

EPAct Tax Aspects of National Hockey League's Green Initiative

By Andressa Bonafe, Seann Convey and Charles G. Goulding

Andressa Bonafe, Seann Convey and Charles G. Goulding discuss the National Hockey League's program aimed at fostering sustainable living and business practices for ice rinks and the tax incentives that stadium owners can take advantage of by reducing their energy consumption and waste.

The National Hockey League (NHL), in partnership with the Natural Resources Defense Council (NRDC), has implemented a program aimed at fostering sustainable living and business practices for ice rinks. Since its launching in 2010, NHL Green has been at the forefront of the movement for sports sustainability. The comprehensive initiative encompasses efforts in different domains, such as waste management, environment preservation and energy efficiency. Notable examples are the award-winning food recovery program, *NHL Rock & Wrap It Up!* and the water restoration program, *Gallons for Goals*.

In recent years, the relationship between sports and sustainability has garnered ever-increasing attention. The National Basketball Association's (NBA) Green Initiative¹ and Major League Baseball's (MLB) Greening Program² are other examples of this growing awareness.

Andressa Bonafe is an Analyst with Energy Tax Savers, Inc.

Seann Convey is an Engineering Analyst with Energy Tax Savers, Inc.

Charles G. Goulding, Attorney/CPA, is the President of Energy Tax Savers, Inc., an interdisciplinary tax and engineering firm that specializes in the energy-efficient aspects of buildings.

©2014 A. Bonafe, S. Convey, C.G. Goulding

Intrinsically linked to the cold weather, hockey traces its origins to frozen ponds. For years, burgeoning NHL stars have learned to skate and play in these natural winter settings. By implementing energy-efficiency projects, NHL Arenas can greatly contribute to the League's sustainability goals and to the ultimate objective of perpetuating this tradition. Privately owned arenas and designers of public ones can take advantage of energy tax savings that significantly improve the economic payback of such measures.

The EPAct Tax Opportunity

Pursuant to Code Sec. 179D, as enacted by the Energy Policy Act of 2005 (EPAct),³ properties that make qualifying energy-reducing investments in new or existing locations can obtain immediate tax deductions of up to \$1.80 per square foot.

If the building project does not qualify for the maximum EPAct \$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 building envelope.

Table 1.

Potential Tax Deductions Available for Energy-Efficient Building Improvements							
Team	Arena	Total Square Footage	Lighting		HVAC Maximum Deduction	Building Envelope Maximum Deduction	Total
			Minimum Deduction	Maximum Deduction			
New Jersey Devils	Prudential Center	850,000	\$ 255,000	\$ 510,000	\$ 510,000	\$ 510,000	\$ 1,530,000
New York Islanders	Nassau Veterans Memorial Coliseum	410,000	\$ 123,000	\$ 246,000	\$ 246,000	\$ 246,000	\$ 738,000
New York Islanders	Barclays Center	675,000	\$ 202,500	\$ 405,000	\$ 405,000	\$ 405,000	\$ 1,215,000
New York Rangers	Madison Square Garden	1,000,000	\$ 300,000	\$ 600,000	\$ 600,000	\$ 600,000	\$ 1,800,000
Philadelphia Flyers	Wells Fargo Center	650,000	\$ 195,000	\$ 390,000	\$ 390,000	\$ 390,000	\$ 1,170,000
Pittsburgh Penguins	Consol Energy Center*	735,000	\$ 220,500	\$ 441,000	\$ 441,000	\$ 441,000	\$ 1,323,000
Boston Bruins	TD Garden	755,000	\$ 226,500	\$ 453,000	\$ 453,000	\$ 453,000	\$ 1,359,000
Buffalo Sabres	First Niagara Center	700,000	\$ 210,000	\$ 420,000	\$ 420,000	\$ 420,000	\$ 1,260,000
Carolina Hurricanes	PNC Arena	700,000	\$ 210,000	\$ 420,000	\$ 420,000	\$ 420,000	\$ 1,260,000
Florida Panthers	BB&T Center	872,000	\$ 261,600	\$ 523,200	\$ 523,200	\$ 523,200	\$ 1,569,600
Tampa Bay Lightning	Tampa Bay Times Forum	670,000	\$ 201,000	\$ 402,000	\$ 402,000	\$ 402,000	\$ 1,206,000
Washington Capitals	Verizon Center	836,840	\$ 251,052	\$ 502,104	\$ 502,104	\$ 502,104	\$ 1,506,312
Chicago Blackhawks	United Center	960,000	\$ 288,000	\$ 576,000	\$ 576,000	\$ 576,000	\$ 1,728,000
Columbus Blue Jackets	Nationwide Arena	685,000	\$ 205,500	\$ 411,000	\$ 411,000	\$ 411,000	\$ 1,233,000
Detroit Red Wings	Joe Louis Arena	666,400	\$ 199,920	\$ 399,840	\$ 399,840	\$ 399,840	\$ 1,199,520
Nashville Predators	Bridgestone Arena	750,000	\$ 225,000	\$ 450,000	\$ 450,000	\$ 450,000	\$ 1,350,000
St. Louis Blues	Scottrade Center	665,000	\$ 199,500	\$ 399,000	\$ 399,000	\$ 399,000	\$ 1,197,000
Colorado Avalanche	Pepsi Center	675,000	\$ 202,500	\$ 405,000	\$ 405,000	\$ 405,000	\$ 1,215,000
Minnesota Wild	Xcel Energy Center	650,000	\$ 195,000	\$ 390,000	\$ 390,000	\$ 390,000	\$ 1,170,000
Anaheim Ducks	Honda Center	650,000	\$ 195,000	\$ 390,000	\$ 390,000	\$ 390,000	\$ 1,170,000
Dallas Stars	American Airlines Center	750,000	\$ 225,000	\$ 450,000	\$ 450,000	\$ 450,000	\$ 1,350,000
Los Angeles Kings	Staples Center	950,000	\$ 285,000	\$ 570,000	\$ 570,000	\$ 570,000	\$ 1,710,000
Phoenix Coyotes	Jobing.com Arena	600,000	\$ 180,000	\$ 360,000	\$ 360,000	\$ 360,000	\$ 1,080,000
San Jose Sharks	HP Pavilion at San Jose	450,000	\$ 135,000	\$ 270,000	\$ 270,000	\$ 270,000	\$ 810,000
New York Islanders	Islanders IceWorks**	50,000	\$ 15,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 90,000
New York Rangers	MSG Training Facility	110,000	\$ 33,000	\$ 66,000	\$ 66,000	\$ 66,000	\$ 198,000
Philadelphia Flyers	Virtua Health Flyers Skate Zone	100,000	\$ 30,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 180,000
Pittsburgh Penguins	IceoPlex at Southpointe	65,000	\$ 19,500	\$ 39,000	\$ 39,000	\$ 39,000	\$ 117,000
Boston Bruins	Ristuccia Memorial Arena**	30,000	\$ 9,000	\$ 18,000	\$ 18,000	\$ 18,000	\$ 54,000
Buffalo Sabres	Amherst Ice Center	182,000	\$ 54,600	\$ 109,200	\$ 109,200	\$ 109,200	\$ 327,600
Carolina Hurricanes	Raleigh Ice Center	33,750	\$ 10,125	\$ 20,250	\$ 20,250	\$ 20,250	\$ 60,750

Potential Tax Deductions Available for Energy-Efficient Building Improvements

Team	Arena	Total Square Footage	Lighting		HVAC Maximum Deduction	Building Envelope Maximum Deduction	Total
			Minimum Deduction	Maximum Deduction			
Florida Panthers	Iceplex	125,000	\$ 37,500	\$ 75,000	\$ 75,000	\$ 75,000	\$ 225,000
Tampa Bay Lightning	Ice Sports Forum	85,000	\$ 25,500	\$ 51,000	\$ 51,000	\$ 51,000	\$ 153,000
Washington Capitals	Kettler Capitals Iceplex	137,000	\$ 41,100	\$ 82,200	\$ 82,200	\$ 82,200	\$ 246,600
Chicago Blackhawks	Edge Ice Arena	34,000	\$ 10,200	\$ 20,400	\$ 20,400	\$ 20,400	\$ 61,200
Columbus Blue Jackets	OhioHealth Ice Haus	63,000	\$ 18,900	\$ 37,800	\$ 37,800	\$ 37,800	\$ 113,400
Nashville Predators	Centennial Sportsplex	145,000	\$ 43,500	\$ 87,000	\$ 87,000	\$ 87,000	\$ 261,000
St. Louis Blues	Ice Zone	22,000	\$ 6,600	\$ 13,200	\$ 13,200	\$ 13,200	\$ 39,600
Colorado Avalanche	South Suburban Family Sports Center	150,000	\$ 45,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 270,000
Anaheim Ducks	Anaheim ICE	90,000	\$ 27,000	\$ 54,000	\$ 54,000	\$ 54,000	\$ 162,000
Dallas Stars	Dr. Pepper Star Center	30,000	\$ 9,000	\$ 18,000	\$ 18,000	\$ 18,000	\$ 54,000
Los Angeles Kings	Toyota Sports Center	135,000	\$ 40,500	\$ 81,000	\$ 81,000	\$ 81,000	\$ 243,000
Phoenix Coyotes	Ice Den	150,000	\$ 45,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 270,000
San Jose Sharks	Sharks Ice	170,000	\$ 51,000	\$ 102,000	\$ 102,000	\$ 102,000	\$ 306,000
Totals:		19,211,990	\$ 5,763,597	\$ 11,527,194	\$ 11,527,194	\$ 11,527,194	\$34,581,582
* LEED Gold							
** Google Earth Estimates							

The building envelope comprises every item on the building's exterior perimeter that touches the outside world including roof, walls, insulation, doors, windows and foundation.

EPAct tax savings are driven by square footage. As a result, big structures such as NHL arenas have enormous potential for deductions. Exhibit 1 illustrates benefits available for U.S. arenas and training facilities.

Energy-Efficient Lighting



Similar to most sports facilities, the NHL's arenas consume an immense amount of electricity for interior building lighting. In this scenario, replacing inefficient lighting is not only a major opportunity for energy savings but also a strategy for cutting operating costs. In addition, qualifying interior stadium lighting projects are eligible for up to a \$0.60-per-square-foot immediate EPAct tax deduction. Adjacent parking garages are also strong candidates for such deductions.

LED lighting stands out as a promising solution for hockey arenas. This new technology is significantly

more efficient and has a much longer lifespan than traditional ones. Contrary to metal halide fixtures, which need to be heated to emit light, LEDs light up instantly. If the Mercedes-Benz Superdome were equipped with LED lighting, the nation would not have had to wait for 30 minutes for the 2013 Super Bowl to resume after a power outage.

With the objective of fostering sustainable operating practices and procedures in the Bridgestone Arena, NHL's Nashville Predators have recently conducted energy audits that lead to the establishment of concrete efficiency goals. The planned improvements to the lighting system will utilize daylight-harvesting next to glass curtain walls. According to the senior director of operations for the arena, Terry McConnell,⁴ the process will allow for the better use of daylight throughout the facility. To further reduce energy consumption, inefficient bulbs will be replaced with energy-saving ones; bi-level lighting controls and energy-efficient lamps will be used in the place of metal-halide sources. EPAct tax savings are available to assist the Predators' efficient lighting projects.

Table 2.

	<p>Bridgestone Arena has undergone both energy usage and water consumption audits. Sustainable goals were established and improvements are under consideration. In addition to efficient lighting, the Predators will upgrade their HVAC system: enthalpy-based economizer controls are planned for all air-conditioning units, occupancy-based controls, night setbacks, and variable frequency drives will be utilized on unit fans.</p>
	<p>Minnesota Wild has implemented an ambitious, strategic plan to reduce the Xcel Energy Center's carbon footprint. After major upgrades and the development of on-site renewable energy, the arena has achieved a 42% carbon footprint reduction and is 13.3% more efficient than the average for similar facilities.</p>
	<p>The Phoenix Coyotes have implemented various building management policies aimed at fostering sustainability. The energy-saving demand response program developed at the Jobing.com Arena has been considered highly innovative and effective.</p>
	<p>The Scottrade Center, home of the St. Louis Blues, is reducing energy consumption through new staff policies and strategic capital upgrades. The arena has recently undergone a major lighting retrofit that resulted in higher efficiency and better lighting. Backlit signs were also upgraded to LED technology, becoming three to eight times more efficient. Additionally, variable frequency drives were installed in the facility's cooling tower, further reducing energy consumption.</p>
	<p>San Jose Sharks' HP Pavilion has recently become the first multi-purpose sports and entertainment facility to utilize fuel cell technology as a supplemental electricity source. The activation of Bloom Energy Servers has provided more affordable, reliable and efficient energy source. The Arena's carbon footprint is expected to be reduced by 4.8 million pounds of CO₂ over 10 years.</p>
	<p>Home to the Pittsburgh Penguins, the CONSOL Energy Center is the first LEED-certified NHL Arena. The facility has achieved the Gold standard and is an outstanding example of sustainability among sports venues.</p>

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

Ice hockey arenas have very particular interiors. In these locations, HVAC systems must be able to keep the ice in good condition, avoid fog formation, prevent excess moisture and ensure spectators safety and

comfort. Therefore, and particularly during peak summer months when temporary dehumidification is necessary, HVAC generates huge energy consumption. Arenas can use highly 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.

With the objective of attaining greater HVAC efficiency standards throughout the League, the NHL has made Johnson Controls' York HVAC division a global leader in sustainable solutions, the official HVAC partner for the 2012-2013 season.⁵ NHL arenas investing in highly efficient HVAC systems generally qualify for the \$1.80-per-square-foot tax deduction presented above. Those that already have such systems should be positioned to obtain the maximum EPAct deduction when making further energy reducing projects.

Energy-Efficient Building Envelope

Unlike lighting and HVAC, the building envelope does not actually consume energy so the \$0.60-per-square-foot Code Sec. 179D building envelope energy tax deductions will be predicated by achieving energy-efficient lighting and, in particular, HVAC energy-efficiency targets.

Arenas that have undergone or are currently implementing highly energy-efficient measures, will be positioned to simultaneously achieve large

tax deductions for investments made in qualifying building envelope items, such as roofs, walls, doors, windows, foundation and insulation.

Sustainable Slapshots

NHL Green has inspired several sustainable initiatives throughout the League, particularly with regards

to energy-efficient facilities. Table 2 presents a few examples of these “sustainable slapshots.”⁶

Conclusion

Rising sustainability standards for NHL arenas have come to stay. “We need to make our buildings as efficient as the athletes that use them,” said the former New York Rangers goaltender and Stanley Cup champion Mike Richter,⁷ now a principal at Healthy Planet Partners.⁸ To this end, the League has established a metrics tracking system, designed to capture and analyze a facility’s energy, water and waste consumption. EPAAct tax deductions are available to assist the quest for high performance NHL arenas.

ENDNOTES

- ¹ Charles Goulding, Jacob Goldman and Taylor Goulding, *National Basketball Association (NBA) and Energy Tax Savings*, CORP. BUS. TAX’N MONTHLY, Oct. 2009, at 11.
- ² Charles Goulding, Raymond Kumar and Kenneth Wood, *The Tax Aspects of Major League Baseball’s Green Team Initiative*, CORP. BUS. TAX’N MONTHLY, Aug. 2009, at 13.
- ³ Energy Policy Act of 2005 (P.L. 109-58).
- ⁴ NHL Green Slapshots, *Predators Attack Water and Energy Usage*, Oct. 25, 2012. Available online at www.nhl.com/ice/blogpost.htm?id=11748.
- ⁵ NHL Green Press Release, *York Becomes Official HVAC Partner of the NHL*, June 6, 2012. Available online at www.nhl.com/ice/news.htm?id=635240.
- ⁶ For more information, see NHL Green’s Blog at www.nhl.com/ice/blog.htm?id=1125.
- ⁷ For information on Mike Richter, see www.nhl.com/ice/player.htm?id=8450833.
- ⁸ NHL Green Press Release, *Richter Addresses Sports and Sustainability Conference at the White House*, July 23, 2012. Available online at www.nhl.com/ice/news.htm?id=638423.



This article is reprinted with the publisher’s permission from the CORPORATE BUSINESS TAXATION MONTHLY, a monthly journal published by CCH, a part of Wolters Kluwer. Copying or distribution without the publisher’s permission is prohibited. To subscribe to CORPORATE BUSINESS TAXATION MONTHLY or other CCH Journals please call 800-449-8114 or visit www.CCHGroup.com. All views expressed in the articles and columns are those of the author and not necessarily those of CCH.