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REAL ESTATE SOLUTIONS™

March 7, 2005

Mr. Richard G. Lubinski  
CEM, CDSM, CEMSC, BEP  
President  
Think Energy Management LLC  
2925 Circle Drive  
Silver Lake, OH 44224-3045

RE: Energy Management Services

Dear Rick,

**BUILDING AUTOMATION SYSTEM: 76 & 50 SOUTH MAIN BUILDINGS**

As you are aware, McKinley has had considerable exposure to Energy Management in large facilities. As a result of that experience, we have learned that putting 'blind faith' in a major manufacturer of building automation controls to provide a building automation systems (BAS) that meets the real needs can be a journey full of pitfalls. Unfortunately, most "major" manufacturers of building automation controls appear to be interested in:

- Installing as much of their equipment in your building(s) as possible,
- "Locking-in" a client to an extended relationship including an expensive preventative maintenance contract.
- Writing a general BAS/EMS program that is aimed more towards avoiding "call backs" for changes than the achievement of energy saving,

Recognizing the above pitfalls, it was imperative to McKinley that we involve an independent consultant with the expertise to not only identify the best energy savings opportunities but to also design project and create the BAS/EMS control strategies that maintains the building comfort and realizes substantial utility cost savings. It was with the above qualifications in mind that we chose Think Energy Management LLC (TEM) as our energy consultant.

TEM began our project with an *investment grade energy audit* that addressed not only the possible need expanded BAS/EMS controls but other energy conservation measures (ECMs) such as lighting modifications and utility rate analysis. This energy audit resulted in a proposal for major revisions and expansion of our existing BAS/EMS. The savings projected from implementation of this project were conservatively estimated at \$73,335.00/ year.

TEM then entered into its role as project designer and project manager. The installation was awarded to a local electrical contractor and the material portion was awarded to Johnson

Controls, Inc. (the manufacturer of our existing BAS/EMS). TEM professionally fulfilled this portion of the project, supervising all labor and the material ordering, deliveries to complete the installation on time and on budget. TEM then worked with McKinley personnel to develop a BAS/EMS program that would ensure the building's comfort and energy savings requirements. TEM supervised the Direct Digital Control (DDC) BAS programming to ensure its control strategies were fully implemented.

TEM provided detailed monthly M & V (Measurement & Verification) reports showing (a) Gross Utility Savings and (b) Net Utility Savings (adjusted for heating/cooling degree days). These monthly reports were easy to follow, without any "hidden" calculations or adjustments. After twelve (12) months of the BAS/EMS being "on-line", the results were in. The original projected savings estimate of \$73,335 was indeed conservative. Our actual first annual Net Savings totaled \$122,279 (167% of the projected savings, or \$48,944 over the projected savings).

As you can imagine, McKinley was extremely pleased with these results. In fact, we were so please with TEM's handling of this project that seven year's later when Johnson Controls informed McKinley that we needed to upgrade our Metasys' program, we turned to TEM again for their professional advice. The system was updated in 2004 with TEM's approval.

#### **LIGHTING: ORANGERIE MALL**

During 2004, we also contacted TEM to review the existing HID lighting within the Orangerie Mall. The existing HID lighting does not provide enough lighting in the Mall on overcast days and the cost of replacement lamps is ever increasing as production of these lamps decreased. TEM was asked to make a recommendation as to whether we should retrofit the existing fixtures or replace the lighting during a proposed mall renovation project. TEM researched our existing lighting and provided us with several alternative solutions that provided *increased light output with reduced energy costs*--the goal of every good management company!

#### **UTILITY METERING AND SUB-METERING: 222 SOUTH MAIN BUILDING**

We also called on TEM's expertise when we were having sub-metering problems in an office condominium building with district heating and cooling. The sub-metering system measured hot water and chiller water flow plus temperature 'delta-T'. The contractor that installed eighteen (18) sub-meters throughout the building was not able to provide the +/- 3% accuracy in the meter readings as promised. After trying numerous solutions over a two-year period, *TEM was hired to find a permanent, reliable solution*. TEM reviewed the problem and found a local contractor who was qualified to thoroughly evaluate, make recommendations and implement metering solutions.

#### **HOT WATER HEATING SYSTEM: 222 SOUTH MAIN STREET BUILDING**

Another HVAC problem this building experienced was a "dead head" issue on the hot water heating system. The building has two (2) constant speed Taco pumps that circulate the hot and chilled water throughout the building. Heating bills during the summer months were high when no hot water should have been flowing through the fan units (heating valves

were turned off.) It was discovered that 3-way valves were installed that allowed the water to circulate throughout the building and flow through the meters even though the fan unit did not use hot water. If the 3-way valves were shut off to prohibit this flow, a "dead head" pressure issue would result. Since the building's hot water was heated with the district hot water, a temperature differential in the supply and return was present which *overstated the building's hot water usage and bill in the non-heating months*. One contractor recommended installing a re-circulating loop for approximately \$10,000. A second contractor recommended installing two (2) new variable frequency drives (VFD's) with two new pumps at a cost of \$17,475. TEM evaluated both proposals and recommended that we install one (1) variable speed drive since the Taco pumps alternate and do not run at the same time. The existing pump motors were capable of operating with the new VFD and did not need to be replaced. This issue was resolved for a total project cost of \$6,965. The new VFD also afforded the building an opportunity to reduce energy costs with an estimated payback of 2.7 years.

#### **LANDLORD / TENANT METER & BILLING: 222 SOUTH MAIN STREET BUILDING**

McKinley has also asked TEM to review tenant after-hours HVAC billing calculations for accuracy and to provide us with a calculation to bill tenants for domestic hot water heating using district hot water.

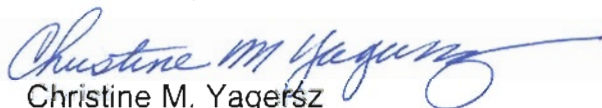
#### **ELECTRICITY METERING: 222 SOUTH MAIN STREET BUILDING**

Finally, McKinley is working on an electric metering problem that both the electric utility company and the metering company say 'is not their problem'. If we don't find a satisfactory resolution to the electric usage discrepancy between these two companies, McKinley will not hesitate to once again turn to Think Energy Management to resolve the problem in a fast, professional manner.

*Think Energy Management is a one-stop resource for all of McKinley's building automation systems, utility metering, utility tariff, metering, lighting and energy conservation needs. McKinley manages over 850,000 sq. ft. of Class A office space in downtown Akron. I would not hesitate to recommend Think Energy Management for all of your energy management needs.*

Sincerely,

MCKINLEY, INC.



Christine M. Yagersz  
Assistant Vice President and  
Regional Property Manager

CMY/rh