

Nexterra Launches \$30 Million Program to Commercialize A New Generation of High Efficiency Biomass Power System

Vancouver, **BC** – **February 23**, **2009** – Nexterra Energy (<u>www.nexterra.ca</u>) today announced a program to commercialize a new application of its biomass gasification technology to generate power and heat from small-scale plants (2 – 10 MWe) by direct-firing syngas into high efficiency gas engines.

This initiative follows two years of intensive work by Nexterra to upgrade syngas made by gasifying biomass so that it meets the fuel specification of GE Jenbacher's internal combustion engines. GE has supported this work through its Jenbacher gas engine division. Nexterra has also received support from Canada's National Research Council (NRC-IRAP) and the Province of British Columbia.

Once fully developed, Nexterra's gasification technology is planned to be combined with GE's Jenbacher gas engines to form modular biomass combined heat and power ("CHP") plants. The scale of individual plants will range from 2 – 10 MWe (megawatt electric) and will yield net efficiencies of up to 60% in cogeneration mode and 30% in combined cycle mode. The plants will be fully automated and will not require steam generation equipment.

"We are very encouraged by the results Nexterra has achieved with its syngas conditioning technology and look forward to working with them on the next phase of development," said Prady Iyyanki, CEO of GE Energy's Jenbacher gas engine business. "GE's Jenbacher business has a long history of developing 'special gas' applications for reciprocating engines, and we believe the combination of biomass gasification and internal combustion engines is a breakthrough for biomass power generation."

The new biomass CHP system is designed for on-site applications at public institutions such as universities, hospitals and other government facilities; industrial operations such as food and beverage plants, waste management facilities and forest products mills; as well as stand-alone power for independent power producers or electric power utilities.

"Johnson Controls is enthusiastic about this advanced biomass power solution," said Don Albinger, Vice President, Renewable Energy, Johnson Controls Inc. "We believe it has tremendous potential to help our customers at public institutions become energy independent using local biomass resources. Through our strategic alliance with Nexterra, we are jointly developing projects for Nexterra thermal gasification solutions. We look forward to working with GE and Nexterra to take this new solution to market."

Over the next 24 months, Nexterra and GE will test and demonstrate the new power application in two phases. The total cost of this program will be approximately \$30 million over two years.

In the first phase, Nexterra's proprietary syngas conditioning technology and a GE Jenbacher J208 GS 250kW engine will be installed and tested at Nexterra's product development center in 2009. For the second phase, a first commercial scale 2 MWe



plant will be demonstrated at a customer site. Discussions are underway with a number of candidate sites to host the demonstration facility.

"Biomass power generation is a multi-billion market opportunity driven by rising power prices and Renewable Portfolio Standards," said Jonathan Rhone, President and CEO of Nexterra Energy. "Our objective is to exploit this opportunity by creating a new standard of small-scale biomass power solution that has widespread application as a distributed generation solution. We believe this approach has significant advantages over large-scale, centralized combustion-based biomass power plants in terms of higher efficiency, lower fuel risk and reduced emissions."

An illustration is available of Nexterra's 2 MWe commercial demonstration plant featuring a GE Jenbacher engine that will be built in Phase 2 of the biomass power program. <u>http://www.nexterra.ca/news/media.cfm</u>

About Nexterra Energy Corp. – Nexterra Energy is a leading supplier of biomass gasification solutions that generate heat and power for institutional and industrial customers. Nexterra's gasification technology is fully proven for thermal applications to displace natural gas. Sales to date include projects at the University of South Carolina, Dockside Green, the US Department of Energy's Oak Ridge National Lab, Kruger Products and Tolko Industries. Nexterra is a private company based in Vancouver, BC, Canada. For more information: <u>www.nexterra.ca</u>

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– 30 –