



### **GE to Help Natural Gas Producers Treat Shale Gas Frac Water at the Well Site**

*New Mobile Evaporator Enables Producers to Recycle Water, Meet New Discharge Regulations and Lower Costs*

TREVOSE, PA.—September 30, 2010—Further advancing a solution for unconventional gas production, GE (NYSE: GE) today introduced a mobile evaporator, specifically designed to help natural gas producers recycle untreated waters that result from the hydraulic fracturing process at the well site. GE's new, completely mobilized evaporator is energy efficient, fully transportable, cost effective and will enable onsite frac water recycling, reducing the volume of wastewater and fresh water that needs to be hauled to and from the site.

There are massive amounts of natural gas and oil buried deep below the earth's surface in shale reservoirs, which lack the natural permeability to flow to the surface for recovery. The process of hydraulic fracturing, which involves creating small fractures in the rock surrounding the reservoirs in order to create a path through which the natural gas and oil can flow, has enabled production from oil and gas resources that were otherwise thought unrecoverable.

While hydraulic fracturing increases the production rate of oil and gas wells, the process also uses a substantial amount of freshwater and produces billions of gallons of wastewater each year. To offset this impact on the environment, GE's mobile evaporator will treat the severely impaired waters, such as frac flowback and produced water, making it possible to reuse the water in the industrial process, reduce the amount of fresh water consumed and reduce any subsequent environmental impact from discharge.

GE's mobile evaporator will be used for all unconventional gas and frac water applications in regions of the world where shale gas can be found, including North America, Europe, China and Indonesia. Initial applications will be in various North American markets such as the Marcellus Shale reservoirs located in the Appalachian Basin.

Regions like the Marcellus Shale are unique in that they produce very high total dissolved solids (TDS) frac water, have limited deep well capacity and increasingly stringent discharge regulations. The mobile evaporator will enable natural gas producers to significantly decrease their transportation and disposal costs. Additionally, the communities will benefit from less truck traffic and decreased wear and tear on local roads. The first units will be available in early 2011.

"GE's objective is to create a solution that not only lessens the environmental impact of gas drilling, but also one that reduces the current treatment cost to service providers and producers. As the mobile evaporator illustrates, our research and development teams are continually working toward offering new solutions to meet our customers' challenges throughout the industry," said Jeff Connelly, vice president, engineered systems —water and process technologies for GE Power & Water.

The mobile evaporator is a 50-gallon per minute, horizontal, shell and tube, forced circulation, mechanical vapor recompression system. Unlike other treatment methods, thermal evaporation

removes nearly all of the impurities in the water, allowing producers to easily meet the newly passed Pennsylvania discharge regulations of less than 500 TDS. The mobile evaporator is mounted on a single trailer that will allow it to reach the most remote drilling sites. Additionally, its unique design has been optimized for maximum energy efficiency.

GE has offered thermal evaporation technology for more than 40 years, but this is the first time that the technology used for the treatment of shale gas frac water has been completely mobilized.

## **About GE**

GE (NYSE: GE) is a diversified infrastructure, finance and media company taking on the world's toughest challenges. From aircraft engines and power generation to financial services, health care solutions and television programming, GE operates in more than 100 countries and employs about 300,000 people worldwide. For more information, visit the company's website at [www.ge.com](http://www.ge.com).

GE serves the energy sector by developing and deploying technology that helps make efficient use of natural resources. With nearly 85,000 global employees and 2009 revenues of \$37 billion, GE Energy [www.ge.com/energy](http://www.ge.com/energy) is one of the world's leading suppliers of power generation and energy delivery technologies. The businesses that comprise GE Energy—GE Power & Water, GE Energy Services and GE Oil & Gas—work together to provide integrated product and service solutions in all areas of the energy industry including coal, oil, natural gas and nuclear energy; renewable resources such as water, wind, solar and biogas; and other alternative fuels.

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