



*John Turner Consulting offers comprehensive energy retrofit programs for national and regional organizations.*

*Our experienced team develops customized plans based on your energy reduction priorities and return on investment goals, all without disrupting the normal flow of your business.*

# ENERGY EFFICIENCY RETROFIT PROGRAMS

Lighting | HVAC | Refrigeration



## LED (Light Emitting Diode) and Lighting Controls

Lighting retrofits replace traditional lighting fixtures, such as incandescent, fluorescent, or halogen bulbs, with LED lighting technology.

LEDs are energy-efficient and have become a more sustainable and cost-effective lighting solution. A lighting retrofit can involve simply changing the light bulbs or replacing the entire lighting fixture with LED equivalents.

### Benefits of LED retrofits include:

- ✓ Cost savings
- ✓ Energy efficiency
- ✓ Lighting longevity
- ✓ Improved lighting quality
- ✓ Heat reduction
- ✓ Instantaneous on/off
- ✓ Dimming capabilities
- ✓ Environmental benefits

**Setting:** Residential, Commercial, Public facilities

## Heating, Ventilation, and Air Conditioning (HVAC)

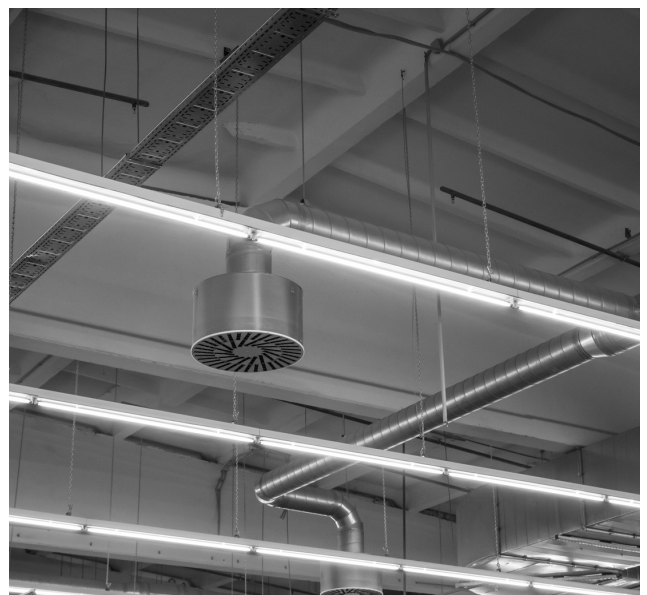
HVAC retrofits (ECMs, VFDs, controls) upgrade or replace components of an existing HVAC system with more advanced and efficient technologies.

The goal is to improve the overall performance, energy efficiency, and comfort of the heating and cooling systems in the building. The upgrades are customized to the building's needs and the state of the existing system.

### Benefits of HVAC retrofits include:

- ✓ Cost savings
- ✓ Energy efficiency
- ✓ Enhanced comfort
- ✓ Extended equipment lifespan
- ✓ Improved indoor air quality
- ✓ Environmental benefits

**Setting:** Residential, Commercial





## Refrigeration

Refrigeration retrofits (ECMs, VFDs, controls, case doors) upgrade or modify existing refrigeration systems to improve efficiency and performance, as well as modernize and reduce energy consumption. The retrofit may involve replacing components, adding new technology, or implementing system-wide changes to achieve better results for a refrigeration system.

**Setting:** Commercial

### Benefits of refrigeration retrofits include:

- ✓ Energy efficiency
- ✓ Improved cooling performance
- ✓ Extended equipment lifespan
- ✓ Compliance to updated regulations
- ✓ Adaptation to changing needs
- ✓ Smart controls and monitoring
- ✓ Environmental benefits
- ✓ Reduction in maintenance and operational costs

### Return on Investment Project Example: *These numbers are based off of a \$0.13 kWh and 10% rebates.*

Project ROI		Store #0 Turnkey Energy Efficiency Project							
Measure	Est. kWh Reduction	Estimated Energy Savings	Estimated Maintenance Savings	Phase 1 Material/Labor Cost	Phase 2 Material/Labor Cost	Total Savings	Total Cost	Estimated Incentives	Simple Payback
Sales Floor/Backroom LED Lighting Retrofit	605,954 kWh	\$78,774	\$4,098	\$31,648	\$127,510	\$82,872	\$159,157	\$10,000	1.80 years
Exterior Lighting Retrofit	159,066 kWh	\$20,679	\$1,076	\$18,089	\$13,714	\$21,754	\$31,803	\$3,000	1.32 years
Display Case LED Lighting Retrofit	48,226 kWh	\$6,269	\$326	\$4,237	\$20,276	\$6,596	\$24,513	\$2,400	3.35 years
Case & Walk-In Evap. Motor Retrofit	124,735 kWh	\$16,216	\$3,327	\$22,513	\$19,509	\$19,543	\$42,022	\$0	2.15 years
Incentive Investigation, application, processing (20% of recovered rebate/incentive)							\$3,080		
<b>PROJECT TOTALS:</b>	937,981 kWh	\$121,937.56	\$8,827.10	\$76,486.25	\$181,009.32	\$130,764.66	\$260,575.57	\$15,400.00	1.87 years

*Estimated incentives column assumes John Turner Consulting shall provide rebate/incentive processing for a fee of 20% of the recovered rebate/incentive using an upstream incentive approach.*

Present Value Calculation		Assumes Annual Inflation Rate of 1.5%							
Measure	Initial Investment	FY1 Return	FY2 Return	FY3 Return	FY4 Return	FY5 Return	FY6 Return	FY7 Return	IRR
Sales Floor/Backroom LED Lighting Retrofit	\$ (149,157)	\$ 82,872	\$ 84,115	\$ 85,377	\$ 86,658	\$ 87,957	\$ 89,277	\$ 90,616	54%
Exterior Lighting Retrofit	\$ (28,803)	\$ 21,754	\$ 22,081	\$ 22,412	\$ 22,748	\$ 23,089	\$ 23,436	\$ 23,787	75%
Display Case LED Lighting Retrofit	\$ (22,113)	\$ 6,596	\$ 6,694	\$ 6,795	\$ 6,897	\$ 7,000	\$ 7,105	\$ 7,212	24%
Case & Walk-In Evap. Motor Retrofit	\$ (42,022)	\$ 19,543	\$ 19,836	\$ 20,133	\$ 20,435	\$ 20,742	\$ 21,053	\$ 21,369	44%
<b>PROJECT TOTALS:</b>	\$ (245,176)	\$ 130,765	\$ 132,726	\$ 134,717	\$ 136,738	\$ 138,789	\$ 140,871	\$ 142,984	52%

Net Present Value Calculation		Assumes Discount Rate of 7%							
Measure	Initial Investment	FY1 Return	FY2 Return	FY3 Return	FY4 Return	FY5 Return	FY6 Return	FY7 Return	Total NPV
Sales Floor/Backroom LED Lighting Retrofit	\$ (149,157)	\$ 77,451	\$ 73,469	\$ 69,693	\$ 66,111	\$ 62,712	\$ 59,489	\$ 56,431	\$ 316,199
Exterior Lighting Retrofit	\$ (28,803)	\$ 20,331	\$ 19,286	\$ 18,295	\$ 17,354	\$ 16,462	\$ 15,616	\$ 14,813	\$ 93,355
Display Case LED Lighting Retrofit	\$ (22,113)	\$ 6,164	\$ 5,847	\$ 5,547	\$ 5,262	\$ 4,991	\$ 4,735	\$ 4,491	\$ 14,923
Case & Walk-In Evap. Motor Retrofit	\$ (42,022)	\$ 18,264	\$ 17,325	\$ 16,435	\$ 15,590	\$ 14,789	\$ 14,029	\$ 13,307	\$ 67,717
<b>PROJECT TOTALS:</b>	\$ (245,176)	\$ 122,210	\$ 115,928	\$ 109,969	\$ 104,317	\$ 98,955	\$ 93,868	\$ 89,043	\$ 489,114