

Conserving is Saving: Your City's Progress



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Happy Holidays to you residents and businesses of Satellite Beach. In the last edition of the “Energy Enlightenment” series, we discussed my summer-long international journey during which I travelled to two other continents and five countries to witness firsthand their strategies and policies toward energy efficiency and conservation. In addition to the international perspective, the installments of this series have covered various important topics with regard to conserving and saving, including an introduction to sustainable energy usage and conservation, overviews of renewable and alternative energy sources and strategies, as well as comprehensive methods for you to save money by reducing your energy and water usage in your homes and businesses. For your convenience, all past articles are available in their entirety on the City website at <http://satellitebeachfl.org/Beachcaster.aspx>.

With that in mind, it is time to bring the discussion home in order to give you an update on the City's valuable work toward making your municipal buildings more energy efficient and less costly to operate as part of the Department of Energy grant that was described in the introductory article of this series. This grant runs through April of 2012 and work has been steadily underway toward utilizing the funds awarded to make key improvements to your Civic Center and City Hall complex, as well as the pursuit of LEED (Leadership in Energy and Environmental Design) certification for the David R. Schechter Community Center. Thus far, significant preliminary work has been conducted to set the stage for the upgrades and retrofits to take place. To date, all City buildings have received thorough inspections and energy audits from the Florida Solar Energy Center (FSEC). Based on these reports, the bases for the improvement plans have been developed. As such, the Civic Center is the primary target for improvements, followed by the City Hall and the

David R. Schechter Community Center.

The Civic Center is the primary candidate for upgrade because of its age, along with the volume and frequency of its usage. Major areas identified for improvement are Lighting, and Heating, Ventilation and Air Conditioning (HVAC). Lighting systems and fixtures were inspected and illumination levels evaluated against code standards. The results showed that the current lighting fixtures are antiquated, inefficient and provide more light than is necessary for the various activities taking place in the building. Therefore, planned improvements include strategic installation of modern, energy efficient and eye-friendly lighting systems. This will improve occupant comfort and reduce energy usage. The second major area identified for improvement is the HVAC system. Due to the higher than standard insulation characteristics of the building, significant savings can be realized by downsizing the capacity of the HVAC system, while improving its performance and ventilation capacity with new energy efficient air handling units equipped with digital controls with programming capability. These will improve operational scheduling of the HVAC system and optimize performance while lowering usage during unoccupied hours. Various other cosmetic improvements are planned, such as repairs to the building envelope and repainting of certain areas. These upgrade plans are currently out for bid and upon receipt of proposals will be evaluated and awarded to the best contractor.

Depending on the outcome of this bid process, if additional funds are available, targeted upgrades could be applied to the neighboring City Hall building. These similar, but less profound retrofits would include smaller-scale Lighting and HVAC upgrades as well.

The David R. Schechter Community Center is also in the process of

being refined for greater energy and water efficiency. In addition to the FSEC inspection and audit, this building has also received an in-depth analysis of its chilled water HVAC system. As a result, new sensors were installed on the chiller system; after a test period, the performance will be reevaluated based on the calibrated sensors. Once this reevaluation is completed, the chiller system's operational settings and schedules will be optimized. Certain small-scale improvements have already been made, such as replacement of 2.0 gallon per minute faucet heads with 0.5 gallon per minute flow aerators on restroom sinks. Improvements being implemented include low-to-no cost short-term upgrades, such as installation of occupancy sensors to restrooms and other intermittently occupied spaces, as well as long-term capital improvement plans to replace the inefficient parking lot lights with Satellite Beach-made LED units from Lighting Science Group, and the eventual replacement of the gym lights with more efficient fluorescent or LED units. Additionally, the LEED certification process for this facility is ongoing, with plans and policies to optimize all operational aspects of the facility currently being edited; these will result in lower costs of operation and improved facility sustainability.

On a side note, the non-related planned installation of solar panel arrays to various city buildings has been halted. With the demise of several domestic solar manufacturers, the lease program that was offered to the City is no longer available. This development has affected similar plans from multiple surrounding cities. However, as evidenced by the other aforementioned improvements, Satellite Beach remains committed to minimizing facility operational costs, while maximizing occupant comfort and environmental sustainability.