

Energy Cost Reduction Experience

Solution Dynamics has been involved in many different types of facilities ranging from heavy industrial facilities such as glass melting to medium size commercial facilities such as office buildings. Our experience also includes various systems in those facilities that consume energy such as compressed air, steam, hot water, lighting, HVAC, motors, variable speed drives, chilled water, and cooling tower water, etc.. The following is a brief listing of some of the recent work Solution Dynamics has performed.

Opportunity	Customer Value	Description	Facility Type
Improve & optimize central plant operation	Saved over \$80,000 and reduced system energy cost by over 20%	Upgrade controls, install VFD's	State: Illinois Consumer products - Research and Development
Improve & optimize ammonia refrigeration central plant	Saved over 1,200,000 kWh and reduced system energy cost by 35%	Upgrade controls, install new equipment and VFD's	State: California Refrigerated warehouse
Improve & optimize ice storage system	Saved over \$29,000 with a one year simple payback	Reconfigure system, upgrade controls, modify operation	State: Wisconsin Trucking company – office building
Low cost opportunity implementation program	Savings of over \$300,000 per year with an implementation cost of only \$150,000	Optimize and modify operation for multiple opportunities including process air flows, compressed air, and steam.	State: Kansas Large industrial facility
Energy Commodity Management Services	Services provided long term savings that exceeded program cost in first few months	Rate & billing review, utility negotiation, energy procurement, and account management	State: Missouri Plastics manufacturer
Improve compressed air system	Saved over \$139,000 and reduced operating problems	Installed controlled storage tank, sequencer, fixed air leaks, modified end uses and cooling water use.	State: Kansas Large industrial facility
Improve steam system and facility heating system	Saved over \$400,000 in energy and reduced O&M cost	Installed new boilers, direct fired gas heating, and process heating	State: Kansas Large industrial facility

Opportunity	Customer Value	Description	Facility Type
Improve boiler efficiency and recover heat	Identified an innovative application for preheating process water via a condensing economizer recovering heat from boiler flue gas.	Upgrade boiler controls to increase efficiency and installed fully condensing economizer	State: Missouri Manufacturing facility
Upgraded and improved lighting	Utilized a leasing arrangement to create a positive cash flow for the customer while preserving internal capital for other business investments.	Upgrade lighting to more efficient technology	State: Florida Fabrication and office facility
Upgrade and control lighting	Saved over \$31,000 per year in electricity costs on a facility that had already had their lighting systems upgraded.	Facility had already been retrofitted to high efficiency T-8 and ballasts. The project went one step further by installing lighting controls and retrofitting fixtures missed during the first retrofit.	State: Illinois Consumer products - Research and Development
Facility Energy Assessments	Required a quick mobilization to meet an aggressive schedule for delivery of results. Identified opportunities expected to result in \$585,500 per year in energy savings at an average IRR of 107% & simple payback of 1.9 years.	Performed assessments for 12 buildings across 8 states with over 2,500,000 sq. ft of space and \$6,400,000 in energy spend in 90 days	States: NJ, FL, NC, IL, AZ, CA, CO, Communication industry – office facilities, (many with data centers)
Convert electric supply from secondary to primary service	Reduced energy cost by \$90,000 which is over 13% of the facilities annual bill, with just over a 1 year simple payback	Consolidated five separate secondary services into a single primary service feed to reduce facility demand charges	State: Wisconsin Metal plating facility
Project management services	Managed projects to be on budget and schedule to achieve predicted savings.	Generated RFP's, evaluated quotes, managed contractors, verified contract performance	Multiple facilities and customers
Sales tax audits	Ongoing savings exceed cost of audit in less than 6 months	Performed facility audit so that customer would no longer need to pay sales tax on energy	Multiple facilities