

Chevron Energy Solutions

Washtenaw County

Washtenaw County, Michigan Energy Performance Contract

| Project Size: | 18 buildings, 665,760 sq ft |
|------------------|---|
| Project Value: | \$6,088,652 |
| Source of Funds: | The County issued bonds and a \$60,000 grant was awarded for the solar portion of the project |
| Contract Terms: | Guaranteed Energy Savings for 4 years |

Project Schedule: Completed on time

| Project Phase | Project Dates | | | |
|-------------------------------|---------------|---------------|--|--|
| | Started | Completed | | |
| Comprehensive Energy Analysis | Feb 2004 | May 2004 | | |
| Design/Implementation | June 2004 | October 2005 | | |
| Monitoring | November 2005 | November 2009 | | |

Guaranteed Annual Energy Savings: \$215,755 (Electric – \$83,958; Gas – \$29,2977; Water – \$7,806; O&M – \$94,694)

Annual Non-Energy Savings: \$94,694 and an additional \$65,000 due to a rate change negotiation with DTE.



List of Improvements:

- Interior/exterior lighting and controls
- · Replaced existing boilers in-kind
- Replaced vacuum condensate return system
- · Hot water pipe and valve modifications
- Steam trap replacement
- Cooling tower fan VFD
- · Replaced chillers
- Installed VFD for existing variable air volume system
- Increased outdoor airflow for ventilation
 purposes
- Replaced existing RTU and VAV boxes
- Replaced existing AHU in-kind
- Controls upgrade to countywide system, include setbacks, economizers, etc.

(see other side for more)

Achieved Summarized Savings:

| Baselines | kWh | kW | CCF | Water (gal) | Steam (Ibs) | Energy \$ | Non-Energy \$ | Total Dollars* | | | |
|-----------|----------------|----|---------|-------------|-------------|------------|---------------|----------------|--|--|--|
| | 9,448,875 | | 391,451 | | | | | \$1,197,434 | | | |
| | ANNUAL SAVINGS | | | | | | | | | | |
| Year | kWh | kW | CCF | Water (gal) | Steam (Ibs) | Energy \$ | Non-Energy \$ | Total Dollars* | | | |
| 1 | 9,448,875 | | 391,451 | | | \$1,197434 | | \$1,197,434 | | | |
| 2 | 76,580 | | 54,602 | | | \$144,187 | \$120,927 | \$265,114 | | | |
| 3 | 780,775 | | 41,035 | | | \$141,375 | \$105,827 | \$247,202 | | | |

* Energy Savings + Non-Energy Savings = Total Annual Dollars Saved

Measurement and Verification: This project will use a combination of stipulated savings and IPMVP, 1997, Option C (entire facility-level comparison before and after retrofit, typically with utility bills).

Comments: The Chevron Energy Solutions project team has implemented energy saving measures and facility upgrades in 18 buildings throughout the County including the County Courthouse, Library Learning Resources Center, and the Administration Building. The project involves upgrading building

Reference:

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Washtenaw County, continued

infrastructures by replacing old, inefficient equipment to reduce expenses and improve indoor comfort. The project is structured as an energy savings performance contract that enables the project to be built without any money upfront.

For more information, contact:

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List of Improvements, cont'd.:

- Irrigation system moisture controls
- Time clock for the domestic water recirculating pump
- Window improvements
- Installed insulated overglazing panels on existing windows
- Added insulation panels along back wall
- Energy education for facility occupants
- Solar installation
- High efficiency motors
- Separate irrigation system from main water meter
- UtilityVision® hardware