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National Basketball Association (NBA) & Energy Tax Savings

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Tax incentives for energy efficiency upgrade projects provide excellent opportunities for NBA facilities.

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 both 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) tax deductions to help achieve their targeted energy efficiency goals. Code Sec. 179D provides up to \$1.80-per-square-foot tax deductions each for 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 a sample 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 are presented on the following page.

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 than 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.²

Energy-Efficient HVAC

One of the largest energy users in NBA arenas is HVAC (heating, cooling and air conditioning). Arenas can use highly energy efficient special purpose HVAC solutions, such as energy recovery ventilation, geothermal and thermal storage, to greatly reduce energy usage and potentially qualify for a large EPAct HVAC tax deduction.

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Chart 1: The potential EAct Code Sec. 179D energy efficiency tax deduction benefits for a sample of the NBA's current U.S. arenas.

U.S. NBA Team Arenas

Potential Tax Deductions Available for Energy Efficient Building Improvements

Team	Stadium	Total Square Footage	Prescriptive Lighting Method		Whole Building Lighting Modeling Method	
			\$0.30/sq.ft. Minimum Deduction	\$0.60/sq.ft. Maximum Deduction	\$1.20/sq.ft. Maximum Deduction	\$1.80/sq.ft. Maximum Deduction
Atlanta Hawks	Phillips Arena	680,000	\$ 204,000	\$ 408,000	\$ 816,000	\$ 1,224,000
Boston Celtics	TD Garden	755,000	\$ 226,500	\$ 453,000	\$ 906,000	\$ 1,359,000
Brooklyn Nets	Barclays Center	675,000	\$ 202,500	\$ 405,000	\$ 810,000	\$ 1,215,000
Charlotte Hornets	Time Warner Cable Arena	780,000	\$ 234,000	\$ 468,000	\$ 936,000	\$ 1,404,000
Chicago Bulls	United Center	960,000	\$ 288,000	\$ 576,000	\$ 1,152,000	\$ 1,728,000
Cleveland Cavaliers	Quicken Loans Arena	750,000	\$ 225,000	\$ 450,000	\$ 900,000	\$ 1,350,000
Dallas Mavericks	American Airlines Center	840,000	\$ 252,000	\$ 504,000	\$ 1,008,000	\$ 1,512,000
Denver Nuggets	Pepsi Center	975,000	\$ 292,500	\$ 585,000	\$ 1,170,000	\$ 1,755,000
Detroit Pistons	The Palace of Auburn Hills	950,000	\$ 285,000	\$ 570,000	\$ 1,140,000	\$ 1,710,000
Golden State Warriors	Oracle Arena	500,000	\$ 150,000	\$ 300,000	\$ 600,000	\$ 900,000
Houston Rockets	Toyota Center	500,000	\$ 150,000	\$ 300,000	\$ 600,000	\$ 900,000
Indiana Pacers	Bankers Life Fieldhouse	750,000	\$ 225,000	\$ 450,000	\$ 900,000	\$ 1,350,000
Los Angeles Lakers	Staples Center	950,000	\$ 285,000	\$ 570,000	\$ 1,140,000	\$ 1,710,000
Memphis Grizzlies	FedExForum	500,000	\$ 150,000	\$ 300,000	\$ 600,000	\$ 900,000
Miami Heat	American Airlines Center	680,000	\$ 204,000	\$ 408,000	\$ 816,000	\$ 1,224,000
Milwaukee Bucks	BMO Harris Bradley Center	550,000	\$ 165,000	\$ 330,000	\$ 660,000	\$ 990,000
Minnesota Timberwolves	Target Center	831,500	\$ 249,450	\$ 498,900	\$ 997,800	\$ 1,496,700
New Orleans Pelicans	Smoothie King Center	571,000	\$ 171,300	\$ 342,600	\$ 685,200	\$ 1,027,800
New York Knicks	Madison Square Garden	1,000,000	\$ 300,000	\$ 600,000	\$ 1,200,000	\$ 1,800,000
Oklahoma City Thunder	Chesapeake Energy Arena	586,000	\$ 175,800	\$ 351,600	\$ 703,200	\$ 1,054,800
Orlando Magic	Amway Center	800,000	\$ 240,000	\$ 480,000	\$ 960,000	\$ 1,440,000
Philadelphia 76ers	Wells Fargo Center	650,000	\$ 195,000	\$ 390,000	\$ 780,000	\$ 1,170,000
Phoenix Suns	Talking Stick Resort Arena	1,000,000	\$ 300,000	\$ 600,000	\$ 1,200,000	\$ 1,800,000
Portland Trail Blazers	Moda Center	758,000	\$ 227,400	\$ 454,800	\$ 909,600	\$ 1,364,400
Sacramento Kings	Golden 1 Center	779,200	\$ 233,760	\$ 467,520	\$ 935,040	\$ 1,402,560
San Antonio Spurs	AT&T Center	730,000	\$ 219,000	\$ 438,000	\$ 876,000	\$ 1,314,000
Utah Jazz	Vivint Smart Home Arena	743,000	\$ 222,900	\$ 445,800	\$ 891,600	\$ 1,337,400
Washington Wizards	Verizon Center	836,800	\$ 251,040	\$ 502,080	\$ 1,004,160	\$ 1,506,240
Totals:		21,080,500	\$ 6,324,150	\$ 12,648,300	\$ 25,296,600	\$ 37,944,900

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 Wells Fargo 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 Wells Fargo 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."³ 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 tax deductions will be predicated by achieving energy efficient lighting, and in particular, HVAC energy

efficiency targets. Qualifying the 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. 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 Section 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.

The American Airlines Arena

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 roof that reflects heat and an offsite chiller for air conditioning.⁴ Over the past five years, the facility has maintained its steadfast commitment to environmentally sound principles and practices – so much so that the facility completely bypassed its initial LEED Silver goal and achieved LEED Gold, the first arena in the world to receive LEED Gold recertification. When compared to other public assembly facilities, the Arena uses 26.5% less energy per square foot.⁵ In 2014, Miami-Dade County received \$1.135 million from Consolidated Edison Solutions, Inc. resulting from the federal 179D

allocation associated with recent improvements completed by ConEdison Solutions to the County's downtown chilled water system.⁶ Our firm, Energy Tax Savers, directed the tax work related to this project.



Representatives from ConEdison Solutions present Miami-Dade County with \$1.135 million check.

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."⁷ Presuming NBA Commissioner Adam Silver 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.

¹ "NBA, NRDC team up for first-ever NBA Green Week." *NBA Media Ventures*, July 2009. Available online at:

www.nba.com/2009/news/04/01/green.week.release

² Charles Goulding, Peter Kelly and Taylor Goulding. "EPA Act Tax Deductions for Parking Garage Lighting Projects Gain Wider Use."

The Parking Professional, September 2008. Available online at:
www.facilitiesnet.com/lighting/article/EPA-Act-Tax-Deductions-for-Lighting-Projects-Gain-Wider-Use--9216

³ Kelly Pedone. "Environmentally Friendly." *International Association of Assembly Managers*, July 2009. Available online at:

www.iaam.org/facility_manager/Pages/2006_Dec_Jan/Feature_2.htm

⁴ Paul Brinkmann. "American Airlines Arena gets LEED Certification." *South Florida Business Journal*, April 2009. Available online at:

www.southflorida.bizjournals.com/southflorida/stories/2009/04/06/daily23.html

⁵ "American Airlines Arena is World's First Sports & Entertainment Facility to Achieve LEED Gold Recertification." *NBA Media Ventures*, January 2015. Available online at:

www.nba.com/heat/news/americanairlines-arena-worlds-first-sports-entertainment-facility-achieve-leedr-gold/

⁶ "Miami-Dade County and Con Edison Solutions Tap Into the "Fifth Fuel" for Savings." *ConEdison Solutions*, July 2014. Available online at: www.conedsolutions.com/news/newsview/14-07-16/Miami-Dade-County-And-Con-Edison-Solutions-Tap-Into-The-%E2%80%9CFifth-Fuel%E2%80%9D-For-Savings.aspx

⁷ Bob Brown. "Celtics Injuries? Kobe Bryant's Shooting? Nah, Tech's the Real Story at NBA Finals." *Network World*, June 2008. Available online at: www.networkworld.com/community/node/28521