

GLENBROOK HIGH SCHOOLS
District Business Office

TO: Dr. Riggle
Hillarie Siena

FROM: Kimberly L. Ptak

DATE: March 11, 2013

RE: Retro-commissioning Update

During the spring 2012, the district received a grant for retro-commissioning services at GBN and GBS. The value of the grant was \$50,000 per school.

Retro-commissioning seeks to identify and correct building energy systems that become misadjusted over time or have failed in ways and are not immediately detectable. Under the program, each building has committed to invest at least \$10,000 in measures that have been identified to have a payback of less than 18 months. This commitment has been met.

GBN – At Glenbrook North, the following measures have been identified and all have either been completed or are in process and will be completed within the next two months. Total cost to implement the measures is \$31,300. Energy savings is estimated to be \$69,515 with an estimated payback of 5 months.

RCx Measure	Energy Savings (%)	Cost Savings (\$)	Measure Cost (\$)	Simple Payback Period (months)
1 - Pool Unit Hot Water Valve Replacement	4.7%	\$21,279	\$5,000	3
2 - Pool Unit Hot Gas Bypass Valve Repair	0.4%	\$8,426	\$12,000	17
3 - Pool Air and Water Temperature Set-points- Reset to 84 air and 82 water	1.1%	\$6,925	\$0	0
4 - CO2 Sensor Replacement	0.3%	\$1,669	\$6,000	19
5 - Humidity Sensor Replacement	0.1%	\$1,203	\$300	3
6 - Winter Supply Air Temperature Reset	3.7%	\$16,280	\$500	0.4
7 - Pool Units – Keep one Unit on at a Time	0.4%	\$6,717	\$0	0
8 - Pool Pump VFD	0.3%	\$7,016	\$7,500	13
Total	11%	\$69,515	\$31,300	5

GBS - At Glenbrook South, the following measures have been identified and the plant operators are currently working with Siemens on implementation. The total cost is \$10,000 and annual cost savings is estimated to be \$19,098. Payback is estimated to be 6 months.

RCx Measure	Economic Analysis		
	Cost Savings (\$)	Measure Cost (\$)	Simple Payback Period (months)
1 – Implement Trim and Response Sequencing for VAV AHUs	\$10,914	\$4,000	4
2 – Implement Chilled Water Temperature Set Point Reset	\$3,531	\$4,000	13
3 – Implement Condenser Water Temperature Set Point Reset	\$2,863	\$1,000	4
4 – Operate West PE AHU According to Schedule	\$1,790	\$1,000	7
Total	\$19,098	\$10,000	6