



Project Fact Sheet

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OPTimum Integration of POLYGENERation in the Food Industry (OPTIPOLYGEN)

Programme area:	Innovative approaches in industry
Status:	completed
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Website:	http://www.optipolygen.org
Objective:	Identify polygeneration potential, market gaps and promote applications in the European Food industry.
Benefits:	Exploitation of renewables, fuel savings, market information, best practice development, job creation.
Keywords:	Polygeneration, food, industry
Duration:	January/2005 – December/2006 (24 months)
Budget:	€ 586,402,00 (EU contribution: 50%)
Contract number:	EIE/04/150/S07.39553



Short description

Polygeneration is the transformation of multiple energy sources to multiple, suitable for use, energy forms. The food industry is an area where considerable amounts of energy of various forms are consumed and where by-products form a potential source of renewable energy.

OPTIPOLYGEN had the goal to reveal the potential of polygeneration in the European food industry, determine technical and non technical gaps related with polygeneration applications and promote the applications of polygeneration as a route to sustainability in the food industry.

Achieved results

- A full map of polygeneration potential in the European – EU15- food industry.
- A freely accessible database with operating polygeneration plants with classified plant data.
- Identification of technical barriers which exist in the use of renewables in hybrid systems with conventional CHP and Trigeration in the food industry and propose beneficiary solutions.
- Promotion of polygeneration applications in the European food industry by improving the awareness technologies and solutions among of the stakeholders.
- Classified knowledge on polygeneration applications in the food industry in existing best practice guides.
- Training material suitable for consultants & engineers regarding polygeneration applications.

- All project material & freely accessible feasibility calculator in the project web site www.optipolygen.org.

Lessons learnt

- Mini and Micro CHP technology extended the threshold for potential applications to smaller plants although an actual working polygeneration unit is subject to several pricing and legislative issues.
- Only 25% of the existing technical polygeneration potential in the EU-15 food industry is already exploited.
- The rest 75% can give about 63 TWh_{el} polygenerated every year and about 18.000 ktonnes of avoided CO₂ emission/year (in EU15).
- The main non-technical parameter which do not permit the development of polygeneration applications is the electricity related to the fuels pricing policy.