The total estimated energy conservation

ES = ES1 + ES2 + ES3

= ${ESSum}

= ${ES} kWh/yr

Therefore, the annual cost savings, ACS, can be estimated as follows:

ACS = ED × Electricity cost

= ${ES} kWh/yr × ${EC}/kWh

= ${ACS}/yr

Implementation Costs

The implementation cost for this recommendation includes the equipment and labor costs required for the new occupancy sensors installation. The material cost for each occupancy sensor and related wiring and consumable material is about ${COST} with applicable rebates. A total of ${NUM} occupancy sensors are estimated to be required for current plant area lighting control. Thus, related total material cost is about ${TCOST}. Considering ${TIME} hour being required for installation of each sensor at a labor rate of ${LABOR}/hr, the total labor cost is ${TLABOR}. Therefore, the total implementation cost for this recommendation is approximately ${IC}. <REBATE>

However, there could be energy efficiency rebates available through your utility company, which could potentially reduce the overall capital cost and thereby the payback period. The savings from the rebate is calculated below.

RB = ${ERR}⋅yr/kWh × ES

= ${ERR}⋅yr/kWh × ${ES} kWh/yr

= ${RB}

The incentives are capped at 50% of the project cost, which makes the modified rebate savings, MRB, equal to ${MRB}. Hence, the modified implementation cost, MIC, is estimated as follows:

MIC = IC - MRB

= ${IC} - ${MRB}

= ${MIC}

The modified implementation cost is ${MIC}.</REBATE>

**The annual electricity savings for this recommendation will be ${ES} kWh. The estimated annual cost savings is ${ACS} and, with ${MIC} in implementation costs, the payback period will be about ${MPB}.**

Implementation Cost References

The below links are for implementation cost references. We do not endorse/recommend these brands or products. Furthermore, these products may or may not be suitable for the application. The client should contact a vendor(s) to conduct a detailed study of the process, in order to determine the best product for the recommended application.

* <https://www.mcmaster.com/7477K36/>
* https://www.grainger.com/product/LITHONIA-LIGHTING-Occupancy-Sensor-Hard-Wired-20VE50