

## CASE STUDY: INDUSTRIAL HVAC SYSTEM

### Efficiency and Optimization

#### **Automotive-Related Manufacturing Plant Realizes \$796,000/year in Energy Cost Savings**

Automotive-related manufacturing facility utilizes a central plant to provide chilled and hot water to the various air handlers for space conditioning in the plant, offices, laboratories, and product testing areas.

#### **System Description**

- Three Chillers, two 1,250 ton and one 1,500 ton centrifugal chiller.
- Primary/Secondary pumping configuration.
- Two cooling towers with a common header.
- 63 air supply houses.
- Existing Building Management Control System.

#### **Opportunities/Issues**

- Improve and optimize operation of air supply houses.
- Improve and optimize operation of control system.
- Change ASH fans to Variable Air Volume operation.
- Control air flow into and out of facility better.

#### **Project Description**

- Clean and re-commission Air Supply House operation.
- Optimize Air Supply House operation and use of modified control strategy.
- Install and optimize new control system.
- Install Variable Air Volume control on Air Supply House fans.
- Install controls on exhaust fans and other supply fans.
- Install power monitoring to allow tracking of facility energy use.

## Project Benefits

- Restored and optimized proper operation of Air Supply Houses for better overall operation of system.
- Controlled and reduced unnecessary outside air intake and exhaust.
- Installed new building controls equipment and strategies.
- Reduced energy usage.
- Brought equipment up to date on O&M issues.
- Improved overall operation of the HVAC system.

## Key Results

Total Turnkey Installed Cost \$ 1,585,000

Annual Cost Savings of \$ 796,000.

Annual CO<sub>2</sub> Emissions Reduced by 3,252 Tonnes.

Average Project IRR 40%

2.0 Year Simple Payback.

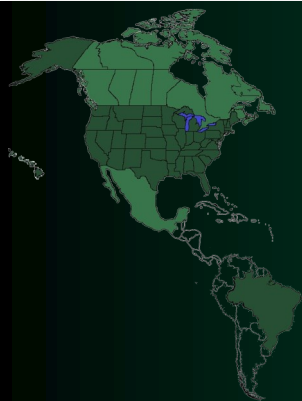


## Key Benefits

<b>Cost Savings</b>	Total annual savings of \$ 796,000.
<b>Carbon Reductions</b>	Annual Reduction of 3,252 Tonnes CO <sub>2</sub>
<b>Fuel Type</b>	Electricity
<b>Payback</b>	2.0 Year Simple Payback



**Achieve energy/sustainability goals & increase profit - Guaranteed**



Solution Dynamics is a team of certified energy experts committed to improving the environment by implementing sustainable solutions that reduce use of precious natural resources.

We serve clients in commercial and industrial sectors who are seriously committed to reducing their energy consumption, cost, and environmental impact.

For additional information, or to schedule a consultation, please call us at **(888) 435-9226** or email: **info@sol-dyn.com**.

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