Indonesia's Climate Ambition to Achieve Net-Zero Emission

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Climate and Economic Targets should not be decoupled.

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Climate change: IPCC report is 'code red for humanity'

By Matt McGrath
Environment correspondent

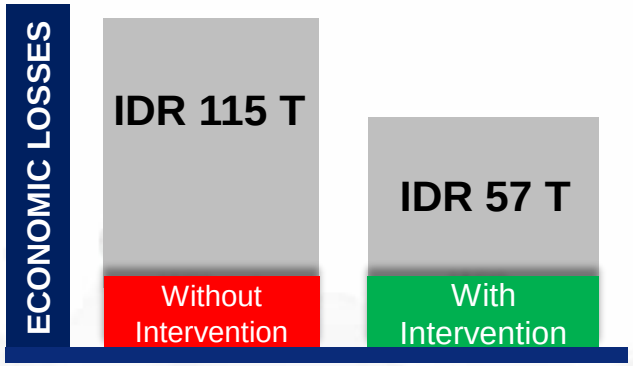
9 August | Comments

UK climate change protests

On August 9, 2021, **the new assessment from the United Nation's Intergovernmental Panel on Climate Change (IPCC)** says that the **warming is happening even faster**, projections have us reaching or **exceeding 1.5 degrees**

Without vs With Intervention
Indonesia's Economic Loss

Without climate policy intervention, potential economic loss due to Climate Change on GDP reach **IDR 115 Trillion** in 2024.



Bappenas study reveals climate resilience policies in 4 priority sectors (water, health, coastal marine, agriculture) have the potential to reduce economic losses to GDP by up to **50.4%**

Without economic transformation, Indonesia will have difficulties to escape from climate crisis and face economic loss

Green Economy

Economic transformation through green economy as development path which synergize **economic growth** and **environmental quality improvement** with **Low Carbon Development**

Incorporating Low Carbon Development & Climate Resilience to Reach Green Economy objectives (Mid and Long-term Development)

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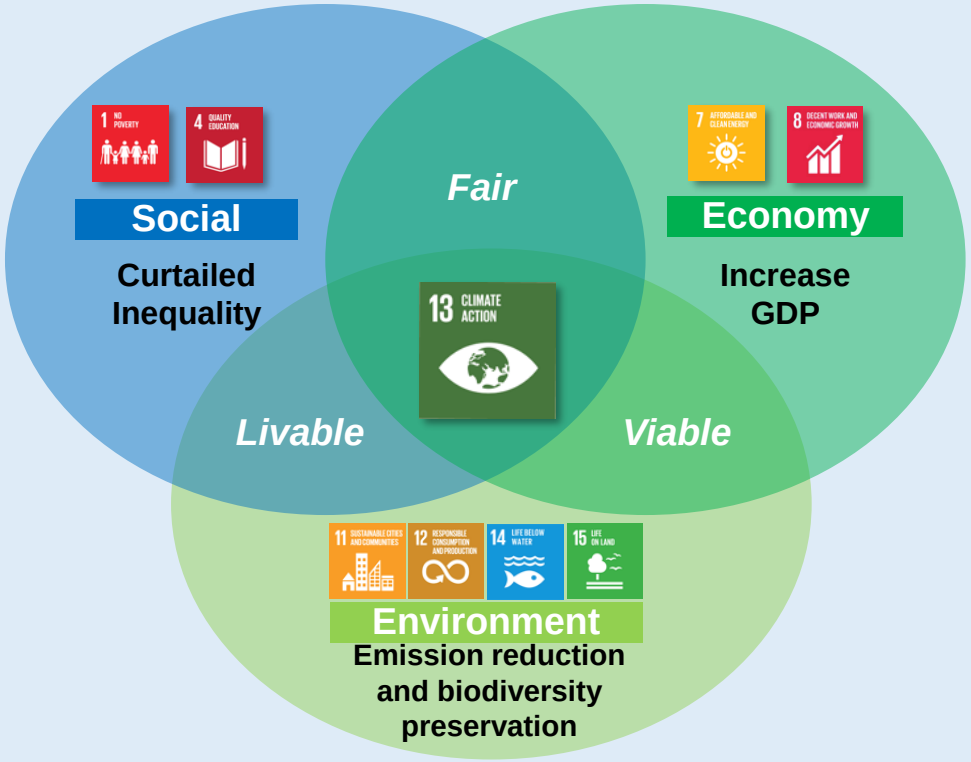


Bappenas has made Goal 13 (Climate Change) of SDGs as the foundation of the three pillars of **sustainable development**

Article 3.4 UNFCCC as a Basis for Strategy and Policy on Climate Change Countermeasures

Indonesia's commitment in Paris Agreement: to reduce emissions by 29% by 2030

Low Carbon Development and Climate Resilience as national priority agenda **in the RPJMN 2020-2024**

PN6: Building the **Environment**, Enhancing **Disaster Resilience** and **Climate Change**

Low Carbon Development

- **Waste Management & Circular Economy**
- **Green Industry Development**
- **Low Carbon Marine & Coastal**
- **Sustainable energy development**
- **Sustainable land restoration**

LCDI has 5 (five) **main strategies** of Indonesia's Low Carbon Development to achieve high economic growth while reducing emission up to 27,3% in 2024

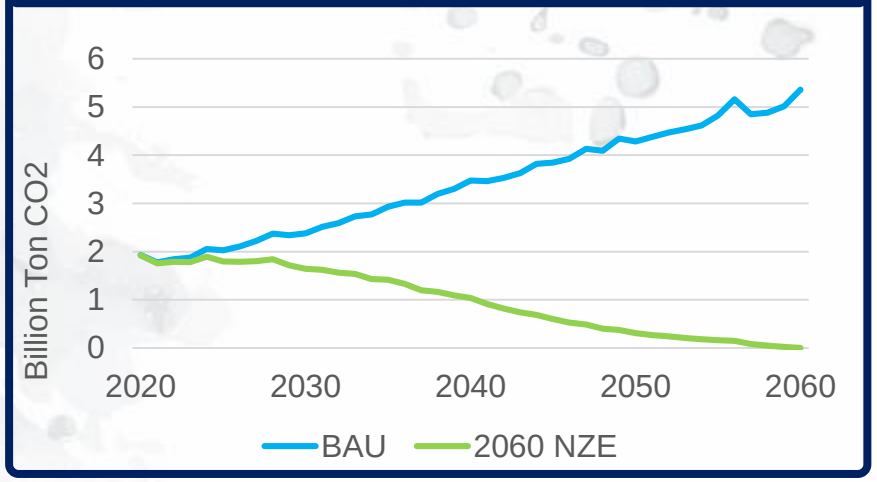
Climate Resilience

- **Marine & Coastal**
- **Water**
- **Agriculture**
- **Health**

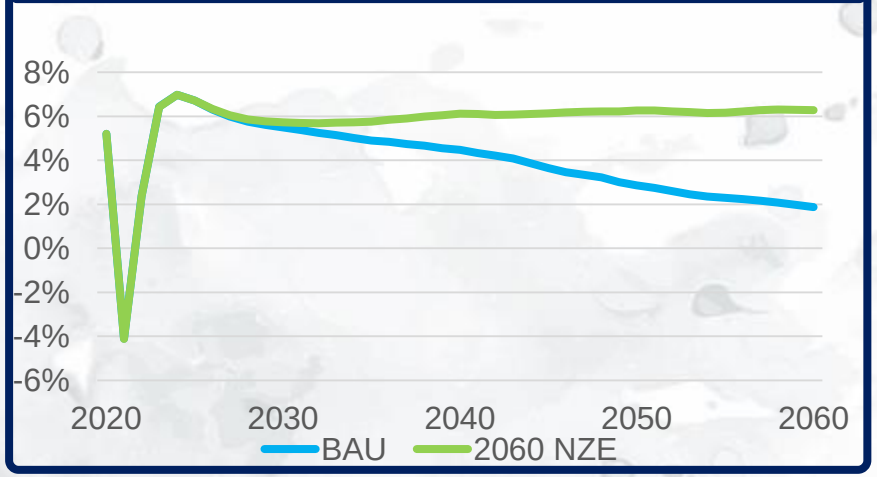
Towards Indonesia Net Zero Emission 2060: Low Carbon Economy Scenario

Net Zero Emission Target: 2060 or sooner

GHG Emission Projection



Economic Growth Rate Projection



In mid-term, **implementation of low carbon development** which focus on should focus our mitigation efforts on 'greening' energy sector at massive level of actions **can help Indonesia to achieve 29% GHG emission reduction target by 2030.**

Higher economic growth from LCD scenario is achieved due to better productivity level and higher quality of carrying capacity

Low carbon development policies to support NZE

Energy Sector

- **Decrease the Energy Intensity (Energy Efficiency),** gradually from 1 percent to 6 percent per year
- **New and Renewable Energy,** up to 100% in 2060
- **Transition to Electric Vehicles,** up to 95% of the total vehicles used

Land Sector

- **Reforestation**
- **Peat restoration**
- **Mangrove rehabilitation**
- **Decreasing deforestation**

Waste Sector

- **Natural resource efficiency for waste production and management through a circular economy,**

Fiscal Sector

- **Elimination of energy subsidies** completely by 2030

Toward NZE, coal retirement plan needs a comprehensive plan and transitional step

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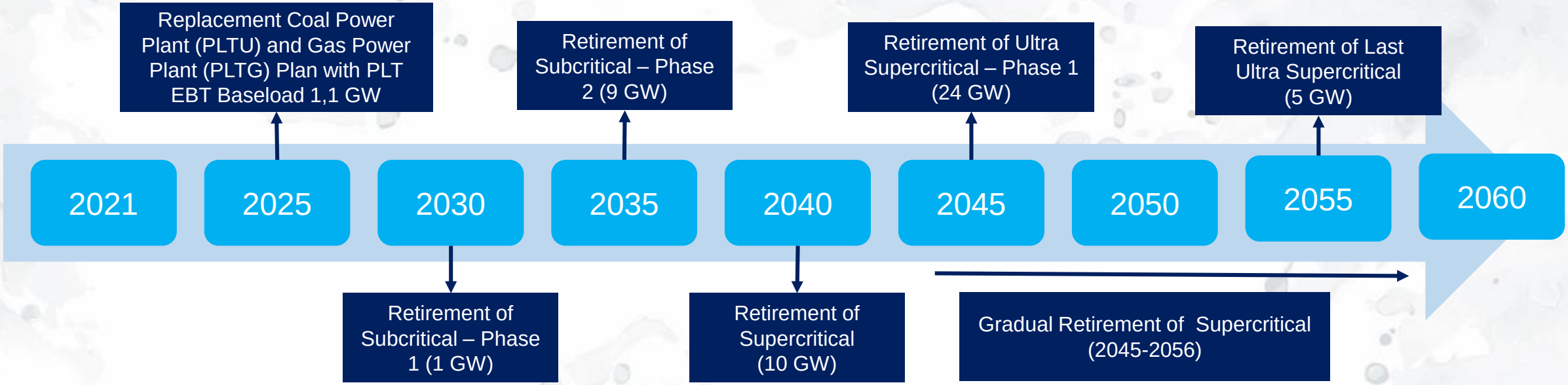
I. Retirement Coal-Fired Power Plant towards Carbon Neutrality 2060



II. Battery technology innovation is expected to make EBT Base Load compete with coal-fired power plants

Solar Power Plant (PLTS) Base Load	Innovation for Solar Power Plant Base Load
Generation cost of PLTS (4 cents/kWh)	Generation cost of PLTS (2,5—3 cents/kWh)
Solid state battery storage (cost 13 cents/kWh)	Redox flow battery storage (cost 3,5 cents/kWh)
Total cost 17—18 cents/kWh	Total cost of 6—7 cents/kWh
Battery technology: lithium ion, ferro nickel	Flow redox battery (Vanadium, Cerium)

(Source: PLN, 2021)

Challenges and opportunities in achieving Indonesia's low carbon development and NZE

CHALLENGES

Enormous amount of investment is needed

It is important for Indonesia to start formulate policies to mobilize funding to low carbon activities, either from public funds or private investment, including the compensation for the termination of the Power Purchasing Agreement

Stranded asset risk

The energy transition strategy needs to be prepared carefully, including how the government manages "brown assets" which have been built and have potential to become stranded assets

Awareness to transition to use efficient and environmentally friendly products

Public awareness is needed to realize the transition to environmentally friendly products and technologies, supported by an increase in people's purchasing power

Preparation of Migration to Green Jobs

Energy transition will require preparation of human resources which will be aligned with policies and program on human resource development

OPPORTUNITY

Green jobs creation

Activities in energy sector are contributing great amount of job creation due to labour-intensive activities, whether in manufacture process and operation.

Green jobs from energy sector are resulted from: RE deployment, energy efficiency activities, and electric vehicles-related occupations with EVs-related occupations as the highest share (more than 50%)

Decarbonization transport

In addition to the issuance of Presidential Regulations that set targets for electric vehicle adoption and provide incentives for local electric vehicle production, there is also a Major Project in the 2020-2024 RPJMN that focuses on the development of transport infrastructure

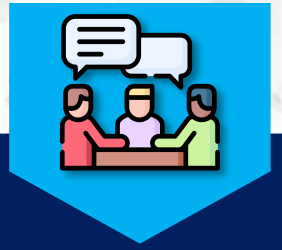
Regulate carbon trading

Plan for carbon trading, carbon offset, and commodity market offers opportunity to support progress towards meeting and enhanced NDC target

Closing Remarks

The national's economy recovery efforts should not only concern about economic aspect, where one can lead to unsustainable development path**. We have to build back better from the previous development pattern**

Implementation of Low Carbon Development framework is **essential for Indonesia for transitioning into green economy,** which can give more resilient economy, inclusive growth, and better environmental quality



In achieving low carbon development agenda, **intensive communication and collaboration** among multisector stakeholders is one of key parts, **including international stakeholders**

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BUILD BACK BETTER with LOW CARBON DEVELOPMENT

THANK YOU