ADB’s Journey in Promoting Private Sector Renewable Energy in Viet Nam
What made it possible in Vietnam – A policy shift in 2018

In 2019 – number of solar power projects in operation
- Many small projects: around 8-10 MW
  * Household levels*
  * Trade and services building level*
- Only three ground mounted totalling 135 MW

In 2019 – number of wind power projects in operation
- 06 projects: around 197 MW

---


**Support mechanism**
- Grid connected projects:
  - FIT: 9.35 USct/kWh
  - PPA: 20 years
  - Cell efficiency >16%, module efficiency >15%
  - Adjustment of FIT: according to VND/USD exchange rate
  - Only applied for the project having COD before 30 June 2019

**Other incentives:**
- **Import duty**: exempted from import duty for imported goods as fixed assets of the projects.
- **Corporate income tax (CIT)**: rate 0% from year 1-4, 5% from year 5-13, 10% from year 14-15, 20% from year 16-20
- **Land use**: Solar power projects, transmission lines and transformers connected to the grid must be reduced or exempted from land use charge and rent pursuant to current regulations
Renewable Energy Achievements: ADB Role and Impact in Viet Nam

Our Role

$1,410 million
Mobilized Private Sector Financing
For renewable energy projects

Concessional Finance
Parallel, B Loans

1,054
112
244

Our Impact

32 MW C&I rooftop solar plants
547 MW solar farm plants
48 MW floating solar farm plant
232 MW onshore wind power plants
600 MW cross-border wind power plant

Total 1,459 MW Renewable Energy in Vietnam
Total GHG reduction: 1,358,092 tons of CO₂ equivalent per annum

Gulf Solar Power Project

1st 50 MW solar power plant in Tay Ninh Province

B.Grimm Viet Nam Solar Power Project – Dau Tieng

240 MW capacity utility-scale solar power project in Tay Ninh Province, Viet Nam.

AC Energy Wind Power Project

88 MW wind farms in Ninh Thuan Province, Vietnam.

Monsoon Wind Power Project

1st 600 MW wind power project in Lao PDR export RE to Vietnam.

Floating Solar Energy Project

1st 47.5 MW floating solar projects in Viet Nam

B.Grimm VN Solar Power Project - Phu Yen

257 MW solar power plant in Viet Nam.

Lotus Wind Power Project

1st 144 MW wind power projects in Viet Nam.

Green Yellow Rooftop Solar Project

1st 32.3 MW solar rooftop of C&I buildings in Viet Nam
Financing Structures and Solutions

Strong understanding of the market and high flexibility in developing innovative financing solutions
At the forefront in developing various financing structures to meet the needs of the clients, including various forms of limited recourse financings to mitigate PPA risks

**Full Recourse**
- Long-term corporate financing to the sponsor
- Full recourse to the sponsor’s balance sheet

**Limited Recourse**
- Project financing structure with limited recourse to the sponsors to address and mitigate risks under the PPA
  - Sponsor support to provide ongoing “drip” to cover any DSRA shortfall
  - Sponsor support to cover project risks generally

**Non Recourse**
- Standard project financing
- No recourse to the sponsor
  - Sponsor support limited to dividend stream from the sponsor’s other assets in Viet Nam
  - Sponsor support to cover project risks generally

- Certain thresholds for each risks agreed upfront
- Sponsor support to cover specific risks under the PPA:
  - Curtailment risk
  - Change in law (in relation to the tariff reduction)
  - PPA Termination

- Sponsor support to cover certain thresholds for each risks agreed upfront
- Sponsor support limited to dividend stream from the sponsor’s other assets in Viet Nam

- Sponsor support to cover project risks generally
# Gulf Solar Power Project (2019)

## Key Financing and Project Features

<table>
<thead>
<tr>
<th>Borrower</th>
<th>TTC Energy Development Investment Joint Stock Company. (SPV 90% owned by GED)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADB Financing</td>
<td>~$11 million</td>
</tr>
<tr>
<td>Total Financing</td>
<td>~$38 million</td>
</tr>
<tr>
<td>Purpose</td>
<td>The project involves the development and operation of a 50 MW photovoltaic solar power plant and its associated facilities in Tay Ninh Province, about 50 kilometers (km) northwest of Ho Chi Minh City.</td>
</tr>
<tr>
<td>Tenor</td>
<td>17 years</td>
</tr>
</tbody>
</table>

### ADB’s Value Addition

- Mobilized financing package that makes the 50 MW solar project commercially viable.
- Provided longer term loan to improve the financial viability of the project.
- Mobilized LEAP non-parallel financing which further improved financial viability and helped to achieve bankable DSCR.
- Positive demonstration effect of limited recourse financing in Viet Nam’s nascent renewable energy sector.
- Ensured project is developed and operated to international best practice standards.
- Ensured compliance with ADB’s environmental and social safeguard standards.
Monsoon Wind Power Project (2023)

Key Financing and Project Features

<table>
<thead>
<tr>
<th>Borrower</th>
<th>Monsoon Wind Power Company Limited.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADB Financing</td>
<td>$100 million</td>
</tr>
<tr>
<td>Total Financing</td>
<td>~$693 million</td>
</tr>
<tr>
<td>Purpose</td>
<td>To support the development, construction, and operation of 600MW wind power plant with 133 wind turbine generators in Lao PDR.</td>
</tr>
<tr>
<td>Tenor</td>
<td>19 years</td>
</tr>
</tbody>
</table>

**ADB’s Value Addition**

- Lead arranger role
- Mobilize commercial banks with B-loan product
- Administration of concessional/grant funds to mitigate key project risks
- Strengthen E&S standards and capacity of triple A project
- Incorporated measures to promote gender equality.
Against this backdrop, Viet Nam’s PDP8 incorporates the MOU target to import 5,000 MW by 2030
**Monsoon by the numbers**

**Project**
- **133 x 4.5MW Envision turbines**; project cost of approx. $950m
- Project developed under an MoU between Lao PDR and Viet Nam for import of renewable power
- Complementarity of wind with hydro compelling given large existing hydro exports from Lao PDR

**Transmission**
- **22km 500kV transmission line (TL)** from the project to the border constructed by Project
- Project TL will connect to 44km 500kV TL constructed by EVN, with interconnection at the border

**Power Purchase Agreement**
- **25-year Power Purchase Agreement with EVN** signed in 2021, amended 2022
- US$ tariff paid offshore Viet Nam; PPA governed by English law with Singapore arbitration
- Termination payments for GoV Force Majeure; deemed generation payments for delay in EVN TL
- “Take-and-pay” for electrical power generated, with curtailment only for technical EVN grid issues

**Concession Agreement**
- **25-year Concession Agreement** with the Government of Lao PDR, signed in 2022
- Royalties payable as a % of gross revenue; key bank accounts to be held offshore

**E&S**
- Strong community support with a focused community development programme, including $1.1m contributed to Community Development Fund annually

**EPC**
- Fixed-price, date-certain, turnkey, fully-wrapped EPC with PowerChina

**O&M**
- O&M with Envision Lao for the turbines, and PowerChina Lao for the balance of plant (BoP) facilities