

# Financing Renewable Energy: EBRD Experience in Ukraine

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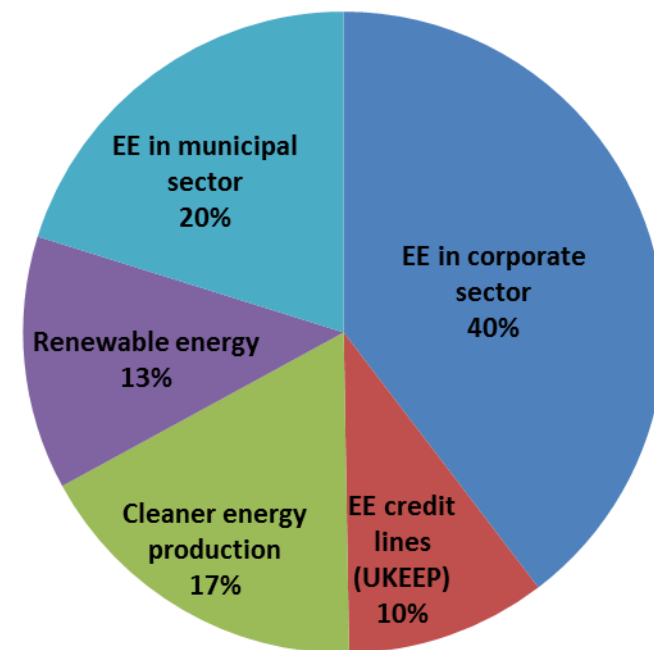
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# EBRD – a largest financial investor and facilitator of energy efficiency

- Portfolio of €12 bln in 370 projects (€1 bln annually)
- Sustainable energy - 25% of all financing

## Sustainable energy investments in Ukraine, 2006-2016

|                                  | Number of projects | Amount (EUR million) |
|----------------------------------|--------------------|----------------------|
| <b>EE in corporate sector</b>    | <b>64</b>          | <b>910</b>           |
| <b>EE credit lines (UKEEP)</b>   | <b>13</b>          | <b>232</b>           |
| <b>Cleaner energy production</b> | <b>9</b>           | <b>397</b>           |
| <b>Renewable energy</b>          | <b>16</b>          | <b>293</b>           |
| <b>EE in municipal sector</b>    | <b>27</b>          | <b>463</b>           |
| <b>TOTAL</b>                     | <b>126</b>         | <b>2,295</b>         |



# Biofuel projects in corporate sector



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- 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, € 3.8 m, 2014
  - Nyva (straw) – 4 MWt, 2015



# Biofuel projects in municipal sector



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- **NEW** - Lviv Sludge Biogas – 15 mcm/y, 4.5 MW, € 22 m, 2016
- DH biomass:
  - Cherkasy (2MW) operational
  - Ivano-Frankivsk (10MW),
  - Zhytomyr (15MW)
  - Ternopil (10MW)
  - Lutsk (5MW)
  - **NEW** – Chernivtsi (10 MW)

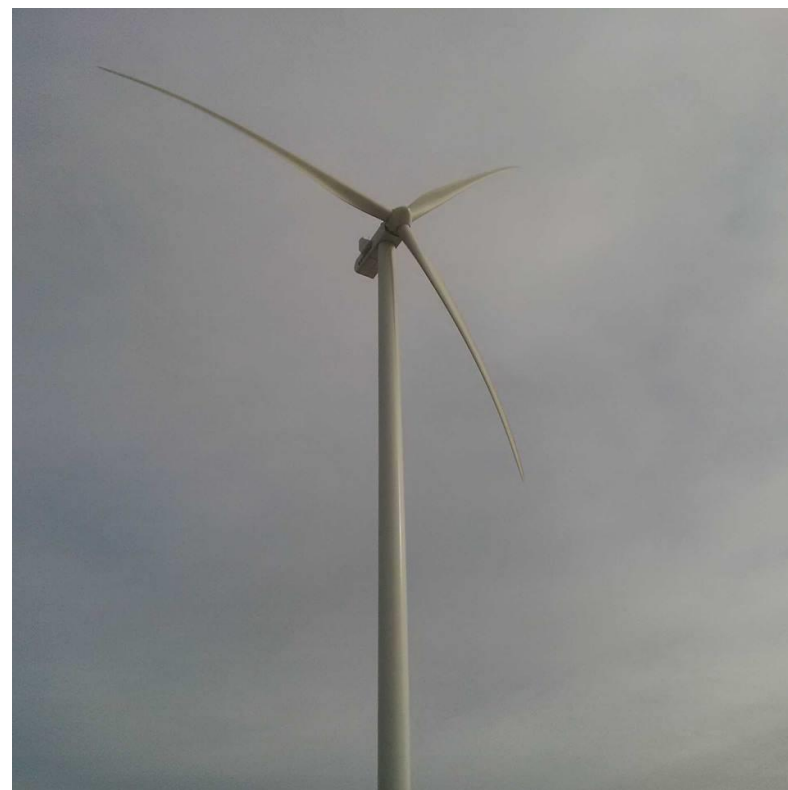


# USELF: Ukraine Sustainable Energy Lending Facility



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- USELF is implementing Phase II – € 70 million (€ 50m of EBRD and € 20m of Clean Technology Fund)
- Three new projects – Karpatsky Wind (10 MW), Aquanova small hydro (1.7 MW), and Shargorod solar (9 MW)
- Overall, EBRD financed 11 projects – 4 solar, 2 wind, 2 small hydro, 2 biogas and 1 biomass in 2011-2016



- Projects complexities are underestimated especially in biomass and biogas – deadlines are often missed
- Resource analysis is important:
  - Volumes and availability, contracts etc
  - Chemical analysis for biogas resources (labs)
- A low interest in obtaining FIT by agribusiness due to its complexity and different line of business
- A need for DH sector reform (tariff setting, market entrance for private business, subsidies reform) to tap a huge potential

# Thank you!



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