National Basketball Association (NBA) and Energy Tax Savings

By Charles Goulding, Jacob Goldman and Taylor Goulding

Charles Goulding, Jacob Goldman and Taylor Goulding discuss the NBA's Green Initiative, explaining the tax saving benefits afforded by Code Sec. 179D.

The National Basketball Association (NBA) has entered into a partnership with the Natural Resources Defense Council (NRDC) aimed at having the NBA "reduce its ecological impact and to help educate basketball fans worldwide about environmental protection."[1] NBA arenas owned by private commercial enterprises and designers involved in government-owned arenas can use a variety of tax incentives to accomplish these goals. NBA basketball arenas are big structures that have the potential to utilize large Code Sec. 179D Energy Policy Act (EPAct)[2] tax deductions to help achieve their targeted energy efficiency goals. Code Sec. 179D provides for 60-cent-per-square-foot tax deductions each for expenditures on lighting, HVAC (heating, ventilation and air-conditioning) and for the building envelope. Chart 1 presents the potential EPAct Code Sec. 179D energy efficiency tax deduction benefits for 28 of the NBA's current U.S. arenas.

The typical types of energy reducing investments for NBA arenas that will qualify for the three categories of Code Sec. 179D tax benefits (described in the Chart 1) are presented below.

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Energy Efficient Lighting

NBA arenas use a lot of electricity for interior building lighting. Today's building lighting products, on average, use 40 to 60 percent less electricity then those lighting products of only five or six years ago. The maximum 60-cent-per-square-foot lighting tax deduction is calculated on a room-by-room basis, which means the main seating and event area can generate the largest lighting tax incentive. Specific types of stage and task lighting can be excluded from the energy efficiency tax calculation making the strictly building-related energy efficient lighting incentive easier to obtain.

NBA stadiums are often supported by large parking garages that can use EPAct tax savings to upgrade to energy lighting. Many of the parking garages adjacent to NBA arenas use prior generation probe start metal halide lighting that is energy-inefficient, and as of January 1, 2009, is illegal to manufacture or import into the United States. To obtain the 30-to-60-cent-per-square-foot tax deductions for parking garages, the watts per square foot have to meet prescribed targets.[3]

Energy-Efficient HVAC (Heating, Ventilation and Air Conditioning)

One of the largest energy users in NBA arenas is HVAC. Arenas can use highly energy efficient special purpose HVAC solutions, such as energy recovery

US NBA Team Arenas

Tax Deductions Available for Energy Efficient Building Improvements Under Current Legislation

Team	Stadium	Total Square Footage	Lighting Minimum Deduction	Lighting Maximum Deduction	HVAC Maximum Deduction	Building Envelope Maximum Deduction	Total
Atlanta Hawks	Phillips Arena	680,000	$ 204,000	$ 408,000	$ 408,000	$ 408,000	$ 1,224,000
Boston Celtics	Fleet Center	755,000	$ 226,500	$ 453,000	$ 453,000	$ 453,000	$ 1,359,000
Charlotte Bobcats	Time Warner Cable	780,000	$ 234,000	$ 468,000	$ 468,000	$ 468,000	$ 1,404,000
Chicago Bulls	United Center	960,000	$ 288,000	$ 576,000	$ 576,000	$ 576,000	$ 1,728,000
Cleveland Cavaliers	Quicken Loans Arena	750,000	$ 225,000	$ 450,000	$ 450,000	$ 450,000	$ 1,350,000
Dallas Mavericks	American Airlines Center	750,000	$ 225,000	$ 450,000	$ 450,000	$ 450,000	$ 1,350,000
Denver Nuggets	Pepsi Center	675,000	$ 202,500	$ 405,000	$ 405,000	$ 405,000	$ 1,215,000
Detroit Pistons***	Palace of Auburn Hills	950,000	$ 285,000	$ 570,000	$ 570,000	$ 570,000	$ 1,710,000
Golden State Warriors	Oracle Arena	500,000	$ 150,000	$ 300,000	$ 300,000	$ 300,000	$ 900,000
Houston Rockets	Toyota Center	500,000	$ 150,000	$ 300,000	$ 300,000	$ 300,000	$ 900,000
Indiana Pacers	Conseco Fieldhouse	750,000	$ 225,000	$ 450,000	$ 450,000	$ 450,000	$ 1,350,000
Los Angeles Lakers****	Staples Center	950,000	$ 285,000	$ 570,000	$ 570,000	$ 570,000	$ 1,710,000
Memphis Grizzlies	The Pyramid	500,000	$ 150,000	$ 300,000	$ 300,000	$ 300,000	$ 900,000
Miami Heat	American Airlines Arena	680,000	$ 204,000	$ 408,000	$ 408,000	$ 408,000	$ 1,224,000
Milwaukee Bucks	Bradley Center	550,000	$ 165,000	$ 330,000	$ 330,000	$ 330,000	$ 990,000
Minnesota Timberwolves	Target Center	831,533	$ 249,460	$ 498,920	$ 498,920	$ 498,920	$ 1,496,759
New Jersey Nets**	Izod Center	4,800,000	$ 1,440,000	$ 2,880,000	$ 2,880,000	$ 2,880,000	$ 8,640,000
New Orleans Hornets	New Orleans Arena	665,000	$ 199,500	$ 399,000	$ 399,000	$ 399,000	$ 1,197,000
New York Knicks	Madison Square Garden	1,000,000	$ 300,000	$ 600,000	$ 600,000	$ 600,000	$ 1,800,000
Oklahoma City Thunder	Ford Center	586,000	$ 175,800	$ 351,600	$ 351,600	$ 351,600	$ 1,054,800
Orlando Magic	Orlando Magic Arena (2010)	800,000	$ 240,000	$ 480,000	$ 480,000	$ 480,000	$ 1,440,000
Philadelphia 76'ers	Wachovia Center	650,000	$ 195,000	$ 390,000	$ 390,000	$ 390,000	$ 1,170,000
Phoenix Suns	US Airways	1,000,000	$ 300,000	$ 600,000	$ 600,000	$ 600,000	$ 1,800,000
Portland Trailblazers	Rose Garden	758,000	$ 227,400	$ 454,800	$ 454,800	$ 454,800	$ 1,364,400
Sacramento Kings	Arco Arena II	442,000	$ 132,600	$ 265,200	$ 265,200	$ 265,200	$ 795,600
San Antonio Spurs	SBC Center	730,000	$ 219,000	$ 438,000	$ 438,000	$ 438,000	$ 1,314,000
Utah Jazz	Energy Solutions Arena	743,000	$ 222,900	$ 445,800	$ 445,800	$ 445,800	$ 1,337,400
Washington Wizards	Verizon Center	836,840	$ 251,052	$ 502,104	$ 502,104	$ 502,104	$ 1,506,312
Totals:		24,572,373	$ 7,371,712	$ 14,743,424	$ 14,743,424	$ 14,743,424	$ 44,230,271

* Note: Square footage in countries outside the US cannot be included in the tax deduction
** Izod Arena square footage based on Meadowlands sports complex including the basketball arena
*** Palace at Auburn Hills is the second largest NBA stadium which we estimated to be 950,000 sq. ft. based off of the size of the other arenas
**** Both the LA Lakers and LA Clippers play at the Staples Center

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ventilation, geothermal and thermal storage, to greatly reduce energy usage and potentially qualify for a large EPAct HVAC tax deduction.

Many of the NBA arenas are within city centers where electricity in particular is supply constrained. A material reduction in energy use in these facilities will greatly benefit the communities that support professional basketball. One HVAC technology that can greatly reduce arena peak time electrical energy use is thermal storage. With thermal storage systems, ice is manufactured at night when electricity is in excess supply and electricity prices are very low. This inexpensive energy is then used to cool the building down during the day when electricity is in peak demand and is very expensive. The one million square foot Wachovia Facility hosts nearly 300 events a year, including games for the NHL's Philadelphia Flyers and the NBA's Philadelphia 76ers. Michael Ahearn, Vice President of operations for the Wachovia Center in Philadelphia, expressed the benefits of their thermal storage system this way: "It's a system that works for everyone...It helps reduce our expenses and saves energy for the rest of the community."[4] NBA arenas that invest in thermal storage will generally qualify for the $1.80-per-square-foot tax deduction presented above and those that already have thermal storage should be positioned to obtain the $1.80-per-square-foot tax deduction when making further arena facility energy reducing investments.

Energy-Efficient Building Envelope

Unlike lighting and HVAC, the building envelope does not actually consume energy so the 60-cent-per-square-foot Code Sec. 179D arena building envelope energy tax deductions will be predicated by achieving energy efficient lighting and, in particular, HVAC energy efficiency targets.

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Qualifying building envelope items for tax deductions include roofs, walls, doors, windows, foundation and insulation.

Accordingly, those arenas that have or are proposing to have highly energy-efficient measures such as thermal storage or geothermal, will be positioned to simultaneously achieve large tax deductions for investments made in qualifying building envelope items.

Understanding Energy Modeling

To obtain the HVAC and building envelope tax deduction, the arena must be modeling in IRS approved modeling software. Code Sec. 179D lighting tax incentives do not require modeling. New LEED (Leadership in Energy and Environmental Design) arenas must be modeled to qualify for LEED. LEED certification is increasingly being required to be accomplished for most new government-owned or government-funded arenas. The American Airlines arena is the first NBA arena to achieve the coveted LEED certification status. According to the April 29th, 2009, press release the arena's energy efficient features include a cool roof and an offsite chiller.[5] Some state and utility rebate incentives require modeling, particularly for large energy reducing projects. All arenas that have or are contemplating thermal storage, geothermal or energy recovery ventilation should strongly consider having their building modeled to evaluate the building's performance and then secure their probable Code Sec. 179D tax deductions. Many state and utility rebate programs will pay all or a portion of modeling costs pursuant to proposals to make new energy efficiency investments.

Alternative Energy

Most mainstream alternative energy investments including solar, wind and geothermal are now eligible for federal tax credits or economically equivalent grants and five-year deprecation. When made within bonus deprecation eligibility time periods, some of these investments may also be eligible for 50-percent bonus deprecation. Two examples of NBA arenas that have recently made solar investments are as follows:

(1) **U.S. Airways Center:** Installed 1,125 panels and 18,000 square feet of solar photovoltaic (PV) panels to produce 331,233 kilowatts of electricity per year.[6]

(2) **Staples Center:** Installed 1,727 panels and 24,190 square feet of solar PV panels. In a combined project whereby the Nokia Theater, L.A. (located directly across the street) also installed PV. The combined systems will generate 512 kilowatts of electricity per year.[7]

Conclusion

The NBA Green initiative presents tremendous opportunity for energy and tax savings for both commercial owners and designers involved with government owned arenas. For the last 12 years the NBA has made large capital investments in automated computer and software systems to measure player performance statistics. NBA Executive Vice President of Operations and Technology, Stephen Hellmuth said, "You're not in a league unless you got a statistics system."[8] Presuming NBA Commissioner David J. Stern takes the same approach in monitoring and measuring arena energy performance while identifying the related tax opportunities, the NBA can be of great service in helping lead the nation into an energy-efficient future.

The NBA and the NRDC are hoping that the NBA green initiative will serve as a model and catalyst for other facility's green initiatives. Reducing arena energy uses will serve as a direct model for the myriad of other inner city athletic facilities including K-12 school athletic facilities and community college and university athletic facilities. Indirectly, the NBA green initiatives will influence many parties since NBA activities are widely followed and emulated.

Endnotes

1 "NBA.com: NBA, NRDC team up for first-ever NBA Green Week." *NBA.com—The Game Happens Here*, (Jul. 7, 2009). *See www.nba.com/2009/news/04/01/green.week.release/.*

2 Energy Policy Act of 2005 (P.L. 109-58).

3 Charles Goulding, Peter Kelly and Taylor Goulding, *EPAct Tax Deductions for Parking Garage Lighting Projects Gain Wider Use*, The Parking Professional, Sept. 2008.

4 Kelly Pedone, *Environmentally Friendly*, IAAM, International Association of Assembly Managers. *See www.iaam.org/facility_manager/Pages/2006_Dec_Jan/Feature_2.htm.*

5 Paul Brinkmann, *American Airlines Arena Gets LEED Certification*, S. Fla. Bus. J. *See, http://southflorida.bizjournals.com/southflorida/stories/2009/04/06/daily23.html.*

6 Emily Clark, US Airways Center Announces Solar Installation, Gizmag Emerging Tech. Mag. July 7, 2009 *www.gizmag.com/us-airways-center-announces-solar-installation/9956/.*

7 *Solar Powers Staples Center Events, Green Cuisine Factory | NBC Chicago*, Chicago - Local News, Weather, Traffic, Entertainment, Events, Breaking News | NBC Chicago, Oct. 29, 2008. Environment News Service (ENS), July 7, 2009. *See, www.nbcchicago.com/news/green/Solar_Powers_Staples_Center_Events__Green_Cuisine_Factory.html.*

8 Bob Brown, *Celtics injuries? Kobe Bryant's shooting? Nah, tech's the real story at NBA Finals | NetworkWorld.com Community*, NetworkWorld.com—Network World, June 6, 2008. See, *www.networkworld.com/community/node/28521.*