

2014 IAVM Sustainability Report





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IAVM 2014 Sustainability Survey Report Research and Production

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EXECUTIVE SUMMARY OF KEY FINDINGS

IAVM's research demonstrates the continuing importance and relevance of environmental sustainability and sustainable practices to the venue industry.

- 83% of venue mangers continue to make it a priority for their buildings to be environmentally friendly
- This belief translates into action, with 86% of responding venues currently regularly using sustainable practices
- **Most venue managers voluntarily choose** to implement sustainable practices. Pressure from venue users or from local government mandates are not significant factors for adopting sustainability programs.

At the venues that have implemented green or sustainable practices:

- 75% have performed an environmental-related audit or procedure
- 64% are likely to prefer green vendors, when available
- 44% have an environmental certification, primarily LEED (21%)
- 43% organized green task forces at their venues
- 41% enjoy an improved relationship with their community, with absolutely no negatives
- 23% use solar or other sustainable energy resources
- 47% are keeping records of their generated waste and at these buildings, 47% of their waste is diverted from a landfill

Venues are voluntarily going green. Being a role model (60%), giving back to the community (46%) and commitments to environmental improvement (71%) are far more important to them than governmental mandates or regulations.

Senior level involvement is the single most influential motivation for pursuing sustainability (67%), along with cost savings (57%). In contrast, the cost of implementing sustainability initiatives is the most frequent deterrent (63%) and saving money is the only way to overcome this obstacle (70%).

The data shows that **implementing sustainability programs results in measurable cost savings.** It is hoped that this report will be useful to venue managers still considering sustainable practices for their venues.



BACKGROUND

A sustainable business is any organization that participates in environmentally friendly or green activities to ensure that all processes, products, and manufacturing activities adequately address current environmental concerns while maintaining a profit. In other words, it is a business that "meets the needs of the present world without compromising the ability of the future generations to meet their own needs."¹

IAVM conducted surveys among member venues in 2010, 2012 and now in 2014 to track the progress of sustainability initiatives in the venue management industry.

¹ United Nations General Assembly (1987) <u>Report of the World Commission on Environment and Development: Our Common Future</u>.



METHODOLOGY

Using an internet-based survey platform, the IAVM 2014 Sustainability Survey was conducted from June 10th through July 29th, 2014.

From a list of 1,363 venue organizations, a total of 288 completed surveys were obtained (78 convention centers, 90 arenas, 21 stadiums, 54 performing arts centers, 45 other types) for a response rate of 21%. The sample characteristics of the participating venue types are shown below.

	Convention <u>Center</u> #	Arena/Civic <u>Center</u> #	Theater/ Performing <u>Arts Center</u> #	<u>Stadium</u> #	<u>Other Types</u> #
Total	<u>78</u>	<u>90</u>	<u>54</u>	<u>21</u>	<u>45</u>
Size of Venue *					
Large	20	29	23	14	11
Medium	25	29	15	3	24
Small	33	32	16	4	10
Sinai		52	10	7	10
Market Tier	31	40	18	16	12
1st Tier	22	25	14	3	15
2nd Tier	23	24	18	2	13
3rd Tier					
Venue is:					
University based	3	30	10	7	12
Not university based	75	59	43	14	33
Ownership					
Public Owner (Government/Authority)	70	68	38	13	28
Not Public Owner (Private/Non-profit/Other)	8	21	15	8	17
Management					
Public Management (Government/Authority)	45	39	24	8	19
Not Public Management (Management	33	50	28	13	26
Company/ Non-Profit/Other)					
* = See next page for size descriptions	Note: Sums	may not add to	o total due to no	n-response	



DEFINITIONS USED FOR VENUE CLASSIFICATION

	Size of Venue				
Venue Type	Large	Medium	<u>Small</u>		
Arena/Civic Center number of seats	over 12,000	7,501 - 12,000	up to 7,500		
Stadium number of seats	over 35,000	15,001 - 35,000	up to 15,000		
Theatre/ Performing Arts Center number of seats	over 2,500	1,501 - 2,500	up to 1,500		
Convention Center/Exhibit Hall gross sq. ft. of exhibit space	over 500,000	100,001 - 500,000	up to 100,000		
Note: Complexes and other types were asked to compare themselves relative to venues that are the same type; no quantification was used.					



ANALYTICAL NOTES

- 1. In all charts and tables in this report, percentage totals may not add to 100% due to rounding.
- 2. Data is included for each year in which the question was asked in a comparable manner.
- 3. Charts are shown for the *total sample of responding venues*. Differences by venue types are highlighted in text boxes, as needed.
- 4. Readers interested in the 2014 tabular results by specific venue type can contact the IAVM Research Manager (<u>frank.ingoglia@iavm.org</u>) to request this data in Excel format.

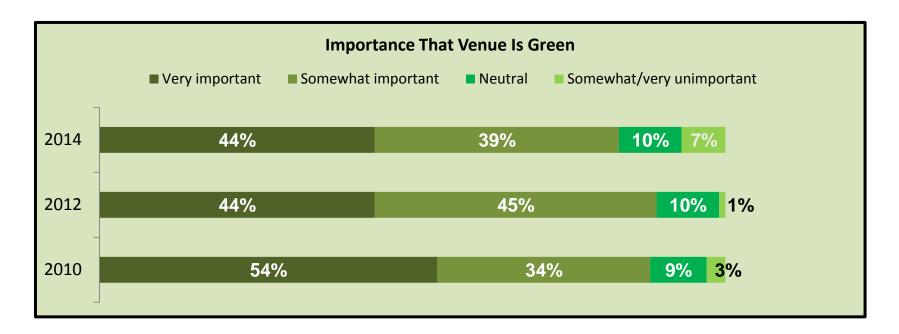


DETAILED FINDINGS



Importance That Venue Is Green

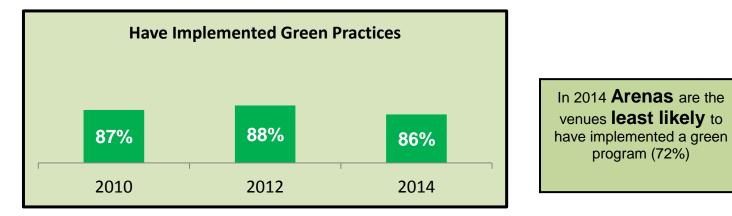
The green initiative has been very impactful for venue managers. Since we started measuring attitudes in 2010, **about 4 out of 5** venue managers have consistently made it important for their buildings to be environmentally friendly, or "green".





Implementation of Sustainable Practices and Motivating Reasons

Beliefs about the importance of sustainability translate into action at venues, with 86% having implemented sustainable practices, a substantial level that has remained stable since 2010.



Venues are voluntarily pursuing green practices. Interest at the upper management level, leading by example by being a good role model and cost savings are the primary motivators, well ahead of governmental mandates.





Importance of Decision to Implement Sustainable Practices

We asked respondents to estimate the degree of importance that each of the following six factors played in the greening decision.

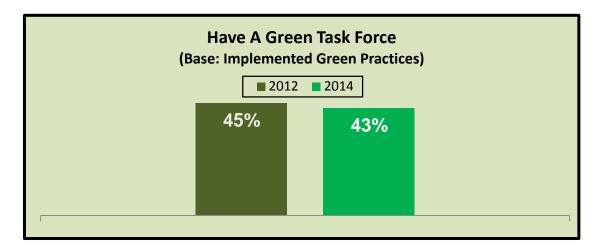
While each factor was rated very or somewhat important by over half the venue managers, **senior manager buy-in and effective partnerships had more impact than citizen or environmental group involvement.** Regulations and local government fell in the middle.

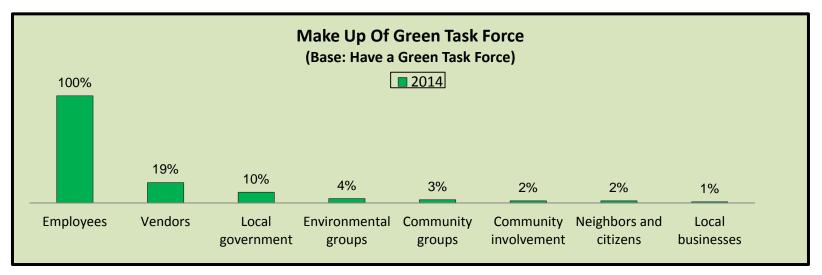
Importance In Decision To Implement Green Practices in 2014 (Base: Implemented Green Practices) Very important Somewhat important Neutral Somewhat/very unimportant					
Buy-in from Senior Management		51%	33%	11% 5%	
Effective Partnerships	30%	41%	% <mark>2</mark>	24% <mark>5%</mark>	
Environmental regulations	26%	34%	30%	10%	
Quality of local government	22%	38%	30%	10%	
Active citizen involvement	20%	33%	33%	14%	
Active Environmental Groups	20%	33%	33%	14%	



Prevalence of Green Task Forces

More than **two out of five venues that have implemented green or sustainable practices maintain a green task force,** with 100% employee participation plus additional support from vendors (19%) and local government (10%). The percentage of green task forces has remained consistent since 2012.

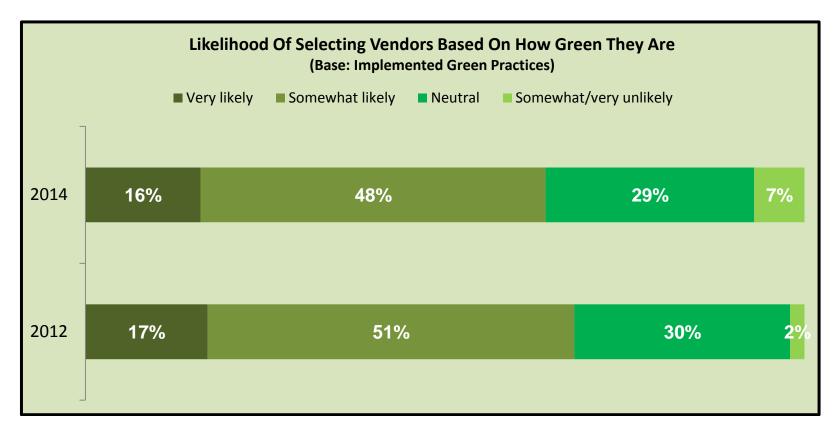






Likelihood of Selecting Vendors Based On How Green They Are

Vendor participation in the green movement is important at those venues that have initiated green or sustainable practices. Since 2012, about **two-thirds are very or somewhat likely to select their vendors based on how green they are.**





CASE STUDIES: Minneapolis Convention Center, Minneapolis MN

- One of six facilities worldwide to achieve ASTM Standard Level 1 Certification pertaining to the evaluation and selection of venues for environmentally sustainable meetings events, trade shows and conferences
- 95 percent of cleaning products are Green Seal certified
- Floor care equipment uses FaST (foam scrubbing technology) to reduce chemical application by using **87 percent less** chemicals than traditional floor scrubbers
- Terrazo floor care machines utilize ECH2O ionization technology to clean hard surfaces without chemicals
- The floor care machines use 70 percent less water than traditional floor care equipment
- The riding scrubber used to clean concourses uses 15,330 fewer gallons of water annually than a non-FaST scrubber

Georgia World Congress Center, Atlanta GA

- The world's largest LEED-certified convention center; one of the fifteen largest LEED-certified buildings in the world
- **86 percent cost savings** by using janitorial paper and cleaning products that meet sustainability criteria, including recycled content materials and reduced harmful chemicals
- 73 percent of annual office supply purchases (by cost) are sustainably procured
- Integrated pest management program reduces employee and guest exposure to toxic pesticides
- Diverted over 600 tons of material from landfills in FY 14, including more than 275 tons of single-stream recycling (paper, plastic, aluminum), a 30% increase over FY 13
- Surplus materials and metal recycling program generated more than \$40,000 from the sale of these materials, while simultaneously reducing disposal costs and diverting an additional 90 tons of material from landfills

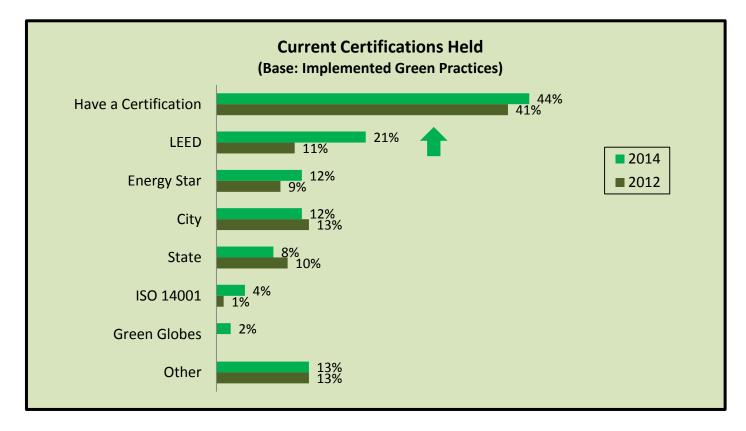
Source: Minneapolis Convention Center, Georgia World Congress Center



Current Certifications Held

Further substantiating the commitment to ongoing sustainability in the venue industry, **two out of five of the venues that have implemented green or sustainable practices received a certification**, primarily LEED.

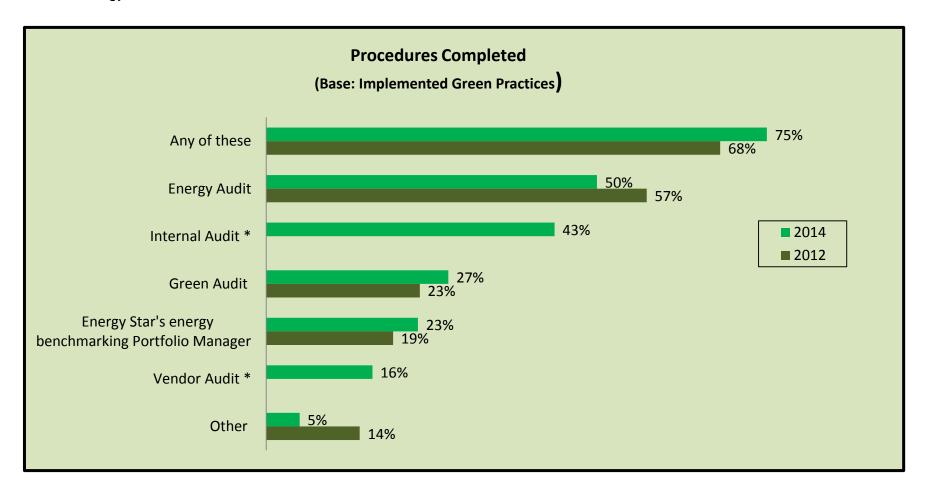
Although the proportion that achieved any certification hasn't changed since 2012, LEED certification almost doubled.





Environmental-Related Audit Procedures Completed

In 2014, **75% of the venues that implemented green practices completed an environmental practice audit** or related procedure. Energy and internal audits were conducted most often.



* = Not measured in 2012



CASE STUDY: St. Paul RiverCentre/Xcel Energy Center Complex

- The first complex in the world to be certified to three international sustainability standards LEED, Green Globes and APEX/ASTM
 - o LEED Certified as an Existing Building for Operations and Maintenance
 - Green Globes Certified for Continuous Improvement of Existing Buildings
 - o APEX/ASTM Certified as a Venue for Sustainable Events
- Certification initiatives began with waste recycling and reduction (2009), followed by energy efficiencies and renewable energy technologies, and completed with water conservation and environmentally friendly purchasing efforts
 - 2009 annual recycling rate: 15%; 2014 recycling rate: 60% of two million pounds of waste
 - The complex is a **Top Five windsource purchaser** in Minnesota through a partnership with Xcel Energy, which has also provided over \$200,000 in rebates for facility-wide energy efficiency upgrades
 - The rooftop solar thermal array is the first in the US to integrate solar thermal into a district heating system
 - 90% of cleaning products meet green standards

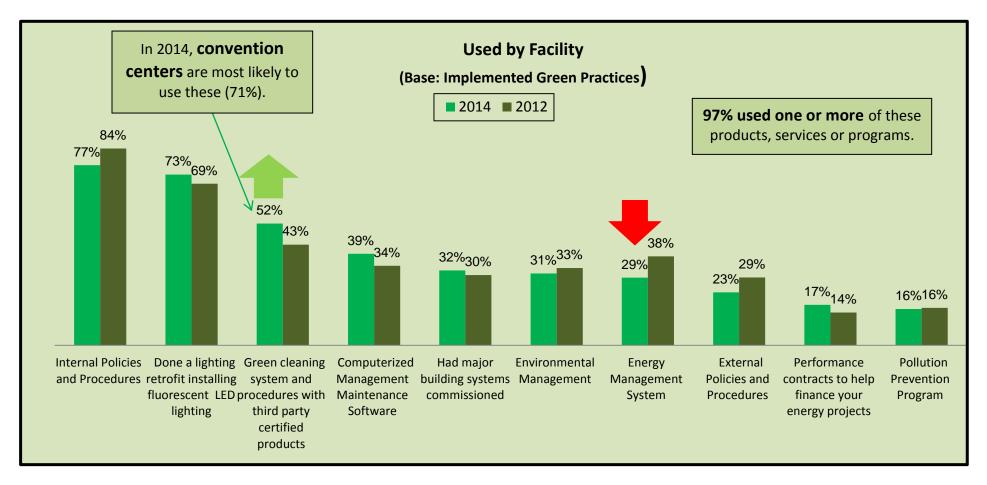
Source: Today's Facility Manager http://todaysfacilitymanager.com/2014/12/saint-paul-rivercentre-and-xcel-energy-center-complex-first-in-the-world-to-be-leed-green-globes-apexastm-certified/; Xcel Energy Center



Environmental-Related Products/Services/Programs Used

Respondents were asked which of nine environmental related products, services or programs were used at their venues.

In 2014, the majority utilized **internal policies and procedures**, had performed a **lighting retrofit**, or used a **green cleaning system and procedures with third party certified products**, with the latter showing an increase since 2012.





CASE STUDY: PNC Arena Lighting Retrofit

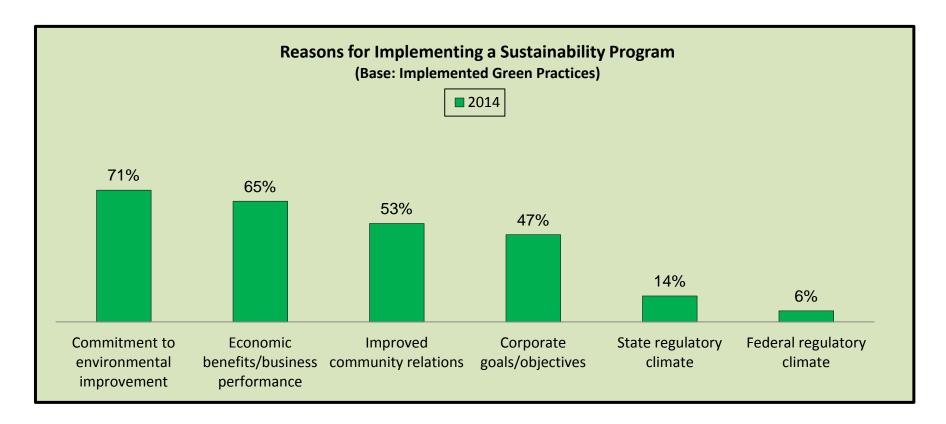
- Installation: Summer 2014
- Energy reduction: almost 70%
- Cost: \$650,000
- The more than 200 optically-enhanced fixtures fitted with over 20,000 LEDs effectively manage glare to improve playability for athletes and the experience for fans, while meeting NHL and NCAA requirements for TV broadcasts.
- The control system has instant on/off and dimming capabilities, which will help conserve energy and allow for enhanced lighting special effects.
- The manufacturer's comprehensive 10-year warranty eliminates maintenance and maintenance-related costs

Source: IAVM Sustainability Committee



Reasons for Implementing Current Sustainability Programs

A genuine, voluntary commitment to the environment, as well as the recognized economic benefits derived from their environmental efforts are more powerful inducements for venues to pursue environmental programs than mandated governmental regulations.





CASE STUDIES: Moda Center, Portland OR

By decreasing food waste and switching to compostable paper goods for food service and packaging, the arena has:

- Increased its landfill diversion rate to **87%**
- Accrued over \$625,000 in savings on waste disposal since 2008

Portland Center Stage – Gerding Theatre at the Armory, Portland OR

- The first historic rehabilitation on the National Historic Register, and the first performing arts venue to achieve LEED Platinum rating
- 95% of the theatre's waste is diverted from landfills
- Contractors use local and recycled building materials whenever possible
- Patrons may leave playbills behind for re-use
- Onsite storm water capture and treatment is estimated to reduce potable water use by **40%** (a water savings of approximately **53% over standard new construction)**
- Rainwater harvesting system reduces the amount of potable water used for sewage conveyance by 100% and the overall use of potable water by 89%

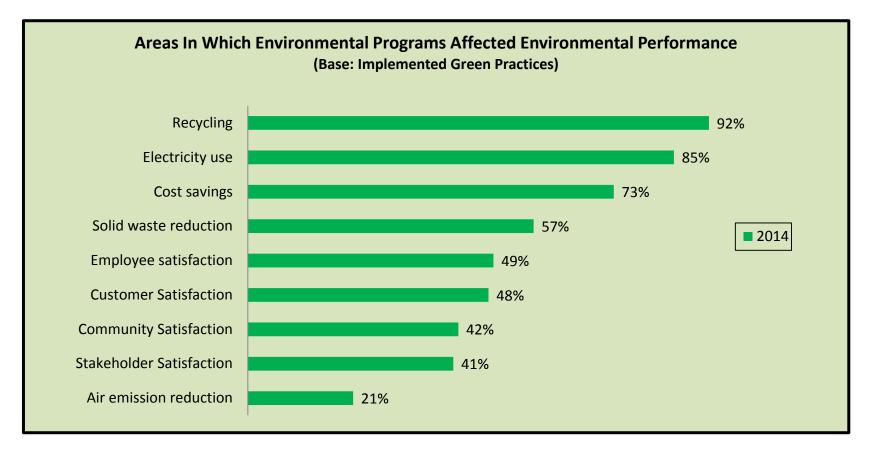
Source: "Do The Right Thing," Facilities Manager, September/October 2014; Portland Center Stage



Areas Where Sustainable Programs Affected Environmental Performance

When asked in which areas sustainable programs affected environmental performance, venue managers were most likely to credit the programs with having **positive cost savings** (including electricity use) and **recycling efforts**, areas which can be quickly measured.

Fewer mentioned the more difficult to measure areas of employee, customers, community or stakeholder satisfaction.





CASE STUDIES: Lincoln Financial Field, Philadelphia PA

- 11,000 solar panels and 14 wind turbines allow the stadium to generate nearly all of its electricity onsite
- Energy conservation programs and management systems reduced electrical consumption by over 33%
- All tissue paper products are 100% post-consumer recycled paper, saving 10 tons of paper annually
- Almost half of all cleaning products (169 gallons) are environmentally friendly
- Media guide publishing dropped from 50,000 copies printed to 2,000 copies printed by providing the content online
- Green Teams hand out recycling boxes to tailgaters
- The waste system of utilizing chutes for trash and carts for recyclables has been switched chutes for recyclables and carts for trash due to the impact of recycling initiatives

M&T Bank Stadium, Baltimore MD

- 43% water reduction with the installation of over 400 waterless urinals
- 123,070 metric tons of greenhouse gas emissions offset
- 5 million KWH of electricity usage reduced between 2005 and 2012
- Currently recycles **31%** of its regular waste; plans to increase diversion in the future
- Purchases recycled, renewable and ENERGY STAR-labeled products using USGBC's Sustainable Purchasing Policy
- 10% of visitors arrive by light rail service; 2% arrive by "Ravens Ride" buses
- Irrigation system and adaptive vegetation in landscaping reduces 30% of its potable water used for outside irrigation

Staples Center, Los Angeles CA

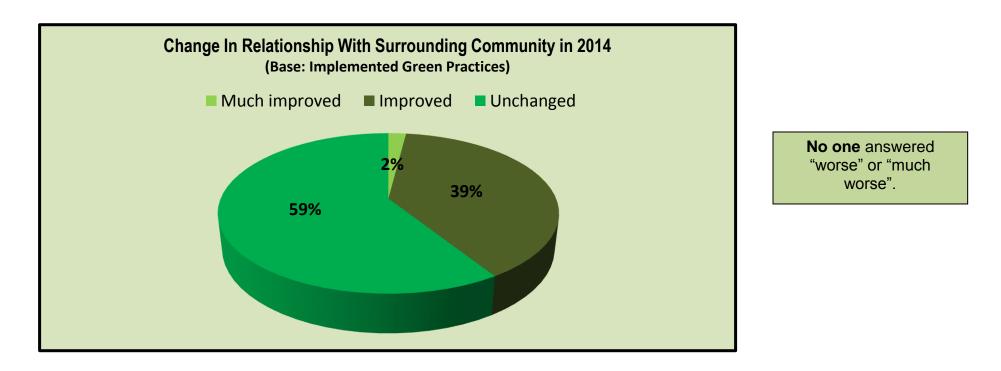
- A 1,727-panel solar array covers 25,000 square feet of roof space and supplies up to 20% of the building's energy use, **saving \$55,000 per year**
- A lighting retrofit replaced almost 3,000 halogen fixtures with LED fixtures, saving \$80,000 per year
- Low-voltage lighting relays control the sequence and operation of all task, general and event lighting
- All 178 urinals are now waterless, **saving \$28,200** in annual water costs
- **50% landfill diversion** achieved through source separation of cardboard, wood pallets, electronic waste, and glass/plastic/aluminum beverage containers
- Over 90% of cleaning projects have green certifications





Change in Relationship with Surrounding Community

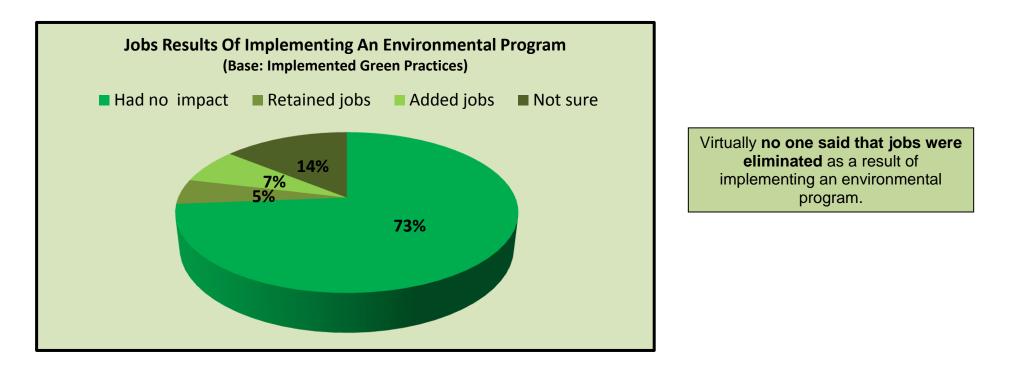
Since implementing their green programs, **41% acknowledge an improved relationship with their surrounding community**, and virtually none saw any negative effects.





Effect of Sustainability Program Implementation on Jobs

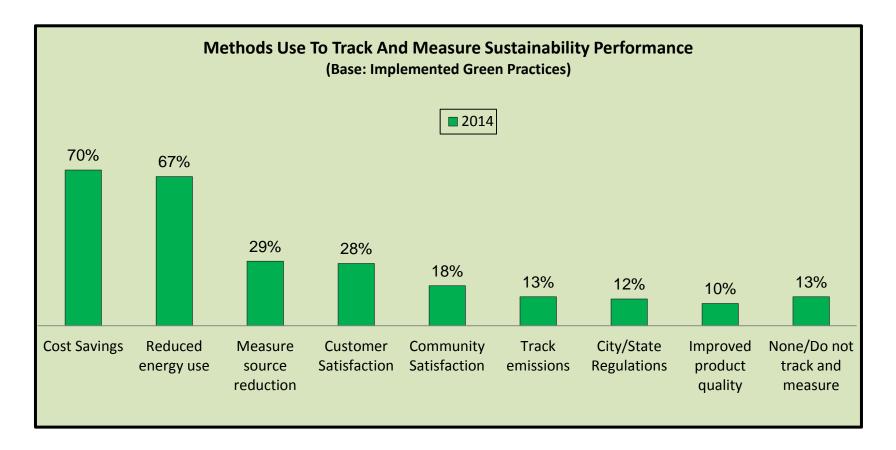
Among the venue managers interviewed, most saw **no change in employment** at their venue from implementing an environmental program; **none** indicated any **job losses**. In fact, a small percentage **saw jobs added or retained**.





Methods Used to Track and Measure Sustainability Performance

To track environmental performance at their venues, most managers look at **reduced energy use and the affiliated cost savings**, both which have direct impacts on them and are easier to measure than customer or community satisfaction.





Green Products/Services/Equipment Used

Using three different questions, venue managers were provided an exhaustive list of green products, services and equipment and asked to indicate which ones they used. The responses show that except for declining use of green office recycling containers or waste receptacles, **usage levels have not changed substantially since 2012.**

Green Products/Services Used At Venue

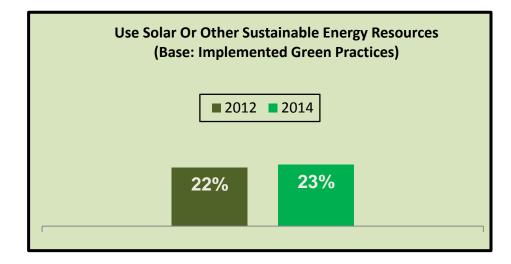
RECYCLE	2014	2012	USE/PURCHASE/PARTICIPATE IN	2014	2012	In 2014, convention
Paper	97%	94%	Use Biodegradable cups, plates and utensils	56%	53%	centers are most
Cardboard	95%	93%	Composting of food and compostable disposables	36%	34%	likely to:
Plastic	85%	82%	Use of Organic certified intermingled with traditiona	16%	18%	Recycle grease
Glass	72%	70%	Solar on Roof photovoltaic's	11%	14%	(77%) and organic
Batteries	69%	67%	Wind Power	8%	8%	materials (58%).
Light bulbs (fluorescent, metal halide, etc)	65%	65%	Hydro Electric	6%	6%	Use green products
E-cycling (electronic equip. and devices)	62%	56%	Partnered with a Seafood Watch program	5%	8%	for floor care (76%),
Metal	61%	53%	Solar heated water	1%	3%	paper hand towels
Grease	56%	58%				(74%), carpet care
Wood	46%	43%				(74%), microfiber wiping cloths (49%)
Organic materials (plant clippings, etc)	38%	37%				and microfiber flat
Construction materials	32%	37%				mops (44%).
GREEN ITEMS USE	2014	2012	GREEN ITEMS USE	2014	2012	
Green cleaning chemicals	68%	66%	Green microfiber wiping cloths	24%	29%	
Green floor care products	56%	59%	Green microfiber flat mops	21%	22%	
Green copy paper	54%	58%	Green binders, clipboards, file folders, etc.	18%	25%	
Green office recycling containers	54%	68%	Green entryway mats	16%	21%	
Green paper hand towels	52%	57%	Green vacuum cleaners	12%	14%	
Green toilet tissue	48%	55%	Green office furniture	10%	8%	
Green carpet care products	47%	50%	Green ink saving font program	10%	10%	
Green office waste receptacles	37%	47%	Green printer ribbons	9%	8%	
Green plastic trash can liners	37%	38%	Green plastic desktop accessories	4%	4%	
Green toner cartridges	29%	32%	Green plastic envelopes	4%	3%	



Use of Solar or Other Sustainable Energy Resources

We asked respondents directly (via a yes/no response) if their venue uses solar or other sustainable energy resources and if so, how they were acquired.

Almost **one-quarter use solar or other sustainable energy resources**, acquired primarily via power purchase agreements or grants.



Acquisition Methods (Base: Use Solar/Other Energy Resources)

	TOTAL			
	2012	2014		
Power Purchase Agreement	42%	41%		
Grants	36%	33%		
Some other way	38%	41%		



Generated Waste Recordkeeping

Almost half of the surveyed venues keep records of their generated waste. On average, **venues divert almost half the generated waste from landfills.**





CASE STUDIES: San Diego Convention Center, San Diego CA

- Recycling diverts approximately 40% of total waste generated annually
- Copper wire recycled after every show, averaging five tons recovered annually
- Cooking oil collected and recycled into bio-diesel fuel
- Approximately 100 tons of leftover food is donated to local charities annually
- Over 10 tons of leftover convention items, unclaimed lost and found items and surplus furniture and computers are donated annually to local schools and social service organizations
- Nearly 150 tons of food waste is annually diverted to composting, with a goal of diverting all food scraps and eliminating the use of garbage disposals

Colorado Convention Center, Denver CO

Last year, the Colorado Convention Center

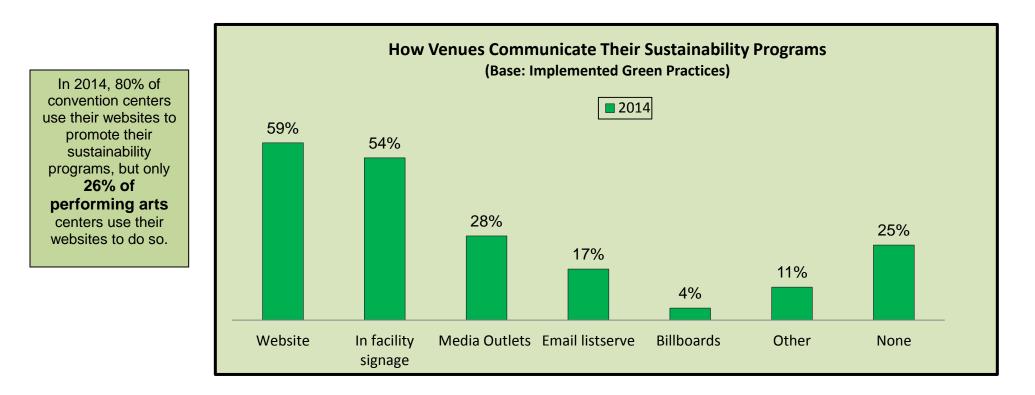
- Diverted 55% of total waste from landfills through recycling
- Donated nearly 400 tons of materials or reuse or repurposing by local nonprofit organizations through its materials donation program f resulted in recycled, 175 tons of materials composted
- Composed nearly 175 tons of materials
- Recycled over 2 tons of paper, 170 tons of metal and nearly 8 tons of electronics

Source: San Diego Convention Center Corporation Green Meetings Fact Sheet; Colorado Convention Center 2013 Annual Sustainability Report



Mechanisms Venues Use to Communicate Their Sustainability Programs

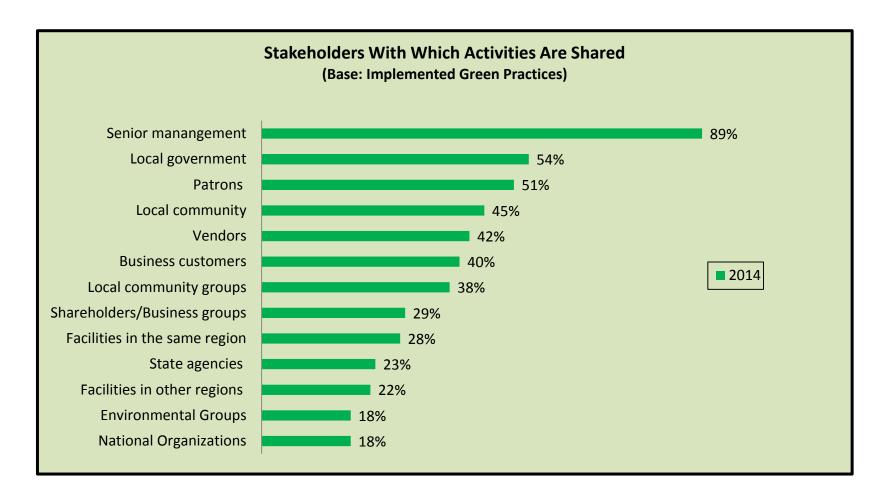
To learn more about how venues communicate their activities, we asked respondent to indicate which of five specific methods are used. Most use their **websites and in-facility signage** to share activity information.





Stakeholders with Which Sustainability Activities Are Shared

We wanted to learn with whom venues communicate their activities. In addition to keeping their senior management informed, most venues are likely to **promote their activities with local governments and the local community**, as well as to their patrons.

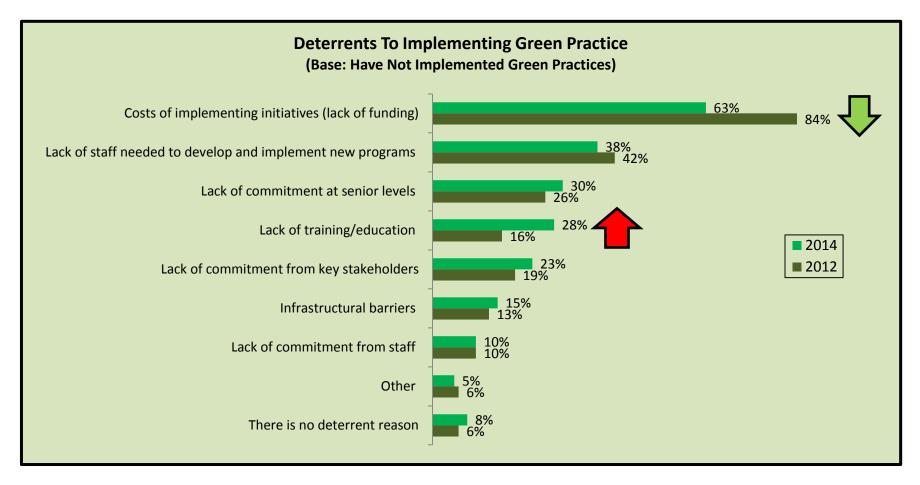




Deterrents to Implementing Sustainable Practices

The 40 venues that have not implemented green practices were asked to enumerate the major deterrents they encountered.

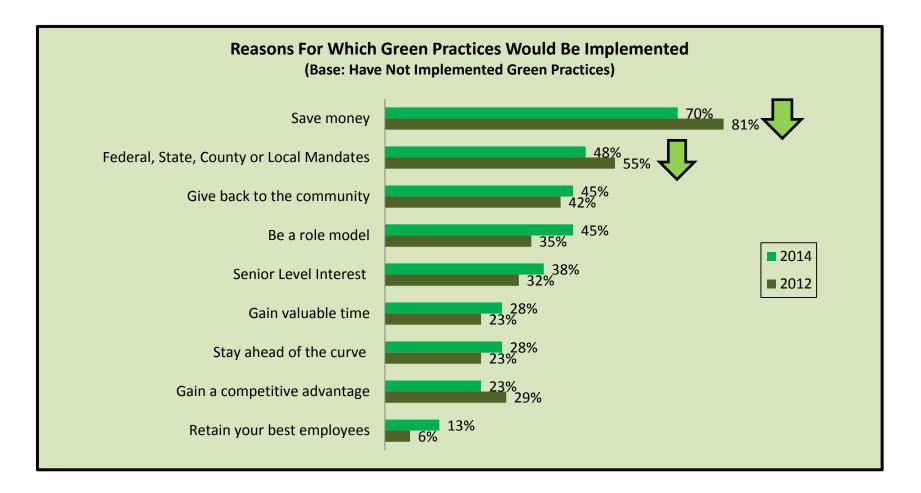
The cost of going green is the major deterrent, but this proportion has declined since 2012 while lack of training is mentioned more frequently. Lack of commitment at various levels doesn't seem to be a major deterrent.





Reasons For Implementing Sustainable Practices (If No Current Program Exists)

Managers at these 40 venues were then asked what it would take in order to implement green practices in their facilities. The vast majority felt that **saving money would be the most compelling voluntary inducement**, followed by being mandated to do so.





- **Q.** What suggestions do you have for venues who seek to "go green?" Are there some small steps that venue managers can take to be environmentally friendly, even if they aren't currently able to complete a huge project?
- A. I'd say, *just get started.* There are so many zero or low-cost ideas available, depending on the type of venue and location. A good start is to work with the custodians on improving recycling rates and switching to non-toxic cleaning solutions.

Creon Thorne, General Manager, Portland Center Stage ("Do The Right Thing," Facility Manager, September-October 2014)

