



THE Energy Alliance Group OF MICHIGAN

STAR LINCOLN



PROJECT OVERVIEW STAR LINCOLN – ENERGY EFFICIENCY UPGRADES

Star Lincoln, located in Southfield, Michigan, is a mid-size automobile dealership. The showroom was recently upgraded to incorporate the latest design standards. But the service area was another story altogether.

Many of the energy systems were original to the 1969-vintage building. Dated technologies accounted for high utility bills and less-than-optimal working conditions. These included lighting, heating, compressed air and service entry doors. Needed building envelope improvements included most door and window seals. The slow moving service overhead doors and poor seals, along with the almost 50 year old heating system, resulted in a chilly working environment for the technicians. Parking lot lights were also original technology and very energy inefficient.

The dealership contacted The Energy Alliance Group (EAG) of Michigan to identify, develop and manage a plan for energy efficiency upgrades to the service area and vehicle lots.

Energy inefficient gas unit heaters throughout the shop areas were replaced with 93% efficient condensing units for an 18% reduction in natural gas usage. A noisy, energy-intensive air compressor was replaced with an efficient rotary screw variable frequency drive unit. In addition to a 25% reduction in energy consumption, the new compressor's quiet operation enabled it to be relocated to the shop floor freeing up floor space.

Energy-intensive building exterior and parking lot lights were replaced with high output, long-life LED fixtures. In addition to a 58% reduction in energy consumption, customers enjoyed improved lighting and color rendering critical for shopping during evening hours. Savings were also realized throughout the vehicle service areas where HID and fluorescent fixtures were replaced with LED designs, improving the overall quality of lighting while reducing operating costs.

The original overhead doors in the service drive-through shop areas were replaced with insulated high-speed units yielding a four second open/close cycle time compared to the 60 second cycle of the original design. This resulted in a 15% reduction in heat loss. New seals were also installed on all remaining overhead door systems to significantly reduce cold air infiltration.

Average Monthly Utility Spend

BEFORE	■ \$7,910
AFTER	■ \$3,260

Total Savings*

10 Years	\$678,400
20 Years	\$1,125,000

*Includes scheduled maintenance

The significant reduction in energy use qualified Star Lincoln for \$17,714 utility rebates.