WASTE-TO-ENERGY from the Polish perspective

Astana
2017

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Member of the Board
Marguerite Fund
ABOUT US
MARGUERITE FUND

MANDATE

- The Marguerite Fund is a EUR 710m long term equity fund targeting infrastructure investment in EU28.
- Advised by independent Luxembourg-based company: Marguerite Adviser.

CORE SPONSORS

OTHER INVESTORS

European Commission
CASE STUDY
POZNAŃ WASTE-TO-ENERGY PPP PROJECT
POZNAŃ WtE CASE STUDY
MUNICIPAL WASTE MANAGEMENT IN POLAND

MUNICIPAL WASTE MANAGEMENT IN POLAND

- Poland generates 10 million tons of Municipal Solid Waste ("MSW") per year. Almost 80% of it is landfilled.
- The 99/31/EC Directive on waste storage requires member states to limit the amount of biodegradable municipal waste directed to landfills.

TARGETS FOR POLAND

1. Reduction of biowaste in landfills to 35% of the 1995’s level by 2020;
2. Recycling targets for package waste, bulky waste, demolition waste;

WITH >75% OF MSW LANDFILLED POLAND DOES NOT COMPLY WITH THE EU WASTE RECYCLING TARGETS AND COULD POTENTIALLY FACE PENALTIES. THE GOAL IS TO REACH THE 35% HURDLE IN 2020.

SOURCES: (1) Eurostat, Statistics in focus, 31/2011, “Generation and treatment of municipal waste”.
POZNAŃ WtE CASE STUDY
PROJECT OVERVIEW

GENERAL INFORMATION
- Sita Zielona Energia owns a 28.5 year DBOFM concession for a 210kt p.a. WtE in Poznań, Poland
  - Construction is on schedule and within budget; expected to be completed by end-2016
  - Total capex of PLN 905m
- Revenues are availability based with no volume risk
- The Fund holds a 50% interest in the project
  - The remaining 50% is owned by SITA Polska, a leading service provider in recycling and waste

KEY OPERATING METRICS
<table>
<thead>
<tr>
<th>CAPACITY</th>
<th>210 kt p.a.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAPEX</td>
<td>PLN 905m</td>
</tr>
<tr>
<td>CONSTRUCTION COMPLETION (EXPECTED)</td>
<td>end 2016</td>
</tr>
<tr>
<td>CONCESSION EXPIRY</td>
<td>2041</td>
</tr>
<tr>
<td>REMAINING CONCESSION LENGTH</td>
<td>25 years (from construction completion)</td>
</tr>
</tbody>
</table>

PROJECT LOCATION

PROJECT FINANCING
- Financial Close: April 2013
- PLN 735m term loan provided by PKO BP, Peako SA and Bank Gospodarstwa Krajowego
- Debt-to-equity: 80:20
- Debt partially replaced by a EU subsidy of PLN 330m.
- Maturity: 20 to 22 years from COD
- Benefitted from good relationship between Marguerite and the Marguerite Fund’s investor PKO BP
POZNAŃ WtE CASE STUDY
PROJECT VISUALISATION
POZNAŃ WtE CASE STUDY

CONTRACTUAL STRUCTURE

- Waste collection contracts
  - Shareholders: Polska OpCo
  - Suez Environment Group
  - Marguerite
- O&M Contract
- Project Management Contract
- EPC Contract
- Municipal Waste Tax
- Waste flow
- Households

- POZnan
- Heat offtaker
- Power offtaker
- GC offtaker
- Scrap metal market
- Bottom ash offtakers (construction) or landfill
- ACPR storage

- Senior Lenders
- Senior Facility Agreement
- EU Grant contract
- European Union

- Suez Environment group
- SH A
- Polsk
- OpCo

- Bank Polski
- Bank Pekao
- European Union
- European PPP Agreement
- EU Grant contract

- SUEZ
- SITA
- ZIELONA ENERGIA
- Hitachi Zosen INOVA
- HOCHTIEF
## POZNAŃ WtE CASE STUDY
### RISK MATRIX

<table>
<thead>
<tr>
<th>RISK</th>
<th>CITY</th>
<th>SPV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Update of EIA Report and building permit application</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Design documentation</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Construction delay and cost overruns</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Waste volume and calorific value risk</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Waste throughput, heat and power output performance</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Heat, power and green certificates prices</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Assumptions on recyclable metals and bottom ashes</td>
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<td></td>
</tr>
<tr>
<td>O&amp;M costs overruns</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Financing (senior debt, subordinated debt, equity)</td>
<td>✓</td>
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</tr>
<tr>
<td>EU Grant availability <em>(cap)</em></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Exchange rate (EUR/PLN) variation between BAFO submission and start of construction</td>
<td>✓</td>
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</tr>
<tr>
<td>Interest rate variation between BAFO submission and hedging transaction entered at start of construction</td>
<td>✓</td>
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</tr>
<tr>
<td>Change in Law <em>(cap)</em></td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Force Majeure &amp; Fait du Prince</td>
<td>✓</td>
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