Waste to Energy Experience in Poland, Budimex

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General info about Budimex Group

Budimex Group

Group business split (revenue 2016 – 1 308 mln €)

- Construction: 92%
- Developer: 5%
- Other: 3%

Construction (budimex + mostostal)

- General construction
- Infrastructure
- Industrial

Residential developer

Other activities
First WtE in Poland

**Project duration:**
06.1997 – 03.2000

**Contract value:**
82,5 Mio PLN net

**Capacity:**
40 000 t/year

**Location:**
Warsaw

It was the first municipal waste treatment plant in Poland.
The scope of works included construction works and assembly of technological equipment.
Recent WtE projects in Poland

**Solid Waste Incineration Plant, Bialystok**
TENDER DURATION: 06.2012 - 08.2012

**Solid Waste Incineration Plant in Konin**

**Solid Waste Incineration Plant in Szczecin**

**Construction of Waste Thermal Treatment Plant in Krakow**

**Incineration Plant Poznan Public-Private Partnership**

**Solid Waste Incineration Plant in Bydgoszcz**
Revoked: 16.05.2012. SECOND TENDER - 08.2013
Budimex selected for two WtE projects

**Solid Waste Incineration Plant, Bialystok**

- **Contract value:** PLN 332.9 M net
- **Capacity:** 120 000 t/year
- **Investor:** PUHP "LECH" Spółka z o.o.

**Competitors:**

<table>
<thead>
<tr>
<th>Company</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Astaldi Termomeccanica Ecologia</td>
<td>Lowest price</td>
</tr>
<tr>
<td>RAFAKO</td>
<td></td>
</tr>
<tr>
<td>PBG</td>
<td></td>
</tr>
<tr>
<td>PBG Energia Control Process</td>
<td></td>
</tr>
<tr>
<td>Polimex Mostostal Fisia Babcock Environment</td>
<td></td>
</tr>
<tr>
<td>BUDIMEX S.A. KEPEL SEGHERS N.V.</td>
<td>Winning offer</td>
</tr>
</tbody>
</table>

**Evaluation criteria:**

- Solutions – 37%, Price – 35%,
- Parameters – 15%, OPEX – 13%

**Construction of Waste Thermal Treatment, Krakow**

- **Contract value:** PLN 673 M net
- **Capacity:** 220 000 t/year
- **Investor:** KHK S.A.

**Competitors:**

<table>
<thead>
<tr>
<th>Company</th>
<th>Status</th>
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</thead>
<tbody>
<tr>
<td>Mostostal Warszawa S.A.</td>
<td>Rejected offer by the Court</td>
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<tr>
<td>PBG</td>
<td>Bankruptcy</td>
</tr>
<tr>
<td>PBG Energia Control Process</td>
<td></td>
</tr>
<tr>
<td>Polimex Mostostal Fisia Babcock Environment</td>
<td>Withdrawal from submission of the bid</td>
</tr>
<tr>
<td>BUDIMEX S.A. KEPEL SEGHERS N.V.</td>
<td>Withdrawal from submission of the bid</td>
</tr>
<tr>
<td>POSCO Engineering &amp; Construction</td>
<td>Selected offer (the least attractive offer)</td>
</tr>
</tbody>
</table>

**Evaluation criteria:**

- Solutions – 5%, Price – 45%,
- Parameters – 15%, OPEX – 35%
Municipal Waste Treatment Plant in Bialystok
Contract for Construction

- **Investor:**
  Service, Trade and Production Enterprise „LECH” Ltd

- **General Contractor:**

- **Contract:**
  Contract signed: 31 August 2012
  Contract value: 409 538 641 PLN gross

- **Financing:**
  By the European Union Cohesion Fund under the Programme of Infrastructure and Environment 210 000 000 PLN
  The loan from the National Fund for Environmental Protection 164 000 000 PLN
Plant Performance

Electric Power:
8,68 MWe / 6,08 MWe

Thermal Power:
17,5 MWt

Forecast - 38 000 MWh of an electric energy annually

Forecast - 360 000 GJ of a thermal energy annually
Project Schedule - Challenge

31.08: Signature of the project
20.12: Approval of preliminary design
20.03: Tender + site level

09/12
01/13

09.07: Start of Mech. Erection Works
07.02: Boiler Pressure Test
18.05: DCS Power-up
26.09: First Waste Fire
29.10: Start Trial Run

05/14
09/14
01/15
05/15
09/15
01/16

www.budimex.pl
As per today
Waste to Energy and Biomass Projects as Polish Power Generation alternative to fossil plants

1) WtE Warsaw to be launched in 2017.
2) WtE Gdańsk in PPP formula is in the PP selection process
3) WtE Radom could be announced in 2017.
4) WtE Olsztyn in PPP formula is in the PP selection process

Poland currently produces 10.3 mln tons of waste, 2.2 tons is incinerated. 2.2 mln tons recycled and 5 mln tons landfilled and the rest is processed for compost.

Several Biomass projects are planned to be launched in Poland as result of electric power auctions.

<table>
<thead>
<tr>
<th>Location</th>
<th>Net value [M PLN]</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warsaw</td>
<td>1 100</td>
<td>~305k Mg/year</td>
</tr>
<tr>
<td>Gdańsk</td>
<td>625</td>
<td>~250k Mg/year</td>
</tr>
<tr>
<td>Radom</td>
<td>n.a.</td>
<td>~110k Mg/year</td>
</tr>
<tr>
<td>Olsztyn</td>
<td>650</td>
<td>~100k Mg/year</td>
</tr>
</tbody>
</table>
Thank you