Using Underlying Building Characteristics to Pay for Roof Improvements

By Charles R. Goulding, Kenneth Wood and Charles G. Goulding

Charles R. Goulding, Kenneth Wood and Charles G. Goulding explain how commercial building owners can use the tax incentives provided by Code Sec. 179D to offset the cost of roof improvements and repairs.

Property owners with large roofs, particularly in the warehouse,[1] industrial[2] and self-storage[3] area, have a unique opportunity to obtain large tax incentives for major roof improvements and repairs. For many existing buildings, roofs are the most expensive items requiring end-of-life cycle replacement. This article explains how to use the commercial building Code Sec. 179D tax incentive and energy-efficient lighting to plan into a large roof tax incentive.

The EPAct Tax Opportunity

Pursuant to Code Sec. 179D, as enacted by the Energy Policy Act of 2005 (EPAct),[4] warehouse owners or tenants making qualifying energy-reducing investments can obtain immediate tax deductions of up to $1.80 per square foot.

If the building project does not qualify for the maximum $1.80-per-square-foot immediate tax deduction, there are tax deductions of up to 60 cents per square foot for each of the three major building subsystems: lighting; heating, ventilation and air conditioning (HVAC); 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.

Understanding the Lighting Tax Calculation That Drives the $1.80-Per-Square-Foot Deduction

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. Most warehouses, industrial and self-storage buildings are "nonconditioned," meaning they are not air-conditioned.[5]

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Many existing warehouses, manufacturing facilities and self-storage facilities have prior generation metal halide and or T-12 lighting that is now federally banned and needs to be replaced.

In nonconditioned buildings lighting is by far the biggest building energy user. Code Sec. 179D requires a 50-percent overall building energy-cost reduction and energy-efficient lighting can achieve 42-percent and greater energy-cost reduction alone. The remaining difference to achieve the 50-percent cost reduction can usually be achieved by a reasonably energy-efficient heater.

Roof Tax Planning

Commercial Roof replacement is very expensive and can cost upwards of $4.00 per square foot. This means that with buildings 250,000 square feet and above, roof replacement can easily exceed $1 million. The ability to take a large portion of roof capital outlay and convert it from a 39-year asset to an immediate tax deduction has tremendous economic value. Roofs require replacement when they are worn and often need to be replaced or improved in preparation for solar panel installation.

Tax Planning Examples

Example 1

Heated-Only 100,000 sq. ft. Warehouse			
$1.80 per sq. ft. EPAct Tax Deduction			
	Lighting	Roof	Total
Project Cost	$ 80,000	$ 320,000	$ 400,000
Utility Rebates	$ 30,000	$ 70,000	$ 100,000
Net Investment	$ 50,000	$ 250,000	$ 300,000

EPAct Qualifying 100,000 Square Feet Warehouse Example. If light power density is reduced to 0.45 watts/sq. ft. or less, then the scenario shown in Example 1 would achieve a $1.80/sq. ft. EPAct tax deduction in addition to the estimated rebates listed. At 100,000 sq. ft., in this example, having achieved maximum tax deduction the warehouse would receive an $180,000 EPAct tax deduction, worth $63,000 in federal tax saved, using a 35-percent federal tax rate.

250,000 Square Feet Heated-Only Manufacturing Facility Example. The lighting targets for manufacturing to achieve both lighting only and modeled tax deductions under EPAct are even easier to achieve in this building category than they are in a pure pick and pack warehouse. The targets represented in Example 2, if achieved, could generate a $450,000 EPAct Tax deduction.

Example 2

Heated-Only Manufacturing EPAct Wattage Targets	
Light Power Density (w/sq. ft.) Targets for Modeled EPAct Deduction	
Qualifying EPAct Tax Deduction	Manufacturing
Lighting only $0.60/sq. ft. (low bay)	1.26
Lighting only $0.60/sq. ft. (high bay)	1.80
Modeled $1.20/sq. ft.	1.37
Modeled $1.80/sq. ft.	0.82

Most times the project costs associated with achieving the wattage targets above and installing or replacing unit heaters, costs around $1.00/sq. ft. In the case of the example's manufacturing facility, if it were able to reduce its lighting watts/sq. ft. to 0.82, then the facility would fully qualify for $1.80/sq. ft. Achieving the $1.80/sq. ft. would leave $0.80/sq. ft. or $200,000, in EPAct tax deductions, left over to apply to an envelope improvement, in this case a roof enhancement or replacement.

Example 3

Self-Storage EPAct Portfolio Example. Example 3 indicates the strategy related to this tax deduction with regards to a portfolio. We have used the example

Example 3

Self-Storage EPAct Portfolio Strategies								
Ten 50,000 sq. ft. Self Storage Facilities	Building Needs	Total Square Footage	Lighting Maximum Deduction	HVAC Maximum Deduction	Building Envelope Maximum Deduction	Total	Project Cost	Available Tax Deduction Limited by Project Cost
5	lighting	250,000	$ 150,000	$ 150,000	$ 150,000	$ 450,000	$ 200,000	$ 200,000
5	lighting/roof	250,000	$ 150,000	$ 150,000	$ 150,000	$ 450,000	$ 1,000,000	$ 450,000
Totals:		500,000	$ 300,000	$ 300,000	$ 300,000	$ 900,000	$ 1,200,000	$ 650,000

of self-storage as these businesses are usually chains with multiple locations. In this example, there are 10 total facilities, five of which need lighting retrofits and the other five of which need lighting retrofits and roofs. The strategy in this case is to take advantage of the projects in which all of the deduction can be used. EPAct limits deductions to the lesser of the amount qualified for (by achieving certain energy benchmarks) or project cost, so the best projects have a high enough project cost to fully realize the deduction for which they are qualified. In this case when retrofitting lighting in a heated-only space, like these self-storage facilities, the project cost associated with only a lighting retrofit is likely only $0.80/sq. ft., which leaves $1.00/sq. ft. left over. Lighting and the fact that the space is heated-only, qualifies the space for $1.80, an additional spend on the envelope, and raises the project cost above the $1.80 for which it has already qualified. This "left-over" $1.00/sq. ft. should be used to reduce the cost of the roof replacement/improvement.

Conclusion

The total project should take advantage of energy savings, rebates and tax savings to leverage all incentives. Knowing the EPAct targets ahead of time and making sure the internal systems qualify is important to achieve an EPAct Tax deduction. Planning ahead to take advantage of the largest tax deductions by reviewing portfolio needs is the best way to utilize the EPAct to the fullest extent. Understanding all of these concepts and using them systematically will allow companies to take advantage of their underlying building systems to upgrade or replace roofs, a project with substantially higher costs than other building improvements.

Endnotes

1 *See* Charles Goulding, Jacob Goldman and Joseph Most, *Complete Warehouse Tax Enhanced Energy Efficient Design*, Corp. Bus. Tax'n Monthly, Aug. 2010, at 17.

2 *See* Charles Goulding, Taylor Goulding and Raymond Kumar, *The EPAct Tax Aspects of Resurging U.S. Manufacturing Investments*, Corp. Bus. Tax'n Monthly, Jun. 2011, at 17.

3 *See* Charles Goulding, Taylor Goulding and Raymond Kumar, *Energy and Tax Savings Opportunities for Self Storage Facilities*, Corp. Bus. Tax'n Monthly, Sep. 2010, at 13.

4 Energy Policy Act of 2005 (P.L. 109-58) ("EPAct").

5 *See* Charles Goulding, Taylor Goulding and Raymond Kumar, *The EPAct Tax Aspects of Resurging U.S. Manufacturing Investments*, Corp. Bus. Tax'n Monthly, June 2011, at 17, *citing* Charles Goulding, Taylor Goulding and Amelia Aboff, *How LEED 2009 Expands EPAct Tax Savings Opportunities*, Corp. Bus. Tax'n Monthly, Sep. 2009, at 11.