Agenda

1. eef – key elements
2. Portfolio overview
3. Case study: CHP Plant City of Orléans, France
**eeef at a glance**

<table>
<thead>
<tr>
<th>Objective</th>
<th>eeef is an innovative public-private partnership dedicated to mitigating climate change through market based financing in the member states of the European Union</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beneficiaries</td>
<td>Municipal, local and regional authorities or public and private entities acting on behalf of those authorities such as utilities, public transportation providers, social housing associations, ESCOs etc.</td>
</tr>
<tr>
<td>eeef’s capital</td>
<td>Initial capitalization of the fund amounting to €265m provided by the European Commission, the European Investment Bank, Cassa Depositi e Prestiti and Deutsche Bank</td>
</tr>
<tr>
<td>Investments</td>
<td>Fund’s investments are split into three project categories:</td>
</tr>
<tr>
<td></td>
<td>- Energy Efficiency (EE)</td>
</tr>
<tr>
<td></td>
<td>- Renewable Energy (RE)</td>
</tr>
<tr>
<td></td>
<td>- Clean Urban Transport</td>
</tr>
</tbody>
</table>
Objective and sponsors of the eeeF

Background and objective

- Commitment of the EU member states to achieve the 20/20/20 goals: 20% increase in EE, 20% reduction of CO2 emissions, and 20% RE in EU's energy mix by 2020.
- Substantial potential for EE and small scale RE in the European public sector.
- Set up a funding source to enhance EE and foster RE dedicated financing within the European Union, primarily through the provision of dedicated financing to:
  - municipal, local and regional authorities
  - public and private entities acting on behalf of those authorities such as utilities, public transportation providers, social housing associations, ESCOs etc.
- Focus areas: EE, RE and clean urban transport.

Sponsors

European Commission
(Initiator)

European Investment Bank
(Founding investor)

Cassa Depositi e Prestiti
(Founding investor)

Deutsche Bank
(Investor and investment advisor)
Advantages of the eeeEF

Fast and flexible financing
- Professional investment advisor, decision making process from initial screening (assuming all information is provided) until financial close no longer than 6 months
- One-stop shop from project development support via grants from the TA facility to tailor-made financing of projects

Various financing instruments
- The fund offers various financing instruments including senior debt, mezzanine, equity, leasing structures and forfeiting loans
- Fund can also operate as the sole investor in projects (single investor transactions) to simplify implementation and lower execution costs

Long maturities
- Flexible with respect to maturities:
  - Debt can be provided for maturities up to 15 - 20 years
  - Equity or mezzanine capital can be provided to act as co-sponsor or long-term subordinated risk taker
Eligibility criteria of the eeef

According to eeef’s investment guidelines an investment has to meet several eligibility criteria:

- General eligibility criteria such as:
  - municipal link
  - commitment of municipality to mitigate climate change (e.g. Covenant of Mayors Initiative)
  - Primary energy savings of at least 20% (Co2 savings for certain technologies)
  - use of proven technologies

- Furthermore, each technology may have its own specific eligibility criteria

- Financing need of the Project from eeef shall be preferably in the range of €5m to €25m
  – smaller project sizes will be reviewed on a case-by-case basis

- Alignment with relevant EU legislation
Role of Deutsche Bank in the eeef

- Deutsche Bank, in its role as investment advisor for eeef, is the first point of contact for private and public clients, developing projects in the energy efficiency, renewable energy or clean urban transport sector.

- Identifies, evaluates and structures the investments for the Fund, the final investment decision is taken by the Management Board.

- Manages the existing project portfolio and interacts with all fund‘s service providers.

- Sources new investors for the Fund.

- Is the key point of contact for all investors, service providers, sponsors and project companies.
Agenda

1. eeef – key elements
2. Portfolio overview
3. Case study: Street lighting upgrade
eeef’s typical projects so far...

<table>
<thead>
<tr>
<th>Project examples</th>
<th>Characteristics</th>
<th>Project structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building upgrades</td>
<td>▪ Energy audits completed, vast energy savings potential</td>
<td>▪ Senior debt</td>
</tr>
<tr>
<td></td>
<td>▪ Sufficient know-how of ESCO in case of big projects</td>
<td>▪ Mezzanine / equity</td>
</tr>
<tr>
<td></td>
<td>▪ Savings guarantee required</td>
<td>▪ Funding via co-investments in SPV or NewCo</td>
</tr>
<tr>
<td></td>
<td>▪ Depending on counterparty risk additional parental/municipal guarantee required</td>
<td>▪ Forfaiting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Leasing (mostly for clean urban transport projects)</td>
</tr>
<tr>
<td>Street lighting</td>
<td>▪ Only light bulbs, switch boards plus EE related measures can be financed, not the light pole itself</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Ownership of lighting points need to be in municipal hand</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Technology with good track-record only</td>
<td></td>
</tr>
<tr>
<td>Biomass plants</td>
<td>▪ Contracts for input (feed-stock) / output (e.g. electricity/heat) in place</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Substitution of input possible</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Technology with good-track record (e.g. boilers, turbines etc.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ O&amp;M concept</td>
<td></td>
</tr>
<tr>
<td>Photovoltaic</td>
<td>▪ Land ownership in municipal hand</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Grid connection secured</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Feed-in tariff secured</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ O&amp;M concept</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Bankable module supplier</td>
<td></td>
</tr>
</tbody>
</table>
Investments by Projects (in %)

- JMB: 22%
- Bolloré Autolib: 7%
- Banca Transilvania: 4%
- CHP Biomass Orléans: 1%
- CHP Biomass Rennes: 27%

Investments by Country (in %)

- France: 41%
- Germany: 22%
- Italy: 28%
- Netherlands: 7%
- Romania: 2%

Investments by type of Partner Institution (in %)

- Direct Investment: 78%
- Financial Institution: 22%

Investments by Financial Instrument (in %)

- Senior Debt: 67%
- Subordinated Debt: 11%
- Equity: 22%
eeef results – what we have achieved (1/3)
Portfolio investments

NETHERLANDS
- €8.5m senior debt to City of Venlo
  (EE: public lighting)

FRANCE
- €5.1m junior funds to project vehicle to supply heat to City of Orléans
  (EE: CHP/biomass)
- €7.3m junior funds to project vehicle to supply heat to City of Rennes
  (EE: CHP/biomass)
- €30m senior funding to Bolloré
  (Clean Urban Transport: electric cars)
- €5m senior construction facility to project vehicle of Région Rhône-Alpes
  (EE: schools retrofit)

GERMANY
- €0.9m forfeiting loan to Jewish Museum Berlin with Johnson Controls (EE: building retrofit)
- €0.6m forfeiting loan to University of Applied Sciences Munich with ESCO of Johnson Controls
  (EE: building retrofit + CHP)

ITALY
- €32m project bond facility to project entity upgrading University Hospital S.Orsola Malpighi in Bologna
  (EE: reduction on energy in entire fluid production and distribution system)

ROMANIA
- €25m subdebt to Banca Transilvania
  (Financial Intermediary investment: EE, RE, Clean Urban Transport)
### eeeef results – what we have achieved (2/3)
Examples from eeeef’s portfolio investments

<table>
<thead>
<tr>
<th>University Hospital S. Orsola, Bologna, Italy</th>
<th>Key project characteristics</th>
<th>Type of eeeef’s instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Heat Power Plant Orléans, France</td>
<td>Replacing gas with a biomass plant in the existing district heating network</td>
<td>Equity investment in the project vehicle to supply heat to the City of Orléans and sale of electricity EDF</td>
</tr>
<tr>
<td>Banca Transilvania, Cluj, Romania</td>
<td>First co-operation of the eeeef with a financial institution</td>
<td>Financial institution supports local EE/RE projects</td>
</tr>
<tr>
<td>City of Venlo, Netherlands</td>
<td>Street lighting upgrade as part of an overall green development plan of the city</td>
<td>eeeef’s first direct lending to a European municipality</td>
</tr>
<tr>
<td>University of Applied Sciences, Munich, Germany</td>
<td>2nd forfaiting transaction in the German market opening opportunities with universities and schools</td>
<td>Purchase of receivables resulting from the building retrofitting services</td>
</tr>
</tbody>
</table>
eeef results – what we have achieved (3/3)
Technical Assistance projects

UNITED KINGDOM
- €1.7m to Ore Valley Housing Association
  (EE: CHP plant/decentralised district heating)

IRELAND
- €336k to Limerick and Clare Education and Training Board
  (EE: building upgrade and RE: PV, micro wind)
- €184k to Roscommon Council
  (EE: biomass district heating)

SPAIN
- €452k to City of Santander
- €754k to City of Cordoba
- €871k to Cabildo of La Palma
- €623k to City of Terrassa
- €456k to City of Marbella
- €782k to City of Elche
  (EE: public lighting, building retrofit and RE as well as Clean Urban Transport)

BELGIUM
- €1.5m to University of Liège
  (EE: building retrofit)
- €2m to GRE Liège
  (EE: building retrofit)

NETHERLANDS
- €425k to City of Venlo
  (EE: public lighting)
- €463k to Municipality of Zaanstad
  (EE: open/smart energy network)

DENMARK
- €1.9m to the Municipality of Ringkøbing-Skjern
  (RE: biogas plant)

FRANCE
- €1.1m to project vehicle
  Région Rhône-Alpes SPL
  (EE: building retrofit)

PORTUGAL
- €540k to CIMAC (Comunidade Intermunicipal do Alentejo Central)
  (EE: public lighting, building retrofit and RE as well as Clean Urban Transport)
Agenda

1. eeeef – key elements
2. Portfolio overview
3. Case study: CHP Plant City of Orléans, France
Case study: combined heat and power plant
City of Orléans, France (1/3)

City of Orléans: 15,000 households benefiting from the district heating network

Decentralized energy supply for the city of Orleans using an existing district heating network, allowing 15,000 households to achieve substantial energy savings with the new energy source and increase environmental sustainability of the citizens

Key facts of the CHP plant

- The co-generating facility is using high steam pressure to produce heat and electricity and has a capacity of 7.5MWe (electrical) and 17MWth
- It is fired by wood chip biomass sourced from local suppliers within a radius of less than 100 km
- The thermal heat will supply the district heating network of the city and electricity produced will be sold to EDF through a 20 year contractual agreement
- During the first partial year of operation, the CHP plant achieved primary energy savings of 2,470 MWh and 23,361 tonnes of CO2
Case study: combined heat and power plant
City of Orléans, France (2/3)

Added value of eeef in the financing structure

- The City of Orléans project required equity/and quasi equity loan to complete the funding structure
- Overall project volume of EUR36m includes funding provided by eeef in form of equity and quasi equity (shareholder loan) in the amount of ca. EUR5m to the project SPVs
- eeef purchased 84% of shares of Orléans Biomasse Energie, the project SPV. Dalkia France is co-invested along with eeef and is a shareholder of the remaining 16% and is also responsible for the operation/maintenance of the plants
- eeef was an integral part to realize the project due to the Fund’s flexibility to provide various financial instrument (debt, mezzanine, equity, leasing, forfeiting structure)
- First equity investment for eeef, which was replicated in a second project, ‘CHP biomass City of Rennes’ with a similar structure
## Case study: combined heat and power plant
**City of Orléans, France (3/3)**

### Project description

<table>
<thead>
<tr>
<th>Partners:</th>
<th>City of Orléans, Dalkia France, eef</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Measures:</strong></td>
<td>Dalkia won a public tender realized under a French Regulation Commission Tender (&quot;CRE3&quot;) for electricity /heat generation fired by biomass</td>
</tr>
<tr>
<td>Biomass plant/ energy efficiency</td>
<td>Biomass-fired combined heat and power plant with a capacity of 7.5 MW in electricity and 17 MW thermal energy</td>
</tr>
<tr>
<td><strong>Results:</strong></td>
<td>Reduction of CO2 emissions of 20,500t p.a., approx. 89.1% compared to baseline</td>
</tr>
<tr>
<td></td>
<td>Energy production 50,826 kWh p.a.</td>
</tr>
</tbody>
</table>

### Project structure

- **City of Orléans**
- **Orléans Biomasse Energie s.a.s**
- **EEEF**
- **Dalkia Biomasse Orléans s.a.s**
- **Contract for electricity sale**
- **Construction contract**
- **Operation and maintenance, Incl. biomass supply**
- **Poor concession for Heat supply to district heating network**
- **EDF**

### Location

- **Orléans, France**

### Investment characteristics

**Key data:**
- EEEF is a 84.4% shareholder of Orléans Biomasse Energie s.a.s
- Total project volume: € 36m
- Total junior funds volume: € 6m
- Duration of financing: 18 years

**Highlights:**
- Decentralized energy supply for City of Orléans using existing district network
- Supply of biomass within 100 km
- Long term PPA agreement with EDF
eeef support along the whole energy efficiency investment circle

- Authority reports achievement of targets
- Achievements get reviewed by the EU

- eeef requires selected ESCOs to provide guarantees for energy savings to the authorities

- Many financiers perceive energy efficiency projects as high risk projects
- eeef’s objective is to fund projects reaching energy efficiency targets aligned with the authorities’ strategic plan

- Lack of capacity for self funding due to austerity policies
- Commercial banks do not support project development
- eeef provided access to the EC Technical Assistance (TA) attached to the Fund

- Depends on results of the project development phase
- eeef has flexibility in offering various financing solutions
- eeef with right to match for projects which received TA support

- Specific targets for European cities
- Political support to launch the projects

EEEOF
EU CO₂ and energy targets

CO₂ and energy savings reporting

Primary energy savings targets achieved

Financing Instrument

Access to financing

Project Development phase

Energy efficiency investment circle

Start
Contacts

European Energy Efficiency Fund (eeef)

**Lada Strelnikova**
+49 (69) 910 46444
lada.strelnikova@db.com

**Matthias Benz**
+49 (69) 910 46449
matthias.benz@db.com

**Pablo Cavia**
+44 (20) 754 1532 869
pablo.cavia@db.com

**Zarpana Signor**
+49 (69) 910 49858
zarpana.signor@db.com

[www.eeef.eu](http://www.eeef.eu)
This presentation (the ‘Document’) has been prepared by European Energy Efficiency Fund, SICAV-SIF (‘European Energy Efficiency Fund’) exclusively for the benefit and internal use of the potential client (‘Client’) in order to indicate, on a preliminary basis, the feasibility of a possible transaction or transactions. The Document may only be used for these purposes. The Client is not permitted to duplicate the information provided in this Document and to communicate the received information of this Document to any third party without the prior written consent of European Energy Efficiency Fund.

The Document is incomplete without reference to, and should be viewed solely in conjunction with, the oral briefing provided by European Energy Efficiency Fund. The Document is neither intended to serve as legal or tax advice nor should it replace it.

The information in the Document reflects prevailing conditions and European Energy Efficiency Fund’s views as of this date, all of which are subject to change.

Neither the European Energy Efficiency Fund nor their directors, officers, agents or employees, customers or professional advisers make any representation, warranty or undertaking, express or implied, as to the accuracy, reliability, completeness or reasonableness of the Document. The aforementioned persons will be under no duty to provide access to any additional information or to update or correct (if required) any Information. Accordingly, neither the European Energy Efficiency Fund nor the aforementioned persons will be liable for the accuracy, reliability, completeness or reasonableness of the Document.