The Tax Aspects of Major League Baseball's Green Team Initiative

By Charles Goulding, Raymond Kumar and Kenneth Wood

Charles Goulding, Raymond Kumar and Kenneth Wood discuss energy reduction initiatives available to Major League Baseball stadiums and the tax incentives that stadium owners can take advantage of by reducing their energy consumption and waste.

In March 2008, Major League Baseball (MLB) announced a collaboration with the National Resources Defense Counsel called the Green Team Initiative.[1] This is an important initiative because it is a comprehensive program, and major league ball parks are large facilities with a high degree of public visibility.

This article focuses on some of the major energy reduction initiatives available to stadiums and the tax opportunities produced by many of those initiatives. Stadiums are typically located in densely populated areas where electric grids experience the most demand stress related to finite electrical supply. This is particularly relevant in high-cost electric markets like New York, California and Texas that have multiple stadiums. Also, many new stadiums are enclosed and may need to be air conditioned, thus adding significant new electric costs.

Since MLB stadiums are large facilities that for baseball purposes are used for only 81 home regular season games a year, they have a unique ability to use their physicality to generate excess energy to help their immediate neighbors and the communities that support them.

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Overview

Some stadiums are privately owned and some are government owned. Energy Policy Act (EPAct) tax benefits are available in both situations since commercial owners are eligible beneficiaries, as are the designers of new and retrofitted government-owned stadiums.[2]

The EPAct added Code Sec. 179D to provide an immediate tax deduction of up to $1.80 per square foot for building investments that achieve specified energy cost reductions beyond ASHRAE 90.1-2001 building energy code standards. A one-time $1.80-per-square-foot deduction is the maximum allowable tax deduction, but deductions of up to 60 cents per square foot are also available for three types of building systems: lighting, including lighting controls; HVAC; and the building envelope, which includes roof, walls, windows, doors and floor/foundation.[3]

Lighting Tax Incentives

Stadiums need an immense amount of lighting, and one of the best ways to reduce stadium lighting is to install energy efficient interior and exterior lighting fixtures. Qualifying interior stadium lighting projects are eligible for up to a 60 cent per square foot immediate EPAct lighting tax deduction.

To obtain this tax deduction, stadiums must replace their inefficient lighting by December 31, 2013. Many

stadiums have nearby parking garages, which provide one of the best EPAct tax deduction opportunities when prior generation lighting fixtures are replaced by EPAct qualifying fluorescent, induction or LED (Light Emitting Diode) lighting. We are beginning to see a marked increase in LED lighting for large parking garages. Although LED lighting is expensive, it has a long, useful life, and many of these facilities collect enough revenue to justify payment of the upfront costs necessary to obtain long-term operating cost reduction savings. Stadiums are often supported by local area parking garages and MLB should lead by example and encourage local facilities to also reduce their parking garage lighting energy use.

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HVAC

Stadiums with domes and retractable roofs have HVAC needs throughout the entire facility, and uncovered stadiums have HVAC needs in locker rooms, concession areas, offices, restaurants, rest rooms, mechanical rooms and other support areas. Because of the large size of these facilities, special purpose HVAC such as thermal storage, geothermal and energy recovery ventilation can be used in these facilities to obtain large energy cost reductions and obtain the Code Sec. 179D 60-cent-per-square-foot HVAC tax deduction.

Using HVAC to Help MLB Stadium Neighbors

Because baseball stadiums are large facilities with sporadic power needs, nearby facilities can draw on the unused excess power via district-wide HVAC systems, thus allowing the stadium's neighbors to benefit from the investment in energy-efficient HVAC technologies, too. Chase Field, the Arizona Diamondbacks' home stadium in Phoenix, Arizona, is an example of a stadium that benefits the local area in this way. The Diamondbacks accomplish this with high efficiency chillers and a thermal storage system. Using an extensive piping system, the thermal storage technology provides cooling for a variety of downtown Phoenix buildings. Brian Kearney, Executive Director of the Downtown Phoenix district, forecasted that "this innovative system will help ensure that this momentum continues by providing a competitive benefit to developers, building owners and tenants who are able to take advantage of it."

The multiple benefits of the system have been described this way: "Ice storage works by producing air conditioning ahead of the moment of need. The cooling district will use an ice-based chiller system to manufacture ice at night when utility loads—and market prices—are lowest. During peak cooling periods, the ice will be melted, and the water will be pumped through an underground distribution network for use in air-conditioned buildings. The water is then returned to the icemaker for reconditioning. The system not only ensures conservation of a vital natural resource (water), but it also eliminates the need for buildings to own air-conditioning systems that use ozone-depleting chlorofluorocarbons (CFCs), thus potentially reducing the 'heat island' effect of increased temperatures in downtown Phoenix."[4]

Solar Photovoltaic Electricity Generation

Solar (P.V.) generates extra electricity that can be used to provide electricity for the building or can be transferred to the electrical grid for use by others. The process of transferring P.V. solar electricity to the grid is sometimes called "nega watts" or "net metering." Commercial solar installations are eligible for a 30-percent tax credit, and the credit was recently extended through the end of 2016.[5] Solar material prices are rapidly decreasing, which, in effect is increasing the economic payback from this technology.

Baseball Stadiums provide interesting solar electricity opportunities, because the physical layout of stadiums usually provides space for multiple solar installations. Shading from nearby structuring normally is not an issue, and the 81-game-day limited use means the majority of the PV generation can be transferred back to the electric grid to benefit the

Table 1. Major League Baseball's Solar Net Metering Opportunity

Team Name	Stadium	Opened	State	State System Size Limit (for Commercial)
Arizona Diamondbacks	Chase Field	1998	AZ	100 KW
Atlanta Braves	Turner Field	1996	GA	100 KW
Baltimore Orioles	Oriole Park at Camden Yards	1992	MD	2 MW
Boston Red Sox	Fenway Park	1912	MA	Class I facilities: 60 KW Class II facilities: 1 MW Class III facilities: 2 MW
Chicago Cubs	Wrigley Field	1914	IL	40 KW
Chicago White Sox	U.S. Cellular Field	1991	IL	40 KW
Cincinnati Reds	Great American Ball Park	2003	OH	No Limit Specified
Cleveland Indians	Progressive Field	1994	OH	No Limit Specified
Colorado Rockies	Coors Field	1995	CO	25 KW
Detroit Tigers	Comerica Park	2000	MI	30 KW
Florida Marlins	Dolphin Stadium	1987	FL	10 KKW
Houston Astros	Minute Maid Park	2000	TX	50 KW
Kansas City Royals	Kauffman Stadium	1973	MO	100 KW
Los Angeles Angels of Anaheim	Angel Stadium of Anaheim	1966	CA	1 MW
Los Angeles Dodgers	Dodger Stadium	1962	CA	1 MW
Milwaukee Brewers	Miller Park	2001	WI	20 KW
Minnesota Twins	Metrodome	1982	MN	40 kw
New York Mets	Citi Field	2009	NY	2 MW
New York Yankees	Yankee Stadium	2009	NY	2 MW
Oakland Athletics	Oakland-Alameda County Coliseum	1966	CA	1 MW
Philadelphia Phillies	Citizens Bank Park	2004	PA	3 MW
Pittsburgh Pirates	PNC Park	2001	PA	3 MW
St. Louis Cardinals	Busch Stadium	2006	MO	100 KW
San Diego Padres	PETCO Park	2004	CA	1 MW
San Francisco Giants	AT&T Park	2000	CA	1 MW
Seattle Mariners	Safeco Field	1999	WA	100 KW
Tampa Bay Rays	Tropicana Field	1990	FL	10 KW
Texas Rangers	Rangers Ballpark in Arlington	1994	TX	50 KW
Washington Nationals	Nationals Park	2008	DC	1 MW

* Chart prepared by Energy Tax Savers, Inc.

community. Table 1 provides the name of existing MLB stadiums that are in jurisdictions that allow excess solar electricity to be sold into the market.[6]

In 2007, the San Francisco Giants installed 120 kW of solar panels in three locations in their stadium. The three-location system used 590 panels that were provided by Sharp Corp.[7]

Solar Electricity TV Offset Example

Many of today's wide-screen TVs use tremendous amounts of electricity. MLB stadiums typically use hundreds of TV sets to keep fans connected while waiting in line and dining. The Cleveland Indians made the solar generation/TV use connection when

they installed their solar panels in 2007. Curtis Danburg, team spokesperson, stated that the panels generate 8.4 kilowatts, or "enough to energize the 400 televisions we have in the ballpark."[8] TV electricity use has become such a concern that California is proposing minimum TV efficiency standards and Japan is offering five percent of purchase price incentives for energy-efficient TVs and other appliances. The California energy commission says that televisions account for 10 percent of the electricity used in the average household and the new standards would require 50-percent less energy use. The proposed rules would come into effect in 2013 and affect all televisions manufactured from January 2011 onward.[9]

Yankee Stadium and Mets CitiField

In a surprising announcement, it has been publicly reported that both the recently opened Yankee Stadium and Mets CitiField use materially more energy than their predecessor stadiums.[10] In view of today's more rigorous building energy codes and the availability of more energy-efficient building components, this is indeed a startling announcement, particularly in view of the supply-constrained electricity markets of New York's municipalities. The stadium owners cite the extensive use of energy inefficient wide-screen TVs as one reason for the increased energy use. The good news is that both of these stadiums can make good use of MLB's initiative and achieve substantial energy cost reduction that could be facilitated by the EPAct energy efficiency commercial tax incentives.

Using Baseball Statistics

From the time we are young we learn that baseball is game of statistics, whether it be calculating a hitter's batting average or a pitcher's earned run average. Accordingly, MLB statisticians should easily be able to measure energy efficiency and publish the resulting data—including lighting, HVAC, TV and appliance use—for all its ball parks. MLB should be given credit for any excess alternative energy generation provided to the community from technologies such as thermal storage and solar described above.

Conclusion

The MLB and National Resources Defense Council Team Greening program can greatly benefit our country and use a multitude of EPAct energy-efficiency tax deductions and alternative energy tax credits to improve economic payback and accelerate its goals. Technologies like thermal storage can result in both energy and tax savings, and also create additional energy and tax savings for neighboring buildings. It's gratifying to see America's favorite pastime become an integral part of its desired "future-time."

Endnotes

1 Major League Baseball Press Release, *Major League Baseball Goes Green in Collaboration with the Natural Resources Defense Council*, Mar. 11, 2008. http://mlb.mlb.com/news/press_releases/press_release.jsp?ymd=20080311&content_id=2418580&vkey=pr_mlb&fext=.jsp

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

3 Charles Goulding, Jacob Goldman and Nicole DiMarino, *EPAct Tax Deductions for Lighting Gain Wider Use*, Building Operating Mgmt, July 2008, at 68-74.

4 APS Energy Services Press Release, *APS Energy Services To Develop Innovative District Cooling System For Downtown Phoenix Businesses—Bank One Ballpark Slated as First Customer*," Oct. 20, 1999. Available at *www.apses.com/content/northwind/press_releases/media19991020.asp*.

5 Charles Goulding, Jacob Goldman, and Taylor Goulding, *Tax Planning for the 21st Solar Century*," Corp. Bus. Tax'n Monthly, Feb. 2009, at 23.

6 The list of MLB stadiums for the table was obtained at *http://en.wikipedia.org/wiki/List_of_Major_League_Baseball_stadiums* and the IREC State-By-State Net Metering Table was obtained at *www.irecusa.org/index.php?id=90*.

7 Mark LaPedus, *Baseball Goes Solar*, EE Times, Jul. 9, 2007. Available at *www.eetimes.com/showArticle.jhtml;jsessionid=TIL03JISFPXO2QSNDLOSKHSCJUNN2JVN?articleID=201000336*.

8 Adam Hadhazy, *Green Diamonds: Baseball Stadiums Take a Swing at Energy Efficiency*, Sci. Am., Apr. 5, 2009. Available at *www.scientificamerican.com/article.cfm?id=green-baseball-diamonds-energy-efficiency*.

9 David Adams, *California Says TV Manufacturers Need to Improve Energy Efficiency* St. Petersburg Times, Apr. 15, 2009. Available at *http://blogs.tampabay.com/energy/2009/04/california-says-tv-manufactureres-need-to-improve-energy-efficiency.html*.

10 Bill Sanderson, *Oh, Watt a Play! New Met, Yanks Parks Use Twice the Power*, N.Y. Post, Apr. 6, 2009. Available at *www.nypost.com/seven/04062009/news/regionalnews/oh__watt_a_play__163144.htm*.