

# Executive Summary

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Howard County's commitment to and focus on energy conservation and environmental responsibility parallels Energy Systems Group's (ESG) primary tenet in the development of an Energy Performance Contract (EPC). This EPC bundles critical infrastructure upgrades and replacements with the newest advances in technology integrated with renewable components to

## **ENVIRONMENTAL BENEFITS**

**23% reduction in energy consumption**

**Decreased emissions by 3,281 metric tons of carbon dioxide equates to:**

- o 545 cars removed from the roadways
- o 395 homes eliminated from the electric supply grid
- o 76,324 seedlings planted over 10 years

**Overall positive impact on the carbon footprint for Howard County**

assist Howard County in being responsive to both the report submitted by the Commission on the Environment and Sustainability as well as the Executive Order 2007-1, which endorsed the US Mayors Climate Protection Agreement. This proposal prepared by ESG offers Howard County the opportunity to install new and renewable technology while saving energy, avoiding capital expenditures, reducing operating costs and ultimately improving the environment. This proposal provides quantifiable impact on both the Commission and County Executive's agenda.

ESG's funding strategy is to reduce utility and operating costs so that Howard County can redirect this money to fund their mission critical needs. This proposal presents Howard County with a project that will reduce energy costs by 23%, save more than \$483,000 annually which generates \$5.3 million in upgrades, improvements, major equipment replacements, and new green building technologies. These reductions in energy units correlate directly to reduced carbon dioxide emissions where every kWh of electricity and every therm of gas reduce pollution.

While the environmental benefits of this proposal are significant, at its core is a variety of newly installed assets. This proposal addresses critical equipment concerns and comfort issues, identified by Howard County Staff and from observations during the site survey. The highlights of this program provide Howard County the following capital improvements:

- New chillers
- New gas fired boilers
- Expanded DDC controls
- Upgraded lighting and associated controls
- **PV system-Green Roof- Daylight Harvesting,**
- Many more innovative and cost-effective energy conservation measures.



***Building Performance With Energy***

*Proprietary & Confidential  
Howard County Phase II Proposal  
Revised pages February 9, 2009*

Based on the review and recommendations by the County, ESG has developed this project to be installed in two Phases. The Phase I construction will result in \$4.4 million dollars of upgrades and improvements and will include the new boilers at the detention center. This Phase I will begin immediately upon ESG's receipt of a PO from the county and is estimated to commence in May 2009. Upon funding approval by the County Council, Phase II, which represents the remaining \$1.095 million dollars of improvements, will commence August 1, 2009 upon receipt of a PO from the County expected no later than July 31, 2009. This second Phase of work will include the cooling system upgrades. ESG has structured this phased approach so the County will receive much of the energy savings during the Phase I of construction. The term for the project is 15 years which includes twelve months for construction.

This project offers Howard County a comprehensive solution to critical equipment issues as well as renewable energy components which will directly impact the County's new initiatives for a more sustainable future. ESG is excited to begin the implementation of this project so Howard County can begin generating energy savings today and be one of the first counties in Maryland to initiate Carbon Footprint Reduction efforts.