

ENERGY  
EVALUATION  
ASIA PACIFIC



# Energy Program and Policy Evaluation Capacity Building in Indonesia

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Jakarta, Indonesia

Energy Evaluation Asia Pacific Conference  
Bangkok, Thailand  
October 31, 2019

# Topics



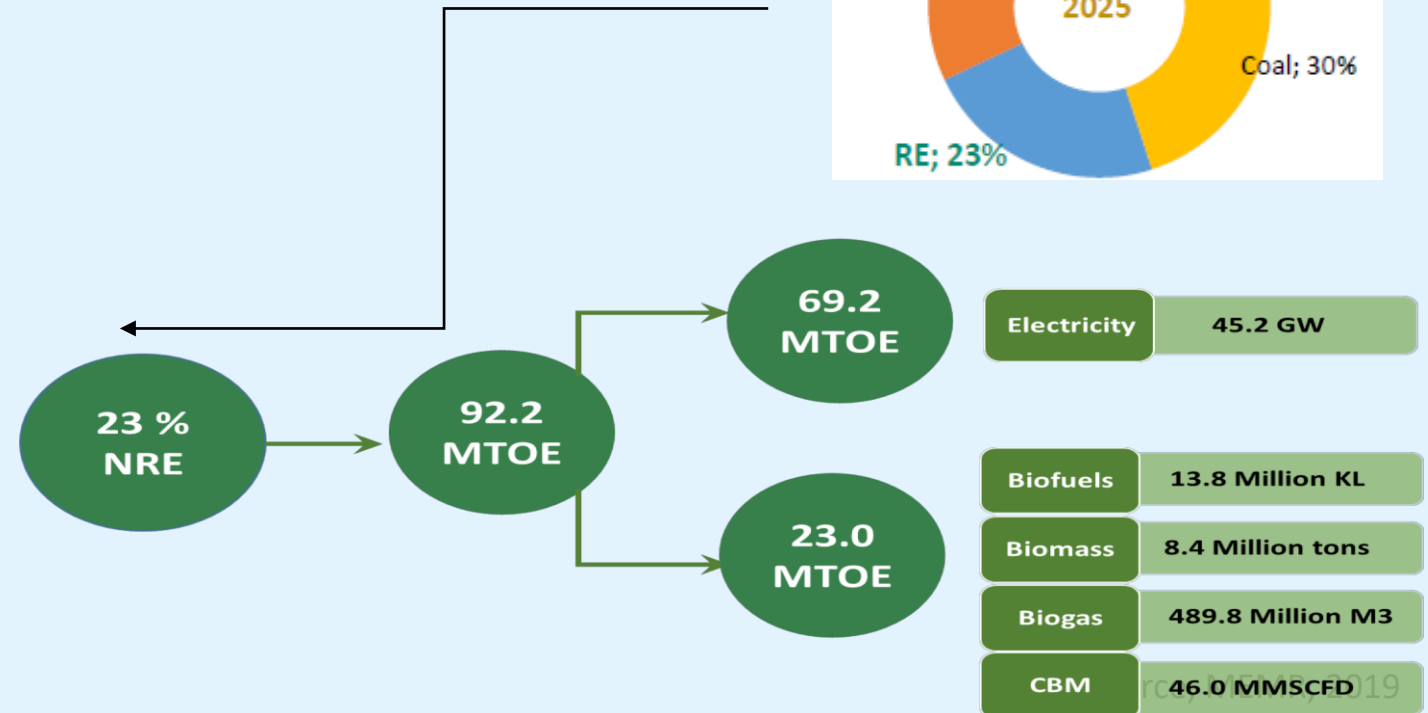
- National energy policy: current condition and challenges
- What is being done in the country to promote and support evaluation (for policy makers as well as for evaluation professionals)?
- Energy programs and policies have been evaluated, or are planned to be evaluated
- Gaps, Challenges and Opportunities
- What is being planned regarding evaluation capacity building

# National Energy Policy to accelerate renewable energy

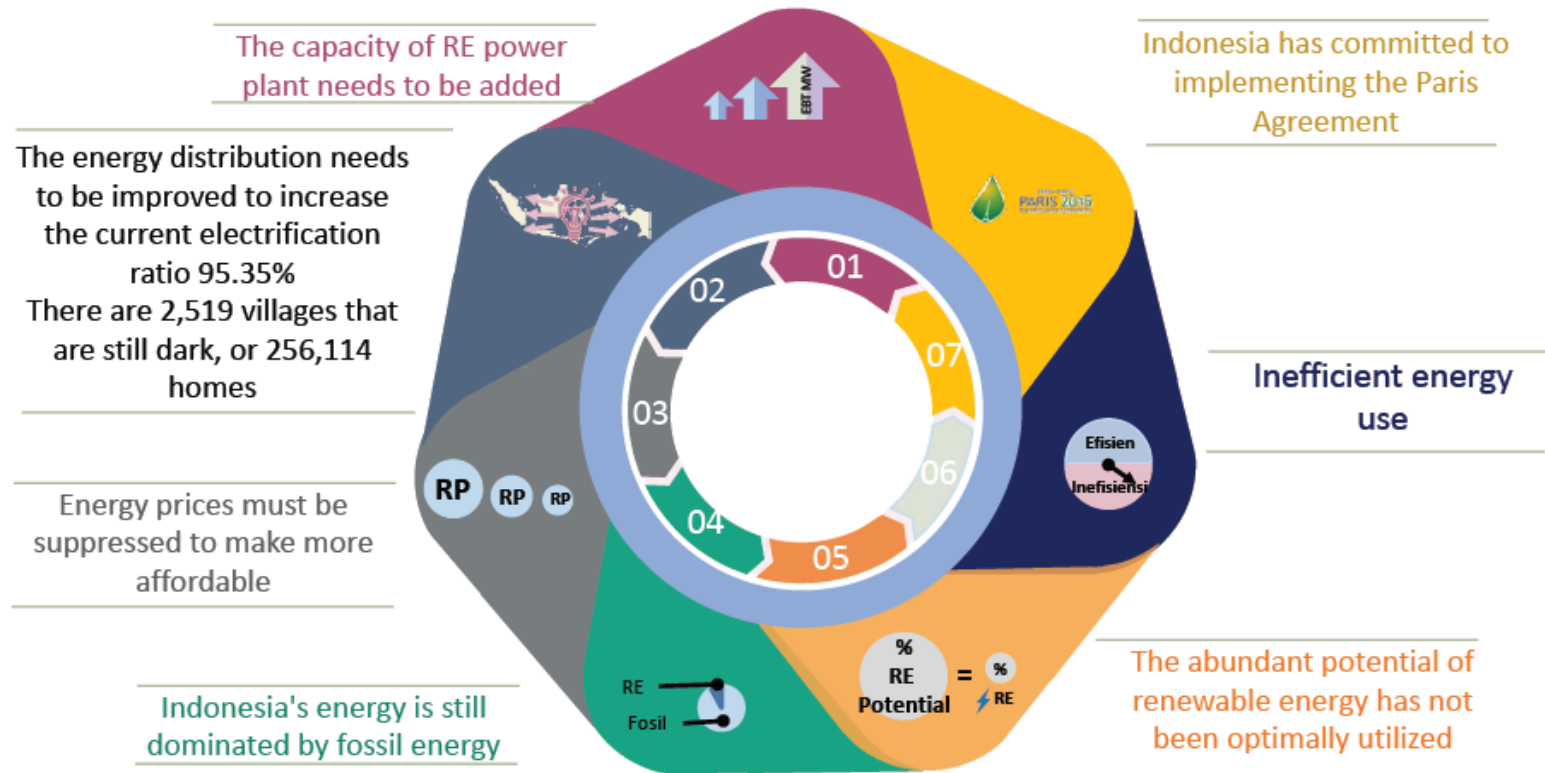
- Government Regulation 79/2014 on National Energy Policy
- President Regulation 22/2017 on General Planning of National on Energy



- Maximizes renewable energy utilisation
- Minimize Oil utilization
- Optimize gas and new energy utilization
- Utilization of coal as the main national energy supply
- Utilization of Nuclear Power Plant as the last option



# Current condition



Source, MEMR, 2018

# Challenges

Increasing 10.9 % share in 2017 to 23 % (2025) has consequences on increasing investment that roughly estimated around USD 108 billion (Bappenas, 2018)

Ministry of Energy and Mineral Resources (MEMR) degree no 50/2017 : regarding electricity purchase price from RE connected to the grid as 85% of cost of production (BPP)

No detail planning (mapping) on how to realize the target of 23% share of renewable energy: location, size, etc.

PLN still the only off-taker/ buyer for renewable energy on-grid and the purchase price of electricity is not attractive for investors (IPP)

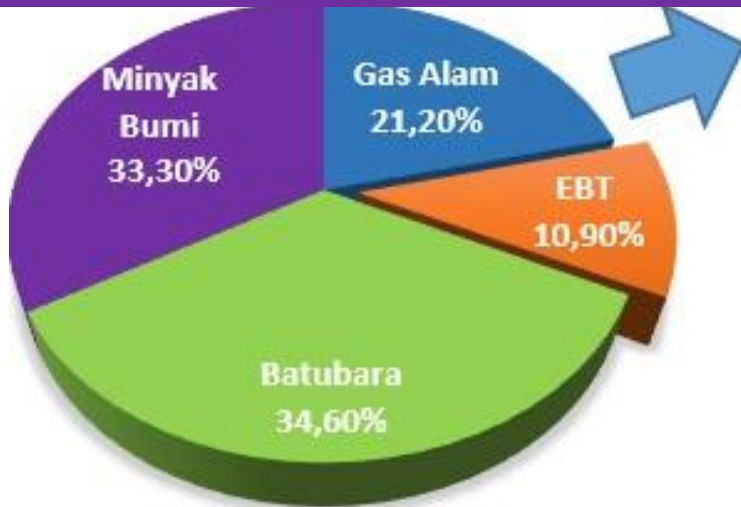
Linked with the regional government to do planning, preliminary survey of renewable energy that potentially located in the region: to compile General Plan of Regional Energy (RUED)

# Challenges

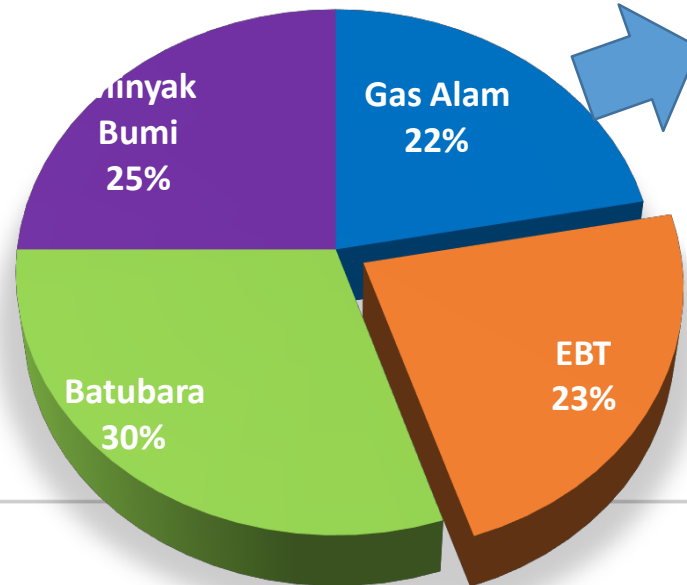
Government Regulation No. 79 of 2014 on National Energy Policy

Energy prices must be suppressed to make more affordable

2017

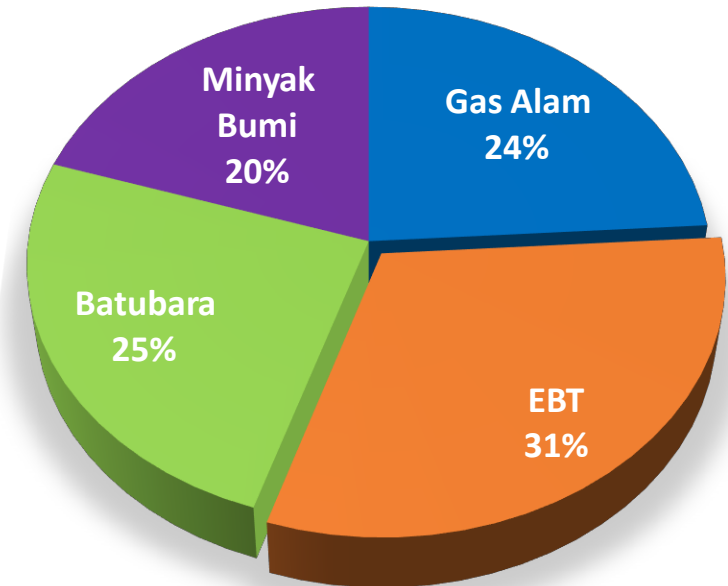


2025



Indonesia's energy is still dominated by fossil energy

2050



Source, MEMR, 2017



# What is being done to promote and support evaluation (1)

MEMR (Ministry of Energy  
and Mineral Resources)



- produce a number of rules and regulation related to energy, and conduct review and evaluation as necessary
- conduct assessment (evaluation) for energy policy and programs both that are being and have been implemented
- invite participation of third party (NGO or private sectors) to conduct evaluation/ assessment if necessary
- fulfill the assignment from the House of Representatives (DPR) Commission VII, e.g, request MEMR to review regulations that have received complaints or negative responses from public or investors.
- produce yearly performance accountability report showing performance achieved on the implementation of programs and activities funded by national budget (LAKIP)

# What is being done to promote and support evaluation (2)

MEMR (Ministry of Energy and Mineral Resources)



- Develop the National Energy Security Index and the National Energy Independence Index. These indexes is being developed (under progress)

## The National Energy Security Index

- to describe the performance achievements of the units within the MEMR both internal and external to energy sector stakeholders in Indonesia (Gov't regulation PP No. 79/2014 on the National Energy Policy (KEN)
- is a condition of ensuring the availability of energy and public access to energy at an affordable price in the long term while still paying attention to the protection of the environment.
- compiled based on the 4A framework (Availability, Accessibility, Affordability, and Acceptability)

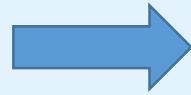
## National Energy Independence Index

- a. Independence of Energy Sources
  - measured through the ratio of the ratio of energy supply from domestic sources (including energy sourced from exploitation abroad) to the total fulfilment of domestic needs
- b. Independence of the Energy Sector Industry
  - illustrates the ability of the domestic energy industry to provide goods and / or services to support the quality of energy management that is fully oriented to the national interest to ensure that Energy, Energy Sources, and Energy Resources are well managed for the greatest prosperity of the people .
  - measured using Domestic Component Level (TKDN), an indicator that represent the size of the local component of goods, services and the combination of goods and services in the energy sector, expressed as a percentage.



# What is being done to promote and support evaluation

National Energy Council  
(DEN)



*Is responsible to compile National General Energy Plan. (Rencana Umum Energi Nasional, RUEN), which will be used as a reference for formulating General Plan of Regional Energy – Province (Rencana Umum Energi Daerah – Provinsi, RUED-P)*

Other Ministries:  
Coordinating Ministry for  
Economic Affairs, Ministry of  
Industry, Ministry of  
Research and Technology



- Perform surveys, studies and assessment on energy regulation
- conduct assessment (evaluation) for policies and programs
- Ministry of Industry: issue regulation for the use of local component (TKDN), which is an indicator that represent the size of the domestic component of goods, services and the combination of goods and services in the energy sector, expressed as a percentage (Minister of Industry Regulation No.54/ MIND/PER/03/2012 concerning Guidelines for the Use of Domestic Products for Electricity Infrastructure Development.

# What is being done to promote and support evaluation

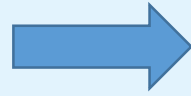
Evaluation  
Professionals



<b>IESR</b>	IESR (2019), A Roadmap for Indonesia's Power Sector: How Renewable Energy Can Power Java-Bali and Sumatra, Institute for Essential Services Reform (IESR), Jakarta <a href="http://iesr.or.id/wp-content/uploads/2019/04/COMS-PUB-0021_A-Roadmap-for-Indonesia_s-Power-Sector.pdf">http://iesr.or.id/wp-content/uploads/2019/04/COMS-PUB-0021_A-Roadmap-for-Indonesia_s-Power-Sector.pdf</a>
<b>PWC</b>	Power In Indonesia Investment and Taxation Guide November 2018, 6th Edition PwC <a href="https://www.pwc.com/id/en/publications/assets/eumpublications/utilities/power-guide-2018.pdf">https://www.pwc.com/id/en/publications/assets/eumpublications/utilities/power-guide-2018.pdf</a>
<b>ADB</b>	Summary Of Indonesia's Energy Sector Assessment ADB Papers On Indonesia No. 09 December 2015 <a href="https://www.adb.org/sites/default/files/publication/178039/ino-paper-09-2015.pdf">https://www.adb.org/sites/default/files/publication/178039/ino-paper-09-2015.pdf</a>

# What is being done to promote and support evaluation

LSP Energy



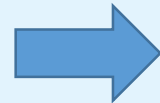
The Energy Professional Certification Institute (LSP) is an independent institution established by several company associations, professional associations and experts in the field of Energy

Professional Certification Agency (LSP), Energy Expert Conservation Association (HAKE)



LSP HAKE is an implementing agency for professional certification activities that obtain a license from BNSP after fulfilling the requirements set to carry out work competency certification. LSP HAKE is a legal entity, part of a legal entity, or a legal business entity, so that it can be legally accountable for its certification activities

BNSP



This body works to guarantee the quality of competence and recognition of workers in all professional sectors in Indonesia through the process of work competency certification for workers, both from work training graduates and from work experience

# Energy programs and policies that have been evaluated, or are planned to be evaluated?

Theme	Regulation	Target and Indicators	Why need to review/evaluate	Realization (revision)
<b>National energy policy</b>	<ul style="list-style-type: none"> <li>Government Regulation 79/2014 on National Energy Policy (KEN)</li> <li>President Regulation 22/2017 on General Planning of National Energy</li> <li>Law No 30/2007 about Energy</li> </ul>	<p>energy mix target: 23% of renewable energy in 2025. (10.9 % share in 2017) to achieve national energy resilience and national energy independence</p> <p>Policy</p> <ul style="list-style-type: none"> <li>•Maximize Renewable Energy utilization</li> <li>•Minimize Oil utilization</li> <li>•Optimize gas and new energy utilization</li> </ul>	<ul style="list-style-type: none"> <li>• Increasing 8.4%-10.9% share in 2017 to 23 % (2025) is estimated to increase investment roughly around USD 108 billion (Bappenas, 2018).</li> <li>• There is no detail planning to reach 23% of RE (location, etc)</li> <li>• Need a comprehensive legal framework for RE development that guarantee its development</li> </ul>	Law on renewable Energy is under developed by stakeholders

# Energy programs and policies that have been evaluated, or are planned to be evaluated?

Theme	Regulation	Target and Indicators	Why need to review/evaluate
<b>Renewable Energy Sources</b>	Regulation of the Minister of Energy and Mineral Resources (MEMR) number 12 of 2017 concerning Utilization of Renewable Energy Sources for Electricity Supply, then revised to MEMR Regulation No 50/2017, then MEMR Regulation No 53/2018	<p>upper limit of the purchase price of electricity from renewable energy</p> <p>The construction of electric power networks from renewable energy sources to on grid can be carried out by IPP based on a mutually beneficial mechanism (Business to Business).</p> <p>PT PLN (Persero) is to conduct due diligence on the technical and financial capabilities of IPP</p>	<p>The pattern of cooperation is to build, own, operate and transfer (Build, Own, Operate, and Transfer / BOOT), for hydro and geothermal power. This scheme is also considered to weaken the role of the private sector, since after the contract expires, all assets should be transferred to PLN.</p> <p>The purchase price of electricity is 85% of BPP (cost of production). Nationally, the generation BPP is at the level of US \$ 7.66 cents / kWh or Rp1,025 / kWh, which gives little margin to developer (IPP)</p>



# Energy programs and policies that have been evaluated, or are planned to be evaluated?

## Sumba Iconic Island



Sumba Iconic Island is a pilot project. This project is initiated for the development of the Sumba Island as the iconic island of renewable energy. The aim of this project is to improve the access to energy through the development and utilization of new renewable energy resources. It is expected to be 100% completed by the year of 2020.

### Stakeholders

MEMR, HIVOS

Assessor of this project is a local NGO, namely, Resilience Development Initiative (RDI), based in Bandung

## 1,000 Islands - Renewable Energy for Electrification Programme (REEP).

PT Perusahaan Listrik Negara (PLN Persero) develop solar power plants (PLTS) in 1000 locations or islands, prioritized in the outer and isolated areas to accelerate the electrification ratio.

### Type of PLTS installed:

- centralized / communal PLTS, with hybrid mode
- solar home system (SHS): solar panels combined with LED lights with batteries in a small scale dispersed capacity.

### Stakeholders

The Directorate General of New Renewable Energy and Energy Conservation (EBTKE), in cooperation with GIZ, acting on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ)

# Energy programs and policies that have been evaluated, or are planned to be evaluated?

The Indonesia Clean Energy Development II (ICED II) began in 2015 of the USAID clean energy program in Indonesia.

## Stakeholders

- Tetra Tech is contracted by USAID to implement the project
- The national and regional government agencies,
- the national utility: state owned power company (PT PLN),
- private sector project developers and suppliers,
- banks and financial institutions, and
- other stakeholders related to renewable energy projects and technologies in Indonesia.

## Team of ICED II midterm evaluation

37 key informant interviews with ICED II counterparts within the Indonesian MEMR, Bappenas, PLN (state-owned utility company), as well as provincial government officials in three out of the five ICED II priority provinces (North Sumatra, East Java and South Sulawesi). Also part of the KIIs, the team met with relevant financial institutions and project developers, and conducted four site visits to projects supported by ICED II.

# Energy programs and policies that have been evaluated, or are planned to be evaluated?

Monitoring and  
Estimation of  
Energy  
Conservation  
Policies Impact

## Stakeholders

Indonesian Institute for Energy Economics (IIEE)

Ministry of Energy and Mineral Resources (MEMR), Directorate General for New and Renewable Energy (EBTKE)

Danish Government (ESP3 DANIDA)

The project is to estimate the effects of energy conservation policies, both existing and upcoming, using methods and monitoring tools agreed by stakeholders by using LEAP Model and to enable the directorate of MEMR to have the results updated in the future. The outputs of the study will be used as the basis for relevant decision making and to prepare the groundwork for better integration of energy conservation policies in the future.

# Gaps, challenges and opportunities

## Gaps

To increase from 10.9% to 23% target of renewable energy in 2025

## Challenges

detail planning of renewable energy development (RE mapping) to strengthen the commitment for RE is crucial; type of RE, location, size, renewable energy source for power generation, etc.

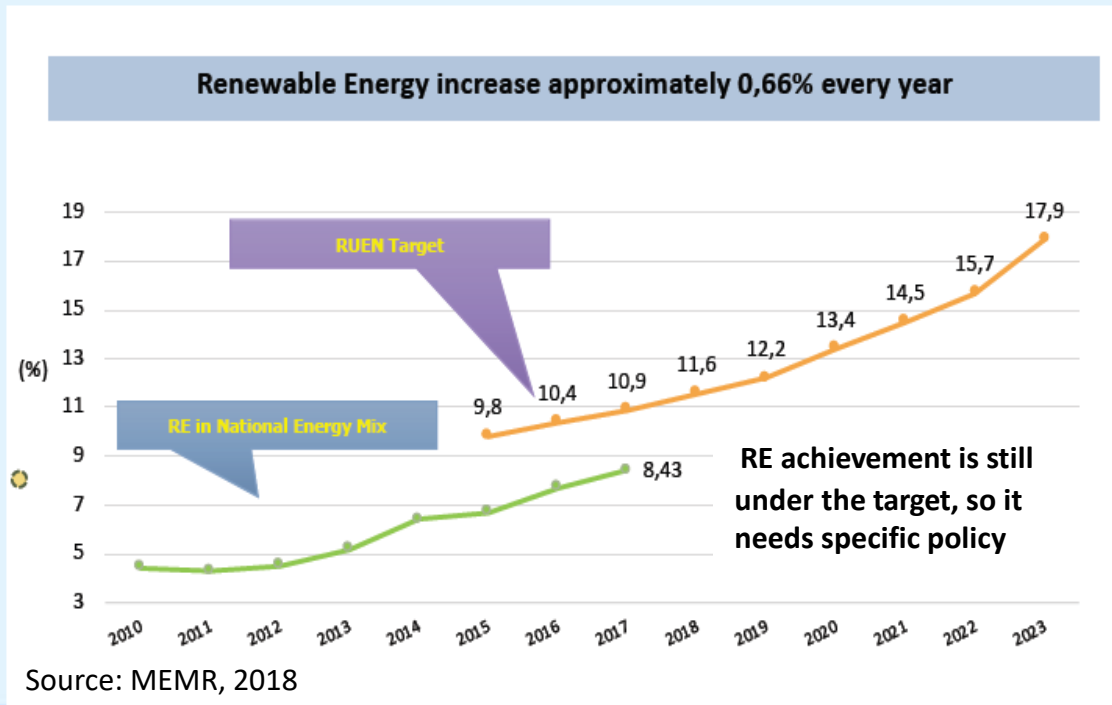
Technology of renewable energy still need to improve

## Opportunities

- detail analysis on RE planning to reach the 23% RE share
- capacity building on the policy evaluation; investment analysis; technology improvement, etc.
- Huge market for renewable energy which need private sectors to involve in.

# What is being planned regarding evaluation capacity building

## New and renewable energy bill (RUU EBT) is on progress



Based on evaluation and analysis of related regulations the new and renewable Energy Bill must be synchronized with other related laws: Regional Government Law, Geothermal Law, Nuclear Energy Act, Plantation Law, Maritime Law, Electricity Law.

### Article 12 of the bill:

The community has the right to participate in the organization of New and Renewable Energy include:

- providing input in determining the direction of the New and Renewable Energy policy;
- cooperation in the supply, research, development and utilization of New and Renewable energy;
- supervision and evaluation of the implementation of regulations or policies of new and renewable energy



# **Thank you...**