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# Long-term strategy on climate change of Vietnam

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# Mitigation policies 2015-2020

Reduce greenhouse gas emissions in various energy activities as compared with BAU scenario: by approx. 5% in 2020; approx. 25% in 2030 and around 45% in 2050

Renewable Development Strategy to 2030 and a Vision to 2050

- Action Plan for the implementation of the Paris agreement on climate change
- Target Program to respond to climate change and green growth for the period 2016-2020

The mitigation target with international support is now 27% by 2030 compared to the business-as-usual scenario (9% from national funds)

**2015**

**2017**

For 2030 Reduce total GHG emissions by at least 1% per year without and 2% with international support

**2016**

Adjustment of the National Power Development Plan for the period 2011-2020 with inspection to 2030 (Adjusted Power Master Plan VII, 2016)

**2020**

Resolution No. 55-NQ/TW dated 11/02/2020 of the Politburo on orientations of Vietnam's national energy development strategy to 2030, with a vision to 2045

Prioritize the exploitation of renewable sources for electricity production; increase the share of electricity produced from these sources to 7% in 2020 and over 10% in 2030

The share of renewable energy sources in the total primary energy supply reaches 15 - 20% in 2030 and 25 - 30% in 2045

# Recent mitigation policies by Ministry

## MoIC

- Decision 319/QD-TTg in **2018** on approving the development strategy of Vietnam's mechanical industry to 2025, with a vision to 2035
- Decision 2289/QD-TTg in **2020** on the National Strategy for the Fourth Industrial Revolution to 2030

## MARD

- Decision 1520/QD-TTg in **2020** approving the livestock development strategy for the period 2021-2030, with a vision to 2045
- Decision 339/QD-TTg in **2021** approving the Strategy for Vietnam's Fisheries Development to 2030, with a Vision to 2045
- Decision 891/QD-BNN-KHCN in 2020 approving the implementation plan of the Paris Agreement on Climate Change of the Ministry of Agriculture and Rural Development for the period of 2021-2030
- Decision 42/QD-BNN-KH in 2020 Action plan to implement **Resolution 01/NQ-CP**
- Decision 5227/QD-BNN-KH in 2020 approving the investment promotion plan in agriculture and rural areas for the period of 2021-2025

# Recent mitigation policies by line ministries

## MoT

- Decision 214/QD-TTg in **2015** approving the adjustment of the Vietnam Railway Transport Development Strategy to 2020, with a vision to 2050
- Decision 1456/QD-BGTVT 2016 on Action plan to respond to climate change and green growth of the Ministry of Transport for the period 2016-2020
- Decision 4206/QD-BGTVT 2016 Action plan to reduce CO2 emissions in civil aviation activities in Vietnam for the period 2016-2020

## MoC

- Decision 1266/QD-TTg in **2020** on approval of the Strategy for development of building materials in Vietnam for the period of 2021-2030, with a vision to 2050
- Decision 1659/QD-BXD 2018 on the Action Plan of the Construction sector to implement the National Action Plan to implement the 2030 Agenda for Sustainable Development
- Decision 802/QD-BXD 2017 Action plan to reduce greenhouse gas emissions in the cement industry to 2020, with orientation to 2030

# Recent mitigation policies

- Vietnam updated NDC: 7/2020
- Law on Environmental Protection: 11/2020
- National climate change strategy: planned to be approved by 12/2021

# Recent mitigation policies

Updated NDC:

- Measures for GHG emissions mitigation in the updated NDC include:
- (i) energy saving and energy efficiency, reducing energy consumption; (ii) changing fuel and energy consumption structure in industry and transportation; (iii) shifting the cargo transportation model; (iv) promoting efficient exploitation of renewable energy sources and increasing their proportion in energy production and consumption;
- (v) reducing GHG emissions through sustainable agriculture development, improving efficiency and competitiveness in agricultural production; (vi) sustainable forest management and development, enhancing carbon sequestration and environmental services; biodiversity conservation together with economic development and increasing income for forest-dependent communities and people;
- (vii) waste management;
- (viii) reducing GHG emissions by replacing construction materials and improving cement production process, chemical industry and reducing HFCs consumption.

# Recent mitigation policies

- Law on Environmental Protection: 11/2020
  - Organize the implementation of greenhouse gas mitigation and greenhouse gas absorption activities according to the roadmap and methods of greenhouse gas mitigation suitable to the country's conditions and international commitments;
  - Control greenhouse gas and measure, report, appraise GHG emission reduction at national, sectoral, and levels concerned;
  - Inspecting compliance with regulations on greenhouse gas inspection, greenhouse gas mitigation, implementation of mechanisms and cooperation on GHG emission reduction;
  - Develop and implement mechanisms and methods of cooperation on GHG emission reduction in accordance with the provisions of law and international conditions to which Vietnam is a member;
  - Organize and develop carbon markets in the country.

# New National Climate Change Strategy (CCS)

- Timeframe: 2021 – 2030 vision up to 2050
- Goals:
  - Roadmap to reduce greenhouse gas emissions, commit to implementing international treaties on climate change;
  - Establish a MRV systems;
  - Monitor emission sources;
  - Increase greenhouse gas absorption;
  - Develop carbon markets;
  - Develop low-carbon economies scenarios;
  - Determine a year of peaking in emissions;
  - Towards long-term carbon neutrality



# New CCS

- By 2030:
  - Determine the ability to mitigate greenhouse gas emissions compared with the committed target in the Nationally Determined Contribution (NDC) of Vietnam.
  - Identify solutions/efforts to maximize total greenhouse gas emissions compared to the development-as-usual (BAU) scenario.
  - Determine the contribution rate to the emission reduction target of the following sectors: energy; agriculture; land use and forestry; waste; industrial processes.

# New CCS

- Mitigation of greenhouse gas emissions becomes the compulsory criterion;
- Setting up and operating a carbon credit exchange;
- Regulate and organize the implementation of domestic and international carbon credit exchange and compensation mechanisms;

# New CCS

- Up to 2050:
  - Target for total GHG emission reduction compared with BAU;
  - Structure of renewable energy in total national primary energy;
  - non-market mechanism to mitigate greenhouse gas emissions in line with the country's socio-economic conditions;

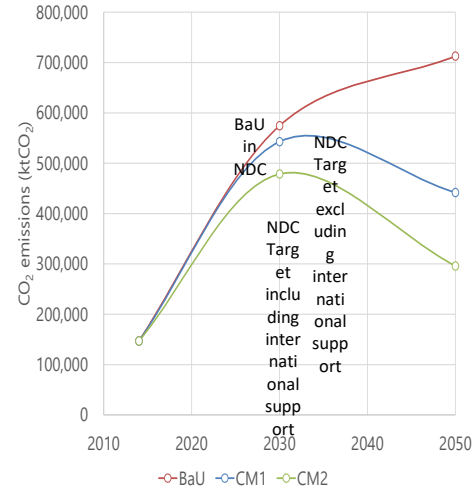
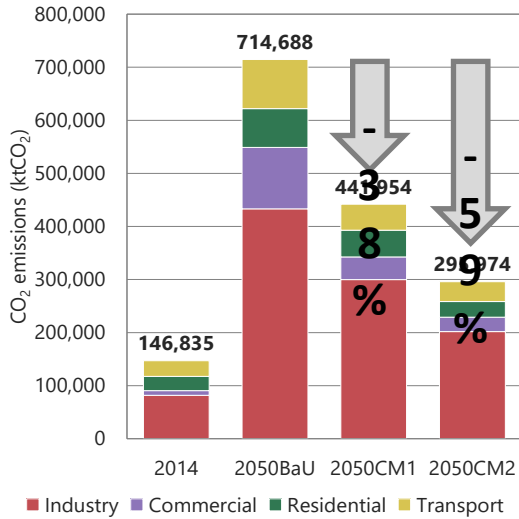
# Request from MONRE/DCC

- AIM team to support answer questions:
  - When does Vietnam reach its peak of GHG emission?
  - Scenarios of GHG emission reduction: countermeasures?

# AIM modeling works

- **ExSS model:** forecast CO2 emissions of the energy sector for the period 2014-2050 based on GDP, population and technology development to 2050.
- **AIM/Enduse model:** evaluate technology options to achieve future emissions targets based on the lowest cost.
- **AIM/CGE model:** assess the macroeconomic impact, when investing to achieve emission reduction targets

# Projected CO<sub>2</sub> emissions/reductions

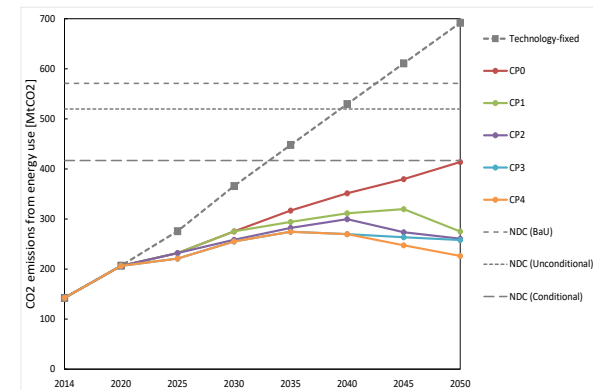


Nguyen Thai Hoa, Yuki Yochi

## Result of Calculation with AIM/Enduse

- Even “Technology-fixed” scenario does not reach to the conditional NDC.
- At 2030, the “Carbon price” scenario is 26~31% less compared to the “Technology-fixed” scenario. This decrease rate is almost consistent with the contribution of emission reduction with international support in NDC (-27%).
- Around 100USD of carbon price determines the peak year of the emission pathways. (**Peak year of each scenario is colored in red in the following**)

USD/tCO <sub>2</sub>	2014	2020	2025	2030	2035	2040	2045	2050	note
CP0 scenario	0	0	0	0	0	0	0	0	Without carbon price
CP1 scenario	0	0	0	0	43	70	98	125	10 year behind CP3
CP2 scenario	0	0	0	43	70	98	125	125	5 year behind CP3
CP3 scenario	0	0	43	70	98	125	125	125	<b>Based on SDS in World Energy Outlook 2020 (IEA)</b>
CP4 scenario	0	0	43	70	98	125	263	400	400USD in 2050



Tomoki Hirayama

# Progress

- Time for approving: by Dec. 2021
- Different groups are working on mitigation and adaptation policies;
- Using AIM models results for reference with MONRE vice minister and line ministries;
- Paper to Journal Global Environmental Research : "Long term GHG mitigation strategy in Vietnam"

Thank you for your attention!