2013 Landfill Management Excellence Award

Houston County Solid Waste Disposal Facility
Kathleen, Georgia

Submitted by:
Houston County Board of Commissioners

May 17, 2013
RELEASE FORM

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Printed Name of Representative: Robbie Dunbar

Organization Name: Houston County Board of Commissioners

Signature: [Signature]

Date: May 17, 2013
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The Houston County Solid Waste Disposal Facility is located on 2,588 acres in middle Georgia. The facility serves as a regional landfill for Houston County and three adjacent counties. The facility provides separate MSW and C& D landfill areas, yard waste mulching/composting and recycling drop-off areas. This facility stands as a model to others in the state and the country for its fiduciary accountability, environmental compliance, operating efficiency, waste reduction and reuse efforts. The bar for environmental compliance at the facility is set high with continuous State inspection scores of 100 for the last three years. The County's foresight into the future is demonstrated by their land acquisitions for expansions and buffers and by their “green” initiatives. The landfill gas to energy facility, a public-private partnership, has environmental and financial benefits by producing “green power” that can generate enough electricity to power 1,680 homes.
On the Houston-Pulaski County line in south Georgia sits a 2,588 acre MSW and C & D waste disposal facility. The facility serves as a regional landfill for Houston County and three adjacent counties and receives an average of 466 TPD of MSW and 122 TPD of C&D waste. The facility has been in operation since 1987 and provides yard waste, mulching/composting and recycling drop-off areas. This facility stands as a model to others in the state and the country for its fiduciary accountability, environmental compliance, operating efficiency, waste reduction and reuse efforts. Public acceptance is easy to understand when you see the beautifully landscaped entranceway, paved roads, and vintage-style lampposts with colorful banners touting environmental and patriotic messages. The canopy-covered scale and check-in area is one example of a customer friendly feature that makes this facility unique. The bar for environmental compliance at the facility is set high with continuous State inspection scores of 100 for both MSW and C & D landfills over the last three years. The County’s foresight into the future is demonstrated by their land acquisitions for expansions and buffers and by their “green” initiatives. The landfill gas to energy facility, a public-private partnership, has environmental and financial benefits by producing “green power” that can generate enough electricity to power 1,680 homes. Clearly, the Houston County solid waste disposal facility exemplifies great landfill management by being a good steward of our environment in all aspects.
In Kathleen, Georgia in the southern end of the Houston County sits a 2,588 acre solid waste disposal facility with separate landfill areas for municipal solid waste (MSW) and construction & demolition waste (C & D). A person could easily mistake the facility for a high end subdivision with the stacked stone entranceway, beautiful landscaping and flags waving gently in the breeze, but the give-away clue is the many garbage trucks turning in. Phase I of the MSW landfill opened in 1987 and was an unlined disposal site. Phase II of the landfill opened in 1993 and utilized the required Subtitle “D” standard liner system which includes a compacted subbase, 24” thick clay liner, 60 ml high density polyethylene liner, and 24” protective cover. The C & D landfill opened in 1999.

The C & D landfill is unlined with the base of the landfill remaining at least five feet above seasonal high groundwater or bedrock. All phases of the MSW landfill have been constructed by specialized contractors most recently selected through a quality based request for proposal process. Construction of the C & D landfill has been almost entirely accomplished with County forces. Each phase of landfill construction has been observed by independent third party Construction Quality Assurance professionals. The landfill construction has been completely funded by revenue generated from landfill tip fees.

Early on, a master plan for the property was developed identifying future areas for expansion of the landfills and for the construction of a future landfill gas to energy facility and leachate treatment facility. Over the years, the landfills have been expanded to accommodate the growing demand. The landfill gas to energy facility was commissioned in early 2011. Currently the C & D landfill has approximately 36 years of remaining capacity while the MSW landfill has approximately 6 years of remaining capacity. The County initiated another expansion of the MSW landfill in late 2012 that will provide over 100 years of capacity when completed. Currently the facility is surrounded by undeveloped property. The landfills are sited towards the center of the property thereby providing large undisturbed buffer areas from future developments. The site has also been designed and developed in such a way as to avoid impacting jurisdictional wetlands and waters. While no final end use has been designated, the County has recently initiated efforts for the installation of solar panels on closed sections of the site.
The Houston County Landfill has several environmental control features in place to protect the surrounding environment and to assure that they remain in compliance with Georgia Environmental Protection Division (GA EPD) regulations. Leachate filters through the sand protective cover layer and natural gravity flow directs it to the drainage piping system in place where it is picked up by sump pumps that pump it into an above ground, dual-contained, 365,000 gallon glass lined leachate storage tank. A gas collection and leachate recirculation system has been recently installed on Phase II and Phase III of the landfill in order to take advantage of the reuse of the leachate. Over 75 percent of the landfill leachate is re-circulated back into the landfill in order to increase the methane gas production and improve in-place density. In turn, the methane gas is piped to a landfill gas to energy (LFGTE) plant onsite which generates electricity that is sent to a power grid and produces enough electricity to power 1,680 homes. The remaining 25 percent of the leachate is transported to the nearby wastewater treatment plant for treatment. Leachate is monitored daily and tested quarterly.

Groundwater, surface water and methane gas are monitored in accordance with GA EPD requirements to assure that the landfill remains in compliance. Groundwater wells surrounding the landfill areas are monitored semi-annually. Perimeter methane monitoring wells are monitored quarterly. Surface waters are tested both upgradient and downgradient semi-annually. The site follows procedures outlined in the facility’s Stormwater Pollution Prevention Plan (SPPP) and Spill Prevention and Countermeasure Plan (SPCP) to protect the environment.

The following environmental controls are in place at the landfill.

- 43 methane gas monitoring wells
- 34 groundwater monitoring wells
- 8 surface water monitoring points
- Surface emission testing
- 115 methane gas extraction wells feeding the flare
- Active gas extraction system of Phase I, II, and III of the landfill with a flare station installed.
- Active landfill gas to energy plant onsite

Methane Gas Flare Station
The County contracts with a private firm to provide for the collection of solid waste, yard waste, and recyclables. This facility is a key part of the County’s integrated solid waste management system as it is the end point for those materials that cannot be recycled or reused. The facility is also a point for the collection of recyclable materials and for yard waste and wood that can be mulched. The site has separate solid waste permits for the MSW and C & D landfills, a Title V Air Permit, multiple leachate pretreatment permits, local land disturbance permits, and NPDES storm water permits for both landfill construction and operations.

Perfect scores on Georgia Environmental Protection Division compliance inspections are evidence of why this facility is good neighbor in the community and a good steward of the environment. Mr. Jeff Cown, who oversees the GA EPD’s solid waste management program has been quoted in the Middle Georgia newspaper, The Telegraph, as saying his goal is to have all landfills of the Houston County caliber. His department monitors over 100 public accessible landfills in Georgia and another 60 that are maintained privately for industrial use. The landfill is inspected by GA EPD twice a year. The last three years the Houston County Solid Waste Disposal Facility has received scores of 100 for both the MSW and C & D landfills. The compliance scores have been so consistent and exemplary over the years, that it is easy to see why the landfill stands as a model for other operations in the state and sets the bar for compliance standards. On the following page is a sample of the Annual Compliance Schedule that is maintained to assure that the required actions are done on a timely basis.
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1 Annual HPCAS leachate analysis required and leachate daily maximum of 100 mg/l and a monthly average maximum of 30 mg/l for Total Suspended Solids (TSS), daily maximum of 2.1 mg/l and a monthly average maximum of 0.3 mg/l for Total Dissolved Solids, daily maximum of 0.12 mg/l and a monthly average maximum of 0.01 mg/l for Total Nitrogen, daily maximum of 0.003 mg/l and a monthly average maximum of 0.003 mg/l for Total Phosphorus.

1a Quarterly report required to POTW with stormwater notice.

Permits

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Planning

Houston County has a Solid Waste Management Plan that presents the County’s plans for future waste reduction, recycling, collection, and disposal efforts. The Plan was last updated in 2012. Due to the foresight of the Houston County Board of Commissioners and other officials, the County has acquired 2,588 acres on the Houston-Pulaski County line over the last 25 years for their solid waste needs. The large tract of land provides room for expansion and creates a significant buffer to future developments. With 50 acres of C & D landfill and 200 acres of MSW landfill permitted and with an additional 321 acres of MSW landfill in the process of being permitted, the facility has the capacity to serve Houston County and the Middle Georgia region well into the foreseeable future.

The County has an aggressive waste reduction strategy that has resulted in a 28 percent waste reduction of waste landfilled per capita in Houston County. Curbside waste collection and single stream recycling pick-up has been privatized by the County. Single stream recycling is co-mingled recyclables that are collected and then sold for reuse or as feedstock for various manufacturing processes. The landfill receives white goods and miscellaneous metals which are sold for revenue. They also take old tires and pay $75 per ton to have them recycled. Yard trimming from residents and wood waste consisting of pallets and crates from Warner Robins AFB are ground up into mulch which is used for erosion control, grassing and landfill protective covering at the landfill. The landfill got a minor modification to their solid waste permit to use the ground wood waste for landfill wet weather covering.

In 2003, Governor Sonny Perdue signed an agreement allowing 2,000 acres of county property near the landfill to be used as a Wildlife Management Area (WMA) for hunting and other recreation. A timber management plan allows the landfill to timber parts of the WMA land tract for
and a camera system to look at loads coming in which also facilitate the traffic flow into the landfill.

Daily activities include compacting heaps of refuse with heavy duty compactors and then covering them with a layer of soil with bulldozers. The process is repeated in layers of garbage then soil (or mulch during wet weather conditions) with the maximum lift eventually reaching 100 to 120 feet before the cell is closed. Other activities include sweeping of the roads and on days when the wind is high and dust is prevalent, they spray water on the roads to keep the dust down even though the roads are paved to help control the dust. Routine maintenance on the equipment is also part of the day’s tasks. Employees and prison probationers maintain the grounds by picking up stray trash from trucks and sprucing up the facility by planting trees and flowers in the beds seasonally. Also on a regular basis, the leachate stored in the onsite storage tank is collected in tanker trucks and hauled to the wastewater treatment plant for treatment.

Financial Management

A point of significance is that the Houston County Solid Waste Disposal Facility has no outstanding debt on the landfill construction or new equipment. The landfill is operated as an enterprise fund without tax monies, bond issues, special assessments, grants or loans—everything is strictly user fee funded. More noteworthy is that the tipping fees are on the lower end of the Subtitle “D” fees in the entire state and they have remained the same since 1993. Examples of the tipping fee structure are
$20.50 per ton for garbage and trash; $15.00 per ton for segregated yard waste and white goods; and $15.50 per ton for C & D waste. There is an additional $2.00 per ton host fee for out-of-county customers. The County sets aside part of its fees to handle closure and post-closure monitoring activities which are required for 30 years after a site is closed.

The waste generated is approximately one ton per capita per year in Houston County. The waste received has increased to about 200,000 tons per year. The landfill receives an average of 750 tons of waste a day. The cost for disposal is approximately $20.50 per person per year translating to about one cent per pound per person. In 1994, the County began taking out-of-county waste from Bleckley County, Cochran, Hawkinsville, Pulaski County and Dodge County.

The waste facility has turned a profit for years. Their fiscal year (FY) begins July 1. In FY 2011-2012, $4.4 million in revenue was generated and operating expenditures were $2.9 million. For the FY 2012-2013, the operating budget is $3.89 million and the projected revenue is $4.37 million. Profits are pumped back into the landfill operation rather than into the County’s general fund.

**Employee Health and Safety Training**

Because Houston County is totally self-insured, they are exempt from OSHA regulations and requirements. However, they have established their own health and safety training program. Robbie Dunbar, Director of Operations, conducts a monthly safety meeting covering pertinent topics, such as seat belt use, trench safety, and accident reporting. Additionally, a monthly health and safety bulletin is produced and distributed among the department heads and other personnel. There is a county-wide safety board that sets annual safety goals and tracks the number of claims for each public works department. Terry Dietsch, the Landfill Manager, is a member of the safety board and in 2005 and 2007 he was the recipient of the County’s safety award based on zero claims at the landfill. Mr. Dietsch is serving as Vice President of the local SWANA Georgia Chapter and is on the Board of Directors which keeps him in touch with any updates to safety and training requirements. Employees participate in continuing education programs sponsored by SWANA and the GA EPD with cover topics of landfill gas systems operation and maintenance and safety in general. Training is ongoing to assure that required certifications are kept current. Employees also participate in the annual SWANA-GA Road-E-O which allows them to demonstrate their skills on the big landfill equipment.
Below is a list of the heavy equipment used at the landfill:

- 2 826 Compactors
- 2 D-7 Bulldozers
- 2 Excavators
- 2 740 40 yd. Dump Trucks
- 1 D-5 Bulldozer
- 1 Motor Grader
- 1 950 Loader
- 1 Street Sweeper
- 1 Water Truck
- 1 Tanker Truck-Leachate

The compactors are definitely the workhorses of all the heavy equipment. They log over 2,500 hours a year. After logging 12,000 to 15,000 hours of use they are traded or sold or moved to the C & D landfill where they are not used as heavily. Basically, the compactors last for 6-7 years on average. If the equipment is being repaired the landfill will borrow equipment from the road department or rent equipment. When newly purchased equipment is delivered, the operators are trained to use the equipment by the manufacturers’ representatives in one-day sessions. Further instruction is available if necessary.

Mounted behind the scale house is a back-up, diesel fuel generator that can provide a source of electricity in the case of an outage. Outages are common in this geographic area due to lightning strikes, particularly in the summer months.
Not only is this facility a model for its financial position, operating procedures and revenue-generating capacity, it is a source of pride for the County for its future planning, environmental efficiency and community involvement and acceptance. According to Tommy Stalnaker, Chairman of the Houston County Board of Commissioners, when you come into the County’s landfill you have a sense of pride and a “hey, this is nice” reaction. The stacked stone and landscaped entranceway, paved and lighted roads, and fresh-cut grass are more common to country clubs and subdivisions than landfills. The staff also works to beautify the grounds by planting seasonal flowers at the entrance and even the roadside beyond the entrance has beds filled with trees, shrubs, and flowers. Vintage style lampposts line the entrance road and display banners touting patriotic and environmentally friendly messages. Odor at the site is non-existent and even dust is not an issue on these roads because they are completely paved throughout the facility. The entranceway roads are not only paved, but are curbed as well.

Through a private contractor, Houston County has promoted curbside recycling of newspaper, plastic, aluminum and tin. Bins are provided free of charge to households that participate, with over 18,000 households participating is recycling efforts. Recycling is also promoted at the local schools through a program called the Happy Hour School Workshops.

In addition to promoting volunteer efforts in the County for recycling materials, the County also participates in educational and public information programs to get the residents to buy into source reduction activities. These efforts have included making presentations at local civic organizations, such as the Association of Retired and Active Federal Employees, Rotary Club, The Lions Club and Keep Warner Robins Beautiful. Additionally, they have conducted tours at the facility for groups such as the Perry-Warner Robins Leadership. Events for the statewide annual Earth Day in the spring are hosted at the landfill.
All of these activities and events enhance their public acceptance and promote their image as a good neighbor and a good steward of the environment.

The new LFGTE facility is a showplace for “green” education for students and adults. This educational resource includes an observation room, equipped with screens which provide real-time data about the system’s operations and the electricity it is generating. One of the first tour groups to visit was the Youth Leadership Class from Warner Robins.

The County issues regular media releases touting their accomplishments as a tightly-run operation and an innovator in green energy technology. Public appearances at the site by Governor Sonny Perdue also assure good press like when the agreement was signed for the 2,000 acre Wildlife Management Area. The Supplemental Materials Section contains examples of the several press releases.
On January 5, 2011 Houston County, Flint Energies and Power Secure started a landfill gas to power generation plant to make beneficial use of the methane gas by-product generated from the natural decomposition process of solid waste disposed of at the Houston County landfill. Historically, the project began in November 2003 when Houston County installed a gas collection system and flare station to serve Phase I of the landfill, therefore laying the groundwork for a future energy generating project. It was not until April 2008 that Houston County solicited proposals for LFGTE partners and received eleven responses that identified at least six potential end users of the energy from landfill gas. The proposal by Flint Energies, in partnership with Power Secure International, Inc., was determined to be within the best interest of the County. Under this plan, Flint buys gas from the County and power generation output from Power Secure which installed, owns and operates the generation plant facilities. In November 2009, Houston County expanded its gas collection system to serve Phase II of the landfill.

In April 2010, Power Secure began construction on this groundbreaking project. A 90-ton crane installed two CAT generators, valued at $1 million each, into a massive energy conversion facility at the Houston County landfill. The generators are part of a multimillion dollar system to collect methane generated at the landfill and convert it into energy for the local area. According to Terry Dietsch, the Houston County Landfill Manager, “We are going to collect the gas; they are going to produce the energy.” The system works by sucking methane out of the ground like soda through a straw. The methane is then converted into electricity by the...
two generators; the electricity is pushed out to a substation, which distributes the power throughout the area including a museum building at nearby Warner Robins AFB. Houston County invested approximately $1.2 million in the project for the expansion of the gas collection system to serve Phase III. This expansion was completed in October 2011. Flint Energies invested almost $7 million in the facility.

Gas collection from the landfill is currently producing about 1,200 standard cubic feet a minute. The LFGTE plant is producing 3.2 megawatts of “green power” which is enough electricity to service 1,680 homes annually on average. Houston County is compensated $2.00 per MMBTU for gas consumed by the generation plant. Sales of landfill gas were projected to generate $250,000 to $500,000 in revenues annually to the County depending on gas flow rates. In FY 2011-2012, the first year of operation, the sale of landfill gas has already generated $434,023 in revenues.

In addition to the financial benefits, there are many environmental benefits. Previously, the gas in the landfill was piped to the surface and “flared or burned off” to dispose of it. These greenhouse gases are twenty times more potent than carbon dioxide at trapping heat in the atmosphere. Recovering gas and using the energy to produce electricity instead of flaring reduces emissions. The alternative to burning methane gas is to use it as a fuel for power generation. Also, fewer fossil fuels, such as oil and coal, are used for electricity generation. Finally, recovering the landfill gas for reuse is another way to recycle from the waste stream coming into the landfill. Renewable green energy is an important part of the future of power generation.

Additionally, a public-private partnership benefits the County, the private partners, and the County citizens by providing green energy that is more environmentally friendly. The landfill is expected to be in use through the middle of the century. It will produce even more methane as the site is expanded. The recently opened landfill gas to energy generation facility gives the landfill more opportunities to showcase their green consciousness to the public as the facility is specifically designed with features to accommodate tour groups. This innovative and forward-thinking LFGTE facility makes the Houston County landfill a model to other disposal facilities throughout the state of Georgia and the country.
May 10, 2013

SWANA
Technical Programs Department
1100 Wayne Avenue, Suite 700
Silver Spring, MD 20910

Dear Sirs and Madams:

It is with pleasure that I endorse the Houston County Board of Commissioners in submitting the Houston County Solid Waste Disposal Facility for the SWANA 2013 Landfill Management Excellence Award. The Houston County Solid Waste Disposal Facility is the recent recipient of the first place award of the SWANA-Georgia Chapter’s Landfill Management Excellence Award, which I served as chair for the awards committee.

Currently, I serve as the Assistant Chief of the Land Protection Branch of the Georgia Environmental Protection Division (EPD). I formerly served as the Program Manager of the Solid Waste Management Program for Georgia EPD, which monitors over 100 operating landfills in Georgia. There are several reasons I believe Houston County is deserving of such an extraordinary national honor. Their attention to detail at the site is unprecedented with no foul odors and impeccably maintained grounds. Colorful banners on vintage lampposts line the all-paved road. Several have commented that the facility has a “country club worthy” entrance. A canopy covers the scales and check-in window that enhances the customer-friendly atmosphere. The facility routinely has a perfect score on the Landfill Compliance Evaluations. Recently, the facility entered into the renewable energy sector with a public-private partnership to convert the methane gas generated at the facility into electricity, proving once again that this facility has a robust and dynamic commitment to the environment.

I certainly hold the Houston County facility as a model to all other landfills in Georgia. It is evident that Houston County takes pride in their facility. I hope the national judging panel will give this facility serious consideration for the Landfill Management Excellence Award. In my opinion, they are worthy and deserving of such an honor.

Sincerely,

Jeffrey W. Cown
Assistant Chief
Land Protection Division
County Turns Gas from Trash Into Energy

SEPTEMBER 18, 2008 • 6:16 PM

Houston County’s trash could soon be part of the gas that powers homes and businesses.

The county, together with Flint Energies, plans to turn methane gas created by decomposing trash into electricity.

County Public Works Director Tommy Stainaker says right now, they burn the methane at the landfill. It’s released into the air through a flare station. The flare creates a flame that burns about 15 feet into the air at 1200 degrees. It can only be seen at night.

Under the new plan, the gas will be stored and pumped into a generator

where Flint will turn into electricity.

Stainaker says it’s an environmentally friendly process that cuts down on pollution. The “green energy” won’t cut down on power bills right away because of the investment required to start the process.

As more is produced, Stainaker says the price will come down and eventually lower energy bills. Stainaker said, “Once the cost in my opinion is contained, capital is recovered, I think the cost would be in the line with the conventional cost of power.”

Stainaker says the county will invest about $1.5 million into the project. He says in five to ten years, they should begin to see a return on their investment of up to $750,000 dollars each year.

The “green energy” should be available to Flint customers in late 2009.

In Your Voice

READ REACTIONS TO THIS STORY

Houston Commissioners Pick Flint In Methane Project

Houston County Commissioners have decided on a new partner to turn methane gas at the Houston County landfill into a viable power source. This new partnership hopes to provide a new stream of income to the residents of Houston County.

Houston County Board Commissioners approved Flint Energies to serve as their partner to help turn methane gas at the Houston landfill into electricity for the community.

Marian Douglas of Flint Energies says the partnership offers "green power" at an affordable price.

Marian Douglas: Alternative energy or methane gas is a more environmentally friendly way of generating electricity. Gas captured at landfill is cleaned up and run through a system that will burn methane gas which will generate energy.

Contract negotiations have begun, and a contract will be finalized within 45-60 days. Then there will be a 14 month construction process to collect the methane gas. Terry Dietsch says the project has the potential to grow to be the largest landfill gas generator in the state of Georgia.

Terry Dietsch: It will help the environment. With us capturing the gas and doing something positive with the gas, our atmosphere will be cleaner and our facility will be greener. It will be better for our environment overall for everybody.

Methane gas is currently burned of to get rid of it. The new environmentally friendly way is to capture it and use it as fuel.

"There will be mandates from government in near future requiring electric companies like Flint to generate certain amount of electricity from renewable resources. This is a way for us to meet those requirements and to continue our environmental stewardship."

Houston picks Flint Energies as gas partner

By David Charnow

Houston County and Flint Energies became even stronger allies Tuesday as county commissioners voted unanimously to designate the electric cooperative as Houston County's Landfill Gas to Energy (LFGTE) partner. Under the agreement, specifics of which are yet to be hammered out, Flint Energies will help capture and sell methane and other gases generated by the Houston County Landfill on Harvinsville Road.

“This was a very methodical process and took a lot of hours and a lot of study,” said Tommy Stalnaker, Houston County’s director of operations, in recommending Flint to commissioners. “And I am convinced that the agreement will improve environmental compliance and quality as well as produce an alternative energy source for the production of green power.”

Flint Energies competes for the partnership designation. A selection team made up of consulting engineers, energy and solid waste experts, Houston County government personnel and commissioners Todd McMichael and Neil Sanders cut the list of contenders to five. A further review by the selection team “enthusiastically” recommended Flint.

Financial arrangements, commissioners said, are among the details to be worked out as the contract is negotiated. What is known is that the LFGTE project will be “very capital intensive initially for both parties,” according to Stalnaker. “A single extraction unit, one we (the county) will have to build right away, will cost about $3 million.”

He noted that additional extraction system units will have to be added in the coming years. Under criteria established before the selection process began, Flint will buy methane gas from the county at market-driven rates. Power Secure, a Flint partner, will then “process” the methane to generate electricity. Flint then buys the electric output from generators and sells it to customers.

The 3,386-acre Houston County Solid Waste Disposal Facility, on landfill, burns off 1,000 cubic feet of landfill gas per minute. This time next year, officials say, more than 90 cubic feet per minute will be “flared.”

When the Houston-Flint partnership becomes fully functional, it is expected to produce more than 27 million kilowatt-hours (kWh) of “green” electricity a year, a considerable figure when one considers that 1,500 kWh will power the average Houston County home for a month.

Houston County and Flint Energies have a long history. The county is Flint’s third largest customer and was selected to provide electric power to the Houston County Justice Complex, which includes the new courthouse and jail.

It is a partnership that County President and CEO Robert Ray would like to broaden. “We have looked forward to being associated with this country’s nationally recognized landfill," he said after Tuesday’s meeting. "This facility has the potential to be the largest landfill gas generating site in the Southeast in the next 20 years and we want to be a part of that.”

Commissioners also held the first of three public hearings in advance of voters being asked to approve in November a half-mill property tax increase to pay for a countywide weather alert system.

To contact writer, David Charnow, 733-8674, extension 400.

Landfill from 18

proposals for landfill gas to energy partners. Among 11 proposals submitted, the one that rose to the top came from electric cooperative Flint Energies in partnership with North Carolina based PowerSecure, Stalnaker said.

Under the agreement, Flint Energies purchases the gas from the county and buys power generation output from PowerSecure, which installed, owns and operates the generators on the county’s 2,600 acres of landfill property off Ga. 247. About 250 acres are permitted for trash burial. Recovering the gas, instead of flaring it, is projected to reduce the emission of nitrogen oxides by about 230 pounds per year, Stalnaker said. Nitrogen oxides lead to the creation of ground-level or “bad” ozone, a pollutant.

Information from Telegraph archives was used in this report. To contact writer Becky Purser, call 256-9359.

Houston County

Generators begin converting gas to energy at landfill

By Becky Purser

Kathleen — Garbage dumped at the public landfill in Houston County is now being used to make electricity.

The county has been “flaring” or burning off methane gas produced by trash naturally decomposing underground in the landfill. But now two new generators capture the gas and use it as a fuel to power the generators.

The generators started up Monday after a ceremonial ribbon-cutting at the landfill, marking the culmination of a project that was initiated in 2008. The ceremony was held under a tent to shield from the rain a host of elected officials, community and business leaders who assembled.

Houston County Commission Chairman Tommy Stalnaker characterized the starting of the generators as “a great day” for all involved in the project and for all who will benefit from it.

Bob Ray, chief executive officer and president of Flint Energies, noted the project is “the realization of a vision” and “what a pile of trash and innovative minds can do.”

In April 2008, Houston County moved to market its methane gas by soliciting
Macon.com

More than 400 family members, friends pay final respects to Kathleen girl

Houston landfill generators will convert methane to energy

Published: July 29, 2010

By THOMAS L. DAY — tday@macon.com

KATHLEEN A 90-ton crane installed two generators, valued at $1 million each, into a massive energy-conversion facility at the Houston County landfill Wednesday morning.

The generators are a part of a multimillion dollar system to collect methane generated at the landfill and convert it into energy for the local area. The facility is a private-public partnership between Houston County and Flint Energies, launched in 2006.

“We are going to collect the gas; they are going to produce the energy,” said Terry Dietch, the Houston County landfill manager.

The project is scheduled to culminate in December, when Flint Energies opens a substation across Ga. 247 to feed the power into the Houston County energy grid. When the facility is complete, the landfill will generate about 3.2 megawatts of electricity continuously.

“The electric generators will be enough to power 800 to 1,000 homes,” said Marian Douglas, spokeswoman for Flint Energies.

The system, according to Dietch, works by sucking methane out of the ground like soda through a straw. Methane is generated during the natural decomposition process of the waste.

The methane will then be converted into electricity, using the generators that were installed Wednesday, and pushed out to the substation, which will distribute the power throughout the area.

Houston County has invested about $1.2 million in the project, including installing a methane collection system that weave through the 2,900 acre landfill. They should make their money back quickly, if estimates prove accurate.

“We’re looking to generate about $250,000 to $400,000 a year,” said Ned Sanders, Houston County Commission chairman.

Flint Energies invested about $7 million in the facility. It, too, could see its investment pay off if the region’s largest potential client takes notice.

Robins Air Force Base is facing stiff federally imposed requirements for clean energy use. The electricity generated by the landfill will be carbon-free, according to Douglas. Robins currently powers much of the base with energy provided by Georgia Power.

To contact writer Thomas L. Day, call 744-4489.

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Power Secure

News Release

PowerSecure Announces Commissioning of New Landfill Gas Power System

WAKE FOREST, N.C., Jan 10, 2011 (BUSINESS WIRE) — PowerSecure International, Inc. (Nasdaq: POWER) today announced it has commissioned a new landfill gas power system on behalf of Flint Energies and Houston County, Georgia. The new system turns methane gas from the Houston County Landfill into clean, “green” electricity. A commissioning ceremony was held to formally place the system in service, bringing to completion a project which was announced and initiated in December of 2009. The ceremony was attended by approximately two hundred people, including officials from Houston County, Flint Energies, and PowerSecure.

As an added benefit to the community, PowerSecure and Flint have built the facility to be a showplace for “green” education, including students and adults. The facility includes an observation room, equipped with screens which provide real-time data about the system’s operations and the electricity it is generating. One of the first tour groups to visit will be the Youth Leadership Class from Warner Robins on Jan. 12.

Landfill gas, largely methane, is produced when materials in large landfills decompose. Previously, the gas in the landfill was piped to the surface and “flared” or burned off to dispose of it. These greenhouse gases are twenty times more potent than carbon dioxide at trapping heat in the atmosphere. The alternative to burning methane gas is to use it as a fuel for power generation. The Houston County landfill is slated to have an extremely long life of approximately 40 to 50 years, and as the landfill grows, the quantity of the methane gas will also grow.

Sidney Hinton, CEO of PowerSecure, said, “We are thrilled to be able to serve Flint Energies and Houston County with this new renewable energy system. The system is designed to provide continuous power from methane which was previously flared - providing financial and environmental benefits to the community. We are committed to providing a best-in-class system and gold standard service to Flint and Houston County for years to come.”
Flint, county agree on Landfill gas agreement

by Special to the Patriot

2 years ago | 613 views | 0 | 6 | 1

WARNER ROBINS – At its December meeting, the Houston County Board of Commissioners and Flint Energies completed a final agreement to turn methane gas at the Houston County Landfill into electric power generation. The project will produce benefits for county citizens and Flint’s members-consumers.

Under the plan, Flint will buy gas from the County and power generation output from PowerSecure International, Inc. which will install, own and operate the generation plant facilities. The project will be located at the landfill just off GA Highway 247 toward Hawkinsville.

The proposal gives Flint members access to 3.2 megawatts of environmentally “green power” and creates a new revenue stream of income for the landfill operations of the county.

“We are pleased that Houston County has chosen Flint Energies as their partner on the landfill gas project,” said Flint CEO Bob Ray. “Our close relationship with the County goes back many years through many other projects and partnerships.”

“This partnership is good for our members who want and need new power generation resources, and for the residents of Houston County who can benefit from the revenues derived from what was considered waste,” said Ray.

“Renewable ‘green’ energy is an important part of the future of power generation for Flint Energies members,” said Ray. “We have been part of Green Power EMC’s efforts to build renewable energy generation, including the first landfill gas in the State of Georgia at the Taylor County Landfill in Mauk.”

Flint also demonstrates renewable energy generation with a “SunPower for Schools” solar project at Huntington Middle School in Warner Robins.

As another benefit to the community, Flint is proposing to make the landfill gas green power generators a showplace for education of students and adults. This additional benefit adds to the reputation and management provided at the landfill that has already won the 2007 Solid Waste Association of North America (SWANA) silver excellence award as the second best landfill in the United States.

Ray explained that “green power” is electric energy generated by renewable, more environmentally-friendly sources. These types of generators have less air, water and natural resource impacts. Landfill gas as a renewable resource is considered biomass power generation. Other types of biomass generation might include the burning of wood waste or chicken litter.

Landfill gas, largely methane, is produced when the materials in large landfills decompose. Houston County is currently piping the gas to the surface and “flaring” or burning it off to dispose of it. These greenhouse gases are 20 times more potent than carbon dioxide at trapping heat in the atmosphere. The more environmentally friendly alternative to burning methane gas as a waste product is to capture it and use it as a fuel for power generation.

The Houston County landfill is expected to have a long life, approximately 40 to 50 years into the future. As the landfill grows, the quantity of the methane gas is also expected to grow.

This agreement will accrue other benefits to Flint Energies and its members. The new substation to be built onsite will improve reliability to Flint’s members in that part of Houston County. Since