Cogeneration in Central and Eastern Europe: An Upbeat Perspective

Ian French
Research Analyst
Frost & Sullivan

The Central and Eastern European (CEE) market for cogeneration equipment displays relatively low levels of saturation and appears poised to enjoy a healthy upsurge in sales, according to a new Frost & Sullivan study.

Initial growth monitored in the CEE cogeneration market seems stimulated by the widespread restructuring of the energy sector currently sweeping the region. Demand for new facilities remains increasingly prevalent, driving potential users of cogeneration systems to opt for on-site generation as it becomes increasingly viable in economic terms.

Eastern bloc countries have been restructuring their economies, and this has meant a decrease in their needs for industrial power. But the overall *demand* for energy by industry is increasing, as well as in all areas. In recent years, over 40 percent of cogeneration equipment sales to Europe have been by the industrial sector.

In most countries, cogeneration installations are old, and often inefficient. In heat and power generation and distribution, losses are estimated to be around 25-30 percent.

The need for efficient, economic, clean and reliable heat and power generation based on the most modern technologies adds luster to the overall CEE cogeneration equipment market, pushing revenues from

US$390 million in 1999 to an estimated US$700 million by 2006.

Players already active in this sector need to refine their existing approach to cement their foothold in the market as a glut of new competitors start homing in on the Central and Eastern European market.

The high generating efficiencies associated with cogeneration substantially benefits growth in this market and attracted a rising number of end-users. **Cogeneration has been recognized as among the most effective methods of converting fuel to energy at favorable economic levels.**

The overall market is expected to flourish further on the back of electricity and gas market liberalization. This depends on the stabilization of rates but, taking into account previous market transitions in western European countries, end-users will generally enjoy economic advantages, the benefits of energy autonomy and the opportunity of exporting a proportion of power to the grid at preferential "greener energy" rates. These types of benefits should allow installers to recoup capital investment over a relatively shorter period of time in the near future.

Most of the generating capacity across the ex COMECON countries requires replacement, refurbishment or modernization. Coupled with pre-EU accession, environmental issues and the interest of smaller-scale end-users, the need for efficient, cogeneration facilities has never been higher and growth prospects look optimistic.

Natural gas usage is increasing in Central and Eastern Europe, following the growth of the gas supply infrastructure. As a result, modern technologies, including gas turbines which incorporate heat recovery steam generators, spark ignition systems, and CCGT CHP, are now being used.

However, the use of traditional fuel-based technologies (steam turbines, coal and oil-fired boilers) is also expanding.

DISTRICT HEATING

About 30 percent of cogen applications are for district heating. District heating serves approximately 40 million people in the two regions, and is used in every major city. Nearly 40 percent of Estonia's power production is via cogeneration; in Poland, 15 percent; in Hungary and the Czech Republic, 10 percent.

Electric Generator Market Dominates Sales;
Alstom Power, GE, Siemens in the Lead

According to the report, the electric generator market dominates sales in the CEE cogeneration equipment product markets, followed by gas turbines and heat recovery boiler sales. By the end of the forecast period, the reciprocating engine is expected to move into second position, eclipsing sales in the gas turbine segment.

The fuel-fired and HRSG product sector boasts the largest number of market players, with most possessing turnkey capability. Market participants operating in all sectors will increase as the market develops and competition is set to stiffen over the next few years until it more accurately reflects the levels of intensity seen in the more mature western European market.

Domestic markets differ in their use of units although applications are similar. Generally, the larger markets of Turkey, the Czech Republic, Poland and Hungary are similar in their use of all ranges of output capacity based on their requirement for more power.

Most markets are mature, based on unit sales, with a proportion of the market relying on the replacement sector for sales of new units. Also, in a region where fuel-fired steam generators traditionally prevail for energy production, gas turbines are now being installed as the preferred generating option.

The leading companies in the market are generally those that have a strong market presence in the western European market and have the capability to install turnkey plant. However, some market players have successfully capitalized on the lucrative sales in the gas turbine sector, which yields high levels of revenue. ABB Alstom (now just Alstom Power), GE and Siemens assume a commanding position in the overall market,

It is expected that the deregulation of electricity and gas markets, fuel and energy rate reform, state incentives and project finance will continue affecting the market for some time. The potential for companies to exploit the cogeneration sector is significant and continues to provide abundant opportunities for expansion.

Companies vying for market share in the CEE cogeneration equipment market will need to be aware of the challenges this industry holds.

ABOUT THE AUTHOR

Ian French spent a number of years working in the power industry before studying environmental management and policy at Middlesex University. His main areas of interest and study during this time involved an end-user energy study with recommendations for energy efficiency for the main university campus and a dissertation involving the security of landfill sites. After graduating with a BSc (2.1) he trained to be a teacher selecting geography as a specialism. He spent time teaching in Cardiff and London but is now employed by Frost & Sullivan. Since joining the company he has further developed his analytical skills in his main interest areas of cogeneration and distributed power. He is currently researching the European market for UPS systems.

The complete Frost and Sullivan Report on the Central and Eastern European market for cogeneration equipment (Code 3970-14) is available for $4,750 (US). For further details, contact Rolf Gatlin, rgatlin@frost.com or Kristina.menzefricke@fs-europe.com.

Rolf Gatlin, Industrial Research, Frost &, Sullivan, 7550 IH-10 West, Suite 910, San Antonio, TX 78229.

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