

EPAct Tax Aspect of McQuay Chiller LED Lighting Combinations

By Charles R. Goulding, Jacob Goldman and Gary Savell

Charles Goulding, Jacob Goldman and Gary Savell discuss the energy efficiency of the McQuay chiller or LED lighting. Installing these energy-saving devices allows property owners to nearly always receive a tax deduction under EPAct and allows a property owner or tenant to greatly reduce ongoing operating costs.

Buildings, particularly office buildings, that are interested in operating at the highest energy efficiency levels are upgrading to very energy-efficient McQuay frictionless chillers and low wattage LED lighting. Large EPAct tax incentives typically at the \$1.80-per-square-foot level are available for these product combinations.

Code Sec. 179D Tax Opportunities

Pursuant to Code Sec. 179D, as enacted by the Energy Policy Act of 2005 (EPAct),¹ commercial property owners making qualifying energy-reducing investments in their new or existing locations can obtain immediate tax deductions of up to \$1.80 per square foot.

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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 \$0.60 per square foot for each of the three major building subsystems: lighting; heating, ventilating 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.

LED Lighting

LED lighting is becoming widely used as a much more energy-efficient alternative for the lighting needs for buildings. In our article entitled, *LED Lighting Can Play a Key Role in Securing EPAct Tax Benefits*, we looked at LED lighting as a prime solution for office buildings, hotels and restaurants and retail stores. LEDs are extremely energy-efficient and typically qualify for a full deduction for the lighting portion of the EPAct.²

McQuay Chillers

McQuay, a large U.S. HVAC maker, has engineered an innovative, very energy-efficient chiller. The firm,

which recently was purchased by Daikin Industries, Ltd., has created frictionless chillers, which are much more efficient than many conventional chillers. These chillers use magnetic bearings which are able to spin quicker than their lubricated counterparts. This makes the chiller run efficiently and utilize much less electricity.

In October 2011, the U.S. Department of Energy (DOE) announced the submission of Daikin McQuay's "Rebel" unit as part of a voluntary challenge for new HVAC units. Referring to this, the Secretary of Energy, Dr. Steven Chu, said, "I'm excited to see manufacturers raising the performance bar to meet the genuine demand for energy-saving commercial air conditioners." The DOE desires a 50- to 60-percent reduction in energy usage for commercial HVAC units, such as the ones McQuay makes.³

Integrated Part Load Value (IPLV) is a measurement of commercial HVAC efficiency across various building loads. This important value allows comparison between HVAC make and models and current building code standards. A magnetic bearing chiller's IPLV exceeds 40 percent more efficient than chillers designed to ASHRAE 90.1 2001-2007 codes.

Benchmarking

The mandatory and voluntary use of building energy benchmarking has become practice for measuring how well a product meets efficiency standards. Benchmarking takes energy utilization for a building and compares this number with other similar property energy usage. A building is energy-efficient and qualifies for the Energy Star rating if it is at the 75-percent mark or in the third quartile or better.⁴ The use of energy benchmarking allows building owners and tenants to measure the amount of energy usage compared to similar buildings. Major jurisdictions with mandatory energy benchmarking include California and the cities of Austin, Texas, Seattle, Washington, New York City and Washington D.C. Office buildings below the 75th percentile rating may want to

consider LED lighting and or McQuay chillers to improve their rating.

HVAC Tax Deduction Targets

For projects placed in service after March 12, 2012, businesses no longer need to hit a 16-2/3-percent target per technology in order to qualify for EPAct incentives. An HVAC EPAct tax incentive is available for a 15-percent energy cost reduction, and a building envelope tax incentive is available for a 10-percent energy cost reduction.

Accordingly, a property owner can now receive a two-measure \$1.20-per-square-foot deduction for a 15-percent HVAC and 10-percent envelope energy cost reduction (a total combined energy cost reduction of 25 percent). A company would have previously had to have met a total combined energy cost reduction of 33-1/3 percent before the recently issued IRS Notice 2012-28.⁵

Although the initial capital investment may be large, the McQuay chiller and LED lighting bring along energy cost savings in addition to the tax deduction from EPAct.

Conclusion

The energy efficiency of either a McQuay chiller or LED lighting allows property owners to nearly always receive a tax deduction under EPAct. Although the initial capital investment may be large, the McQuay chiller and LED lighting bring along energy cost savings in addition to the tax deduction from EPAct. This allows the property owner or tenant to greatly reduce ongoing operating costs.

ENDNOTES

- ¹ Energy Policy Act of 2005 (P.L. 109-58) (EPAct).
- ² Charles R. Goulding, Raymond Kumar and Jennifer Pariente, *LED Lighting Can Play a Key Role in Securing EPAct Tax Benefits*, IMARK Now, Feb. 2012.
- ³ See Sec. of Energy press release: <http://energy.gov/articles/department-energy-announces-first-entry-market-driven-high-efficiency-commercial-air>.
- ⁴ Charles R. Goulding and Spencer Marr, *Washington D.C. Energy Benchmarking Impacts Local Hotels*, Jun. 2011. Available online at www.energytaxsavers.com/articles/Article%20-%20Washington%20D.C.%20Energy%20Benchmarking%20Impacts%20Local%20Hotels%20-%20Google%20Knol.pdf.
- ⁵ See Notice 2012-28, IRB 2012-17, Apr. 23, 2012.