

**COUNTY OF MILWAUKEE
INTER-OFFICE COMMUNICATION**

DATE: March 22, 2011

TO: Supervisor Lee Holloway, Chairman, County Board of Supervisors

FROM: Pamela Bryant, Capital Finance Manager, Department of Administrative Services

**SUBJECT: UPDATE ON DUE DILIGENCE REPORT REGARDING PHASE 2
GUARANTEED ENERGY SAVINGS PERFORMANCE CONTRACTING WITH
JOHNSON CONTROLS**

Background

During the April 2010 County Board cycle the Department of Administrative Services (DAS) submitted due diligence reports for the second phase of performance contracting. A separate report was completed for the proposal submitted by Johnson Controls. The County Board requested further analysis on the Johnson Controls proposal relating to the replacement of steam heating systems currently used at various County Grounds facilities with natural gas boilers at each location.

In the October 2010 County Board cycle an updated report was provided by DAS that included information on long term rate agreements, alternatives to steam, maintenance costs associated with the new natural gas system and detailed information on the projected annual savings. The conversion from steam to gas would provide a substantial cost savings by switching to a less expensive energy source. However, since the savings was not based on a decrease in energy usage, and there was no guarantee that steam rates would remain much higher than natural gas rates, DAS recommended that this initiative be looked at as part of the Capital Improvements Program in 2013. DAS submitted a resolution that recommended that the County Board not move forward with converting from steam to gas as part of Phase 2 performance contracting, and substitute other projects in place of it. The County Board did not approve moving forward with the proposed project.

Issue

In order to move forward with completing Phase 2 Johnson Controls has submitted an alternative proposal. They have removed the portion of the project relating to the conversion from steam to gas and provided an updated proforma with the facility improvements that remain. The project would include the following improvements:

Children's Court Center

- Upgrades to air handling units
- Upgrade existing control systems with Facility Performance Indexing System
- Convert to DDC controls
- Install solar thermal domestic hot water heating system
- Lighting upgrades, including adding new electronic ballasts to existing lighting and converting parking lot lights to LED
- Upgrade existing plumbing fixtures with low flush fixtures
- Installing vending misers on vending machines

Fleet Garage & Sheriff Building

- Upgrade building controls to Metasys Extended Architecture
- Provide destratification fans in garage
- Provide variable speed controls on secondary hot water pump

- Install 10kw PhotoVoltaic system for power generation
- Lighting upgrades, including new lighting within the garage and new lighting in the parking lot
- Upgrade existing plumbing fixtures with low flush fixtures
- Installing vending misers on vending machines

Parks Administration Building

- Installing vending misers on vending machines

The projected annual cost of the loan and service agreement for the improvements is listed below, along with the projected annual savings. The projected annual savings in years 2011 – 2015 also includes some operational savings due to all of the equipment being new and under warranty, which would provide a cost savings to the Department’s operating budget.

	Projected Annual Savings	Annual Cost Principal and Interest	Service Agreement	Net Savings
Year 1	\$222,894	\$220,333	\$17,723	(\$15,162)
Year 2	\$229,581	\$220,333	\$18,254	(\$9,006)
Year 3	\$236,468	\$220,333	\$18,801	(\$2,666)
Year 4	\$243,562	\$220,333	\$19,365	\$3,864
Year 5	\$250,869	\$220,333	\$19,946	\$10,590
Year 6	\$246,522	\$220,333		\$26,189
Year 7	\$253,918	\$220,333		\$33,585
Year 8	\$261,535	\$220,333		\$41,202
Year 9	\$269,381	\$220,333		\$49,048
Year 10	\$277,463	\$220,333		\$57,130
TOTAL	\$2,492,193	\$2,203,330	\$94,089	\$194,774

In the first three years the projected savings do not cover the cost of the loan and service agreement costs. In previous performance contracts the projected annual savings offset the costs associated with implementing the improvements. In 2010 the County Board approved a master lease with Bank of America to finance the full cost of the improvements in Phase 2 of performance contracting with the proposals from Johnson Controls, Ameresco and Honeywell for a total of \$7.5 million. The County will begin paying debt service costs on that loan in 2011. Since the Johnson Controls portion of performance contracting has not been implemented the County may not see adequate savings to cover the cost of the debt service payment in 2011. This may leave the Department of Transportation and Public Works with a year-end deficit. If the County is able to implement the revised proposal we will begin to see savings in 2011. The estimated debt payment in 2011 for the \$3.8 million directly related to the Johnson Controls proposal is \$497,330. The total debt service payment for phase 2 of performance contracting is \$930,564.

If the revised proposal is approved Johnson Controls would move forward with implementation in 2011. Given that the lighting upgrades have a quick installation time frame, the County would begin to see some energy savings in 2011. The first full year of savings would be realized in 2012. The original proposal from Johnson Controls included a total of \$3,812,769 in improvements. The revised proposal includes \$1,809,550 in improvements. The Department of Transportation and Public Works will be requesting approval for Johnson Controls to complete a technical energy audit on other County facilities to make up the remaining \$2.0 million.

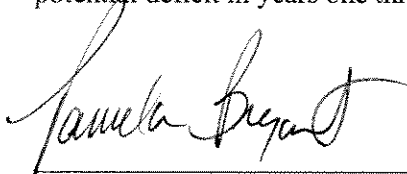
The net savings over a ten-year period are anticipated to reach \$194,774. It is important to note that the savings is based on the current rates with a projected annual increase. If rates decrease or increase higher than anticipated, then savings may be lower or higher than projected. The proforma was based on current

energy rates with an estimated 3% increase each year. The Department of Energy Administration predicts a 6.4% increase in natural gas rates and a 0.5% increase in electric rates from 2011 to 2012. Since 2001 the average increase in electric prices is 3.5% and natural gas is 4.9%. Based on the current projections and historical trends a 3% increase is likely to occur.

Conclusion

Based upon the review by the Department of Transportation and Public Works A&E Division on the analysis of the improvements and due diligence review of projected utility rates in future years it is likely that the overall savings will be achieved for the Johnson Control proposals. The actual return on the investment will depend on future utility rates. As was discussed earlier if utility rates increase higher than projected, then the County will receive additional dollar savings, but if the utility rates decrease the County will see lower savings than projected.

Based on the due diligence review it appears that the projected savings could be realized and provide adequate savings to pay for the cost of the improvements beyond year three. The County also anticipates receiving Focus on Energy grants upon completion of the improvements, which should exceed the potential deficit in years one through three.



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