Wicomico County, Maryland

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Internal Auditor's Report

The County Council and County Executive of Wicomico County, Maryland:

Background

This report supersedes the report dated March 2, 2015. Many of you are aware that the County engaged Energy Systems Group (ESG) in a contractual arrangement to upgrade various components of County infrastructure involving a large number of facilities. An important component of the arrangement was a bond-secured provision stating that guaranteed savings would pay for the upgrades over a specified period. The Office of the Internal Auditor (IA) developed a continuous audit plan to assess contract compliance by ESG. IA audited the construction phase of the project (report dated March 25, 2013) in which we rendered a satisfactory conclusion.

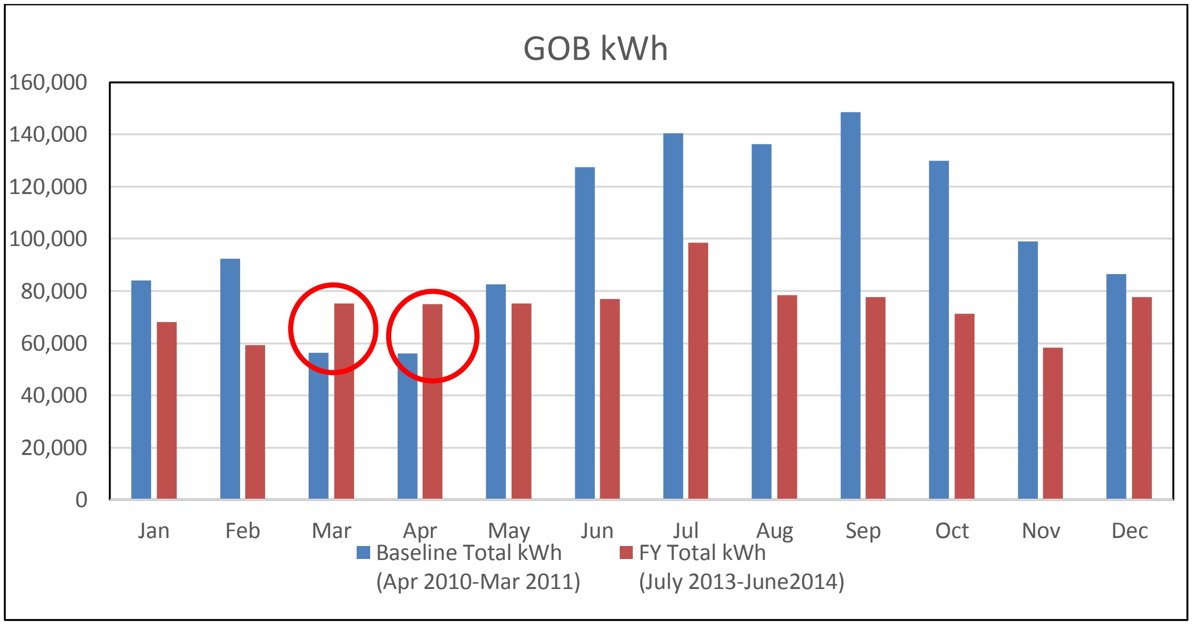
We strongly recommend that users of this report familiarize themselves with the latest Audit Report (dated October 1, 2014). The October 2014 Audit Report attempted to access ESG contract compliance for the first savings measurement period (roughly corresponding of FY ending June 30, 2014). The County received a report from ESG in late September 2014 claiming energy savings in excess of contracted guaranteed savings. Compared with contractor provided baselines, IA research involving actual energy bills for the measurement period calculated savings amount considerably less than contracted guarantees. In lieu if rendering a conclusive opinion on first measurement year compliance, IA offered several questions for the contractor and suggested further dialogue between county management and ESG in effort to clear up some issues.

We held a meeting on November 19, 2014. In attendance were representatives from County Purchasing, IA, ESG, and County Department of Law. Please refer to IA Memo dated December 3, 2014 for a description of the meeting. Participants in the November meeting decided that some additional work might reveal some of the reasons for the variances.

Action and Findings

ESG subsequently asked for, and received, copies of energy bills for several of the buildings involved in the upgrades. Based on additional work submitted by ESG and reviewed by IA, we offer the following:

1. We have evidence that the baselines submitted by ESG were understated. For example, the Detention Center baseline did not include usage recorded by one the two gas meters materially understating the baseline and corresponding savings. When we estimate savings for the sample of affected buildings (giving ESG the benefit of the doubt), the savings appear to be closer to guaranteed savings (72% as opposed to 40%).
2. Although the methodology employed by the contractor for measuring energy savings contains numerous assumptions and other subjective components in lieu of actual measurement, IA is now of the opinion that extraneous factors can cause significant variations in actual measurement as well. For example:



The graph shows that the County achieved electricity savings at the GOB for ten of the twelve months ending June 30, 2014. According to ESG (and construction documentation), the vast majority of the savings come from lighting and other electrical upgrades. Since the upgraded components (and corresponding efficiency) placed in service is the same month-to-month it follows logically that month-to-month fluctuations are likely caused by outside influences.

Conclusion

IA is of the opinion that, although the measurement methodology employed by ESG contains subjective components, the actual (utility bill) measurement methodology employed by this office also contains subjective components and is subject to other unaccounted variables that may affect the results. Subsequent (and expensive) engineering studies would likely provide more information regarding the aforementioned open questions and other issues. IA recommends that management perform a robust cost-benefit analysis regarding any additional work on the evaluation of County energy savings related to this project.

Response from Contractor

[W]e offer the following comments/edits to your memo:

1. This letter and the original IA Audit Report of 10/1/14 states the objective of the audit is to assure/assess <u>contract</u> compliance by ESG. In accordance with the contract the savings were verified to be achieved based on ESG's Sept 2014 Report. As we discussed the M&V[1] methodology was Option A which is an appropriate protocol for the installed measures. Verification with actual bills, while appearing to be "simple", in fact highlights unknown variances which are out of ESG's control or scope.
2. Building specific operations have caused significant increases in energy usage as evidenced by the buildings reviewed in detail for this report. These increases, while data would suggest reasonable explanations for such increases, have effectively minimized the energy savings. The IA report which included variances of

[1] Measurement and verification

16%-25% in the 10/1/14 Report and 12/3/14 memo do not take into account operational and other influences (or the monthly observations made by ESG). This was discussed at length at our meeting and while we can offer reasonable explanations for increases in energy it is very subjective.

3. Finding #1 in the 4/7/15 memo: ESG underestimated the baseline for the Detention Center by not including *one* gas account. While this had no effect on energy savings it did create an apparent under-performance of energy savings in the IA analysis. Going from 40% to 72% is only based on correcting for the Detention Center savings. Actually based on ESG's analysis of the monthly utility bills 83%-100% of the guaranteed savings can be accounted for by addressing operational influences outside the control of ESG.
4. Finding #2 suggested replacement: "The Government Office Building (GOB) graph above shows that the County achieved expected electricity energy savings in seven of the twelve months, some savings in three of the twelve months and increased energy usage in two of the twelve months ending June 30,2014." This increase in energy usage was discussed in #2 above.
5. Conclusion: The "actual" measurement methodology statement is also misleading as it does not take into account actual operational and weather related impacts so it should say "utility bill" measurement methodology.
6. We suggest a statement to this affect be added to the conclusion: There are significant benefits to the Energy Performance Contract since we are convinced energy savings were achieved. In fact, had the EPC not be implemented the increases in energy use would have created a significant shortfall in the fuel and utilities budgets. (Assuming that building operations were the same as those in the sample period – but given that the majority of the project was a lighting upgrade, this would have no effect on the operations.)

Auditor Response to Item 6:

The fact that the County achieved energy savings because of the project was never in question. We have some strong evidence that the energy procurement and construction (EPC) upgrades have a contributory effect on the energy savings. IA reserves any conclusions concerning facts related to the non-implementation of the project and associated budget shortfall matters.

Respectfully Submitted,

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