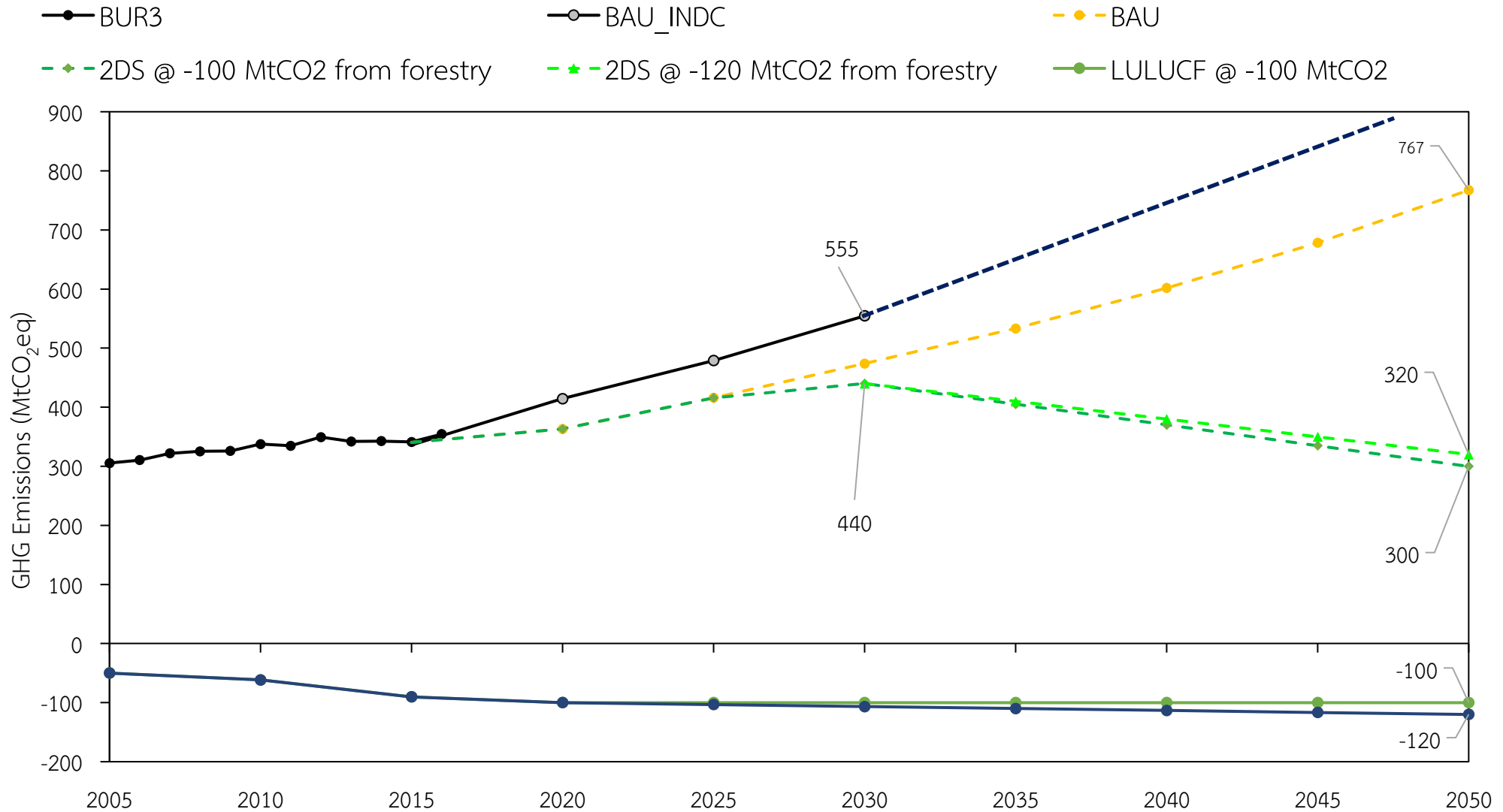
Stringent policy is necessary to achieve 2-degree goals, particularly during the period 2030-2050

Main Sector	Policy Action
Electricity supply	Implement energy efficiency improvement measures
	Increase renewables in electricity production
	Deploy CCS
	Deploy BECCS
Industry	Enhance energy efficiency of industrial production
	Promote renewable energy for industrial applications
	Deploy CCS
Transport	Improve fuel economy of vehicles
	Increase number of electric vehicles (charged with renewable energy)
	Increase the use of biofuels
	Promote hybrid vehicles
Buildings	Enhance energy efficiency of appliances
	Improve building insulation
LULUCF	Reduce deforestation

Conclusions

- ❖ Thailand should increase its share of energy efficient technologies & renewable energy options more extensively by 2050 to achieve the 2-degree targets.
- ❖ In the absence of transformative structural & technological changes, more stringent GHG emission reduction targets will impose more challenges to the energy & economic systems of Thailand & will lead to greater GDP losses compared to the BAU.
- ❖ Without a transformative change in the economic structure & energy system of Thailand, the country would have to face enormous cost in the 2-degree targets.
- ❖ BECCS & afforestation could act as the major mitigation measures for Thailand to achieve the 2-degree targets.

Thailand Long-Term Strategy



1st Joint meeting between MOEN and MONRE on Thailand's LTS and 2-degree pathways 17-Mar-2021 @ MOEN



THANK YOU