Financing Sustainable Energy: EBRD Experience and Plans

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EBRD – a largest financial investor and facilitator of sustainable energy

- Portfolio of €12 bln in 380 projects (€1 bln annually)
- Sustainable energy - 30% of all financing

**Sustainable energy investments in Ukraine, 2006-1H2017**

<table>
<thead>
<tr>
<th>Type of Investment</th>
<th>Number of projects</th>
<th>Amount (EUR million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE in corporate sector</td>
<td>67</td>
<td>960</td>
</tr>
<tr>
<td>EE credit lines for SMEs/RE</td>
<td>23</td>
<td>283</td>
</tr>
<tr>
<td>Cleaner energy production</td>
<td>9</td>
<td>397</td>
</tr>
<tr>
<td><strong>Renewable energy</strong></td>
<td><strong>31</strong></td>
<td><strong>430</strong></td>
</tr>
<tr>
<td>EE in municipal sector</td>
<td>22</td>
<td>430</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>152</strong></td>
<td><strong>2,500</strong></td>
</tr>
</tbody>
</table>
INTEGRATED APPROACH

USELF helped to open and develop the renewable energy market in Ukraine via:

- Policy dialogue since 2008 (FIT law and the NERC support)
- TA to developers, incl. technical, financial, environmental, legal (funded by the GEF, SIDA, Japan)
- EBRD DLF-type financing for developers
- Substantial concessional co-financing from the Clean Technology Fund (EUR 50 m)

Over 170 projects screened and 11 projects financed – 4 solar, 2 wind, 2 small hydro, 2 biogas and 1 biomass in 2011-2016

ECO-OPTIMA WIND FARM

13.2MW wind farm in the Lviv region:

- EBRD 10-y loan € 9.5 million
- CTF 15-y loan € 3.8 million
- Sponsor equity € 7.2 million

Wind farm successfully commissioned and operational since February 2015
Biomass/biogas projects in municipal sector

- Lviv Sludge Biogas – 15 mcm/y, 4.5 MWe, € 22 m, 2016
- DH biomass:
  - Cherkasy (2.5 MWt) operational
  - Ivano-Frankivsk (10MWt), partly op-l
  - Ternopil (10MWt)
  - Lutsk (5MWt)
  - Chernivtsi (10 MWt)
  - NEW – Zhytomyr CHP (2MWe+10MWt)
  - NEW – Lviv CHP (5MWe + 20 MWt)
Biomass/biogas projects in corporate sector

- **Agri biogas:**
  - Astarta – 14.4 mcm/y, €10m, 2013
  - MHP – 18 mcm, 5 MWel, €12m, 2013
  - Danosha – 3.5 mcm/y, 1.5MWel, €3.9m, 2014

- **Agri biomass:**
  - Slavuta – 6 MWt, €3.8m, 2014
  - Nyva (straw) – 4 MWt, €2m 2015
  - Dniprovska Agri – 8 MWt, €4.3m 2017
UKEEP:
Ukraine Energy Efficiency Credit Line


- Renewable Energy
- Total EUR 40 million loans
- In 16 projects:
  - 7 biomass, 5 solar, and 4 small hydro power projects
  - Over 20 MWe and 45 MWt installed
## All Renewable Energy Projects

<table>
<thead>
<tr>
<th>Programme</th>
<th>N</th>
<th>MWe</th>
<th>MWt</th>
<th>M EUR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stand-alone</td>
<td>3</td>
<td>57</td>
<td>2</td>
<td>52</td>
</tr>
<tr>
<td>USELF</td>
<td>11</td>
<td>81</td>
<td>0</td>
<td>40</td>
</tr>
<tr>
<td>Agri sector</td>
<td>6</td>
<td>20</td>
<td>18</td>
<td>36</td>
</tr>
<tr>
<td>Municipal sector</td>
<td>8</td>
<td>11</td>
<td>67</td>
<td>60</td>
</tr>
<tr>
<td>UKEEP</td>
<td>16</td>
<td>20</td>
<td>46</td>
<td>40</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>44</td>
<td>189</td>
<td>133</td>
<td>228</td>
</tr>
</tbody>
</table>
Ukraine Biomass Supply Value Chain Development Programme

Key objectives:

• Partnership among the key agri-companies in Ukraine to promote the use of biomass resources and develop biomass supply value chain

• Support companies with knowledge and expertise on best available technologies and practices related to biomass supply and use

• Provide a dedicated project preparation support for biomass supply and biomass use projects

• Provide EBRD financing blended with grants (FINTECC Ukraine, GEF) and concessional co-financing

• Improve legislative and regulatory framework needed to develop biomass supply value chain
Thank you!

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