We believe that harnessing technology and innovation to adapt and succeed in a changing marketplace is key to the Group's growth.

At SembCorp Industries, we believe that harnessing technology and innovation to adapt and succeed in a changing marketplace is key to the Group's growth. Keeping abreast of technology and constantly thinking out of the box to improve our products, services and business models allows us to sharpen our competitive edge, provide better value to customers and establish a safer and greener environment for our employees.

This feature highlights two ways we put this into practice in 2005. Firstly, we engaged our staff in our ongoing drive to build a Group-wide culture of creativity and innovation, through the fifth run of our annual in-house Group-wide innovation awards. Secondly, we entered the new field of energy generation from renewables, investing in new conversion technology for SembCorp Utilities UK (SembUtilities UK) groundbreaking wood-burning biomass plant in the UK.

Fostering a culture of innovation – The IDEA Awards
A key initiative to engage our staff to leverage their operational experience for innovation is our in-house innovation awards, the IDEA Awards. IDEA – short for Innovate, Discover, Engineer and Achieve – aims to showcase innovations within the Group, encourage ideas, promote creativity and to establish a repository for sharing of novel ideas.

Since its inception in 2000, participation has grown steadily – from 27 applicants in 2001 to 43 in 2005. Since the Awards began, innovations submitted have resulted in an estimated S$3 million in cost savings and S$27 million in increased revenue. Along with this have come substantial improvements in workplace safety, environmental protection, reliability and added value for our customers. The 2005 Grand Winners of the IDEA Awards included:

- **SembCorp Utilities (SembUtilities) Singapore's utilisation of heat inertia**
  Innovative modifications were made at SembUtilities' cogeneration plant to utilise heat inertia from tripped boilers to maintain steam supply in the event of an electrical trip.

- **SembCorp Marine (SembMarine) subsidiary Jurong Shipyard's portable safe high-speed valve overhauling and grinding device**
  A cross-functional team from the shipyard designed a lightweight, innovative device for a much faster, safer and more accurate valve overhauling. Four months after implementation, the use of the tool had already provided an estimated cost savings of $63,000.

- **SembUtilities Singapore's effluent recovery project**
  SembUtilities' SUT Division undertook two years of extensive research and development leading to its establishment of a new industrial effluent recovery plant, which will reclaim effluent to boost SembUtilities' demineralised water supply.

- **SembMarine subsidiary Sembawang Shipyard's "Handy Safe" hand tool**
  Staff from Sembawang Shipyard designed a simple, elegant hand tool consisting of a handle and spring loaded stopper to limit hand contact and safety hazards in manual shifting, lifting and aligning of pipes.

Leveraging technology for greener energy – Wilton 10
2005 marked SembUtilities UK first large-scale foray into power generation from renewable fuels, with its £60 million investment in Wilton 10, a stand alone wood-burning power plant. Set to be one of the UK's largest biomass energy projects, the new plant will supply over 30 megawatts of electricity, enough to power around 30,000 homes.

Cost-effective and environmentally compatible power generation from biomass benefits from newer energy conversion technologies compared to the conventional coal-fired combustors. In building Wilton 10, SembUtilities UK applied bubbling fluidised-bed combustion technology, which is particularly efficient when firing fuels with low heating value and high moisture and ash content, or fuels that are difficult to handle with very low levels of emissions. This has met the UK Environment Agency's requirements for Best Available Technology, a term used to describe the most effective and advanced facilities or techniques which prevent or reduce emissions and any impact on the environment.

The plant will be fueled by wood from a variety of sources including recycled and green wood and specially-grown short rotation coppice, a sustainable energy crop. A test burn of short rotation coppice delivered from the UK was performed in Finland specifically for the Wilton 10 project.

Said Paul Gavens, SembUtilities UK's Executive Vice-President, "Renewable energy presents an entirely new business opportunity for this region and one that we're keen to be a part of. We believe this investment will transform our operations and offers us a great platform from which we can move forward to a brighter, greener future."

Wilton 10 boiler: side elevation