GSH Creates a $475,000 Fund for Energy Projects at Meritage Properties

Project Scope
GSH Group has provided energy management services to Metroplex I and II, a 293,000 square foot property, since 2008. One key feature of this relationship was the creation of a $494,400 fund for project work over a four-year period. This fund financed several energy upgrade projects, which GSH implemented. Through upgrades and conservation efforts, Metroplex I earned the ENERGY STAR, demonstrating superior energy performance.

Project Summary
Energy upgrade projects implemented by GSH in both Metroplex I and II included: upgrading from T12 to high-efficiency T8 bulbs, installing occupancy sensors in offices, re-commissioning building management system (BMS) to reset schedules and optimum set points, and installing a solar water heating system to supplement the electric domestic hot water systems. In addition, in Metroplex I, variable frequency drives were installed on supply and return fans for the fresh air system to be controlled by CO2 sensors and outside air temperature. Also, GSH replaced an existing non-functioning heat recovery wheel to bring this system back to intended performance.

- **Energy Savings**
  17% of energy savings was achieved through the energy conserving measures implemented. This equates to an annual savings of 722 offset tons of CO2 and $185,275 in utility cost savings.

- **Investment**
  A total of $494,400 was invested into the property: Metroplex I received a $228,500 investment for upgrades to the BMS and lighting, installation of a solar domestic water heater (30% of its cost was offset through a rebate), and heat wheel replacement. A total of $265,900 was invested into Metroplex II for upgrades to the BMS and lighting, installation of solar domestic water heater, and repairs to the outdoor air dampers. Additionally, $75,000 per year is invested for ongoing energy monitoring and maintenance.

- **Financial Return**
  The simple payback on the $494,000 investment plus annual monitoring and maintenance is just over three and a half years.

- **Other Benefits**
  Metroplex I earned the ENERGY STAR certification in 2010.

Monitoring & Verifying Energy Savings
Ongoing energy savings are tracked per Method C of the IPMVP, whole building comparison, since there is an interactive relationship between the measures implemented. Energy consumption and performance for Metroplex I and II are also tracked in EPA’s ENERGY STAR Portfolio Manager.

Distinguishing Value
GSH’s energy management program invested $475,000 to enhance efficiency in two Meritage Properties’ facilities, and as a result, Metroplex I received the ENERGY STAR certification.