



Energy Efficiency Evaluation and Funding Plan for Sauk County

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Buildings Evaluated

- Law Enforcement Center (LEC)
- Health Care Center (HCC)
- Highway Garage

Goal of Energy Efficiency Improvements

- Address operational issues in the buildings
 - Building pressure issues observed
 - Building control system/software issues observed
 - Other issues
- Provide for operational savings
 - Electricity use and cost
 - Natural Gas use and cost
- Lighting measures not included as Sauk County continues to address these on its own

Energy Efficiency Evaluation Overview

- LEC
 - Number of EE measures recommended: 9
 - Construction Cost Estimate: \$62,028
 - Estimated annual savings: \$26,410 (ROI 2.3 years)
- HCC
 - Number of EE measures recommended: 8
 - Construction Cost Estimate: \$112,350
 - Estimated annual savings: \$29,976 (ROI 3.8 years)
- Highway Garage
 - Defer EE action until remodeling occurs

Energy Measures



EE Measures Recommended at LEC

1. Software correction for set back of air handling systems
2. Software correction to enable 100% economizer operation
3. Software correction to address simultaneous heating and cooling
4. Software correction to address constant duct pressure
5. Software correction to boiler water pumping pressure
6. Software correction to chilled water pumping pressure
7. Software correction to allow boiler condensing mode operation
8. Variable speed drives for primary boiler pumps
9. Balance 13 energy recovery units (intake and exhaust)

EE Measures Recommended at HCC

1. Adjust balancing and temperature controls
2. Adjust delivery air temperature controls
3. Add software to control outdoor air intake relative to operation of the kitchen exhaust hood
4. Software adjustment to address simultaneous heating and cooling
5. Adjust duct pressure in roof top units
6. Provide water distribution pressure reset
7. Provide standby operation for transient use spaces
8. Correct boiler operation using existing control system
9. Conditional: convert dishwasher booster heater to natural gas

EE Measure Funding

- Total EE funding requirement is estimated at a modest \$174,378
- Per discussions with Ian Crammond, this funding can be provided with current and 2018 budget funds
- Recommendation
 - Self-funding
 - Schedule work to avoid peak contractor activity periods during the summer
 - Determine applicability of Wisconsin Focus on Energy incentives

What questions do you have?

