

Ingersoll Rand Energy Systems

Next Generation Combustor

One of our key programs in 2005 is design/development of our next generation of dry low-NOX combustors for our microturbine products. The new combustors will build upon the current IR-Proprietary combustor technology and be targeted to meet the new 2007 emissions levels (CARB and California SQAMD) as well as provide better stability, increased turndown, and superior combustion efficiency. The combustors operate with a wide range of gaseous fuels with lower heating values ranging from 350 BTU/cf to 2500 BTU/cf and operate with biomass fuels (landfills and digesters), CHP natural gas applications, wellhead applications, and various high-BTU refinery processes. The program involves both analytical and laboratory test phases. CFD modeling of the combustor is being performed to optimize the aerodynamics and flame stabilization characteristics.

Location

Portsmouth, New Hampshire is the home of the technology center for Ingersoll Rand Energy Systems. This is a 56,000 sq.ft. facility comprised of both offices, prototype assembly, and laboratory spaces. The technology center includes a state-of-the-art microturbine test facility capable of running up to 1MW of synchronous generation with the grid. The facility also includes a state-of-the-art fuel mixing facility that enables testing of microturbines with a wide range of gaseous fuel heating values and densities.