

## **Charlotte County Practices Energy Efficiency**

**By David Milligan, Facilities Construction & Maintenance Director**

Energy efficiency is now a driving force in American society. Reducing energy consumption and promoting environmental stewardship is a high priority for Charlotte County government. The county is analyzing building systems, energy usage and new technologies toward achieving a multi-faceted approach to energy efficiency.

Staff members from many departments have come together to form a sustainability team whose purpose is to identify, develop and implement new programs and initiatives. The county's Green Building Ordinance (2009-20) encourages environmentally-sensitive commercial construction and development, including County projects. The annual Southwest Florida Green Futures Expo highlights green products, services, and technologies and provides resources and training—this year's expo theme is "An Exploration in Green Living." The annual Southwest Florida Energy Options Conference, also in October, is a day of discussions and panel sessions on renewable energy, economic growth, retrofitting and new wave technology.

Charlotte County has many ongoing efforts that focus specifically on increasing energy efficiency in County buildings, facilities and operations. Last month the Board of County Commissioners adopted an Energy Efficiency and Conservation Strategy. This report describes energy efficiency, conservation and usage goals and identifies strategies to achieve those goals. Goals include increasing energy efficiency thereby reducing fuel use and emissions; incorporating practices in County operations that provide a positive example to our visitors and citizens; and encouraging a "culture" of conservation for county employees and the public.

Energy efficient solutions may incorporate passive, active, behavioral, technological, new and old strategies. Some efficiency improvements, or retrofits, are funded through the County's annual operating budget; other larger efforts are funded through an annual capital project dedicated to energy efficiency initiatives or incorporated into new buildings and renovations. Grants may also play a role in project funding. In either case, the payback, or return-on-investment is always considered before adopting a new strategy.

Examples of energy efficiency projects range from broad-based efforts to individual office improvements. Electrical usage—encompassing offices, fire stations, sports lighting, libraries and other facilities—is one of the largest sectors of energy consumption in Charlotte County government operations. Energy management software that monitors electrical usage in all of Charlotte County government's facilities tracks usage and identifies areas for savings. Submeters have been installed in selected electrical systems to provide detailed tracking of electrical usage of specific equipment on a daily basis. Other current broad-based efficiency efforts include general recycling, converting landfill gas to energy, converting traffic signals to LED lamps and sponsoring low to moderate income weatherization programs through grants. Projects on the horizon include converting grease to biodiesel, sludge to fertilizer and the use of solar photovoltaic where applicable.

Many older County buildings are constructed with systems and products now considered inefficient. These are prime candidates for efficiency retrofits. Assessments are being conducted on buildings such as fire stations and libraries to identify where technology or simple behaviors can improve energy efficiency. Some of these upgrades include interior, sports field and parking lot lighting which can typically save 50-60% in electricity. Motion detectors are being installed to limit energy waste by passively controlling lighting only when rooms are occupied. Air conditioning systems are being maintained at peak performance to meet building and occupant needs with programmable thermostats, demand-control ventilation, and central computer monitoring. Building envelope improvements include window tinting, blinds, upgraded insulation and caulking.

Occasionally, analysis yields surprising recommendations; for example, changing paper towel dispensers to electric hand dryers has resulted in cost savings by reducing product waste. Unique projects, both current and future, include solar hot water heating in fire stations, a geothermal pool heater at South County Regional Park pool, and ongoing maintenance of the “green” roof at the Charlotte Sports Park.

Buildings that were retrofitted last year alone have resulted in an electrical cost savings to Charlotte County government of approximately \$300,000. Measuring and projecting actual results of energy efficiencies is ongoing exercise. Charlotte County will continue to evaluate and incorporate new ideas and emerging technologies where appropriate.

Advancement of the County’s energy efficiency program continues to show environmental, social and financial benefits and serves to demonstrate the County’s commitment to energy efficiency through its commissioners, staff, customers, and partners. For more information on Charlotte County government’s efforts contact Caryn Huff, Charlotte County’s Energy Efficiency Coordinator at 743-1995 and visit our web pages: [www.CharlotteCountyFL.com/Sustainability](http://www.CharlotteCountyFL.com/Sustainability) and [www.CharlotteCountyFL.com/Facilities](http://www.CharlotteCountyFL.com/Facilities).