#### CLEAN, RENEWABLE, SAFE AND ECONOMICAL

with two 600 ton per day waste combustion units. The operation of these two units has provided a safe and economical disposal of the garbage generated in unincorporated Lee County, its municipali-

ties, and the garbage generated in neighboring Hendry County.

21st Century, Florida, particularly
Southwest Florida, experienced
rapid population growth and an all time
high in new residential construction and
the sale of new homes. It soon became
apparent that Lee County's Waste To
Energy facility needed to be expanded in
order to keep up with the rising garbage
volumes being generated in the County.

In 2004, after a complex and lengthy permitting process, the Florida DEP issued a Prevention of Significant Deterioration (PSD) permit and the Board of County Commissioners decided to proceed with the expansion of the WTE facility.

## SOLID WASTE (S.W.) FEED STOCK FOR ENERGY

he original facility was built with future expansion capabilities in mind,

and several key elements were already in place. These included a stack with space available for a third flue pipe and a tipping floor,



A look at the three flue pipes 275 feet above ground

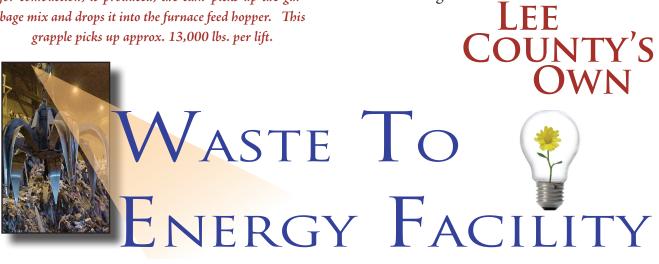
waste pit, and a crane with sufficient capacity to support a third combustion unit.

The grapple operator first mixes the material by redistributing the garbage evenly. Once the "right mix", optimal for combustion, is produced, the claw picks up the garbage mix and drops it into the furnace feed hopper. This grapple picks up approx. 13,000 lbs. per lift.

## STABLE S.W. ASSESSMENTS & DISPOSAL CHARGES

The new combustion unit is the first Municipal Waste Combustor permitted and constructed under the EPA's New Source Performance Standards (NSPS) in the United States since they were promulgated in the 1990's.

Site construction activities commenced in late 2005 with the addition of a new flue in the existing stack. The mobilization of the General Contractor commenced December 19, 2005. Installation of over 300 concrete piles for support occurred over the following 3 months for major boiler steel, air pollution control system, and the turbine building.



#### LEE COUNTY'S OWN ENERGY SOURCE

housands of feet of piping, and almost 80 miles of cable were installed. Major components including the turbine generator, boiler, transformer, pumps, fans, and control panels were delivered and installed or field fabricated and erected. At the peak of construction close to 500 construction workers worked on the expansion project. Over 55 different contractors and major equipment vendors were utilized by the County.



First fire for combustion unit no.

3 occurred on August 18, 2007. This event culminated intense construction activity during the previous 19 months.

ity's operating staff successfully synchonized the new electric generator to the electric grid with a gross output of over 18 megawatts of electric power. Combined with the original turbine generator, the expanded WTE facility can now burn more than 1,800 tons per day of garbage while producing enough electricity to supply approximately 36,000 homes.



Generator Step-Up Transformer, purchased from General Electric

May 12, 1887 and named in honor of General Robert E. Lee. The County is located on the West coast of Florida and encompasses about 811 square miles, including several small islands in the Gulf of Mexico.

he Solid Waste Department and its facilities service the garbage needs of approx. 650,000 people in Lee County (2013 population estimate).

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(239) 533-8000 www.leegov.com/solidwaste

Providing, Economic and Environmentally Responsible Recycling & Disposal Services

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## LEE COUNTY

### WASTE TO ENERGY FACILITY



LEE COUNTY'S OWN

# ENERGY SOURCE





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