



Emergency power

> Case History

The Trzebinia Refinery

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**Power
Generation**

Where:

Trzebinia Refinery, South Poland

What:

C550D5 enclosed generator set

Purpose:

To provide emergency standby power for the paraffin hydro-refinery installation

Primary Choice Factors:

- Most cost-effective solution
- Best value for money

Cummins ensures an uninterrupted supply of refined glycerine

TRZEBINIA, POLAND - The Trzebinia Refinery is part of the national PKN Orlen Group - currently the largest manufacturer and distributor of fuel in Poland.

Primarily involved in the distillation of glycerine, the plant utilises a paraffin hydro-refinery installation that allows the Trzebinia Refinery to achieve glycerine purity levels of 99.7%.

Raw glycerol is produced as a by-product in the process of manufacturing biodiesel from rapeseed oil. Refined glycerine is widely used in the electrochemical industry, food industry (for sweetening) and the cosmetic industry (for soaps, shampoos and toothpastes) amongst other industries.



The original paraffin hydro-refinery at the plant was constructed by Prochem SA. With the refinery process needing to be continuous, since down time costs can be significant, the company went out to tender to find a power supplier who could provide an uninterruptible power supply, in case of emergency, at the best value for money. It did not, however, specify the required kVA for the site, leaving this to the companies submitting tenders to decide. It simply stipulated the required load, the starting method and the number of steps (including several electrical motors from 3-37kW).

As one of the potential generator set providers, Cummins Poland used its PowerSuite programme to automatically calculate the generator set requirements for the project and independently chose the C550 generator set, with PMG excitation and an oversized alternator (HC5E - 610kVA instead of HC5D - 550kVA). This generator set can provide a 10 second total starting period for all loads, and in the next step another 16 loads after the subsiding of transient phenomena.

Most competitors chose to recommend larger generator sets in the 700-1100kVA range, which come at typically a 30% higher cost to the client. The Cummins Power Generation option, however, was a more cost-effective solution that ensured an appropriate starting procedure even for electric motors started across the line.

At the conclusion of the tender process, Prochem SA and the Trzebinia Refinery decided on the unique applicability of the cost-effective Cummins Power Generation solution.

It proved to be a wise decision, in fact, as the Trzebinia Refinery found it could count on the full support of Cummins Poland throughout the entire installation process.

“Cummins Poland demonstrated a professional and committed attitude throughout all stages of this project. The Cummins Power Generation team not only met, but exceeded all project milestones. In addition, its technical support team was always available and actively involved in all stages of the installation. I would recommend Cummins Power Generation without hesitation, as a well-prepared, qualified and responsive partner,” said Mr. Jaroslaw Wieczorek, Prochem SA Project Manager.

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