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from Ian's desk



Effective January 1, 2012, Taitem Engineering has become a partnership, and I am delighted to introduce our partners (see right). Each has outstanding leadership qualities, each has a stellar reputation for technical work, and each has taken initiative to develop new services for us to offer.

We have so much exciting news to report including the award of **LEED Platinum for the Maguire Automotive Dealership**, which we understand is one of the first dealerships in the country to receive this level of certification from the US Green Building Council. If you are in Ithaca, drive south on route 13 and look for the big solar array on the roof, it will be on your right. The building also has rainwater recycling and much, much more.

And have I mentioned our Thursday, noon basketball games? Talk about reaching whole new levels! You got game? Bring your team down to Henry St. John. I play the 1 or the 2, and Dom and Evan are on my team. Bring it!

-Ian Shapiro, *President*

news update

- Taitem Engineering was awarded a **GSA Schedule Contract**. This contract allows Taitem to perform energy-related work for all departments of the executive branch of the federal government.
- In 2006, the City of Ithaca made a commitment that by 2016, they would **reduce greenhouse gas (GHG) emissions by 20%** below 2001 emission levels. Taitem Engineering is helping the City assess its progress toward this goal and creating clear records of data sources to facilitate future progress reports.
- The Energy Audit Services Department is providing **comprehensive energy audits at NO COST** through NYSEERDA's Benchmarking Program, Energy Audit Program, or Farm Audit Program. If you are a business, church, non-profit, or farm owner, please call or email Umit at 607-277-1118 ext. 128; usirt@taitem.com



staff highlights

Congratulations to the new partners!



Dan Cogan, PE, is the leader of Taitem's work as the statewide quality assurance consultant for NYSEERDA's multifamily performance programs. Dan has expertise in energy audits in multifamily buildings and has conducted ventilation research in multifamily buildings. Dan also leads our Aero-seal duct-sealing division.

Javier E. Rosa, PE, has been doing structural engineering design since 1993. His structural work at Taitem has included work on both low-rise and multistory industrial, commercial, and residential projects. Javier is our leading specialist in geothermal system design.



Umit Sirt, PE, HBDP, CEM, has gained a reputation for quality energy auditing, energy modeling, and design consulting. He is a provisional assessor in ASHRAE'S Building Energy Quotient Pilot and among the first High-performance Building Design Professionals in New York.

Lou Vogel, PE, LEED AP, is Vice President of Taitem and works on design, commissioning, and energy modeling of LEED and other high-performance buildings. He has served on ASHRAE standards and handbook committees and participated in the design of the Energy Star Pilot for multifamily buildings.



featured projects



Kitchen Theatre | Ithaca, NY

Taitem Engineering generated hourly simulation energy models of this 7,500 SF theatre. The building was renovated with improved building shell insulation, high efficiency lighting, variable refrigerant volume systems, air-side economizer, and demand-controlled ventilation.



Red Jacket Orchards | Geneva, NY

Red Jacket Orchards' new fruit processing facility in Geneva, NY was awarded LEED certification. The process was led by Senior Engineer Crista Shopis. Senior Energy Analyst Rob Rosen completed the eQuest model. Project Engineer Nate Goodell and Vice-President Lou Vogel, PE completed the commissioning.



City of Ithaca | Ithaca, NY

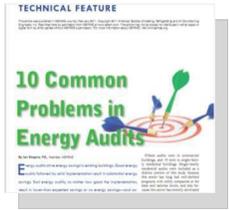
Two solar thermal installations for the City of Ithaca are up and running this month at Cass Park and at Streets and Facilities. The systems are designed to supplement domestic hot water usage and are expected to produce over 95 MMBtu annually. Taitem provided full design services including construction management for the completion of the two systems.

awards and recognition

signs of sustainability

Sustainable Tompkins, the non-profit organization dedicated to advancing regional sustainability, acknowledged Taitem's work as one of this year's "Signs of Sustainability." Taitem received recognition for —

- President Ian Shapiro's, article, "10 Common Problems in Energy Audits," published in the *Journal of the American Society of Heating, Refrigerating and Air-Conditioning Engineers*;
- Installation of a 9.2 kW solar photovoltaic system at our Ithaca location;
- Our first overseas project, energy modeling for **Var-yap Meridian in Istanbul, Turkey**, a 4.2 million square foot residential/commercial development



Taitem also played an integral role in several other projects that received Sign of Sustainability recognition, including energy audits for the Town of Caroline highway department and Maguire Automotive.



deep energy retrofits

Taitem was awarded funding by NYSERDA to begin work on the "Deep Energy Retrofit Strategy" project. In collaboration with Snug Planet and Dow Building Solutions, the team will aim to improve and optimize a deep energy retrofit (DER) strategy using a single 2.5-inch layer of Thermax polyisocyanurate rigid foam wall insulation. The goal of the project is to significantly reduce labor costs associated with DER by optimizing various labor-intensive processes. TV station WBNG and other regional news sources covered the project.

partnerships

- Taitem Engineering has been accepted as a **RetroCommissioning Trade Ally** in good standing for the Pepco Maryland Service Territory.
- Taitem is a partner in the **Pay for Performance program** for both new construction and existing buildings in support of NJ's Clean Energy Program. We are pleased to be teaming up with Jay Shapiro & Associates and SClenergy as part of this comprehensive energy-efficiency program.
- Taitem was accepted as a Market Partner for the **Con Edison Commercial and Industrial Energy Efficiency Program**.



Taitem's Senior Engineer and Training Department Manager, Beth Mielbrecht, pops open the champagne after passing the Fundamentals of Engineering exam. She took the Professional Engineer licensing exam this spring.

Congratulations Beth!

new services update

Synairco has kicked off 2012 with a bang securing a **\$50,000 Commercialization Assistance Program award from the Syracuse Center of Excellence** and a nearly **\$100,000 Business Development grant from NYSERDA**. With the help of this grant money and the technical expertise of Air Innovations, Synairco is busy designing the second generation split air stream desiccant unit and **seeking four interested building owners to install it**.



Taitem's duct sealing division, **Aeroseal of Ithaca**, completed a multifamily project in March. A four-man crew drove the **newly decaled Aeroseal of Ithaca van** to Punxsutawney, PA to seal the ventilation ductwork at Mahoning Towers, a 9-story, 100-unit

senior housing building. Over four days, the **Taitem crew, along with an Aeroseal technician, sealed 19 exhaust risers and one supply riser**. Everything went smoothly, and the crew is looking forward to several more jobs ahead.



Taitem's solar photovoltaic (PV) division is off the ground and building momentum with **six projects slated for this spring and early summer**. As Taitem builds its reputation in this new area we will be working towards leveraging our design and construction management background to help us secure commercial-scale PV projects. We will also remain engaged in the local residential market to serve the community's desire for solar energy.

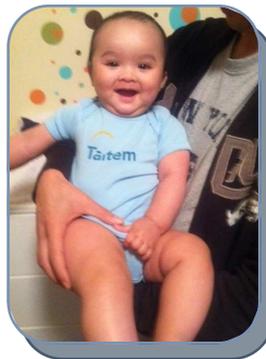


our community news

After an extended review of options to improve Taitem's business management systems, the Administrative Department adopted a software program called **Ajera to combine project planning, payroll, finance and reporting into a single integrated package**. The company-wide transition to a host of new procedures was challenging but reasonably smooth, thanks to a real team effort. The new tools will help raise

Taitem's standards of precision and efficiency in managing diverse projects.

In other admin news, the company logo is featured on our snazzy new T-shirts, polos, and onesies, modeled above by aspiring engineer Henry Goldsmith and, to the left, by our team at the Cancer Resource Center's annual 5k.



office locations

110 South Albany Street
Ithaca, NY 14850
(607) 277-1118

71 Perrine Street, Auburn, NY 13021
365 Town Line Road, Hermon, NY 13652
5625 Route 812, Ogdensburg, NY 13669
480 North Street, Williamstown, MA 01267

team taitem

Tim Allen
Senior Energy Analyst

Yossi Bronsnick, LEED AP
Senior Engineer, Structural
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Mahbud Burton
Energy Analyst

Dan Cogan, PE
Senior Engineer

Dominick DeLucia
Engineering Associate

Susan Galbraith
Senior Energy Analyst

Arthur Godin
Business Manager

Nick Goldsmith
Energy Manager

Nate Goodell
Project Engineer

Evan Hallas
Energy Analyst

Jim Holahan
Energy Analyst

Joy Joseph
Maintenance

Betsy Jenkins
Senior Energy Engineer

Bill King
Project Engineer

Nick Kirk
Project Engineer

Beth Mielbrecht
Senior Engineer
Training Department Manager

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Senior Energy Engineer
Energy Audit Services Department Manager

Lou Vogel, PE, LEED AP
Vice President
Green Building Services
Manager

Jordie Van Ham
IT Support Specialist

Myron Walter
Senior Engineer, Electrical

featured tech tips

lighting occupancy controls

Very significant energy savings are achieved by converting 24-hour lighting to occupancy-controlled lighting. A critical setting is the off-delay, which is the time that the light stays on after occupancy is no longer detected. **For most building spaces, there is a potentially large additional energy savings to be gained by reducing the lighting off-delay and selecting the lowest possible standby lighting level during unoccupied periods.**

In this tech tip, three high-rise senior residence buildings were monitored for occupancy patterns in corridors and stairways. Energy savings were modeled using the monitored occupancy patterns and various sensor off-delay times. **In the case of corridors, for example, savings can be tripled by using off-delays shorter than 30 minutes.** For occupancy controls that do not allow such short off-delays, significant savings are achieved by selecting the shortest allowable off-delay setting.

Figure 1:
Motion Sensor
and Data Logger
Unit



Figure 2:
Data Logger
and Sensor
Battery Setup

For more information on this Tech Tip, email **Evan Hallas** ehallas@titem.com.

windows: weatherization and replacement

The U.S. Department of Energy estimates that **10% to 25% of a typical residential heating bill results from energy loss through the windows.** Installing replacement windows or weatherizing existing windows can significantly reduce this loss, reduce air-conditioning loads, mitigate wind and water damage to the building envelope, and improve occupant comfort. **Choosing between replacement and rehabilitation requires careful assessment to maximize energy savings and cost effectiveness.**

This tech tip presents tools for assessing existing windows, options and code requirements for selecting replacement windows, and weatherization **techniques for improving the energy performance of existing windows.**

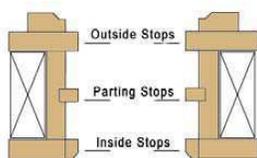
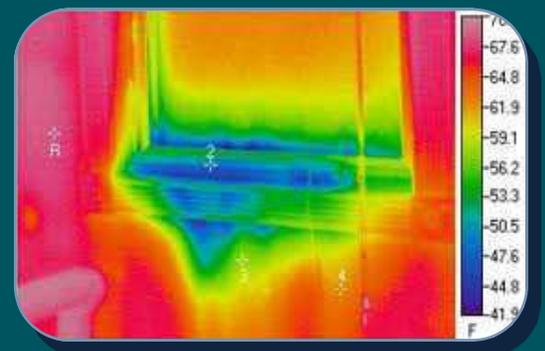


Figure 1
Top View Cross Section of
Left and Right Jambs



Thermograph of window

For more information on this Tech Tip, email **Beth Mielbrecht** bmiebrecht@titem.com.

Click here to view more great research projects by Titem staff.