

The Energy Tax Aspects of Long Island Warehouses

By Charles R. Goulding and Charles G. Goulding

Throughout the Long Island area, warehouse owners are moving quickly to make the building energy reducing investments they need to make for business reasons while qualifying for substantial Federal and New York tax savings and utility rebates. Long Island area warehouse owners need to make a series of building improvements in order to remain competitive attract tenants and retain building value. It is important for the warehouse owners making these investments to optimize a series of important tax benefits that are in certain cases only available for a limited time period.

The Energy Tax Aspects of Long Island Warehouses

Along with servicing its own large 2.5 million population, Long Island is a major support area for New York metropolitan area businesses and is also home to, or adjacent to, four airports. The four airports are JFK, LaGuardia, Islip, and Farmingdale. Excluding LaGuardia, the airports are supported by a strong warehouse market that is relatively immune to economic cycles. As of February 2010, Long Island had a warehouse vacancy rate of only 4.5%, which was the lowest of any major industrial market in the country. Although Long Island warehouse vacancies are low, rental rates have declined and owners need to reduce operating costs to retain tenants and prevent further rent declines. Accordingly, Long Island with its 6,400 warehouses is one of the nation's leading warehouse markets. Although Long Islanders view properly Queens as part of New York City from a geography stand point Queens is part of the Long Island land mass and many leading lighting and HVAC contractors often service Queens's warehouses from Long Island. Long Island and Queens have some of the highest electricity and heating costs in the country. As result of lighting product technology changes and abundant natural gas these warehouses are retrofitting to substantially reduce their energy costs.

The EPAct Tax Opportunities

EPAct

Pursuant to Energy Policy Act (EPAct) Section 179D, warehouses making qualifying energy-reducing investments in their new or existing locations can obtain immediate tax deductions of up to \$1.80 per square foot.

If the building project doesn't qualify for the maximum EPAct \$1.80 per square foot immediate tax deduction, there are tax deductions of up to \$0.60 per square foot for each of the three major building subsystems: lighting, HVAC (heating, ventilating, and air conditioning), and the building envelope. The building envelope is every item on the building's exterior perimeter that touches the outside world including roof, walls, insulation, doors, windows and foundation.

Warehouses that combine energy-efficient lighting and heating have become, by far, the largest category of buildings qualifying for the \$1.20 to \$1.80 EPAct tax deductions. The following table illustrates the magnitude of potential EPAct tax benefits available at various square footage's:

Warehouse Properties Potential EPAct Tax Deductions

Sample Square Footage	EPAct Deduction \$1.20/Sq.Ft.	EPAct Deduction \$1.80/Sq.Ft.
50,000	\$60,000	\$90,000
100,000	\$120,000	\$180,000
250,000	\$300,000	\$450,000
500,000	\$600,000	\$900,000
750,000	\$900,000	\$1,350,000
1,000,000	\$1,200,000	\$1,800,000

Alternative Energy Tax Credits and Grants

There are multiple 30% or 10% tax credits available for a variety of alternative energy measures with varying credit termination dates. For example, the 30% solar tax credit expires January 1st 2017 and the 10% Combined Power tax credit also expires January 1st 2017. The 30% closed loop and open loop biomass credit expires January 1st, 2014.

All alternative measures that are eligible for the 30% and 10% tax credits are also eligible for equivalent cash grants for the three years starting January 1st 2009 and ending December 31st 2011.

Strong Local Utility Rebates

The local Long Island and Queens utilities are offering rebates for both lighting and natural gas heater upgrades. On Long Island, Long Island Power Authority (LIPA) provides the electrical rebates and National Grid supplies the natural gas heater rebates. In Queens, both Con Edison in a program administered by Lockheed Martin and the New York State Energy Research and Development Authority (NYSERDA) provide the electrical rebates and Con Edison/Lockheed Martin and National Grid supply the gas heater rebates. For both Long Island and Queens, the heater rebates are so called "custom rebates" meaning they are customized to the project and based on natural gas therms saved and in many cases can amount to thousands of dollars when enough natural gas therms are saved.

Lighting

Building lighting comprises a large portion of warehouse energy use. Most warehouses that have not had a lighting upgrade to energy-efficient lighting in the last 7 or 8 years utilize prior generation metal halide or T-12 fluorescent lighting. It is also important to realize that effective January 1, 2009 most probe-start metal halide lighting may no longer be manufactured or

imported into the United States and effective July 1, 2010; most T-12 lighting may no longer be manufactured or imported into the United States. This means that warehouses that still have this lighting technology will soon be subject to large price increases for replacement lamps and bulbs.

This prior generation T12 and metal halide lighting is very energy inefficient compared to today's T-8 and T-5 lighting, and a lighting retrofit can easily reduce lighting electricity costs by 40 to 60 percent. In addition to large energy cost reduction from the base building lighting, most warehouses undergoing lighting retrofits install sensors that completely shut off the lighting in portions of the warehouse that are not in use. Previously, many warehouse owners and lighting specifiers were reluctant to install sensors because they reduced fluorescent lamp useful life. Today, improved technology sensors are available with warranties not to reduce lamp useful life.

Heating

New, improved commercial heating systems can provide energy cost savings of eight percent or more over the ASHRAE 2001 building code standards. There are multiple heater technologies suitable for the warehouse market, including direct fired gas heaters, unit heaters, and infrared (radiant) heaters¹.

If feasible the warehouse heater should be mounted on an exterior wall to optimize the roof top solar P.V. space.

An example illustrating the maximum utilization of the \$1.20 EAct tax deduction for a 100,000 sq ft warehouse with an energy-efficient heater is as follows:

¹ See Charles Goulding, Jacob Goldman and Raymond Kumar, *Large EAct Energy Tax Deduction Opportunities for Commercial Heaters*, Corp. Bus. Tax'n Monthly, January 2010, at 11.

100,000 sq ft Warehouse			
\$1.20 per sq ft EAct Tax Deduction			
	Lighting	Heater	Total
Project Cost	\$ 135,000	\$ 35,000	\$ 170,000
Utility Rebate	\$ (35,000)	\$(15,000)	\$ (50,000)
Net Investment	\$ 100,000	\$ 20,000	\$ 120,000

With this example, the \$120,000 (100,000 sq ft x \$1.20) entire investment EAct tax deduction will be achieved as long as the combined lighting heater project reduces total energy cost by 33 1/3% as compared to ASHRAE 2001.

Building Envelope

If a warehouse requires reroofing this owner should consider a more energy-efficient white roof. Moreover, when reroofing this is the ideal time to consider adding more insulation. If the building already had an energy-efficient design and roof the owner may want to consider upgrading to more energy-efficient truck bay doors and windows.

100,000 sq ft Warehouse				
\$1.80 per sq ft EAct Tax Deduction				
	Lighting	Heater	Roof	Total
Project Cost	\$ 135,000	\$ 35,000	\$ 80,000	\$ 250,000
Utility Rebate	\$ (35,000)	\$ (15,000)	\$ (20,000)	\$ (70,000)
Net Investment	\$ 100,000	\$ 20,000	\$ 60,000	\$ 180,000

With this example the maximum \$180,000 EAct tax deduction (100,000 sq ft x \$1.80) will be available as long as the combined lighting, heater and roof project reduces total energy cost by at least 50% as compared to ASHRAE 2001.

The total Long Island warehouse and industrial building EAct opportunity is presented below:

Long Island Industrial & Warehouse EAct Opportunity

Property	Square Footage	Lighting Minimum Deduction	Lighting Maximum Deduction	HVAC Maximum Deduction	Building Envelope Maximum Deduction	Total
Western Nassau	14,024,882	\$4,207,465	\$8,414,929	\$8,414,929	\$8,414,929	\$25,244,788
Central Nassau	8,954,622	\$2,686,387	\$5,372,773	\$5,372,773	\$5,372,773	\$16,118,320
Eastern Nassau	21,866,265	\$6,559,880	\$3,119,759	\$3,119,759	\$3,119,759	\$39,359,277
Western Suffolk	25,615,042	\$7,684,513	\$5,369,025	\$5,369,025	\$5,369,025	\$46,107,076
Central Suffolk	39,741,772	\$11,922,532	\$23,845,063	\$23,845,063	\$23,845,063	\$71,535,190
Eastern Suffolk	15,992,538	\$4,797,761	\$9,595,523	\$9,595,523	\$9,595,523	\$28,786,568
Totals:	126,195,121	\$37,858,536	\$75,717,073	\$75,717,073	\$75,717,073	\$227,151,218

The Kennedy Airport Aerotropolis

The Kennedy airport facilities infrastructure or Aerotropolis² has undergone major improvements in recent years. Besides on airport terminal and parking garage³ improvements and a monorail train to the plane rail system connecting New York City and Long Island an improved warehouse center is developing.

Kennedy Aerotropolis Warehouses EAct Opportunity

Property	Total Long Island Warehouse Square Footage	Lighting Minimum Deduction	Lighting Maximum Deduction	HVAC Maximum Deduction	Building Envelope Maximum Deduction	Total
AMB	1,500,000	\$450,000	\$900,000	\$900,000	\$900,000	\$2,700,000
Seagis	500,000	\$150,000	\$300,000	\$300,000	\$300,000	\$900,000
Vista	110,000	\$33,000	\$66,000	\$66,000	\$66,000	\$198,000
Totals:	\$2,110,000	\$633,000	\$1,266,000	\$1,266,000	\$1,266,000	\$3,798,000

Warehouse Tax Incentivized Energy-Efficient Design Process Steps

The process steps for achieving an energy-efficient Long Island warehouse are presented below:

² See Charles R. Goulding and Charles G. Goulding, *The EAct Tax Aspects of the Aerotropolis*, Google Knol, March 2011 at <http://knol.google.com/k/charles-goulding/the-eact-tax-aspects-of-the/1xedf26uc9hpj/10#>

³ See Charles Goulding, Jacob Goldman, and D. Malcolm Thomas, *Multiple Lighting Technologies Drive Large EAct Tax Deductions for Parking Garages*, Parking Professional, August 2010

- 1) Assemble team including Warehouse experts for EAct tax incentives, utility rebates, lighting, heater, envelope and solar.
- 2) See if roof is compatible for solar and heater. Obtain solar and any needed roof/insulation proposals. Make sure existing roof warranties are compatible with solar P.V. installation.
- 3) Obtain lighting design that replaces all inefficient lighting. Compare and contrast fluorescent, induction and LED lighting alternatives.
- 4) Obtain Cambridge heater or equivalent design proposal based on proposed roof design.
- 5) Determine utility rebate based on all proposed separate and combined measures. Lighting will reduce electrical use. Roof, insulation and heater will reduce therms.
- 6) Determine tax incentives including EAct tax deduction benefit and solar credit tax deductions. EAct will be based on total project square footage, including mezzanines and pick and pack modules. The 30% solar tax credit will be based on the combined solar material and installation costs.
- 7) Prepare project proposal integrating project cost, energy savings, utility rebates and tax incentives.
- 8) Get project approved.
- 9) Hire contractors and execute project.
- 10) Have EAct modeler and tax expert prepare IRS approved software model and tax documentation.
- 11) Process utility rebates.
- 12) Reduce Federal and State estimated tax payments for large tax deductions and credits.
- 13) Celebrate tax enhanced energy-efficient warehouse achievement.

Conclusion

As described above there are multiple compelling reasons including energy and substantial tax savings why Long Island area warehouses are acting on energy-efficient warehouse projects. This is such a widespread phenomenon that market forces will require warehouse landlords to upgrade just to remain competitive. Once the overwhelming majority of warehouses are upgraded America's building products community will undoubtedly turn their attention to the

next major building category requiring improvement which may very well be the office building you are sitting in.

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