

GREEN BUSINESS QUARTERLY

WINTER 2009

EMACX SYSTEMS, INC.

ECO-WORX INC.

OTHER WORLD COMPUTING

D.M. FIGLEY COMPANY

DIMENSIONS PLASTER

BARR INTERNATIONAL

CASTALIA HOMES, LLC

THE SAMUELS GROUP

S.M. WILSON & CO.

QUACKENBUSH BUILDING
COMPANY

SRD BUILDING CORPORATION

FAMILY-OWNED CUSTOM BUILDER FINISHES ITS FIRST
LEED-CERTIFIED LUXURY HOME IN BOCA RATON

EMACX SYSTEMS, INC.



NEW JERSEY COMPANY SUBSTANTIALLY REDUCES ENERGY CONSUMPTION THROUGH INTELLIGENT PEAK LOAD CONTROL

by Daniel Casciato

*Above: A demand controlled
chilled water pump.*

UNNECESSARY ENERGY DEMANDS ARE usually responsible for a large portion of a company's utility bill. Accordingly, companies need the ability to process energy information from multiple sources, and utilize such information to realize the most efficient use of that energy. For several reasons, including the deregulation of the energy market, and the considerable increase in the demand for energy throughout Europe over the last decade, European companies have been much more proactive with regard to energy data, communication of that data, and thus energy

conservation. "European and Asian companies have become major players in today's global market," explains Theo Breitenstein, founder and owner of Emacx Systems, Inc. "They are much more sensitive to energy preservation as a means of being competitive, versus looking at reorganizing, reengineering, or downsizing to increase productivity." Accordingly, peak-load control systems have been in use throughout Europe for some time. Breitenstein, an electrical engineer with over 20 years of experience in several high-tech firms, mainly in the power and energy industry, first

“European and Asian companies have become major players in today’s global market. They are much more sensitive to energy preservation as a means of being competitive.” *Theo Breitenstein, Founder and Owner*

witnessed the effectiveness of this energy-conservation technology overseas.

Understanding the need to better control, energy instead of simply monitoring it, especially in the areas of demand usage, Breitenstein introduced such state-of-the-art technology to the US through Emacx Systems. Offering the necessary hardware and software to deal with the flood of data, an intelligent peak load control system gives companies the ability to measure the energy they use, and achieve optimization, or peak load control, so they can control their energy usage more efficiently, resulting in a substantial cost savings.

As energy continues to become more expensive, and as it becomes more difficult to expand power plants due to

space or size constraints, or the type of fuels used, controlling energy demand in large facilities has become a challenge.

“Controlling demand without risking or causing any discomfort to the guest, patient, customer, and so forth, is even more challenging,” explains Alex Bickel, business development manager at Emacx Systems.

In the past, the only active energy-saving measure was to turn something off. Utility companies, during an energy emergency, very often due to weather, would ask facilities to reduce their electricity consumption to prevent blackouts. Moreover, generally power companies will charge their customers a demand fee, which can be up to 30 percent of the facility’s overall energy bill. According to Breitenstein, to avoid

**EMACX SYSTEMS, INC.
AT A GLANCE**

LOCATION: Montclair, NJ

AREA OF SPECIALTY:
Energy management and information-systems solutions

FULL-TIME EMPLOYEES: 5

EMPLOYEE GROWTH IN 2007: 2

Below, left: Understanding the growing need to better control and not just monitor. Right: Emacx automated load controller.



“Controlling demand, without jeopardizing or causing any discomfort to the guest, patient, customer, and so forth, is even more challenging.” *Alex Bickel, Business Development Manager*

THE FOLLOWING TYPES OF EQUIPMENT CAN BE CONTROLLED USING SUCH A SYSTEM:

- Air Handlers
- Chillers
- Washers and Dryers
- Compressors
- Battery Chargers
- Electrical Industrial Equipment
- Electrical Heating Systems
- Ice Makers
- Motors
- Ventilators
- Non-Critical Process Equipment
- HVAC Systems

such demand peaks, and the associated expense, “demand control is the art of intelligent peak load control.” Once the electrical demand approaches a peak level, the system is instructed to initiate a pre-programmed electrical load-shedding strategy.

To monitor the real-time effects of load-shedding strategies on a facility’s overall demand, such intelligent peak load control systems are linked directly to the utility meter at the facility. This linkage allows facility operators not only to see the immediate effects of load-shedding strategies, but also allows them to program the facility’s usage to a specific

demand level. This process effectively conserves power essentially without anyone noticing.

“In today’s competitive marketplace, there is no reason not to engage in effective energy and demand-savings measures, as well as take advantage of highly attractive incentive programs offered by utilities and government institutions,” concludes Breitenstein. “Not only will it directly add to your bottom line, but it will address one of the root problems of utility grid overload. It is like a permanent demand reduction, without jeopardizing operations.” ⁽²⁰⁾

THE POWER

of energy IT & optimization



- *Intelligent Demand Response and Demand Control Technology*
- *Carbon Footprint Reduction Tracking through Green Software*
- *Energy Savings are Cost Avoidance Going Directly to Your Bottom Line*
- *Proven Track Record to Ensure Savings*

Some of our customers include: National Retail and Hotel Chains | Shopping Mall Property Owners | Large NY Hospitals and many more...

SYSTEMS
emacx

Emacx Systems, Inc. is an Energy Technology Company that provides sophisticated, turn-key, Energy Management and Information Systems Solutions. We assist companies in reducing energy costs without interruption of operation or production. Our advanced technology has helped customers in all kinds of industries all over the world to save hundreds of thousands of dollars in energy costs, demand charges and allow them to participate in lucrative demand response programs. We have a proven track record of ensuring economical aspects in the regulated and deregulated market place.

