Renewable Environmental Solutions, LLC

530 N. Main Street • Carthage, MO 64836 • www.res-energy.com

PRESS CONTACT: Julie Gross Gelfand • (516) 536-6811 • jgelfand@hldblankman.com

CHRONOLOGY OF A PROVEN TECHNOLOGY USING THERMAL PROCESSING

Stone Age	Early ancestors use wood soaked in animal fat as first lamp light.
1700s	First principal use of whale oil as an illuminant in lamps.
1920s-1940s	Synthetic gas is produced by the Germans during WWII from coal and biomass, using the Fischer-Tropsch Process, which was discovered in 1923. (Fischer-Tropsch is a liquid hydrocarbon synthesis using a thermal catalytic process.)
1960s-1970s	US Bureau of Mines at the Pittsburgh Energy Research Center (PERC) investigates the conversion of biomass materials into oil-like materials. Conversion proves feasible, but quality of product and costs not in line with markets.
1993	Patent for Thermal Depolymerization Process (TDP) – an improvement to the previous work of the US Bureau of Mines – is issued.
August 1997	Changing World Technologies, Inc. (CWT) is formed to develop and deploy thermal processes including TDP in the environmental and energy industries, led by Brian Appel.
August 1997 – Present	CWT improves steadily on concepts from the initial TDP patent, incorporating many new and existing technologies to make commercially successful processes. Technology is renamed Thermal Conversion Process (TCP).
June 1998	Joint venture is formed between CWT and the Gas Research Institute to build and operate an R&D facility at the Philadelphia Naval Yard.
September 1998	Protocols for food and agricultural waste processing are developed with ConAgra Foods.
December 1999	CWT opens thermal processing Research & Development facility in Philadelphia, Pennsylvania.
2000	Renewable Environmental Solutions, LLC (RES) is formed as a joint venture between CWT and ConAgra Foods to commercialize TCP technology in the worldwide food industry.
July 2002	Construction begins on Carthage, Missouri plant.
April 2003	First commercial thermal processing facility in Carthage, Missouri starts operating to convert turkey waste into clean oil, gas and carbon products.
April 2004	RES' Carthage plant achieves 50% capacity and begins selling oil commercially.
February 2005	Carthage plant achieves 100% of capacity.