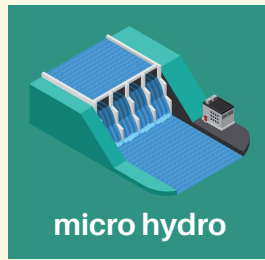


# MTRE3

**Climate Change Mitigation Actions through  
The Increase of Renewable Energy Use  
and Energy Efficiency**

## THE POTENTIAL OF RENEWABLE ENERGY IN INDONESIA



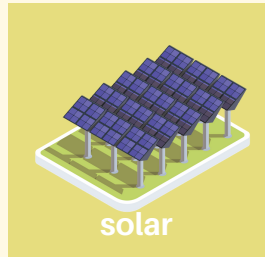
micro hydro



biomass



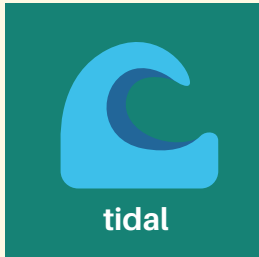
biogas



solar



wind



tidal

THE POTENTIAL OF RENEWABLE ENERGY  
IN INDONESIA

**4 4 2 G W**

THE CHALLENGES TO  
INCREASE RENEWABLE ENERGY USE  
AND ENERGY EFFICIENCY  
FOR CLIMATE CHANGE MITIGATION



The need to strengthen policy and institutional capacity on policy planning and implementation for climate change mitigation

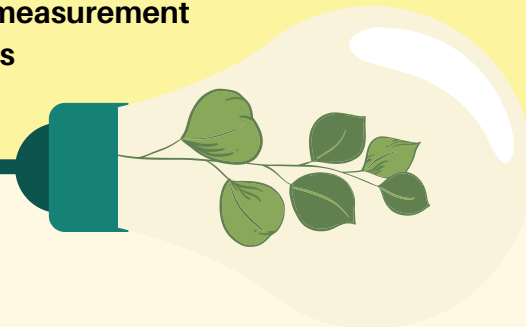


High dependency on public budget for climate change mitigation actions

- limited investment information for banks and private sector
- limited capacity of renewable energy and energy efficiency projects in accessing financing



The need to increase knowledge and capacity in utilising measurement and reporting system for climate change mitigation actions



## THE TARGETS OF THE GOVERNMENT OF INDONESIA

The Government of Indonesia targets in **2025**

**↑ 23%**

Increase  
renewable energy  
use by 23%

**↓ 1%**

Reduce  
final energy intensity  
1% per year



# MARKET TRANSFORMATION FOR RENEWABLE ENERGY AND ENERGY EFFICIENCY

To address the challenges and help to achieve the targets of the Government of Indonesia in increasing renewable energy use and energy efficiency, **the United Nations Development Programme (UNDP), Ministry of Energy and Mineral Resources (MEMR), and the Directorate General of Renewable Energy and Energy Conservation (DG-REEC)** are working together for **Market Transformation through Design and Implementation of Appropriate Mitigation Actions in the Energy Sector (MTRE3) Project**.



## Funding:

Grant from Global Environment Facility (GEF)



## Period:

2017-2022



## Objectives:

Support the planning and implementation of climate change mitigation actions from renewable energy and energy efficiency sector

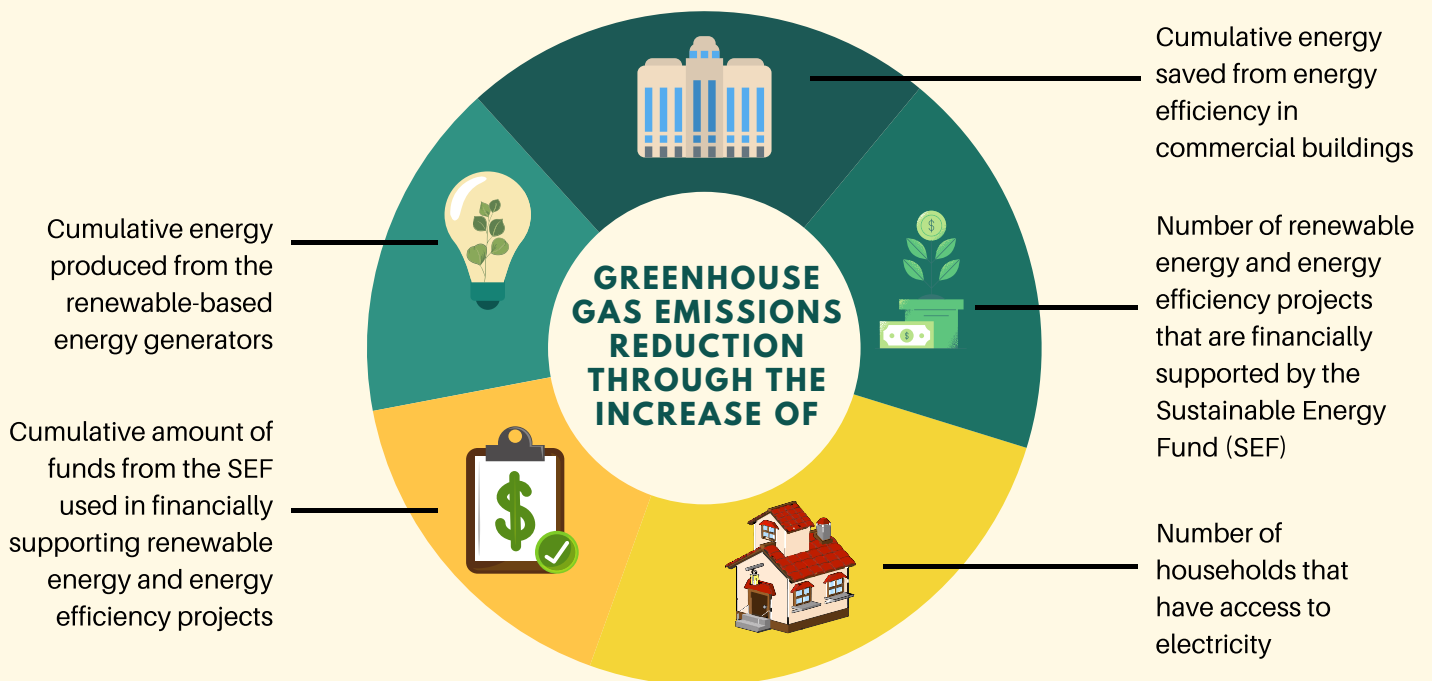


## Pilot Provinces:

East Nusa Tenggara, West Sulawesi, Riau, Jambi



## MTRE3 PROJECT OUTCOME



MTRE3 is addressing the challenges to increase renewable energy use and energy efficiency by implementing **three main component activities** - **strengthening the mitigation options, market transformation, measurement and reporting system for climate change mitigation from renewable energy and energy efficiency sector**.

## COMPONENT I

Strengthen the climate change mitigation options from renewable energy and energy efficiency sector



### 1. Strengthen the policy planning of climate change mitigation options

- Planning and preparation of **Regional Energy General Plan**
- Review of **Regional Action Plan for Greenhouse Gas Emissions Reduction**

### 2. Strengthen the base of regional energy policies

- Formulation of **Greenhouse Gas Emissions Inventory**
- Benchmarking specific energy consumption** from renewable-based energy generators and energy efficiency
- Utilisation of **Marginal Abatement Cost Curve** to analyse cost-effective renewable based energy generators and energy efficiency

## COMPONENT II

Market transformation through the implementation of climate change mitigation actions from renewable energy and energy efficiency sector



- Facilitation of **Sustainable Energy Fund (SEF)** for renewable energy and energy efficiency projects
- Pilot projects facilitation for energy management and investment information system
- Cross learning on renewable energy and energy efficiency sector with local government through **Integrated Market Service Centre (IMSC)**

## COMPONENT III

Supporting Measurement Reporting and Verification (MRV) as well as National Registry System for climate change mitigation actions from renewable energy and energy efficiency sector



- Preparation of nationally agreed **methodology for emissions reduction from energy sector**
- Facilitation to fill out the data of mitigation actions into **the National Registry System**
- Cross learning with local government to fill out the data of mitigation actions in **monitoring, evaluation, reporting (PEP - online) application**
- Supporting additional mitigation action recording feature on **Electricity Emissions Measurement and Reporting (APPLE - Gatrik) application**

## MTRE3 PROJECT LOCATIONS

### Energy Efficiency Projects

Kariyadi Hospital - Semarang  
Ratu Indah Mall - Makassar  
DG-REEC Office - Jakarta  
Ravindo Tower - Jakarta  
Transmart Building - Pekanbaru  
Pullman Hotel - Bali

Energy Consumption Survey  
and Energy Management Workshop  
Medan, Bandung, Surabaya

### Pilot Provinces

Riau, Jambi, West Sulawesi, NTT

### Renewable Energy and SEF

PLTM - West Java  
PLTBm - Riau and Kep. Riau  
PLTA - Aceh and West Sumatera  
PLTMH - Jambi  
PLT Biogas - Riau  
Solar Hybrid - North Sulawesi

