

Solid Waste Management

27. Municipal Waste Thermal Treatment Plant, Poznań, Poland



Photo Credit⁶⁰

Background

In response to new European Union (EU) regulations on waste management, the City of Poznań in Poland started planning the construction of a mixed municipal waste-to-energy power plant, referred to as an energy for waste “EfW” project. The project would be the first PPP in this sector in Poland.

Project Structure

In 2010, after lengthy stakeholder and community consultations, the city decided to develop EfW through a PPP due to its lack of experience in developing this type of project and its attendant desire to have an expert partner manage the operation of the plant. The private partner, Sita Zielona Energia, was selected through a competitive dialogue process that spanned November 2011 to July 2012. Under the resulting contract, the private partner would be responsible for designing, financing, constructing, managing, and maintaining the EfW’s facilities.

The PPP agreement between Sita Zielona Energia and Poznań was signed on 13 April 2013. Sita Zielona is a Special Purpose Vehicle (SPV) formed by SITA Polska (50 percent stake) and Marguerite Waste Polska (50 percent stake). SITA Polska is a subsidiary of Suez Environment, a global leader in environmental solutions; Marguerite Waste Polska belongs to the European investment fund Marguerite. The contract included a construction term of 43 months and an operation period of 25 years from completion of construction. Construction, maintenance, operation, and availability risk were allocated to the private sector, and the city took on the demand risk.

The waste-to-energy plant is in the northern part of Poznan, close to the city’s main heat and power plant, which is the main recipient of the energy

produced by the facility. The project’s capital investment cost was estimated at PLN 725 million (USD 192 million). The project is funded in part by a EUR 84 million (USD 96 million) subsidy from the EU Cohesion Fund, with the remainder financed by equity contributed by SITA Zielona Energia and a non-recourse loan provided by a consortium of three commercial banks.

The city pays the private partner based on its approximate operation costs, disaggregated into fixed and variable costs; debt service requirements in the form of principal installments and financing costs; and the planned profit of the private partner. The payment amount is calculated on the basis of the accounts submitted by the private partner to the city each month. The amount payable by the city is then reduced by revenues generated by the private partner through the sale of electric and thermal energy, and certificates.

Lessons Learned

The waste-to-energy plant officially started operations in 2017, producing both electrical power and heat. At present, 30 percent of the City’s domestic electricity consumption is generated by the new facility. In addition, the plant has reduced the City’s expenses for treating urban solid waste by 20 percent, resulting in estimated annual cost savings of EUR 34 million (USD 38 million).⁶¹

This project highlights the following:

- PPPs should be pursued purposefully, with clear objectives and justifications for procuring a private partner. In this case, the project concept originated from the municipality’s need to improve its solid waste management and the decision to use a PPP stemmed from the municipality’s relative lack of capacity in the preferred project type, namely waste-to-energy.

⁶⁰ Photo in the public domain published by Prylarer <https://pixabay.com/photos/landfill-waste-management-waste-879437/>

⁶¹ Ferek, Agnieszka, Magdalena Kosewska-Kwaśny, et al. 2013. Public-Private Partnership in Waste Management. Warsaw: Crido Taxand, Baker & McKenzie, Centrum PPP. http://www.centrum-ppp.pl/Content/Uploaded/files/PDF/crido_odpady.pdf;

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Suez. n.d. “At Poznan, in Poland, waste is converted to electricity to meet the growing needs of the population.” Suez. Accessed February 7, 2019. <https://www.suez.com/en/our-offering/Success-stories/Our-references/Poznan-energy-from-waste>.