Two 30 MW GE Gas Turbines Propel *Queen Mary 2*, the World's Largest Transatlantic Liner

The world's largest transatlantic liner, *Queen Mary 2*, sails today powered by two 30 MW GE marine gas turbine-generator sets and four diesel-generator sets. This flagship of the British merchant fleet is owned by Cunard Line. Power produced by the combined gas turbine and diesel (CODAG) propulsion system is also used for shipboard service such as heating, air conditioning and laundry. Each turbine-generator set contributes 25 megawatts to the ship's overall 118 MW of installed power. GE specially designed the two 30 MW packages to be some 35 tons lighter than previous 30 MW marine gas turbine installations. This lighter design gave *Queen Mary 2* designers greater flexibility in placing various shipboard equipment and public areas.

GE has delivered more than 90 marine gas turbines worldwide for commercial marine projects, five high-speed yachts and 19 fast ferries. In fact, GE engines are the only gas turbines currently installed on 17 cruise ships. In addition to *Queen Mary 2*, GE provided 25 MW or 30 MW gas turbines for these cruise installations:

- Combined gas turbine electric and steam system on four Royal Caribbean cruise ships and four Celebrity Cruises ships

- CODAG configurations on four Princess Cruises and four Holland America Line ships

30 MW Gas Turbine

The 30 MW GE marine gas turbine is based on the design and precedent-setting reliability of GE's popular 25 MW unit. The 40,500-shaft horsepower, 30 MW gas turbine delivers up to 20% more power at a simple-cycle thermal efficiency greater than 39%. Its high efficiency, reliability, and installation flexibility make the 30 MW gas turbine ideal for a wide variety of marine, power generation and mechanical drive applications.

GE's 30 MW gas turbine

Shown is *Queen Mary 2*, the world's largest transatlantic liner (photo courtesy of Cunard Line).

Imagination at work.