

# Case Study: The Indonesia perspective – Incorporating inclusivity, safeguards, and benefit sharing into projects

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*Carbon Markets Webinar Series*

**2<sup>nd</sup> Workshop: Strengthening Legal Frameworks for Equitable and  
Sustainable Carbon Credit Implementation**

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**PLN, a fully integrated Indonesian electric utility company, has powered homes and industries for 79 years and is now on a journey to become a clean, sustainable top 500 global company**

### Primary Energy



### Generation



### Transmission



### Distribution



### Retail



#### Electrification Ratio

**99,8%**



#### Employee

**51,2 K**



#### Customer

**92,9 Mn**



#### Energy Sold

**306,2 TWh**



#### Revenue

**USD 33.8 Bn**



#### Renewables Capacity

**8.742 MW**

#### Installed Solar Rooftop

**406,7 MWp**

#### Renewable Energy Certificate delivered

**10.998.286 MWh**

#### Carbon Credit sold

**~ 4,4Mn TonCO2e**

VCS = ~ 4 Millions tCO2e  
SPE - GRK = ~ 0,4 Millions tCO2e

#### EV Charging

**~12.1 GWh**

#### ESG Rating



**Water B**

**Climate C**



**87,65%**

**Very Good**

#### Total Secured Green Financing

**USD 25 Bn**

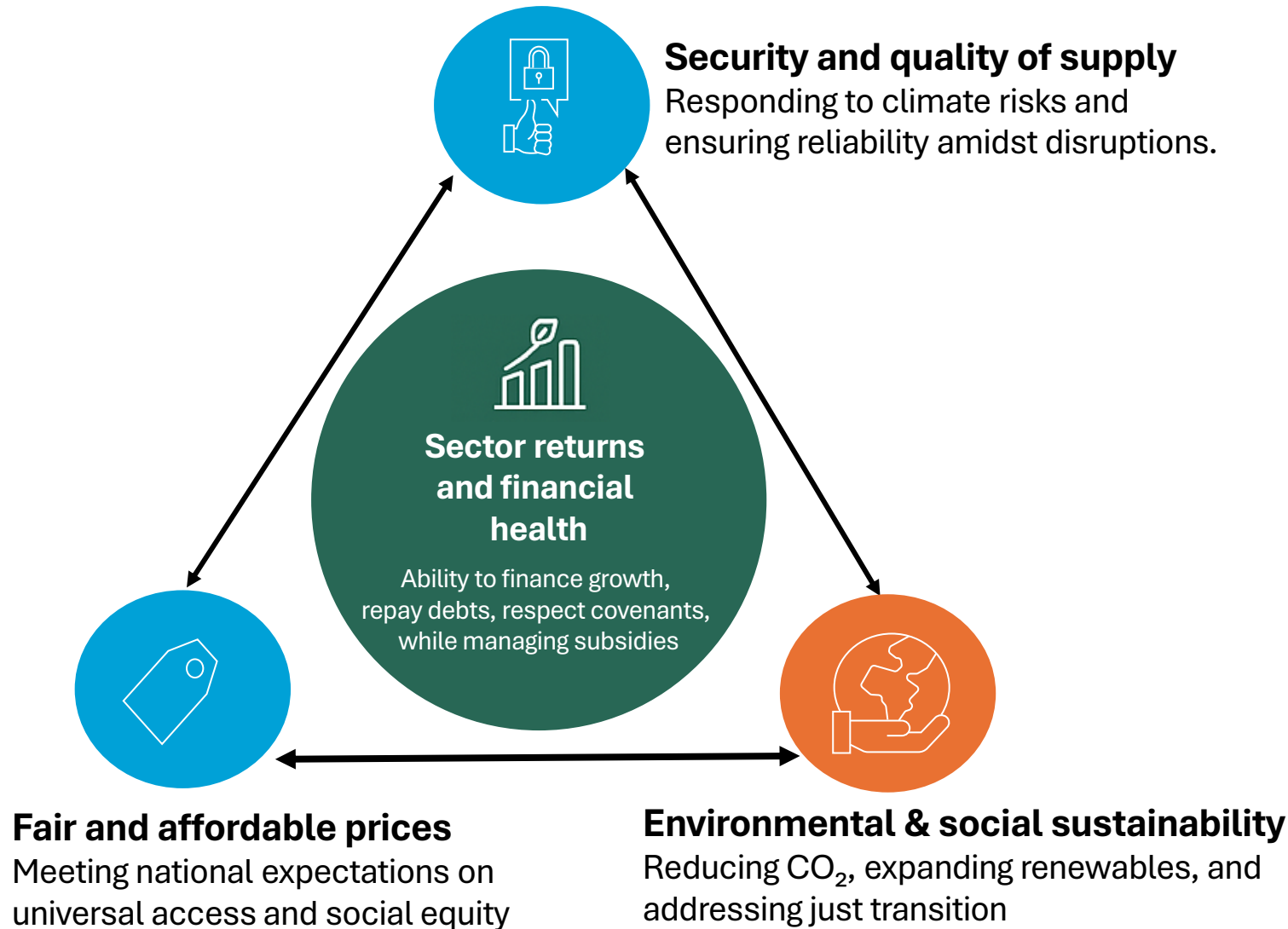
#### EDGE Certified



**27.4**

**Medium Risk**

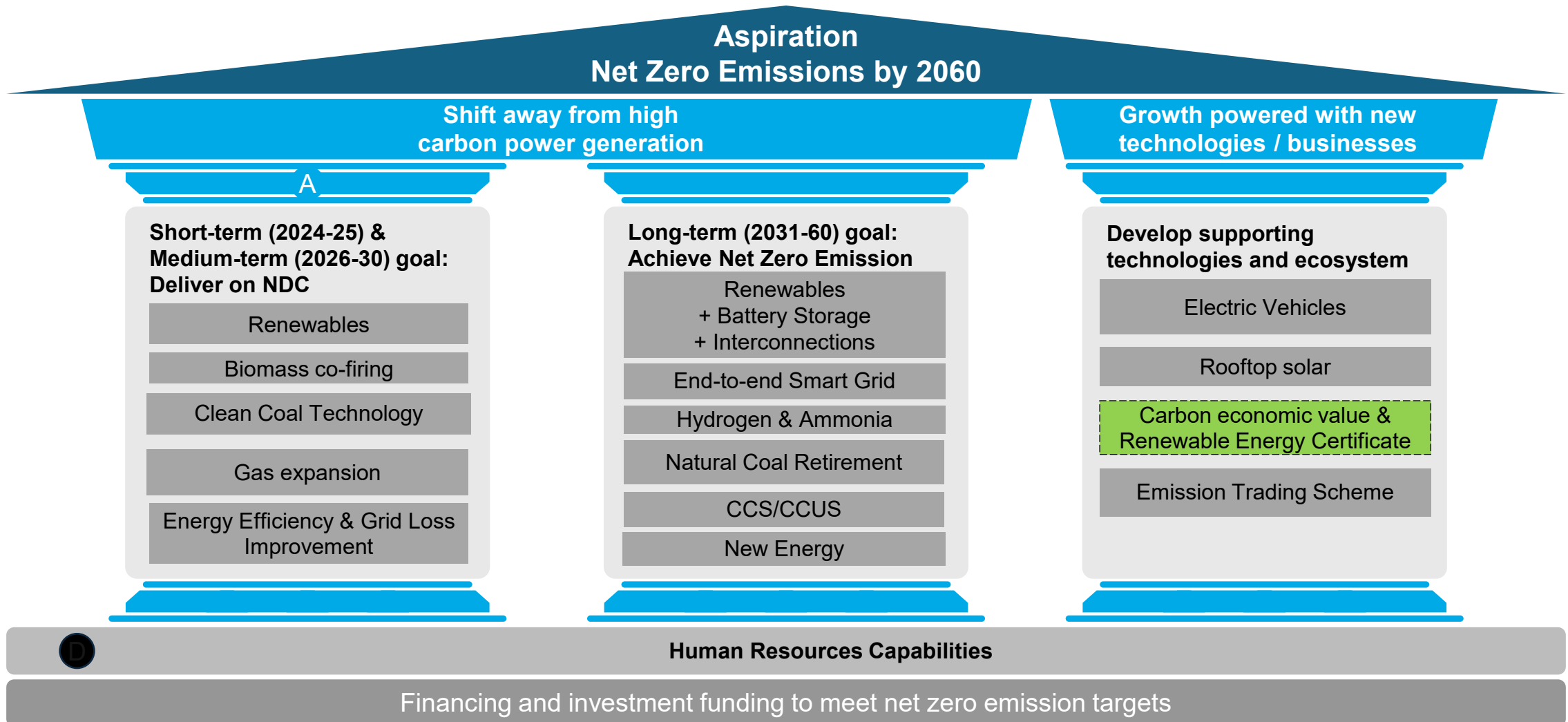
**Sustainability is no longer optional for PLN.** It's a strategic imperative to ensure long-term resilience, align with national goals, and meet stakeholder expectations



**Sustainability anchors PLN's long-term strategy, because:**

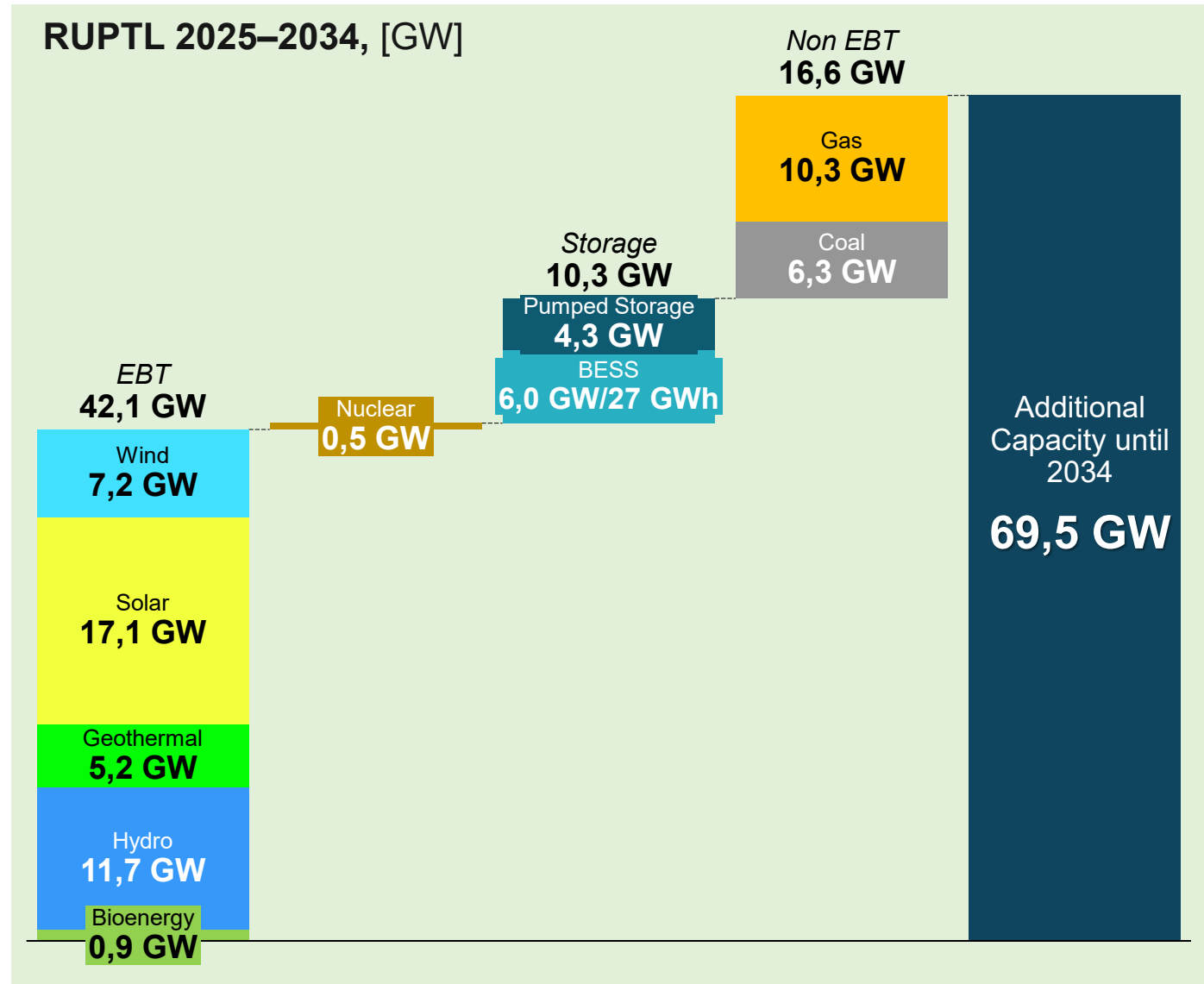
- 1. Climate change affects our business fundamentals.** PLN must adapt to physical risks and stricter environmental standards.
- 2. We must align with Indonesia's and global climate targets** and deliver public value through universal access to clean, reliable energy
- 3. Stakeholders expect climate leadership and social inclusion** through a just transition, empowering and engaging inclusively across regions.
- 4. Financial strength is key** to deliver on all fronts — infrastructure, affordability, and environmental performance.

In PLN's Net Zero Emissions roadmap, **the carbon economic value acts as a strategic driver for emission reductions and green business innovation**



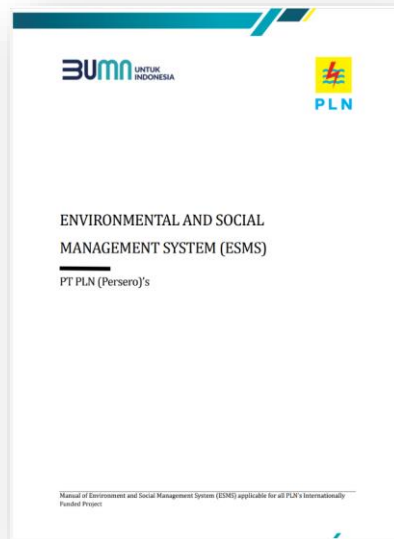


75% of PLN's 10-year business plan (RUPTL) is dedicated to renewable energy and storage, which could potentially generate carbon credits. **Robust environmental and social safeguards are vital to ensure emissions reduction projects deliver real benefits for communities**



\*exclude PV Rooftop 3 GW)

# PLN's Environmental and Social Management System (ESMS) helps manage environmental and social risks and ensure that the energy transition is fair and benefits communities



a framework to manage environmental and social risks and impacts across PLN operations and supply chain, ensuring alignment with Good International Industry Practices and International Finance Institution standards.

consists of a manual, 16 Management Guidelines, and IPP Guidelines



## **Environmental Management Guideline**

1. Noise and Vibration Control
2. Air Quality
3. Energy Efficiency
4. Biodiversity
5. Hazardous Materials
6. Hazardous Waste
7. Water Efficiency
8. Erosion and Sediment Control
9. Wastewater and Water Quality
10. Non-Hazardous Waste



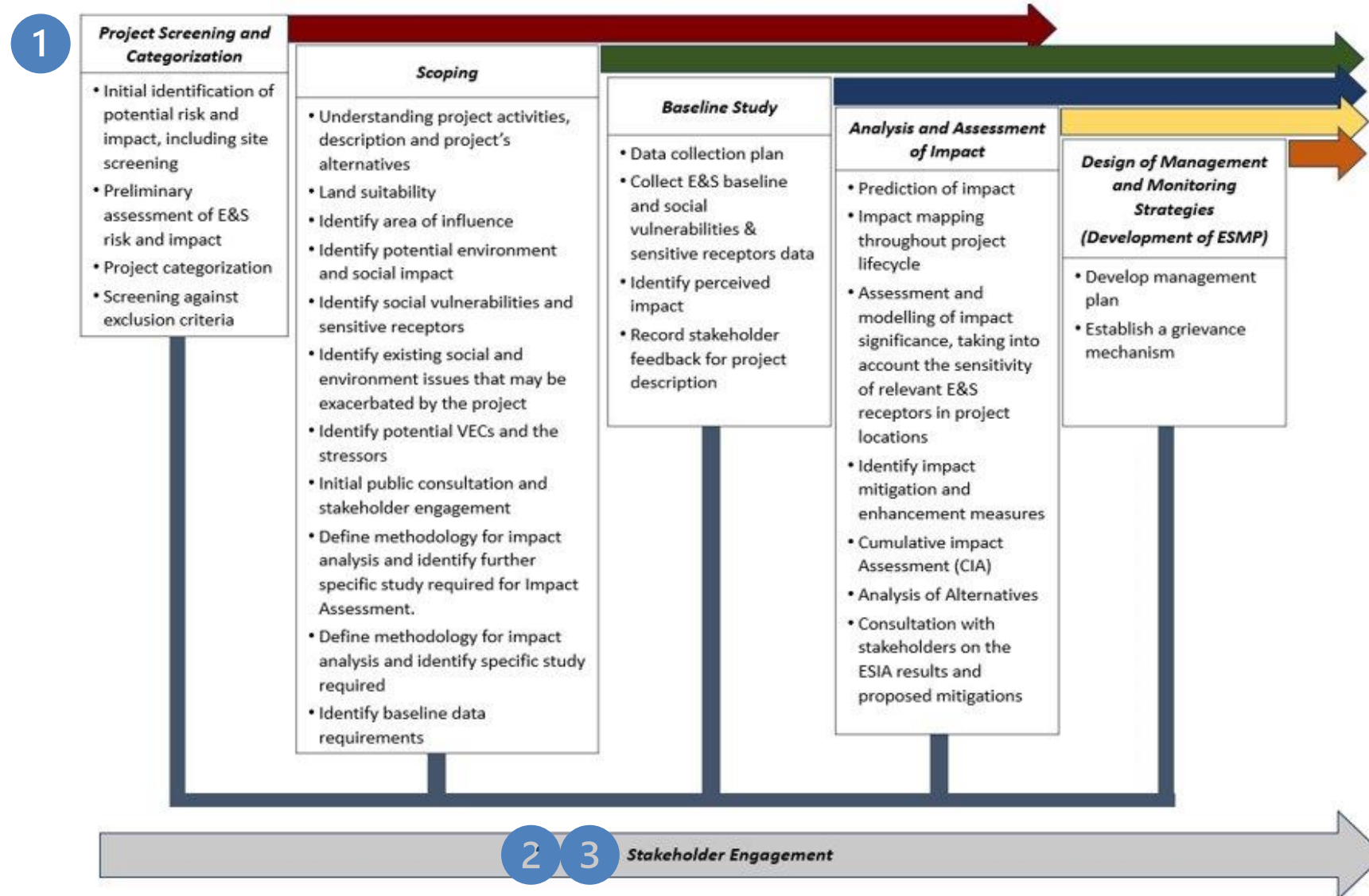
## **Social Management Guideline**

1. Cultural Heritage
2. Land Acquisition and Resettlement
3. Community Health Safety, and Security
4. Labor and Working Condition
5. Indigenous People
6. Stakeholder Engagement



## **Independent Power Producer (IPP) Guideline**

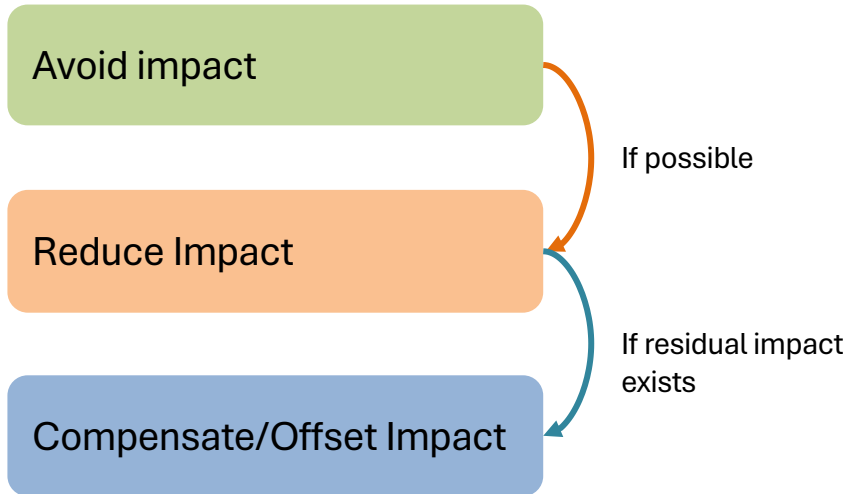
# PLN's ESMS ensures comprehensive impact assessments from project screening to commissioning and operation



- 1 Screening process** is conducted at the early stage of the project, covering environmental and social aspects. It uses several tools such as IBAT, MCA tools, GIS, AMAN, and BRWA for identifying Indigenous Peoples.
- 2 Stakeholder engagement** is carried out at every stage of the project, not only during the planning process.
- 3 If Indigenous Peoples** are encountered in a project, **FPIC** (Free, Prior, and Informed Consent) is conducted to obtain their approval. A benefit-sharing program is then jointly developed and implemented sustainably, along with identifying potential project impacts.

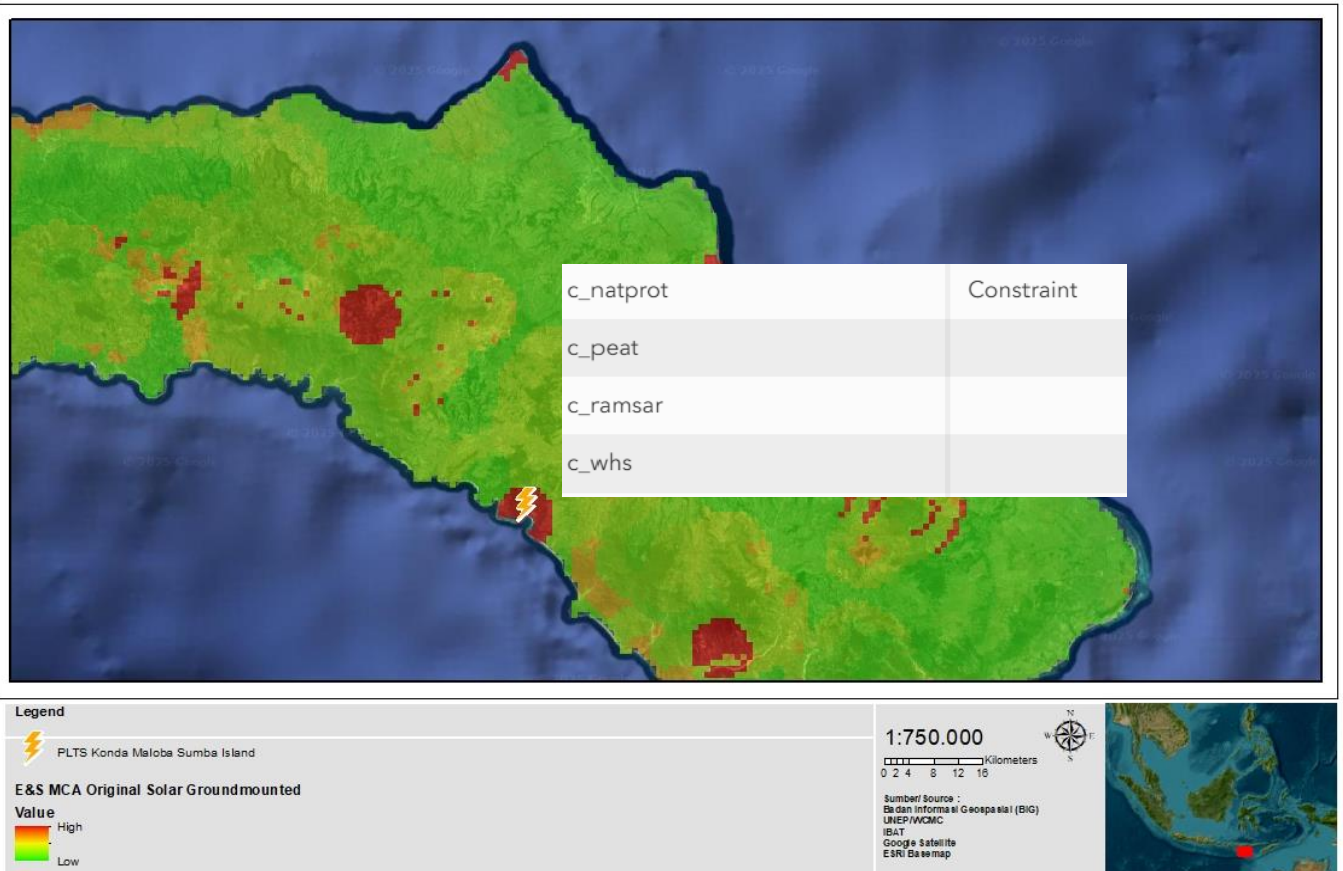
# 1 In the project screening, **MCA (Multi-Criteria Analysis)** tools are applied to **identify and evaluate environmental and social (E&S) risks**

## Hierarchy Mitigation for E&S Risks :



**MCA Tools** is one of the tools for screening environmental and social aspect such as protected area, indigenous people, potential disaster and existing infrastructure

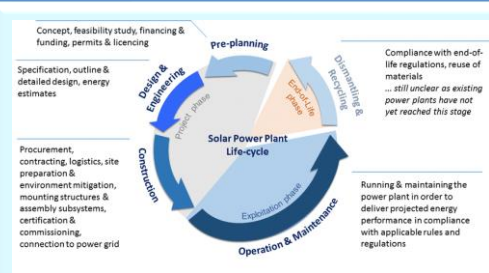
Screening MCA Tools on Solar PV Site (Sample)



This is an example of solar PV site screening using MCA tools, indicating that the project is located within a constrained area (national protected area) classified as a high-risk project.

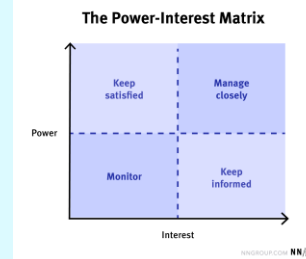


## 2 Stakeholder Engagement Plan is prepared from the start to **build trust and secure a social license** to operate across all project phases



### Continuous Process Throughout the Project Cycle

Starts from the early stages (feasibility study) through construction and operation to support inclusive project planning and the acquisition of a social license to operate.



### Types & Identification of Stakeholders

Stakeholders include project-affected parties, vulnerable groups, and other interested parties;

Mapped based on power, interest, and vulnerability;  
Updated periodically throughout the project duration.



### Principles

- ✓ Two-way and timely communication
- ✓ Inclusive (gender, disability, indigenous communities, etc.)
- ✓ Transparent & culturally appropriate
- ✓ Free from pressure or intimidation
- ✓ Confidential and safe grievance mechanism



### Forms of Stakeholder Engagement

Stakeholder engagement may include workshops, focus group discussions (FGDs), public meetings, online/written consultations;

Provision of a Grievance Redress Mechanism (GRM)

## Stakeholder Engagement Plan (SEP)

The Stakeholder Engagement Plan (SEP) is a foundational document prepared from the early stages of the project and serves as the main guide for planning, implementing, and evaluating all stakeholder engagement activities throughout the project cycle.



### Identification & Initial Screening (Pre-Construction)

- ✓ Conducted from the pre-feasibility study stage to determine whether Indigenous Peoples (IP) are present in the project area.
- ✓ Uses 4 criteria of IP characteristics and/or refers to data from Badan Registrasi Wilayah Adat (BRWA), Kemensos Komunitas Adat Terpencil (KAT), or Aliansi Masyarakat Adat (AMAN).



### Meaningful Consultation and FPIC

- Consultations are conducted in a culturally sensitive manner and initiated as early as possible.
- Free, Prior and Informed Consent (FPIC) from Indigenous Peoples is required if the project:
- ✓ Impacts indigenous land/resources;
    - ✓ Causes relocation;
  - ✓ Affects IP cultural heritage.

Risk Rating	Consequence				
	Insignificant (1)	Minor (2)	Medium (3)	Significant (4)	Highly Significant (5)
Probability / Likelihood	Very High (5)	Moderate	Moderate	High	Very High
	High (4)	Low	Moderate	High	Very High
	Moderate (3)	Low	Moderate	High	Very High
	Low (2)	Low	Moderate	High	Very High
	Very Low (1)	Low	Low	Moderate	High

### Risk & Impact Assessment Specific to IP

Protection efforts for IP begin with identifying social, cultural, economic, and environmental impacts.

This is followed by the development of a vulnerability analysis and mitigation strategy based on indigenous customs.



### Grievance Redress Mechanism (GRM)

The GRM mechanism must be adapted to local culture and values and oriented toward resolving customary disputes.

## Indigenous Peoples Plan (IPP)

The IPP is a foundational document designed to ensure that projects affecting Indigenous Peoples are carried out inclusively, with cultural sensitivity, and in accordance with social protection principles.

The IPP includes screening results, impact assessments, engagement strategies, mitigation measures, benefit-sharing, and FPIC approval.

## Both international and national standards **ensure the incorporation of environmental and social safeguards**

Environmental	<b>VERRA</b>	<b>Gold Standard</b>	<b>SPEI</b> <small>SERTIFIKASI PENGURANGAN EMISI GAS RUMAH KACA INDONESIA</small>
	<b>Net positive</b> to biodiversity and ecosystems impact	<b>Strong environmental safeguards</b>	<b>Environmental Impact Analysis</b> related to Environmental Risk Management
	<b>Risk Assessment</b> for ecosystem degradation	<b>Do No harm Assessment</b>	
	<b>Stakeholder Engagement &amp; FPIC<sup>1</sup></b>	<b>Stakeholder Engagement &amp; FPIC<sup>1</sup></b>	<b>Public Consultation &amp; Disclosure</b> (conducted by announcing the implementation plan and gathering input from directly affected stakeholders and communities)
	<b>Grievance Redress Mechanism</b> (Complaint system for affected stakeholder)	<b>Grievance Redress Mechanism</b> (Complaint system for affected stakeholder)	
Social			
Economic & Other	<b>ILO Compliance</b> (No forced labor, etc.)	<b>ILO Compliance</b> (No forced labor, etc.)	<b>Additionality</b>
	<b>Economic Outcomes</b>	<b>Economic Impact &amp; Risk</b> along with economic co-benefit	

All standards also highlight the importance of MRV:

**M : Monitoring**

**R : Report**

**V : Verification**

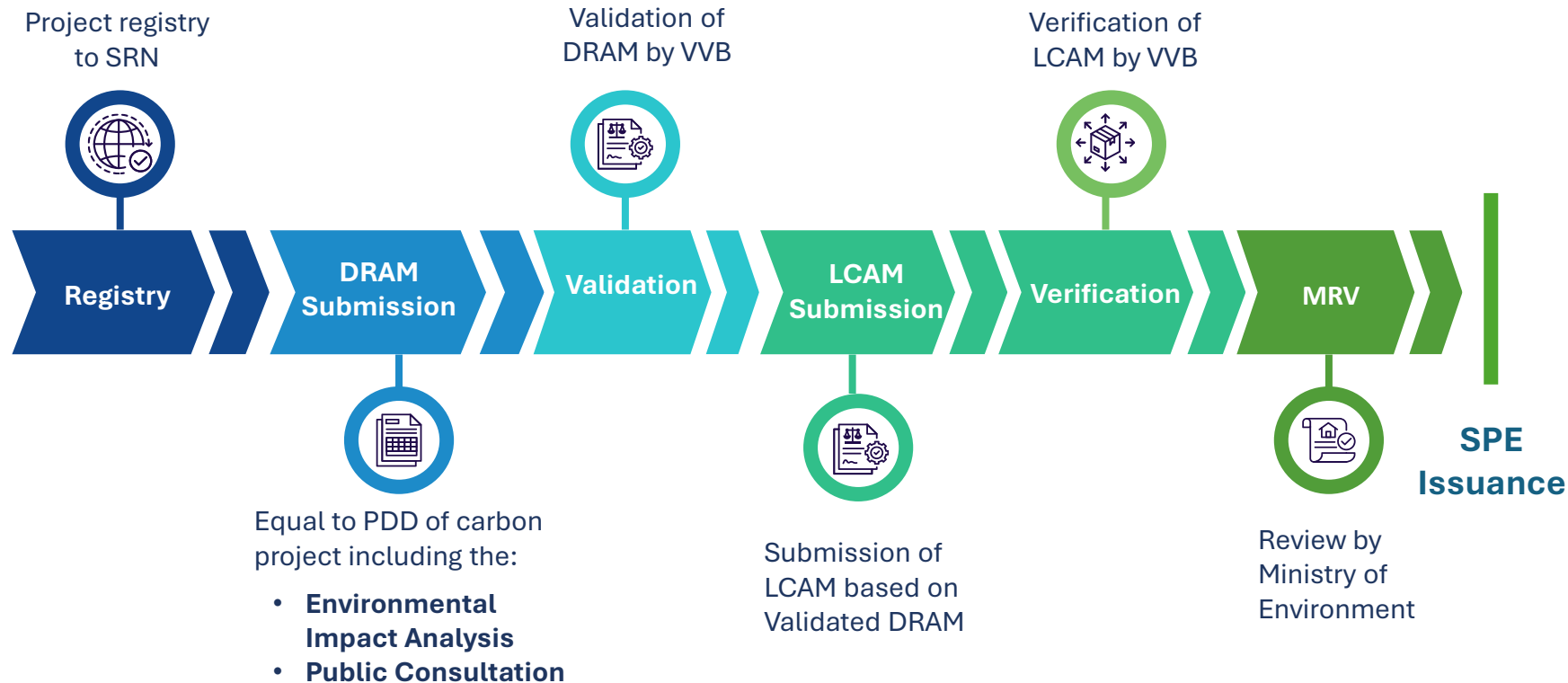
aspect to ensure transparency, accuracy and credibility of carbon credit



<sup>1</sup>FPIC (Free, Prior, and Informed Consent)

Under the SPEI<sup>1</sup> scheme, **public involvement and support must be validated**, along with social and environmental impact assessments

### SPEI Mechanism



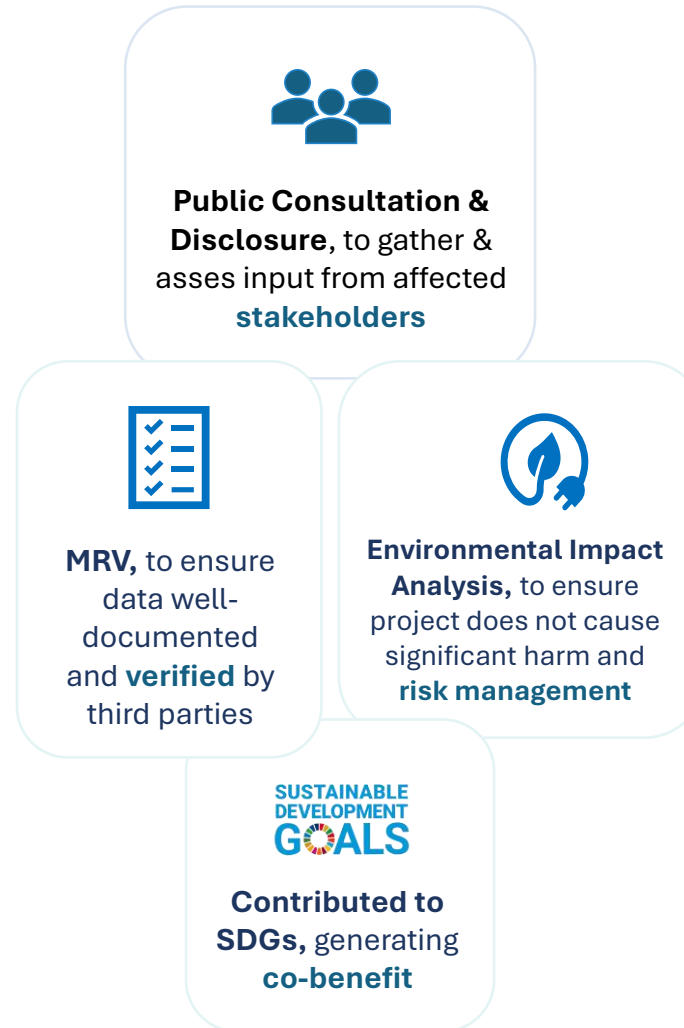
**Requirements to be validated prior to SPE Issuance**

**Conducting Public Consultation & Disclosure**

**Social & Environmental Impact Assessment**

**Evidence of local consent & support**

### Safeguard aspects included in the SPEI Standard



<sup>1</sup>SPEI: Indonesia's Certified Emission Reductions



The MOE's regulation provides for a **Result-Based Payment Mechanism** to verify carbon projects and ensure benefit sharing that supports capacity building and social investment

## Result Based Payment (RBP) Mechanism

Performance-based financing mechanism in which payments are **disbursed only after independently verified** results are achieved



Beneficiaries:  
**Communities**, Project Developer, or Government



Requirement:

- **Registered in National Registry**
- **Emission Reduction Verified by VVB**
- **Approved by MOE**



Scheme:  
**Benefit Sharing**, could be monetary and non monetary  
(Social Investment & Capacity Building)

### Benefit Sharing Scheme



\*Recommended by MRV team which consider  
(Co-benefit, NDC contribution and availability implementation of mitigation action)

*Example of Benefit Sharing: Payment for Environmental Services*

## Indonesia's RBP Project

RBP Project generally come from **AFOLU sector**



Project Type : REDD+  
RBP Buyer : World Bank through FCPF Carbon Fund  
Fund Channeling Institution : BPDHLH \*  
\*Indonesia Environmental Fund

### Scheme

- Proposal Submission to Donor
- Emission Reduction Agreement
- Approval by Ministry
- Distribution by BPDHLH

RBP channel to communities and regional stakeholder

**PLN currently does not have any projects related to Result-Based Payment**

# Through SPEI and VCS mechanisms, **PLN contributes to community benefits, supports SDG alignment, and promotes inclusive participation**

## National Scheme

### Indonesia's Certified Emission Reductions (SPEI)

**6** Projects in MHPP and CCPPs

**~5** million tCO<sub>2</sub> SPE has been issued

#### Example projects



**Muara Karang CCPP Block 3**  
~927 thousand tCO<sub>2</sub>e



**Gunung Wugul MHPP**  
~11 thousand tCO<sub>2</sub>e

## International Scheme

### Verified Carbon Standard (VCS)

**~3** Projects HPP

**~8** Mn tCO<sub>2</sub> carbon credits issued

#### Example projects



**Lau Renun HPP**  
1.8 million tCO<sub>2</sub>e



**Musi HPP**  
4.9 million tCO<sub>2</sub>e



**Sipansihaporas HPP**  
1.1 million tCO<sub>2</sub>e

## Social Carbon



Quality standard to certified carbon project contribution to SDGs

**3** PLN's VCS project are certified as Social Carbon



Social carbon certification ensures community benefits and adds value to carbon credits

## Co-Benefit of PLN VCS Project



#### Local jobs

are created by the project during the construction and operation



#### Ongoing technical training

for employees working on the project



#### Free training

for locals on composting and making organic fertiliser from invasive aquatic plants – providing free fertilisers to farmers to maintain healthy ecosystems



**± 20 ha of land**

reforested in the project area as part of a dedicated programme to support a healthy, natural ecosystem

# PLN's VCS<sup>1</sup> projects serve as a catalyst for local development by integrating **environmental restoration with social benefits**



## Community Empowerment: Local Job Opportunities

**8** PEKERJAAN LAYAK  
DAN PERTUMBUHAN  
EKONOMI

About  
**80 Permanent Jobs\***

Created during the construction and operation phase boosting local economic development



## Community Development: Recycling Facilities

**“Yamantab Recycling Facilities”**

Support tackling waste management issue, providing transportation and selling product



## Environment: Land Reforestation

**15** EKOSISTEM  
DARATAN

**20 Ha**  
area of land

Project area reforested to support health and natural ecosystem



## Education: School Funding

**11** SUSTAINABLE CITIES  
AND COMMUNITIES

Community  
infrastructure

Provide finance for new school supporting local education development



## Infrastructure: Facilities Funding

**11** KOTA DAN  
PEMUKIMAN YANG  
BERKELANJUTAN

**2 Drawbridges**

**9** INDUSTRI, INOVASI  
DAN INFRASTRUKTUR

Support Infrastructure & facilities repairment and fund for new one

\*Total Jobs created from 3 VCS Project of PLN

<sup>1</sup>VCS: Verified Carbon Standard



**Social and environmental benefits** are already being generated through PLN's SPEI projects, while **advancing net-zero milestones**

## Biodiversity



### Biodiversity: Ecological Program

#### “Eco Marine Mangrove Program ”

Transforms garbage coastal area into mangrove forest which increase the **biodiversity index**

*Location: Java*

## Environment



### Environment: Ecosystem Improvement

#### “Rebuilding West Java Tropical Rain Forest”

Saving **critical land** and inventorying the **potential of flora and fauna**

*Location: West Java*



### Environment: Quality Improvement

#### “Improvement of Ranu Grati Lake”

Distribution of Ecoenzym to improve **lake quality**.

*Location: Grati Lake*

## Social



### Social: Community Empowerment

#### “Denting Nusantara Program”

To tackle **stunting in local area** by taking initiatives to detect stunting & counselling

*Location: Muara Karang*



### Social: Accessibility

#### “Road Utilization”

Utilization of the access road to project area **for local community activities**

*Location: Gn. Wugul*



Going forward, PLN will **seize carbon market opportunities** to reach its net zero target and ensure every emission reduction project **includes safeguards that benefit communities.**



### Article 6 Operationalization

*Opportunity*

Active participation in discussions on the operationalization of Article 6 and in **bilateral dialogues within the energy sector**



### Leader in National Carbon Market

*Growth*

Consistently leading Indonesia's market through transparent reporting and allowance transactions within Emission Trading System, and **delivering more high-quality emission reduction projects**



### Project Diversification

*Innovation*

Diversify projects such as **Floating Solar PV**, tech-based **carbon removal**, and **transition finance project**



### Co-benefit Enhancement

*Value*

Enhancing **community-based carbon projects** to improve environmental and social outcomes across emission reduction initiatives





**PLN**