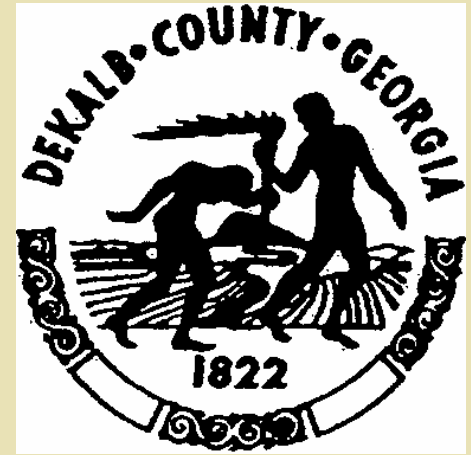


A collection of historical artifacts is arranged on a light-colored surface. On the left, a portion of a chessboard with a checkered pattern and several chess pieces is visible. Below the chessboard are two ornate medals: one with a red ribbon and a white star, and another with a blue ribbon and a white star. A small red circular object is also present. In the bottom left corner, there is a circular compass with a white face and black markings. A pair of thin, gold-rimmed glasses with a red-tipped nose bridge lies across the center of the image.

Developing a Methane to Electricity Facility by a Municipality

August 2nd 2006
Tifton, Georgia

Organization



- ◆ DeKalb County, Georgia
- ◆ DeKalb County Sanitation was officially formed as a County Department in 1940
- ◆ Exclusive Rights to Collect, Transport and Dispose of all Solid Waste Generated in Unincorporated DeKalb



Operations

- ◆ 750,000 population DeKalb County
- ◆ 2nd Largest population County in Georgia
- ◆ 165,000 single family residential homes
 - Twice Week Garbage, Yard Debris, Recycling
- ◆ 8,000 commercial customers
 - Front Loader, Compactor Roll-off, Open Top Roll-off
- ◆ Own & Operate
 - 3 MSW Transfer Stations (No Residential Vehicles)
 - 1 Citizen Convenience Center
 - 1 MSW Landfill
 - 1 C & D Landfill
 - 1 Yard Debris Composting Facility



Sanitation Department

- ◆ Enterprise Fund – No General Tax Dollars
- ◆ 715 Full Time Employees
- ◆ 74,000,000 Annual Budget (User Fees)
 - 52,000,000 Operating Budget
 - 18,000,000 Capital Improvements Budget
 - 4,000,000 Reserve for Appropriations Budget




Seminole Road MSW Landfill

- ◆ Began Receiving Waste in 1977
- ◆ 8,000,000 Tons in Place
- ◆ 1,650 Tons per Day
- ◆ 1811 lbs per cubic yards in-place density
- ◆ 50 Million Cubic Yards Airspace Capacity
- ◆ Expected to reach Fill Capacity 2071
- ◆ 2nd Largest Active MSW Landfill in Georgia



Active Gas Collection and Destruction System

- ◆ Active Gas System began in 1999
- ◆ Present Gas Flow - 1,250 scfm
- ◆ 54% Methane – All MSW Material (no C&D or Yard Debris)
- ◆ Tier II Spacing Permit (175 foot ROI)
- ◆ 26 additional wells 2006 (90 foot ROI)
- ◆ 56 additional wells 2008 Closure Phase 2A
- ◆ Expected Flows to Increase to $\approx 2,500$ scfm



Finding a Premium Buyer for your Green Energy Development

- ◆ Snapping Shoals EMC RFP 2001
 - DeKalb County did not participate
 - Gas System was not optimized at the time
- ◆ Georgia Power RFP May 15th 2002
 - DeKalb County used a 3rd Party Developer as a Bidder
 - Made Competitive Tier – not selected to negotiate
 - GA Power and Allied did not finalize PPA - Cancelled
- ◆ 2nd Georgia Power RFP September 3rd 2004



Reviewing the RFP

◆ Critical Elements

- 45,000 MWh Annually for 10 years (90 % Biomass):
Includes Landfill Projects
- Awards to be in 7,500 MWh Blocks
- Must Own Green Tag Attributes
- Must Meet Georgia Green-E Accreditation Criteria
 - More restrictive than Georgia Severe Non-Attainment
 - More restrictive than any State Requirement
 - More restrictive than any Federal Requirement
- 0.5gr/bhph or (1.5lbs./MWh) NOx Emission
- Liquidated Damages Letter of Credit Provisions



Path Forward for a Municipality

- ◆ Bidders Conference September 17th 2004
 - Preliminary Business Pro Forma
 - Review Competitors List from Bidders Conference
- ◆ Letter of Intent to Bid October 1st 2004
- ◆ Work Session with BOC October 5th 2004
 - Power Point – Discuss Project and RFP process
 - General Discussion of Conversion; Cost & ROI
- ◆ BOC Regular Agenda October 12th 2004
 - Approval to Submit Bid
- ◆ Submit Formal Bid on October 22nd 2004



Business Pro Forma

◆ Minimum Criteria

- Five Year Return on Capital Investment
 - 1.2 to 2 million per MW – Larger Engines reduce Cost / MW
- Evaluating your Gas Flows % Methane
 - Properly Size your Facility for Flow and Electrical Output
 - 1,000 scfm @ 50% methane for the two 3520 CAT engines;
 - 210 scfm minimum flow to operate J-1650 gas flair,
 - 500 scfm for 3rd engine 2009 (need emission offsets prior 2010)
 - 88 % availability – 60 % RFP – 3rd engine 2009 – 90% RFP
- Permit Requirements
 - Severe Non Attainment (25 tons NOx) – 5 year increase rule
 - Modify Title V Permit to Construct and Operate
- Project Schedule and Timeline
 - Shorter Timeline to Production Increases Cost of Project
- Strategize Pricing from your Competitors on the Project



Competitive Tier & PPA

- ◆ November 10th 2004 - Made Competitive Tier
- ◆ December 5th 2004 – Request to Negotiate PPA
- ◆ December 13th 2004 - BOC Approved Staff to Negotiate PPA
- ◆ December 15th 2004 - Confidential Agreement was Authorized and Signed By CEO
- ◆ February 15th 2005 - Completed Negotiations
- ◆ February 22nd 2005 – Work Session - Terms PPA
- ◆ March 10th 2005 - BOC Agenda - Deferred



PPA Action Item by BOC

- ◆ March 22nd 2005 – BOC Deferred 2nd Time
– Newspapers, TV Stations & Citizen Groups
- ◆ April 4th 2005 – Public Hearing
- ◆ April 12th 2005 – Item Tabled by BOC
- ◆ April 20th 2005 – 2nd Public Hearing
- ◆ July 5th 2005 – Work Session – BOC Approved to take the item off the table
- ◆ July 12th 2005 – BOC Approved PPA
- ◆ Facility must be in Commercial Operation by October 12th 2006 (15 months)



Design Build RFP

- ◆ July 25th 2005 – Sanitation submits a Design Build RFP to Purchasing
 - Design and Construction of Facility
 - 10-year Operation & Maintenance of Facility
- ◆ September 27th 2005 – Purchasing and Law Approve the RFP
- ◆ October 4th 2005 – RFP Let - 3 Week Advertising (12 months to be Operational) - Tight Schedule
- ◆ October 19th 2005 – CEO Cancels RFP – Siemens
 - Change Order to an existing Contract
- ◆ Sanitation Requested CEO to Cancel PPA – Time



Fast Track Bidding Q & A

- ◆ October 27th 2005 – RFP Reinstated
- ◆ November 18th 2005 – Pre Bid Conference
- ◆ December 1st 2005 – Four Proposals Received
 - Siemens, Ameresco, LES and SCS
- ◆ 3 Firms determined to be Responsive to bid
- ◆ 2 Firms selected to be Interviewed
- ◆ 1 Firm Short Listed
 - Only vendor with No Exceptions to Bid
 - Only Vendor who demonstrated they could meet the schedule
 - Only Vendor who included a Letter of Credit to Georgia Power at no additional cost to their proposal



Recommendation of Award

- ◆ Department Determined the Cost Proposal was within Budget Pro Forma & ROI
- ◆ January 10th 2006 – Department made Recommendation of Award to BOC - Deferred
 - Met with Commissioners one on one to Discuss Details
- ◆ January 24th 2006 – BOC Approved SCS Bid
- ◆ March 8th 2006 - Notice to Proceed Issued
 - 7 Months to Achieve Commercial Operation



Environmental Permits

- ◆ February 2nd 2006 – EPD Land Permit to Construct Facility
- ◆ April 10th 2006 – LDP Issued by County
- ◆ May 17th 2006 – EPD Title V Amendment No. 5 for Permit to Operate Facility



Interconnection to Substation

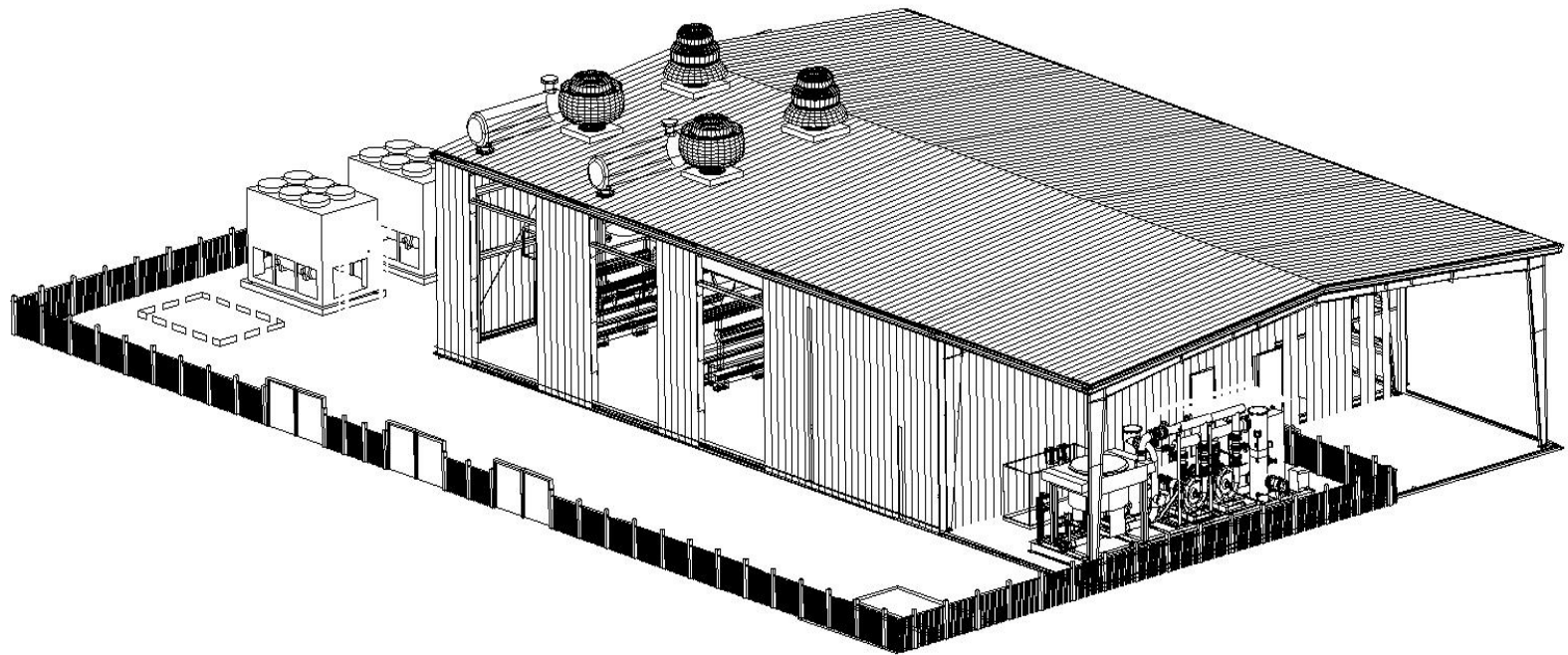
- ◆ March 2nd 2006 - Application Submitted to Georgia Power – Still under Review
- ◆ July 3rd 2006 – 5 foot Additional Easement Signed by the County
- ◆ July 10th 2006 - 3-way Service Agreement Signed by the County – Waiting on Georgia Power & SS EMC
- ◆ July 31st 2006 - Connection Electrical Line substantially completed to substation



Critical Lead Items

- ◆ March 10th 2006 - 2) CAT 3520 Engines Secured
- ◆ July 21st 2006 – Final Permit Designs Approved by the Building Department
- ◆ August 12th 2006 – Building Scheduled to be delivered to the site
- ◆ Schedule Very Tight – Commercial Operation is a priority and is anticipated to be completed on and near the October 12th 2006 deadline
- ◆ Complete Building scheduled to be complete by mid November 2006

Seminole Road Green Energy Facility



Timeline for Specific Activities

- 
- ◆ Feasibility Study
 - ◆ Power Sales Agreement
 - ◆ Environmental Permits
 - ◆ Interconnection Agreement
 - ◆ Develop Design Build RFP
 - ◆ Local Acceptance
 - ◆ Local Approvals & Meetings
 - ◆ Engine Availability
 - ◆ Construction
 - ◆ Facility Startup
 - ◆ Operation & Maintenance
 - ◆ Overall Time to Develop
- | | |
|----------------------------------|-----------------|
| ◆ 6 to 8 weeks | |
| ◆ 8 to 12 weeks | 10-year min. |
| ◆ 2 to 4 months | 5-year |
| ◆ 4 to 6 weeks | |
| ◆ 2 to 4 months | Future Flows |
| ◆ 3 to 4 months | |
| ◆ 4 to 6 months | |
| ◆ 6 to 8 months | |
| ◆ 9 to 12 months | Longer Better |
| ◆ 2 to 3 weeks | |
| ◆ 3 rd Party Contract | 5-years min. |
| ◆ 2 Years | Start to Finish |



Why Do It Yourself

- ◆ Maintain Control your Landfill Operations
- ◆ Avoid Leasing Property or Equipment
- ◆ Win Win with Electrical Companies
- ◆ Streamline Permitting Processes
- ◆ Competitive with 3rd Party Developers
- ◆ Maintain Ownership Today and Tomorrow
- ◆ Satisfaction and Accomplishment



Contact Information

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