

INFORMATION ITEM

April 25, 2011

To: Board of Education Members

From: Ellen E. Mauer, PhD

Subject: Energy Audit

History

A possible energy audit had been previously discussed. Fanning Howey felt that there would be a larger cost savings if they used Central as the building for the audit. Lisa and Bob R. met to discuss the proposal and requested some additional options. The proposal is attached and shows one of the options. Other options, should you wish to move forward, are as follows:

1-Option as listed in the original proposal is to do the audit and not pay the \$10,000 fee unless any of the findings are used to do a project.

2-Pay \$5000 up front and \$5000 after/if any of the recommendations lead to a project. There would be a 4 year time constraint on this option.

The original proposal is attached.

Additionally, for either of the options, should we move forward with a facilities master planning audit, there would be a discount due to the work already performed in gathering energy information at Central. I have worked with Fanning Howey on two projects and they have good references.

Shawn gave information regarding a SEDAC on March 8, but needed more time to come forward with a presentation. SEDAC requires \$10,000 and focuses on electricity only at the time we had the information. It was determined to table the audit until the next meeting on March 21. At that time, Shawn was going to get recommendations from schools using SEDAC for our next meeting and give some additional information for April. At the April meeting, he was absent and I do not have any information regarding SEDAC.

At this time, I would recommend that the BOE discuss whether or not they want to move forward with an energy audit. This was originally a BOE member initiative.



February 3, 2011

Dr. Ellen Mauer
Milburn District 24
18550 Millburn Road
Wadsworth, IL 60083

Re: Proposal for Professional Services
Milburn District 24
Wadsworth, IL

Dear Dr. Mauer:

Thank you for making time in your busy schedule to meet with Charli Johnsos and Ian Hadden recently to discuss the process of analyzing the energy use of your facilities. During these trying economic times, some of our clients are also looking for physical modifications to the facility to achieve additional utility cost savings; therefore, the quality data and analysis of an Energy Audit are required to determine which facility improvements provide the most value to the school district and its patrons.

Fanning/Howey Associates, Inc. would be pleased to provide Energy Audit Services as follows:

1. Using data provided by the school district, Fanning Howey assesses year-to-year cost and consumption of energy. The average consumption is compared to a national consumption database using the EPA Target Finder or Portfolio Manager program. The goal is to compare the energy consumption of the facility to the consumption as reported by the national database. In that way, the facility is "benchmarked" against both national and FHAI datasets as to its energy consumption, providing an initial assessment of energy cost savings potential for the facility.
 - a. Milburn District 24 will provide:
 - .1 Building square footage, quantity of computers, and food service information such as where cooking is done and the number of coolers/freezers
 - .2 Utility bills and/or tracking reports of utility costs for the previous 3 years
 - .3 Utility account managers and authorization to access site rate structure
 - b. Utility analysis provides:
 - .1 Monthly energy use and cost
 - .2 Average annual utility consumption and cost for use in the energy model
 - .3 Annual energy use intensity (EUI)
 - .4 Rationalization of energy cost and use into energy use intensity in kBtus per square foot
 - .5 Indication of excess utility consumption
 - c. Search for potential incentives or rebates for implementing energy efficiency projects.
 - .1 IL Department of Commerce and Economic Opportunity
2. Conduct an on-site assessment of existing conditions with staff and collect data:
 - a. Visually observe and discuss the maintenance history of existing equipment and the building envelope.
 - b. Determine a building occupancy profile.
 - c. Determine building operating procedures and system characteristics.

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- d. Review building Construction Documents.
 - e. Review Facility Master Plan for site or predicted student population trends.
3. Analyze the assessment and utility information history and develop a computer-generated energy model for the school facility:
- a. Assemble data and information from on-site inspections and utility analysis.
 - b. Develop baseline energy models:
 - .1 Utilize historic utility analysis and building data to create an energy model
 - .2 Achieve energy model consumption within 10% of actual utility history by fuel and total consumption
 - c. Apply Energy Conservation Measures (ECMs):
 - .1 Apply energy conservation measures to the baseline energy model to determine potential impact
4. Develop a written Energy Audit Report providing information on the current physical and operational conditions, comparison to original design intent, equipment inventory, proposed ECMs and prioritized recommendations on the implementation of the ECMs:
- a. Transfer energy model data into report format to show modeled results from implementing energy conservation measures:
 - .1 Reduction in electric kW demand
 - .2 Reduction in electric kWh consumption
 - .3 Reduction in therms of natural gas consumption
 - .4 Reduction in EUI
 - .5 Reduction in total electric cost
 - .6 Reduction in gas cost
 - .7 Reduction in total utility cost
 - b. Combine modeled energy savings with implementation cost information to show financial results achieved from implementing energy conservation measures:
 - .1 Annual savings
 - .2 Initial investment
 - .3 Simple payback
 - .4 Return on investment
 - c. Finalize applicable incentive/rebate programs.

The energy audit process takes 4 to 6 weeks to complete once a schedule opening is created. Items 1 and 2 are typically accomplished by the end of week 2 with items 3 and 4 completed over the remaining time. Deliverable material for the project will be the Energy Audit Report in hard and electronic .pdf format and an in-person review of the report with Milburn District 24.

With this information in hand, Milburn District 24 can make an informed decision about incorporating specific ECMs that have a reasonable payback and discard those that have less than a favorable return on investment.

Dr. Ellen Mauer
Milburn District 24
Proposal for Professional Services
February 3, 2011
page 3

Fanning/Howey Associates, Inc. proposes to provide the above noted services for the fixed, lump sum fee shown below:

Energy Audit Services – Milburn Central: \$10,000.00

We will invoice one time for our services 60 days after implementation of at least one ECM recommended in the audit report. We do not anticipate any reimbursable costs for the Energy Audit Services.

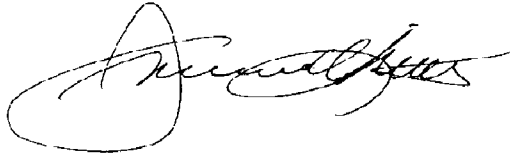
If the provisions of this proposal are agreeable, please sign both originals and return one original to our office. This document will serve as the agreement between the Milburn District 24 and the firm of Fanning/Howey Associates, Inc. for providing the services outlined herein.

Should you be interested in pursuing development of other potential ECMs, we would be pleased to provide an additional proposal for the implementation of those recommended measures.

Please contact Ian Hadden or Charli Johnsos if you have any questions regarding our Proposal or our services. We look forward to the opportunity to work with you.

Sincerely,

FANNING HOWEY



Terrance R. Liette, PE, LEED AP BD+C
Executive Director of Engineering / Principal

trl/jks

Accepted by: _____
Milburn District 24

Date: _____