






Republic of Indonesia

Strengthening Policy Synergy to Maintain Stability and Recovery amid Lower Global Growth and Heightened Uncertainty

March 2023

About Investor Relations Unit of the Republic of Indonesia

Investor Relations Unit (IRU) of the Republic of Indonesia has been established as a joint effort between Coordinating Ministry of Economic Affairs, Ministry of Finance and Bank Indonesia since 2005. The main objective of IRU is to actively communicate Indonesian economic policy and to address concerns of investors, especially financial market investors.

As an important part of its communication measures, IRU maintains a website under Bank Indonesia website which is administered by International Department of Bank Indonesia. However, day-to-day activities of IRU are supported by all relevant government agencies, among others: Bank Indonesia, Ministry of Finance, Coordinating Ministry for Economic Affairs, Ministry of Investment, Financial Services Authority, Ministry of State-Owned Enterprises, and The Committee for Acceleration of Priority Infrastructure Delivery.

IRU also convenes an investor conference call on a monthly basis, answers questions through email, telephone and may arrange direct visit of banks/financial institutions to Bank Indonesia and other relevant government offices.

Published by Investor Relations Unit – Republic of Indonesia

Website: http://www.bi.go.id/en/iru/default.aspx

Contact:
Rosita Dewi (International Department - Bank Indonesia, Ph.: +6221 2981 8232)
Thasya Pauline (Deputy Ministry for Macroeconomic and Finance Coordinator - Coordinating Ministry for Economic Affairs, Ph. +6221 352 1843)
Putri Rizki Yulianti (Fiscal Policy Office - Ministry of Finance, Ph.: +6221 345 0012)
Subhan Noor (Directorate General of Budget Financing and Risk Management - Ministry of Finance, Ph.: +6221 351 0714)

E-mail: contactIRU-DL@bi.go.id

This Presentation Book also can be downloaded from: https://www.bi.go.id/en/iru/presentation/default.aspx

Commitment to Sustainability and Preserving the Environment

Global Trends Strengthening Attention to Climate Change

UNFCCC-COP26 GOALS

01
Secure global net zero by mid-century and keep 1.5 degrees within reach

- accelerate the **phase-out of coal**
- **curtail deforestation**
- speed up the switch **to electric vehicles**
- encourage **investment** in **renewables**

02
Adapt to protect communities and natural habitats

- **protect and restore ecosystems**
- **build** defences, warning systems and resilient infrastructure and agriculture

03
Mobilise finance

- developed countries **mobilise at least $100bn** in climate finance per year by 2020.
- **International financial institutions** unleashing the trillions in private and public sector finance

04
Work together to deliver

- **finalise the Paris Rulebook**
- **collaboration** between governments, businesses and civil society.

Countries will be encouraged to achieve Net Zero Emissions by 2050 in COP26

G20 FORUM

The G20 has encouraged countries' commitments on the issue of climate change, including phasing out subsidies on fossil fuels.

EUROPEAN UNION

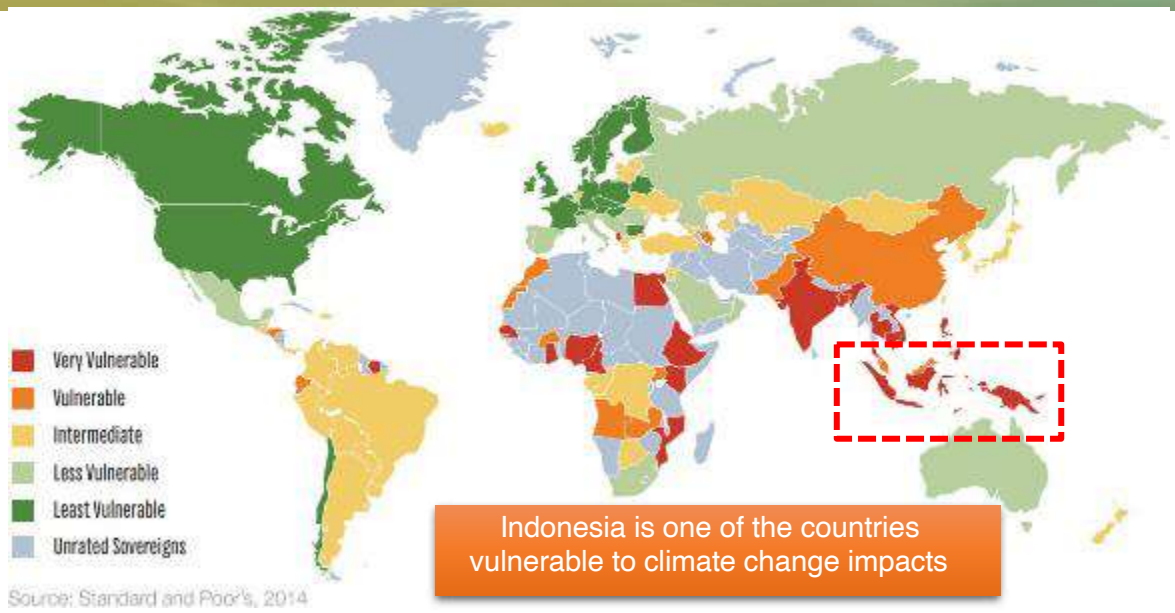
The European Union is discussing a Border Carbon Arrangement policy (part of the EU Green Deal) or the imposition of import taxes on goods that produce emissions according to the amount of emissions produced

INTERNATIONAL FINANCE INSTITUTIONS

- Global financial institutions such as Goldman Sachs, have committed to start reducing and even stopping financing for projects related to fossil fuels.
- The global trend of ESG funds (funds that pay attention to ESG principles in their investment activities) has been increasing rapidly since 2020.

Source: Ministry of Finance

Indonesia is Highly Vulnerable To The Impacts Of Climate Change



Source: Standard and Poor's, 2014

Indonesia is one of the countries vulnerable to climate change impacts

Indonesia is an archipelagic country with **>17,000 islands** and is vulnerable to climate change risks such as rising sea levels.

From 2010-2018, national GHG emissions experienced a growing trend of around **4.3%** per year.

From 1981-2018, Indonesia experienced increasing temperature of **0.03 °C per year.**

Indonesia experiences a sea-level rise of **0.8-1.2 cm/year**, while approximately 65% of the population lives in coastal areas.

RISKS OF CLIMATE CHANGE

WATER SCARCITY
Increasing levels of floods and severe drought will exacerbate the scarcity of clean water.

LAND ECOSYSTEM DAMAGE
It is scientifically predicted that severe forest fires will occur. This can lead to loss of ecosystems, biodiversity, and changes in Biomass.

MARINE ECOSYSTEM DAMAGE
Rising sea surface temperatures cause the extinction of coral reefs, seaweed, mangroves, some biodiversity and marine ecosystems.

HEALTH QUALITY DECREASE
Floods can cause the spread of vector-borne diseases and death from drowning. An increase in temperature can cause death from heatstroke.

FOOD SCARCITY
Changes in the production of biomes and ecosystems can lead to food scarcity for all living things.

Source: MoF, *BP Statistical Review of World Energy 2021*

Climate Change may increase the risk of hydrometeorological disasters, which currently reach

80%

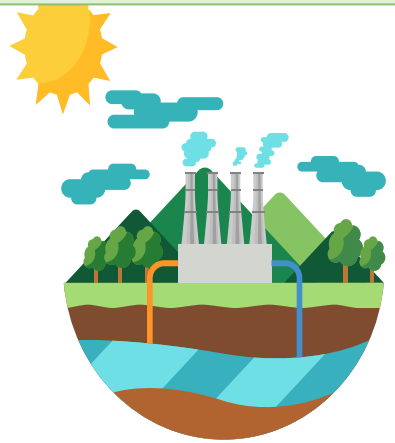
of the total disasters that occurred in Indonesia.
Source: *NDC, 2016*

Indonesia's potential economic losses can reach **0,66% to 3,45% of GDP** in 2030
Source: Roadmap NDC Adaptasi, 2020

Source: Coordinating Ministry for Economic Affairs

Green Economy Has Become One Of Indonesia's Economic Transformation Strategies

- The energy transition is inevitable, and we have to face it. As a country that still relies on fossil energy, **Indonesia views the energy transition to reduce the share of fossil energy in the energy mix**. This decline in share shortly will not necessarily reduce the amount of fossil energy used.
- For doing so, **Indonesia has several policies on compensation and incentives**, i.e., clean energy acquisition, energy transition mechanism (coal-fired PP early retirement), conversion of dirty energy sources, carbon trading, **carbon tax**.
- **The Carbon Tax will be enforced from April 1, 2022, based on Law Number 7 of 2021 concerning the Harmonization of Tax Regulations.**



- *Fossil fuel share will be decrese, but the magnitude not recessarily reduced*
- *Renewable energy share will increase and dominate the energy mix.*

- ***Corporate that still use non-renewable energy***
  a) Upgrading technology to clean technology
  b) Use of CCS (Carbon Capture Storage);
  c) Early retirement Coal power plant;
  d) Carbon trading; and
  e) Clean energy R&D investment

- **New corporation**
  a) Clean energi utilization
  b) Carbon trading
  c) Clean Energy R&D Investment

Policy – Compensation & Incentives

1 Clean Energy Acquisition

Incentives to companies that will conduct R&D and invest in clean/renewable energy (hydrogen, hydro, PLTS, etc.)

2 Energy Transition Mechanism (*Coal-fired PP Early Retirement)*

Compensation for early retirement of dirty/non-renewable energy plants (PLTU)

3 Conversion of Dirty Energy Sources

Incentives to convert dirty energy sources into clean energy sources (Coal to DME)

4 Carbon Trading

The mechanism for buying and selling carbon, and emission certificates as securities that can be traded on the carbon exchange

5 Carbon tax

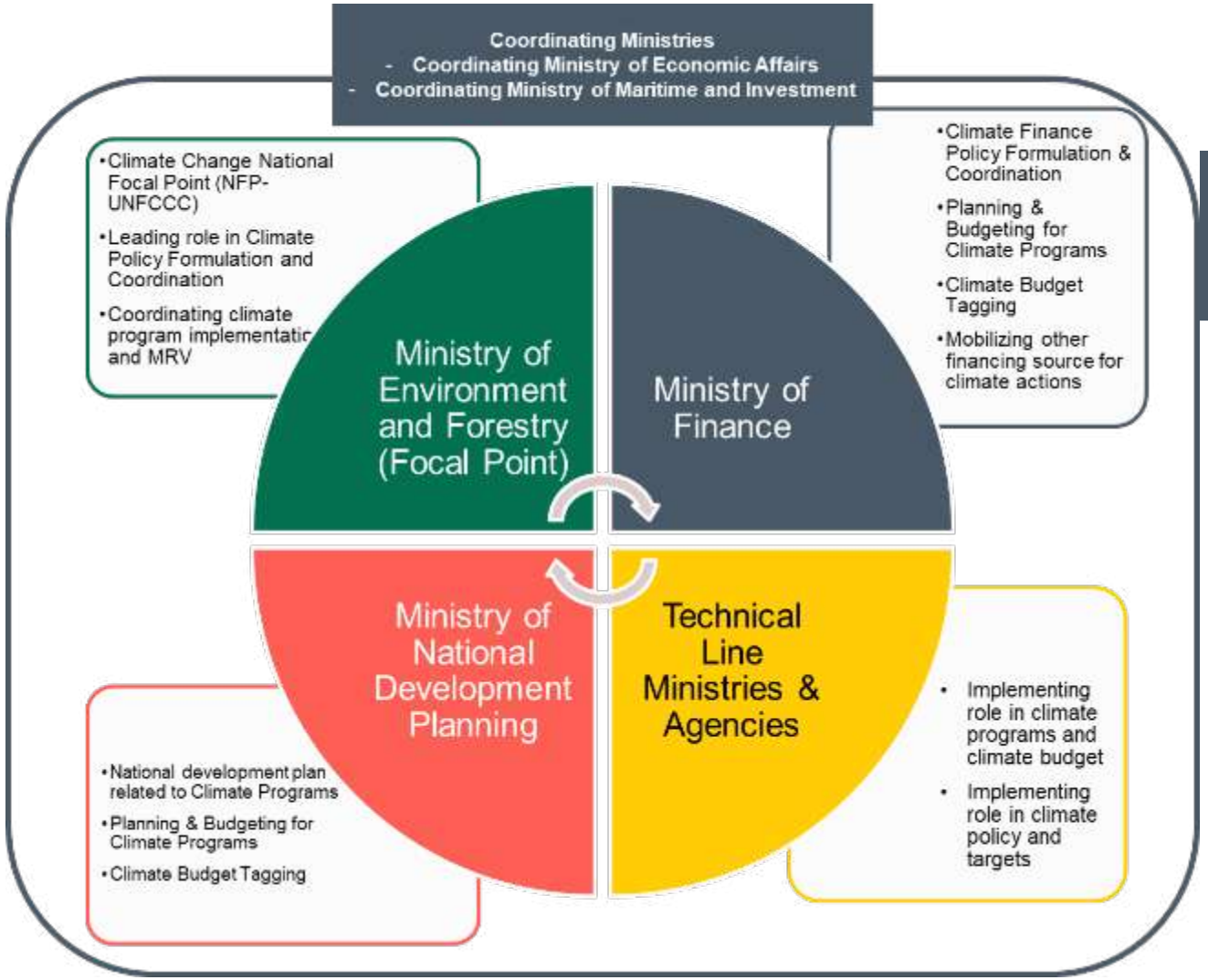
Dis-incentive on the use of dirty/non-renewable energy, and the use of funds from carbon tax to encourage the development and utilization of ean/renewable energy

Source: Coordinating Ministry for Economic Affairs

Climate Governance in Indonesia

Ministry of Finance is responsible for climate fiscal policy

Ministry of Finance c.q. The Fiscal Policy Agency is also the National Designated Authority of the Green Climate Fund (NDA-GCF) as the core interface between the country and the GCF



Central Bank and Financial Sector Authority

Also coordinating with Central Bank (BI) and FSA (OJK) to promote green and resilience development through fiscal, monetary, and financial policy mix

Source: Ministry of Finance

The Government's commitment to climate change mitigation has been formulated in the Nationally Determined Contribution (NDC) and Net Zero Emission (NZE)

INDONESIA'S CLIMATE CHANGE AGENDA

Paris Agreement and Nationally Determined Contribution (NDC) 2030

Target:

29% national effort

41% with international support

Stated in:

- First NDC (2016)
- Updated NDC (2021)

MITIGATION

GHG Emission Reduction Target Per NDC Sector (MTon CO_2e)

INDONESIAN EMISSION REDUCTION TARGET	FORESTRY	ENERGY & TRANSPORTATION	WASTE	AGGRICULTURE	IPPU
29%	497	314	11	9	3
41%	692	446	40	4	3.25

Policy Strengthening and Implementation

- **Carbon Pricing**
  - Carbon Trade
  - Carbon Tax (initial rate: Rp30/Kg CO2e)
- **Climate Finance**
- **Technology Development and Transfer**
- **Capacity Building**

Climate Resilience

1. Economic Resilience
2. Social Resilience and Livelihood
3. Ecosystem and Landscape Resilience

ADAPTATION

Long-Term Strategy for Low Carbon and Climate Resilience 2060

Mandate from:

- Paris Agreement Article. 4.19
- Dec.1/CP.21 Para 35

LCCP Scenario:

- Peak emission 5 sector in 2030 = 540 Mton CO2e
- Net-Sink FOLU in 2030
- Net Zero Emission in 2060 or sooner

Toward Net Zero Emission 2060

Commitment to Sustainability and Climate Change Mitigation

Republic of Indonesia's Commitment to Sustainability which Includes Climate Change Mitigation

Background of Commitment

Commitment to Sustainability

Successfully implemented the Sustainable Development Goals by achieving the 2030 development agenda introduced by the United Nations (**UN**). The Indonesia's Presidential Regulation no. 59/2017 concerning the implementation of SDGs in Indonesia mandated the Ministry of National Development Planning to provide the Roadmap of SDGs in Indonesia

Combining public and private funds to support Sustainable Development Goals (SDG)s

The Government of Indonesia through the Ministry of Finance and PT Sarana Multi Infrastruktur (**SMI**) seeks to achieve the SDGs through the establishment of an integrated platform called "SDG Indonesia One"[1] which combines public and private funds through blended finance schemes to be channeled into infrastructure projects related to the achievement of SDGs

The President's *Nawacita* Programme

The **Nine Agenda Priorities** of the President's priority actions. Shifting to a low-carbon and climate-resilient development path is an integral part of this mission and is integrated in development policies, strategies and programs

Environment Commitment and Objectives

Mitigation

- Based on the Paris Agreement and Indonesia's NDC, GoI has committed to **reduce greenhouse gas emission** by 29% in 2030 on unconditional mitigation scenario using self-financing, and by 41% in 2030 on conditional mitigation scenario using international financing support
- Based on National Energy Policy, **increase New Renewable Energy to 23%** of national energy mix by 2025
- **Strengthen the Core Actions** through strengthening the policy framework, human and institutional capacity, socializing, and researching
- With regards to forestry, the actions should include deforestation prevention, forest degradation prevention, conservation, and others

Adaptation

- **Climate Change:** Significant risks for Indonesia's natural resources that will impact the production and distribution of food, water, and energy
- **National Action Plan on Climate Change Adaptation:** National framework for adaptation initiatives mainstreamed into the National Development Plan
- **Medium-term Goal of Indonesia's climate change adaptation strategy:** reduce risks on all development sectors by 2030 through local capacity strengthening, improved knowledge management, convergent policy on climate change adaptation and disaster risks reduction

Biodiversity

- Indonesia is the world's largest archipelago comprising over 16,056 islands with unique ecosystems containing a large number of diverse species.
- Contains the world 3rd largest area of rainforests
- Biodiversity Strategy and Action Plan 2015-2020 was launched to provide an outline on how biodiversity could be utilized sustainably to improve economic and development opportunities.

Note: (1) SDG Indonesia One, PT Sarana Multi Infrastruktur

Source: Ministry of Finance

Commitment to Handling Climate Change

NATIONAL CLIMATE CHANGE POLICY TIMELINE

- 1994 — UNFCCC ratification to UU No.6/1994
- 2004 — Kyoto Protokol ratification to UU No.17/2004
- 2011 and 2014 — RAN-GRK and RAN-API
- 2016 — Paris Agreement ratification to UU No.16/2016
- 2016 — Submission of Nationally Determined Contribution (NDC) to UNFCCC
- 2020 — RPJMN 2020-2024 Prioritas Nasional 6

FISCAL POLICY RESPONSE TO CLIMATE CHANGE ISSUES

- Mitigation Fiscal Framework
- Tax Incentives for NRE and clean technology development
- Revocation of Fuel Subsidy
- Implementaion of Climate Budget Tagging
- Indonesia's Green Bond/Sukuk Framework
- Mainstreaming Climate Budget Tagging in local government budget
- Ecology-based Fiscal Transfer

NEXT STEP OF CLIMATE RELATED FISCAL POLICY

Preparation of fiscal instruments related to Carbon Tax and Carbon Trading

updating Mitigation Fiscal Framework

Integration of Climate Change Planning, Budgeting and MRV Systems

Preparation of SDGs Government Securities Framework

CLIMATE CHANGE AGENDA NATIONAL AND GLOBAL

Nationally Determined Contribution (NDC)

SDGs 13: Climate Action

Low Carbon Development Planning in RPJMN 2020-2024

Agenda Net-Zero Emission

Source: Ministry of Finance

The Government Has Committed to Address Climate Change Impacts

The National Climate Change Policies:

- **1994** — The ratification of UNFCCC Law 6/1994
- **2004** — The ratification of Kyoto Protocol to Law 17/2004
- **2011 & 2014** — RAN-GRK dan RAN-API
- **2016** — The ratification of Paris Agreement to Law 16/2016
- **2016** — Delivery of first NDC to UNFCCC
- **2020** — The Medium-Term National Development Plan 2020-2024 6th National Priority
- **2021** — Delivery of Update NDC and LTS-LCRR 2050
- **2022** — Submitted the Enhanced NDC (ENDC) to UNFCCC

Enhanced Nationally Determined Contribution **(NDC) is an enhanced national commitment to contribute the reduction of GHG emission from the BaU scenario by 2030: 31,89% by self-effort and 43,20% with international cooperation**

Mitigation

GHG Reduction Emission Target per NDC Sector (Mton CO2e)

Target	Forest	Energy & Transportation	Waste	Agriculture	IPPU
31,9%	500	358	40	10	7
43,2%	729	446	43,5	12	9

Estimate cost of mitigation

IDR 4.002 trillion or +/- USD 281 billion*
(accumulated cost from 2018 until 2030)

Long-Term Strategy for Low Carbon and Climate Resilience (LTS-LCCR) 2050

- A mandate of the Paris Agreement Article. 4.19
- NDC achieving guideline in the future;

LCCP (*low carbon compatible with Paris Agreement*) Scenario:

- Forestry and Other Land Uses (FOLU) Net-Sink 2030;
- Net Zero Emission (NZE) 2060 or sooner.

Road to *Net Zero Emission* (NZE) 2060 or sooner

*Source: *Third Biennial Update Report*

Enabling Factors To Achieve Enhanced NDC

Requirements to Reduce Emissions

ENERGY DIVERSIFICATION

01 

Development of RE Power Plants

- ❑ RUPTL: Additional 20.92 GW until 2030
- ❑ Beyond RUPTL: Rooftop Solar, RE PPs for non-PLN Business Areas, Large-Scale hydro.

02 

Biofuel Utilization

Implementation of the B40 Program starting in 2025, with a target of biofuel production reaching 30 million KL in 2030

03 

Early Retirement Coal PP

Starting in 2027, the total capacity of the Coal PP that will be "retired" is 9.1 GW.

Requires an NRE baseload generator as a replacement

04 

Utilizing New Energy as Baseload

Encouraging the use of new energy, including nuclear (every 1 GW of nuclear power plants will reduce 6.7 million tons of CO2), as an alternative provider of base load electricity

ENERGY CONSERVATION

01 

Application of Energy Management

Implementation of energy management compliance in all sectors, including industry, transportation, and buildings through the Revised GR on Energy Conservation which was completed this year.

02 

Electric Vehicle

- ❑ 13 million two-wheeler by 2030
- ❑ 2 million four-wheeler by 2030

03 

Electric Stoves and Gas Network

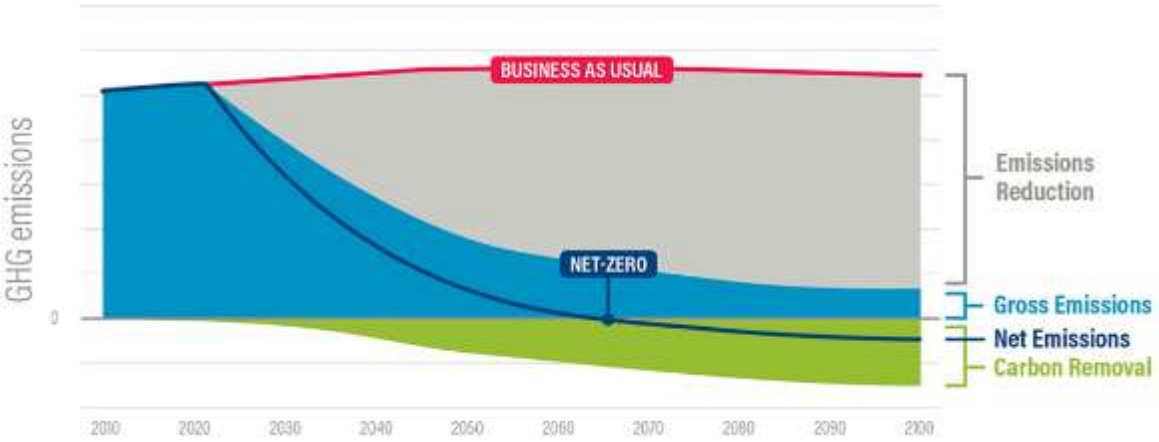
- ❑ Electric Stove for 19 Households
- ❑ Expand Gas Network until 10,2 million SR by 2030

04 

Implementation of policies on Minimum Energy Performance Standards (Standar Kinerja Energi Minimum -SKEM), Fuel Switching, and Clean Generation Technology.

Source: Coordinating Ministry of Economic Affairs

Net Zero Emission (NZE)



Source: World Resource Institute

Net Zero Emission is a more ambitious Long Term Strategy to keep the global temperature rate below 1.5 degrees.

In 2018, the Special Report on Global Warming of 1.5°C, the Intergovernmental Panel on Climate Change (IPCC) stated the importance of achieving the NZE by 2050 or earlier to prevent the worst effects of climate change.

10 Key Solutions to Achieve NZE 2050

Sumber: World Resource Institute

Long Term Strategy was mandated ini Paris Agreement Article 4.19

"All Parties should strive to formulate and communicate long-term low greenhouse gas emission development strategies…."

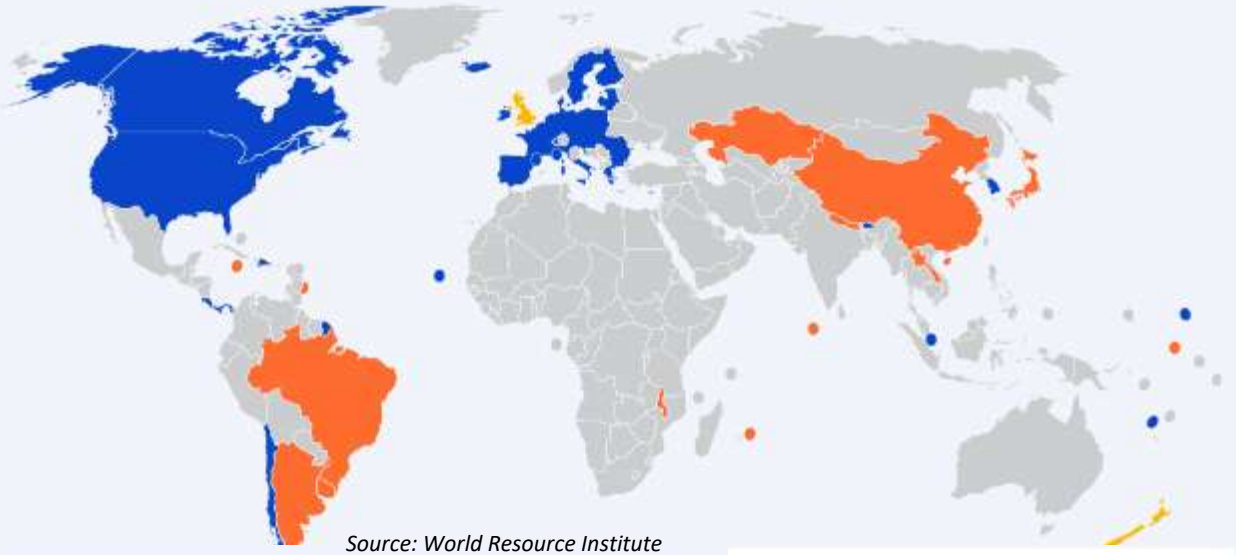
Source: Ministry of Finance

Indonesia's Net Zero Emission

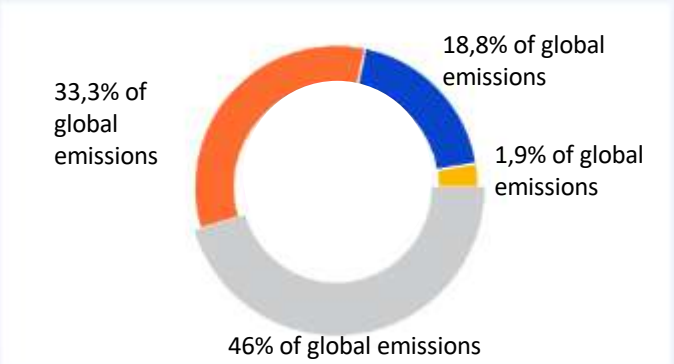
Currently, there are 48 Parties (with a global emission share of 54%) that have communicated to the UNFCCC regarding the target NZE.

Indonesia and 148 other Parties (with a global emission share of 46%) have not submitted the document

The Government of Indonesia is drafting the Long Term Strategy on **Low Carbon and Climate Resilience 2050** (LTS-LCCR) document and sectoral strategies to support the commitment to Net-Zero Emission 2050.



Source: World Resource Institute



Source: Ministry of Finance

Roadmap New Renewable Energy (NRE) to Net Zero Emission

- The NRE Roadmap towards Net Zero Emission is a form of energy transition roadmap from fossil energy to renewable energy to achieve net zero emission in the energy sector.
- **Some of the important points in this roadmap include :** NRE development to reach 100% in the national energy mix, Reducing the operating emissions of PLTD which is getting bigger, Reducing fossil energy consumption, both in the residential, transportation, and power generation sectors, Utilization of energy efficiency equipment on a large scale.

2021-2025

2021: President decree RNE, President decree *Retirement Coal*, *Cofiring* electric Steam Pwr Plant, CCT, conversion Diesel Pwr Plant to gas & EBT
2022: Act NRE, Electric stove 2 millon household/year
2024: Interconnection, *smart grid & smart meter*
2025: NRE 23% dominate by Solar Power Plant
- Electrification ratio 100%
- Electricity .217 kWh/kapita.

2026-2030

2027: Stop import LPG
2030: NE 42% dominate Solar Pwr Plant
- No New PLTS fosil pasca 2030
- EV 2 million car & 13 mil motorcycle
- Gas fuel vehicle 300.000
- Household Gas 10 million
- DME fuel
- Electric 1.548 kWh/kapita

2031-2035

2031: *Retirement Steam Pwr Plant Phase I sub-critical,* interconnection inter-island start COD
2035: RNE 57% dominate by Solar Pwr Plant, *hydro, geothermal*
- Electricity 2.085 kWh/kapita

2036-2040

2037: *Retirement Steam Pwr phase 2 sub-critical, critical &* some *super critical*
2040: NRE 71% dominate Solar pwr plant & biomass
- Stop selling conventional motorcycle
- No Diesel pwr plant
- LED lamp 70%
- Electricity 2.847 kWh/kapita

2041-2050

2045: First Nuclear Pwr Plant start COD
2050: RNE 87% dominate *Biomass* & Solar Pwr Plant
- Stop selling conventional car
- Electricity 4.299 kWh/kapita

2051-2060

2054: Last Steam pwr plant *retired*
2055: Last Steam gas pwr plant *retired*
2060: NRE 100% dominate Solar pwr plant, *hydro*
- All vehicle electricity basis
- Electric stove 52 million household
- Household gas 23 milion
- Electricity 5.308 kWh/kapita

Source: Coordinating Ministry for Economic Affairs

Goverment Effort In Accelerating Energy Transition

"Reducing Fossil Energy and Increasing Renewable Power Plant"

PRESIDENT INSTRUCTION

UNFCCC - COP21, DEC 2015 upd SEP 2022

Decreasing greenhouse gases emission up to 31,89% (with our own ability) **or 43,2%** (with International Assistance) in 2030 according to NDC

COP 26, NOVEMBER 2nd, 2021

In Energy Sector, we also stepping forward by improving electric vehicle development ecosystem, developing biggest solar energy power plant in Southeast Asia, utilization of renewable energy including biofuel, and developing Clean Energy Industry including the World Biggest Green Industry Area in North Kalimantan.

G20 SUMMIT GOAL

"Recover Together, Recover Stronger"

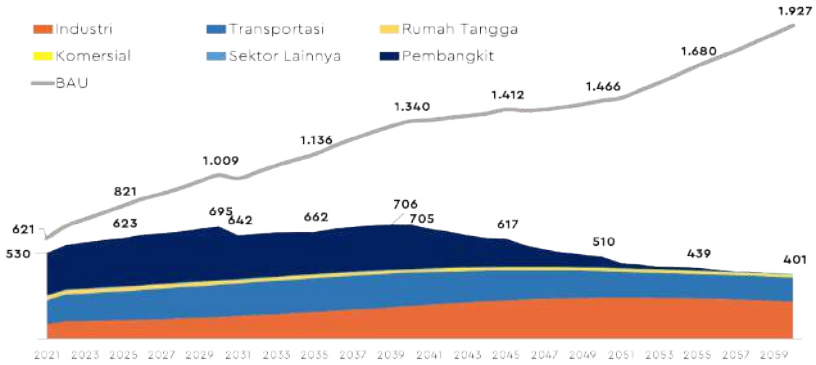
1. Inclusive Global Health;
2. Digital Economic Transformation; and
3. Sustainability Energy Transition.

NET ZERO EMISSION

COP26: Indonesia Should Achieve Net Zero Emission in 2060 or Faster

MAIN STRATEGY

1. Retirement Electric Steam Power Plant Gradually
2. Acceleration of Renewable Energy Development Power Plant especially Solar and Wind
3. Utilization of High-Efficiency Technology
4. Encouraging utilization of Electric Vehicle and Electric Stove
5. Implementation of Smart Grid to prevent VRE (Variable Renewable Energy)



Source: Ministry of Energy and Mineral Resource

The ETM Mechanism To Address The Energy Transition Challenges

The Main Objectives

Shortening the economic life of the PLTU project (early retirement of coal)

Getting additional reduction of greenhouse gas emissions to achieve Indonesia's NDC (CO2 emission avoidance)

Gaining access to financing with lower cost of fund

Limitation:

Does not provide additional burden from the fiscal side / APBN (minimum fiscal burden)

Does not change the electricity tariff as stated in the Electricity Sale and Purchase Agreement (PJBL) / Power Purchase Agreement (PPA) which will increase the electricity rates

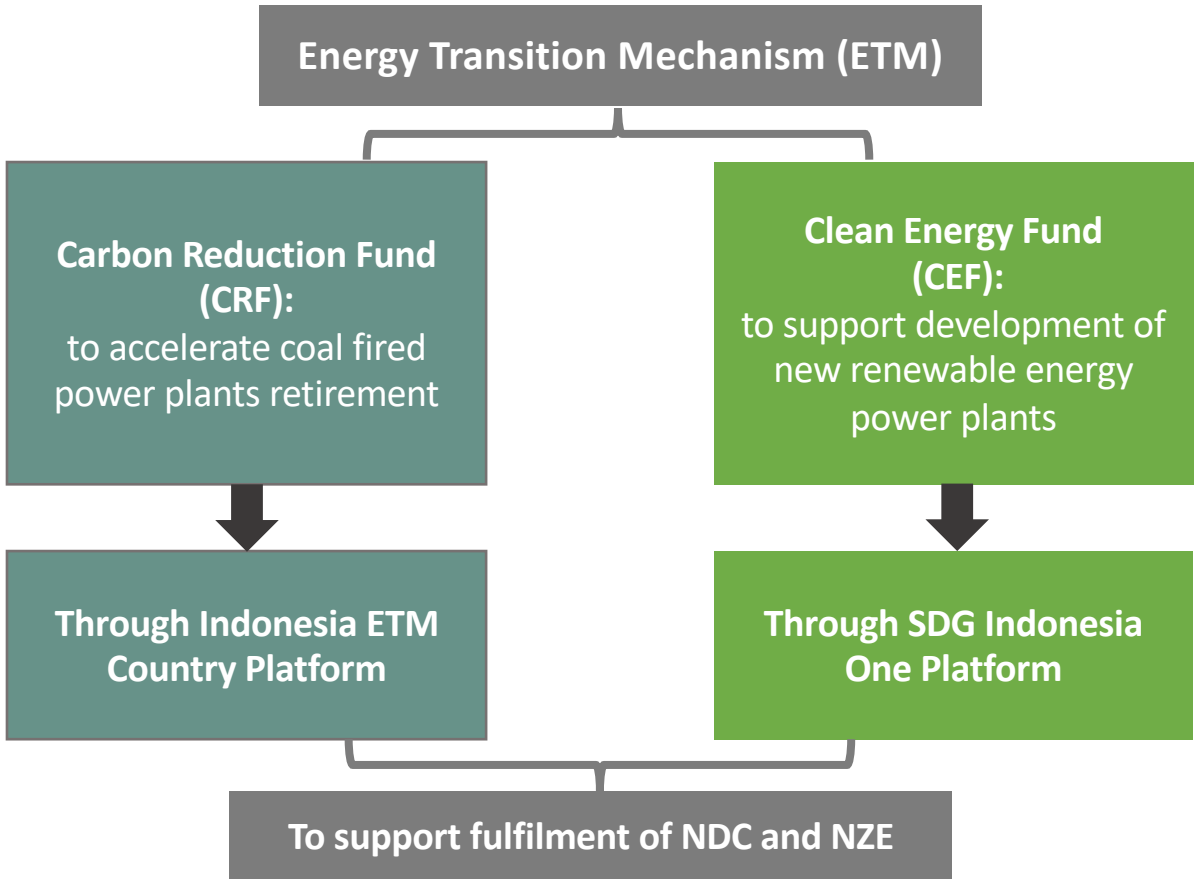
Solution

Support for Cost of Capital Reduction

01 Support to reduce the *Cost of Equity*

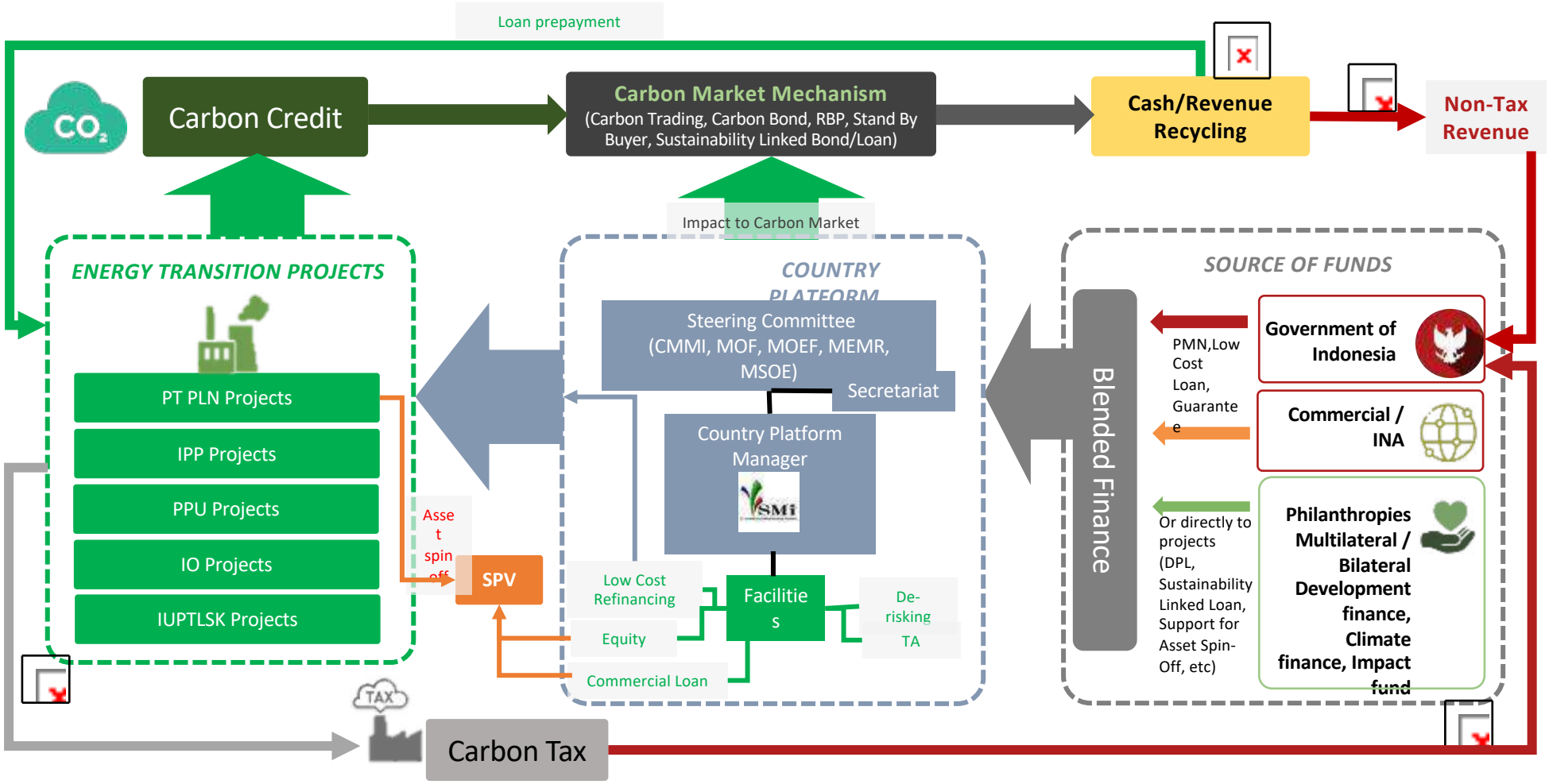
02 Support to reduce *Cost of Debt*

Energy Transition Mechanism Overview

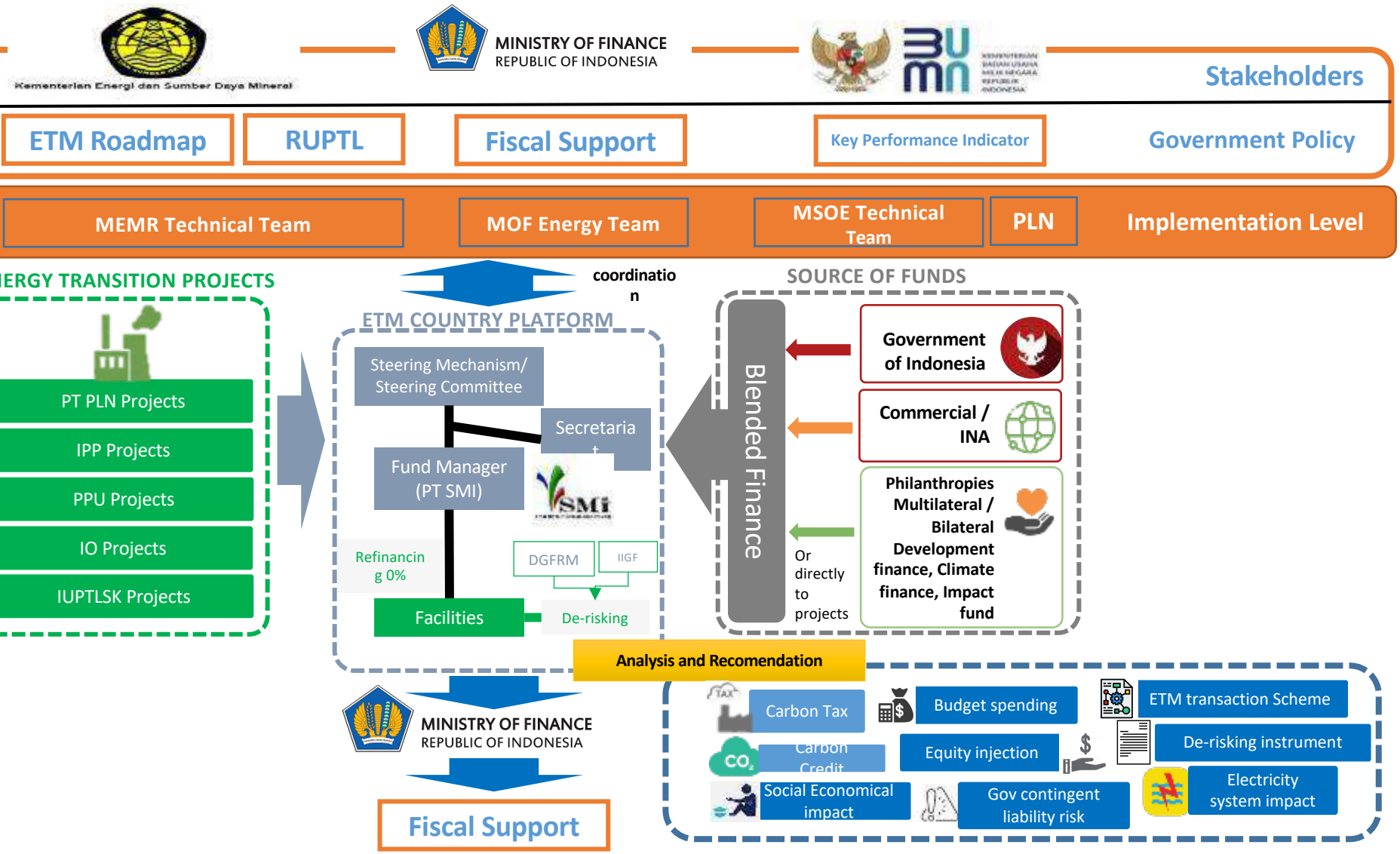


Note:
The CRF is not bundled with CEF, but there will be a commitment to use the proceeds of CRF directly and indirectly to develop new renewable energy projects

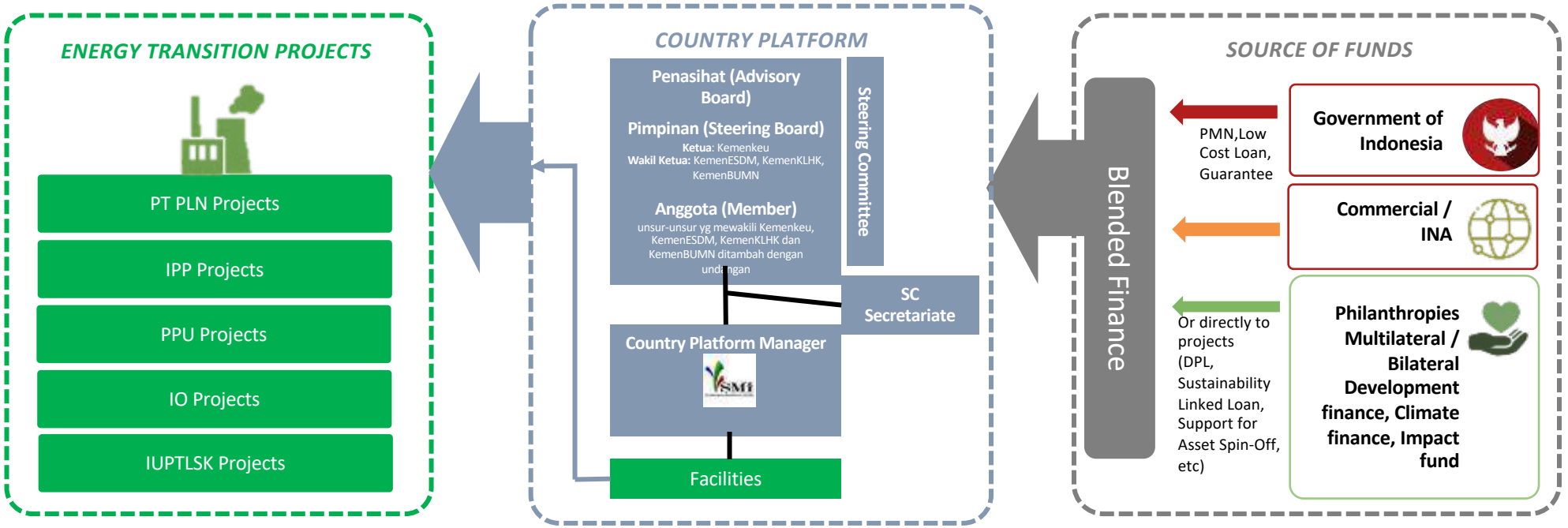
INDONESIA ENERGY TRANSITION MECHANISM COUNTRY PLATFORM (Carbon Reduction Fund)



ETM Transaction Mechanism

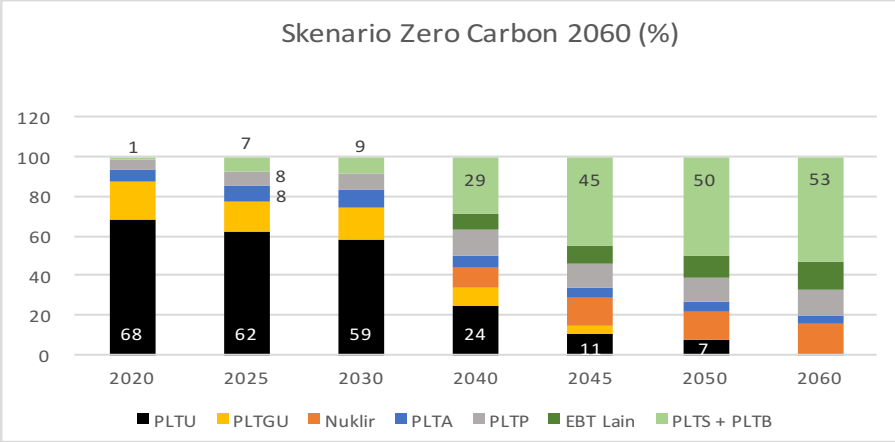


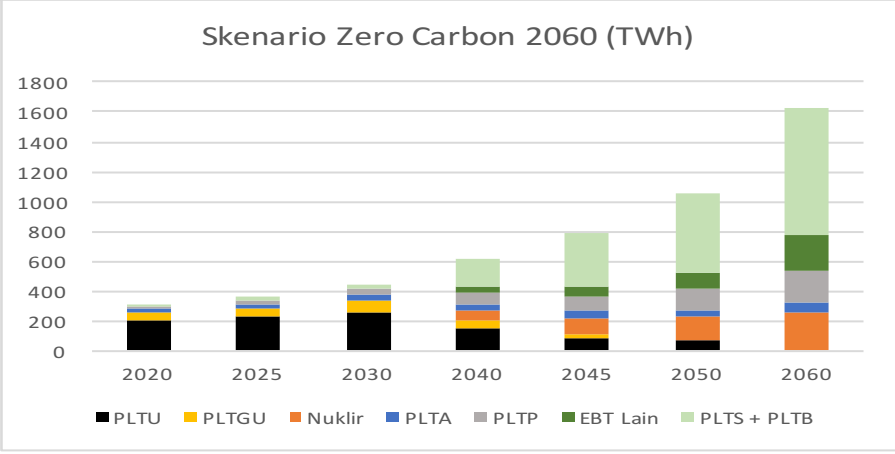
Indonesia Energy Transition Mechanism Country Platform



The Steering Committee (SC) provides directions, sets targets and KPIs, and makes critical decisions regarding the provision of financing instruments (facilities) to energy transition projects.
The SC Secretariate plays role in carrying out daily tasks related to the SC function.
The Country Platform Manager manages the related funds and provides the facilities to the projects according to the direction of the SC.

Phasing Out Coal Scenario





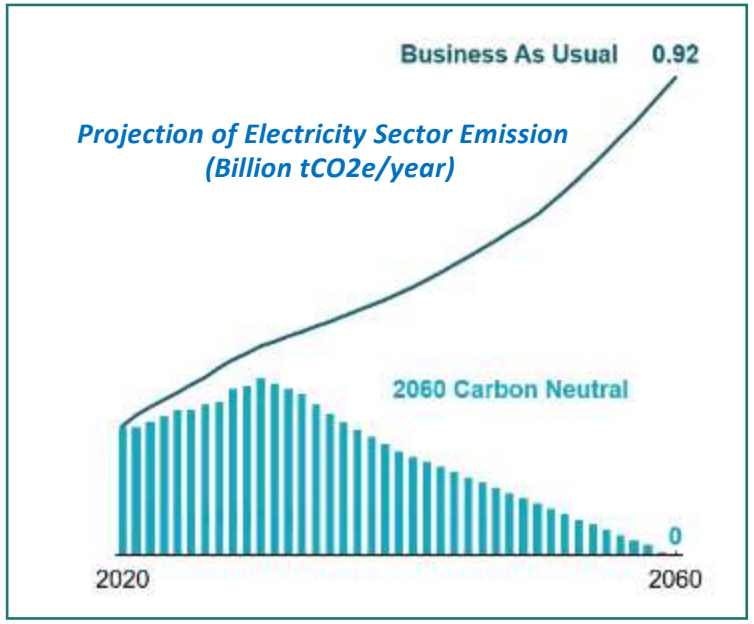
In 2060 All Power Plants in Indonesia are Using Clean Energy

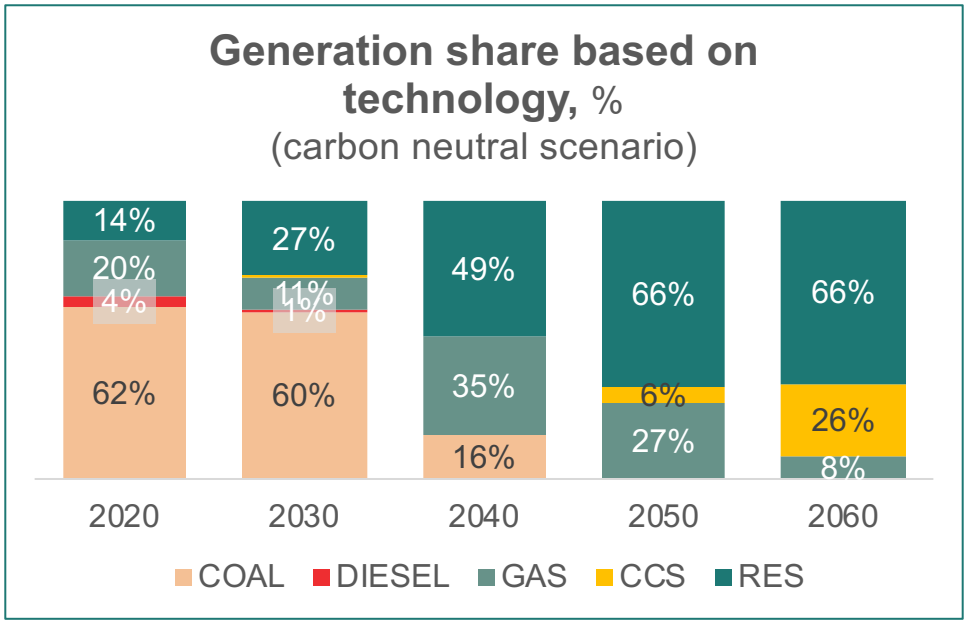
1. The market size utility in 2060 is 1,800 TWh, currently electricity production is 300 TWh plus the launch of 120 TWh from the 35 GW program, so there is room for 1,380 TWh for additional New Renewable Energy (NRE) generating capacity.
2. From 2020 onwards, the portion of PLTU capacity will be reduced (in the graph, it can be seen from the decreasing black color).
3. Efforts to retire fossil power plants will start in 2030 and significantly decrease in number by 2040, following the completion of the power plant contract.
4. Nuclear plants will enter in 2040 to maintain system reliability as nuclear technology becomes more secure.
5. Phase out all coal-fired power plants in 2056, because they have been replaced by NRE.
6. Meanwhile, the development of NRE power plants will experience a massive increase starting in 2028 due to the advancement of battery technology which is getting cheaper. Then it will increase exponentially starting in 2040. And by 2045, the portion of NRE will already dominate the total power plant. The next decade, all power plants in Indonesia came from NRE.

Source: PT PLN

The Roadmap To Net Zero Emission In The Electricity Sector

Without carbon abatement, the electricity sector is estimated to contribute 0.92 billion tCO2e/year emissions by 2060.





Source : PLN

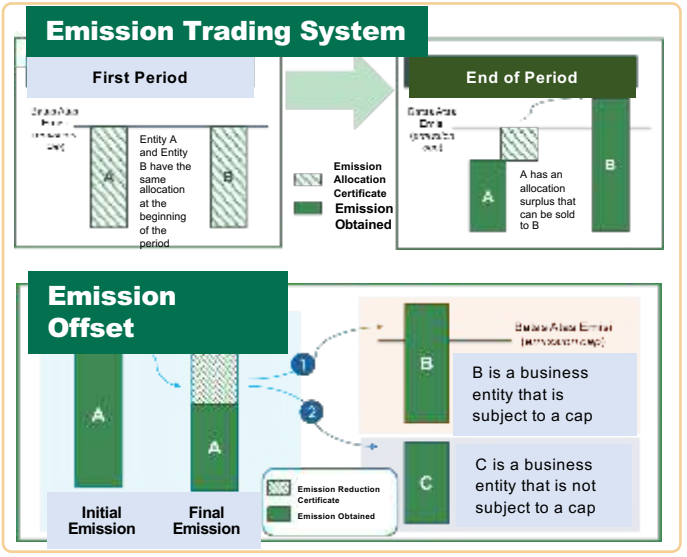
- In the **business as usual scenario,** Electricity contributed 0.92 billion tCO2e/year in 2060.
- Getting around this needs to be devised a strategy to reduce emissions through increased RE and decrease in fossil-based generation.
- According to PLN's estimation, current best scenario is a shift in power generation to 66% based on EBT and 26% CCS technology in 2060.
- This scenario also supports the PLTU phasing down program in the future. The PLTU early retirement scheme through the ETM has the potential to be carried out.

Carbon Pricing or Carbon Economic Value (NEK) is a part of a comprehensive policy package for climate change mitigation

01. **Trading instruments**, consists of 2 types:

a. ***Emission Trading System (ETS)*** an entity that emits more buys emission permit from other entities that emits less

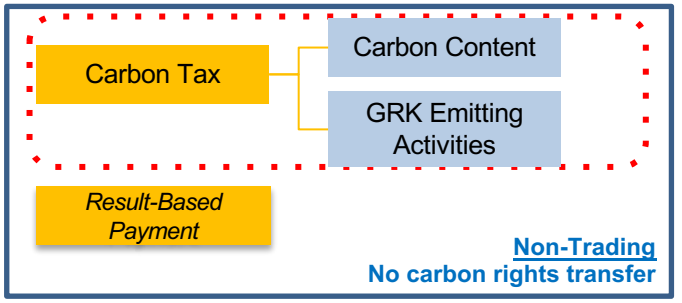
b. ***Crediting Mechanism***: entities undertaking emission reduction activities can sell their carbon credits to other entities requiring carbon credits



02. **Non-trading instruments**, consists of 2 types:

a. ***Carbon tax***, imposed on carbon content or carbon emitting activity

b. ***Result Based Payment*** **(RBP):** payment is given as a result of emission reduction



Carbon tax is one of the instruments of Carbon Economic Value (NEK)

OBJECTIVES

1 CHANGE BEHAVIOR

Aims to change the behavior of economic actors to switch to low-carbon green economic activities.

2 SUPPORTS EMISSION REDUCTION

Support GHG emission reduction targets in the medium and long term.

3 ENCOURAGE INNOVATION AND INVESTMENT

Encouraging carbon markets development, technological innovations, and investments that are more efficient, low-carbon, and environmentally friendly.

PRINCIPLES

1 JUST

Based on the *polluters-pay-principle*.

2 AFFORDABLE

Paying attention to affordability aspect for the benefit of the wider community.

3 GRADUAL

Paying attention sector readiness so as not to burden the community.

Carbon Tax

as one concrete step, the policy of carbon taxes is regulated in the Law 7/2021 concerning the Harmonization of Tax Regulations (UU HPP) to support NDC target by 2030.

Background:

- GHG emission controlling to decrease climate change risk and disaster in Indonesia.
- Through NDC, Indonesia committed to reduce 29% of its GHG emissions against the BAU or 41% of its emission with international support by 2030.
- Indonesia climate change mitigation strongly needs fiscal instrument.
- Economic behavior transformation that leads to low carbon development.

Key Points of The Carbon Tax Regulation on the Law 7/2021 (UU HPP):

- The Carbon Tax will be carried out in stages according to a roadmap that will take into account the development of the carbon market, achievement of NDC targets, sector readiness, and economic conditions.
- The implementation will prioritize the principles of justice and affordability by taking into account the business climate and small communities.
- The carbon tax rate is set higher or equal to the carbon price in the carbon market with a minimum rate of IDR 30.00 per kilogram of carbon dioxide equivalent (CO2e) and will be evaluated periodically, in line with the development of the GHG emission rate and the national economy's performance.
- Starting in 2022, it will be imposed on the coal-fired power plant sector with a cap and tax scheme that is in line with the implementation of the carbon market which has already started running in the coal-fired power plant sector.

Source: Coordinating Ministry of Economic Affairs

Principles of Rate Arrangement and Basis for Carbon Tax Imposition

Carbon Tax Implementation

1. The Carbon Tax will be imposed for the first time on entities operating in the coal-fired power plant sector with a tax mechanism based on emission limits.
2. The implementation of the carbon tax was decided to be postponed to July 1, 2022 from the initial plan of April 1, 2022, taking into account the Indonesia conditions – The Government focused on ensuring the availability and stabilization of energy and food prices, ensuring the acceleration of the national economic recovery after the pandemic, as well as to harmonize with efforts to improve various technical regulations for implementing carbon market schemes.
3. Technical regulations related to the carbon tax need to be implemented immediately to support the implementation of the carbon market that has been started in the coal-fired power plant sector.
4. The Ministry of Finance is currently preparing a Government Regulation on the Carbon Tax Roadmap which will be aligned with the Carbon Market Roadmap. The Government Regulation on Carbon Tax Roadmap will be issued in 2022.This is conveyed to comply with the provisions of the HPP Law, that the determination of the Draft Minister of Finance Regulation (RPMK) on Tariffs and Basis for Imposition of Carbon Taxes requires prior consultation with the parliament.

Tax Base

Excess

Carbon Emission

within **1 tax year** above the emission technical approval issued for the emitting unit

Tax Rate

2022

IDR30/ kg CO2e

2023

1.2 x average carbon price*

**in the previous tax year's carbon market or IDR30/kg CO2 (whichever is higher)*

Carbon Market Definition

"The place where carbon trading takes place which is integrated in the National Registry System for Climate Change Control (SRN-PPI)[1]

Refers to carbon trading that is already running and determined by the relevant minister or carried out through the PPI sub-SRN which is registered and registered at the PPI SRN[1]

Stages of Application in Coal-fired Power Plants

2022

limited to the State Electricity Company (PLN) and IPP* generating units with a capacity of **> 100 MW**

2023

Coal-Fire Power Plant with a capacity of **≥ 25MW**

Source: Ministry of Finance

[1]If carbon trading has not been integrated into the SRN PPI

Connectivity NDC And Carbon Pricing

1 *In-scope NDC*

- Sector, sub-sector and activities included on the 29% NDC target;
- Sector, sub sector and activities baseline;
- Financing sources from APBN/APBD, Green Sukuk, SDG Bonds, Carbon bonds, Carbon pricing;

2 *Out-scope NDC*

- Sector/sub-sector not included yet on the 29% NDC target;
- Potential to become NDC upgraded commitment;

Examples:

- *Blue economy, blue carbon, sea grass submitted on the* 2021 NDC *updated*;
- Energy Efficiency through CCS and CCUS submitted on the 2021 NDC *updated*;

3 *Beyond NDC*

Voluntary Carbon Market

- Sector, sub-sector and activities already included on the 29% NDC target and beyond achievement;
- Basic requirement: beyond achievement, government authorization and registered on the SRN;

Source: draft Ministerial Regulation on NDC, 2022

PATHWAYS IN SCOPE, OUT SCOPE and BEYOND NDC

Indonesia's Green PPP Project Priority Sector

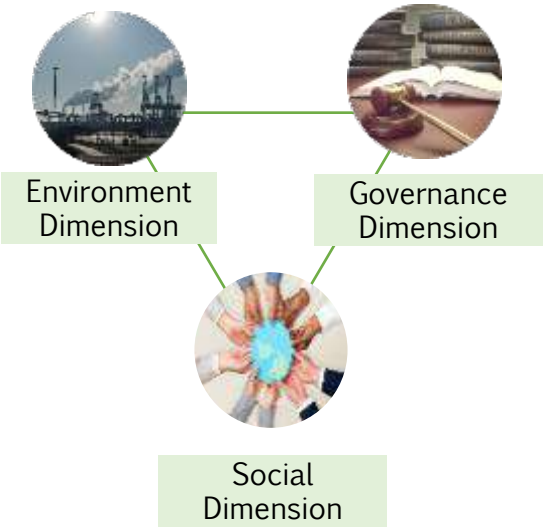
- Indonesia realizes that investment in green and sustainable infrastructure is becoming increasingly important in post-pandemic.
- Regarding the NDC targets in reducing carbon emission, Indonesia has outlined the PPP priority sectors of 2020-2024, in which two sectors are related to climate issue, respectively:
  - Urban Transport, and
  - Waste Management
- Environmental quality aspects of projects are considered since the beginning of PPP project cycle, notably in planning and preparation stage, such as climate change issues and promoting green financing.
- The Project Development Facility (PDF) from MoF is focused to assist those priority sectors while considering environmental and other quality aspects during project preparation and its implementation..

Source: Ministry of Finance

MoF launched the ESG Framework and Manual in November 2022 to be implemented to projects which involve private financing and receive government supports

Frameworks and manual are developed in collaboration with UNDP and the World Bank

ESG Framework



10 ESG Standards

- 4 standards cover 11 scopes in environmental dimensions
- 4 standards cover 11 scopes in the social dimension
- 2 standards cover 6 scopes in the governance dimension

Roadmap

2022	Piloting on the PPP project receiving the PDF (water and housing sector)
2023	Implementation on the PPP project receiving the PDF
2024	Implementation on the all PPP project receiving the PDF and Government Support
2025	Implementation on non-PPP projects that apply for and receive Government Support

The detailed Framework and Manual can be accessed here

The Role of Fiscal Policy in Green Economic Transformation

State **revenue** policy is directed to support the development of **renewable energy** as well as **environmentally friendly business** areas

The Ministry of Finance provides tax facilities in the form of tax holiday, tax allowance, import duty exemption, VAT reduction, government borne income tax, and reduction of property tax to support the development of geothermal and other renewable energy

State **expenditure** policy is directed to support **low-carbon and climate-resilient government spending** (spending better).

The Ministry of Finance implements the Mechanism of **Climate Budget Tagging** at the national and regional levels to determine the contribution of the State Budget and Sub—National Budget to tackle climate change.
Implementation of climate budget tagging in the region in collaboration with the Ministry of Home Affairs and Local Government.

Financing policy is directed to support expansive fiscal policy through the development of innovative financing instruments

The Ministry of Finance issues **Sovereign Green Sukuk (Green Islamic Bond)** both **global green sukuk** and **green sukuk retail** to finance climate mitigation and adaptation projects.

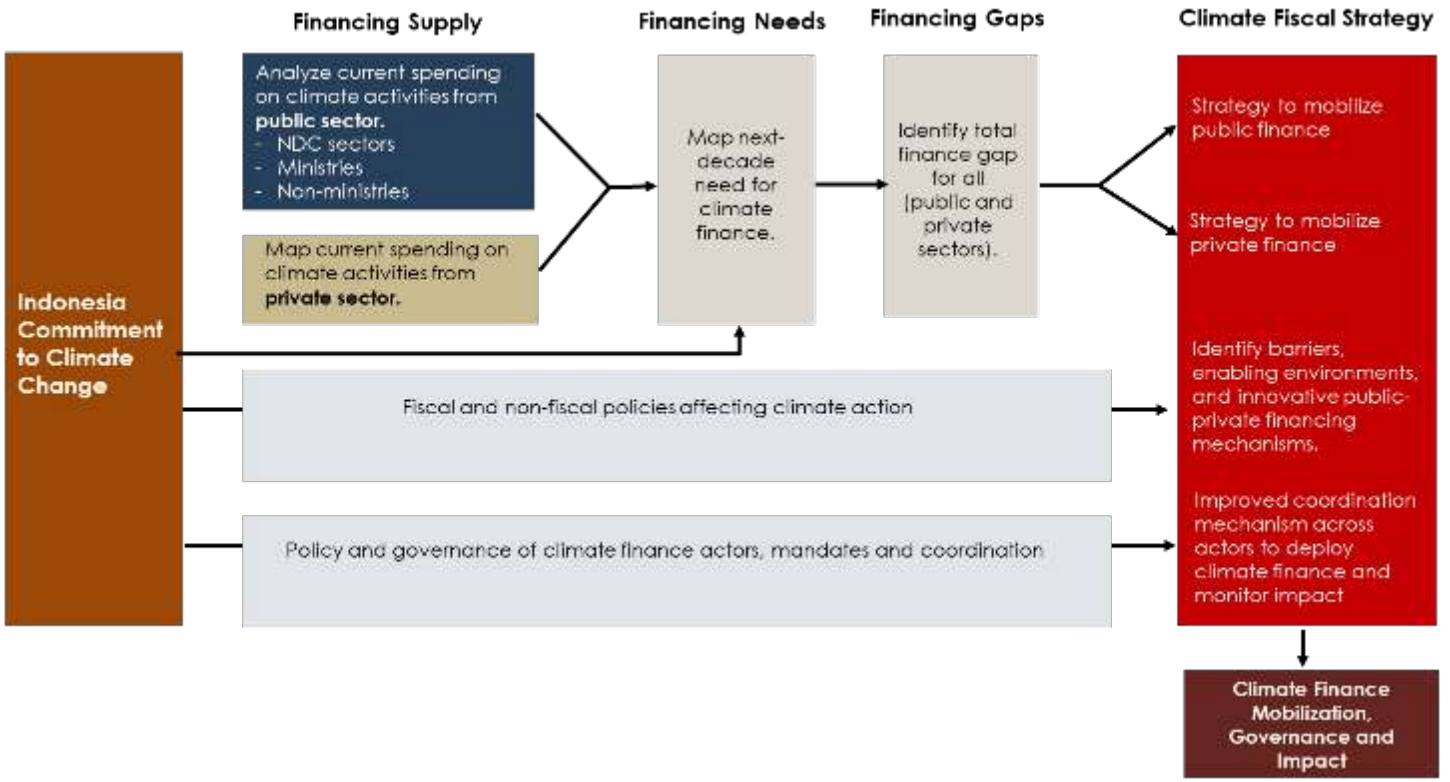
Source: Ministry of Finance

Recent Policies

Facing the existing challenges, the Government continues to develop innovative policies. Two of them are:

a. *Climate Change Fiscal Framework (CCFF)*
b. *Carbon Pricing*

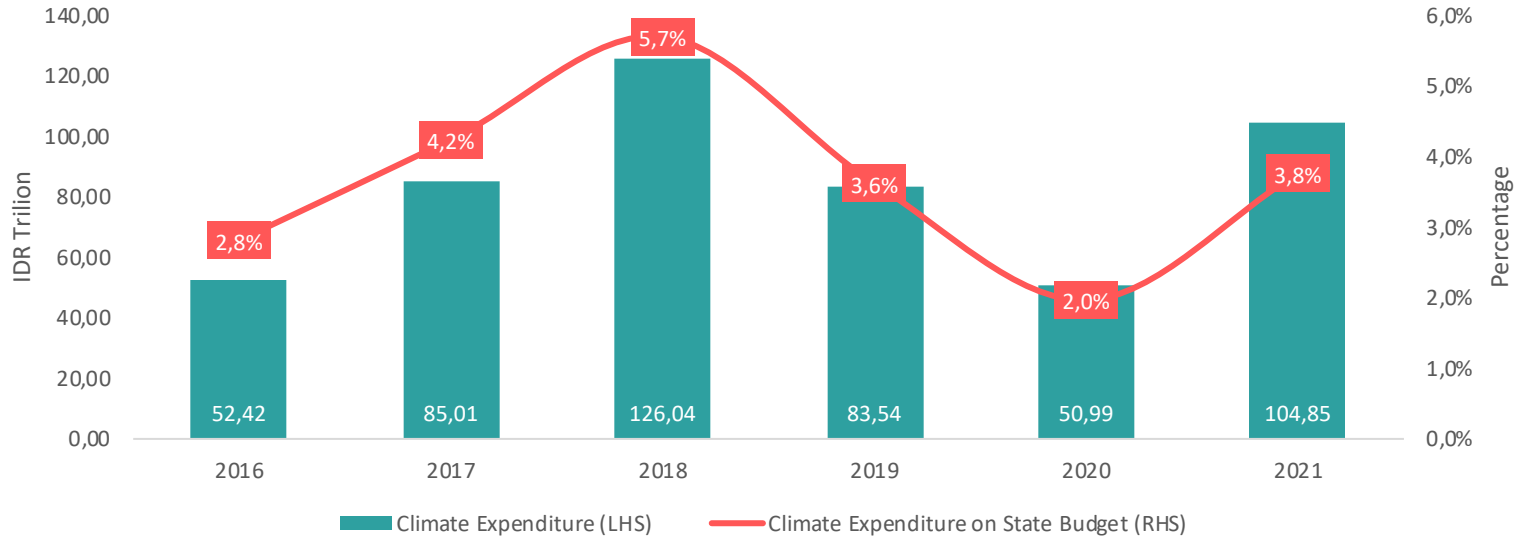
CCFF is a framework for formulating fiscal policies and strategies to mobilize funds outside the Budget



URGENCY

- Strengthening Fiscal Functions - Supporting NDC, SDGs & RPJMN commitments
- Mobilizing funding sources - Strengthening the framework of funding institutions

State Expenditure for Climate Change

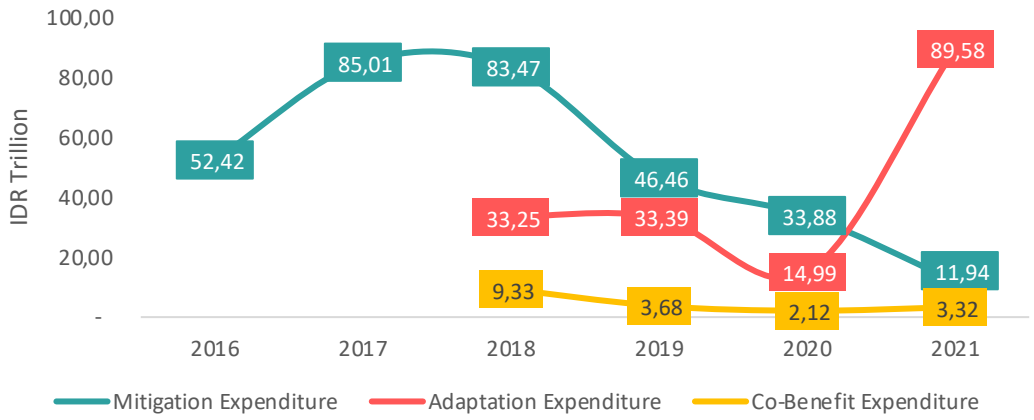


- Nominally, the climate change budget in Indonesia experienced an increasing trend from 2016-2018.
- For the year 2019 to 2020, there was a **decline as a result of the shifting energy policy to diversify renewable energy infrastructure development by private sectors or through PPP. In 2020, due to Covid-19 pandemic, GOI implement the budget reallocation and activity refocusing policy into health sector and social safety net.**
- Along with the economic recovery, the climate change budget bounce back in 2021 with a total budget ceiling of IDR 110.65 trillion and already spent IDR 104,85 trillion (disbursement rate 94,8%.
- During the last 6 years, **the average climate change expenditure has reached IDR 83.8 T per year or 3.7% of the state expenditure per year**.

Source: Ministry of Finance, calculated

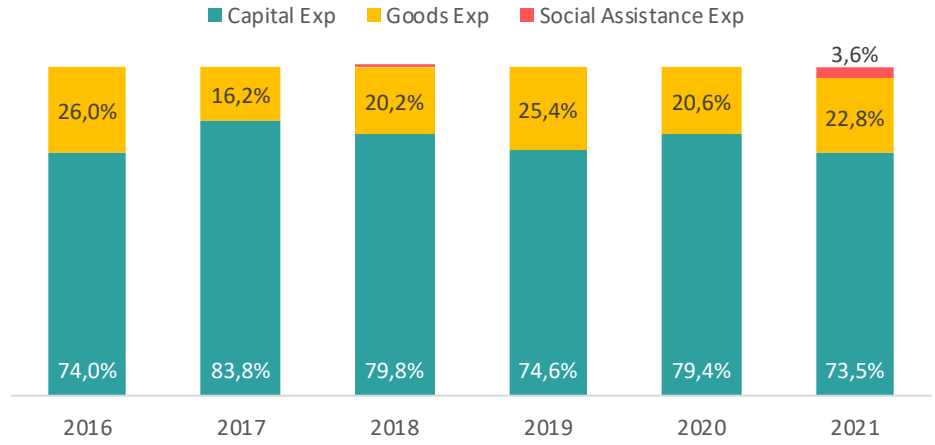
Government Expenditure for Climate Change

Climate Expenditure by Climate Activities



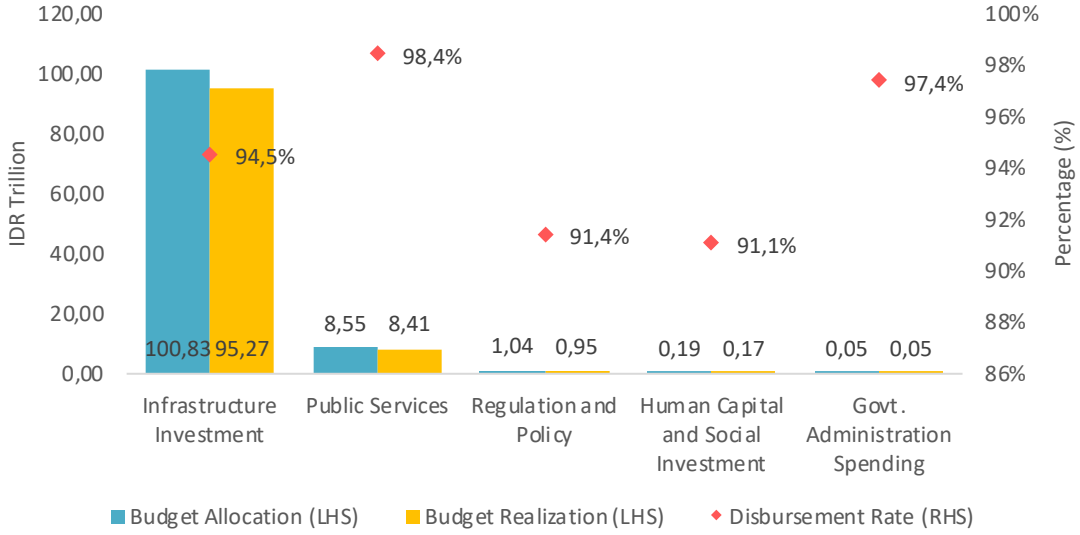
Source: Ministry of Finance, calculated

Climate Expenditure dominated by Capital Expense



Source: Ministry of Finance, calculated

Climate Expenditure FY 2021 by Output Type 2021



Source: Ministry of Finance, calculated

- Decreasing trend of mitigation expenditure due to diversification renewable energy infrastructure financing policy and some of multiyear infrastructure projects already done. But still, government need to pay attention on mitigation action particularly on energy and FOLU to support ENDC target.
- Increasing trend of adaptation expenditure due to climate resilience development policy particularly to develop water resilience infrastructure and blue sector infrastructures.
- Most of climate expenditure is in the form of capital expense with average 77,5% per year or IDR 75,91 trillion per year.
- In 2021, 91% climate budget directed to develop green infrastructures, and already disbursed IDR 95,27 trillion (94,5% disbursement rate).

Fiscal, Monetary, and Financial Sector Policy Mix for Green Economy

KEMENTERIAN KEUANGAN
REPUBLIK INDONESIA

Fiscal Policy:

1. Mitigation Fiscal Framework
2. Implementation of Govt. Expenditure for Climate Change
3. Tax Facilities
4. Republic of Indonesia's Green Bond/Sukuk Framework
5. Indonesia SDGs Government Securities Framework
6. Sustainable Finance Platform: SDG Indonesia One, Green Climate Fund, BPDLH
7. Development of Climate Change Fiscal Framework
8. Government support for new and renewable energy (NRE) development

BANK INDONESIA
BANK SENTRAL REPUBLIK INDONESIA

Central Bank Policy:

1. Macroprudential Policy that encourages financing in green building and environmentally friendly vehicles
2. Technical Assistance/Capacity Building to increase awareness about sustainable and green finance
3. International Cooperation Forum (Network for Greening the Financial System/NGFS)

OJK
OTORITAS JASA KEUANGAN

Financial Sector Authority Policy:

1. Roadmap of Sustainable Finance,
2. Regulation of Sustainable Finance Implementation,
3. Green Bond/Sukuk Regulation,
4. Capability Enhancement to market participants with support from the International Finance Corporation (IFC) and the Sustainable Banking Network (SBN)

Source: Ministry of Finance

National Climate Financing

Funding support to achieve the targets of the climate agenda can come from the public, private and international sectors towards ***"a just and affordable transition"***

SOURCE OF FINANCING

DOMESTIC

STATE BUDGET

- Carbon Tax/Excise
- Central Government Expenditure
- TKDD Expenditure
- Financing (Green Sukuk, SDGs Bond)

NON-STATE BUDGET

- Carbon Trading
- Private Investment and CSR
- BPDLH
- SDG Indonesia One
- ICCTF
- Financial Services sector (Bank and Non Bank)
- Capital market
- Philanthropy
- State Owned Enterprises

INTERNATIONAL

BILATERAL

- Government
- Private

MULTILATERAL

- Green Climate Fund
- Global Environment Facility
- Adaptation Fund
- MDBs
- IFIs

CHALLENGES AHEAD, ESPECIALLY DUE TO THE COVID-19 PANDEMIC

Limited fiscal space
Strengthening the fiscal reform agenda and fiscal consolidation will be the key to fiscal sustainability onward.

Optimal mobilization of non-state budget climate change funding sources**.**

Ensure that the economic recovery and transition to a green economy is **Just and Affordable.**

Strengthen the **viability** of green projects so that they can be financed by the financial sector and receive international support.

The current market mechanism has not been able to reflect the price difference between the Green and non-Green sectors. Currently, it is still limited to Green Financing, it is necessary to strengthen **Greening the Finance** in order to support the sustainable development agenda.

Source: Ministry of Finance

The Need of Climate Change Funding

Indonesia's commitments are derived into each sector's agenda. The commitments have significant financial consequences

Cost Estimation of Climate Change Mitigation

Reference	Scope	Cost/Impact Estimation
Second Biennial Update Report, KLHK (2018)	The cost of mitigating climate change to achieve NDC	**Accumulated mitigation cost** reaches **IDR3.461 trillion** until 2030
Roadmap NDC Mitigation Indonesia, KLHK (2020)	Cost of climate change mitigation to achieve NDC (using mitigation action cost approach)	Accumulated mitigation cost in 2020-2030 reaches **IDR3.779 trillion** (IDR343,6 trillion per year)

The Need of Climate Change Mitigation Funding, by Sector

Sectors	Second BUR (Rp trillion)	NDC Mitigation Roadmap (Rp trillion)
Forestry	77,82	93,28
Energy and Transportation	3.307,20	3.500,00
IPPU	40,77	0,92
Waste	30,34	181,40
Agriculture	5,18	4,04
Total	**3.461,31**	**3.779,63**

Source: Second Biennial Update Report (2018) & Roadmap NDC Mitigasi (2020)

Policies are required to ensure that financing requirements are met.

Source: Ministry of Finance

Role of The Ministry of Finance in Mobilizing Funds From Non-State Budget

GREEN CLIMATE FUND

- The GCF is the implementing entity for the UNFCCC financial mechanism which was established by the Conference of Parties (COP) in 2010.
- Has the potential to help Indonesia achieve its Nationally Determined Contribution (NDC) target without burdening the state budget.
- The world's largest climate change fund.
- Intended for developing countries.
- Have a variety of financial instruments.
- Have a balanced target between mitigation and adaptation

SDG Indonesia One

- SDG Indonesia One is an integrated funding cooperation platform managed by PT. SMI by combining public funds and private funds through a blended finance scheme to be channeled into infrastructure projects in Indonesia related to the achievement of the SDGs.
- SDG Indonesia One funding sources come from the private sector, donors/philanthropy, financial institutions, institutional investors, and bilateral and multilateral institutions.

bpdlh

badan pengelola dana lingkungan hidup

- BLU BPDLH or Indonesia Environment Fund (IEF) is a merger between the BLU of the Center for Forest Development Financing and the environmental conservation program of the Ministry of Environment and Forestry.
- IEF manages and provides the funds needed for environmental and forestry protection, preservation and conservation, biodiversity management, and climate change mitigation and adaptation.
- IEF not only manages funds in the environmental & forestry sector, but also in the fields of energy, agriculture, transportation, marine & fisheries, and industry.

Source: Ministry of Finance

GCF Approved Indonesian Projects/Programs

1 **GCF Readiness Programs I and II** for NDAs and Nationally Accredited Agencies

GGGI

Grants :
Readiness I USD850.000
Readiness II USD998.000

2 **Project Preparation (PPF) for Bus Rapid Transit Development in Semarang**

SMI

Grant : USD788.000

3 **Result-based Payment (RBP) REDD+ Indonesia (2014-2016)**

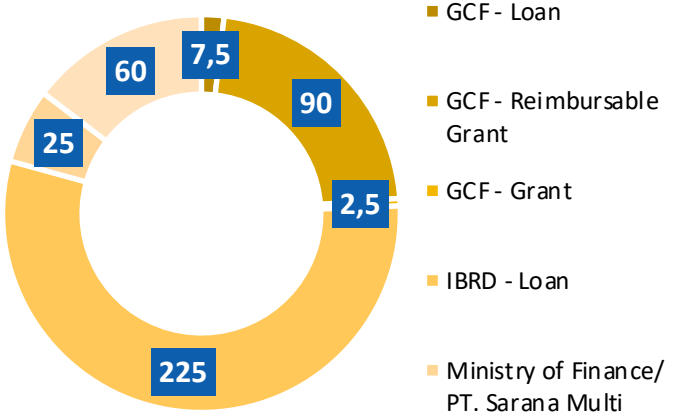
UNDP

RBP : USD103,8 m

4 **Geothermal Resource Risk Mitigation Facility (GREM)**

THE WORLD BANK

Funding Scheme (in million USD)

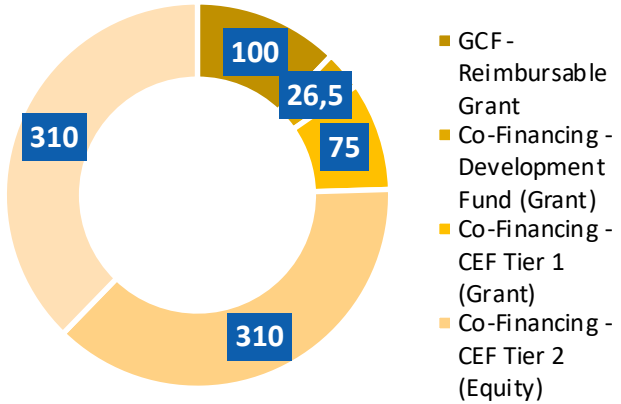


GCF Funding: USD100 m;
***Co-financing*: USD310 m.**

5 **Climate Investor One (CIO)**

FMO Entrepreneurial Development Bank

Funding Scheme (in million USD)

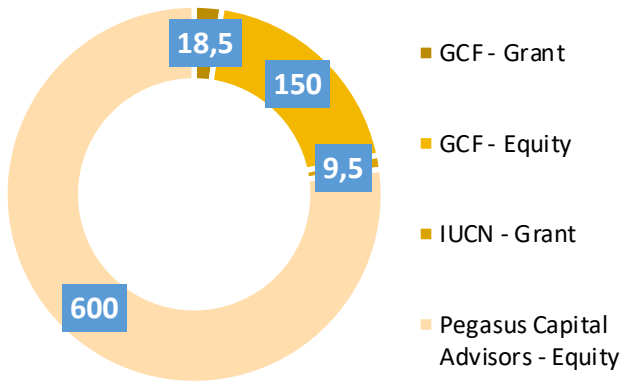


GCF Funding: USD100 m;
***Co-financing*: USD721,5 m.**

6 **Global Subnational Climate Finance (SnCF)**

PEGASUS IUCN

Funding Scheme (in million USD)



GCF Funding: USD168,5 m;
***Co-financing*: USD609,5 m**

Source: Ministry of Finance

Indonesia Environment Fund /BPDLH

13 PRIORITY PROGRAMS

In accordance with the Regulation of the Minister of Finance No. 124 of 2020 concerning Procedures for Management of Environmental Funds

bpdlh
badan pengelola dana lingkungan hidup

1. Climate change control (including the REDD+ program)

2. Sustainable forest management (including the REDD+ framework)

3. Forest and land fire control and peatland restoration (including the REDD+ framework)

4. Social forestry and environmental partnership (including the REDD+ framework)

5. Forest and land rehabilitation activities and other supporting activities (including the REDD+ framework)

6. Conservation of biodiversity and ecosystem(including the REDD+ framework)

7. Control of pollution and/or environmental damage(including the REDD+ framework)

8. Increasing the competitiveness of natural resource-based industries

9. Treatment of solid, liquid and hazardous waste

10. Use of environmentally friendly and low-carbon materials and technologies

11. Increasing the application of energy efficiency, NRE, and social energy conservation and environmental partnership

12. Reducing disturbances, threats, and violations of environmental and forestry laws

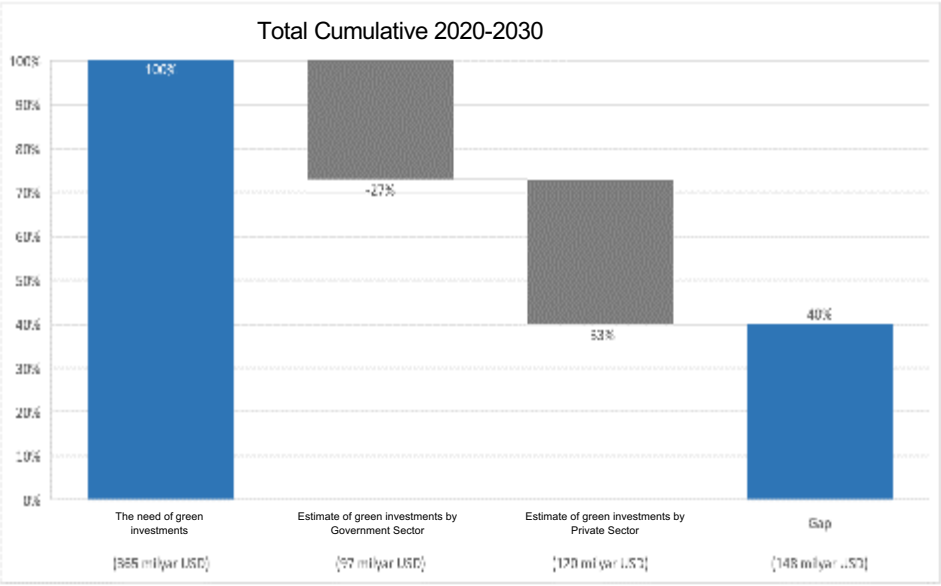
13. Other environmental protection and management activities

Source: Ministry of Finance

Funding Gap for Climate Change Management

NDC Unconditional Target

(avoiding emission in 2030 as much as 29% of BAU)



(1) The effects of covid are estimated to be apparent until 2023. (2) The need for green investment refers to the actual amount of green investment per tonne of emissions averted in the past, as well as the ratio of investment in mitigatied sector vs adaptation in the past. (3) does not take into account the role of local governments. (4) The cost of non-field works is factored into the calculations.

Fiscal Policy Responses

Optimization of budget utilization

Optimal mobilization of non-Budget climate change funding sources, domestically and internationally.

Taxation and Excise incentives

- to stimulate the role of the private sector, for example through efforts to develop EBT and electric vehicles

Ministries/Agencies Budget for Climate Change Mitigation and Adaptation

- CBT in planning and budgeting systems

Transfer to Regions and Village Funds (TKDD)

- TKDD also encourages the increase of regional governments role in dealing with climate change :
  a. Physical DAK (food, water, health, environment and forestry sectors)
  b. Non-Physical DAK (waste management)
  c. Regional Incentive Fund (incentive from waste management performance)
  d. Village Funds (use of low-emission alternative energy)
  e. Ecology Based Fiscal Transfer (financial assistance for environmental improvement)

Innovative Financing for Sustainable Development

- Strengthening green infrastructure financing and deepening the Islamic financial market through *Green Bond/Sukuk Framework* dan *SDGs Government Securities Framework*

CCFF | bpdlh | GREEN CLIMATE FUND | SDG Indonesia One | **PISP**

Government Support for New and Renewable Energy

PISP Fund & Government Guarantee for Electricity Projects

- To promote new and renewable energy development, the Government provides fiscal support in the form of **government guarantee for electricity projects (credit guarantee and business viability guarantee), guarantee for SOEs direct lending from international financial institutions,** and **Geothermal Fund Facility (PISP Fund).**
- Several guarantees has been provided to renewable energy power plant construction and Power Purchase Agreement (PPA), i.e hydropower, geothermal, and solar PV.
- PISP funds (and its co-finance), can be used for geothermal development in the exploration stage and eligible for *Government Drilling, SOE Drilling/Public Window, and Private Drilling/Private Window.*

PISP Fund Exploration Financing Facilities
(MOF Regulation 80/2022)

Objective	Unlocking geothermal market by providing support and financing for geothermal exploration
Fund Manager	PT Sarana Multi Infrastruktur (SMI)
Total Funds	IDR 3,1 Trillion (revolving fund)
Fund Distribution	Loans and data provisions
Main feature	De-risking facility for exploration stage
Governance	▪ Minister of Finance's Assignment Letter (SK) to PT SMI to finance exploration project. ▪ Monitoring and supervision by The Joint Committee between MoF and MEMR. ▪ Engaging academic, professional experts, and independent appraisal to provide review and assessment for strategic decision of the Joint Committee. ▪ Strengthening the role and synergy of MOF's Special Mission Vehicles

PISP Co-financing
(Collaboration with international funding)

Geothermal Energy Upstream Development Project (GEUDP) - World Bank	CTF grant (USD49million) and GEF grant (USD6,25million).
	Aims to support the government's geothermal data and information provisioning facility (Government Drilling). PT SMI as fund manager & PT GDE as implementing agency.
Geothermal Resource Risk Mitigation (GREM)	Total USD655 million (loan, grant, and PISP co-finance)
	Aims to support exploration on the SOE Drilling & Private Drilling scheme.

Sustainable Finance Initiatives

Sustainable Finance Roadmap Phase I (2015-2019)

OJK is committed to supporting the **Indonesian Government's target to achieve Net Zero Emission** and enhancing stakeholders' awareness on the importance of sustainable finance development.

Sustainable Finance Roadmap Phase II (2021-2025)

focuses on **sustainable finance ecosystem** development consisting of 7 components. The Roadmap reflects OJK's commitment to realizing transparent regulations, building synergies in cooperation with relevant ministries/agencies and stakeholders, as well as improving the capabilities of the financial industry.

Phase I Achievement

Strategic Policies

1. Implementation of 8 sustainable finance principles.
2. Reports of SF Action Plan from financial institutions.
3. Corporate Social Responsibility fund allocation.
4. Financial institutions' Sustainability Report.

Enhancing Awareness

1. Capacity building for OJK's supervisors and stakeholders.
2. Guideline on Sustainable Credit, Financing, Investment for palm oil plantation and industry, clean energy, green building, and organic farming with sharia scheme.

Institutional Collaboration

1. Collaboration with ministries and other national/international organizations, including universities and research centers.

Regulation on Sustainable Finance

OJK stipulated some regulations to support SF

a. **POJK No.51/2017** regarding the Implementation of SF for Financial Institutions, Issuers and Public Companies, which aims to enhance awareness of the financial industry, regulate financial institutions' obligation to submit action plan for enhancing sustainable finance and to publish sustainability report.
b. **POJK No.60/2017** regarding framework and incentives for issuance of green bonds.
c. In 2020, OJK also issued supervisory guidance and policy regarding incentives for electric vehicle-related financing.

- Green Taxonomy
- ESG Risk Integration in Financial Institutions Risk Management
- Developing Incentives
- Guidance of Sustainable Finance Implementation in the Capital Market and NBFI

- Guidebook of Credit/Financing/ Investment in Sectors
- National Campaign - Indonesia Sustainability Week
- Sustainable Finance Inclusion Program
- Informative Publications for New Investors

- Sustainable Finance Training and Training of Trainers
- E-learning development

- Developing Research Centers
- Pilot Project on Sustainable Finance

- Sustainable Finance Taskforce
- Monitoring and Evaluation of the Implementation of Sustainable Finance

- Supporting Infrastructure Development
- Product Innovation

Development of Sustainable Finance Information Hub

Source: Financial Services Authority (OJK)

OJK's Support for Sustainable Finance Development

1 **OJK strategic actions** to ensure effective implementation of Sustainable Finance principles and to respond to climate change:

1. **Developing a Green Taxonomy**
2. **Preparing for carbon exchange operations, in line with the Government's policy**
3. **Developing a reporting system for financial institutions, including green financing/instruments in accordance with the Green Taxonomy**
4. **Developing a risk management framework for financial services industry and a risk-based supervision guideline for supervisors to implement climate-related financial risks**
5. **Developing innovative and feasible project financing schemes**
6. **Enhancing awareness and providing capacity building programs for all stakeholders**

2 The establishment of **the Financial Services Sector Sustainable Finance Task Force** as a forum for cooperation and coordination with the industry to respond to developments in sustainable finance at national, regional and global forums.

Source: Financial Services Authority (OJK)

Urgency of the Development of Green Taxonomy

Urgency of Green Taxonomy Development at OJK

- To standardize green definitions and criteria.
- To regularly monitor credit/financing disbursement to the green sectors.
- To improve reporting process carried out by the Financial Services Industry.

Targets

- Policy in the green sector, as the basis for developing innovative products and/or sustainable financial services as well as incentive and disincentive mechanisms for financial services sector.
- Availability of database for green sectors.

Strategic Goals

- To develop standard definitions and green criteria of economic sector activities that support sustainable development, and climate change agenda in Indonesia.
- To encourage innovation and investment in economic activities that have a positive impact on improving the quality of the environment.
- To encourage the financial sector to provide financing for green economy activities.
- To provide a reference for financial services sector, investors, business players (national and international) to disclose information related to financing, funding, or investment in green economy activities.

Source: Financial Services Authority (OJK)

Green Taxonomy

Proposed Definition of Green Taxonomy

Classification of sectors based on business activities that support environmental protection and climate change mitigation and adaptation.

- The Green Taxonomy is used as a guideline for information disclosure in the Financial Services Sector and can be used as a reference for creating innovative sustainable financial products and/or services.
- In developing the Green Taxonomy, OJK actively participates in the **Financial Stability Board**, particularly regarding sustainable financial disclosure for Financial Services Institutions in the **Financial Stability Board - Workstream on Climate Disclosures/WSCD** and **the ASEAN Taxonomy Board**.
- The finalization of the Green Taxonomy involved 43 Directorate Generals in 8 related ministries to confirm the thresholds and to categorize around 2,700 sectors and sub-sectors classification.

Green Taxonomy Definition

Green taxonomy is a classification system that establishes a list of environmentally sustainable economic activities.

(EU Green Taxonomy, 2019)

A classification tool for the financial industry (banking) to protect the environment and reduce greenhouse gas emissions.

(China Green Catalogue, CBRC, 2013).

Benefits of Green Taxonomy

- ❖ As a guideline for allocating capital, a tool to support risk assessment, and a reference for other stakeholders in supporting efforts to mitigate and adapt to climate change.
- ❖ In its development, the green taxonomy is flexible and dynamic so that it can adapt to investment strategies and patterns and changes in technology, science, activities and new data.

(ASEAN Taxonomy for Sustainable Finance ver.1, Nov 2021)

Source: Financial Services Authority (OJK)

Indonesia's Existing Green Bond and Sukuk Framework

Existing Green Bond and Sukuk Framework under which the Republic of Indonesia can Finance and Refinance Selected Eligible Projects

1

Use of proceeds of Green Bond and Green Sukuk

Eligible Green Projects must fall into one of the nine eligible sectors

2

Project Evaluation and Selection

Review and approval process by Ministry of Finance and National Development Planning Agency

Project selection will utilize the Climate Budget Tagging (CBT) mechanism

3

Management of Proceeds Management – Ministry of Finance

The Green Bond and Green Sukuk proceeds will be credited to a designated account of relevant ministries for funding exclusive projects as previously defined. Allocation is managed by Ministry of Finance

Line Ministries

The line ministries utilizing the proceeds shall track, monitor and report to Ministry of Finance, on the environmental benefits of the Eligible Green Projects

4

Reporting

Ministry of Finance will prepare and publish a Green Bond and Green Sukuk annual report on the list of projects, amounts of proceeds allocated to such projects and estimation of beneficial impacts

The Framework has received a second opinion from the Centre for International Climate Research (CICERO) and is awarded medium green shading, which allows the possibility of light, medium and dark green project types. This shade also shows that eligible listed projects are representing the country ongoing efforts towards the long-term vision in carbon emission reduction

Source: Indonesia's Green Bond & Green Sukuk Framework

Indonesia's Existing Green Bond and Sukuk Framework (cont'd)

Existing Green Bond and Sukuk Framework under which the Republic of Indonesia can Finance and Refinance Selected Eligible Projects

Eligible Sectors

Green Shading according to CICERO's second-party opinion

Dark Green

- Renewable Energy
- Resilience to Climate Change for Highly Vulnerable Areas and Sectors/Disaster Risk Reduction

Medium to Dark

- Sustainable Transport
- Green Tourism
- Waste and Waste to Energy Management
- Sustainable Agriculture

Light to Medium

- Energy efficiency
- Sustainable Management of Natural Resources

Light Green

- Green Building

The Framework Excluded Use of Proceeds for

- New Fossil Fuel-Based Electric Power
- Large Scale Hydropower Plants > 30 MW
- Nuclear Assets

Source: Green Sukuk Allocation and Impact Report – May 2021

Indonesia's Green Initiatives: Projected Environmental and Social Impacts

Environmental Benefits Arising from 2021 Global Green Sukuk

Projected Environmental and Social Impacts For 2021 Global Green Sukuk

Renewable Energy	Resilience to Climate Change	Sustainable Transport	Waste Management	Green Buildings
Expected to: • Reduce **136.86 tCO_2e** and generate **150kWp** clean electricity • Reduce **4,972 tCO_2e**, generating **2,456,654 kVA** of clean electricity	Expected to • Improve drinking water supply debit serving **180,000 household connections** or **900,000 individuals** • Benefit **58,624 ha, 1,175 ha and 3,650 ha** irrigated rice/crop areas in Central Java, DI Yogyakarta and South Sulawesi, improving cultivation intensity • **685 building units** benefitting low-income labours, vulnerable communities and students	Expected to: • The railway infrastructure and facility development shows insignificant GHG reduction due to the decline of public transportation demand resulted from lockdown and work from home policies, and changes in lifestyle and movement pattern during the **COVID-19 pandemic period**	Expected to: • Benefit **865,357 households** due to the improved waste management • Benefit **75,780 households** from sewerage systems	Expected to • Reduce electricity consumption at **10,371m2 floor-sized green buildings** • Benefit **670 MSMEs**

Indonesia is highly committed to the achievement of the Sustainable Development Goals, which have been integrated into the national mid-term development plan. The Green Sukuk proceeds have contributed to the achievement of these goals:

Source: Joint Second Party Opinion from CICERO and IISD on the Republic of Indonesia SDGs Government Securities Framework, Ministry of Finance
Note: (1) CICERO is a global, independent, research-based second party opinion provider on green bond frameworks, (2) IISD is a Second Party Opinion provider offering practical solutions to the growing challenges and opportunities of integrating environmental and social priorities with economic development

Tangible Results from Indonesia's Green Sukuk Initiatives

Green Projects Refinanced and Financed with Proceeds from Indonesia's Green Sukuk Issuance in 2021

Proceeds from Indonesia's Green Sukuk Initiative has been successfully deployed to a range of eligible Green projects

	Renewable Energy	Resilience to Climate Change	Sustainable Transport	Waste Management	Green Buildings
Locations	DKI Jakarta	Across the country	Jakarta, Java, Sumatera	Sumatera, Sulawesi Selatan, Yogyakarta, Riau	North Sumatera, Jakarta, Lampung
Amount Committed to Finance 2021 New Projects	USD 2.0 million	USD 204.4 million	USD 91.9 million	USD 62.6 million	USD 7.5 million
Amount Committed to Refinance 2017 Projects	USD 162.9 million	USD 85.2 million	USD 134.4 million	-	-
Relevant SDGs					
Project Examples Financed / Refinanced	**Planning, Development, and Supervision of New, Renewable Energy and Energy Conservation Infrastructure** • Installation of 23 units of rooftop solar PV plants on the State's border stations and 2 volcano observation stations • Provision and revitalisation of solar PV powered aids to navigation at sea to enhance the sea safety transportation and traffic services	**Flood and Lava Control, Urban Drainage Management, and Coastal Protection** • Construction of seawalls, sea dikes or breakwaters of 160 meters in length, and were built to protect the housings inhabited by 758 residential areas and public facilities of fishermen settlements, as one of the climate vulnerable communities **Development of Drinking Water Supply System** • Construction, expansion and improvement of reservoirs, intakes, transmission pipes, water treatment plants serving 3 to 4 neighbouring municipalities. The development is prioritized at areas prone to prolonged drought or flooding due to the impact of climate change and improve the drinking water supply debit	**Construction and Management of Railways Infrastructure and Supporting Facilities** • Improvement of operational facilities of the Palembang Light Rail Transit (LRT), to reduce traffic congestion and reduce duration of commute, with use of electricity as the LRT's system main source of power • Development of electric-powered railway systems in other urban areas, including an airport railway system in Jakarta, Medan, and Yogyakarta	**Improvement of Municipal Solid Waste Management System at Regional- and City-scale** • Development of sanitation services, which cover municipal solid waste (MSW) management and sewerage management systems	**Development of Green Building** • Construction and rehabilitation of buildings that meet the green and environmental friendly criteria and indicators set by the Government; Reconstruction of the Aksara Traditional Market buildings with a green building concept • The Aksara Traditional Market in Medan provides 670 kiosks benefiting for 670 MSMEs.

Note:
Information extracted from Green Sukuk Issuance Allocation and Impact Report 2022, which has obtained a limited assurance statement from EY
Projects were financed in Indonesian Rupiahs and the currency exchange rate is based on the State Budget Assumption for 2021 budget year of IDR 14,600 per USD.
Green Sukuk issued in 2018-2021 will follow the RoI Green Bond and Green Sukuk Framework. Going forward, Green and SDGs Securities will follow the SDGs Framework.

Source: Ministry of Finance

2022 Republic of Indonesia Global Green Sukuk USD1.50 Billion

Issuer	Republic of Indonesia through Perusahaan Penerbit SBSN Indonesia III
Issuer Rating	Moody's: Baa2 (Stable) / S&P: BBB (Stable) / Fitch: BBB (Stable)
Format	144A / Reg S
Settlement Date	June 6th, 2022
Tenor	10 Year
Maturity Date	June 6th, 2032
Issue Size	**USD1.50 billion**
Profit Rate	4.70% p.a
Reoffer Price	100.00%
Use of Proceeds	In line with RoI'S SDGs Government Securities Framework
Listing	SGX-ST and Nasdaq Dubai
Joint Bookrunners	CIMB, Deutsche Bank, Dubai Islamic Bank, HSBC, and Standard Chartered Bank
Co-Managers	PT BRI Danareksa Sekuritas Tbk and PT Trimegah Sekuritas Indonesia Tbk

Transaction Highlights

- The USD1.50 billion 10-year global green sukuk issuance was part of two-tranches USD3.25 billion RoI sukuk issuance in international market at June 2022.
- **The largest green sukuk issuance in international market** has received a very positive response from investors, indicated by the total order more than USD5.1 billion, reflecting an oversubscription of 3.4x
- **The first green sukuk issuance** in **10-year maturity** by the RoI.
- The successful 5th issuance of global green sukuk demonstrates the RoI's dedication and commitment to green and sustainable finance, as well as diversifying financing methods in the effort against climate change.

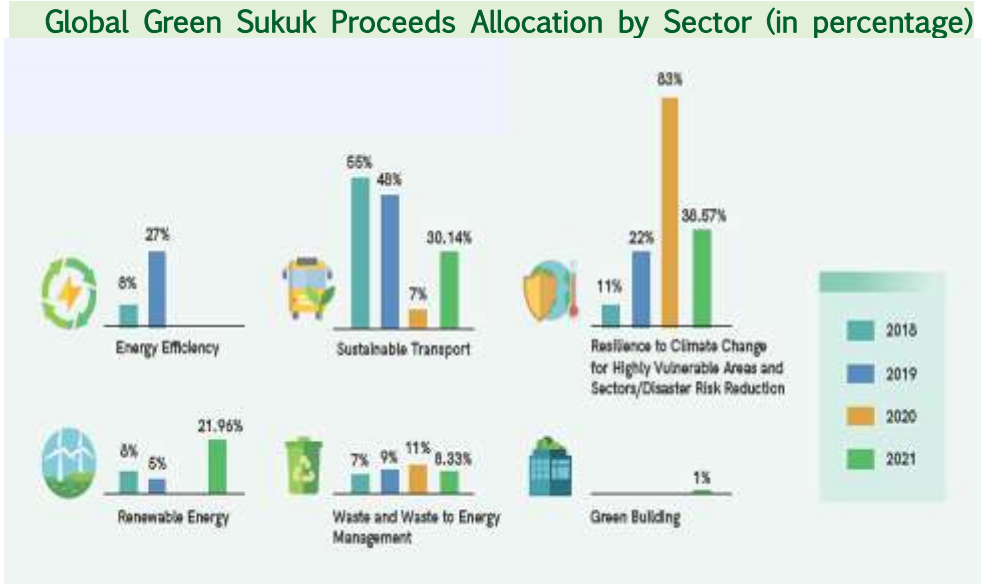
Source: Ministry of Finance

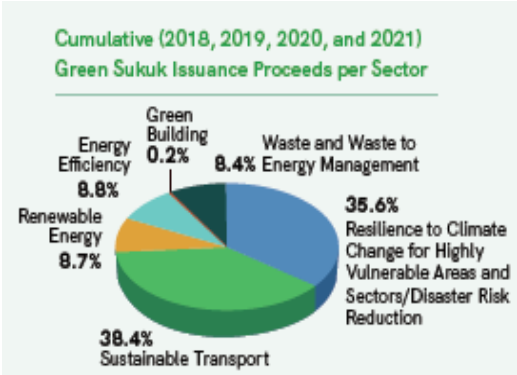
Indonesia's Green Initiatives: Financing Green Projects

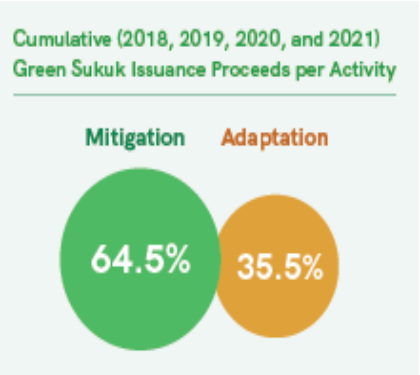
Indonesia's Green Projects Financed by a Combination of Green Sukuk and Other Funding Sources

The Government of Indonesia has issued five sovereign global green sukuk, consecutively in March 2018, February 2019 and June 2020, 2021 & 2022, with the total amount of **USD5.00 billion**

In 2019-2021, the Government of Indonesia issued three retail green sukuk (all issuances held in November), with the total amount of **IDR11.88 trillion**.







Note:

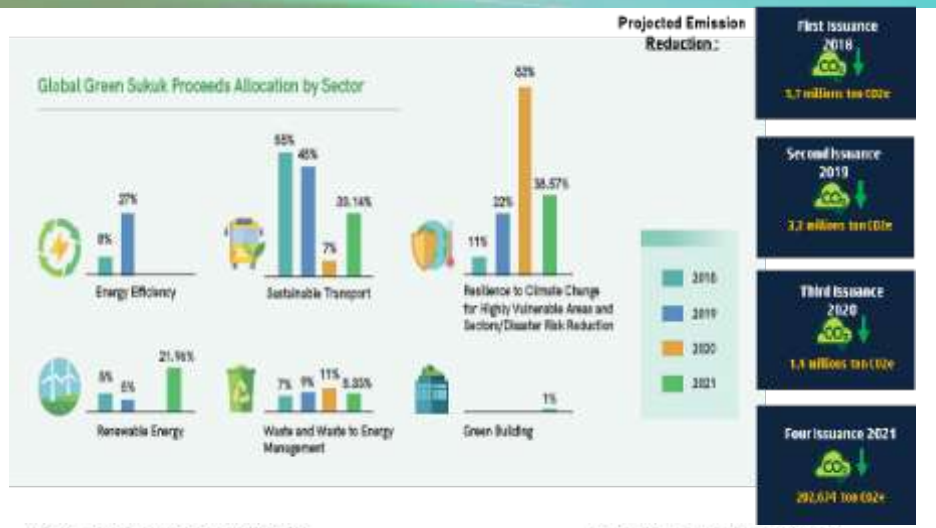
Information extracted from Green Sukuk Issuance Allocation and Impact Report 2022, which has obtained a limited assurance statement from EY
Projects were financed in Indonesian Rupiahs and the currency exchange rate is based on the State Budget Assumption for 2021 budget year of IDR 14,600 per USD.

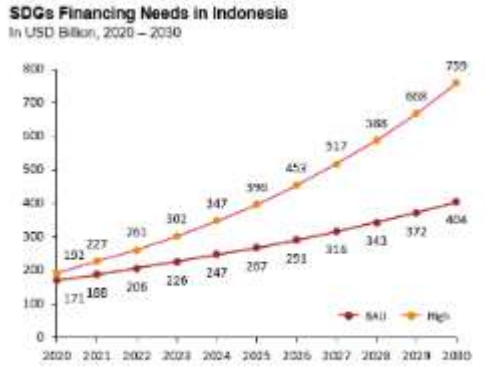
Source: Ministry of Finance

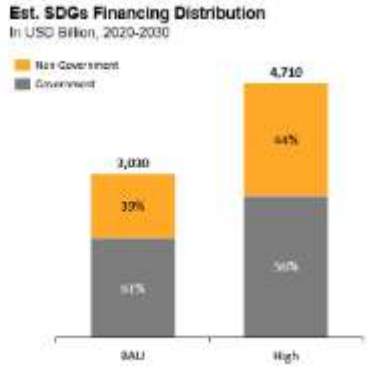
Innovative Financing: Sovereign Green Sukuk and SDGs Bond

Sovereign Green Sukuk and SDG Bond

No	Issuance	Value
1	Global Green Sukuk (Mar 2018)	USD1.25 billion
2	Global Green Sukuk (Feb 2019)	USD750 million
3	Green Sukuk Retail (Nov 2019)	IDR1.46 trillion
4	Global Green Sukuk (Jun 2020)	USD750 million
5	Green Sukuk Retail (Nov 2020)	IDR5.42 trillion
6	Global Green Sukuk (Jun 2021)	USD750 million
7	SDG Bond (Sep 2021)	EUR500 million
8	Green Sukuk Retail (Nov 2021)	IDR5.00 trillion
9	Global Green Sukuk (Jun 2022)	USD1.50 billion
10	PBSG001 (Sept-Dec 2022)	IDR5.73 trillion
11	FRSDG001 (Oct-Nov 2022)	IDR3.26 trillion
12	Green Sukuk Retail (Dec 2022)	IDR10.00 trillion







- Sovereign green sukuk is Indonesia's main financing instrument for climate actions.
- Total global green sukuk financing: **USD5.00 billion**
- Total green sukuk retail financing: **IDR21.88 trillion**
- Green sukuk has financed various projects in 6 sectors, mostly for sustainable transportation and resilience to climate change projects .
- In June 6th, 2022, RoI has successfully issued its 5th global green sukuk by the amount of USD1.5 billion (10y tenor).
- In September and October 2022, ROI issued the first green sukuk series and the first SDG bond series offered through auction mechanism in the domestic primary market
- In December 7th, 2022, RoI issued its 4th green sukuk retail by the amount of IDR10.00 trillion (2y tenor).

Source: Ministry of Finance

Overview of the Indonesia SDGs Government Securities Framework

The SDGs Government Securities Framework is the Key to the Issuances of Green and SDGs Securities

Journey of The Republic of Indonesia SDGs Government Securities Framework ("SDGs Framework")

January 2018

Published a Green Bond and Green Sukuk Framework & obtained a Second Party Opinion from CICERO

2018 - 2021

Successfully issued 4 Green Sukuk based on ROI Green Bond and Green Sukuk Framework

August 2021

SDGs Framework developed to demonstrate how ROI intends to issue Green and Blue Bonds and Sukuk ("Green Securities") and Social and Sustainability Bonds and Sukuk ("SDGs Securities")

SDGs Government Securities Framework

1. **Use of Proceeds**
   New or existing Eligible SDGs Expenditures with Green and/or Social focus ("Eligible Expenditures")
2. **Process for Project Evaluation and Selection**
   Budget Tagging Process to select Eligible SDGs Expenditures for Green and SDGs Securities
3. **Management of Proceeds**
   Managed within the Government's general account; allocation register will be established
4. **Reporting**
   Annual allocation reporting and impact reporting

Aligned with International Standards & Principles

All Green and SDGs Securities issued under The Republic of Indonesia ("ROI") SDGs Government Securities Framework will align with international standards and principles

The Green Bond Principles

The Social Bond Principles

The Sustainability Bond Guidelines

ACMF

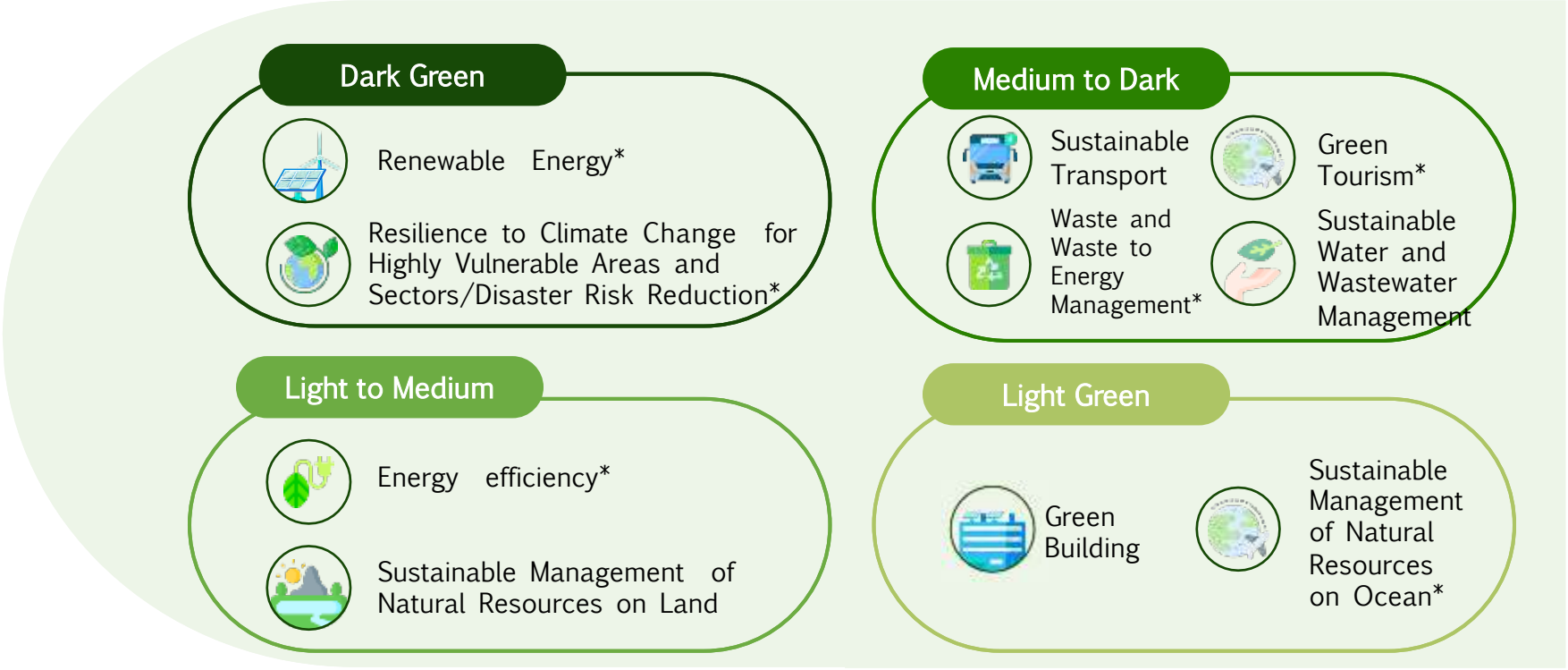
Source: Republic of Indonesia SDGs Government Securities Framework

Source: Ministry of Finance

Indonesia SDG Government Securities Framework (cont)

Updated Green Bond and Sukuk Framework which the Republic of Indonesia can Finance and Refinance Selected Eligible Projects (of social (SDGs), green or blue projects)

Eligible SDGs Expenditures with Green and Blue focus



** Eligible SDGs Expenditures with Green focus can be further linked to Blue (ocean related) projects*

Alignment with the RoI's 2030 SDGs Target

Source: Indonesia SDG Government Securities Framework

Indonesia SDGs Government Securities Framework (cont)

Updated Green Bond and Sukuk Framework which the Republic of Indonesia can Finance and Refinance Selected Eligible Projects (of social (SDGs), green or blue projects)arecfv D7YC34E

Eligible SDGs Expenditures with Social focus

- Employment Generation including through the Potential Effect of SME Financing and Microfinance
- Socioeconomic Advancement and Empowerment
- Access to Essential Services
- Food Security and Sustainable Food Systems
- Affordable Basic Infrastructure

Alignment with the RoI's 2030 SDGs Target

The Framework Excluded Use of Proceeds for

- New Fossil Fuel-Based Electric Power
- Large Scale Hydropower Plants > 30 MW
- Nuclear Assets

Source: Indonesia SDG Government Securities Framework

External Review of Indonesia SDGs Government Securities Framework

Engaged with CICERO and IISD to Adhere to the Best Market Practice of External Reviews

Joint Second Party Opinion from CICERO Shades of Green[1] and IISD[2]

Extracts of Republic of Indonesia SDGs Framework Second Opinion

"In alignment with the **green bond principles, social bond principles**, and **sustainability bond guidelines**."

The Green Bond Principles

The Social Bond Principles

The Sustainability Bond Guidelines

"CICERO Shades of Green governance procedures in the Republic of Indonesia's framework to be **Good**."

"Eligible social projects credibly aim for enabling **sustainable development** that will be supported by proposed **comprehensive reporting of impacts"**

"We rated Republic of Indonesia's green bond and sukuk issuances under this framework **CICERO Medium Green".**

Aligned with Best Practice and to Obtain Assurance on Post-Issuance Annual Reporting

The Republic of Indonesia will engage an independent third party to provide assurance on its annual reporting on Green and SDGs Securities and the compliance of each Green and SDGs Securities issued with this Framework

Source: Joint Second Party Opinion from CICERO and IISD on the Republic of Indonesia SDGs Government Securities Framework

Note:

1. CICERO is a global, independent, research-based second party opinion provider on green bond frameworks
2. IISD is a Second Party Opinion provider offering practical solutions to the growing challenges and opportunities of integrating environmental and social priorities with economic development

Source: Ministry of Finance

Republic of Indonesia Sustainable Development Goals (SDG BOND) EUR500 Million

Issuer	Republic of Indonesia		
Issuer Rating	**Moody's: Baa2 (Stable) / S&P: BBB (Negative) / Fitch: BBB (Stable)**		
Format	SEC-Registered		
Settlement Date	September 23, 2021		
Tranche	USD Tap of 2031s	USD 40 Year	EUR Long-12 Year
Currency	USD	USD	EUR
Issue Size		$650 million	€500 million (SDG)
Original Principal Amount	$600 million	--	--
Reopening Size	$600 million	--	--
Maturity	July 28, 2031	September 23, 2061	March 23, 2034
Coupon (p.a.)	2.150%	3.200%	1.300%
Reoffer Yield	2.180%	3.280%	1.351%
Reoffer Price	99.734%	98.225%	99.419%
Use of Proceeds	Repurchase certain of its outstanding global bonds pursuant to its tender offer announced on September 13, 2021		Invest in projects that may qualify as Eligible SDGs Expenditures
Listing	SGX-ST and Frankfurt Stock Exchange		

Transaction Highlights

- **Debut** Sustainable Development Goals (SDG) EUR issuance by an Asian Sovereign
- **Debut Liability Management transaction** and Debut US$ 40 Year issuance by ROI
- **Tightest ever spread achieved by ROI for a US$ 10Y** issuance to date yet again (implied spread of +85.8 over 10Y UST)
- **Tightest ever spread achieved by ROI for a EUR 12** / long-12 Year issuance
- **Achieved zero to negative new issue concessions** across all 3 tranches despite a crowded primary market on the day of bookbuild
- The successful debut SDG Offering demonstrates RoI's commitment towards financing environmental and social projects in contribution to the 2030 National Development Agenda and to be aligned with the SDGs.

Source: Ministry of Finance


Sade and Ende Village, Mandalika, West Nusa Tenggara
indonesia.travel
@indtravel
indonesiatravel
@indtravel
wonderful
indonesia
www.indonesia.travel