RENEWABLE ENERGY DEVELOPMENT PROGRAM

PoA-REDP in Vietnam

Ministry of Industry and Trade
Vietnam
ROAD MAP

1. Overview of the REDP
2. Current status of the PoA-REDP
3. Lessons learnt
OVERVIEW OF THE REDP

REDP background

Policy target: Increasing share of RE to 5.6% of total capacity in 2020, and about 9.4% in 2030 (not included hydro power>30 MW).

![Graph showing energy sources for 2020 and 2030]
Economic context:

 Shortage of financial source for electricity as well as RE development.
 Difficulty for private sector to access the financial resource to develop the RE projects.

REDP objectives:

 REDP was launched with expectation of achieving the policy goal.
 The project was funded by World Bank with the aim of support private sector accessing the financial source for RE.
 Carbon finance component under REDP is expected to help developers getting benefit from CERs and increasing sub-project’s feasibility.
OVERVIEW OF THE REDP

REDP outline

- Total capital: 320 mil USD
- Estimated capacity: 210 MW
- Implementation period: 2009-2016

- Number of project: 20-25
- Estimated output: 880 GWh/year,
- Expected emission reduction: 300,000 mil tCO2/year.
OVERVIEW OF THE REDP

Key eligibilities:
- SHPs with capacity less than 30 MW
- 100% electricity output is from renewable energy resource
- New and Grid connected project
- Refinancing from REDP
- FIRR of CPA must be less than FIRR PoA-REDP’s reference
- Apply methodology of ACM0002 on base line
- To comply with Vietnamese regulations, WB safeguards
OVERVIEW OF REDP

REDP stakeholders

Ministry of Industry and Trade (MOIT)

Re-financing by Ministry of Finance (MOF)

Dam Safety Review Panel (DSRP)

Project Management Board (PMB)

CPA Implementers (Project developers)

SHP 1  SHP 2  SHP 3

Participating Banks

PB 1  PB 2  PB 3
OVERVIEW OF REDP

CDM EB

WB

WB CFU

MOIT (CME)

MOF

Developer

PBs

PoA-REDP structure

1

2

3

4

5

6a

6b
CURRENT STATUS OF REDP

PoA REDP mile stones:

- PoA DD and first CPA DD were provided LoA by DNA Vietnam in June, 2011.
- PoA DD and first CPA DD approved by EB in December, 2012.
- SPA was signed between MOIT and WB in December, 2011.
- ERPA was signed between MOIT and WB in December, 2013.
- First five Sub-ERPAs expected to be signed between MOIT and developers in September, 2014.
- OM for PoA REDP was prepared.
## CURRENT STATUS OF REDP

### First 5 CPAs:

<table>
<thead>
<tr>
<th>No</th>
<th>Project Name</th>
<th>Commissioned Date</th>
<th>Installed Capacity (MW)</th>
<th>Generation (MWh/year)</th>
<th>Estimate Annual ERs (tCO2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sung Vui</td>
<td>May 2013</td>
<td>18</td>
<td>53,250</td>
<td>31,888</td>
</tr>
<tr>
<td>2</td>
<td>Song Rieng</td>
<td>February 2012</td>
<td>2.5</td>
<td>13,500</td>
<td>8,100</td>
</tr>
<tr>
<td>3</td>
<td>Pa Chien</td>
<td>April 2013</td>
<td>22</td>
<td>74,800</td>
<td>44,880</td>
</tr>
<tr>
<td>4</td>
<td>Nam Tha 4</td>
<td>July 2013</td>
<td>11.5</td>
<td>45,900</td>
<td>27,540</td>
</tr>
<tr>
<td>5</td>
<td>Hoa Phu</td>
<td>December 2013</td>
<td>29</td>
<td>132,472</td>
<td>79,483</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>83</strong></td>
<td><strong>319,922</strong></td>
<td><strong>191,891</strong></td>
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</tbody>
</table>
## CURRENT STATUS OF REDP

### Pipeline CPAs:

<table>
<thead>
<tr>
<th>No</th>
<th>Project Name</th>
<th>Commissioned Date</th>
<th>Installed Capacity (MW)</th>
<th>Generation (MWh/year)</th>
<th>Estimate Annual ERs (tCO2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Trung Thu</td>
<td>September 2016</td>
<td>29.6</td>
<td>113,960</td>
<td>66,940</td>
</tr>
<tr>
<td>2</td>
<td>Son Tay</td>
<td>September 2016</td>
<td>18.0</td>
<td>71,316</td>
<td>41,891</td>
</tr>
<tr>
<td>3</td>
<td>Bao Lam 2</td>
<td>December 2016</td>
<td>29.4</td>
<td>113,190</td>
<td>66,488</td>
</tr>
<tr>
<td>4</td>
<td>Nam Hoa 1</td>
<td>June 2016</td>
<td>18.0</td>
<td>67,176</td>
<td>39,459</td>
</tr>
<tr>
<td>5</td>
<td>Nam Pia 1</td>
<td>September 2015</td>
<td>4.6</td>
<td>17,167</td>
<td>10,084</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>99.6</strong></td>
<td><strong>382,809</strong></td>
<td><strong>224,862</strong></td>
</tr>
</tbody>
</table>
CURRENT STATUS OF REDP

**Verfication of first CPA:**

- Up to now, among 9 projects funded by REDP, there are 5 CPAs joined PoA REDP
- First CPA Sung Vui is on going verification, final MR submitted DoE.

**Inclusion process of next 4 CPAs:**

- PDD of CPA Pa Chien was finished and now is technical review by DoE.
- PDDs of 3 other CPA are preparing and will be submitted to DoE near future.
Lessons learnt

For developers:

Developers will get benefit when joining PoA due to:

- CERs issued from PoA REDP will be bought until 2020.
- Cost of preparing DD/MR/verification/registration for CPA under PoA is lower than the ones which apply for separate CPA.
- Reduce the cost for transaction of CERs
- The buyer side is the government of Norway, Sweden, Spain through ERPA signed with WB so it reduces the risk from buyer side.
- It’s convenient to developer to get approval from EB, DoE.
Lessons learnt

For MOIT:

- Through implementation of PoA REDP, MOIT has the experience in term of PoA development and management including PDD/MR preparation, CPA monitoring, ERPA aspect etc.

- Based on this PoA, MOIT could develop and manage the other PoAs in RE field such as wind, biomass, waste to energy etc

- MOIT has to deal with the risks which may occur in the future for instance developers could sell their project, falsify verification of CPA in the future, risk of reduced CERs because of unsustainability of RE projects etc.

- It’s very important to hire highly qualified CDM consultant, DoE
Lessons learnt

The points to be considered if doing other PoAs:

- The project design should be appropriate and not too complicated so that it could attract the developer and smooth operation of project.

- Volatile carbon finance market, instability of macroeconomic environment have great impacts on viability of RE as well as CDM projects.

- Be careful in proving the additionally of CDM projects.

- The role of PBs is very important. Getting support from PBs could touch half of success.

- Good coordination between relevant stakeholders.

- It’s very important to hire highly qualified CDM consultant, DoE
Thank you!