Cogeneration Growth Projections—European Union

Louis Braquet, P.E., CCP
LB Services, L.D.C.

Plans to provide a uniform platform for cogeneration grid access with consistent pricing rules and incentives is currently being implemented within the EU, although the results and problematic issues are not clear at this time. Because of the considerable difference in utility supply, regulatory interface, taxation, and political structures in the various countries, the current level of cogeneration activity varies greatly from country to country. For instance, there exists little technical or economic incentives to develop cogeneration in France. However, in the United Kingdom and Germany, with their high dependence on fossil fuels and a much more "open" political structure, cogeneration activity is significantly higher.

The UK, despite its deregulated political status, still maintains a tight band of very large utility operators, as contrasted to Germany's market with over 900 utility entities. While Germany's cogeneration market is well developed, it is also the world leader in wind capacity, with approximately 1,200 MW operating in 1999, many infrastructure and political issues still prevent the full potential from being realized. Germany, along with Sweden, has initiated strong legislation to phase out current nuclear generation capacity. This will open additional areas for cogeneration growth, especially Sweden, where the current power supply is over 90% nuclear and hydro. To date this has provided minimum room for only a very small market for specialized, highly efficient thermal cogeneration plants.

Denmark, Finland and the Netherlands are established leaders in the European cogeneration markets. Denmark's strong political support has made it the reported leader in cogeneration development and while the Netherlands currently operates over 3,000 MW of "combined heat

and power" (CHP) plants, it plans to expand this level to 8,000 MW by 2001, which will represent almost 40% of the nation's total generation capacity. Likewise, Finland has almost doubled its CHP capacity over the past 20 years and currently produces almost 30% of its total power from cogeneration.

Growth projections from the European Commission indicate that it should be feasible to double the share of cogeneration in the European Union from 9% to 18% by 2010. Cogen Europe, an independent trade organization, believes these figures should be closer to 30% in 2020 with future goals of 40%. The following table provides some selected values for cogeneration activity in Europe.

Estimated Cogeneration Production for Selected Countries: 1998*

Country	Gross Production, GWh	Cogeneration, GWh	% Cogen
France	486,000	10,700	2.2
Germany	516,000	71,100	13.8
Sweden	154,000	9,400	6.1
United Kingdom	352,000	21,000	5.9
United States	3,620,000	407,000	11.2

*NOTE: Figures are approximate based on different reporting schemes in different countries for various data base restrictions.

A major difficulty in researching information on European cogeneration plants stems from different descriptions used to characterize independent power production. Designations include "cogeneration," "combined heat and power," "CHP," "autoproducer," "district energy," and "non-utility generation," along with the more common "IPP" and "merchant" designations used by international developers.

ABOUT THE AUTHOR

Louis J. Braquet, P.E., CCP, LB Services, L.D.C., is an independent energy consultant whose work entails knowledge of the energy industry's customer/utility/regulatory, environments. His background

includes project experience with industrial and commercial power generation, electric technology application, and business development opportunities. He has been involved in over 60 large power systems projects, some exceeding 200 MW and $150 million construction value.

He is a Certified Cogeneration Professional-Cogeneration Institute (AEE), a Certified Energy Manager (AEE), and a Certified Demand-Side Management, Professional (AEE.) Mr. Braquet is registered as a P.E. in Louisiana with both mechanical and environmental qualifications.

Louis Braquet, P.E., 66 Schill Ave., Kenner, LA 70065; (office) 504-443-3931; (home) 504-443-3185; Louis@LBServices.net; www.LBServices.net