Role of PT SMI in Addressing Climate Finance for Indonesia’s Infrastructure Development

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PT Sarana Multi Infrastruktur (Persero)

Jakarta
August 2021

A leading catalyst in the acceleration on the national infrastructure development
Climate Action Failure Along With Infectious Diseases Are The Top Of Mind Risks In 2021

**2021 Global Risks Outlook**

Every year, the World Economic Forum analyzes the top risks facing the world in terms of likelihood and impact. Which risks are top of mind in 2021?

Sources: https://www.visualcapitalist.com/visualized-a-global-risk-assessment-of-2021-and-beyond/
Climate Action Failure Could Negatively Effect GDP Per Capita

Emerging market (EMs) and low income countries (LICs) are more exposed to climate change costs than advanced economies (AEs)

Heterogeneous Effects and Frequency of Weather-Related Natural Disasters

1. Impact of Extreme Disasters on GDP per Capita (Percentage points)

2. Number of Disasters by Country Group, Adjusted for Land Area (Annual average 1980–2019, per million km²)

Sources: EM-DAT (Emergency Events Database); and IMF staff calculations.

Note: Error bars in panel 1 represent 90 percent confidence intervals. In panel 2, for each year, the number of disasters is added up and divided by the total land area of the country group, then averaged over years. Small states are defined as territories with land area under 30,000 square kilometers (for reference, Haiti is 27,750 square kilometers).

AEs = advanced economies; EMs = emerging market economies; LICs = low-income countries.
PT SMI’s Concrete Steps to Support Climate Finance Projects in Indonesia

Strategic Direction of PT SMI’s Climate Finance

1. Making PT SMI’s climate finance consistent with low emission, climate-resilient pathways
2. Taking steps to end finance for carbon-intensive fossil fuel based-energy
3. Mobilizing private sector climate finance, promoting climate PPP’s, as well as project preparation
4. Scaling up international climate borrowings and enhancing the impact (through SDG Indonesia One)
5. Defining, measuring, and reporting PT SMI’s climate finance

Concrete Action of PT SMI’s Climate Finance

1. Established Sustainable Finance Division (2016) to finance RE-projects related
2. PT SMI as the first accredited entity in South-East Asia
3. Blended Finance Platform (October 2018) to support Sustainable Development Goals (SDGs), including support for green projects
4. Issued the 1st corporate green bond & impact report in Indonesia
5. The development and implementation of Guidelines of Environmental and Safety Management Frameworks (ESMF)
Financing Commitment and Project Cost
Coal-Fired vs Climate Related Projects*

Cumulative Commitment

<table>
<thead>
<tr>
<th>Year</th>
<th>Coal Fired</th>
<th>Climate Related</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>1.2 Triliun</td>
<td>1.4 Triliun</td>
</tr>
<tr>
<td>2016</td>
<td>1.2 Triliun</td>
<td>2.4 Triliun</td>
</tr>
<tr>
<td>2017</td>
<td>2.2 Triliun</td>
<td>5.1 Triliun</td>
</tr>
<tr>
<td>2018</td>
<td>3.2 Triliun</td>
<td>7.7 Triliun</td>
</tr>
<tr>
<td>2019</td>
<td>6.1 Triliun</td>
<td>9.4 Triliun</td>
</tr>
<tr>
<td>2020</td>
<td>6.1 Triliun</td>
<td>9.8 Triliun</td>
</tr>
</tbody>
</table>

Financed Project Cost

<table>
<thead>
<tr>
<th>Year</th>
<th>Coal Fired</th>
<th>Climate Related</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>7.0 Triliun</td>
<td>6.0 Triliun</td>
</tr>
<tr>
<td>2016</td>
<td>7.0 Triliun</td>
<td>21.6 Triliun</td>
</tr>
<tr>
<td>2017</td>
<td>14.3 Triliun</td>
<td>53.8 Triliun</td>
</tr>
<tr>
<td>2018</td>
<td>19.0 Triliun</td>
<td>63.2 Triliun</td>
</tr>
<tr>
<td>2019</td>
<td>28.5 Triliun</td>
<td>28.5 Triliun</td>
</tr>
<tr>
<td>2020</td>
<td>28.5 Triliun</td>
<td>28.5 Triliun</td>
</tr>
</tbody>
</table>

Active Commitment Portfolio by End of the Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Coal Fired</th>
<th>Climate Related</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>1.2 Triliun</td>
<td>1.0 Triliun</td>
</tr>
<tr>
<td>2016</td>
<td>2.0 Triliun</td>
<td>2.2 Triliun</td>
</tr>
<tr>
<td>2017</td>
<td>4.2 Triliun</td>
<td>3.2 Triliun</td>
</tr>
<tr>
<td>2018</td>
<td>6.0 Triliun</td>
<td>5.6 Triliun</td>
</tr>
<tr>
<td>2019</td>
<td>7.7 Triliun</td>
<td>5.2 Triliun</td>
</tr>
<tr>
<td>2020</td>
<td>8.1 Triliun</td>
<td>4.6%</td>
</tr>
</tbody>
</table>

Climate Related Projects Portfolio Breakdown in 2020

- Renewable Energy: 53%
- Urban Transport - LRT: 38%
- Water & Sanitation: 9%

PT SMI is committed to support sustainable development. One of the way to achieve it is by implementing moratorium on financing electricity projects based on coal or coal fired power plant and switched to climate related project that contributes to the reduction of carbon emission and greenhouse effect.

- PT SMI’s commitment to support sustainable development is reflected on climate related projects financing amounted to 7.1%, higher compared to coal-fired of 4.6% from total financing commitment of Rp 113.3 trillion¹ in 2020.

- PT SMI has financed 31 climate related projects with total commitment of Rp9.8 trillion and project cost amounted to Rp77.5 trillion, significantly higher than coal-fired projects with 9 projects and total commitment of Rp6.1 trillion and project cost amounted to Rp28.5 trillion

* YTD
¹ Excluding equity investment
Framework: Climate Change Issue Must Be Resolved by Collaboration Between Government and Private

- Climate action failure → Global Warming

**As an example of public bad:** non-excludable and non-rival, and negatively affects welfare

**How to mitigate public bad?**

Intervention of **government** and supported by **private**

**Sustainable Finance** to support sustainable/green projects

**Challenges of Sustainable Finance:** Private sector participation, Project readiness, Financial market development, and Electricity affordability.

**Blended finance** is the use of catalytic capital from public or philanthropic sources to increase private sector investment in sustainable development.

Sources: [https://www.convergence.finance/blended-finance](https://www.convergence.finance/blended-finance)
Sustainable Development Goals (SDG) Indonesia One - Blended Finance Platform: From the Concept to the Implementation

Challenges

Resources and public sector’s limited ability on budgeting, planning, and preparation

Lack of project readiness due to inadequate process preparation (including the risks allocation framework)

Other setbacks caused by:
- Tariff policy
- Unsustainable business model
- High interest rate

Blended Finance Solution

Offers consultation and project development service to improve project qualities and readiness

Use various sources of funds from various stakeholders to de-risk projects and increase bankability

Synergy and collaborate with relevant stakeholders and strategic partners

Platform Concept

SDG Development Facilities

SDG De-risking Facilities

SDG Financing Facilities

SDG Equity Fund

SDG Indonesia One as of May 2021

USD 3.27 Billion from 33 Partners
Case Study Blended Finance on Clean Energy Sector (Project Development): Collaboration Between PT SMI and ClimateWorks Foundation
Grant for Feasibility Study in Solar Rooftop Airport

**Program Detail**

**Donors**

- Bloomberg Philanthropies
- high tide

**Re-granting Agency**

- ClimateWorks Foundation

**Program Manager**

- PT Sarana Multi Infrastruktur (Persero)

**Consultant**

- reConsult

**Beneficiary**

- Angkasa Pura | AIRPORTS

**Grant Fund**

Available grant fund

**IDR 4.93 billion (~USD 323,778)**

**Program Period**

1 April 2020 - 31 September 2021

**Output**

Feasibility Study of Airport Solar Rooftop Projects

**Other Proposed Program**

- Airport Solar Rooftop Feasibility Study in collaboration with **PT Angkasa Pura I**
- Gas Station Solar Rooftop Feasibility Study in collaboration with **Pertamina**
- Solar Rooftop Feasibility Study development in **remote areas**
- **Capacity Building** on solar rooftop

**Scheme**

- **Ultimate Donor**
- **Reporting**
- **Grant Agreement**
- **Grant Management**
- **Procurement & Contracts Consultant**
- **Technical Assistance Agreements**
- **FS, Monitoring & Reporting**
- **Review Feasibility Study (FS)**
Case Study Blended Finance on Clean Energy Sector (De-risking):
**Blended Finance Structure in Geothermal Sector**

*Collaboration of Public Sector, DFIs and Donors to de-risk projects*

### Blended Finance Structure to de-risk Exploration Stages of Geothermal Development

1. **Geothermal Upstream Development Projects (Government Drilling)**
   - **Location**: Wae Sano
   - **Province**: Nusa Tenggara Timur
   - **Potential Capacity**: 30 MW
   - **Exploration Drilling cost**: USD 30.3 juta
   - **CTF grant**: USD 49 mill.
   - **GEF grant**: USD 6.25 mill.
   - **Co-financing**: USD 49 mill.

2. **Geothermal Resource Risk Mitigation (GREM) (SOE Drilling)**
   - **Loan Facility with De-risking for SOE drilling**: 100% PISP fund or GREM
   - **Private Window financial instrument**: Reimbursable Grant
   - **Donor**: GCF/CTF

3. **Geothermal Resource Risk Mitigation (GREM) (Private Drilling)**
   - **Loan Facility with De-risking from donor fund**: Private Sectors
   - **Private Window financial instrument**: Reimbursable Grant
   - **Donor**: GCF/CTF

**Program**

- **Geothermal Energy Upstream Development Projects (GEUDP)**

**Public Sector Development Financial Institution**

- **Donor**: GCF/CTF

**Green fund (Donor)**

- **Donor**: GCF/CTF

**Collaboration of Public Sector, DFIs and Donors to de-risk projects**

**Loan Facility with De-risking**

- **Government Fund**: 50%
- **De-risking**: 50%

**Blended Loan**

- **IBRD/GCF/CTF**: 50%

**De-risking**

- **Government Fund**: 50%
- **De-risking**: 50%
- **IBRD/GCF/CTF**: 50%
- **Financial Instrument Reimbursable Grant**: GCF/CTF
### Facility Details

<table>
<thead>
<tr>
<th><strong>Sector</strong></th>
<th>Electricity – Renewable Energy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project Name</strong></td>
<td>Air Putih Minihydro Power Plant</td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td>Desa Ladang Palembang, Kecamatan Lebong Utara, Provinsi Bengkulu</td>
</tr>
<tr>
<td><strong>Installed Capacity</strong></td>
<td>3 x 7 MW</td>
</tr>
<tr>
<td><strong>Project Cost</strong></td>
<td>IDR 670,870,000,000</td>
</tr>
</tbody>
</table>
| **Tenor**       | Senior Loan: 9 years  
Sub-debt: 12 years |
| **Facilities**  | Senior Loan: IDR 140,000,000,000  
Sub-debt: IDR 100,000,000,000 |

### Financing Structure

- **Senior Loan**
- **Junior Loan / Sub-Debt**
- **Equity**

**Project Sponsor**

**Collaboration of DFIs and Donors to de-risk projects**
PT SMI as Green Climate Fund Accredited Entity

- Green Climate Fund (GCF) is a financial mechanism under the United Nations Framework Convention on Climate Change (UNFCCC) which was established in 2010.
- GCF invests in climate change mitigation and adaptation activities in developing countries through GCF’s partners, known as Accredited Entities.
- PT SMI is one of GCF’s Accredited Entity, the Accreditation Master Agreement between PT SMI and GCF was signed on 28 April 2017.
- As Accredited Entity, PT SMI submits proposals to receive funding from GCF through the following facilities:

<table>
<thead>
<tr>
<th>Facility</th>
<th>Project Preparation Facility (PPF)</th>
<th>Funding Proposal (FP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instrument</td>
<td>Grant</td>
<td>Grant, loan</td>
</tr>
<tr>
<td>Function</td>
<td>Project preparation</td>
<td>Project implementation</td>
</tr>
<tr>
<td>Amount</td>
<td>Max. USD 1.5 million/project</td>
<td>Max. total project cost USD 50 million</td>
</tr>
<tr>
<td>Description</td>
<td>Project prepared by the PPF grant is expected to submit Funding Proposal within 2 years of the project preparation</td>
<td>Project which does not need PPF support can directly submit the Funding Proposal</td>
</tr>
</tbody>
</table>

Ministry of Finance Fiscal Policy Agency (BKF) National Designated Authority (NDA)

PT Sarana Multi Infrastruktur (PT SMI)
PT SMI as the first accredited entity in South-East Asia

All proposal require No Objection Letter (NOL) from Fiscal Policy Agency Ministry of Finance as NDA GCF Indonesia
PT SMI’s Approved GCF Project:
Project Preparation Facility for Integrated Sustainable Bus Rapid Transit Development in Semarang

Project Overview:
Bus Rapid Transit in Semarang, Central Java
- Project Owner: City Government of Semarang
- Estimated total project cost: ± Rp 1200 billion
- Estimated corridor length: ± 13 km
- Project Preparation Cost: USD 788,000 (GCF) + USD 300,000 (GIZ)
- Project Preparation Source of Fund: Green Climate Fund and GIZ SUTRI NAMA – INDOBUS

PPF Scope:

<table>
<thead>
<tr>
<th>No</th>
<th>Activity</th>
<th>PT SMI (GCF)</th>
<th>SUTRI NAMA – INDOBUS (GIZ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pre-Feasibility Study</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>2</td>
<td>Feasibility Study</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Legal and Regulation Study</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>4</td>
<td>ESIA</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>5</td>
<td>Gender Assessment</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>6</td>
<td>Risk Assessment</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>7</td>
<td>Stakeholder Management</td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

PPF Implementation Timeline:

- March 2018: PPF Proposal Submission
- November 2018: PPF Approval
- April 2019: Signing Grant Support Agreement
- September 2019: Start of FS study
- January 2020: Start of ESIA
- September 2020: End of FS
- December 2020: End of ESIA
- End of PPF Implementation
Potential Collaboration

Equity Investor -> Financial Institution
   - Equity
   - Co Financing

Financial Institution
   - Two Steps Loan
   - Equity

Govt of Indonesia
   - Loan Facility

Donor / Partner
   - Loan Facility

PT SMI
   - Capacity Building
   - Technical Assistance
   - De-Risking Tools

Investment

Financing

De-Risking Tools

Equity

Fund Level

SPV

Financing

Investment Financing

Bridge Financing

Take Out Financing

Working Capital Financing

Promoter Financing

Subordinated/Mezzanine
Thank you.

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