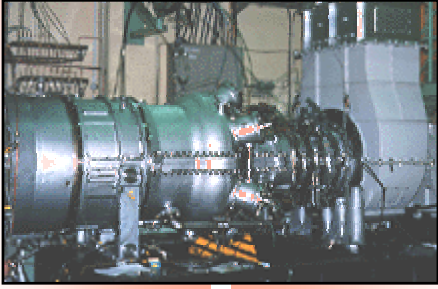




Use of GTMax to Analyze the Economic and Financial Benefits of Distributed Generation Small-Scale Gas-Fired CHP in Poland

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Opportunity: The Polish energy markets have recently been restructured, opening the door to new players with access to a variety of new products and instruments. In response to this new environment, the Government of Poland and the Polish Power Grid Company were interested in analyzing the competitiveness of small-scale combined heat and power (CHP) plants as well as potential east-west power transfers from Russia to Germany.



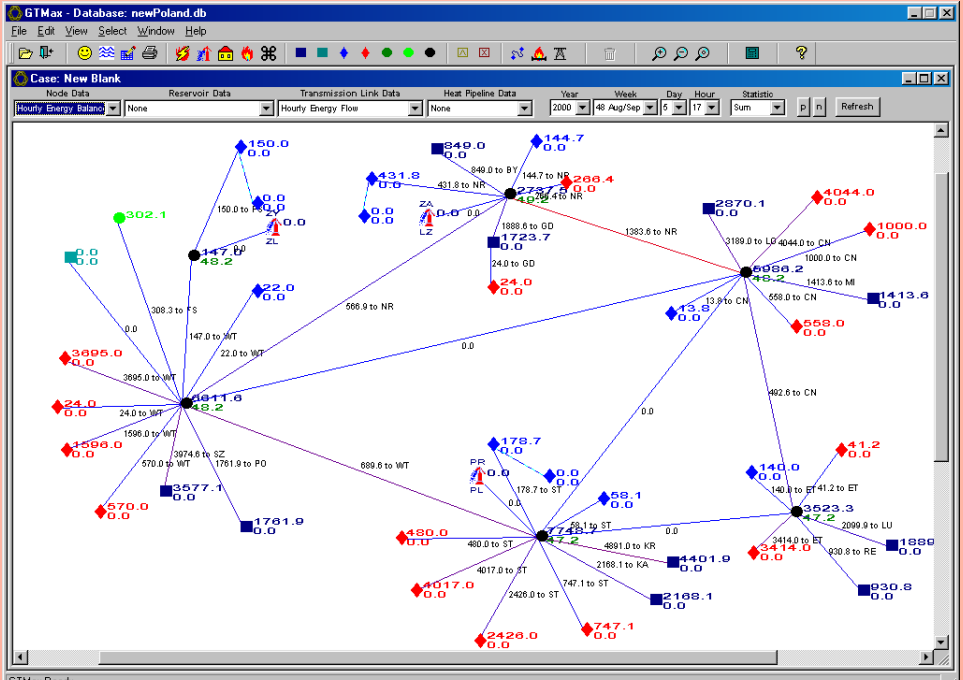
units and the economic trade of energy among utility companies by using a network representation of the power grid. The objective of GTMax is to maximize the net revenues of power systems by finding solutions that increase income while minimizing expenses. The Polish power grid was modeled as a set of five interconnected power regions, or power pools, as shown below.

Argonne Approach: CEEESA developed the Generation and Transmission Maximization (GTMax) model to study the complex marketing and operational issues in Poland's deregulated energy markets. GTMax simulates the dispatch of generation

CEEESA transferred GTMax to the Polish Energy Market Agency (EMA), trained a group of experts from the agency to use the model, and provided ongoing technical support to the team. By using GTMax's powerful graphical user interface, EMA was able to quickly build a network representation of the Polish power system topology and analyze a variety of scenarios.



Topology of the Polish Power Grid in GTMax



The GTMax Program was Developed by Argonne and is Distributed by Adica

