



Coordinating Ministry for Economic Affairs



Exploring Market-Based Mechanisms For Low Carbon Business in Indonesia

Jakarta, 7 February 2019



Climate Change Commitment

GLOBAL COMMITMENT

Target of Paris Agreement:

To keep global temperature rise below 2°C, and strive to reach 1.5°C



NATIONAL COMMITMENT

The mandate of Law No. 16 of 2016 on the Ratification of the Paris Agreement to Reduce GHG emissions according to NDC by 2030:

29% from BaU (National Effort)

41% from BaU (International Support)

29% from BaU (National Effort)

41% from BaU (International Support)

Energy	11%
Waste	0.38%
IPPU	0.10%
Agriculture	0.32%
Forestry	17.2%



Energy	14%
Waste	1%
IPPU	0.11%
Agriculture	0.13%
Forestry	23%





Introduction



Indonesia has ratified the Paris Agreement in Law No. 16 of 2016, which set out emission reduction target of **29%-41%** below the business as usual (BAU) scenario by **2030**.



The government has set out mitigation and adaptation plan that will **leverage private and public participations**, one of which is by utilizing **market-based instruments**.



Indonesia has participated in several international carbon markets, such as Clean Development Mechanism (**CDM**), Joint Crediting Mechanism (**JCM**) and Verified Carbon Standard (**VCS**).



Market-based instrument (MBI) could be an effective policy tool to **scale-up mitigation actions**. To support the implementation of MBI, the strengthening of **MRV system and policies** is needed.



Market-Based Instrument for Climate Change Mitigation

- Market-based instrument (or carbon market) is a policy tool that aims to achieve a cost-effective climate change mitigation. This is done by giving flexibility and market options on achieving mitigation targets.
- As of 2018, 51 carbon pricing initiatives have been implemented or are scheduled for implementation, which consists of 25 emissions trading systems (ETS) and 26 carbon taxes. These carbon pricing initiatives would cover 11 GtCO₂e or about 20 percent of global GHG and valued at approximately US\$82bn, a 56% increase from 2017.
- Market-based instrument needs emission reduction target, emission inventory, and governance framework.





Market-Based Framework in National Policies

- Regulations that serve as a basis for market-based instruments are Law Number 17 of 2004 on Kyoto Protocol Ratification, Law Number 32 of 2009 on Environmental Protection and Management, and Law Number 16 of 2016 on Paris Agreement Ratification.
- As a derivative of those laws, Government of Indonesia established **Government Regulation Number 46 of 2017 on Environmental Economic Instruments (EEI)**, which classified three parts of EEI, i.e. development planning and economic activities, environmental funding, and incentives/disincentives. This regulation, which explicitly mentioned **emission trading**, can be used as a **framework for market-based instruments development in Indonesia**.
- The newly established **Presidential Regulation Number 77 of 2018** stipulates the principles and mechanisms of environmental fund management agency, which mentioned **carbon trading** as one of the fund-distribution strategies.

Based on those regulations, it can be inferred that Indonesia's policy and emission data has the readiness to support development of MBI as tools to achieving emission reduction target.



Technical Team for Carbon Market Preparation

Since 2017, the government has set out a **cross-ministerial technical team** and has been actively working in preparing the market based instrument options to be implemented in Indonesia.

STEERING COMMITTEE



Chair

Member:

: Deputy Minister for Energy Management, Natural Resources and Environment, CMEA

1) Deputy Minister for Maritime, Bappenas

2) DG of Climate Change, MoEF

3) Head of Research, Development and Innovation Agency, MoEF

4) DG of Electricity, MEMR

5) Head of Industry Research and Development Agency, Mol

IMPLEMENTING COMMITTEE



POWER WORKING GROUP

Coordinator: Director of Technical and Electricity Environment, MEMR



INDUSTRY WORKING GROUP

Coordinator: Head of Green Industry and Environment Research and Development Center, Mol



MBI WORKING GROUP

Coordinator: Director of Sectoral and Regional Resources, MoEF

Members:

21 Officials and staffs from MEMR (DG Electricity, DG Renewable Energy and Energy Conservation, Center of Data and Information, Center of Research and Development, PT. PLN, and Indonesia Power Producers Association)

Members:

29 Officials and staffs from Mol (Green Industry and Environment Research and Development Center, Directorate of non-metallic minerals, Directorate of metal industry, Directorate of Food Industry and Fishery, Directorate of Beverage, Tobacco, and Freshener, Directorate of Upstream Chemical Industry) and MEMR (DG Renewable Energy and Energy Conservation)

Members:

22 Officials and staffs from MoEF, Bappenas, Ministry of Finance, MEMR, Presidential Office for Climate Change



PMR Program to Support Government of Indonesia

- PMR Indonesia supports and assists the technical team in preparing Indonesia's carbon market.
- PMR Indonesia aims to increase Indonesia's capacity and readiness in market-based instruments through **three main programs**:

GHG PROFILING

- ✓ Emission profile and MACC in power sector
- ✓ Emission profile and MACC in industry sector

MRV SYSTEM

- ✓ MRV guideline for power sector
- MRV guideline for fertilizer
- Online reporting tools

MBI DEVELOPMENT

- ✓ MBI assessment study for four scenarios
- ETS pilot development in power sector
- ETS pilot development in cement sector



Green House Gas (GHG) Emission Profile



ELECTRICITY SUBSECTOR

- GHG emission profile for the Electricity Generation Subsector has been developed which includes historical GHG emission data, current emission trajectory scenario, and marginal abatement cost curve.
- GHG emission reduction potential up to 315MtCO₂e (including demand side management) with negative average mitigation cost until 2030.



GHG Emission Reduction Target



INDUSTRY SECTOR

- Is the first study conducted on plant level in 8 (eight) subsectors which incorporates 40 clusters of industries.
- In 2017, 8 (eight) subsectors are estimated to have emitted 211,45 MtCO₂e from energy activities, IPPU, and waste management.
- Total GHG emission projection for 2030 without any mitigation actions (Business-as-Usual scenario) is estimated to reach 277,17 MtCO₂e.
- By doing several chosen mitigation actions, the industry sector will be able to reduce GHG emission to up to 42,38 MtCO₂e, mostly from energy efficiency.

GHG Emission Reduction Targets (Indonesia's NDC, 2016)

Energy: 314 MtCO₂e (CM1)

IPPU: 2,75 MtCO₂e (CM1)

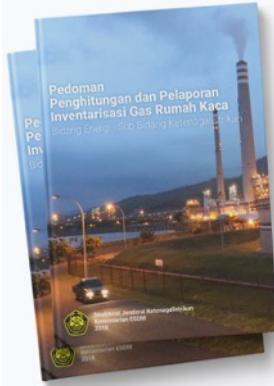
GHG Emission Reduction Potential in 2030

Energy: 315 MtCO₂e (electricity subsector)
32,98 MtCO₂e (manufacturing)

IPPU: 9,10 MtCO₂e (manufacturing)
1,16 MtCO₂e (waste)



Sectoral MRV Development and Pilot Project



ELECTRICITY SUBSECTOR

- An online GHG emission calculation and reporting system (Apple-Gatrik) has been developed and piloted in August 2018.
- GHG emission calculation and reporting guideline for electricity subsector was launched in May 15, 2018.



Total GHG Emission in Facility Level



INDUSTRY SECTOR

- MRV pilot project has been conducted in fertilizer and cement subsector
- Monitoring and reporting system is done through SIINAS and SIM Online.
- MRV guidelines for fertilizer subsector has been provided and pilot projected.
- MRV guidelines for cement subsector has been compiled by MoI since 2016, it is completed by conducting a pilot project.





Market Based Instrument Development



- The study on market based instrument options and its modelling on four scenarios, i.e. **emission trading, energy efficiency certificate, cap and tax, and offset mechanism**, has been assessed.
- Moving forward, Indonesia will **focus** its MBI development on **emission trading (cap and trade) and offset mechanism**.
- Working together with Ministry of Energy and Mineral Resources, Ministry of Industry, PT PLN, and associations, the emission cap will be determined and elaborated.
- Along with Ministry of Environment and Forestry, the mechanism on mitigation outcome certification will be developed.



Climate Change Mitigation in A Cost-Effective Way



Other Initiatives to Support Carbon Market

Company Performance Rating Program (for Environmental Compliance) (Proper)

MoEF Ministerial Regulation No. 3/2014



Green Industry Standard

MoI Ministerial Regulation No. 51/2015
on Green Industry Development Standard
Guidelines



Environmental Fund Management Agency

Presidential Decree No. 77/2018



Sustainable Public Procurement

- Sustainable Public Procurement (SPP) increases demand for goods, services, construction and utilities that are beneficial to society and the economy while at the same time also reduces negative impacts on the environment in the whole cycle of its use.
- The implementation of SPP can improve supply chain competitiveness and support the reduction of greenhouse gas emissions.
- Presidential Decree Number 16 of 2018 on Public Procurement has stipulated the implementation of SPP by encouraging 'Sustainable Procurement'.

Joint Crediting Mechanism

- JCM has managed to mobilize grants for low-carbon development in Indonesia, which proves that JCM is able to convince many commercial sectors to invest more on low-carbon development.
- The government ensures that JCM activities comply with the existing regulations while promoting green investment and private sector participation in low-carbon development.
- JCM is also expected to promote co-benefits in the framework of sustainable development (such as employment, environmental quality improvement, etc.)



Conclusions

- Based on current national regulations, **Indonesia has the policy and GHG emission data readiness** to support MBI development.
- **Indonesia has established a technical team in carbon market preparation**, consisting of related ministries and associations.
- Although Indonesia has made some progress in MBI development, Indonesia still needs to develop its **resources and human capacity**.
- To improve Indonesia's readiness in development of MBI, a **pilot project should be developed and implemented as soon as possible**.





COORDINATING MINISTRY FOR ECONOMIC AFFAIRS

Thank You

Ali Wardhana Building
Lapangan Banteng Timur No. 2 – 4
Jakarta, 10710
Telp. 021-3500901, Fax. 021-3441261